Apex Laboratories, LLC
6700 SW Sandbug St. Tigard, Oregon 97223
503.718.2323

Level IV Data Package for
Hahn and Associates
Mult 802 Decommissioning
Apex Laboratories Work Order number:
A9E0785

APEX LABORATORIES, LLC
6700 SW Sandburg St Tigard, OR 97223 phone 503-718-2323

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Analytical Case Narrative

APEX LABORATORIES, LLC
6700 SW Sandburg St Tigard, OR 97223 phone 503-718-2323

Analytical Case Narrative

Client: Hahn and Associates Date: 10/08/2019
Project: Mult 802 Decommissioning
Apex Work Order Number: A9E0785

This data package contains data associated with analysis of samples for the above referenced Apex work order numbers. The data package Table of Contents, along with the PDF bookmarks, allow for ease of navigation and location of items within the data deliverable.

The Sample Receipt Documentation section of this package contains sample receipt information, including sample temperature and condition of receipt documented on Cooler Receipt Form(s). Apex analyzed the samples by the methods indicated on the Chain of Custody. Any additional analyses requested are indicated on the Apex Work Order.

If any anomalies were encountered during analysis that could potentially impact data quality, sample results are qualified and/or a separate Case Narrative is included in the Analytical Report. Please refer to the Notes and Definition section of the Analytical Report(s) for Qualifier explanations, Conventions, and the Blank Policy.

Data represented in this package are in compliance with the referenced method(s), both technically and for completeness, for all conditions other than those stated above and/or noted by qualification of the reported data. The signature below verifies that the Laboratory Director or his designee has authorized release of this data package.

Estella Rieben,
Quality Systems Manager
Apex Laboratories, LLC

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Analytical Report

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Wednesday, June 19, 2019

Rob Ede
Hahn and Associates
434 NW 6th Ave. Suite 203
Portland, OR 97209

RE: A9E0785 - Mult 802 Decommissioning - 2708-60F

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A9E0785, which was received by the laboratory on 5/23/2019 at 1:55:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of final reporting, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	4.3 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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Philip Nerenberg, Lab Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2708-190522-011	**A9E0785-01**	**Solid**	**05/22/19 16:30**	**05/23/19 13:55**

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Philip Nerenberg, Lab Director

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL CASE NARRATIVE

Work Order: A9E0785

Preservation Nonconformance

A temperature excursion occurred during sample storage. Sample 2708-190522-011 (A9E0785-01) analyzed for EPA Method 8260 and NWTPH-Gx was stored out of EPA recommended storage temp (>6C) reaching 17C for a period of approximately 48 hours. No other analysis was affected.

Mark Zehr
Organics Manager
6/5/2019

Philip Nerenberg, Lab Director

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**		**Batch: 9060517**		
Diesel	**162000**	---	33900	mg/kg	100	06/04/19	NWTPH-Dx	**F-17**
Oil	**133000**	---	67800	mg/kg	100	06/04/19	NWTPH-Dx	**F-17**
Surrogate: o-Terphenyl (Surr)			*Recovery: %*	*Limits: 50-150 %*	*100*	*06/04/19*	*NWTPH-Dx*	*S-01*

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**			**Batch: 9060533**	**V-16, X**
Gasoline Range Organics	**21800**	---	3500	mg/kg	10000	06/04/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery:*	*89 %*	*Limits: 50-150 %*	*1*	*06/04/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*83 %*	*50-150 %*	*1*	*06/04/19*	*NWTPH-Gx (MS)*	

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**			**Batch: 9060533**	**V-16, X**
Acetone	ND	---	699000	ug/kg	10000	06/04/19	5035A/8260C	
Acrylonitrile	ND	---	69900	ug/kg	10000	06/04/19	5035A/8260C	
Benzene	**114000**	---	6990	ug/kg	10000	06/04/19	5035A/8260C	
Bromobenzene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Bromochloromethane	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Bromodichloromethane	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Bromoform	ND	---	69900	ug/kg	10000	06/04/19	5035A/8260C	
Bromomethane	ND	---	350000	ug/kg	10000	06/04/19	5035A/8260C	
2-Butanone (MEK)	ND	---	350000	ug/kg	10000	06/04/19	5035A/8260C	
n-Butylbenzene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
sec-Butylbenzene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
tert-Butylbenzene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Carbon disulfide	ND	---	350000	ug/kg	10000	06/04/19	5035A/8260C	
Carbon tetrachloride	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Chlorobenzene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Chloroethane	ND	---	350000	ug/kg	10000	06/04/19	5035A/8260C	
Chloroform	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Chloromethane	ND	---	175000	ug/kg	10000	06/04/19	5035A/8260C	
2-Chlorotoluene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
4-Chlorotoluene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Dibromochloromethane	ND	---	69900	ug/kg	10000	06/04/19	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	175000	ug/kg	10000	06/04/19	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Dibromomethane	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
1,2-Dichlorobenzene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
1,3-Dichlorobenzene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
1,4-Dichlorobenzene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Dichlorodifluoromethane	ND	---	69900	ug/kg	10000	06/04/19	5035A/8260C	
1,1-Dichloroethane	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
1,1-Dichloroethene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**			**Batch: 9060533**	**V-16, X**
1,2-Dichloropropane	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
1,3-Dichloropropane	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
2,2-Dichloropropane	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
1,1-Dichloropropene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Ethylbenzene	**104000**	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Hexachlorobutadiene	ND	---	69900	ug/kg	10000	06/04/19	5035A/8260C	
2-Hexanone	ND	---	350000	ug/kg	10000	06/04/19	5035A/8260C	
Isopropylbenzene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
4-Isopropyltoluene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Methylene chloride	ND	---	175000	ug/kg	10000	06/04/19	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	350000	ug/kg	10000	06/04/19	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
n-Propylbenzene	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Styrene	**39500**	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Toluene	**145000**	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	175000	ug/kg	10000	06/04/19	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	175000	ug/kg	10000	06/04/19	5035A/8260C	
1,1,1-Trichloroethane	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
1,1,2-Trichloroethane	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Trichloroethene (TCE)	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Trichlorofluoromethane	ND	---	69900	ug/kg	10000	06/04/19	5035A/8260C	
1,2,3-Trichloropropane	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
1,2,4-Trimethylbenzene	**58000**	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
Vinyl chloride	ND	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
m,p-Xylene	**156000**	---	35000	ug/kg	10000	06/04/19	5035A/8260C	
o-Xylene	**50300**	---	17500	ug/kg	10000	06/04/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery: 91 %*		*Limits: 80-120 %*	*1*	*06/04/19*	*5035A/8260C*	

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Philip Nerenberg, Lab Director

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**			**Batch: 9060533**	**V-16, X**
Surrogate: Toluene-d8 (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/04/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/04/19*	*5035A/8260C*	
2708-190522-011 (A9E0785-01RE1)				**Matrix: Solid**			**Batch: 9060582**	**V-16, X**
Naphthalene	**9020000**	---	699000	ug/kg	100000	06/05/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 90 %*	*Limits: 80-120 %*	*1*	*06/05/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*06/05/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/05/19*	*5035A/8260C*	

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ANALYTICAL SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01RE1)				**Matrix: Solid**			**Batch: 9060589**	
Acetone	ND	---	1.00	mg/L	50	06/05/19	1312/8260C	
Benzene	**1.17**	---	0.0125	mg/L	50	06/05/19	1312/8260C	
Bromobenzene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Bromochloromethane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Bromodichloromethane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Bromoform	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Bromomethane	ND	---	0.250	mg/L	50	06/05/19	1312/8260C	
2-Butanone (MEK)	ND	---	0.500	mg/L	50	06/05/19	1312/8260C	
n-Butylbenzene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
sec-Butylbenzene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
tert-Butylbenzene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Carbon tetrachloride	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Chlorobenzene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Chloroethane	ND	---	0.250	mg/L	50	06/05/19	1312/8260C	
Chloroform	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Chloromethane	ND	---	0.250	mg/L	50	06/05/19	1312/8260C	
2-Chlorotoluene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
4-Chlorotoluene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.250	mg/L	50	06/05/19	1312/8260C	
Dibromochloromethane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Dibromomethane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,2-Dichlorobenzene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,3-Dichlorobenzene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,4-Dichlorobenzene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Dichlorodifluoromethane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,1-Dichloroethane	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,1-Dichloroethene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
cis-1,2-Dichloroethene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
trans-1,2-Dichloroethene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,2-Dichloropropane	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,3-Dichloropropane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	

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ANALYTICAL SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01RE1)				**Matrix: Solid**			**Batch: 9060589**	
2,2-Dichloropropane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,1-Dichloropropene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
cis-1,3-Dichloropropene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
trans-1,3-Dichloropropene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Ethylbenzene	**0.213**	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Hexachlorobutadiene	ND	---	0.250	mg/L	50	06/05/19	1312/8260C	
2-Hexanone	ND	---	0.500	mg/L	50	06/05/19	1312/8260C	
Isopropylbenzene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
4-Isopropyltoluene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.500	mg/L	50	06/05/19	1312/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Methylene chloride	ND	---	0.250	mg/L	50	06/05/19	1312/8260C	
Naphthalene	**9.71**	---	0.100	mg/L	50	06/05/19	1312/8260C	
n-Propylbenzene	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Styrene	**0.0830**	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Tetrachloroethene (PCE)	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Toluene	**0.724**	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,2,3-Trichlorobenzene	ND	---	0.100	mg/L	50	06/05/19	1312/8260C	
1,2,4-Trichlorobenzene	ND	---	0.100	mg/L	50	06/05/19	1312/8260C	
1,1,1-Trichloroethane	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
1,1,2-Trichloroethane	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Trichloroethene (TCE)	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Trichlorofluoromethane	ND	---	0.100	mg/L	50	06/05/19	1312/8260C	
1,2,3-Trichloropropane	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/L	50	06/05/19	1312/8260C	
Vinyl chloride	ND	---	0.0250	mg/L	50	06/05/19	1312/8260C	
m,p-Xylene	**0.277**	---	0.0500	mg/L	50	06/05/19	1312/8260C	
o-Xylene	**0.0916**	---	0.0250	mg/L	50	06/05/19	1312/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*102 %*	*Limits:*	*80-120 %*	*1*	*06/05/19*	*1312/8260C*
Toluene-d8 (Surr)			*100 %*		*80-120 %*	*1*	*06/05/19*	*1312/8260C*

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

ANALYTICAL SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01RE1)				**Matrix: Solid**			**Batch: 9060589**	
Surrogate: 4-Bromofluorobenzene (Surr)		*Recovery: 97 %*		*Limits: 80-120 %*	*1*	*06/05/19*	*1312/8260C*	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**			**Batch: 9060490**	
Acenaphthene	**9320000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Acenaphthylene	ND	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Anthracene	**6230000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Benz(a)anthracene	**5750000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	**M-05**
Benzo(a)pyrene	**6830000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Benzo(b)fluoranthene	**7020000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	**M-05**
Benzo(k)fluoranthene	**2840000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	**M-05**
Benzo(g,h,i)perylene	**4250000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Chrysene	**5980000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	**M-05**
Dibenz(a,h)anthracene	**904000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	**Q-42**
Dibenzofuran	**5590000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Fluoranthene	**19300000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Fluorene	**5240000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	**4670000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
1-Methylnaphthalene	**2960000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
2-Methylnaphthalene	**5650000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Naphthalene	**16200000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	**Q-29**
Phenanthrene	**20600000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Pyrene	**18100000**	---	877000	ug/kg	10000	06/04/19	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)			*Recovery: %*	*Limits: 44-120 %*	*10000*	*06/04/19*	*EPA 8270D (SIM)*	*S-01*
p-Terphenyl-d14 (Surr)			*%*	*54-127 %*	*10000*	*06/04/19*	*EPA 8270D (SIM)*	*S-01*

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ANALYTICAL SAMPLE RESULTS

SPLP PAH by EPA 1312/8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**			**Batch: 9060758**	
Acenaphthene	**0.733**	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Acenaphthylene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Anthracene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Benz(a)anthracene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Benzo(a)pyrene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.400	mg/L	1000	06/11/19	1312/8270D (SIM)	
Chrysene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Dibenzofuran	**0.361**	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Fluoranthene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Fluorene	**0.228**	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
1-Methylnaphthalene	**0.523**	---	0.400	mg/L	1000	06/11/19	1312/8270D (SIM)	
2-Methylnaphthalene	**0.875**	---	0.400	mg/L	1000	06/11/19	1312/8270D (SIM)	
Naphthalene	**9.95**	---	0.400	mg/L	1000	06/11/19	1312/8270D (SIM)	**B**
Phenanthrene	**0.267**	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Pyrene	ND	---	0.200	mg/L	1000	06/11/19	1312/8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		*Recovery: 99 %*		*Limits: 44-120 %*	*1000*	*06/11/19*	*1312/8270D (SIM)*	*S-01*
p-Terphenyl-d14 (Surr)		*114 %*		*50-133 %*	*1000*	*06/11/19*	*1312/8270D (SIM)*	*S-01*

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ANALYTICAL SAMPLE RESULTS

SPLP Extraction by EPA 1312 (ZHE)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190522-011 (A9E0785-01)				**Matrix: Solid**			**Batch: 9060554**	
TCLP ZHE Extraction	PREP	---		N/A	1	06/04/19	EPA 1312 ZHE	
SPLP Extraction	PREP	---		N/A	1	06/05/19	EPA 1312	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060517 - EPA 3546 (Fuels)							**Solid**					
Blank (9060517-BLK1)			Prepared: 06/03/19 16:03		Analyzed: 06/04/19 05:28							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 95 %*	*Limits: 50-150 %*		*Dilution: 1x*							
LCS (9060517-BS1)			Prepared: 06/03/19 16:03		Analyzed: 06/04/19 05:50							
NWTPH-Dx												
Diesel	116	---	25.0	mg/kg	1	125	---	93	70-130%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 93 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (9060517-DUP1)			Prepared: 06/03/19 16:03		Analyzed: 06/04/19 06:36							
QC Source Sample: Non-SDG (A9E0723-03)												
Diesel	**114000**	---	37700	mg/kg	100	---	116000	---	---	2	30%	F-17
Oil	ND	---	75500	mg/kg	100	---	51400	---	---	***	30%	
Surr: o-Terphenyl (Surr)		*Recovery: %*	*Limits: 50-150 %*		*Dilution: 100x*							S-01

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Blank (9060533-BLK1)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 11:23									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery:*	*95 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
1,4-Difluorobenzene (Sur)			*89 %*		*50-150 %*			*"*				
LCS (9060533-BS2)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 10:56									
NWTPH-Gx (MS)												
Gasoline Range Organics	23.4	---	5.00	mg/kg	50	25.0	---	94	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery:*	*95 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
1,4-Difluorobenzene (Sur)			*93 %*		*50-150 %*			*"*				
Duplicate (9060533-DUP1)			Prepared: 05/29/19 11:20 Analyzed: 06/04/19 20:32									
QC Source Sample: Non-SDG (A9F0057-03)												
Gasoline Range Organics	**581**	---	17.8	mg/kg	200	---	ND	---	---		**30%**	Q-04
Surr: 4-Bromofluorobenzene (Sur)		*Recovery:*	*93 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
1,4-Difluorobenzene (Sur)			*98 %*		*50-150 %*			*"*				
Duplicate (9060533-DUP2)			Prepared: 05/29/19 11:00 Analyzed: 06/04/19 21:27									
QC Source Sample: Non-SDG (A9F0057-02)												
Gasoline Range Organics	**12900**	---	192	mg/kg	2000	---	9940	---	---	26	30%	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery:*	*80 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
1,4-Difluorobenzene (Sur)			*112 %*		*50-150 %*			*"*				

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Blank (9060533-BLK1)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 11:23									
5035A/8260C												
Acetone	ND	---	667	ug/kg	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	ug/kg	50	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Bromoform	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
Bromomethane	ND	---	333	ug/kg	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	ug/kg	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Chloroethane	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Chloroform	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Chloromethane	ND	---	167	ug/kg	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	ug/kg	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Blank (9060533-BLK1)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 11:23									
1,2-Dichloropropane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
2-Hexanone	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Methylene chloride	ND	---	167	ug/kg	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Styrene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	ug/kg	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	ug/kg	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 94 %* *Limits: 80-120 %* *Dilution: 1x*

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Philip Nerenberg, Lab Director

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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Blank (9060533-BLK1)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 11:23									
Surr: Toluene-d8 (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*				*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*				*"*				
LCS (9060533-BS1)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 10:28									
5035A/8260C												
Acetone	1860	---	1000	ug/kg	50	2000	---	93	80-120%	---	---	
Acrylonitrile	998	---	100	ug/kg	50	1000	---	100	80-120%	---	---	
Benzene	962	---	10.0	ug/kg	50	1000	---	96	80-120%	---	---	
Bromobenzene	1120	---	25.0	ug/kg	50	1000	---	112	80-120%	---	---	
Bromochloromethane	1040	---	50.0	ug/kg	50	1000	---	104	80-120%	---	---	
Bromodichloromethane	1040	---	50.0	ug/kg	50	1000	---	104	80-120%	---	---	
Bromoform	902	---	100	ug/kg	50	1000	---	90	80-120%	---	---	
Bromomethane	955	---	500	ug/kg	50	1000	---	96	80-120%	---	---	
2-Butanone (MEK)	1860	---	500	ug/kg	50	2000	---	93	80-120%	---	---	
n-Butylbenzene	1110	---	50.0	ug/kg	50	1000	---	111	80-120%	---	---	
sec-Butylbenzene	1120	---	50.0	ug/kg	50	1000	---	112	80-120%	---	---	
tert-Butylbenzene	1100	---	50.0	ug/kg	50	1000	---	110	80-120%	---	---	
Carbon disulfide	980	---	500	ug/kg	50	1000	---	98	80-120%	---	---	
Carbon tetrachloride	1050	---	50.0	ug/kg	50	1000	---	105	80-120%	---	---	
Chlorobenzene	1030	---	25.0	ug/kg	50	1000	---	103	80-120%	---	---	
Chloroethane	858	---	500	ug/kg	50	1000	---	86	80-120%	---	---	
Chloroform	966	---	50.0	ug/kg	50	1000	---	97	80-120%	---	---	
Chloromethane	902	---	250	ug/kg	50	1000	---	90	80-120%	---	---	
2-Chlorotoluene	1090	---	50.0	ug/kg	50	1000	---	109	80-120%	---	---	
4-Chlorotoluene	1080	---	50.0	ug/kg	50	1000	---	108	80-120%	---	---	
Dibromochloromethane	922	---	100	ug/kg	50	1000	---	92	80-120%	---	---	
1,2-Dibromo-3-chloropropane	975	---	250	ug/kg	50	1000	---	98	80-120%	---	---	
1,2-Dibromoethane (EDB)	1120	---	50.0	ug/kg	50	1000	---	112	80-120%	---	---	
Dibromomethane	986	---	50.0	ug/kg	50	1000	---	99	80-120%	---	---	
1,2-Dichlorobenzene	1030	---	25.0	ug/kg	50	1000	---	103	80-120%	---	---	
1,3-Dichlorobenzene	1030	---	25.0	ug/kg	50	1000	---	103	80-120%	---	---	
1,4-Dichlorobenzene	1030	---	25.0	ug/kg	50	1000	---	103	80-120%	---	---	
Dichlorodifluoromethane	984	---	100	ug/kg	50	1000	---	98	80-120%	---	---	
1,1-Dichloroethane	1030	---	25.0	ug/kg	50	1000	---	103	80-120%	---	---	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
LCS (9060533-BS1)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 10:28									
1,2-Dichloroethane (EDC)	988	---	25.0	ug/kg	50	1000	---	99	80-120%	---	---	
1,1-Dichloroethene	1040	---	25.0	ug/kg	50	1000	---	104	80-120%	---	---	
cis-1,2-Dichloroethene	988	---	25.0	ug/kg	50	1000	---	99	80-120%	---	---	
trans-1,2-Dichloroethene	1020	---	25.0	ug/kg	50	1000	---	102	80-120%	---	---	
1,2-Dichloropropane	992	---	25.0	ug/kg	50	1000	---	99	80-120%	---	---	
1,3-Dichloropropane	1060	---	50.0	ug/kg	50	1000	---	106	80-120%	---	---	
2,2-Dichloropropane	1140	---	50.0	ug/kg	50	1000	---	114	80-120%	---	---	
1,1-Dichloropropene	970	---	50.0	ug/kg	50	1000	---	97	80-120%	---	---	
cis-1,3-Dichloropropene	1120	---	50.0	ug/kg	50	1000	---	112	80-120%	---	---	
trans-1,3-Dichloropropene	1110	---	50.0	ug/kg	50	1000	---	111	80-120%	---	---	
Ethylbenzene	1050	---	25.0	ug/kg	50	1000	---	105	80-120%	---	---	
Hexachlorobutadiene	1200	---	100	ug/kg	50	1000	---	120	80-120%	---	---	
2-Hexanone	1980	---	500	ug/kg	50	2000	---	99	80-120%	---	---	
Isopropylbenzene	1070	---	50.0	ug/kg	50	1000	---	107	80-120%	---	---	
4-Isopropyltoluene	1120	---	50.0	ug/kg	50	1000	---	112	80-120%	---	---	
Methylene chloride	712	---	250	ug/kg	50	1000	---	**71**	**80-120%**	---	---	Q-55
4-Methyl-2-pentanone (MiBK)	1900	---	500	ug/kg	50	2000	---	95	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	947	---	50.0	ug/kg	50	1000	---	95	80-120%	---	---	
Naphthalene	1070	---	100	ug/kg	50	1000	---	107	80-120%	---	---	
n-Propylbenzene	1090	---	25.0	ug/kg	50	1000	---	109	80-120%	---	---	
Styrene	1100	---	50.0	ug/kg	50	1000	---	110	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1130	---	25.0	ug/kg	50	1000	---	113	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1050	---	50.0	ug/kg	50	1000	---	105	80-120%	---	---	
Tetrachloroethene (PCE)	1000	---	25.0	ug/kg	50	1000	---	100	80-120%	---	---	
Toluene	1020	---	50.0	ug/kg	50	1000	---	102	80-120%	---	---	
1,2,3-Trichlorobenzene	1120	---	250	ug/kg	50	1000	---	112	80-120%	---	---	
1,2,4-Trichlorobenzene	1080	---	250	ug/kg	50	1000	---	108	80-120%	---	---	
1,1,1-Trichloroethane	1030	---	25.0	ug/kg	50	1000	---	103	80-120%	---	---	
1,1,2-Trichloroethane	1100	---	25.0	ug/kg	50	1000	---	110	80-120%	---	---	
Trichloroethene (TCE)	930	---	25.0	ug/kg	50	1000	---	93	80-120%	---	---	
Trichlorofluoromethane	982	---	100	ug/kg	50	1000	---	98	80-120%	---	---	
1,2,3-Trichloropropane	1050	---	50.0	ug/kg	50	1000	---	105	80-120%	---	---	
1,2,4-Trimethylbenzene	1110	---	50.0	ug/kg	50	1000	---	111	80-120%	---	---	
1,3,5-Trimethylbenzene	1120	---	50.0	ug/kg	50	1000	---	112	80-120%	---	---	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
LCS (9060533-BS1)			Prepared: 06/04/19 09:03 Analyzed: 06/04/19 10:28									
Vinyl chloride	910	---	25.0	ug/kg	50	1000	---	91	80-120%	---	---	
m,p-Xylene	2160	---	50.0	ug/kg	50	2000	---	108	80-120%	---	---	
o-Xylene	1070	---	25.0	ug/kg	50	1000	---	107	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*100 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*				*"*			
Duplicate (9060533-DUP1)			Prepared: 05/29/19 11:20 Analyzed: 06/04/19 20:32									
QC Source Sample: Non-SDG (A9F0057-03)												
Acetone	ND	---	3560	ug/kg	200	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	1070	ug/kg	200	---	ND	---	---	---	30%	R-02
Benzene	ND	---	35.6	ug/kg	200	---	ND	---	---	---	30%	
Bromobenzene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Bromoform	ND	---	356	ug/kg	200	---	ND	---	---	---	30%	
Bromomethane	ND	---	1780	ug/kg	200	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	2670	ug/kg	200	---	ND	---	---	---	30%	R-02
n-Butylbenzene	**1210**	---	178	ug/kg	200	---	ND	---	---		**30%**	M-02, Q-04
sec-Butylbenzene	**407**	---	178	ug/kg	200	---	ND	---	---		**30%**	Q-04
tert-Butylbenzene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	1780	ug/kg	200	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
Chloroethane	ND	---	1780	ug/kg	200	---	ND	---	---	---	30%	
Chloroform	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Chloromethane	ND	---	889	ug/kg	200	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	356	ug/kg	200	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	889	ug/kg	200	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Dibromomethane	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Duplicate (9060533-DUP1)			Prepared: 05/29/19 11:20 Analyzed: 06/04/19 20:32									
QC Source Sample: Non-SDG (A9F0057-03)												
1,3-Dichlorobenzene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	356	ug/kg	200	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Ethylbenzene	**1440**	---	88.9	ug/kg	200	---	ND	---	---		**30%**	Q-04
Hexachlorobutadiene	ND	---	356	ug/kg	200	---	ND	---	---	---	30%	
2-Hexanone	ND	---	1780	ug/kg	200	---	ND	---	---	---	30%	
Isopropylbenzene	**919**	---	178	ug/kg	200	---	ND	---	---		**30%**	Q-04
4-Isopropyltoluene	**181**	---	178	ug/kg	200	---	ND	---	---		**30%**	M-02, Q-04
Methylene chloride	ND	---	889	ug/kg	200	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	1780	ug/kg	200	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Naphthalene	**1370**	---	356	ug/kg	200	---	ND	---	---		**30%**	Q-04
n-Propylbenzene	**4220**	---	88.9	ug/kg	200	---	ND	---	---		**30%**	Q-04
Styrene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
Toluene	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	889	ug/kg	200	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	889	ug/kg	200	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Duplicate (9060533-DUP1)			Prepared: 05/29/19 11:20 Analyzed: 06/04/19 20:32									
QC Source Sample: Non-SDG (A9F0057-03)												
Trichloroethene (TCE)	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	356	ug/kg	200	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	178	ug/kg	200	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	**11600**	---	178	ug/kg	200	---	ND	---	---		**30%**	Q-04
1,3,5-Trimethylbenzene	**6560**	---	178	ug/kg	200	---	ND	---	---		**30%**	Q-04
Vinyl chloride	ND	---	88.9	ug/kg	200	---	ND	---	---	---	30%	
m,p-Xylene	**3010**	---	178	ug/kg	200	---	ND	---	---		**30%**	Q-04
o-Xylene	**197**	---	88.9	ug/kg	200	---	ND	---	---		**30%**	Q-04
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 91 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*		*"*					
Duplicate (9060533-DUP2)			Prepared: 05/29/19 11:00 Analyzed: 06/04/19 21:27									
QC Source Sample: Non-SDG (A9F0057-02)												
Acetone	ND	---	38500	ug/kg	2000	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	15400	ug/kg	2000	---	ND	---	---	---	30%	R-02
Benzene	ND	---	385	ug/kg	2000	---	ND	---	---	---	30%	
Bromobenzene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Bromoform	ND	---	3850	ug/kg	2000	---	ND	---	---	---	30%	
Bromomethane	ND	---	19200	ug/kg	2000	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	44200	ug/kg	2000	---	ND	---	---	---	30%	R-02
n-Butylbenzene	**24000**	---	1920	ug/kg	2000	---	18700	---	---	25	30%	M-02
sec-Butylbenzene	**7980**	---	1920	ug/kg	2000	---	6190	---	---	25	30%	
tert-Butylbenzene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	19200	ug/kg	2000	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
Chloroethane	ND	---	19200	ug/kg	2000	---	ND	---	---	---	30%	
Chloroform	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Chloromethane	ND	---	9620	ug/kg	2000	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Duplicate (9060533-DUP2)			Prepared: 05/29/19 11:00 Analyzed: 06/04/19 21:27									
QC Source Sample: Non-SDG (A9F0057-02)												
4-Chlorotoluene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	3850	ug/kg	2000	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	9620	ug/kg	2000	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	3850	ug/kg	2000	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Ethylbenzene	**78100**	---	962	ug/kg	2000	---	62300	---	---	22	30%	
Hexachlorobutadiene	ND	---	3850	ug/kg	2000	---	ND	---	---	---	30%	
2-Hexanone	ND	---	19200	ug/kg	2000	---	ND	---	---	---	30%	
Isopropylbenzene	**19100**	---	1920	ug/kg	2000	---	15100	---	---	23	30%	
4-Isopropyltoluene	**2900**	---	1920	ug/kg	2000	---	2080	---	---	**33**	**30%**	M-02, Q-04
Methylene chloride	ND	---	9620	ug/kg	2000	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	19200	ug/kg	2000	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
Naphthalene	**52000**	---	3850	ug/kg	2000	---	43200	---	---	19	30%	
n-Propylbenzene	**98100**	---	962	ug/kg	2000	---	78300	---	---	22	30%	
Styrene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	5770	ug/kg	2000	---	ND	---	---	---	30%	R-02

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Duplicate (9060533-DUP2)			Prepared: 05/29/19 11:00 Analyzed: 06/04/19 21:27									
QC Source Sample: Non-SDG (A9F0057-02)												
Tetrachloroethene (PCE)	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
Toluene	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	9620	ug/kg	2000	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	9620	ug/kg	2000	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	3850	ug/kg	2000	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1920	ug/kg	2000	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	**348000**	---	1920	ug/kg	2000	---	285000	---	---	20	30%	
1,3,5-Trimethylbenzene	**160000**	---	1920	ug/kg	2000	---	128000	---	---	22	30%	
Vinyl chloride	ND	---	962	ug/kg	2000	---	ND	---	---	---	30%	
m,p-Xylene	**141000**	---	1920	ug/kg	2000	---	113000	---	---	22	30%	
o-Xylene	**8790**	---	962	ug/kg	2000	---	7010	---	---	23	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 92 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*102 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*		*"*					
Matrix Spike (9060533-MS1)			Prepared: 05/29/19 11:00 Analyzed: 06/04/19 14:33									**X**
QC Source Sample: Non-SDG (A9E0932-01)												
5035A/8260C												
Acetone	1760	---	928	ug/kg	50	1860	ND	95	36-164%	---	---	
Acrylonitrile	918	---	92.8	ug/kg	50	929	ND	99	65-134%	---	---	
Benzene	851	---	9.28	ug/kg	50	929	ND	92	77-121%	---	---	
Bromobenzene	1040	---	23.2	ug/kg	50	929	ND	112	78-121%	---	---	
Bromochloromethane	869	---	46.4	ug/kg	50	929	ND	94	78-125%	---	---	
Bromodichloromethane	855	---	46.4	ug/kg	50	929	ND	92	75-127%	---	---	
Bromoform	832	---	92.8	ug/kg	50	929	ND	90	67-132%	---	---	
Bromomethane	821	---	464	ug/kg	50	929	ND	88	53-143%	---	---	
2-Butanone (MEK)	1740	---	464	ug/kg	50	1860	ND	94	51-148%	---	---	
n-Butylbenzene	977	---	46.4	ug/kg	50	929	ND	105	70-128%	---	---	
sec-Butylbenzene	990	---	46.4	ug/kg	50	929	ND	107	73-126%	---	---	
tert-Butylbenzene	943	---	46.4	ug/kg	50	929	ND	101	73-125%	---	---	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Matrix Spike (9060533-MS1)			Prepared: 05/29/19 11:00		Analyzed: 06/04/19 14:33							X
QC Source Sample: Non-SDG (A9E0932-01)												
Carbon disulfide	821	---	464	ug/kg	50	929	ND	88	63-132%	---	---	
Carbon tetrachloride	847	---	46.4	ug/kg	50	929	ND	91	70-135%	---	---	
Chlorobenzene	947	---	23.2	ug/kg	50	929	ND	102	79-120%	---	---	
Chloroethane	691	---	464	ug/kg	50	929	ND	74	59-139%	---	---	
Chloroform	833	---	46.4	ug/kg	50	929	ND	90	78-123%	---	---	
Chloromethane	759	---	232	ug/kg	50	929	ND	82	50-136%	---	---	
2-Chlorotoluene	982	---	46.4	ug/kg	50	929	ND	106	75-122%	---	---	
4-Chlorotoluene	964	---	46.4	ug/kg	50	929	ND	104	72-124%	---	---	
Dibromochloromethane	869	---	92.8	ug/kg	50	929	ND	94	74-126%	---	---	
1,2-Dibromo-3-chloropropane	934	---	232	ug/kg	50	929	ND	101	61-132%	---	---	
1,2-Dibromoethane (EDB)	1050	---	46.4	ug/kg	50	929	ND	113	78-122%	---	---	
Dibromomethane	901	---	46.4	ug/kg	50	929	ND	97	78-125%	---	---	
1,2-Dichlorobenzene	943	---	23.2	ug/kg	50	929	ND	102	78-121%	---	---	
1,3-Dichlorobenzene	947	---	23.2	ug/kg	50	929	ND	102	77-121%	---	---	
1,4-Dichlorobenzene	945	---	23.2	ug/kg	50	929	ND	102	75-120%	---	---	
Dichlorodifluoromethane	840	---	92.8	ug/kg	50	929	ND	90	29-149%	---	---	
1,1-Dichloroethane	889	---	23.2	ug/kg	50	929	ND	96	76-125%	---	---	
1,2-Dichloroethane (EDC)	818	---	23.2	ug/kg	50	929	ND	88	73-128%	---	---	
1,1-Dichloroethene	873	---	23.2	ug/kg	50	929	ND	94	70-131%	---	---	
cis-1,2-Dichloroethene	850	---	23.2	ug/kg	50	929	ND	92	77-123%	---	---	
trans-1,2-Dichloroethene	878	---	23.2	ug/kg	50	929	ND	94	74-125%	---	---	
1,2-Dichloropropane	864	---	23.2	ug/kg	50	929	ND	93	76-123%	---	---	
1,3-Dichloropropane	988	---	46.4	ug/kg	50	929	ND	106	77-121%	---	---	
2,2-Dichloropropane	915	---	46.4	ug/kg	50	929	ND	99	67-133%	---	---	
1,1-Dichloropropene	842	---	46.4	ug/kg	50	929	ND	91	76-125%	---	---	
cis-1,3-Dichloropropene	1020	---	46.4	ug/kg	50	929	ND	110	74-126%	---	---	
trans-1,3-Dichloropropene	985	---	46.4	ug/kg	50	929	ND	106	71-130%	---	---	
Ethylbenzene	960	---	23.2	ug/kg	50	929	ND	103	76-122%	---	---	
Hexachlorobutadiene	1120	---	92.8	ug/kg	50	929	ND	120	61-135%	---	---	
2-Hexanone	1850	---	464	ug/kg	50	1860	ND	99	53-145%	---	---	
Isopropylbenzene	984	---	46.4	ug/kg	50	929	ND	106	68-134%	---	---	
4-Isopropyltoluene	1010	---	46.4	ug/kg	50	929	ND	109	73-127%	---	---	
Methylene chloride	634	---	232	ug/kg	50	929	ND	**68**	**70-128%**	---	---	Q-54c

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060533 - EPA 5035A							**Soil**					
Matrix Spike (9060533-MS1)			Prepared: 05/29/19 11:00		Analyzed: 06/04/19 14:33							X
QC Source Sample: Non-SDG (A9E0932-01)												
4-Methyl-2-pentanone (MiBK)	1790	---	464	ug/kg	50	1860	ND	96	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	847	---	46.4	ug/kg	50	929	ND	91	73-125%	---	---	
Naphthalene	1060	---	92.8	ug/kg	50	929	ND	115	62-129%	---	---	
n-Propylbenzene	968	---	23.2	ug/kg	50	929	ND	104	73-125%	---	---	
Styrene	1050	---	46.4	ug/kg	50	929	ND	113	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1030	---	23.2	ug/kg	50	929	ND	111	78-125%	---	---	
1,1,2,2-Tetrachloroethane	928	---	46.4	ug/kg	50	929	ND	100	70-124%	---	---	
Tetrachloroethene (PCE)	950	---	23.2	ug/kg	50	929	ND	102	73-128%	---	---	
Toluene	936	---	46.4	ug/kg	50	929	ND	101	77-121%	---	---	
1,2,3-Trichlorobenzene	1040	---	232	ug/kg	50	929	ND	112	66-130%	---	---	
1,2,4-Trichlorobenzene	1020	---	232	ug/kg	50	929	ND	109	67-129%	---	---	
1,1,1-Trichloroethane	860	---	23.2	ug/kg	50	929	ND	93	73-130%	---	---	
1,1,2-Trichloroethane	1030	---	23.2	ug/kg	50	929	ND	111	78-121%	---	---	
Trichloroethene (TCE)	888	---	23.2	ug/kg	50	929	ND	96	77-123%	---	---	
Trichlorofluoromethane	628	---	92.8	ug/kg	50	929	ND	68	62-140%	---	---	
1,2,3-Trichloropropane	973	---	46.4	ug/kg	50	929	ND	105	73-125%	---	---	
1,2,4-Trimethylbenzene	988	---	46.4	ug/kg	50	929	ND	106	75-123%	---	---	
1,3,5-Trimethylbenzene	1010	---	46.4	ug/kg	50	929	ND	108	73-124%	---	---	
Vinyl chloride	819	---	23.2	ug/kg	50	929	ND	88	56-135%	---	---	
m,p-Xylene	1940	---	46.4	ug/kg	50	1860	ND	104	77-124%	---	---	
o-Xylene	960	---	23.2	ug/kg	50	929	ND	103	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 92 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*99 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	A9E0785 - 06 19 19 1744

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
Blank (9060582-BLK1)			Prepared: 06/05/19 13:00 Analyzed: 06/05/19 14:47									
5035A/8260C												
Acetone	ND	---	667	ug/kg	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	ug/kg	50	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Bromoform	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
Bromomethane	ND	---	333	ug/kg	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	ug/kg	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Chloroethane	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Chloroform	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Chloromethane	ND	---	167	ug/kg	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	ug/kg	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	

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Philip Nerenberg, Lab Director

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
Blank (9060582-BLK1)			Prepared: 06/05/19 13:00 Analyzed: 06/05/19 14:47									
1,2-Dichloropropane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
2-Hexanone	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Methylene chloride	ND	---	167	ug/kg	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	ug/kg	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Styrene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	ug/kg	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	ug/kg	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	ug/kg	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	ug/kg	50	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	ug/kg	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 90 %* *Limits: 80-120 %* *Dilution: 1x*

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
Blank (9060582-BLK1)				Prepared: 06/05/19 13:00 Analyzed: 06/05/19 14:47								
Surr: Toluene-d8 (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*				*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*				*"*				
LCS (9060582-BS1)				Prepared: 06/05/19 13:00 Analyzed: 06/05/19 13:52								
5035A/8260C												
Acetone	1680	---	1000	ug/kg	50	2000	---	84	80-120%	---	---	
Acrylonitrile	893	---	100	ug/kg	50	1000	---	89	80-120%	---	---	
Benzene	867	---	10.0	ug/kg	50	1000	---	87	80-120%	---	---	
Bromobenzene	1060	---	25.0	ug/kg	50	1000	---	106	80-120%	---	---	
Bromochloromethane	894	---	50.0	ug/kg	50	1000	---	89	80-120%	---	---	
Bromodichloromethane	899	---	50.0	ug/kg	50	1000	---	90	80-120%	---	---	
Bromoform	864	---	100	ug/kg	50	1000	---	86	80-120%	---	---	
Bromomethane	884	---	500	ug/kg	50	1000	---	88	80-120%	---	---	
2-Butanone (MEK)	1700	---	500	ug/kg	50	2000	---	85	80-120%	---	---	
n-Butylbenzene	1060	---	50.0	ug/kg	50	1000	---	106	80-120%	---	---	
sec-Butylbenzene	1060	---	50.0	ug/kg	50	1000	---	106	80-120%	---	---	
tert-Butylbenzene	1020	---	50.0	ug/kg	50	1000	---	102	80-120%	---	---	
Carbon disulfide	872	---	500	ug/kg	50	1000	---	87	80-120%	---	---	
Carbon tetrachloride	925	---	50.0	ug/kg	50	1000	---	92	80-120%	---	---	
Chlorobenzene	1010	---	25.0	ug/kg	50	1000	---	101	80-120%	---	---	
Chloroethane	658	---	500	ug/kg	50	1000	---	**66**	**80-120%**	---	---	Q-55
Chloroform	830	---	50.0	ug/kg	50	1000	---	83	80-120%	---	---	
Chloromethane	782	---	250	ug/kg	50	1000	---	**78**	**80-120%**	---	---	Q-55
2-Chlorotoluene	1040	---	50.0	ug/kg	50	1000	---	104	80-120%	---	---	
4-Chlorotoluene	1000	---	50.0	ug/kg	50	1000	---	100	80-120%	---	---	
Dibromochloromethane	906	---	100	ug/kg	50	1000	---	91	80-120%	---	---	
1,2-Dibromo-3-chloropropane	942	---	250	ug/kg	50	1000	---	94	80-120%	---	---	
1,2-Dibromoethane (EDB)	1060	---	50.0	ug/kg	50	1000	---	106	80-120%	---	---	
Dibromomethane	874	---	50.0	ug/kg	50	1000	---	87	80-120%	---	---	
1,2-Dichlorobenzene	980	---	25.0	ug/kg	50	1000	---	98	80-120%	---	---	
1,3-Dichlorobenzene	996	---	25.0	ug/kg	50	1000	---	100	80-120%	---	---	
1,4-Dichlorobenzene	988	---	25.0	ug/kg	50	1000	---	99	80-120%	---	---	
Dichlorodifluoromethane	843	---	100	ug/kg	50	1000	---	84	80-120%	---	---	
1,1-Dichloroethane	883	---	25.0	ug/kg	50	1000	---	88	80-120%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
LCS (9060582-BS1)			Prepared: 06/05/19 13:00 Analyzed: 06/05/19 13:52									
1,2-Dichloroethane (EDC)	862	---	25.0	ug/kg	50	1000	---	86	80-120%	---	---	
1,1-Dichloroethene	924	---	25.0	ug/kg	50	1000	---	92	80-120%	---	---	
cis-1,2-Dichloroethene	886	---	25.0	ug/kg	50	1000	---	89	80-120%	---	---	
trans-1,2-Dichloroethene	913	---	25.0	ug/kg	50	1000	---	91	80-120%	---	---	
1,2-Dichloropropane	886	---	25.0	ug/kg	50	1000	---	89	80-120%	---	---	
1,3-Dichloropropane	1040	---	50.0	ug/kg	50	1000	---	104	80-120%	---	---	
2,2-Dichloropropane	1000	---	50.0	ug/kg	50	1000	---	100	80-120%	---	---	
1,1-Dichloropropene	886	---	50.0	ug/kg	50	1000	---	89	80-120%	---	---	
cis-1,3-Dichloropropene	1100	---	50.0	ug/kg	50	1000	---	110	80-120%	---	---	
trans-1,3-Dichloropropene	1060	---	50.0	ug/kg	50	1000	---	106	80-120%	---	---	
Ethylbenzene	1000	---	25.0	ug/kg	50	1000	---	100	80-120%	---	---	
Hexachlorobutadiene	1120	---	100	ug/kg	50	1000	---	112	80-120%	---	---	
2-Hexanone	1900	---	500	ug/kg	50	2000	---	95	80-120%	---	---	
Isopropylbenzene	1040	---	50.0	ug/kg	50	1000	---	104	80-120%	---	---	
4-Isopropyltoluene	1110	---	50.0	ug/kg	50	1000	---	111	80-120%	---	---	
Methylene chloride	560	---	250	ug/kg	50	1000	---	**56**	**80-120%**	---	---	Q-55
4-Methyl-2-pentanone (MiBK)	1830	---	500	ug/kg	50	2000	---	91	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	863	---	50.0	ug/kg	50	1000	---	86	80-120%	---	---	
Naphthalene	1050	---	100	ug/kg	50	1000	---	105	80-120%	---	---	
n-Propylbenzene	1040	---	25.0	ug/kg	50	1000	---	104	80-120%	---	---	
Styrene	1060	---	50.0	ug/kg	50	1000	---	106	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1080	---	25.0	ug/kg	50	1000	---	108	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1000	---	50.0	ug/kg	50	1000	---	100	80-120%	---	---	
Tetrachloroethene (PCE)	1030	---	25.0	ug/kg	50	1000	---	103	80-120%	---	---	
Toluene	981	---	50.0	ug/kg	50	1000	---	98	80-120%	---	---	
1,2,3-Trichlorobenzene	1100	---	250	ug/kg	50	1000	---	110	80-120%	---	---	
1,2,4-Trichlorobenzene	1080	---	250	ug/kg	50	1000	---	108	80-120%	---	---	
1,1,1-Trichloroethane	904	---	25.0	ug/kg	50	1000	---	90	80-120%	---	---	
1,1,2-Trichloroethane	1050	---	25.0	ug/kg	50	1000	---	105	80-120%	---	---	
Trichloroethene (TCE)	878	---	25.0	ug/kg	50	1000	---	88	80-120%	---	---	
Trichlorofluoromethane	714	---	100	ug/kg	50	1000	---	**71**	**80-120%**	---	---	Q-55
1,2,3-Trichloropropane	984	---	50.0	ug/kg	50	1000	---	98	80-120%	---	---	
1,2,4-Trimethylbenzene	1030	---	50.0	ug/kg	50	1000	---	103	80-120%	---	---	
1,3,5-Trimethylbenzene	1080	---	50.0	ug/kg	50	1000	---	108	80-120%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
LCS (9060582-BS1)			Prepared: 06/05/19 13:00 Analyzed: 06/05/19 13:52									
Vinyl chloride	821	---	25.0	ug/kg	50	1000	---	82	80-120%	---	---	
m,p-Xylene	2030	---	50.0	ug/kg	50	2000	---	102	80-120%	---	---	
o-Xylene	1010	---	25.0	ug/kg	50	1000	---	101	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*101 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			
Duplicate (9060582-DUP1)			Prepared: 05/29/19 16:30 Analyzed: 06/05/19 21:14									
QC Source Sample: Non-SDG (A9F0057-09)												
Acetone	ND	---	836	ug/kg	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	167	ug/kg	50	---	ND	---	---	---	30%	R-02
Benzene	ND	---	8.36	ug/kg	50	---	ND	---	---	---	**30%**	Q-05
Bromobenzene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Bromoform	ND	---	83.6	ug/kg	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	418	ug/kg	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	418	ug/kg	50	---	ND	---	---	---	30%	
n-Butylbenzene	**96.6**	---	41.8	ug/kg	50	---	73.9	---	---	27	30%	M-02
sec-Butylbenzene	ND	---	41.8	ug/kg	50	---	28.9	---	---	***	30%	
tert-Butylbenzene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	418	ug/kg	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	418	ug/kg	50	---	ND	---	---	---	30%	
Chloroform	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	209	ug/kg	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	83.6	ug/kg	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	209	ug/kg	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
Duplicate (9060582-DUP1)			Prepared: 05/29/19 16:30 Analyzed: 06/05/19 21:14									
QC Source Sample: Non-SDG (A9F0057-09)												
1,3-Dichlorobenzene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	83.6	ug/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Ethylbenzene	**472**	---	20.9	ug/kg	50	---	413	---	---	13	30%	
Hexachlorobutadiene	ND	---	83.6	ug/kg	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	418	ug/kg	50	---	ND	---	---	---	30%	
Isopropylbenzene	**99.1**	---	41.8	ug/kg	50	---	78.8	---	---	23	30%	
4-Isopropyltoluene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	209	ug/kg	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	418	ug/kg	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Naphthalene	**473**	---	83.6	ug/kg	50	---	367	---	---	25	30%	
n-Propylbenzene	**490**	---	20.9	ug/kg	50	---	378	---	---	26	30%	
Styrene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
Toluene	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	209	ug/kg	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	209	ug/kg	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
Duplicate (9060582-DUP1)			Prepared: 05/29/19 16:30 Analyzed: 06/05/19 21:14									
QC Source Sample: Non-SDG (A9F0057-09)												
Trichloroethene (TCE)	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	83.6	ug/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	41.8	ug/kg	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	**2620**	---	41.8	ug/kg	50	---	2030	---	---	25	30%	
1,3,5-Trimethylbenzene	**898**	---	41.8	ug/kg	50	---	685	---	---	27	30%	
Vinyl chloride	ND	---	20.9	ug/kg	50	---	ND	---	---	---	30%	
m,p-Xylene	**1350**	---	41.8	ug/kg	50	---	1170	---	---	14	30%	
o-Xylene	**269**	---	20.9	ug/kg	50	---	250	---	---	7	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*		*"*					
Matrix Spike (9060582-MS1)			Prepared: 05/29/19 17:30 Analyzed: 06/05/19 22:09									
QC Source Sample: Non-SDG (A9F0057-10)												
5035A/8260C												
Acetone	1980	---	1050	ug/kg	50	2100	ND	94	36-164%	---	---	
Acrylonitrile	1000	---	105	ug/kg	50	1050	ND	95	65-134%	---	---	
Benzene	937	---	10.5	ug/kg	50	1050	ND	89	77-121%	---	---	
Bromobenzene	1160	---	26.3	ug/kg	50	1050	ND	110	78-121%	---	---	
Bromochloromethane	988	---	52.5	ug/kg	50	1050	ND	94	78-125%	---	---	
Bromodichloromethane	944	---	52.5	ug/kg	50	1050	ND	90	75-127%	---	---	
Bromoform	871	---	105	ug/kg	50	1050	ND	83	67-132%	---	---	
Bromomethane	919	---	525	ug/kg	50	1050	ND	87	53-143%	---	---	
2-Butanone (MEK)	1900	---	525	ug/kg	50	2100	ND	90	51-148%	---	---	
n-Butylbenzene	1110	---	52.5	ug/kg	50	1050	ND	105	70-128%	---	---	
sec-Butylbenzene	1120	---	52.5	ug/kg	50	1050	ND	106	73-126%	---	---	
tert-Butylbenzene	1110	---	52.5	ug/kg	50	1050	ND	105	73-125%	---	---	
Carbon disulfide	906	---	525	ug/kg	50	1050	ND	86	63-132%	---	---	
Carbon tetrachloride	968	---	52.5	ug/kg	50	1050	ND	92	70-135%	---	---	
Chlorobenzene	1090	---	26.3	ug/kg	50	1050	ND	104	79-120%	---	---	
Chloroethane	822	---	525	ug/kg	50	1050	ND	78	59-139%	---	---	Q-54
Chloroform	941	---	52.5	ug/kg	50	1050	ND	90	78-123%	---	---	
Chloromethane	848	---	263	ug/kg	50	1050	ND	81	50-136%	---	---	Q-54a

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
Matrix Spike (9060582-MS1)			Prepared: 05/29/19 17:30 Analyzed: 06/05/19 22:09									
QC Source Sample: Non-SDG (A9F0057-10)												
2-Chlorotoluene	1100	---	52.5	ug/kg	50	1050	ND	105	75-122%	---	---	
4-Chlorotoluene	1090	---	52.5	ug/kg	50	1050	ND	104	72-124%	---	---	
Dibromochloromethane	950	---	105	ug/kg	50	1050	ND	90	74-126%	---	---	
1,2-Dibromo-3-chloropropane	935	---	263	ug/kg	50	1050	ND	89	61-132%	---	---	
1,2-Dibromoethane (EDB)	1120	---	52.5	ug/kg	50	1050	ND	107	78-122%	---	---	
Dibromomethane	954	---	52.5	ug/kg	50	1050	ND	91	78-125%	---	---	
1,2-Dichlorobenzene	1050	---	26.3	ug/kg	50	1050	ND	100	78-121%	---	---	
1,3-Dichlorobenzene	1060	---	26.3	ug/kg	50	1050	ND	101	77-121%	---	---	
1,4-Dichlorobenzene	1040	---	26.3	ug/kg	50	1050	ND	99	75-120%	---	---	
Dichlorodifluoromethane	966	---	105	ug/kg	50	1050	ND	92	29-149%	---	---	
1,1-Dichloroethane	1030	---	26.3	ug/kg	50	1050	ND	98	76-125%	---	---	
1,2-Dichloroethane (EDC)	974	---	26.3	ug/kg	50	1050	ND	93	73-128%	---	---	
1,1-Dichloroethene	1020	---	26.3	ug/kg	50	1050	ND	97	70-131%	---	---	
cis-1,2-Dichloroethene	988	---	26.3	ug/kg	50	1050	ND	94	77-123%	---	---	
trans-1,2-Dichloroethene	1020	---	26.3	ug/kg	50	1050	ND	97	74-125%	---	---	
1,2-Dichloropropane	958	---	26.3	ug/kg	50	1050	ND	91	76-123%	---	---	
1,3-Dichloropropane	1100	---	52.5	ug/kg	50	1050	ND	105	77-121%	---	---	
2,2-Dichloropropane	954	---	52.5	ug/kg	50	1050	ND	91	67-133%	---	---	
1,1-Dichloropropene	963	---	52.5	ug/kg	50	1050	ND	92	76-125%	---	---	
cis-1,3-Dichloropropene	1140	---	52.5	ug/kg	50	1050	ND	109	74-126%	---	---	
trans-1,3-Dichloropropene	1100	---	52.5	ug/kg	50	1050	ND	105	71-130%	---	---	
Ethylbenzene	1070	---	26.3	ug/kg	50	1050	ND	102	76-122%	---	---	
Hexachlorobutadiene	1130	---	105	ug/kg	50	1050	ND	107	61-135%	---	---	
2-Hexanone	2010	---	525	ug/kg	50	2100	ND	96	53-145%	---	---	
Isopropylbenzene	1110	---	52.5	ug/kg	50	1050	ND	105	68-134%	---	---	
4-Isopropyltoluene	1150	---	52.5	ug/kg	50	1050	ND	109	73-127%	---	---	
Methylene chloride	649	---	263	ug/kg	50	1050	ND	**62**	**70-128%**	---	---	Q-54b
4-Methyl-2-pentanone (MiBK)	1970	---	525	ug/kg	50	2100	ND	94	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	923	---	52.5	ug/kg	50	1050	ND	88	73-125%	---	---	
Naphthalene	1070	---	105	ug/kg	50	1050	ND	101	62-129%	---	---	
n-Propylbenzene	1110	---	26.3	ug/kg	50	1050	ND	106	73-125%	---	---	
Styrene	1120	---	52.5	ug/kg	50	1050	ND	107	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1130	---	26.3	ug/kg	50	1050	ND	108	78-125%	---	---	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060582 - EPA 5035A							**Soil**					
Matrix Spike (9060582-MS1)			Prepared: 05/29/19 17:30 Analyzed: 06/05/19 22:09									
QC Source Sample: Non-SDG (A9F0057-10)												
1,1,2,2-Tetrachloroethane	963	---	52.5	ug/kg	50	1050	ND	92	70-124%	---	---	
Tetrachloroethene (PCE)	1090	---	26.3	ug/kg	50	1050	ND	104	73-128%	---	---	
Toluene	1070	---	52.5	ug/kg	50	1050	ND	101	77-121%	---	---	
1,2,3-Trichlorobenzene	1110	---	263	ug/kg	50	1050	ND	106	66-130%	---	---	
1,2,4-Trichlorobenzene	1100	---	263	ug/kg	50	1050	ND	105	67-129%	---	---	
1,1,1-Trichloroethane	984	---	26.3	ug/kg	50	1050	ND	94	73-130%	---	---	
1,1,2-Trichloroethane	1120	---	26.3	ug/kg	50	1050	ND	106	78-121%	---	---	
Trichloroethene (TCE)	988	---	26.3	ug/kg	50	1050	ND	94	77-123%	---	---	
Trichlorofluoromethane	807	---	105	ug/kg	50	1050	ND	77	62-140%	---	---	Q-54c
1,2,3-Trichloropropane	1040	---	52.5	ug/kg	50	1050	ND	99	73-125%	---	---	
1,2,4-Trimethylbenzene	1120	---	52.5	ug/kg	50	1050	ND	106	75-123%	---	---	
1,3,5-Trimethylbenzene	1150	---	52.5	ug/kg	50	1050	ND	109	73-124%	---	---	
Vinyl chloride	919	---	26.3	ug/kg	50	1050	ND	87	56-135%	---	---	
m,p-Xylene	2180	---	52.5	ug/kg	50	2100	ND	104	77-124%	---	---	
o-Xylene	1080	---	26.3	ug/kg	50	1050	ND	103	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*101 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*				*"*			

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Blank (9060589-BLK1)			Prepared: 06/05/19 09:09 Analyzed: 06/05/19 11:45									
1312/8260C												
Acetone	ND	---	0.0200	mg/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.000250	mg/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Bromoform	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	0.00500	mg/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.0100	mg/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	0.00500	mg/L	1	---	---	---	---	---	---	
Chloroform	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	0.00500	mg/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.00500	mg/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,2-Dichloropropane	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Blank (9060589-BLK1)			Prepared: 06/05/19 09:09		Analyzed: 06/05/19 11:45							
2,2-Dichloropropane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.00500	mg/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	0.0100	mg/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.0100	mg/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	0.00500	mg/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.00200	mg/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Styrene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Toluene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.00200	mg/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.00200	mg/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.00200	mg/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.00100	mg/L	1	---	---	---	---	---	---	
o-Xylene	ND	---	0.000500	mg/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr)	*Recovery: 106 %*	*Limits: 80-120 %*	*Dilution: 1x*	
Toluene-d8 (Surr)	*101 %*	*80-120 %*	*"*	
4-Bromofluorobenzene (Surr)	*100 %*	*80-120 %*	*"*	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
LCS (9060589-BS1)			Prepared: 06/05/19 09:09		Analyzed: 06/05/19 10:51							
1312/8260C												
Acetone	0.0403	---	0.0200	mg/L	1	0.0400	---	101	70-130%	---	---	
Benzene	0.0203	---	0.000250	mg/L	1	0.0200	---	101	70-130%	---	---	
Bromobenzene	0.0204	---	0.000500	mg/L	1	0.0200	---	102	70-130%	---	---	
Bromochloromethane	0.0231	---	0.00100	mg/L	1	0.0200	---	116	70-130%	---	---	
Bromodichloromethane	0.0225	---	0.00100	mg/L	1	0.0200	---	113	70-130%	---	---	
Bromoform	0.0246	---	0.00100	mg/L	1	0.0200	---	123	70-130%	---	---	
Bromomethane	0.0233	---	0.00500	mg/L	1	0.0200	---	117	70-130%	---	---	
2-Butanone (MEK)	0.0427	---	0.0100	mg/L	1	0.0400	---	107	70-130%	---	---	
n-Butylbenzene	0.0197	---	0.00100	mg/L	1	0.0200	---	99	70-130%	---	---	
sec-Butylbenzene	0.0189	---	0.00100	mg/L	1	0.0200	---	94	70-130%	---	---	
tert-Butylbenzene	0.0178	---	0.00100	mg/L	1	0.0200	---	89	70-130%	---	---	
Carbon tetrachloride	0.0206	---	0.00100	mg/L	1	0.0200	---	103	70-130%	---	---	
Chlorobenzene	0.0203	---	0.000500	mg/L	1	0.0200	---	102	70-130%	---	---	
Chloroethane	0.0151	---	0.00500	mg/L	1	0.0200	---	76	70-130%	---	---	
Chloroform	0.0211	---	0.00100	mg/L	1	0.0200	---	106	70-130%	---	---	
Chloromethane	0.0229	---	0.00500	mg/L	1	0.0200	---	114	70-130%	---	---	
2-Chlorotoluene	0.0191	---	0.00100	mg/L	1	0.0200	---	95	70-130%	---	---	
4-Chlorotoluene	0.0190	---	0.00100	mg/L	1	0.0200	---	95	70-130%	---	---	
1,2-Dibromo-3-chloropropane	0.0199	---	0.00500	mg/L	1	0.0200	---	99	70-130%	---	---	
Dibromochloromethane	0.0202	---	0.00100	mg/L	1	0.0200	---	101	70-130%	---	---	
1,2-Dibromoethane (EDB)	0.0208	---	0.000500	mg/L	1	0.0200	---	104	70-130%	---	---	
Dibromomethane	0.0224	---	0.00100	mg/L	1	0.0200	---	112	70-130%	---	---	
1,2-Dichlorobenzene	0.0202	---	0.000500	mg/L	1	0.0200	---	101	70-130%	---	---	
1,3-Dichlorobenzene	0.0201	---	0.000500	mg/L	1	0.0200	---	100	70-130%	---	---	
1,4-Dichlorobenzene	0.0198	---	0.000500	mg/L	1	0.0200	---	99	70-130%	---	---	
Dichlorodifluoromethane	0.0195	---	0.00100	mg/L	1	0.0200	---	97	70-130%	---	---	
1,1-Dichloroethane	0.0201	---	0.000500	mg/L	1	0.0200	---	100	70-130%	---	---	
1,2-Dichloroethane (EDC)	0.0217	---	0.000500	mg/L	1	0.0200	---	109	70-130%	---	---	
1,1-Dichloroethene	0.0183	---	0.000500	mg/L	1	0.0200	---	92	70-130%	---	---	
cis-1,2-Dichloroethene	0.0205	---	0.000500	mg/L	1	0.0200	---	102	70-130%	---	---	
trans-1,2-Dichloroethene	0.0200	---	0.000500	mg/L	1	0.0200	---	100	70-130%	---	---	
1,2-Dichloropropane	0.0211	---	0.000500	mg/L	1	0.0200	---	106	70-130%	---	---	
1,3-Dichloropropane	0.0202	---	0.00100	mg/L	1	0.0200	---	101	70-130%	---	---	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
LCS (9060589-BS1)			Prepared: 06/05/19 09:09			Analyzed: 06/05/19 10:51						
2,2-Dichloropropane	0.0167	---	0.00100	mg/L	1	0.0200	---	83	70-130%	---	---	
1,1-Dichloropropene	0.0192	---	0.00100	mg/L	1	0.0200	---	96	70-130%	---	---	
cis-1,3-Dichloropropene	0.0191	---	0.00100	mg/L	1	0.0200	---	96	70-130%	---	---	
trans-1,3-Dichloropropene	0.0182	---	0.00100	mg/L	1	0.0200	---	91	70-130%	---	---	
Ethylbenzene	0.0189	---	0.000500	mg/L	1	0.0200	---	95	70-130%	---	---	
Hexachlorobutadiene	0.0197	---	0.00500	mg/L	1	0.0200	---	99	70-130%	---	---	
2-Hexanone	0.0402	---	0.0100	mg/L	1	0.0400	---	101	70-130%	---	---	
Isopropylbenzene	0.0187	---	0.00100	mg/L	1	0.0200	---	94	70-130%	---	---	
4-Isopropyltoluene	0.0190	---	0.00100	mg/L	1	0.0200	---	95	70-130%	---	---	
4-Methyl-2-pentanone (MiBK)	0.0392	---	0.0100	mg/L	1	0.0400	---	98	70-130%	---	---	
Methyl tert-butyl ether (MTBE)	0.0174	---	0.00100	mg/L	1	0.0200	---	87	70-130%	---	---	
Methylene chloride	0.0187	---	0.00500	mg/L	1	0.0200	---	94	70-130%	---	---	
Naphthalene	0.0170	---	0.00200	mg/L	1	0.0200	---	85	70-130%	---	---	
n-Propylbenzene	0.0183	---	0.000500	mg/L	1	0.0200	---	92	70-130%	---	---	
Styrene	0.0207	---	0.00100	mg/L	1	0.0200	---	104	70-130%	---	---	
1,1,1,2-Tetrachloroethane	0.0200	---	0.000500	mg/L	1	0.0200	---	100	70-130%	---	---	
1,1,2,2-Tetrachloroethane	0.0219	---	0.000500	mg/L	1	0.0200	---	109	70-130%	---	---	
Tetrachloroethene (PCE)	0.0195	---	0.000500	mg/L	1	0.0200	---	97	70-130%	---	---	
Toluene	0.0188	---	0.00100	mg/L	1	0.0200	---	94	70-130%	---	---	
1,2,3-Trichlorobenzene	0.0204	---	0.00200	mg/L	1	0.0200	---	102	70-130%	---	---	
1,2,4-Trichlorobenzene	0.0188	---	0.00200	mg/L	1	0.0200	---	94	70-130%	---	---	
1,1,1-Trichloroethane	0.0193	---	0.000500	mg/L	1	0.0200	---	97	70-130%	---	---	
1,1,2-Trichloroethane	0.0215	---	0.000500	mg/L	1	0.0200	---	108	70-130%	---	---	
Trichloroethene (TCE)	0.0205	---	0.000500	mg/L	1	0.0200	---	102	70-130%	---	---	
Trichlorofluoromethane	0.0243	---	0.00200	mg/L	1	0.0200	---	121	70-130%	---	---	
1,2,3-Trichloropropane	0.0198	---	0.00100	mg/L	1	0.0200	---	99	70-130%	---	---	
1,2,4-Trimethylbenzene	0.0195	---	0.00100	mg/L	1	0.0200	---	97	70-130%	---	---	
1,3,5-Trimethylbenzene	0.0191	---	0.00100	mg/L	1	0.0200	---	95	70-130%	---	---	
Vinyl chloride	0.0195	---	0.000500	mg/L	1	0.0200	---	97	70-130%	---	---	
m,p-Xylene	0.0384	---	0.00100	mg/L	1	0.0400	---	96	70-130%	---	---	
o-Xylene	0.0182	---	0.000500	mg/L	1	0.0200	---	91	70-130%	---	---	

Surr: 1,4-Difluorobenzene (Surr)	*Recovery: 105 %*	*Limits: 80-120 %*	*Dilution: 1x*
Toluene-d8 (Surr)	*99 %*	*80-120 %*	*"*
4-Bromofluorobenzene (Surr)	*92 %*	*80-120 %*	*"*

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Duplicate (9060589-DUP2)			Prepared: 06/05/19 12:17 Analyzed: 06/05/19 14:00									
QC Source Sample: Non-SDG (A9E0723-01)												
Acetone	ND	---	2.00	mg/L	100	---	ND	---	---	---	30%	
Benzene	**3.20**	---	0.0250	mg/L	100	---	3.40	---	---	6	30%	
Bromobenzene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Bromoform	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.500	mg/L	100	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	1.00	mg/L	100	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.500	mg/L	100	---	ND	---	---	---	30%	
Chloroform	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.500	mg/L	100	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.500	mg/L	100	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Duplicate (9060589-DUP2)			Prepared: 06/05/19 12:17 Analyzed: 06/05/19 14:00									
QC Source Sample: Non-SDG (A9E0723-01)												
1,3-Dichloropropane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Ethylbenzene	**0.302**	---	0.0500	mg/L	100	---	0.310	---	---	3	30%	
Hexachlorobutadiene	ND	---	0.500	mg/L	100	---	ND	---	---	---	30%	
2-Hexanone	ND	---	1.00	mg/L	100	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	1.00	mg/L	100	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.500	mg/L	100	---	ND	---	---	---	30%	
Naphthalene	**12.8**	---	0.200	mg/L	100	---	13.9	---	---	8	30%	
n-Propylbenzene	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Styrene	**0.128**	---	0.100	mg/L	100	---	0.136	---	---	6	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Toluene	**1.37**	---	0.100	mg/L	100	---	1.46	---	---	6	30%	
1,2,3-Trichlorobenzene	ND	---	0.200	mg/L	100	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.200	mg/L	100	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.200	mg/L	100	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.100	mg/L	100	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.0500	mg/L	100	---	ND	---	---	---	30%	
m,p-Xylene	**0.390**	---	0.100	mg/L	100	---	0.419	---	---	7	30%	
o-Xylene	**0.125**	---	0.0500	mg/L	100	---	0.135	---	---	7	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*				*Dilution: 1x*			

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles												**Water**
Duplicate (9060589-DUP2)					Prepared: 06/05/19 12:17 Analyzed: 06/05/19 14:00							
QC Source Sample: Non-SDG (A9E0723-01)												
Surr: Toluene-d8 (Surr)				*Recovery: 100 %*	*Limits: 80-120 %*						*Dilution: 1x*	
4-Bromofluorobenzene (Surr)				*96 %*	*80-120 %*						*"*	
Matrix Spike (9060589-MS2)					Prepared: 06/05/19 12:17 Analyzed: 06/05/19 15:48							
QC Source Sample: Non-SDG (A9E0832-02)												
1312/8260C												
Acetone	18.8	---	10.0	mg/L	500	20.0	ND	94	70-130%	---	---	
Benzene	12.9	---	0.125	mg/L	500	10.0	2.31	106	70-130%	---	---	
Bromobenzene	10.2	---	0.250	mg/L	500	10.0	ND	102	70-130%	---	---	
Bromochloromethane	11.7	---	0.500	mg/L	500	10.0	ND	117	70-130%	---	---	
Bromodichloromethane	11.2	---	0.500	mg/L	500	10.0	ND	112	70-130%	---	---	
Bromoform	12.4	---	0.500	mg/L	500	10.0	ND	124	70-130%	---	---	
Bromomethane	12.5	---	2.50	mg/L	500	10.0	ND	125	70-130%	---	---	
2-Butanone (MEK)	20.4	---	5.00	mg/L	500	20.0	ND	102	70-130%	---	---	
n-Butylbenzene	10.5	---	0.500	mg/L	500	10.0	ND	105	70-130%	---	---	
sec-Butylbenzene	9.98	---	0.500	mg/L	500	10.0	ND	100	70-130%	---	---	
tert-Butylbenzene	9.14	---	0.500	mg/L	500	10.0	ND	91	70-130%	---	---	
Carbon tetrachloride	11.1	---	0.500	mg/L	500	10.0	ND	111	70-130%	---	---	
Chlorobenzene	10.7	---	0.250	mg/L	500	10.0	ND	107	70-130%	---	---	
Chloroethane	7.49	---	2.50	mg/L	500	10.0	ND	75	70-130%	---	---	
Chloroform	10.8	---	0.500	mg/L	500	10.0	ND	108	70-130%	---	---	
Chloromethane	11.0	---	2.50	mg/L	500	10.0	ND	110	70-130%	---	---	
2-Chlorotoluene	10.1	---	0.500	mg/L	500	10.0	ND	101	70-130%	---	---	
4-Chlorotoluene	9.63	---	0.500	mg/L	500	10.0	ND	96	70-130%	---	---	
1,2-Dibromo-3-chloropropane	9.58	---	2.50	mg/L	500	10.0	ND	96	70-130%	---	---	
Dibromochloromethane	10.4	---	0.500	mg/L	500	10.0	ND	104	70-130%	---	---	
1,2-Dibromoethane (EDB)	10.6	---	0.250	mg/L	500	10.0	ND	106	70-130%	---	---	
Dibromomethane	11.2	---	0.500	mg/L	500	10.0	ND	112	70-130%	---	---	
1,2-Dichlorobenzene	10.3	---	0.250	mg/L	500	10.0	ND	103	70-130%	---	---	
1,3-Dichlorobenzene	10.2	---	0.250	mg/L	500	10.0	ND	102	70-130%	---	---	
1,4-Dichlorobenzene	10.2	---	0.250	mg/L	500	10.0	ND	102	70-130%	---	---	
Dichlorodifluoromethane	10.6	---	0.500	mg/L	500	10.0	ND	106	70-130%	---	---	
1,1-Dichloroethane	10.3	---	0.250	mg/L	500	10.0	ND	103	70-130%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Matrix Spike (9060589-MS2)			Prepared: 06/05/19 12:17		Analyzed: 06/05/19 15:48							
QC Source Sample: Non-SDG (A9E0832-02)												
1,2-Dichloroethane (EDC)	10.6	---	0.250	mg/L	500	10.0	ND	106	70-130%	---	---	
1,1-Dichloroethene	9.78	---	0.250	mg/L	500	10.0	ND	98	70-130%	---	---	
cis-1,2-Dichloroethene	10.4	---	0.250	mg/L	500	10.0	ND	104	70-130%	---	---	
trans-1,2-Dichloroethene	10.3	---	0.250	mg/L	500	10.0	ND	103	70-130%	---	---	
1,2-Dichloropropane	10.6	---	0.250	mg/L	500	10.0	ND	106	70-130%	---	---	
1,3-Dichloropropane	10.4	---	0.500	mg/L	500	10.0	ND	104	70-130%	---	---	
2,2-Dichloropropane	8.60	---	0.500	mg/L	500	10.0	ND	86	70-130%	---	---	
1,1-Dichloropropene	10.3	---	0.500	mg/L	500	10.0	ND	103	70-130%	---	---	
cis-1,3-Dichloropropene	9.75	---	0.500	mg/L	500	10.0	ND	97	70-130%	---	---	
trans-1,3-Dichloropropene	9.23	---	0.500	mg/L	500	10.0	ND	92	70-130%	---	---	
Ethylbenzene	10.2	---	0.250	mg/L	500	10.0	0.180	100	70-130%	---	---	
Hexachlorobutadiene	10.7	---	2.50	mg/L	500	10.0	ND	107	70-130%	---	---	
2-Hexanone	19.5	---	5.00	mg/L	500	20.0	ND	97	70-130%	---	---	
Isopropylbenzene	10.3	---	0.500	mg/L	500	10.0	ND	103	70-130%	---	---	
4-Isopropyltoluene	9.92	---	0.500	mg/L	500	10.0	ND	99	70-130%	---	---	
4-Methyl-2-pentanone (MiBK)	19.2	---	5.00	mg/L	500	20.0	ND	96	70-130%	---	---	
Methyl tert-butyl ether (MTBE)	8.66	---	0.500	mg/L	500	10.0	ND	87	70-130%	---	---	
Methylene chloride	9.28	---	2.50	mg/L	500	10.0	ND	93	70-130%	---	---	
Naphthalene	16.9	---	1.00	mg/L	500	10.0	6.62	102	70-130%	---	---	
n-Propylbenzene	9.66	---	0.250	mg/L	500	10.0	ND	97	70-130%	---	---	
Styrene	11.1	---	0.500	mg/L	500	10.0	ND	111	70-130%	---	---	
1,1,1,2-Tetrachloroethane	10.5	---	0.250	mg/L	500	10.0	ND	105	70-130%	---	---	
1,1,2,2-Tetrachloroethane	10.5	---	0.250	mg/L	500	10.0	ND	105	70-130%	---	---	
Tetrachloroethene (PCE)	10.7	---	0.250	mg/L	500	10.0	ND	107	70-130%	---	---	
Toluene	11.1	---	0.500	mg/L	500	10.0	1.05	100	70-130%	---	---	
1,2,3-Trichlorobenzene	10.7	---	1.00	mg/L	500	10.0	ND	107	70-130%	---	---	
1,2,4-Trichlorobenzene	9.61	---	1.00	mg/L	500	10.0	ND	96	70-130%	---	---	
1,1,1-Trichloroethane	10.1	---	0.250	mg/L	500	10.0	ND	101	70-130%	---	---	
1,1,2-Trichloroethane	11.0	---	0.250	mg/L	500	10.0	ND	110	70-130%	---	---	
Trichloroethene (TCE)	11.0	---	0.250	mg/L	500	10.0	ND	110	70-130%	---	---	
Trichlorofluoromethane	13.3	---	1.00	mg/L	500	10.0	ND	**133**	**70-130%**	---	---	Q-01
1,2,3-Trichloropropane	9.64	---	0.500	mg/L	500	10.0	ND	96	70-130%	---	---	
1,2,4-Trimethylbenzene	9.77	---	0.500	mg/L	500	10.0	ND	98	70-130%	---	---	

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Matrix Spike (9060589-MS2)			Prepared: 06/05/19 12:17 Analyzed: 06/05/19 15:48									
QC Source Sample: Non-SDG (A9E0832-02)												
1,3,5-Trimethylbenzene	9.89	---	0.500	mg/L	500	10.0	ND	99	70-130%	---	---	
Vinyl chloride	10.3	---	0.250	mg/L	500	10.0	ND	103	70-130%	---	---	
m,p-Xylene	21.0	---	0.500	mg/L	500	20.0	0.268	104	70-130%	---	---	
o-Xylene	9.79	---	0.250	mg/L	500	10.0	ND	98	70-130%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*104 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*91 %*		*80-120 %*			*"*				
Matrix Spike (9060589-MS3)			Prepared: 06/05/19 12:17 Analyzed: 06/05/19 22:07									
QC Source Sample: Non-SDG (A9E0832-02RE1)												
1312/8260C												
Acetone	1.86	---	1.00	mg/L	50	2.00	ND	93	70-130%	---	---	
Benzene	3.41	---	0.0125	mg/L	50	1.00	2.42	98	70-130%	---	---	
Bromobenzene	1.01	---	0.0250	mg/L	50	1.00	ND	101	70-130%	---	---	
Bromochloromethane	1.15	---	0.0500	mg/L	50	1.00	ND	115	70-130%	---	---	
Bromodichloromethane	1.11	---	0.0500	mg/L	50	1.00	ND	111	70-130%	---	---	
Bromoform	1.23	---	0.0500	mg/L	50	1.00	ND	123	70-130%	---	---	
Bromomethane	1.27	---	0.250	mg/L	50	1.00	ND	127	70-130%	---	---	
2-Butanone (MEK)	1.96	---	0.500	mg/L	50	2.00	ND	98	70-130%	---	---	
n-Butylbenzene	1.10	---	0.0500	mg/L	50	1.00	ND	110	70-130%	---	---	
sec-Butylbenzene	0.995	---	0.0500	mg/L	50	1.00	ND	99	70-130%	---	---	
tert-Butylbenzene	0.902	---	0.0500	mg/L	50	1.00	ND	90	70-130%	---	---	
Carbon tetrachloride	1.08	---	0.0500	mg/L	50	1.00	ND	108	70-130%	---	---	
Chlorobenzene	1.04	---	0.0250	mg/L	50	1.00	ND	104	70-130%	---	---	
Chloroethane	0.850	---	0.250	mg/L	50	1.00	ND	85	70-130%	---	---	
Chloroform	1.05	---	0.0500	mg/L	50	1.00	ND	105	70-130%	---	---	
Chloromethane	1.10	---	0.250	mg/L	50	1.00	ND	110	70-130%	---	---	
2-Chlorotoluene	0.987	---	0.0500	mg/L	50	1.00	ND	99	70-130%	---	---	
4-Chlorotoluene	0.946	---	0.0500	mg/L	50	1.00	ND	95	70-130%	---	---	
1,2-Dibromo-3-chloropropane	0.995	---	0.250	mg/L	50	1.00	ND	100	70-130%	---	---	
Dibromochloromethane	1.03	---	0.0500	mg/L	50	1.00	ND	103	70-130%	---	---	
1,2-Dibromoethane (EDB)	1.04	---	0.0250	mg/L	50	1.00	ND	104	70-130%	---	---	
Dibromomethane	1.08	---	0.0500	mg/L	50	1.00	ND	108	70-130%	---	---	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Matrix Spike (9060589-MS3)			Prepared: 06/05/19 12:17		Analyzed: 06/05/19 22:07							
QC Source Sample: Non-SDG (A9E0832-02RE1)												
1,2-Dichlorobenzene	1.02	---	0.0250	mg/L	50	1.00	ND	102	70-130%	---	---	
1,3-Dichlorobenzene	1.01	---	0.0250	mg/L	50	1.00	ND	101	70-130%	---	---	
1,4-Dichlorobenzene	1.01	---	0.0250	mg/L	50	1.00	ND	101	70-130%	---	---	
Dichlorodifluoromethane	1.05	---	0.0500	mg/L	50	1.00	ND	105	70-130%	---	---	
1,1-Dichloroethane	0.999	---	0.0250	mg/L	50	1.00	ND	100	70-130%	---	---	
1,2-Dichloroethane (EDC)	1.02	---	0.0250	mg/L	50	1.00	ND	102	70-130%	---	---	
1,1-Dichloroethene	0.966	---	0.0250	mg/L	50	1.00	ND	97	70-130%	---	---	
cis-1,2-Dichloroethene	1.01	---	0.0250	mg/L	50	1.00	ND	101	70-130%	---	---	
trans-1,2-Dichloroethene	1.03	---	0.0250	mg/L	50	1.00	ND	103	70-130%	---	---	
1,2-Dichloropropane	1.03	---	0.0250	mg/L	50	1.00	ND	103	70-130%	---	---	
1,3-Dichloropropane	1.00	---	0.0500	mg/L	50	1.00	ND	100	70-130%	---	---	
2,2-Dichloropropane	0.793	---	0.0500	mg/L	50	1.00	ND	79	70-130%	---	---	
1,1-Dichloropropene	1.00	---	0.0500	mg/L	50	1.00	ND	100	70-130%	---	---	
cis-1,3-Dichloropropene	0.930	---	0.0500	mg/L	50	1.00	ND	93	70-130%	---	---	
trans-1,3-Dichloropropene	0.897	---	0.0500	mg/L	50	1.00	ND	90	70-130%	---	---	
Ethylbenzene	1.17	---	0.0250	mg/L	50	1.00	0.196	97	70-130%	---	---	
Hexachlorobutadiene	1.05	---	0.250	mg/L	50	1.00	ND	105	70-130%	---	---	
2-Hexanone	1.90	---	0.500	mg/L	50	2.00	ND	95	70-130%	---	---	
Isopropylbenzene	1.01	---	0.0500	mg/L	50	1.00	ND	101	70-130%	---	---	
4-Isopropyltoluene	0.993	---	0.0500	mg/L	50	1.00	ND	99	70-130%	---	---	
4-Methyl-2-pentanone (MiBK)	1.85	---	0.500	mg/L	50	2.00	ND	93	70-130%	---	---	
Methyl tert-butyl ether (MTBE)	0.830	---	0.0500	mg/L	50	1.00	ND	83	70-130%	---	---	
Methylene chloride	0.892	---	0.250	mg/L	50	1.00	ND	89	70-130%	---	---	
Naphthalene	9.89	---	0.100	mg/L	50	1.00	10.1	**-20**	**70-130%**	---	---	E, Q-03
n-Propylbenzene	0.951	---	0.0250	mg/L	50	1.00	ND	95	70-130%	---	---	
Styrene	1.23	---	0.0500	mg/L	50	1.00	0.107	113	70-130%	---	---	
1,1,1,2-Tetrachloroethane	1.01	---	0.0250	mg/L	50	1.00	ND	101	70-130%	---	---	
1,1,2,2-Tetrachloroethane	1.01	---	0.0250	mg/L	50	1.00	ND	101	70-130%	---	---	
Tetrachloroethene (PCE)	1.02	---	0.0250	mg/L	50	1.00	ND	102	70-130%	---	---	
Toluene	2.00	---	0.0500	mg/L	50	1.00	1.09	91	70-130%	---	---	
1,2,3-Trichlorobenzene	1.14	---	0.100	mg/L	50	1.00	ND	114	70-130%	---	---	
1,2,4-Trichlorobenzene	1.01	---	0.100	mg/L	50	1.00	ND	101	70-130%	---	---	
1,1,1-Trichloroethane	0.990	---	0.0250	mg/L	50	1.00	ND	99	70-130%	---	---	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP Volatile Organic Compounds by EPA 1312/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060589 - EPA 1312/5030B SPLP Volatiles							**Water**					
Matrix Spike (9060589-MS3)			Prepared: 06/05/19 12:17 Analyzed: 06/05/19 22:07									
QC Source Sample: Non-SDG (A9E0832-02RE1)												
1,1,2-Trichloroethane	1.05	---	0.0250	mg/L	50	1.00	ND	105	70-130%	---	---	
Trichloroethene (TCE)	1.08	---	0.0250	mg/L	50	1.00	ND	108	70-130%	---	---	
Trichlorofluoromethane	1.30	---	0.100	mg/L	50	1.00	ND	130	70-130%	---	---	
1,2,3-Trichloropropane	0.954	---	0.0500	mg/L	50	1.00	ND	95	70-130%	---	---	
1,2,4-Trimethylbenzene	1.06	---	0.0500	mg/L	50	1.00	0.0424	102	70-130%	---	---	
1,3,5-Trimethylbenzene	1.01	---	0.0500	mg/L	50	1.00	ND	101	70-130%	---	---	
Vinyl chloride	1.03	---	0.0250	mg/L	50	1.00	ND	103	70-130%	---	---	
m,p-Xylene	2.39	---	0.0500	mg/L	50	2.00	0.307	104	70-130%	---	---	
o-Xylene	1.09	---	0.0250	mg/L	50	1.00	0.106	98	70-130%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 104 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*99 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*91 %*		*80-120 %*				*"*			

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060490 - EPA 3546							**Solid**					
Blank (9060490-BLK1)			Prepared: 06/03/19 10:10 Analyzed: 06/04/19 14:03									
EPA 8270D (SIM)												
Acenaphthene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Anthracene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Chrysene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Fluoranthene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Fluorene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Phenanthrene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Pyrene	ND	---	2.67	ug/kg	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 66 %*		*Limits: 44-120 %*			*Dilution: 1x*				
p-Terphenyl-d14 (Surr)			*70 %*		*54-127 %*			*"*				
LCS (9060490-BS1)			Prepared: 06/03/19 10:10 Analyzed: 06/04/19 14:30									
EPA 8270D (SIM)												
Acenaphthene	499	---	2.67	ug/kg	1	533	---	94	40-122%	---	---	
Acenaphthylene	482	---	2.67	ug/kg	1	533	---	90	32-132%	---	---	
Anthracene	475	---	2.67	ug/kg	1	533	---	89	47-123%	---	---	
Benz(a)anthracene	453	---	2.67	ug/kg	1	533	---	85	49-126%	---	---	
Benzo(a)pyrene	504	---	2.67	ug/kg	1	533	---	94	45-129%	---	---	
Benzo(b)fluoranthene	464	---	2.67	ug/kg	1	533	---	87	45-132%	---	---	
Benzo(k)fluoranthene	456	---	2.67	ug/kg	1	533	---	86	47-132%	---	---	
Benzo(g,h,i)perylene	399	---	2.67	ug/kg	1	533	---	75	43-134%	---	---	
Chrysene	459	---	2.67	ug/kg	1	533	---	86	50-124%	---	---	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060490 - EPA 3546							**Solid**					
LCS (9060490-BS1)			Prepared: 06/03/19 10:10 Analyzed: 06/04/19 14:30									
Dibenz(a,h)anthracene	489	---	2.67	ug/kg	1	533	---	92	45-134%	---	---	
Dibenzofuran	501	---	2.67	ug/kg	1	533	---	94	44-120%	---	---	
Fluoranthene	504	---	2.67	ug/kg	1	533	---	95	50-127%	---	---	
Fluorene	502	---	2.67	ug/kg	1	533	---	94	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	430	---	2.67	ug/kg	1	533	---	81	45-133%	---	---	
1-Methylnaphthalene	496	---	2.67	ug/kg	1	533	---	93	40-120%	---	---	
2-Methylnaphthalene	541	---	2.67	ug/kg	1	533	---	101	38-122%	---	---	
Naphthalene	802	---	2.67	ug/kg	1	533	---	**150**	**35-123%**	---	---	Q-29
Phenanthrene	456	---	2.67	ug/kg	1	533	---	86	50-121%	---	---	
Pyrene	510	---	2.67	ug/kg	1	533	---	96	47-127%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 74 %*		*Limits: 44-120 %*							
p-Terphenyl-d14 (Surr)			*65 %*		*54-127 %*							
Duplicate (9060490-DUP1)			Prepared: 06/03/19 10:10 Analyzed: 06/04/19 15:23									
QC Source Sample: 2708-190522-011 (A9E0785-01)												
EPA 8270D (SIM)												
Acenaphthene	**9630000**	---	901000	ug/kg	10000	---	9320000	---	---	3	30%	
Acenaphthylene	ND	---	901000	ug/kg	10000	---	ND	---	---	---	30%	
Anthracene	**6090000**	---	901000	ug/kg	10000	---	6230000	---	---	2	30%	
Benz(a)anthracene	**5120000**	---	901000	ug/kg	10000	---	5750000	---	---	12	30%	M-05
Benzo(a)pyrene	**5870000**	---	901000	ug/kg	10000	---	6830000	---	---	15	30%	
Benzo(b)fluoranthene	**6060000**	---	901000	ug/kg	10000	---	7020000	---	---	15	30%	M-05
Benzo(k)fluoranthene	**2470000**	---	901000	ug/kg	10000	---	2840000	---	---	14	30%	M-05
Benzo(g,h,i)perylene	**3630000**	---	901000	ug/kg	10000	---	4250000	---	---	16	30%	
Chrysene	**5250000**	---	901000	ug/kg	10000	---	5980000	---	---	13	30%	M-05
Dibenz(a,h)anthracene	ND	---	901000	ug/kg	10000	---	904000	---	---	***	**30%**	Q-17
Dibenzofuran	**5830000**	---	901000	ug/kg	10000	---	5590000	---	---	4	30%	
Fluoranthene	**17800000**	---	901000	ug/kg	10000	---	19300000	---	---	8	30%	
Fluorene	**5420000**	---	901000	ug/kg	10000	---	5240000	---	---	3	30%	
Indeno(1,2,3-cd)pyrene	**3880000**	---	901000	ug/kg	10000	---	4670000	---	---	18	30%	
1-Methylnaphthalene	**3000000**	---	901000	ug/kg	10000	---	2960000	---	---	1	30%	
2-Methylnaphthalene	**5700000**	---	901000	ug/kg	10000	---	5650000	---	---	0.7	30%	
Naphthalene	**16000000**	---	901000	ug/kg	10000	---	16200000	---	---	1	30%	Q-29
Phenanthrene	**19900000**	---	901000	ug/kg	10000	---	20600000	---	---	3	30%	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060490 - EPA 3546							**Solid**					
Duplicate (9060490-DUP1)			Prepared: 06/03/19 10:10 Analyzed: 06/04/19 15:23									
QC Source Sample: 2708-190522-011 (A9E0785-01)												
Pyrene	**16500000**	---	901000	ug/kg	10000	---	18100000	---	---	10	30%	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: %*	*Limits: 44-120 %*			*Dilution: 10000x*					S-01
p-Terphenyl-d14 (Surr)			*%*	*54-127 %*			*"*					S-01

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QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP PAH by EPA 1312/8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060758 - EPA 1312/3510C (Acid Ext.)							**Solid**					
Blank (9060758-BLK1)			Prepared: 06/10/19 10:20 Analyzed: 06/11/19 10:28									
1312/8270D (SIM)												
Acenaphthene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.000400	mg/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.000400	mg/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.000400	mg/L	1	---	---	---	---	---	---	
Naphthalene	**0.00194**	---	0.000400	mg/L	1	---	---	---	---	---	---	B
Phenanthrene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.000200	mg/L	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 79 %*		*Limits: 44-120 %*			*Dilution: 1x*				
p-Terphenyl-d14 (Surr)			*78 %*		*50-133 %*			*"*				
LCS (9060758-BS1)			Prepared: 06/10/19 10:20 Analyzed: 06/11/19 10:54									
1312/8270D (SIM)												
Acenaphthene	0.0358	---	0.000200	mg/L	1	0.0400	---	89	47-122%	---	---	
Acenaphthylene	0.0367	---	0.000200	mg/L	1	0.0400	---	92	41-130%	---	---	
Anthracene	0.0375	---	0.000200	mg/L	1	0.0400	---	94	57-123%	---	---	
Benz(a)anthracene	0.0377	---	0.000200	mg/L	1	0.0400	---	94	58-125%	---	---	
Benzo(a)pyrene	0.0404	---	0.000200	mg/L	1	0.0400	---	101	54-128%	---	---	
Benzo(b)fluoranthene	0.0376	---	0.000200	mg/L	1	0.0400	---	94	53-131%	---	---	
Benzo(k)fluoranthene	0.0391	---	0.000200	mg/L	1	0.0400	---	98	57-129%	---	---	
Benzo(g,h,i)perylene	0.0344	---	0.000400	mg/L	1	0.0400	---	86	50-134%	---	---	
Chrysene	0.0374	---	0.000200	mg/L	1	0.0400	---	93	59-123%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP PAH by EPA 1312/8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060758 - EPA 1312/3510C (Acid Ext.)							**Solid**					
LCS (9060758-BS1)			Prepared: 06/10/19 10:20		Analyzed: 06/11/19 10:54							
Dibenz(a,h)anthracene	0.0405	---	0.000200	mg/L	1	0.0400	---	101	51-134%	---	---	
Dibenzofuran	0.0372	---	0.000200	mg/L	1	0.0400	---	93	53-120%	---	---	
Fluoranthene	0.0408	---	0.000200	mg/L	1	0.0400	---	102	57-128%	---	---	
Fluorene	0.0382	---	0.000200	mg/L	1	0.0400	---	96	52-124%	---	---	
Indeno(1,2,3-cd)pyrene	0.0364	---	0.000200	mg/L	1	0.0400	---	91	52-133%	---	---	
1-Methylnaphthalene	0.0317	---	0.000400	mg/L	1	0.0400	---	79	41-120%	---	---	
2-Methylnaphthalene	0.0322	---	0.000400	mg/L	1	0.0400	---	80	40-121%	---	---	
Naphthalene	0.0355	---	0.000400	mg/L	1	0.0400	---	89	40-121%	---	---	B
Phenanthrene	0.0365	---	0.000200	mg/L	1	0.0400	---	91	59-120%	---	---	
Pyrene	0.0419	---	0.000200	mg/L	1	0.0400	---	105	57-126%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 84 %*		*Limits: 44-120 %*				*Dilution: 1x*			
p-Terphenyl-d14 (Surr)			*74 %*		*50-133 %*				*"*			
LCS Dup (9060758-BSD1)			Prepared: 06/10/19 10:20		Analyzed: 06/11/19 11:21							**Q-19**
1312/8270D (SIM)												
Acenaphthene	0.0359	---	0.000200	mg/L	1	0.0400	---	90	47-122%	0.3	30%	
Acenaphthylene	0.0371	---	0.000200	mg/L	1	0.0400	---	93	41-130%	1	30%	
Anthracene	0.0398	---	0.000200	mg/L	1	0.0400	---	100	57-123%	6	30%	
Benz(a)anthracene	0.0388	---	0.000200	mg/L	1	0.0400	---	97	58-125%	3	30%	
Benzo(a)pyrene	0.0421	---	0.000200	mg/L	1	0.0400	---	105	54-128%	4	30%	
Benzo(b)fluoranthene	0.0389	---	0.000200	mg/L	1	0.0400	---	97	53-131%	4	30%	
Benzo(k)fluoranthene	0.0402	---	0.000200	mg/L	1	0.0400	---	100	57-129%	3	30%	
Benzo(g,h,i)perylene	0.0353	---	0.000400	mg/L	1	0.0400	---	88	50-134%	2	30%	
Chrysene	0.0394	---	0.000200	mg/L	1	0.0400	---	99	59-123%	5	30%	
Dibenz(a,h)anthracene	0.0418	---	0.000200	mg/L	1	0.0400	---	105	51-134%	3	30%	
Dibenzofuran	0.0384	---	0.000200	mg/L	1	0.0400	---	96	53-120%	3	30%	
Fluoranthene	0.0426	---	0.000200	mg/L	1	0.0400	---	107	57-128%	4	30%	
Fluorene	0.0385	---	0.000200	mg/L	1	0.0400	---	96	52-124%	0.8	30%	
Indeno(1,2,3-cd)pyrene	0.0378	---	0.000200	mg/L	1	0.0400	---	94	52-133%	4	30%	
1-Methylnaphthalene	0.0318	---	0.000400	mg/L	1	0.0400	---	79	41-120%	0.1	30%	
2-Methylnaphthalene	0.0314	---	0.000400	mg/L	1	0.0400	---	79	40-121%	2	30%	
Naphthalene	0.0330	---	0.000400	mg/L	1	0.0400	---	83	40-121%	7	30%	B
Phenanthrene	0.0381	---	0.000200	mg/L	1	0.0400	---	95	59-120%	4	30%	
Pyrene	0.0436	---	0.000200	mg/L	1	0.0400	---	109	57-126%	4	30%	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

QUALITY CONTROL (QC) SAMPLE RESULTS

SPLP PAH by EPA 1312/8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9060758 - EPA 1312/3510C (Acid Ext.)							**Solid**					
LCS Dup (9060758-BSD1)			Prepared: 06/10/19 10:20 Analyzed: 06/11/19 11:21									**Q-19**
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 85 %*		*Limits: 44-120 %*							*Dilution: 1x*
p-Terphenyl-d14 (Surr)			*72 %*		*50-133 %*							*"*

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060517							
A9E0785-01	Solid	NWTPH-Dx	05/22/19 16:30	06/03/19 16:03	0.59g/5mL	10g/5mL	16.90

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060533							
A9E0785-01	Solid	NWTPH-Gx (MS)	05/22/19 16:30	05/31/19 15:46	1.43g/5mL	5g/5mL	3.50

Volatile Organic Compounds by EPA 5035A/8260C

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060533							
A9E0785-01	Solid	5035A/8260C	05/22/19 16:30	05/31/19 15:46	1.43g/5mL	5g/5mL	3.50
Batch: 9060582							
A9E0785-01RE1	Solid	5035A/8260C	05/22/19 16:30	05/31/19 15:46	1.43g/5mL	5g/5mL	3.50

SPLP Volatile Organic Compounds by EPA 1312/8260C

Prep: EPA 1312/5030B SPLP Volatiles

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060589							
A9E0785-01RE1	Solid	1312/8260C	05/22/19 16:30	06/05/19 12:17	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060490							
A9E0785-01	Solid	EPA 8270D (SIM)	05/22/19 16:30	06/03/19 10:10	1.14g/5mL	10g/5mL	8.77

SPLP PAH by EPA 1312/8270D SIM

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SAMPLE PREPARATION INFORMATION

SPLP PAH by EPA 1312/8270D SIM

Prep: EPA 1312/3510C (Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060758							
A9E0785-01	Solid	1312/8270D (SIM)	05/22/19 16:30	06/10/19 10:20	200mL/2mL	200mL/2mL	1.00

SPLP Extraction by EPA 1312

Prep: EPA 1312 (SPLP)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060621							
A9E0785-01	Solid	EPA 1312	05/22/19 16:30	06/05/19 17:15	100g/2000mL	100g/2000mL	NA

Prep: EPA 1311 TCLP/ZHE

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9060554							
A9E0785-01	Solid	EPA 1312 ZHE	05/22/19 16:30	06/04/19 15:58	15g/300mL	25g/500mL	NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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B	Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
E	Estimated Value. The result is above the calibration range of the instrument.
F-17	No fuel pattern detected. The Diesel result represents carbon range C12 to C24, and the Oil result represents >C24 to C40.
M-02	Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
M-05	Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
Q-01	Spike recovery and/or RPD is outside acceptance limits.
Q-03	Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
Q-04	Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
Q-05	Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
Q-17	RPD between original and duplicate sample is outside of established control limits.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
Q-29	Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
Q-54	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -14%. The results are reported as Estimated Values.
Q-54a	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -2%. The results are reported as Estimated Values.
Q-54b	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -24%. The results are reported as Estimated Values.
Q-54c	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -9%. The results are reported as Estimated Values.
Q-55	Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260C, however there is adequate sensitivity to ensure detection at the reporting level.
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
S-01	Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
V-16	Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was not preserved within 48 hours of sampling.
X	See Case Narrative.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**

LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

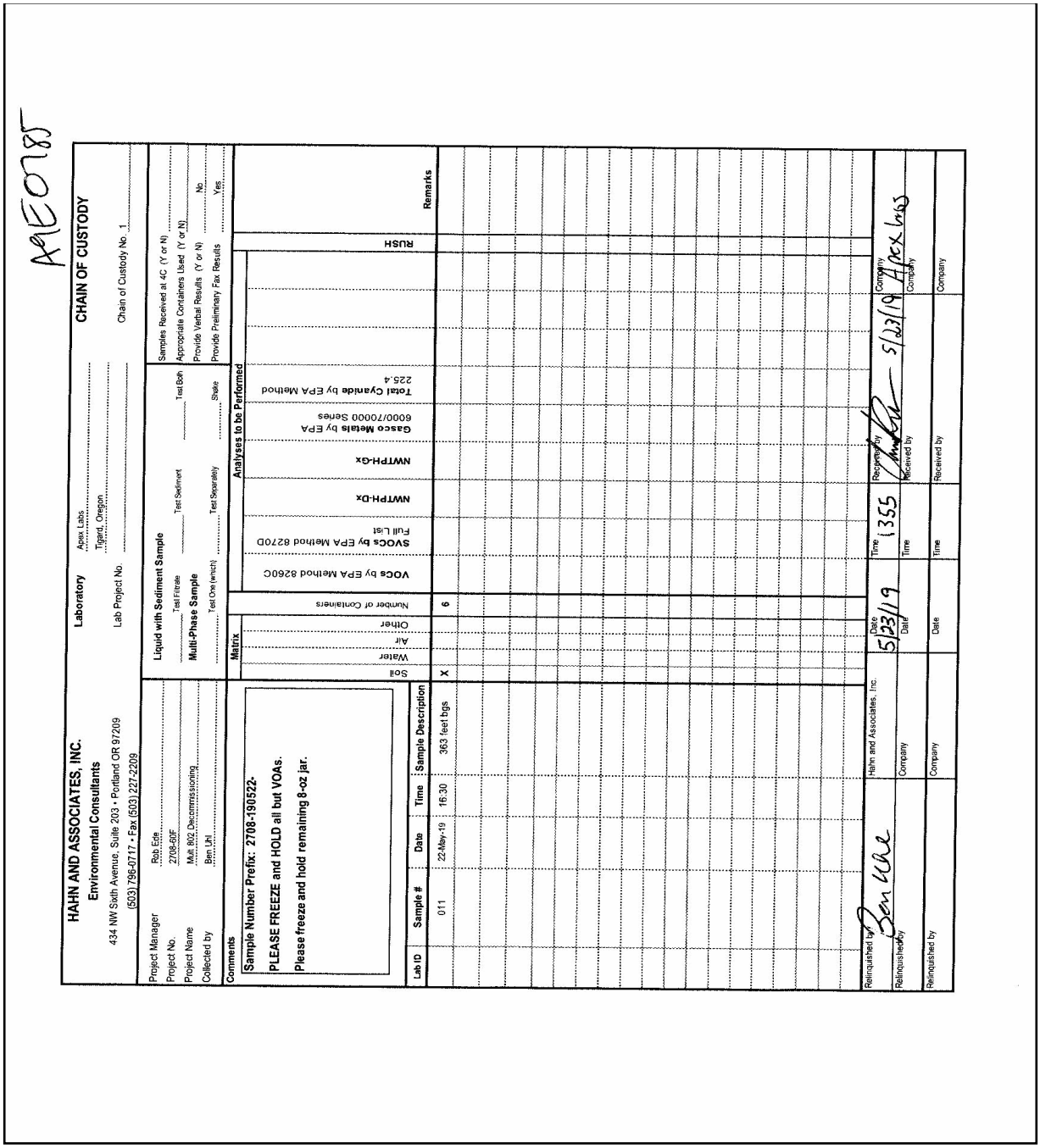
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Philip Nerenberg, Lab Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9E0785 - 06 19 19 1744**



Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Philip Nerenberg

Philip Nerenberg, Lab Director

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	A9E0785 - 06 19 19 1744

APEX LABS COOLER RECEIPT FORM

Client: Hahn Element WO#: A9E0785

Project/Project #: Mult 802 Decommissioning 2709-60F

Delivery Info:

Date/time received: 5/23/19 @ 1355 By: CFH

Delivered by: Apex X Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 5/23/19 @ 1449 By: CFH

Chain of Custody included? Yes X No Custody seals? Yes No X

Signed/dated by client? Yes X No

Signed/dated by Apex? Yes X No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.3						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Gel						
Condition:	Good						

Cooler out of temp? (Y/N) Possible reason why:

If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/NA

Out of temperature samples form initiated? Yes/No/NA

Samples Inspection: Date/time inspected: 5/23/19 @ 1630 By:

All samples intact? Yes X No Comments:

Bottle labels/COCs agree? Yes X No Comments:

COC/container discrepancies form initiated? Yes No NA X

Containers/volumes received appropriate for analysis? Yes X No Comments:

Do VOA vials have visible headspace? Yes No NA X

Comments

Water samples: pH checked: Yes No NA X pH appropriate? Yes No NA X

Comments:

Additional information:

Labeled by: Witness: Cooler Inspected by: See Project Contact Form: Y

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Philip Nerenberg, Lab Director

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Sample Receipt Documentation
(Work orders, Chain of Custody & Cooler Receipt Forms)

A9E0785

Apex Laboratories

Client: Hahn and Associates
Project: Mult 802 Decommissioning

Project Manager: Philip Nerenberg
Project Number: 2708-60F

Report To:
Hahn and Associates
Rob Ede
434 NW 6th Ave. Suite 203
Portland, OR 97209
Phone: (503) 796-0717
Fax: (503) 227-2209

Invoice To:
Hahn and Associates
Rob Ede
434 NW 6th Ave. Suite 203
Portland, OR 97209
Phone :(503) 796-0717
Fax: (503) 227-2209

Date Due: 06/14/19 17:00 (15 day TAT)

Received By: Charles F. Hoffman
Date Received: 05/23/19 13:55

Logged In By: Cameron L O'Brien
Date Logged In: 05/23/19 16:27

Cooler #1 received at 4.3°C

Custody Seals	No	Containers Intact	Yes	COC/Labels Agree	Yes	PH Confirmed	No	Received On Ice	Yes
Temperature OK	Yes								

Analysis	Due	TAT	Expires	Comments
A9E0785-01 2708-190522-011 [Solid] Sampled 05/22/19 16:30				**368 feet bgs hold**
(GMT-08:00) Pacific Time (US & Canada) 7 Containers				
Dry Weight				
~~Dry Weight~~	06/05/19 17:00	3	11/18/19 16:30	added 5-31-19
Fuels				
NWTPH-Dx (Diesel/Oil)	06/14/19 17:00	10	06/05/19 16:30	added 5-31-19
Metals				
SPLP Extraction - Organics	06/05/19 17:00	3	06/05/19 16:30	added 5-31-19
Project Mgmt				
Data Package	07/01/19 17:00	10	08/29/19 16:30	Added 5/31 ST
Sample Control				
Archive Samples - Frozen	05/24/19 17:00	1	05/23/19 16:30	
Semivols (SIM)				
1312/8270 SIM PAH (SPLP)	06/14/19 17:00	10	05/29/19 16:30	ok t run out of hold
8270 SIM PAH	06/14/19 17:00	10	06/05/19 16:30	
Volatiles				
1312/8260C SPLP/ZHE VOCs - Full list	06/14/19 17:00	10	06/05/19 16:30	added 5-31-19
8260C Full List	06/06/19 17:00	10	05/24/19 16:30	ok to run out of extraction hold time added 5-31-19 lad
NWTPH-Gx	06/14/19 17:00	10	05/24/19 16:30	ok to run out of extraction hold time added 5-31-19 lad
SPLP/ZHE Extraction	06/05/19 17:00	3	06/05/19 16:30	added 5-31-19

Reviewed By

Date

A9E0785

HAHN AND ASSOCIATES, INC.
Environmental Consultants
434 NW Sixth Avenue, Suite 203 • Portland OR 97209
(503) 796-0717 • Fax (503) 227-2209

Laboratory Apex Labs, Tigard, Oregon
Lab Project No.

CHAIN OF CUSTODY

Chain of Custody No. 1

Project Manager: Rob Ede
Project No.: 2708-60F
Project Name: Mult 802 Decommissioning
Collected by: Ben Uhl

Liquid with Sediment Sample
Test Filtrate / Test Sediment / Test Both
Multi-Phase Sample
Test One (which) / Test Separately / Shake

Samples Received at 4C (Y or N)
Appropriate Containers Used (Y or N)
Provide Verbal Results (Y or N): No
Provide Preliminary Fax Results: Yes

Comments

Sample Number Prefix: 2708-190522-

PLEASE FREEZE and HOLD all but VOAs.

Please freeze and hold remaining 8-oz jar.

Lab ID	Sample #	Date	Time	Sample Description	Matrix: Soil	Water	Air	Other	Number of Containers	VOCs by EPA Method 8260C	SVOCs by EPA Method 8270D Full List	NWTPH-Dx	NWTPH-Gx	Gasco Metals by EPA 6000/70000 Series	Total Cyanide by EPA Method 225.4				RUSH	Remarks
	011	22-May-19	16:30	363 feet bgs	X				6											

Relinquished by: Ben Uhl	Hahn and Associates, Inc.	Date: 5/23/19	Time: 1355	Received by:	5/23/19	Company: Apex Labs	
Relinquished by	Company	Date	Time	Received by		Company	
Relinquished by	Company	Date	Time	Received by		Company	

APEX LABS COOLER RECEIPT FORM

Client: Hahn Element WO#: A9E0785

Project/Project #: Mult 802 Decommissoning 2708-60F

Delivery Info:

Date/time received: 5/23/19 @ 1355 By: CFH

Delivered by: Apex X Client ___ ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 5/23/19 @ 1449 By: CFH

Chain of Custody included? Yes X No ___ Custody seals? Yes ___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.3						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Gel						
Condition:	Good						

Cooler out of temp? (Y/(N)) Possible reason why: ___

If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/(NA)

Out of temperature samples form initiated? Yes/No/NA

Samples Inspection: Date/time inspected: 5/23/19 @ 1630 By: [signature]

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: ___

COC/container discrepancies form initiated? Yes ___ No ___ NA X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes ___ No ___ NA X pH appropriate? Yes ___ No ___ NA X

Comments: ___

Additional information: ___

Labeled by: [signature] Witness: [signature] Cooler Inspected by: [signature] See Project Contact Form: Y

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

CLP-Like Forms

Apex Laboratories

SDG: A9E0785

CLASS: GC

METHOD: NWTPH-Dx

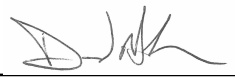
ANALYSES DATA PACKAGE COVER PAGE

NWTPH-Dx

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/1/2019 11:22AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Solid

Analyte	MDL	MRL	Units
Diesel	10.0	20.0	mg/kg
Oil	20.0	40.0	mg/kg

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

NWTPH-Dx

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01	File ID:	1F060330.D
Sampled:	05/22/19 16:30	Prepared:	06/03/19 16:03	Analyzed:	06/04/19 07:21
		Preparation:	EPA 3546 (Fuels)	Initial/Final:	0.59 g / 5 mL

Batch: 9060517 Sequence: 9F03048 Calibration: A9D2602 Instrument: DUALFID1F

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
68334-30-5	Diesel	100	162000	D
Oil	Oil	100	133000	D

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
o-Terphenyl (Surr)	424	ND		50 - 150	D

* Values outside of QC limits

PREPARATION BATCH SUMMARY

NWTPH-Dx

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9060517 Batch Matrix: Solid Preparation: EPA 3546 (Fuels)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9060517-BLK1	1F060325.D	06/03/19 16:03	
LCS	9060517-BS1	1F060326.D	06/03/19 16:03	
2708-190522-011	A9E0785-01	1F060330.D	06/03/19 16:03	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
NWTPH-Dx

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	9060517-BLK1	File ID:	1F060325.D
Prepared:	06/03/19 16:03	Preparation:	EPA 3546 (Fuels)	Initial/Final:	10 g / 5 mL
Analyzed:	06/04/19 05:28	Instrument:	DUALFID1F		
Batch:	9060517	Sequence:	9F03048	Calibration:	A9D2602

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
68334-30-5	Diesel	10.0	U
Oil	Oil	20.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
o-Terphenyl (Surr)	25.0	23.6	95	50 - 150	

LCS / LCS DUPLICATE RECOVERY

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Solid		
Batch:	9060517	Laboratory ID:	9060517-BS1
Preparation:	EPA 3546 (Fuels)	Initial/Final:	10 g / 5 mL

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Diesel	125	116	93	70 - 130

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9D25027	Instrument:	DUALFID1F
Matrix:	Solid	Calibration:	A9D2602

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Blank	9D25027-ICB1	1F042503.D	04/25/19 17:18
Cal Standard	9D25027-CAL1	1F042504.D	04/25/19 17:41
Cal Standard	9D25027-CAL2	1F042505.D	04/25/19 18:03
Cal Standard	9D25027-CAL3	1F042506.D	04/25/19 18:26
Cal Standard	9D25027-CAL4	1F042507.D	04/25/19 18:49
Cal Standard	9D25027-CAL5	1F042508.D	04/25/19 19:12
Cal Standard	9D25027-CAL6	1F042509.D	04/25/19 19:35
Cal Standard	9D25027-CAL7	1F042510.D	04/25/19 19:58
Cal Standard	9D25027-CAL8	1F042511.D	04/25/19 20:20
Cal Standard	9D25027-CAL9	1F042512.D	04/25/19 20:43
Cal Standard	9D25027-CALA	1F042513.D	04/25/19 21:06
Cal Standard	9D25027-CALB	1F042514.D	04/25/19 21:29
Cal Standard	9D25027-CALC	1F042515.D	04/25/19 21:51
Cal Standard	9D25027-CALD	1F042516.D	04/25/19 22:14
Cal Standard	9D25027-CALE	1F042517.D	04/25/19 22:37
Cal Standard	9D25027-CALF	1F042518.D	04/25/19 22:59
Cal Standard	9D25027-CALG	1F042519.D	04/25/19 23:22
Cal Standard	9D25027-CALH	1F042520.D	04/25/19 23:45
Cal Standard	9D25027-CALI	1F042521.D	04/26/19 00:07
Cal Standard	9D25027-CALJ	1F042522.D	04/26/19 00:30
Cal Standard	9D25027-CALK	1F042524.D	04/26/19 01:15
Initial Cal Check	9D25027-ICV1	1F042526.D	04/26/19 02:00
Initial Cal Check	9D25027-ICV2	1F042527.D	04/26/19 02:23

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F03048	Instrument:	DUALFID1F
Matrix:	Solid	Calibration:	A9D2602

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	9F03048-CCV3	1F060322.D	06/04/19 04:20
Calibration Check	9F03048-CCV4	1F060323.D	06/04/19 04:43
Calibration Blank	9F03048-CCB2	1F060324.D	06/04/19 05:05
Blank	9060517-BLK1	1F060325.D	06/04/19 05:28
LCS	9060517-BS1	1F060326.D	06/04/19 05:50
2708-190522-011	A9E0785-01	1F060330.D	06/04/19 07:21
Calibration Check	9F03048-CCV5	1F060333.D	06/04/19 08:29
Calibration Check	9F03048-CCV6	1F060334.D	06/04/19 08:51

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

INITIAL CALIBRATION DATA (Summary)

NWTPH-Dx

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9D2602 Date: 04/26/19 09:36 Instrument: DUALFID1F

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Diesel	1274651	Ave	2.95218	6	0			15	
Oil	1100493	Ave	5.184329	10	0			15	
o-Terphenyl (Surr)	1391526	Ave	0.8255536	6.794	0.0797912			15	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9D2602	Instrument:	DUALFID1F
		Calibration Date:	04/26/19 09:36

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Diesel	25	1354440	40	1306638	100	1253969	250	1264505	500	1270516	1000	1249782
Diesel Range Organics (C12-C24)	25	1354440	40	1306638	100	1253969	250	1264505	500	1270516	1000	1249782

INITIAL CALIBRATION DATA (Continued)

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9D2602	Instrument:	DUALFID1F
Matrix:		Calibration Date:	04/26/19 09:36

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Diesel	2500	1250602	5000	1246756								
Diesel Range Organics (C12-C24)	2500	1250602	5000	1246756								
o-Terphenyl (Surr)					10	1392742	25	1381612	50	1404157	100	1400981

INITIAL CALIBRATION DATA (Continued)

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9D2602	Instrument:	DUALFID1F
Matrix:		Calibration Date:	04/26/19 09:36

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Oil			40	1016461	80	1051013	250	1068527	500	1102754	1000	1146401
o-Terphenyl (Surr)	200	1378140										
Residual Range Organics (>C24-C			40	1016461	80	1051013	250	1068527	500	1102754	1000	1146401

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1F	Calibration:	A9D2602
Lab File ID:	1F042526.D		
Sequence:	9D25027	Inject Date:	04/26/19
Lab Sample ID:	9D25027-ICV1	Inject Time:	02:00

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Diesel	1000	962	-3.8	85 - 115

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1F	Calibration:	A9D2602
Lab File ID:	1F042527.D		
Sequence:	9D25027	Inject Date:	04/26/19
Lab Sample ID:	9D25027-ICV2	Inject Time:	02:23

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Oil	1000	1030	3.2	85 - 115

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1F	Calibration:	A9D2602
Lab File ID:	1F060322.D	Calibration Date:	04/26/19 09:36
Sequence:	9F03048	Injection Date:	06/04/19
Lab Sample ID:	9F03048-CCV3	Injection Time:	04:20

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Diesel	Ave	1000	970		1274651	1235907	-3.0	15

** Quadratic Curve fit may be weighted (1/a or 1/a2).

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1F	Calibration:	A9D2602
Lab File ID:	1F060323.D	Calibration Date:	04/26/19 09:36
Sequence:	9F03048	Injection Date:	06/04/19
Lab Sample ID:	9F03048-CCV4	Injection Time:	04:43

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Oil	Ave	500	498		1100493	1095275	-0.5	15

** Quadratic Curve fit may be weighted (1/a or 1/a2).

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1F	Calibration:	A9D2602
Lab File ID:	1F060333.D	Calibration Date:	04/26/19 09:36
Sequence:	9F03048	Injection Date:	06/04/19
Lab Sample ID:	9F03048-CCV5	Injection Time:	08:29

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Diesel	Ave	1000	967		1274651	1232060	-3.3	15

** Quadratic Curve fit may be weighted (1/a or 1/a2).

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1F	Calibration:	A9D2602
Lab File ID:	1F060334.D	Calibration Date:	04/26/19 09:36
Sequence:	9F03048	Injection Date:	06/04/19
Lab Sample ID:	9F03048-CCV6	Injection Time:	08:51

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Oil	Ave	500	497		1100493	1094881	-0.5	15

** Quadratic Curve fit may be weighted (1/a or 1/a2).

* = Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F03048	Instrument:	DUALFID1F
Matrix:	Solid	Calibration:	A9D2602

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9F03048-CCV3)			Lab File ID: 1F060322.D		Analyzed: 06/04/19 04:20			
o-Terphenyl (Surr)	50.0	105	80 - 120	6.8	6.794	0.0060	+/-1.0	
Calibration Check (9F03048-CCV4)			Lab File ID: 1F060323.D		Analyzed: 06/04/19 04:43			
o-Terphenyl (Surr)	50.0	101	80 - 120	6.8	6.794	0.0060	+/-1.0	
Calibration Blank (9F03048-CCB2)			Lab File ID: 1F060324.D		Analyzed: 06/04/19 05:05			
o-Terphenyl (Surr)			50 - 150	6.79	6.794	-0.0040	+/-1.0	
Blank (9060517-BLK1)			Lab File ID: 1F060325.D		Analyzed: 06/04/19 05:28			
o-Terphenyl (Surr)	25.0	95	50 - 150	6.79	6.794	-0.0040	+/-1.0	
LCS (9060517-BS1)			Lab File ID: 1F060326.D		Analyzed: 06/04/19 05:50			
o-Terphenyl (Surr)	25.0	93	50 - 150	6.8	6.794	0.0060	+/-1.0	
2708-190522-011 (A9E0785-01)			Lab File ID: 1F060330.D		Analyzed: 06/04/19 07:21			
o-Terphenyl (Surr)	424		50 - 150	0	6.794	-6.7940	+/-1.0	*
Calibration Check (9F03048-CCV5)			Lab File ID: 1F060333.D		Analyzed: 06/04/19 08:29			
o-Terphenyl (Surr)	50.0	105	80 - 120	6.8	6.794	0.0060	+/-1.0	
Calibration Check (9F03048-CCV6)			Lab File ID: 1F060334.D		Analyzed: 06/04/19 08:51			
o-Terphenyl (Surr)	50.0	100	80 - 120	6.8	6.794	0.0060	+/-1.0	

HOLDING TIME SUMMARY

NWTPH-Dx

Laboratory: Apex Laboratories

SDG: A9E0785

Client: Hahn and Associates

Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	06/03/19 16:03	11.98	14.00	06/04/19 07:21	0.64	40.00	

Apex Laboratories

SDG: A9E0785

CLASS: GCMS

METHOD: NWTPH-Gx (MS)

ANALYSES DATA PACKAGE COVER PAGE

NWTPH-Gx (MS)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/1/2019 11:22AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

NWTPH-Gx (MS)

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Soil

Analyte	MDL	MRL	Units
Gasoline Range Organics	2.50	5.00	mg/kg

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

NWTPH-Gx (MS)

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01	File ID:	VC19060420.D
Sampled:	05/22/19 16:30	Prepared:	05/31/19 15:46	Analyzed:	06/04/19 18:14
		Preparation:	EPA 5035A	Initial/Final:	1.43 g / 5 mL

Batch: 9060533 Sequence: 9F04032 Calibration: A9E3104 Instrument: VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg wet)	Q
8006-61-9	Gasoline Range Organics	10000	21800	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Sur)	50.0	44.4	89	50 - 150	
1,4-Difluorobenzene (Sur)	50.0	41.5	83	50 - 150	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	347715	6.028	274188	6.029	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

NWTPH-Gx (MS)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Batch: 9060533 Batch Matrix: Soil Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9060533-BLK1	VC19060405.D	06/04/19 09:03	
LCS	9060533-BS2	VC19060404.D	06/04/19 09:03	
2708-190522-011	A9E0785-01	VC19060420.D	05/31/19 15:46	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9060533-BLK1	File ID:	VC19060405.D
Prepared:	06/04/19 09:03	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/04/19 11:23	Instrument:	VOA-GCMS3		
Batch:	9060533	Sequence:	9F04032	Calibration:	A9E3104

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
8006-61-9	Gasoline Range Organics	1.67	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Sur)	50.0	47.6	95	50 - 150	
1,4-Difluorobenzene (Sur)	50.0	44.4	89	50 - 150	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	269768	6.029	274188	6.029	

LCS / LCS DUPLICATE RECOVERY

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9060533	Laboratory ID:	9060533-BS2
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Gasoline Range Organics	25.0	23.4	94	80 - 120

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E29058	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E29058-TUN2	VC19052921.D	05/29/19 23:27
Initial Cal Blank	9E29058-ICB2	VC19052923.D	05/30/19 00:22
Cal Standard	9E29058-CALC	VC19052924.D	05/30/19 00:49
Cal Standard	9E29058-CALD	VC19052925.D	05/30/19 01:17
Cal Standard	9E29058-CALE	VC19052926.D	05/30/19 01:44
Cal Standard	9E29058-CALF	VC19052927.D	05/30/19 02:12
Cal Standard	9E29058-CALG	VC19052928.D	05/30/19 02:39
Cal Standard	9E29058-CALH	VC19052929.D	05/30/19 03:07
Cal Standard	9E29058-CALI	VC19052930.D	05/30/19 03:34
Cal Standard	9E29058-CALJ	VC19052931.D	05/30/19 04:02
Initial Cal Check	9E29058-ICV2	VC19052934.D	05/30/19 05:25

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04032	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F04032-TUN1	VC19060402.D	06/04/19 10:00
Calibration Check	9F04032-CCV2	VC19060404.D	06/04/19 10:56
Blank	9060533-BLK1	VC19060405.D	06/04/19 11:23
2708-190522-011	A9E0785-01	VC19060420.D	06/04/19 18:14

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19052921.D	Injection Date:	05/29/19
Instrument ID:	VOA-GCMS3	Injection Time:	23:27
Sequence:	9E29058	Lab Sample ID:	9E29058-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		114.26	
m/z 96	5 - 9% of m/z 95	7.21	PASS
m/z 173		0.00	
m/z 174	50 - 200% of m/z 95	87.52	PASS
m/z 175	5 - 9% of m/z 174	7.23	PASS
m/z 176	95 - 101% of m/z 174	96.08	PASS
m/z 177	5 - 9% of m/z 176	7.01	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19060402.D	Injection Date:	06/04/19
Instrument ID:	VOA-GCMS3	Injection Time:	10:00
Sequence:	9F04032	Lab Sample ID:	9F04032-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		119.74	
m/z 96	5 - 9% of m/z 95	7.22	PASS
m/z 173		0.21	
m/z 174	50 - 200% of m/z 95	83.51	PASS
m/z 175	5 - 9% of m/z 174	7.48	PASS
m/z 176	95 - 101% of m/z 174	97.90	PASS
m/z 177	5 - 9% of m/z 176	6.60	PASS

INITIAL CALIBRATION DATA (Summary)

NWTPH-Gx (MS)

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E3104 Date: 05/31/19 12:17 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Gasoline Range Organics	1.374597	XXX	8.338264	9.906	1.149889E-02				
4-Bromofluorobenzene (Sur)	3.480957	Ave	0.6535971	10.83525	9.272349E-03			15	
1,4-Difluorobenzene (Sur)	4.659738	Ave	7.911124	6.58675	3.046126E-02			15	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA (Continued)

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9E3104	Instrument:	VOA-GCMS3
Matrix:		Calibration Date:	05/31/19 12:17

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Gasoline Range Organics											50	1.311896
4-Bromofluorobenzene (Sur)											50	3.475581
1,4-Difluorobenzene (Sur)											50	4.431216

INITIAL CALIBRATION DATA (Continued)

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9E3104	Instrument:	VOA-GCMS3
Matrix:		Calibration Date:	05/31/19 12:17

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Gasoline Range Organics	100	1.169169	250	1.30285	500	1.41732	1000	1.416265	2500	1.368701	5000	1.543528
4-Bromofluorobenzene (Sur)	50	3.514514	50	3.488068	50	3.444069	50	3.505176	50	3.487275	50	3.468905
1,4-Difluorobenzene (Sur)	50	4.450786	50	4.464929	50	4.50656	50	4.484652	50	4.511816	50	4.961909

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9E3104
Lab File ID:	VC19052934.D		
Sequence:	9E29058	Inject Date:	05/30/19
Lab Sample ID:	9E29058-ICV2	Inject Time:	05:25

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Gasoline Range Organics	500	534	6.7	70 - 130
4-Bromofluorobenzene (Sur)	50.0	49.4	-1.3	0 - 200
1,4-Difluorobenzene (Sur)	50.0	46.6	-6.8	0 - 200
Pentafluorobenzene (IS)	50.0	50.0	0.0	50 - 200

SURROGATE STANDARD RECOVERY AND RT SUMMARY

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E29058	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9E29058-ICV2)				Lab File ID: VC19052934.D		Analyzed: 05/30/19 05:25		
4-Bromofluorobenzene (Sur)	50.0	99	0 - 200	10.831	10.83525	-0.0043	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	93	0 - 200	6.585	6.58675	-0.0018	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04032	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9060533-BS2)			Lab File ID: VC19060404.D		Analyzed: 06/04/19 10:56			
4-Bromofluorobenzene (Sur)	50.0	95	50 - 150	10.835	10.83525	-0.0002	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	93	50 - 150	6.589	6.58675	0.0023	+/-1.0	
Blank (9060533-BLK1)			Lab File ID: VC19060405.D		Analyzed: 06/04/19 11:23			
4-Bromofluorobenzene (Sur)	50.0	95	50 - 150	10.835	10.83525	-0.0002	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	89	50 - 150	6.583	6.58675	-0.0038	+/-1.0	
2708-190522-011 (A9E0785-01)			Lab File ID: VC19060420.D		Analyzed: 06/04/19 18:14			
4-Bromofluorobenzene (Sur)	50.0	89	50 - 150	10.834	10.83525	-0.0013	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	83	50 - 150	6.582	6.58675	-0.0048	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04032	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9060533-BS2)			Lab File ID: VC19060404.D			Analyzed: 06/04/19 10:56			
Pentafluorobenzene (IS)	274188	6.029	274188	6.029	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9F04032-CCV2)			Lab File ID: VC19060404.D			Analyzed: 06/04/19 10:56			
Pentafluorobenzene (IS)	274188	6.029				50 - 200	6.0290	+/-0.50	*
Blank (9060533-BLK1)			Lab File ID: VC19060405.D			Analyzed: 06/04/19 11:23			
Pentafluorobenzene (IS)	269768	6.029	274188	6.029	98	50 - 200	0.0000	+/-0.50	
2708-190522-011 (A9E0785-01)			Lab File ID: VC19060420.D			Analyzed: 06/04/19 18:14			
Pentafluorobenzene (IS)	347715	6.028	274188	6.029	127	50 - 200	-0.0010	+/-0.50	
Duplicate (9060533-DUP1)			Lab File ID: VC19060425.D			Analyzed: 06/04/19 20:32			
Pentafluorobenzene (IS)	350401	6.031	274188	6.029	128	50 - 200	0.0020	+/-0.50	
Duplicate (9060533-DUP2)			Lab File ID: VC19060427.D			Analyzed: 06/04/19 21:27			
Pentafluorobenzene (IS)	365820	6.028	274188	6.029	133	50 - 200	-0.0010	+/-0.50	

HOLDING TIME SUMMARY

NWTPH-Gx (MS)

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	05/31/19 15:46	8.97	2.00	06/04/19 18:14	4.10	14.00	*

Apex Laboratories

SDG: A9E0785

CLASS: GCMS

METHOD: 5035A/8260C

ANALYSES DATA PACKAGE COVER PAGE

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

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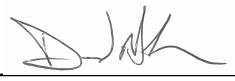
Signature: 
Name: David G. Jack

Forms Created: 10/1/2019 11:22AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

5035A/8260C

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Soil

Analyte	MDL	MRL	Units
Acetone	500	1000	ug/kg
Acrylonitrile	50.0	100	ug/kg
Benzene	5.00	10.0	ug/kg
Bromobenzene	12.5	25.0	ug/kg
Bromochloromethane	25.0	50.0	ug/kg
Bromodichloromethane	25.0	50.0	ug/kg
Bromoform	50.0	100	ug/kg
Bromomethane	500	500	ug/kg
2-Butanone (MEK)	250	500	ug/kg
n-Butylbenzene	25.0	50.0	ug/kg
sec-Butylbenzene	25.0	50.0	ug/kg
tert-Butylbenzene	25.0	50.0	ug/kg
Carbon disulfide	250	500	ug/kg
Carbon tetrachloride	25.0	50.0	ug/kg
Chlorobenzene	12.5	25.0	ug/kg
Chloroethane	250	500	ug/kg
Chloroform	25.0	50.0	ug/kg
Chloromethane	125	250	ug/kg
2-Chlorotoluene	25.0	50.0	ug/kg
4-Chlorotoluene	25.0	50.0	ug/kg
Dibromochloromethane	50.0	100	ug/kg
1,2-Dibromo-3-chloropropane	125	250	ug/kg
1,2-Dibromoethane (EDB)	25.0	50.0	ug/kg
Dibromomethane	25.0	50.0	ug/kg
1,2-Dichlorobenzene	12.5	25.0	ug/kg
1,3-Dichlorobenzene	12.5	25.0	ug/kg
1,4-Dichlorobenzene	12.5	25.0	ug/kg
Dichlorodifluoromethane	50.0	100	ug/kg
1,1-Dichloroethane	12.5	25.0	ug/kg
1,2-Dichloroethane (EDC)	12.5	25.0	ug/kg
1,1-Dichloroethene	12.5	25.0	ug/kg
cis-1,2-Dichloroethene	12.5	25.0	ug/kg
trans-1,2-Dichloroethene	12.5	25.0	ug/kg
1,2-Dichloropropane	12.5	25.0	ug/kg
1,3-Dichloropropane	25.0	50.0	ug/kg
2,2-Dichloropropane	25.0	50.0	ug/kg
1,1-Dichloropropene	25.0	50.0	ug/kg

METHOD DETECTION AND REPORTING LIMITS

5035A/8260C

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Soil

Analyte	MDL	MRL	Units
cis-1,3-Dichloropropene	25.0	50.0	ug/kg
trans-1,3-Dichloropropene	25.0	50.0	ug/kg
Ethylbenzene	12.5	25.0	ug/kg
Hexachlorobutadiene	50.0	100	ug/kg
2-Hexanone	250	500	ug/kg
Isopropylbenzene	25.0	50.0	ug/kg
4-Isopropyltoluene	25.0	50.0	ug/kg
Methylene chloride	125	250	ug/kg
4-Methyl-2-pentanone (MiBK)	250	500	ug/kg
Methyl tert-butyl ether (MTBE)	25.0	50.0	ug/kg
Naphthalene	50.0	100	ug/kg
n-Propylbenzene	12.5	25.0	ug/kg
Styrene	25.0	50.0	ug/kg
1,1,1,2-Tetrachloroethane	12.5	25.0	ug/kg
1,1,2,2-Tetrachloroethane	25.0	50.0	ug/kg
Tetrachloroethene (PCE)	12.5	25.0	ug/kg
Toluene	25.0	50.0	ug/kg
1,2,3-Trichlorobenzene	125	250	ug/kg
1,2,4-Trichlorobenzene	125	250	ug/kg
1,1,1-Trichloroethane	12.5	25.0	ug/kg
1,1,2-Trichloroethane	12.5	25.0	ug/kg
Trichloroethene (TCE)	12.5	25.0	ug/kg
Trichlorofluoromethane	50.0	100	ug/kg
1,2,3-Trichloropropane	25.0	50.0	ug/kg
1,2,4-Trimethylbenzene	25.0	50.0	ug/kg
1,3,5-Trimethylbenzene	25.0	50.0	ug/kg
Vinyl chloride	12.5	25.0	ug/kg
m,p-Xylene	25.0	50.0	ug/kg
o-Xylene	12.5	25.0	ug/kg

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

5035A/8260C

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01	File ID:	VC19060420.D
Sampled:	05/22/19 16:30	Prepared:	05/31/19 15:46	Analyzed:	06/04/19 18:14
		Preparation:	EPA 5035A	Initial/Final:	1.43 g / 5 mL

Batch: 9060533 Sequence: 9F04032 Calibration: A9E3104 Instrument: VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
67-64-1	Acetone	10000	350000	U
107-13-1	Acrylonitrile	10000	35000	U
71-43-2	Benzene	10000	114000	D
108-86-1	Bromobenzene	10000	8740	U
74-97-5	Bromochloromethane	10000	17500	U
75-27-4	Bromodichloromethane	10000	17500	U
75-25-2	Bromoform	10000	35000	U
74-83-9	Bromomethane	10000	350000	U
78-93-3	2-Butanone (MEK)	10000	175000	U
104-51-8	n-Butylbenzene	10000	17500	U
135-98-8	sec-Butylbenzene	10000	17500	U
98-06-6	tert-Butylbenzene	10000	17500	U
75-15-0	Carbon disulfide	10000	175000	U
56-23-5	Carbon tetrachloride	10000	17500	U
108-90-7	Chlorobenzene	10000	8740	U
75-00-3	Chloroethane	10000	175000	U
67-66-3	Chloroform	10000	17500	U
74-87-3	Chloromethane	10000	87400	U
95-49-8	2-Chlorotoluene	10000	17500	U
106-43-4	4-Chlorotoluene	10000	17500	U
124-48-1	Dibromochloromethane	10000	35000	U
96-12-8	1,2-Dibromo-3-chloropropane	10000	87400	U
106-93-4	1,2-Dibromoethane (EDB)	10000	17500	U
74-95-3	Dibromomethane	10000	17500	U
95-50-1	1,2-Dichlorobenzene	10000	8740	U
541-73-1	1,3-Dichlorobenzene	10000	8740	U
106-46-7	1,4-Dichlorobenzene	10000	8740	U
75-71-8	Dichlorodifluoromethane	10000	35000	U
75-34-3	1,1-Dichloroethane	10000	8740	U
107-06-2	1,2-Dichloroethane (EDC)	10000	8740	U
75-35-4	1,1-Dichloroethene	10000	8740	U
156-59-2	cis-1,2-Dichloroethene	10000	8740	U
156-60-5	trans-1,2-Dichloroethene	10000	8740	U
78-87-5	1,2-Dichloropropane	10000	8740	U
142-28-9	1,3-Dichloropropane	10000	17500	U
594-20-7	2,2-Dichloropropane	10000	17500	U
563-58-6	1,1-Dichloropropene	10000	17500	U
10061-01-5	cis-1,3-Dichloropropene	10000	17500	U
10061-02-6	trans-1,3-Dichloropropene	10000	17500	U
100-41-4	Ethylbenzene	10000	104000	D

ORGANIC ANALYSIS DATA SHEET

5035A/8260C

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01	File ID:	VC19060420.D
Sampled:	05/22/19 16:30	Prepared:	05/31/19 15:46	Analyzed:	06/04/19 18:14
		Preparation:	EPA 5035A	Initial/Final:	1.43 g / 5 mL

Batch: 9060533 Sequence: 9F04032 Calibration: A9E3104 Instrument: VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
87-68-3	Hexachlorobutadiene	10000	35000	U
591-78-6	2-Hexanone	10000	175000	U
98-82-8	Isopropylbenzene	10000	17500	U
99-87-6	4-Isopropyltoluene	10000	17500	U
75-09-2	Methylene chloride	10000	175000	U
108-10-1	4-Methyl-2-pentanone (MiBK)	10000	175000	U
1634-04-4	Methyl tert-butyl ether (MTBE)	10000	17500	U
103-65-1	n-Propylbenzene	10000	8740	U
100-42-5	Styrene	10000	39500	D
630-20-6	1,1,1,2-Tetrachloroethane	10000	8740	U
79-34-5	1,1,2,2-Tetrachloroethane	10000	17500	U
127-18-4	Tetrachloroethene (PCE)	10000	8740	U
87-61-6	1,2,3-Trichlorobenzene	10000	87400	U
120-82-1	1,2,4-Trichlorobenzene	10000	87400	U
71-55-6	1,1,1-Trichloroethane	10000	8740	U
79-00-5	1,1,2-Trichloroethane	10000	8740	U
79-01-6	Trichloroethene (TCE)	10000	8740	U
75-69-4	Trichlorofluoromethane	10000	35000	U
96-18-4	1,2,3-Trichloropropane	10000	17500	U
95-63-6	1,2,4-Trimethylbenzene	10000	58000	D
108-67-8	1,3,5-Trimethylbenzene	10000	33900	JD
108-88-3	Toluene	10000	145000	D
75-01-4	Vinyl chloride	10000	8740	U
179601-23-1	m,p-Xylene	10000	156000	D
95-47-6	o-Xylene	10000	50300	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	45.5	91	80 - 120	
Toluene-d8 (Surr)	50.0	48.9	98	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	50.6	101	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	347715	6.028	275376	6.029	
Chlorobenzene-d5 (ISTD)	536543	9.745	443366	9.746	
1,4-Dichlorobenzene-d4 (ISTD)	232487	11.729	185288	11.729	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

5035A/8260C

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01RE1	File ID:	VC19060518.D
Sampled:	05/22/19 16:30	Prepared:	05/31/19 15:46	Analyzed:	06/05/19 17:33
		Preparation:	EPA 5035A	Initial/Final:	1.43 g / 5 mL

Batch:	9060582	Sequence:	9F05048	Calibration:	A9E3104	Instrument:	VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
91-20-3	Naphthalene	100000	9020000	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	44.9	90	80 - 120	
Toluene-d8 (Surr)	50.0	50.2	100	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	51.0	102	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	358151	6.028	357641	6.026	
Chlorobenzene-d5 (ISTD)	538353	9.751	535132	9.749	
1,4-Dichlorobenzene-d4 (ISTD)	229780	11.728	226085	11.726	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

5035A/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9060533 Batch Matrix: Soil Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9060533-BLK1	VC19060405.D	06/04/19 09:03	
LCS	9060533-BS1	VC19060403.D	06/04/19 09:03	
2708-190522-011	A9E0785-01	VC19060420.D	05/31/19 15:46	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

PREPARATION BATCH SUMMARY

5035A/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9060582 Batch Matrix: Soil Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9060582-BLK1	VC19060512.D	06/05/19 13:00	
LCS	9060582-BS1	VC19060510.D	06/05/19 13:00	
2708-190522-011	A9E0785-01RE1	VC19060518.D	05/31/19 15:46	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9060533-BLK1	File ID:	VC19060405.D
Prepared:	06/04/19 09:03	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/04/19 11:23	Instrument:	VOA-GCMS3		
Batch:	9060533	Sequence:	9F04032	Calibration:	A9E3104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
67-64-1	Acetone	333	U
107-13-1	Acrylonitrile	33.3	U
71-43-2	Benzene	3.33	U
108-86-1	Bromobenzene	8.33	U
74-97-5	Bromochloromethane	16.7	U
75-27-4	Bromodichloromethane	16.7	U
75-25-2	Bromoform	33.3	U
74-83-9	Bromomethane	333	U
78-93-3	2-Butanone (MEK)	167	U
104-51-8	n-Butylbenzene	16.7	U
135-98-8	sec-Butylbenzene	16.7	U
98-06-6	tert-Butylbenzene	16.7	U
75-15-0	Carbon disulfide	167	U
56-23-5	Carbon tetrachloride	16.7	U
108-90-7	Chlorobenzene	8.33	U
75-00-3	Chloroethane	167	U
67-66-3	Chloroform	16.7	U
74-87-3	Chloromethane	83.3	U
95-49-8	2-Chlorotoluene	16.7	U
106-43-4	4-Chlorotoluene	16.7	U
124-48-1	Dibromochloromethane	33.3	U
96-12-8	1,2-Dibromo-3-chloropropane	83.3	U
106-93-4	1,2-Dibromoethane (EDB)	16.7	U
74-95-3	Dibromomethane	16.7	U
95-50-1	1,2-Dichlorobenzene	8.33	U
541-73-1	1,3-Dichlorobenzene	8.33	U
106-46-7	1,4-Dichlorobenzene	8.33	U
75-71-8	Dichlorodifluoromethane	33.3	U
75-34-3	1,1-Dichloroethane	8.33	U
107-06-2	1,2-Dichloroethane (EDC)	8.33	U
75-35-4	1,1-Dichloroethene	8.33	U
156-59-2	cis-1,2-Dichloroethene	8.33	U
156-60-5	trans-1,2-Dichloroethene	8.33	U
78-87-5	1,2-Dichloropropane	8.33	U
142-28-9	1,3-Dichloropropane	16.7	U

METHOD BLANK DATA SHEET

5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9060533-BLK1	File ID:	VC19060405.D
Prepared:	06/04/19 09:03	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/04/19 11:23	Instrument:	VOA-GCMS3		
Batch:	9060533	Sequence:	9F04032	Calibration:	A9E3104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
594-20-7	2,2-Dichloropropane	16.7	U
563-58-6	1,1-Dichloropropene	16.7	U
10061-01-5	cis-1,3-Dichloropropene	16.7	U
10061-02-6	trans-1,3-Dichloropropene	16.7	U
100-41-4	Ethylbenzene	8.33	U
87-68-3	Hexachlorobutadiene	33.3	U
591-78-6	2-Hexanone	167	U
98-82-8	Isopropylbenzene	16.7	U
99-87-6	4-Isopropyltoluene	16.7	U
75-09-2	Methylene chloride	167	U
108-10-1	4-Methyl-2-pentanone (MiBK)	167	U
1634-04-4	Methyl tert-butyl ether (MTBE)	16.7	U
91-20-3	Naphthalene	33.3	U
103-65-1	n-Propylbenzene	8.33	U
100-42-5	Styrene	16.7	U
630-20-6	1,1,1,2-Tetrachloroethane	8.33	U
79-34-5	1,1,2,2-Tetrachloroethane	16.7	U
127-18-4	Tetrachloroethene (PCE)	8.33	U
87-61-6	1,2,3-Trichlorobenzene	83.3	U
120-82-1	1,2,4-Trichlorobenzene	83.3	U
71-55-6	1,1,1-Trichloroethane	8.33	U
79-00-5	1,1,2-Trichloroethane	8.33	U
79-01-6	Trichloroethene (TCE)	8.33	U
75-69-4	Trichlorofluoromethane	33.3	U
96-18-4	1,2,3-Trichloropropane	16.7	U
95-63-6	1,2,4-Trimethylbenzene	16.7	U
108-67-8	1,3,5-Trimethylbenzene	16.7	U
108-88-3	Toluene	16.7	U
75-01-4	Vinyl chloride	8.33	U
179601-23-1	m,p-Xylene	16.7	U
95-47-6	o-Xylene	8.33	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	47.1	94	80 - 120	
Toluene-d8 (Surr)	50.0	49.4	99	80 - 120	

METHOD BLANK DATA SHEET
5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9060533-BLK1	File ID:	VC19060405.D
Prepared:	06/04/19 09:03	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/04/19 11:23	Instrument:	VOA-GCMS3		
Batch:	9060533	Sequence:	9F04032	Calibration:	A9E3104

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	50.5	101	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	269768	6.029	275376	6.029	
Chlorobenzene-d5 (ISTD)	439790	9.746	443366	9.746	
1,4-Dichlorobenzene-d4 (ISTD)	185883	11.724	185288	11.729	

METHOD BLANK DATA SHEET
5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9060582-BLK1	File ID:	VC19060512.D
Prepared:	06/05/19 13:00	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/05/19 14:47	Instrument:	VOA-GCMS3		
Batch:	9060582	Sequence:	9F05048	Calibration:	A9E3104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
67-64-1	Acetone	333	U
107-13-1	Acrylonitrile	33.3	U
71-43-2	Benzene	3.33	U
108-86-1	Bromobenzene	8.33	U
74-97-5	Bromochloromethane	16.7	U
75-27-4	Bromodichloromethane	16.7	U
75-25-2	Bromoform	33.3	U
74-83-9	Bromomethane	333	U
78-93-3	2-Butanone (MEK)	167	U
104-51-8	n-Butylbenzene	16.7	U
135-98-8	sec-Butylbenzene	16.7	U
98-06-6	tert-Butylbenzene	16.7	U
75-15-0	Carbon disulfide	167	U
56-23-5	Carbon tetrachloride	16.7	U
108-90-7	Chlorobenzene	8.33	U
75-00-3	Chloroethane	333	U
67-66-3	Chloroform	16.7	U
74-87-3	Chloromethane	167	U
95-49-8	2-Chlorotoluene	16.7	U
106-43-4	4-Chlorotoluene	16.7	U
124-48-1	Dibromochloromethane	33.3	U
96-12-8	1,2-Dibromo-3-chloropropane	83.3	U
106-93-4	1,2-Dibromoethane (EDB)	16.7	U
74-95-3	Dibromomethane	16.7	U
95-50-1	1,2-Dichlorobenzene	8.33	U
541-73-1	1,3-Dichlorobenzene	8.33	U
106-46-7	1,4-Dichlorobenzene	8.33	U
75-71-8	Dichlorodifluoromethane	33.3	U
75-34-3	1,1-Dichloroethane	8.33	U
107-06-2	1,2-Dichloroethane (EDC)	8.33	U
75-35-4	1,1-Dichloroethene	8.33	U
156-59-2	cis-1,2-Dichloroethene	8.33	U
156-60-5	trans-1,2-Dichloroethene	8.33	U
78-87-5	1,2-Dichloropropane	8.33	U
142-28-9	1,3-Dichloropropane	16.7	U

METHOD BLANK DATA SHEET

5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9060582-BLK1	File ID:	VC19060512.D
Prepared:	06/05/19 13:00	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/05/19 14:47	Instrument:	VOA-GCMS3		
Batch:	9060582	Sequence:	9F05048	Calibration:	A9E3104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
594-20-7	2,2-Dichloropropane	16.7	U
563-58-6	1,1-Dichloropropene	16.7	U
10061-01-5	cis-1,3-Dichloropropene	16.7	U
10061-02-6	trans-1,3-Dichloropropene	16.7	U
100-41-4	Ethylbenzene	8.33	U
87-68-3	Hexachlorobutadiene	33.3	U
591-78-6	2-Hexanone	167	U
98-82-8	Isopropylbenzene	16.7	U
99-87-6	4-Isopropyltoluene	16.7	U
75-09-2	Methylene chloride	167	U
108-10-1	4-Methyl-2-pentanone (MiBK)	167	U
1634-04-4	Methyl tert-butyl ether (MTBE)	16.7	U
91-20-3	Naphthalene	33.3	U
103-65-1	n-Propylbenzene	8.33	U
100-42-5	Styrene	16.7	U
630-20-6	1,1,1,2-Tetrachloroethane	8.33	U
79-34-5	1,1,2,2-Tetrachloroethane	16.7	U
127-18-4	Tetrachloroethene (PCE)	8.33	U
87-61-6	1,2,3-Trichlorobenzene	83.3	U
120-82-1	1,2,4-Trichlorobenzene	83.3	U
71-55-6	1,1,1-Trichloroethane	8.33	U
79-00-5	1,1,2-Trichloroethane	8.33	U
79-01-6	Trichloroethene (TCE)	8.33	U
75-69-4	Trichlorofluoromethane	66.7	U
96-18-4	1,2,3-Trichloropropane	16.7	U
95-63-6	1,2,4-Trimethylbenzene	16.7	U
108-67-8	1,3,5-Trimethylbenzene	16.7	U
108-88-3	Toluene	16.7	U
75-01-4	Vinyl chloride	8.33	U
179601-23-1	m,p-Xylene	16.7	U
95-47-6	o-Xylene	8.33	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	45.1	90	80 - 120	
Toluene-d8 (Surr)	50.0	51.0	102	80 - 120	

METHOD BLANK DATA SHEET

5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9060582-BLK1	File ID:	VC19060512.D
Prepared:	06/05/19 13:00	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/05/19 14:47	Instrument:	VOA-GCMS3		
Batch:	9060582	Sequence:	9F05048	Calibration:	A9E3104

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	51.3	103	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	352824	6.035	357641	6.026	
Chlorobenzene-d5 (ISTD)	522808	9.752	535132	9.749	
1,4-Dichlorobenzene-d4 (ISTD)	222610	11.729	226085	11.726	

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9060533	Laboratory ID:	9060533-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	2000	1860	93	80 - 120
Acrylonitrile	1000	998	100	80 - 120
Benzene	1000	962	96	80 - 120
Bromobenzene	1000	1120	112	80 - 120
Bromochloromethane	1000	1040	104	80 - 120
Bromodichloromethane	1000	1040	104	80 - 120
Bromoform	1000	902	90	80 - 120
Bromomethane	1000	955	96	80 - 120
2-Butanone (MEK)	2000	1860	93	80 - 120
n-Butylbenzene	1000	1110	111	80 - 120
sec-Butylbenzene	1000	1120	112	80 - 120
tert-Butylbenzene	1000	1100	110	80 - 120
Carbon disulfide	1000	980	98	80 - 120
Carbon tetrachloride	1000	1050	105	80 - 120
Chlorobenzene	1000	1030	103	80 - 120
Chloroethane	1000	858	86	80 - 120
Chloroform	1000	966	97	80 - 120
Chloromethane	1000	902	90	80 - 120
2-Chlorotoluene	1000	1090	109	80 - 120
4-Chlorotoluene	1000	1080	108	80 - 120
Dibromochloromethane	1000	922	92	80 - 120
1,2-Dibromo-3-chloropropane	1000	975	98	80 - 120
1,2-Dibromoethane (EDB)	1000	1120	112	80 - 120
Dibromomethane	1000	986	99	80 - 120
1,2-Dichlorobenzene	1000	1030	103	80 - 120
1,3-Dichlorobenzene	1000	1030	103	80 - 120
1,4-Dichlorobenzene	1000	1030	103	80 - 120
Dichlorodifluoromethane	1000	984	98	80 - 120
1,1-Dichloroethane	1000	1030	103	80 - 120
1,2-Dichloroethane (EDC)	1000	988	99	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Matrix: Soil
Batch: 9060533
Laboratory ID: 9060533-BS1
Preparation: EPA 5035A
Initial/Final: 5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	1000	1040	104	80 - 120
cis-1,2-Dichloroethene	1000	988	99	80 - 120
trans-1,2-Dichloroethene	1000	1020	102	80 - 120
1,2-Dichloropropane	1000	992	99	80 - 120
1,3-Dichloropropane	1000	1060	106	80 - 120
2,2-Dichloropropane	1000	1140	114	80 - 120
1,1-Dichloropropene	1000	970	97	80 - 120
cis-1,3-Dichloropropene	1000	1120	112	80 - 120
trans-1,3-Dichloropropene	1000	1110	111	80 - 120
Ethylbenzene	1000	1050	105	80 - 120
Hexachlorobutadiene	1000	1200	120	80 - 120
2-Hexanone	2000	1980	99	80 - 120
Isopropylbenzene	1000	1070	107	80 - 120
4-Isopropyltoluene	1000	1120	112	80 - 120
Methylene chloride	1000	712	71 *	80 - 120
4-Methyl-2-pentanone (MiBK)	2000	1900	95	80 - 120
Methyl tert-butyl ether (MTBE)	1000	947	95	80 - 120
Naphthalene	1000	1070	107	80 - 120
n-Propylbenzene	1000	1090	109	80 - 120
Styrene	1000	1100	110	80 - 120
1,1,1,2-Tetrachloroethane	1000	1130	113	80 - 120
1,1,2,2-Tetrachloroethane	1000	1050	105	80 - 120
Tetrachloroethene (PCE)	1000	1000	100	80 - 120
1,2,3-Trichlorobenzene	1000	1120	112	80 - 120
1,2,4-Trichlorobenzene	1000	1080	108	80 - 120
1,1,1-Trichloroethane	1000	1030	103	80 - 120
1,1,2-Trichloroethane	1000	1100	110	80 - 120
Trichloroethene (TCE)	1000	930	93	80 - 120
Trichlorofluoromethane	1000	982	98	80 - 120
1,2,3-Trichloropropane	1000	1050	105	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9060533	Laboratory ID:	9060533-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	1000	1110	111	80 - 120
1,3,5-Trimethylbenzene	1000	1120	112	80 - 120
Toluene	1000	1020	102	80 - 120
Vinyl chloride	1000	910	91	80 - 120
m,p-Xylene	2000	2160	108	80 - 120
o-Xylene	1000	1070	107	80 - 120

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Matrix: Soil
Batch: 9060582
Laboratory ID: 9060582-BS1
Preparation: EPA 5035A
Initial/Final: 5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	2000	1680	84	80 - 120
Acrylonitrile	1000	893	89	80 - 120
Benzene	1000	867	87	80 - 120
Bromobenzene	1000	1060	106	80 - 120
Bromochloromethane	1000	894	89	80 - 120
Bromodichloromethane	1000	899	90	80 - 120
Bromoform	1000	864	86	80 - 120
Bromomethane	1000	884	88	80 - 120
2-Butanone (MEK)	2000	1700	85	80 - 120
n-Butylbenzene	1000	1060	106	80 - 120
sec-Butylbenzene	1000	1060	106	80 - 120
tert-Butylbenzene	1000	1020	102	80 - 120
Carbon disulfide	1000	872	87	80 - 120
Carbon tetrachloride	1000	925	92	80 - 120
Chlorobenzene	1000	1010	101	80 - 120
Chloroethane	1000	658	66 *	80 - 120
Chloroform	1000	830	83	80 - 120
Chloromethane	1000	782	78 *	80 - 120
2-Chlorotoluene	1000	1040	104	80 - 120
4-Chlorotoluene	1000	1000	100	80 - 120
Dibromochloromethane	1000	906	91	80 - 120
1,2-Dibromo-3-chloropropane	1000	942	94	80 - 120
1,2-Dibromoethane (EDB)	1000	1060	106	80 - 120
Dibromomethane	1000	874	87	80 - 120
1,2-Dichlorobenzene	1000	980	98	80 - 120
1,3-Dichlorobenzene	1000	996	100	80 - 120
1,4-Dichlorobenzene	1000	988	99	80 - 120
Dichlorodifluoromethane	1000	843	84	80 - 120
1,1-Dichloroethane	1000	883	88	80 - 120
1,2-Dichloroethane (EDC)	1000	862	86	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9060582	Laboratory ID:	9060582-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	1000	924	92	80 - 120
cis-1,2-Dichloroethene	1000	886	89	80 - 120
trans-1,2-Dichloroethene	1000	913	91	80 - 120
1,2-Dichloropropane	1000	886	89	80 - 120
1,3-Dichloropropane	1000	1040	104	80 - 120
2,2-Dichloropropane	1000	1000	100	80 - 120
1,1-Dichloropropene	1000	886	89	80 - 120
cis-1,3-Dichloropropene	1000	1100	110	80 - 120
trans-1,3-Dichloropropene	1000	1060	106	80 - 120
Ethylbenzene	1000	1000	100	80 - 120
Hexachlorobutadiene	1000	1120	112	80 - 120
2-Hexanone	2000	1900	95	80 - 120
Isopropylbenzene	1000	1040	104	80 - 120
4-Isopropyltoluene	1000	1110	111	80 - 120
Methylene chloride	1000	560	56 *	80 - 120
4-Methyl-2-pentanone (MiBK)	2000	1830	91	80 - 120
Methyl tert-butyl ether (MTBE)	1000	863	86	80 - 120
Naphthalene	1000	1050	105	80 - 120
n-Propylbenzene	1000	1040	104	80 - 120
Styrene	1000	1060	106	80 - 120
1,1,1,2-Tetrachloroethane	1000	1080	108	80 - 120
1,1,2,2-Tetrachloroethane	1000	1000	100	80 - 120
Tetrachloroethene (PCE)	1000	1030	103	80 - 120
1,2,3-Trichlorobenzene	1000	1100	110	80 - 120
1,2,4-Trichlorobenzene	1000	1080	108	80 - 120
1,1,1-Trichloroethane	1000	904	90	80 - 120
1,1,2-Trichloroethane	1000	1050	105	80 - 120
Trichloroethene (TCE)	1000	878	88	80 - 120
Trichlorofluoromethane	1000	714	71 *	80 - 120
1,2,3-Trichloropropane	1000	984	98	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9060582	Laboratory ID:	9060582-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	1000	1030	103	80 - 120
1,3,5-Trimethylbenzene	1000	1080	108	80 - 120
Toluene	1000	981	98	80 - 120
Vinyl chloride	1000	821	82	80 - 120
m,p-Xylene	2000	2030	102	80 - 120
o-Xylene	1000	1010	101	80 - 120

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E29058	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E29058-TUN1	VC19052902.D	05/29/19 14:45
Initial Cal Blank	9E29058-ICB1	VC19052903.D	05/29/19 15:12
Cal Standard	9E29058-CAL1	VC19052904.D	05/29/19 15:40
Cal Standard	9E29058-CAL2	VC19052905.D	05/29/19 16:07
Cal Standard	9E29058-CAL3	VC19052906.D	05/29/19 16:35
Cal Standard	9E29058-CAL4	VC19052907.D	05/29/19 17:02
Cal Standard	9E29058-CAL5	VC19052908.D	05/29/19 17:30
Cal Standard	9E29058-CAL6	VC19052909.D	05/29/19 17:57
Cal Standard	9E29058-CAL7	VC19052910.D	05/29/19 18:25
Cal Standard	9E29058-CAL8	VC19052911.D	05/29/19 18:52
Cal Standard	9E29058-CAL9	VC19052912.D	05/29/19 19:20
Cal Standard	9E29058-CALA	VC19052914.D	05/29/19 20:15
Cal Standard	9E29058-CALB	VC19052916.D	05/29/19 21:10
Initial Cal Check	9E29058-ICV1	VC19052919.D	05/29/19 22:32

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04032	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F04032-TUN1	VC19060402.D	06/04/19 10:00
Calibration Check	9F04032-CCV1	VC19060403.D	06/04/19 10:28
Blank	9060533-BLK1	VC19060405.D	06/04/19 11:23
2708-190522-011	A9E0785-01	VC19060420.D	06/04/19 18:14

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F05048	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F05048-TUN1	VC19060509.D	06/05/19 13:25
Calibration Check	9F05048-CCV1	VC19060510.D	06/05/19 13:52
Blank	9060582-BLK1	VC19060512.D	06/05/19 14:47
Instrument RL Check	9F05048-CRL1	VC19060513.D	06/05/19 15:15
2708-190522-011	A9E0785-01RE1	VC19060518.D	06/05/19 17:33

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19052902.D	Injection Date:	05/29/19
Instrument ID:	VOA-GCMS3	Injection Time:	14:45
Sequence:	9E29058	Lab Sample ID:	9E29058-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		116.13	
m/z 96	5 - 9% of m/z 95	7.28	PASS
m/z 173		0.24	
m/z 174	50 - 200% of m/z 95	86.11	PASS
m/z 175	5 - 9% of m/z 174	7.30	PASS
m/z 176	95 - 101% of m/z 174	96.31	PASS
m/z 177	5 - 9% of m/z 176	7.16	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19060402.D	Injection Date:	06/04/19
Instrument ID:	VOA-GCMS3	Injection Time:	10:00
Sequence:	9F04032	Lab Sample ID:	9F04032-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		119.74	
m/z 96	5 - 9% of m/z 95	7.22	PASS
m/z 173		0.21	
m/z 174	50 - 200% of m/z 95	83.51	PASS
m/z 175	5 - 9% of m/z 174	7.48	PASS
m/z 176	95 - 101% of m/z 174	97.90	PASS
m/z 177	5 - 9% of m/z 176	6.60	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19060509.D	Injection Date:	06/05/19
Instrument ID:	VOA-GCMS3	Injection Time:	13:25
Sequence:	9F05048	Lab Sample ID:	9F05048-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		110.79	
m/z 96	5 - 9% of m/z 95	7.11	PASS
m/z 173		0.13	
m/z 174	50 - 200% of m/z 95	90.26	PASS
m/z 175	5 - 9% of m/z 174	7.46	PASS
m/z 176	95 - 101% of m/z 174	98.16	PASS
m/z 177	5 - 9% of m/z 176	6.52	PASS

INITIAL CALIBRATION DATA (Summary)

5035A/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E3104 Date: 05/31/19 12:17 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.2253755	Ave	12.62378	3.835714	0.198053			20	
Acrylonitrile	0.2924003	Ave	7.645432	4.598	0.1831131			20	
Benzene	2.173291	Ave	6.107014	5.932455	7.470302E-02			20	
Bromobenzene	0.660211	Ave	10.80839	9.925546	33.16625			20	
Bromochloromethane	0.3867513	Ave	7.915163	5.2664	5.715378E-02			20	
Bromodichloromethane	0.4914024	XXX	16.45709	7.1802	4.839797E-02				
Bromoform	0.1079993	XXX	37.80186	10.38778	2.891535E-02				
Bromomethane	0.2874805	Ave	14.8662	2.298	0.2149943			20	
2-Butanone (MEK)	0.4019278	Ave	6.861878	5.692125	0.15901			20	
n-Butylbenzene	1.668652	Ave	12.95508	11.9308	2.610619E-02			20	
sec-Butylbenzene	2.411623	Ave	12.35168	11.49845	0.0256839			20	
tert-Butylbenzene	1.140562	Ave	14.08989	11.35736	2.497059E-02			20	
Carbon disulfide	0.8029804	Ave	14.57182	3.1086	0.203543			20	
Carbon tetrachloride	0.4640012	Ave	14.20593	5.476125	5.910227E-02			20	
Chlorobenzene	0.8022591	Ave	8.073566	9.7663	0.0166771			20	
Chloroethane	0.1914849	Ave	5.762938	2.442429	0.29219			20	
Chloroform	0.8590263	Ave	7.927362	5.349889	9.005742E-02			20	
Chloromethane	0.7372888	Ave	11.41977	1.859333	0.2373304			20	
2-Chlorotoluene	0.6231715	Ave	6.326231	11.07091	4.501259E-02			20	
4-Chlorotoluene	1.801043	Ave	9.996215	11.2071	2.837172E-02			20	
Dibromochloromethane	0.1903591	XXX	28.84565	9.0077	8.099567E-02				
1,2-Dibromo-3-chloropropane	0.1551392	XXX	27.97457	12.673	4.358278E-03				
1,2-Dibromoethane (EDB)	0.2641584	Ave	9.512969	9.244222	5.589469E-02			20	
Dibromomethane	0.2904912	Ave	6.619124	6.997222	4.473185E-02			20	
1,2-Dichlorobenzene	1.064181	Ave	11.05225	12.05955	6.864662E-03			20	
1,3-Dichlorobenzene	1.158628	Ave	13.0256	11.67145	2.983529E-02			20	
1,4-Dichlorobenzene	1.157493	Ave	12.49826	11.7386	2.791165E-02			20	
Dichlorodifluoromethane	0.4488536	Ave	5.631154	1.6614	0.4162911			20	
1,1-Dichloroethane	0.722902	Ave	3.334896	4.5213	0.1431398			20	
1,2-Dichloroethane (EDC)	0.6478979	Ave	3.589848	6.1485	5.931189E-02			20	
1,1-Dichloroethene	0.505879	Ave	6.02585	3.097	0.2089188			20	
cis-1,2-Dichloroethene	0.6546452	Ave	5.35323	5.068	7.688616E-02			20	
trans-1,2-Dichloroethene	0.5865828	Ave	10.37818	3.535455	33.16676			20	

INITIAL CALIBRATION DATA (Summary)

5035A/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E3104 Date: 05/31/19 12:17 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,2-Dichloropropane	0.5555414	Ave	3.684358	7.1085	5.556284E-02			20	
1,3-Dichloropropane	0.499839	Ave	5.06154	9.109182	5.662128E-02			20	
2,2-Dichloropropane	0.5664893	Ave	3.258667	5.173555	9.574314E-02			20	
1,1-Dichloropropene	0.675245	Ave	8.19961	5.6783	0.1226429			20	
cis-1,3-Dichloropropene	0.3936101	Ave	13.49861	7.8884	5.666248E-02			20	
trans-1,3-Dichloropropene	0.3651777	Ave	14.75893	8.643375	2.494301E-02			20	
Ethylbenzene	1.344824	Ave	11.33243	9.7962	3.176435E-02			20	
Hexachlorobutadiene	0.1540623	Ave	7.547805	13.1825	1.280361E-02			20	
2-Hexanone	0.2768391	Ave	6.491161	9.501125	5.085782E-02			20	
Isopropylbenzene	1.170132	Ave	10.65457	10.59509	0.0202351			20	
4-Isopropyltoluene	1.961953	Ave	8.252713	11.6084	2.287279E-02			20	
Methylene chloride	0.7762485	XXX	64.13859	3.725286	0.1605774				
4-Methyl-2-pentanone (MiBK)	0.4083408	Ave	10.15169	8.618091	4.632965E-02			20	
Methyl tert-butyl ether (MTBE)	1.737544	Ave	3.662475	4.034273	0.105963			20	
Naphthalene	2.085939	Ave	8.862537	13.49188	0.0126047			20	
n-Propylbenzene	3.010297	Ave	13.61484	10.94309	2.224009E-02			20	
Styrene	0.713274	Ave	8.047581	10.37089	0.0354697			20	
1,1,1,2-Tetrachloroethane	0.2263147	Ave	13.96301	9.828889	3.446187E-02			20	
1,1,2,2-Tetrachloroethane	0.6550826	Ave	6.228093	11.00836	1.843147E-02			20	
Tetrachloroethene (PCE)	0.3066843	Ave	13.46575	8.5995	4.037679E-02			20	
1,2,3-Trichlorobenzene	0.5869678	Ave	4.011847	13.65389	2.211937E-02			20	
1,2,4-Trichlorobenzene	0.6195526	Ave	9.177609	13.2157	1.448412E-02			20	
1,1,1-Trichloroethane	0.6559841	Ave	4.490047	5.5462	9.514443E-02			20	
1,1,2-Trichloroethane	0.2702075	Ave	4.387567	8.819364	4.631842E-02			20	
Trichloroethene (TCE)	0.6095829	Ave	10.64915	6.550273	7.525326E-02			20	
Trichlorofluoromethane	0.2840989	Ave	5.300846	2.574444	0.2140081			20	
1,2,3-Trichloropropane	0.2701275	Ave	12.91525	11.1163	0.0163219			20	
1,2,4-Trimethylbenzene	2.082496	Ave	9.335725	11.41355	2.000768E-02			20	
1,3,5-Trimethylbenzene	2.035006	Ave	8.015564	11.1041	1.762525E-02			20	
Toluene	1.322662	Ave	11.48784	8.154556	3.821745E-02			20	
Vinyl chloride	0.5096599	Ave	3.257019	1.9491	0.2864279			20	
m,p-Xylene	0.9708556	Ave	12.3665	9.9336	3.419653E-02			20	
o-Xylene	1.020478	Ave	9.818085	10.3223	3.930108E-02			20	

INITIAL CALIBRATION DATA (Summary)

5035A/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E3104 Date: 05/31/19 12:17 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Difluorobenzene (Surr)	1.923181	Ave	0.9315441	6.587182	4.550578E-02			20	
Toluene-d8 (Surr)	1.352618	Ave	0.5818183	8.094909	2.999453E-02			20	
4-Bromofluorobenzene (Surr)	0.863369	Ave	0.7791042	10.83564	1.105545E-02			20	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E3104
Instrument: VOA-GCMS3
Calibration Date: 05/31/19 12:17

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	~~0.3447223~~	4	0.2842637	10	0.2334824
Acrylonitrile	0.1	~~0~~	0.2	~~0~~	0.4	~~0.1681251~~	1	0.2673481	2	0.2501717	5	0.3014056
Benzene	0.1	2.356957	0.2	2.259901	0.4	2.234785	1	2.283963	2	2.146571	5	2.20196
Bromobenzene	0.1	0.4548258	0.2	0.6704971	0.4	0.6912265	1	0.7046887	2	0.6774417	5	0.6997125
Bromochloromethane	0.1	~~0~~	0.2	0.4410751	0.4	0.3244519	1	0.3789298	2	0.3760424	5	0.4003564
Bromodichloromethane	0.1	~~0~~	0.2	0.4196542	0.4	0.4286697	1	0.4229109	2	0.3953694	5	0.4642172
Bromoform	0.1	~~0~~	0.2	~~0~~	0.4	0.0526578	1	7.182424E-02	2	7.496634E-02	5	9.142575E-02
Bromomethane	0.1	~~2.862981~~	0.2	~~1.755537~~	0.4	~~1.070691~~	1	~~0.5000814~~	2	~~0.4390268~~	5	0.3563957
2-Butanone (MEK)	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	0.4530461	4	0.3614736	10	0.4129755
n-Butylbenzene	0.1	~~2.872854~~	0.2	2.178789	0.4	1.782741	1	1.756012	2	1.570042	5	1.645783
sec-Butylbenzene	0.1	3.073286	0.2	2.706822	0.4	2.500477	1	2.410133	2	2.140161	5	2.408358
tert-Butylbenzene	0.1	1.233426	0.2	1.57887	0.4	1.114048	1	1.136963	2	1.03176	5	1.10145
Carbon disulfide	0.1	~~0~~	0.2	0.8130192	0.4	0.770819	1	0.678042	2	0.6724223	5	0.7029787
Carbon tetrachloride	0.1	~~0~~	0.2	~~0.4050491~~	0.4	~~0.3441156~~	1	0.3931829	2	0.3702541	5	0.4285776
Chlorobenzene	0.1	~~1.259914~~	0.2	0.9050022	0.4	0.8878219	1	0.8470387	2	0.8074661	5	0.7964598
Chloroethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0~~	2	0.1965074	5	0.2058695
Chloroform	0.1	~~1.658528~~	0.2	~~1.27941~~	0.4	1.008259	1	0.8948933	2	0.8597076	5	0.8319563
Chloromethane	0.1	~~1.606579~~	0.2	~~1.530618~~	0.4	0.9192803	1	0.788402	2	0.7484548	5	0.7505505
2-Chlorotoluene	0.1	0.6681057	0.2	0.6992513	0.4	0.6037463	1	0.6212244	2	0.5672949	5	0.6378577
4-Chlorotoluene	0.1	~~2.911399~~	0.2	2.19578	0.4	1.929867	1	1.868839	2	1.721526	5	1.793365
Dibromochloromethane	0.1	~~0~~	0.2	9.626492E-02	0.4	0.1554255	1	0.1612855	2	0.1590682	5	0.1671946
1,2-Dibromo-3-chloropropane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.1000484	2	0.1060388	5	0.1267334
1,2-Dibromoethane (EDB)	0.1	~~0.2072008~~	0.2	~~0.1667846~~	0.4	0.2247865	1	0.2477298	2	0.2306571	5	0.2594964
Dibromomethane	0.1	~~0~~	0.2	~~0.1460514~~	0.4	0.2811916	1	0.2589998	2	0.2718532	5	0.2809952
1,2-Dichlorobenzene	0.1	1.369617	0.2	1.088741	0.4	1.161764	1	1.034196	2	0.98118	5	1.054767
1,3-Dichlorobenzene	0.1	1.567479	0.2	1.2116	0.4	1.229363	1	1.100804	2	1.124063	5	1.118797
1,4-Dichlorobenzene	0.1	~~1.77305~~	0.2	1.505678	0.4	1.268464	1	1.187531	2	1.117516	5	1.147072
Dichlorodifluoromethane	0.1	~~0~~	0.2	0.462496	0.4	0.4129387	1	0.4163952	2	0.4476602	5	0.4787006
1,1-Dichloroethane	0.1	~~0~~	0.2	0.7156516	0.4	0.6970799	1	0.7087881	2	0.7337388	5	0.7441919
1,2-Dichloroethane (EDC)	0.1	~~0~~	0.2	0.6669679	0.4	0.6857733	1	0.6389477	2	0.6476013	5	0.6531697
1,1-Dichloroethene	0.1	~~0~~	0.2	0.4439961	0.4	0.5555009	1	0.5033393	2	0.4798391	5	0.5105722

INITIAL CALIBRATION DATA

5035A/8260C

Laboratory: Apex Laboratories

Client: Hahn and Associates

Calibration: A9E3104

SDG: A9E0785

Project: Mult 802 Decommissioning

Instrument: VOA-GCMS3

Calibration Date: 05/31/19 12:17

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	0.1	0.7022769	0.2	0.5949159	0.4	0.6941304	1	0.6285633	2	0.6303345	5	0.6720885
trans-1,2-Dichloroethene	0.1	0.4713914	0.2	0.714678	0.4	0.5712319	1	0.531642	2	0.5654861	5	0.6142723
1,2-Dichloropropane	0.1	~~0~~	0.2	0.5803107	0.4	0.5250221	1	0.5296058	2	0.5501815	5	0.5663865
1,3-Dichloropropane	0.1	0.4879244	0.2	0.5529636	0.4	0.5282767	1	0.4761982	2	0.4731627	5	0.5008873
2,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.5741815	1	0.5452842	2	0.5393898	5	0.566151
1,1-Dichloropropene	0.1	~~0~~	0.2	0.8003614	0.4	0.6439878	1	0.7442173	2	0.6352399	5	0.6520707
cis-1,3-Dichloropropene	0.1	~~0~~	0.2	0.3369272	0.4	0.3193441	1	0.3574968	2	0.342553	5	0.3853809
trans-1,3-Dichloropropene	0.1	~~0.2985474~~	0.2	~~0.3218159~~	0.4	~~0.2570607~~	1	0.3099233	2	0.2849717	5	0.3252241
Ethylbenzene	0.1	~~1.887087~~	0.2	1.620273	0.4	1.52651	1	1.400399	2	1.309973	5	1.368286
Hexachlorobutadiene	0.1	~~0.6038647~~	0.2	~~0.3868755~~	0.4	~~0.2485234~~	1	0.1772597	2	0.1597001	5	0.1475815
n-Hexane	0.1	~~1.646984~~	0.2	~~0.8509926~~	0.4	~~0.5520598~~	1	~~0.2813976~~	2	0.1733543	5	0.1373379
2-Hexanone	0.2	~~0.2467472~~	0.4	~~0.2140775~~	0.8	~~0.2603164~~	2	0.2863687	4	0.2356124	10	0.2787811
Isopropylbenzene	0.1	1.476027	0.2	1.245287	0.4	1.162152	1	1.147563	2	1.125326	5	1.191702
4-Isopropyltoluene	0.1	~~2.754651~~	0.2	2.285964	0.4	2.096212	1	1.876179	2	1.880841	5	1.983756
Methylene chloride	0.1	~~9.674105~~	0.2	~~14.20495~~	0.4	~~7.420608~~	1	~~3.209603~~	2	1.81193	5	0.9910783
4-Methyl-2-pentanone (MiBK)	0.2	0.4829115	0.4	0.4740488	0.8	0.4443356	2	0.408145	4	0.3660284	10	0.3823483
Methyl tert-butyl ether (MTBE)	0.1	1.793211	0.2	1.754564	0.4	1.806607	1	1.734199	2	1.720887	5	1.759763
Naphthalene	0.1	~~1.814164~~	0.2	~~1.787992~~	0.4	~~1.845701~~	1	1.870198	2	1.797397	5	2.024392
n-Propylbenzene	0.1	4.018913	0.2	3.24531	0.4	3.147964	1	2.876119	2	2.838015	5	3.062025
Styrene	0.1	~~0.6516799~~	0.2	~~0.5882234~~	0.4	0.6403868	1	0.656513	2	0.6439686	5	0.7153222
1,1,1,2-Tetrachloroethane	0.1	~~0~~	0.2	~~0.1779782~~	0.4	0.1704301	1	0.2100192	2	0.1961084	5	0.2155581
1,1,2,2-Tetrachloroethane	0.1	0.6835235	0.2	0.5737782	0.4	0.6633919	1	0.6176901	2	0.5964363	5	0.6536662
Tetrachloroethene (PCE)	0.1	~~0.3765262~~	0.2	0.3906565	0.4	0.3739836	1	0.3035416	2	0.2684725	5	0.2965384
1,2,3-Trichlorobenzene	0.1	~~0.2698119~~	0.2	~~0.6953303~~	0.4	0.5633198	1	0.5682096	2	0.5533018	5	0.5697431
1,2,4-Trichlorobenzene	0.1	~~0.9199301~~	0.2	0.7567599	0.4	0.5381361	1	0.6214963	2	0.5739704	5	0.6037474
1,1,1-Trichloroethane	0.1	~~0.582986~~	0.2	0.6397049	0.4	0.6793826	1	0.5951702	2	0.6316099	5	0.6553285
1,1,2-Trichloroethane	0.1	0.255102	0.2	0.283198	0.4	0.25791	1	0.2611896	2	0.2514196	5	0.2779612
Trichloroethene (TCE)	0.1	0.6888086	0.2	0.7575197	0.4	0.5181398	1	0.6098306	2	0.6114	5	0.5973945
Trichlorofluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2757841	1	0.2893387	2	0.2901992	5	0.3021121
1,2,3-Trichloropropane	0.1	~~0~~	0.2	0.1882097	0.4	0.3313646	1	0.2672488	2	0.2824279	5	0.2739435
1,1,2-Trichloro-1,2,2-trifluoroethan	0.1	~~0~~	0.2	0.5871264	0.4	0.4596402	1	0.437164	2	0.3834004	5	0.4095803

INITIAL CALIBRATION DATA

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E3104
Instrument: VOA-GCMS3
Calibration Date: 05/31/19 12:17

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,2,4-Trimethylbenzene	0.1	2.4797	0.2	2.104289	0.4	2.243338	1	2.133369	2	1.97186	5	2.077334
1,3,5-Trimethylbenzene	0.1	~~3.353377~~	0.2	2.321253	0.4	2.080307	1	2.112979	2	1.864152	5	2.109959
Toluene	0.1	~~2.780501~~	0.2	~~1.916903~~	0.4	1.619652	1	1.480113	2	1.319496	5	1.333738
Vinyl chloride	0.1	~~0~~	0.2	0.501443	0.4	0.5201062	1	0.5080225	2	0.5160404	5	0.5288629
m,p-Xylene	0.2	~~1.385238~~	0.4	1.1882	0.8	1.079202	2	1.009485	4	0.9524988	10	0.9872633
o-Xylene	0.1	~~1.4181~~	0.2	1.249205	0.4	1.06448	1	1.050212	2	0.9658698	5	1.026754
Xylenes, total	0.3	~~1.396192~~	0.6	1.208535	1.2	1.074295	3	1.02306	6	0.9569558	15	1.000427
trans-1,4-Dichloro-2-butene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	4.893671E-02	2	4.108041E-02	5	6.816759E-02
1,4-Difluorobenzene (Surr)	50	1.898995	50	1.915613	50	1.909421	50	1.926075	50	1.947953	50	1.931983
Toluene-d8 (Surr)	50	1.353667	50	1.351054	50	1.350243	50	1.354946	50	1.346094	50	1.358951
4-Bromofluorobenzene (Surr)	50	0.8629099	50	0.8664234	50	0.8659007	50	0.8628413	50	0.8567937	50	0.8677337

INITIAL CALIBRATION DATA (Continued)

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E3104
Instrument: VOA-GCMS3
Matrix:
Calibration Date: 05/31/19 12:17

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	20	0.205634	40	0.2174602	100	0.2228833	200	0.2165903	400	0.1973146		
Acrylonitrile	10	0.3014239	20	0.2984808	50	0.3175696	100	0.3081987	200	0.2946037		
Benzene	10	2.176265	20	2.159652	50	2.18442	100	2.045954	200	1.855768		
Bromobenzene	10	0.6925787	20	0.6728622	50	0.6872456	100	0.686058	200	0.6251844		
Bromochloromethane	10	0.4020048	20	0.3936864	50	0.4024547	100	0.3884155	200	0.3600962		
Bromodichloromethane	10	0.4732223	20	0.5159069	50	0.5913129	100	0.6046422	200	0.5981187		
Bromoform	10	9.945226E-02	20	0.1105229	50	0.1440129	100	0.1588168	200	0.1683146		
Bromomethane	10	0.3223011	20	0.276709	50	0.2670883	100	0.2495434	200	0.2528457		
2-Butanone (MEK)	20	0.401726	40	0.4027888	100	0.4155017	200	0.3917591	400	0.3761518		
n-Butylbenzene	10	1.647722	20	1.635715	50	1.604073	100	1.511956	200	1.353685		
sec-Butylbenzene	10	2.373978	20	2.403922	50	2.360269	100	2.233842	200	1.916607		
tert-Butylbenzene	10	1.105888	20	1.110102	50	1.105151	100	1.078095	200	0.950431		
Carbon disulfide	10	0.7261387	20	0.7893901	50	0.9457745	100	0.9707577	200	0.9604621		
Carbon tetrachloride	10	0.4505323	20	0.4647616	50	0.5280438	100	0.5349357	200	0.5417214		
Chlorobenzene	10	0.78503	20	0.7773639	50	0.7815087	100	0.7497145	200	0.685185		
Chloroethane	10	0.1816193	20	0.187039	50	0.191151	100	0.2027048	200	0.1755033		
Chloroform	10	0.8391702	20	0.8450671	50	0.8681585	100	0.8317265	200	0.7522979		
Chloromethane	10	0.709684	20	0.7097387	50	0.7146212	100	0.6827604	200	0.6121071		
2-Chlorotoluene	10	0.6368426	20	0.6169345	50	0.6182646	100	0.6235586	200	0.5618063		
4-Chlorotoluene	10	1.743775	20	1.781719	50	1.769476	100	1.715445	200	1.49064		
Dibromochloromethane	10	0.1842371	20	0.2021042	50	0.2469028	100	0.2623827	200	0.268725		
1,2-Dibromo-3-chloropropane	10	0.1474785	20	0.1565661	50	0.1851799	100	0.2044808	200	0.2145878		
1,2-Dibromoethane (EDB)	10	0.2736742	20	0.2767431	50	0.2950057	100	0.2894677	200	0.2798647		
Dibromomethane	10	0.2968621	20	0.301005	50	0.3205243	100	0.3100595	200	0.2929304		
1,2-Dichlorobenzene	10	1.025871	20	1.035527	50	1.033287	100	0.9944901	200	0.9265535		
1,3-Dichlorobenzene	10	1.11582	20	1.109945	50	1.116117	100	1.076415	200	0.974506		
1,4-Dichlorobenzene	10	1.122379	20	1.098662	50	1.095987	100	1.058131	200	0.9735116		
Dichlorodifluoromethane	10	0.4534009	20	0.4410211	50	0.4877186	100	0.4626798	200	0.4255249		
1,1-Dichloroethane	10	0.7239673	20	0.7378354	50	0.7491965	100	0.7443219	200	0.6742483		
1,2-Dichloroethane (EDC)	10	0.6477099	20	0.6472689	50	0.6634541	100	0.6286668	200	0.5994196		
1,1-Dichloroethene	10	0.5129845	20	0.506629	50	0.5384312	100	0.5148187	200	0.4926785		

INITIAL CALIBRATION DATA (Continued)

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E3104
Instrument: VOA-GCMS3
Matrix:
Calibration Date: 05/31/19 12:17

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	10	0.6749418	20	0.659948	50	0.6785387	100	0.6585095	200	0.60685		
trans-1,2-Dichloroethene	10	0.60484	20	0.5961138	50	0.6262431	100	0.5980107	200	0.558502		
1,2-Dichloropropane	10	0.5536232	20	0.5699759	50	0.5811369	100	0.5648897	200	0.5342817		
1,3-Dichloropropane	10	0.501398	20	0.5082841	50	0.5076875	100	0.4963754	200	0.4650708		
2,2-Dichloropropane	10	0.5846401	20	0.5733089	50	0.5934502	100	0.5736428	200	0.5483554		
1,1-Dichloropropene	10	0.6563357	20	0.6584764	50	0.6875105	100	0.650704	200	0.6235462		
cis-1,3-Dichloropropene	10	0.4017509	20	0.4263151	50	0.4584765	100	0.4602436	200	0.4476129		
trans-1,3-Dichloropropene	10	0.3602351	20	0.3820349	50	0.4188487	100	0.4240313	200	0.4161526		
Ethylbenzene	10	1.323475	20	1.322104	50	1.291962	100	1.212519	200	1.072742		
Hexachlorobutadiene	10	0.1432488	20	0.1607463	50	0.154355	100	0.145664	200	0.1439433		
n-Hexane	10	0.1107406	20	9.823642E-02	50	0.1015447	100	9.324765E-02	200	9.235036E-02		
2-Hexanone	20	0.2807902	40	0.2806108	100	0.2940055	200	0.2873308	400	0.2712131		
Isopropylbenzene	10	1.162912	20	1.169528	50	1.145301	100	1.090283	200	0.955372		
4-Isopropyltoluene	10	1.985351	20	1.973365	50	1.980868	100	1.901336	200	1.655659		
Methylene chloride	10	0.7095844	20	0.5684556	50	0.4896765	100	0.4544216	200	0.4085932		
4-Methyl-2-pentanone (MiBK)	20	0.3988805	40	0.3891706	100	0.4027317	200	0.3848399	400	0.3583084		
Methyl tert-butyl ether (MTBE)	10	1.74151	20	1.751542	50	1.78124	100	1.699133	200	1.570331		
Naphthalene	10	2.132642	20	2.2353	50	2.312145	100	2.256912	200	2.058529		
n-Propylbenzene	10	2.971227	20	2.970799	50	2.888409	100	2.760681	200	2.333803		
Styrene	10	0.7369024	20	0.7671685	50	0.7863926	100	0.7760165	200	0.6967954		
1,1,1,2-Tetrachloroethane	10	0.2260622	20	0.23876	50	0.2598391	100	0.2631874	200	0.2568674		
1,1,2,2-Tetrachloroethane	10	0.6795147	20	0.6826771	50	0.6958363	100	0.6862858	200	0.6731083		
Tetrachloroethene (PCE)	10	0.2943118	20	0.2853503	50	0.2932724	100	0.2836355	200	0.2770802		
1,2,3-Trichlorobenzene	10	0.6015859	20	0.6095439	50	0.6149061	100	0.6109089	200	0.5911911		
1,2,4-Trichlorobenzene	10	0.6212354	20	0.6121254	50	0.6489513	100	0.6192864	200	0.599817		
1,1,1-Trichloroethane	10	0.6535069	20	0.6727538	50	0.6994091	100	0.6789123	200	0.654063		
1,1,2-Trichloroethane	10	0.2754618	20	0.2782313	50	0.2849041	100	0.2775706	200	0.269334		
Trichloroethene (TCE)	10	0.5845804	20	0.5904906	50	0.6134314	100	0.5871264	200	0.5466896		
Trichlorofluoromethane	10	0.2723593	20	0.2913762	50	0.2911765	100	0.2927105	200	0.2518337		
1,2,3-Trichloropropane	10	0.2766995	20	0.274659	50	0.2805165	100	0.2680685	200	0.2581367		
1,1,2-Trichloro-1,2,2-trifluoroethan	10	0.4093955	20	0.4069892	50	0.418564	100	0.3986246	200	0.3843963		

INITIAL CALIBRATION DATA (Continued)

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E3104
Instrument: VOA-GCMS3
Matrix:
Calibration Date: 05/31/19 12:17

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,2,4-Trimethylbenzene	10	2.097787	20	2.105911	50	2.049388	100	1.966569	200	1.677913		
1,3,5-Trimethylbenzene	10	2.087052	20	2.072968	50	2.032023	100	1.957503	200	1.711864		
Toluene	10	1.306172	20	1.285126	50	1.262006	100	1.202572	200	1.095086		
Vinyl chloride	10	0.5023865	20	0.5127395	50	0.5267001	100	0.50986	200	0.4704381		
m,p-Xylene	20	0.9757758	40	0.9756587	100	0.9419256	200	0.8659448	400	0.7326016		
o-Xylene	10	1.002086	20	1.013892	50	1.017395	100	0.9633158	200	0.8515745		
Xylenes, total	30	0.9845457	60	0.988403	150	0.9670822	300	0.8984018	600	0.7722593		
trans-1,4-Dichloro-2-butene	10	7.573364E-02	20	8.610613E-02	50	9.770183E-02	100	0.1024732	200	0.1049195		
1,4-Difluorobenzene (Surr)	50	1.903093	50	1.931437	50	1.95111	50	1.905471	50	1.933838		
Toluene-d8 (Surr)	50	1.353117	50	1.356025	50	1.33804	50	1.347553	50	1.36911		
4-Bromofluorobenzene (Surr)	50	0.8656337	50	0.8683943	50	0.8586692	50	0.8733106	50	0.8484489		

SECOND-SOURCE CALIBRATION VERIFICATION

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9E3104
Lab File ID:	VC19052919.D		
Sequence:	9E29058	Inject Date:	05/29/19
Lab Sample ID:	9E29058-ICV1	Inject Time:	22:32

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acetone	40.0	40.4	0.9	70 - 130
Acrylonitrile	20.0	20.9	4.6	70 - 130
Benzene	20.0	21.2	6.0	70 - 130
Bromobenzene	20.0	21.4	7.2	70 - 130
Bromochloromethane	20.0	21.7	8.4	70 - 130
Bromodichloromethane	20.0	22.0	9.8	70 - 130
Bromoform	20.0	18.7	-6.6	70 - 130
Bromomethane	20.0	20.9	4.6	70 - 130
2-Butanone (MEK)	40.0	40.5	1.2	70 - 130
n-Butylbenzene	20.0	20.2	1.0	70 - 130
sec-Butylbenzene	20.0	20.2	1.0	70 - 130
tert-Butylbenzene	20.0	19.4	-2.8	70 - 130
Carbon disulfide	20.0	19.6	-2.2	70 - 130
Carbon tetrachloride	20.0	21.7	8.7	70 - 130
Chlorobenzene	20.0	20.1	0.7	70 - 130
Chloroethane	20.0	21.4	7.0	70 - 130
Chloroform	20.0	20.7	3.4	70 - 130
Chloromethane	20.0	18.8	-6.2	70 - 130
2-Chlorotoluene	20.0	20.1	0.6	70 - 130
4-Chlorotoluene	20.0	20.3	1.5	70 - 130
Dibromochloromethane	20.0	18.9	-5.4	70 - 130
1,2-Dibromo-3-chloropropane	20.0	20.0	0.1	70 - 130
1,2-Dibromoethane (EDB)	20.0	21.8	9.2	70 - 130
Dibromomethane	20.0	21.3	6.6	70 - 130
1,2-Dichlorobenzene	20.0	19.7	-1.4	70 - 130
1,3-Dichlorobenzene	20.0	19.6	-1.9	70 - 130
1,4-Dichlorobenzene	20.0	19.5	-2.4	70 - 130
Dichlorodifluoromethane	20.0	16.6	-17.0	70 - 130
1,1-Dichloroethane	20.0	24.1	20.5	70 - 130
1,2-Dichloroethane (EDC)	20.0	21.4	6.9	70 - 130
1,1-Dichloroethene	20.0	25.4	26.8	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9E3104
Lab File ID:	VC19052919.D		
Sequence:	9E29058	Inject Date:	05/29/19
Lab Sample ID:	9E29058-ICV1	Inject Time:	22:32

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
cis-1,2-Dichloroethene	20.0	21.6	7.8	70 - 130
trans-1,2-Dichloroethene	20.0	24.3	21.6	70 - 130
1,2-Dichloropropane	20.0	21.0	5.2	70 - 130
1,3-Dichloropropane	20.0	20.7	3.4	70 - 130
2,2-Dichloropropane	20.0	19.5	-2.3	70 - 130
1,1-Dichloropropene	20.0	20.6	3.2	70 - 130
cis-1,3-Dichloropropene	20.0	22.0	10.0	70 - 130
trans-1,3-Dichloropropene	20.0	21.8	8.8	70 - 130
Ethylbenzene	20.0	19.8	-0.9	70 - 130
Hexachlorobutadiene	20.0	21.6	7.8	70 - 130
2-Hexanone	40.0	40.7	1.8	70 - 130
Isopropylbenzene	20.0	19.7	-1.4	70 - 130
4-Isopropyltoluene	20.0	21.0	5.1	70 - 130
Methylene chloride	20.0	18.3	-8.6	70 - 130
4-Methyl-2-pentanone (MiBK)	40.0	38.8	-3.0	70 - 130
Methyl tert-butyl ether (MTBE)	20.0	20.3	1.6	70 - 130
Naphthalene	20.0	21.7	8.4	70 - 130
n-Propylbenzene	20.0	19.7	-1.4	70 - 130
Styrene	20.0	21.5	7.4	70 - 130
1,1,1,2-Tetrachloroethane	20.0	22.0	10.0	70 - 130
1,1,2,2-Tetrachloroethane	20.0	21.5	7.7	70 - 130
Tetrachloroethene (PCE)	20.0	19.4	-3.2	70 - 130
1,2,3-Trichlorobenzene	20.0	20.9	4.6	70 - 130
1,2,4-Trichlorobenzene	20.0	20.9	4.6	70 - 130
1,1,1-Trichloroethane	20.0	22.5	12.6	70 - 130
1,1,2-Trichloroethane	20.0	21.4	7.2	70 - 130
Trichloroethene (TCE)	20.0	20.4	2.2	70 - 130
Trichlorofluoromethane	20.0	18.0	-10.0	70 - 130
1,2,3-Trichloropropane	20.0	20.3	1.7	70 - 130
1,2,4-Trimethylbenzene	20.0	20.2	1.1	70 - 130
1,3,5-Trimethylbenzene	20.0	20.8	3.8	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9E3104
Lab File ID:	VC19052919.D		
Sequence:	9E29058	Inject Date:	05/29/19
Lab Sample ID:	9E29058-ICV1	Inject Time:	22:32

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Toluene	20.0	19.9	-0.6	70 - 130
Vinyl chloride	20.0	19.4	-3.0	70 - 130
m,p-Xylene	40.0	40.5	1.4	70 - 130
o-Xylene	20.0	20.1	0.3	70 - 130
1,4-Difluorobenzene (Surr)	50.0	50.3	0.6	70 - 130
Toluene-d8 (Surr)	50.0	49.5	-1.0	70 - 130
4-Bromofluorobenzene (Surr)	50.0	50.1	0.1	70 - 130

SURROGATE STANDARD RECOVERY AND RT SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E29058	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9E29058-ICV1)				Lab File ID: VC19052919.D		Analyzed: 05/29/19 22:32		
1,4-Difluorobenzene (Surr)	50.0	101	70 - 130	6.59	6.587182	0.0028	+/-1.0	
Toluene-d8 (Surr)	50.0	99	70 - 130	8.093	8.094909	-0.0019	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	70 - 130	10.836	10.83564	0.0004	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04032	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9060533-BS1)			Lab File ID: VC19060403.D		Analyzed: 06/04/19 10:28			
1,4-Difluorobenzene (Surr)	50.0	95	80 - 120	6.588	6.587182	0.0008	+/-1.0	
Toluene-d8 (Surr)	50.0	100	80 - 120	8.091	8.094909	-0.0039	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	10.835	10.83564	-0.0006	+/-1.0	
Blank (9060533-BLK1)			Lab File ID: VC19060405.D		Analyzed: 06/04/19 11:23			
1,4-Difluorobenzene (Surr)	50.0	94	80 - 120	6.583	6.587182	-0.0042	+/-1.0	
Toluene-d8 (Surr)	50.0	99	80 - 120	8.092	8.094909	-0.0029	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	101	80 - 120	10.835	10.83564	-0.0006	+/-1.0	
2708-190522-011 (A9E0785-01)			Lab File ID: VC19060420.D		Analyzed: 06/04/19 18:14			
1,4-Difluorobenzene (Surr)	50.0	91	80 - 120	6.588	6.587182	0.0008	+/-1.0	
Toluene-d8 (Surr)	50.0	98	80 - 120	8.091	8.094909	-0.0039	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	101	80 - 120	10.834	10.83564	-0.0016	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F05048	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9060582-BS1)				Lab File ID: VC19060510.D		Analyzed: 06/05/19 13:52		
1,4-Difluorobenzene (Surr)	50.0	90	80 - 120	6.585	6.587182	-0.0022	+/-1.0	
Toluene-d8 (Surr)	50.0	101	80 - 120	8.094	8.094909	-0.0009	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	102	80 - 120	10.838	10.83564	0.0024	+/-1.0	
Blank (9060582-BLK1)				Lab File ID: VC19060512.D		Analyzed: 06/05/19 14:47		
1,4-Difluorobenzene (Surr)	50.0	90	80 - 120	6.588	6.587182	0.0008	+/-1.0	
Toluene-d8 (Surr)	50.0	102	80 - 120	8.097	8.094909	0.0021	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	103	80 - 120	10.835	10.83564	-0.0006	+/-1.0	
Instrument RL Check (9F05048-CRL1)				Lab File ID: VC19060513.D		Analyzed: 06/05/19 15:15		
1,4-Difluorobenzene (Surr)	50.0	89	0 - 200	6.591	6.587182	0.0038	+/-1.0	
Toluene-d8 (Surr)	50.0	101	0 - 200	8.093	8.094909	-0.0019	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	102	0 - 200	10.837	10.83564	0.0014	+/-1.0	
2708-190522-011 (A9E0785-01RE1)				Lab File ID: VC19060518.D		Analyzed: 06/05/19 17:33		
1,4-Difluorobenzene (Surr)	50.0	90	80 - 120	6.582	6.587182	-0.0052	+/-1.0	
Toluene-d8 (Surr)	50.0	100	80 - 120	8.09	8.094909	-0.0049	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	102	80 - 120	10.834	10.83564	-0.0016	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04032	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9060533-BS1)			Lab File ID: VC19060403.D			Analyzed: 06/04/19 10:28			
Pentafluorobenzene (ISTD)	275376	6.029	275376	6.029	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	443366	9.746	443366	9.746	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	185288	11.729	185288	11.729	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9F04032-CCV1)			Lab File ID: VC19060403.D			Analyzed: 06/04/19 10:28			
Pentafluorobenzene (ISTD)	275376	6.029	256524	6.031	107	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (ISTD)	443366	9.746	450201	9.748	98	50 - 200	-0.0020	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	185288	11.729	190782	11.725	97	50 - 200	0.0040	+/-0.50	
Blank (9060533-BLK1)			Lab File ID: VC19060405.D			Analyzed: 06/04/19 11:23			
Pentafluorobenzene (ISTD)	269768	6.029	275376	6.029	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	439790	9.746	443366	9.746	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	185883	11.724	185288	11.729	100	50 - 200	-0.0050	+/-0.50	
Matrix Spike (9060533-MS1)			Lab File ID: VC19060412.D			Analyzed: 06/04/19 14:33			
Pentafluorobenzene (ISTD)	335037	6.034	275376	6.029	122	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (ISTD)	521185	9.751	443366	9.746	118	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	225131	11.729	185288	11.729	122	50 - 200	0.0000	+/-0.50	
2708-190522-011 (A9E0785-01)			Lab File ID: VC19060420.D			Analyzed: 06/04/19 18:14			
Pentafluorobenzene (ISTD)	347715	6.028	275376	6.029	126	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	536543	9.745	443366	9.746	121	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	232487	11.729	185288	11.729	125	50 - 200	0.0000	+/-0.50	
Duplicate (9060533-DUP1)			Lab File ID: VC19060425.D			Analyzed: 06/04/19 20:32			
Pentafluorobenzene (ISTD)	350401	6.031	275376	6.029	127	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (ISTD)	537431	9.748	443366	9.746	121	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	233272	11.725	185288	11.729	126	50 - 200	-0.0040	+/-0.50	
Duplicate (9060533-DUP2)			Lab File ID: VC19060427.D			Analyzed: 06/04/19 21:27			
Pentafluorobenzene (ISTD)	365820	6.028	275376	6.029	133	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	550111	9.751	443366	9.746	124	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	226259	11.728	185288	11.729	122	50 - 200	-0.0010	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F05048	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9E3104

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9060582-BS1)			Lab File ID: VC19060510.D			Analyzed: 06/05/19 13:52			
Pentafluorobenzene (ISTD)	357641	6.026	357641	6.026	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	535132	9.749	535132	9.749	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	226085	11.726	226085	11.726	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9F05048-CCV1)			Lab File ID: VC19060510.D			Analyzed: 06/05/19 13:52			
Pentafluorobenzene (ISTD)	357641	6.026	256524	6.031	139	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (ISTD)	535132	9.749	450201	9.748	119	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	226085	11.726	190782	11.725	119	50 - 200	0.0010	+/-0.50	
Blank (9060582-BLK1)			Lab File ID: VC19060512.D			Analyzed: 06/05/19 14:47			
Pentafluorobenzene (ISTD)	352824	6.035	357641	6.026	99	50 - 200	0.0090	+/-0.50	
Chlorobenzene-d5 (ISTD)	522808	9.752	535132	9.749	98	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	222610	11.729	226085	11.726	98	50 - 200	0.0030	+/-0.50	
Instrument RL Check (9F05048-CRL1)			Lab File ID: VC19060513.D			Analyzed: 06/05/19 15:15			
Pentafluorobenzene (ISTD)	350602	6.031	357641	6.026	98	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (ISTD)	518297	9.748	535132	9.749	97	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	215945	11.725	226085	11.726	96	50 - 200	-0.0010	+/-0.50	
2708-190522-011 (A9E0785-01RE1)			Lab File ID: VC19060518.D			Analyzed: 06/05/19 17:33			
Pentafluorobenzene (ISTD)	358151	6.028	357641	6.026	100	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (ISTD)	538353	9.751	535132	9.749	101	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	229780	11.728	226085	11.726	102	50 - 200	0.0020	+/-0.50	
Duplicate (9060582-DUP1)			Lab File ID: VC19060526.D			Analyzed: 06/05/19 21:14			
Pentafluorobenzene (ISTD)	329142	6.034	357641	6.026	92	50 - 200	0.0080	+/-0.50	
Chlorobenzene-d5 (ISTD)	500701	9.751	535132	9.749	94	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	215025	11.728	226085	11.726	95	50 - 200	0.0020	+/-0.50	
Matrix Spike (9060582-MS1)			Lab File ID: VC19060528.D			Analyzed: 06/05/19 22:09			
Pentafluorobenzene (ISTD)	331137	6.029	357641	6.026	93	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (ISTD)	500960	9.752	535132	9.749	94	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	211489	11.729	226085	11.726	94	50 - 200	0.0030	+/-0.50	

HOLDING TIME SUMMARY

5035A/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	05/31/19 15:46	8.97	2.00	06/04/19 18:14	4.10	14.00	*
2708-190522-011	05/22/19 16:30	05/23/19 13:55	05/31/19 15:46	8.97	2.00	06/05/19 17:33	5.07	14.00	*

Apex Laboratories

SDG: A9E0785

CLASS: GC

METHOD: 1312/8260C

ANALYSES DATA PACKAGE COVER PAGE

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/2/2019 2:07PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

1312/8260C

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Water

Analyte	MDL	MRL	Units
Acetone	0.0100	0.0200	mg/L
Benzene	0.000125	0.000250	mg/L
Bromobenzene	0.000250	0.000500	mg/L
Bromochloromethane	0.000500	0.00100	mg/L
Bromodichloromethane	0.000500	0.00100	mg/L
Bromoform	0.000500	0.00100	mg/L
Bromomethane	0.00500	0.00500	mg/L
2-Butanone (MEK)	0.00500	0.0100	mg/L
n-Butylbenzene	0.000500	0.00100	mg/L
sec-Butylbenzene	0.000500	0.00100	mg/L
tert-Butylbenzene	0.000500	0.00100	mg/L
Carbon tetrachloride	0.000500	0.00100	mg/L
Chlorobenzene	0.000250	0.000500	mg/L
Chloroethane	0.00500	0.00500	mg/L
Chloroform	0.000500	0.00100	mg/L
Chloromethane	0.00250	0.00500	mg/L
2-Chlorotoluene	0.000500	0.00100	mg/L
4-Chlorotoluene	0.000500	0.00100	mg/L
1,2-Dibromo-3-chloropropane	0.00250	0.00500	mg/L
Dibromochloromethane	0.000500	0.00100	mg/L
1,2-Dibromoethane (EDB)	0.000250	0.000500	mg/L
Dibromomethane	0.000500	0.00100	mg/L
1,2-Dichlorobenzene	0.000250	0.000500	mg/L
1,3-Dichlorobenzene	0.000250	0.000500	mg/L
1,4-Dichlorobenzene	0.000250	0.000500	mg/L
Dichlorodifluoromethane	0.000500	0.00100	mg/L
1,1-Dichloroethane	0.000250	0.000500	mg/L
1,2-Dichloroethane (EDC)	0.000250	0.000500	mg/L
1,1-Dichloroethene	0.000250	0.000500	mg/L
cis-1,2-Dichloroethene	0.000250	0.000500	mg/L
trans-1,2-Dichloroethene	0.000250	0.000500	mg/L
1,2-Dichloropropane	0.000250	0.000500	mg/L
1,3-Dichloropropane	0.000500	0.00100	mg/L
2,2-Dichloropropane	0.000500	0.00100	mg/L
1,1-Dichloropropene	0.000500	0.00100	mg/L
cis-1,3-Dichloropropene	0.000500	0.00100	mg/L
trans-1,3-Dichloropropene	0.000500	0.00100	mg/L

METHOD DETECTION AND REPORTING LIMITS

1312/8260C

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Water

Analyte	MDL	MRL	Units
Ethylbenzene	0.000250	0.000500	mg/L
Hexachlorobutadiene	0.00250	0.00500	mg/L
2-Hexanone	0.00500	0.0100	mg/L
Isopropylbenzene	0.000500	0.00100	mg/L
4-Isopropyltoluene	0.000500	0.00100	mg/L
4-Methyl-2-pentanone (MiBK)	0.00500	0.0100	mg/L
Methyl tert-butyl ether (MTBE)	0.000500	0.00100	mg/L
Methylene chloride	0.00250	0.00500	mg/L
Naphthalene	0.00100	0.00200	mg/L
n-Propylbenzene	0.000250	0.000500	mg/L
Styrene	0.000500	0.00100	mg/L
1,1,1,2-Tetrachloroethane	0.000250	0.000500	mg/L
1,1,2,2-Tetrachloroethane	0.000250	0.000500	mg/L
Tetrachloroethene (PCE)	0.000250	0.000500	mg/L
Toluene	0.000500	0.00100	mg/L
1,2,3-Trichlorobenzene	0.00100	0.00200	mg/L
1,2,4-Trichlorobenzene	0.00100	0.00200	mg/L
1,1,1-Trichloroethane	0.000250	0.000500	mg/L
1,1,2-Trichloroethane	0.000250	0.000500	mg/L
Trichloroethene (TCE)	0.000250	0.000500	mg/L
Trichlorofluoromethane	0.00100	0.00200	mg/L
1,2,3-Trichloropropane	0.000500	0.00100	mg/L
1,2,4-Trimethylbenzene	0.000500	0.00100	mg/L
1,3,5-Trimethylbenzene	0.000500	0.00100	mg/L
Vinyl chloride	0.000250	0.000500	mg/L
m,p-Xylene	0.000500	0.00100	mg/L
o-Xylene	0.000250	0.000500	mg/L

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

1312/8260C

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01RE1	File ID:	VI19060517.D
Sampled:	05/22/19 16:30	Prepared:	06/05/19 12:17	Analyzed:	06/05/19 16:43
		Preparation:	EPA 1312/5030B SPLP Vola	Initial/Final:	5 mL / 5 mL

Batch: 9060589 Sequence: 9F05032 Calibration: A9E1405 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (mg/L)	Q
67-64-1	Acetone	50	0.500	U
71-43-2	Benzene	50	1.17	D
108-86-1	Bromobenzene	50	0.0125	U
74-97-5	Bromochloromethane	50	0.0250	U
75-27-4	Bromodichloromethane	50	0.0250	U
75-25-2	Bromoform	50	0.0250	U
74-83-9	Bromomethane	50	0.250	U
78-93-3	2-Butanone (MEK)	50	0.250	U
104-51-8	n-Butylbenzene	50	0.0250	U
135-98-8	sec-Butylbenzene	50	0.0250	U
98-06-6	tert-Butylbenzene	50	0.0250	U
56-23-5	Carbon tetrachloride	50	0.0250	U
108-90-7	Chlorobenzene	50	0.0125	U
75-00-3	Chloroethane	50	0.250	U
67-66-3	Chloroform	50	0.0250	U
74-87-3	Chloromethane	50	0.125	U
95-49-8	2-Chlorotoluene	50	0.0250	U
106-43-4	4-Chlorotoluene	50	0.0250	U
96-12-8	1,2-Dibromo-3-chloropropane	50	0.125	U
124-48-1	Dibromochloromethane	50	0.0250	U
106-93-4	1,2-Dibromoethane (EDB)	50	0.0125	U
74-95-3	Dibromomethane	50	0.0250	U
95-50-1	1,2-Dichlorobenzene	50	0.0125	U
541-73-1	1,3-Dichlorobenzene	50	0.0125	U
106-46-7	1,4-Dichlorobenzene	50	0.0125	U
75-71-8	Dichlorodifluoromethane	50	0.0250	U
75-34-3	1,1-Dichloroethane	50	0.0125	U
107-06-2	1,2-Dichloroethane (EDC)	50	0.0125	U
75-35-4	1,1-Dichloroethene	50	0.0125	U
156-59-2	cis-1,2-Dichloroethene	50	0.0125	U
156-60-5	trans-1,2-Dichloroethene	50	0.0125	U
78-87-5	1,2-Dichloropropane	50	0.0125	U
142-28-9	1,3-Dichloropropane	50	0.0250	U
594-20-7	2,2-Dichloropropane	50	0.0250	U
563-58-6	1,1-Dichloropropene	50	0.0250	U
10061-01-5	cis-1,3-Dichloropropene	50	0.0250	U
10061-02-6	trans-1,3-Dichloropropene	50	0.0250	U
100-41-4	Ethylbenzene	50	0.213	D
87-68-3	Hexachlorobutadiene	50	0.125	U
591-78-6	2-Hexanone	50	0.250	U

ORGANIC ANALYSIS DATA SHEET

1312/8260C

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01RE1	File ID:	VI19060517.D
Sampled:	05/22/19 16:30	Prepared:	06/05/19 12:17	Analyzed:	06/05/19 16:43
		Preparation:	EPA 1312/5030B SPLP Vola	Initial/Final:	5 mL / 5 mL

Batch: 9060589 Sequence: 9F05032 Calibration: A9E1405 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (mg/L)	Q
98-82-8	Isopropylbenzene	50	0.0250	U
99-87-6	4-Isopropyltoluene	50	0.0250	U
108-10-1	4-Methyl-2-pentanone (MiBK)	50	0.250	U
1634-04-4	Methyl tert-butyl ether (MTBE)	50	0.0250	U
75-09-2	Methylene chloride	50	0.125	U
91-20-3	Naphthalene	50	9.71	D
103-65-1	n-Propylbenzene	50	0.0125	U
100-42-5	Styrene	50	0.0830	D
630-20-6	1,1,1,2-Tetrachloroethane	50	0.0125	U
79-34-5	1,1,2,2-Tetrachloroethane	50	0.0125	U
127-18-4	Tetrachloroethene (PCE)	50	0.0125	U
108-88-3	Toluene	50	0.724	D
87-61-6	1,2,3-Trichlorobenzene	50	0.0500	U
120-82-1	1,2,4-Trichlorobenzene	50	0.0500	U
71-55-6	1,1,1-Trichloroethane	50	0.0125	U
79-00-5	1,1,2-Trichloroethane	50	0.0125	U
79-01-6	Trichloroethene (TCE)	50	0.0125	U
75-69-4	Trichlorofluoromethane	50	0.0500	U
96-18-4	1,2,3-Trichloropropane	50	0.0250	U
95-63-6	1,2,4-Trimethylbenzene	50	0.0376	JD
108-67-8	1,3,5-Trimethylbenzene	50	0.0250	U
75-01-4	Vinyl chloride	50	0.0125	U
179601-23-1	m,p-Xylene	50	0.277	D
95-47-6	o-Xylene	50	0.0916	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.9	102	80 - 120	
Toluene-d8 (Surr)	50.0	49.9	100	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	48.5	97	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	218800	6.241	203251	6.235	
Chlorobenzene-d5 (ISTD)	325341	9.928	317109	9.928	
1,4-Dichlorobenzene-d4 (ISTD)	151108	11.868	156802	11.869	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Batch: 9060589 Batch Matrix: Water Preparation: EPA 1312/5030B SPLP Volatiles

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9060589-BLK1	VI19060506.D	06/05/19 09:09	
LCS	9060589-BS1	VI19060504.D	06/05/19 09:09	
2708-190522-011	A9E0785-01RE1	VI19060517.D	06/05/19 12:17	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
1312/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	9060589-BLK1	File ID:	VI19060506.D
Prepared:	06/05/19 09:09	Preparation:	EPA 1312/5030B SPLP Vola	Initial/Final:	5 mL / 5 mL
Analyzed:	06/05/19 11:45	Instrument:	VOA-GCMS9		
Batch:	9060589	Sequence:	9F05032	Calibration:	A9E1405

CAS NO.	COMPOUND	CONC. (mg/L)	Q
67-64-1	Acetone	0.0100	U
71-43-2	Benzene	0.000125	U
108-86-1	Bromobenzene	0.000250	U
74-97-5	Bromochloromethane	0.000500	U
75-27-4	Bromodichloromethane	0.000500	U
75-25-2	Bromoform	0.000500	U
74-83-9	Bromomethane	0.00500	U
78-93-3	2-Butanone (MEK)	0.00500	U
104-51-8	n-Butylbenzene	0.000500	U
135-98-8	sec-Butylbenzene	0.000500	U
98-06-6	tert-Butylbenzene	0.000500	U
56-23-5	Carbon tetrachloride	0.000500	U
108-90-7	Chlorobenzene	0.000250	U
75-00-3	Chloroethane	0.00500	U
67-66-3	Chloroform	0.000500	U
74-87-3	Chloromethane	0.00250	U
95-49-8	2-Chlorotoluene	0.000500	U
106-43-4	4-Chlorotoluene	0.000500	U
96-12-8	1,2-Dibromo-3-chloropropane	0.00250	U
124-48-1	Dibromochloromethane	0.000500	U
106-93-4	1,2-Dibromoethane (EDB)	0.000250	U
74-95-3	Dibromomethane	0.000500	U
95-50-1	1,2-Dichlorobenzene	0.000250	U
541-73-1	1,3-Dichlorobenzene	0.000250	U
106-46-7	1,4-Dichlorobenzene	0.000250	U
75-71-8	Dichlorodifluoromethane	0.000500	U
75-34-3	1,1-Dichloroethane	0.000250	U
107-06-2	1,2-Dichloroethane (EDC)	0.000250	U
75-35-4	1,1-Dichloroethene	0.000250	U
156-59-2	cis-1,2-Dichloroethene	0.000250	U
156-60-5	trans-1,2-Dichloroethene	0.000250	U
78-87-5	1,2-Dichloropropane	0.000250	U
142-28-9	1,3-Dichloropropane	0.000500	U
594-20-7	2,2-Dichloropropane	0.000500	U
563-58-6	1,1-Dichloropropene	0.000500	U

METHOD BLANK DATA SHEET

1312/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	9060589-BLK1	File ID:	VI19060506.D
Prepared:	06/05/19 09:09	Preparation:	EPA 1312/5030B SPLP Vola	Initial/Final:	5 mL / 5 mL
Analyzed:	06/05/19 11:45	Instrument:	VOA-GCMS9		
Batch:	9060589	Sequence:	9F05032	Calibration:	A9E1405

CAS NO.	COMPOUND	CONC. (mg/L)	Q
10061-01-5	cis-1,3-Dichloropropene	0.000500	U
10061-02-6	trans-1,3-Dichloropropene	0.000500	U
100-41-4	Ethylbenzene	0.000250	U
87-68-3	Hexachlorobutadiene	0.00250	U
591-78-6	2-Hexanone	0.00500	U
98-82-8	Isopropylbenzene	0.000500	U
99-87-6	4-Isopropyltoluene	0.000500	U
108-10-1	4-Methyl-2-pentanone (MiBK)	0.00500	U
1634-04-4	Methyl tert-butyl ether (MTBE)	0.000500	U
75-09-2	Methylene chloride	0.00250	U
91-20-3	Naphthalene	0.00100	U
103-65-1	n-Propylbenzene	0.000250	U
100-42-5	Styrene	0.000500	U
630-20-6	1,1,1,2-Tetrachloroethane	0.000250	U
79-34-5	1,1,2,2-Tetrachloroethane	0.000250	U
127-18-4	Tetrachloroethene (PCE)	0.000250	U
108-88-3	Toluene	0.000500	U
87-61-6	1,2,3-Trichlorobenzene	0.00100	U
120-82-1	1,2,4-Trichlorobenzene	0.00100	U
71-55-6	1,1,1-Trichloroethane	0.000250	U
79-00-5	1,1,2-Trichloroethane	0.000250	U
79-01-6	Trichloroethene (TCE)	0.000250	U
75-69-4	Trichlorofluoromethane	0.00100	U
96-18-4	1,2,3-Trichloropropane	0.000500	U
95-63-6	1,2,4-Trimethylbenzene	0.000500	U
108-67-8	1,3,5-Trimethylbenzene	0.000500	U
75-01-4	Vinyl chloride	0.000250	U
179601-23-1	m,p-Xylene	0.000500	U
95-47-6	o-Xylene	0.000250	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	53.2	106	80 - 120	
Toluene-d8 (Surr)	50.0	50.7	101	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	50.2	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q

METHOD BLANK DATA SHEET

1312/8260C

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	9060589-BLK1	File ID:	VI19060506.D
Prepared:	06/05/19 09:09	Preparation:	EPA 1312/5030B SPLP Vola	Initial/Final:	5 mL / 5 mL
Analyzed:	06/05/19 11:45	Instrument:	VOA-GCMS9		
Batch:	9060589	Sequence:	9F05032	Calibration:	A9E1405

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	203191	6.235	203251	6.235	
Chlorobenzene-d5 (ISTD)	310373	9.928	317109	9.928	
1,4-Dichlorobenzene-d4 (ISTD)	132036	11.868	156802	11.869	

LCS / LCS DUPLICATE RECOVERY

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Water		
Batch:	9060589	Laboratory ID:	9060589-BS1
Preparation:	EPA 1312/5030B SPLP Volatiles	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	0.0400	0.0403	101	70 - 130
Benzene	0.0200	0.0203	101	70 - 130
Bromobenzene	0.0200	0.0204	102	70 - 130
Bromochloromethane	0.0200	0.0231	116	70 - 130
Bromodichloromethane	0.0200	0.0225	113	70 - 130
Bromoform	0.0200	0.0246	123	70 - 130
Bromomethane	0.0200	0.0233	117	70 - 130
2-Butanone (MEK)	0.0400	0.0427	107	70 - 130
n-Butylbenzene	0.0200	0.0197	99	70 - 130
sec-Butylbenzene	0.0200	0.0189	94	70 - 130
tert-Butylbenzene	0.0200	0.0178	89	70 - 130
Carbon tetrachloride	0.0200	0.0206	103	70 - 130
Chlorobenzene	0.0200	0.0203	102	70 - 130
Chloroethane	0.0200	0.0151	76	70 - 130
Chloroform	0.0200	0.0211	106	70 - 130
Chloromethane	0.0200	0.0229	114	70 - 130
2-Chlorotoluene	0.0200	0.0191	95	70 - 130
4-Chlorotoluene	0.0200	0.0190	95	70 - 130
1,2-Dibromo-3-chloropropane	0.0200	0.0199	99	70 - 130
Dibromochloromethane	0.0200	0.0202	101	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.0208	104	70 - 130
Dibromomethane	0.0200	0.0224	112	70 - 130
1,2-Dichlorobenzene	0.0200	0.0202	101	70 - 130
1,3-Dichlorobenzene	0.0200	0.0201	100	70 - 130
1,4-Dichlorobenzene	0.0200	0.0198	99	70 - 130
Dichlorodifluoromethane	0.0200	0.0195	97	70 - 130
1,1-Dichloroethane	0.0200	0.0201	100	70 - 130
1,2-Dichloroethane (EDC)	0.0200	0.0217	109	70 - 130
1,1-Dichloroethene	0.0200	0.0183	92	70 - 130
cis-1,2-Dichloroethene	0.0200	0.0205	102	70 - 130

LCS / LCS DUPLICATE RECOVERY

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Water		
Batch:	9060589	Laboratory ID:	9060589-BS1
Preparation:	EPA 1312/5030B SPLP Volatiles	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. (*=Out)	QC LIMITS REC.
trans-1,2-Dichloroethene	0.0200	0.0200	100	70 - 130
1,2-Dichloropropane	0.0200	0.0211	106	70 - 130
1,3-Dichloropropane	0.0200	0.0202	101	70 - 130
2,2-Dichloropropane	0.0200	0.0167	83	70 - 130
1,1-Dichloropropene	0.0200	0.0192	96	70 - 130
cis-1,3-Dichloropropene	0.0200	0.0191	96	70 - 130
trans-1,3-Dichloropropene	0.0200	0.0182	91	70 - 130
Ethylbenzene	0.0200	0.0189	95	70 - 130
Hexachlorobutadiene	0.0200	0.0197	99	70 - 130
2-Hexanone	0.0400	0.0402	101	70 - 130
Isopropylbenzene	0.0200	0.0187	94	70 - 130
4-Isopropyltoluene	0.0200	0.0190	95	70 - 130
4-Methyl-2-pentanone (MiBK)	0.0400	0.0392	98	70 - 130
Methyl tert-butyl ether (MTBE)	0.0200	0.0174	87	70 - 130
Methylene chloride	0.0200	0.0187	94	70 - 130
Naphthalene	0.0200	0.0170	85	70 - 130
n-Propylbenzene	0.0200	0.0183	92	70 - 130
Styrene	0.0200	0.0207	104	70 - 130
1,1,1,2-Tetrachloroethane	0.0200	0.0200	100	70 - 130
1,1,2,2-Tetrachloroethane	0.0200	0.0219	109	70 - 130
Tetrachloroethene (PCE)	0.0200	0.0195	97	70 - 130
Toluene	0.0200	0.0188	94	70 - 130
1,2,3-Trichlorobenzene	0.0200	0.0204	102	70 - 130
1,2,4-Trichlorobenzene	0.0200	0.0188	94	70 - 130
1,1,1-Trichloroethane	0.0200	0.0193	97	70 - 130
1,1,2-Trichloroethane	0.0200	0.0215	108	70 - 130
Trichloroethene (TCE)	0.0200	0.0205	102	70 - 130
Trichlorofluoromethane	0.0200	0.0243	121	70 - 130
1,2,3-Trichloropropane	0.0200	0.0198	99	70 - 130
1,2,4-Trimethylbenzene	0.0200	0.0195	97	70 - 130

LCS / LCS DUPLICATE RECOVERY

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Water		
Batch:	9060589	Laboratory ID:	9060589-BS1
Preparation:	EPA 1312/5030B SPLP Volatiles	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,3,5-Trimethylbenzene	0.0200	0.0191	95	70 - 130
Vinyl chloride	0.0200	0.0195	97	70 - 130
m,p-Xylene	0.0400	0.0384	96	70 - 130
o-Xylene	0.0200	0.0182	91	70 - 130

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E13041	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9E1405

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E13041-TUN1	VI19051316.D	05/13/19 16:39
Initial Cal Blank	9E13041-ICB1	VI19051317.D	05/13/19 17:06
Cal Standard	9E13041-CAL1	VI19051318.D	05/13/19 17:33
Cal Standard	9E13041-CAL2	VI19051319.D	05/13/19 18:00
Cal Standard	9E13041-CAL3	VI19051320.D	05/13/19 18:27
Cal Standard	9E13041-CAL4	VI19051321.D	05/13/19 18:54
Cal Standard	9E13041-CAL5	VI19051322.D	05/13/19 19:21
Cal Standard	9E13041-CAL6	VI19051323.D	05/13/19 19:48
Cal Standard	9E13041-CAL7	VI19051324.D	05/13/19 20:15
Cal Standard	9E13041-CAL8	VI19051325.D	05/13/19 20:42
Cal Standard	9E13041-CAL9	VI19051326.D	05/13/19 21:09
Cal Standard	9E13041-CALA	VI19051328.D	05/13/19 22:04
Cal Standard	9E13041-CALB	VI19051330.D	05/13/19 22:58
Initial Cal Check	9E13041-ICV1	VI19051333.D	05/14/19 00:19

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F05032	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9E1405

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F05032-TUN1	VI19060503.D	06/05/19 10:23
Calibration Check	9F05032-CCV1	VI19060504.D	06/05/19 10:51
Blank	9060589-BLK1	VI19060506.D	06/05/19 11:45
2708-190522-011	A9E0785-01RE1	VI19060517.D	06/05/19 16:43

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

INITIAL CALIBRATION DATA (Summary)

1312/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E1405 Date: 05/14/19 10:40 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.2806909	Ave	9.891882	3.97125	5.277982E-02				***
Benzene	2.040246	Ave	6.693881	6.150546	3.413772E-02				***
Bromobenzene	0.7455401	Ave	13.14932	11.07855	1.251223E-02				***
Bromochloromethane	0.3067397	Ave	12.72687	5.474222	4.301117E-02				***
Bromodichloromethane	0.5873094	Ave	10.98774	7.409667	2.733028E-02				***
Bromoform	0.1861433	XXX	28.16741	10.5605	1.692552E-02				
Bromomethane	0.4051404	Ave	13.49827	2.380571	0.134076				***
2-Butanone (MEK)	0.4343252	Ave	3.097651	5.888	7.660308E-02				***
n-Butylbenzene	2.029826	Ave	13.73687	12.06464	2.100861E-02				***
sec-Butylbenzene	2.957602	Ave	11.52967	11.63755	1.316583E-02				***
tert-Butylbenzene	1.409091	Ave	11.20777	11.50345	9.434129E-03				***
Carbon tetrachloride	0.5103387	Ave	14.42797	5.688889	7.944788E-02				***
Chlorobenzene	0.9379742	Ave	3.253203	9.952	2.233646E-03				***
Chloroethane	0.2848518	Q **	24.30865	2.523	0.2337445		0.9952469		
Chloroform	0.8709859	Ave	2.644507	5.5558	5.030644E-02				
Chloromethane	0.6250242	Ave	9.500513	1.912667	0.16547				***
2-Chlorotoluene	0.7148632	Ave	8.030891	11.2252	1.805903E-02				***
4-Chlorotoluene	2.244981	Ave	8.056141	11.358	2.609821E-02				***
1,2-Dibromo-3-chloropropane	0.2267202	Ave	12.69149	12.81767	1.283884E-02				***
Dibromochloromethane	0.2743327	XXX	23.68713	9.216	1.660258E-02				
1,2-Dibromoethane (EDB)	0.3254317	Ave	12.541	9.449666	3.431607E-02				***
Dibromomethane	0.3276954	Ave	10.28852	7.228333	4.145553E-02				***
1,2-Dichlorobenzene	1.314217	Ave	4.964256	12.203	1.410932E-02				***
1,3-Dichlorobenzene	1.376772	Ave	4.058007	11.81618	2.570954E-02				***
1,4-Dichlorobenzene	1.475846	Ave	5.744355	11.88155	2.587966E-02				***
Dichlorodifluoromethane	0.5570069	Ave	9.196182	1.695	0.1770311				***
1,1-Dichloroethane	0.8371146	Ave	3.118176	4.713334	4.168549E-02				***
1,2-Dichloroethane (EDC)	0.6635154	Ave	8.217445	6.369	4.112938E-02				***
1,1-Dichloroethene	0.6014695	Ave	3.115019	3.2552	0.1152044				
cis-1,2-Dichloroethene	0.6600469	Ave	7.066721	5.2734	6.267436E-02				***
trans-1,2-Dichloroethene	0.5984876	Ave	7.058054	4.0654	7.625187E-02				***
1,2-Dichloropropane	0.5180831	Ave	7.646217	7.340667	0.0361759				
1,3-Dichloropropane	0.570646	Ave	6.248407	9.3143	3.027329E-02				***

INITIAL CALIBRATION DATA (Summary)

1312/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E1405 Date: 05/14/19 10:40 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
2,2-Dichloropropane	0.60891	Ave	2.667686	5.380444	6.020655E-02				***
1,1-Dichloropropene	0.6635761	Ave	5.236214	5.892111	5.078999E-02				***
cis-1,3-Dichloropropene	0.469043	Ave	13.4587	8.121	6.738796E-03				***
trans-1,3-Dichloropropene	0.3889759	XXX	24.01078	8.865	0.0452992				
Ethylbenzene	1.637146	Ave	13.20011	9.976455	1.178459E-02				
Hexachlorobutadiene	0.1700747	Ave	11.11918	13.3285	9.20822E-03				***
2-Hexanone	0.3761654	Ave	11.04384	9.679445	3.021913E-02				***
Isopropylbenzene	1.419339	Ave	13.85091	10.755	1.079285E-02				***
4-Isopropyltoluene	2.336287	Ave	12.62215	11.747	1.089423E-02				***
4-Methyl-2-pentanone (MiBK)	0.5317434	Ave	6.083651	8.829	0.0328996				***
Methyl tert-butyl ether (MTBE)	1.550599	Ave	4.703682	4.1982	8.949783E-02				***
Methylene chloride	3.301095	Lin 1/a	150.3528	1.771727	114.8913				
Naphthalene	2.340604	XXX	17.66362	13.651	1.936454E-02				
n-Propylbenzene	3.7243	Ave	11.31668	11.096	1.174713E-02				***
Styrene	0.8793008	Ave	13.71676	10.536	1.600259E-03				***
1,1,1,2-Tetrachloroethane	0.2586682	XXX	21.08369	10.0124	2.429029E-02				
1,1,2,2-Tetrachloroethane	0.7035425	Ave	6.212077	11.1582	1.921684E-02				***
Tetrachloroethene (PCE)	0.3264145	Ave	5.952831	8.822889	3.688631E-02				***
Toluene	1.4937	Ave	9.769425	8.387818	3.335921E-02				
1,2,3-Trichlorobenzene	0.6679045	Ave	14.89408	13.809	1.693105E-02				***
1,2,4-Trichlorobenzene	0.7153576	Ave	11.01102	13.36575	2.432274E-03				***
1,1,1-Trichloroethane	0.6715122	Ave	5.56243	5.762778	7.883343E-02				***
1,1,2-Trichloroethane	0.3271528	Ave	8.054917	9.033445	5.254796E-03				***
Trichloroethene (TCE)	0.4925998	Ave	7.674381	6.7715	4.127553E-02				***
Trichlorofluoromethane	0.6803932	Ave	3.743753	2.684667	0.1623526				***
1,2,3-Trichloropropane	0.3517101	Ave	4.670633	11.26867	2.893078E-02				***
1,2,4-Trimethylbenzene	2.381052	Ave	9.90456	11.558	1.134034E-02				***
1,3,5-Trimethylbenzene	2.419326	Ave	10.62893	11.24855	2.119472E-02				*
Vinyl chloride	0.7458821	Ave	13.64162	2.015182	0.2000823				***
m,p-Xylene	1.209959	Ave	12.89825	10.10945	3.04354E-04				***
o-Xylene	1.205869	Ave	9.503239	10.48755	1.024661E-02				***
1,4-Difluorobenzene (Surr)	1.660544	Ave	0.7660393	6.809182	4.521472E-02				***
Toluene-d8 (Surr)	1.351788	Ave	1.512446	8.328	1.759867E-02				***

INITIAL CALIBRATION DATA (Summary)

1312/8260C

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E1405 Date: 05/14/19 10:40 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
4-Bromofluorobenzene (Surr)	0.8057724	Ave	3.41267	10.99227	1.096356E-02				***

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1405
Instrument: VOA-GCMS9
Calibration Date: 05/14/19 10:40

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	0.3400622	4	0.302679	10	0.2750067
Benzene	0.1	2.402978	0.2	2.092792	0.4	1.907831	1	1.947432	2	1.931251	5	1.953574
Bromobenzene	0.1	0.4708328	0.2	0.7056729	0.4	0.7294002	1	0.7395343	2	0.7631915	5	0.8133221
Bromochloromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2150646	1	0.2833852	2	0.2933256	5	0.3180523
Bromodichloromethane	0.1	~~0~~	0.2	~~0.3425962~~	0.4	0.4957692	1	0.5322429	2	0.5342289	5	0.5581883
Bromoform	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.123685	2	0.1310882	5	0.1547206
Bromomethane	0.1	~~1.580739~~	0.2	~~0.9632098~~	0.4	~~0.7300454~~	1	~~0.574805~~	2	0.4790876	5	0.4529798
2-Butanone (MEK)	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	0.4216033	4	0.417312	10	0.4234737
n-Butylbenzene	0.1	2.44833	0.2	1.628476	0.4	1.660221	1	1.877567	2	1.708195	5	1.995212
sec-Butylbenzene	0.1	3.780613	0.2	2.563945	0.4	2.52933	1	2.719106	2	2.785395	5	2.95026
tert-Butylbenzene	0.1	1.824041	0.2	1.315447	0.4	1.189668	1	1.357683	2	1.303895	5	1.398216
Carbon disulfide	0.1	~~0~~	0.2	~~0~~	0.4	1.208737	1	1.196515	2	1.149484	5	1.150694
Carbon tetrachloride	0.1	~~0~~	0.2	~~0~~	0.4	0.3842344	1	0.457325	2	0.4615773	5	0.4870842
Chlorobenzene	0.1	0.9803688	0.2	0.9471611	0.4	0.8868041	1	0.9149384	2	0.8881511	5	0.9623976
Chloroethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0~~	2	0.3958863	5	0.321714
Chloroform	0.1	~~0~~	0.2	0.8373358	0.4	0.8367772	1	0.8846829	2	0.8744301	5	0.8504813
Chloromethane	0.1	~~1.629606~~	0.2	~~0.9785336~~	0.4	0.7652669	1	0.6716554	2	0.6075332	5	0.5984238
2-Chlorotoluene	0.1	~~0~~	0.2	0.5862513	0.4	0.6625457	1	0.6762914	2	0.72199	5	0.7465924
4-Chlorotoluene	0.1	2.720367	0.2	2.149588	0.4	1.99278	1	2.14958	2	2.125119	5	2.271125
1,2-Dibromo-3-chloropropane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0.1441667~~	2	~~0.1453448~~	5	0.1960888
Dibromochloromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.1780967	1	0.209498	2	0.2195634	5	0.2575921
1,2-Dibromoethane (EDB)	0.1	~~0~~	0.2	~~0.171515~~	0.4	0.2366037	1	0.3059814	2	0.2982163	5	0.3253266
Dibromomethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2598919	1	0.2942428	2	0.3136637	5	0.3295908
1,2-Dichlorobenzene	0.1	~~0~~	0.2	1.237642	0.4	1.183668	1	1.280159	2	1.290044	5	1.376391
1,3-Dichlorobenzene	0.1	1.464813	0.2	1.27383	0.4	1.356804	1	1.30158	2	1.344571	5	1.42877
1,4-Dichlorobenzene	0.1	1.712436	0.2	1.476485	0.4	1.43223	1	1.492669	2	1.419084	5	1.513157
Dichlorodifluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.4995048	1	0.4942411	2	0.542821	5	0.5319606
1,1-Dichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	0.7892816	1	0.8571044	2	0.8065639	5	0.831279
1,2-Dichloroethane (EDC)	0.1	~~0~~	0.2	0.5396164	0.4	0.6035683	1	0.6429912	2	0.6668073	5	0.6854092
1,1-Dichloroethene	0.1	~~0~~	0.2	0.6107626	0.4	0.5651448	1	0.6036864	2	0.5956783	5	0.5934848
cis-1,2-Dichloroethene	0.1	~~0~~	0.2	0.5724531	0.4	0.5912941	1	0.6514601	2	0.6494057	5	0.6577765

INITIAL CALIBRATION DATA

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1405
Instrument: VOA-GCMS9
Calibration Date: 05/14/19 10:40

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
trans-1,2-Dichloroethene	0.1	~~0~~	0.2	0.503496	0.4	0.553938	1	0.6019492	2	0.5941557	5	0.5933571
1,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.4253262	1	0.4990185	2	0.5087791	5	0.5180379
1,3-Dichloropropane	0.1	~~0~~	0.2	0.5137794	0.4	0.5118442	1	0.5613165	2	0.5481528	5	0.5822987
2,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.5912941	1	0.6004291	2	0.5910016	5	0.6014042
1,1-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	0.6083712	1	0.6353908	2	0.6436415	5	0.6506235
cis-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	~~0.350674~~	1	0.3969041	2	0.3937936	5	0.4233557
trans-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	0.2546342	1	0.2918545	2	0.314914	5	0.3577766
Ethylbenzene	0.1	2.260212	0.2	1.611016	0.4	1.435445	1	1.564623	2	1.507477	5	1.564036
Hexachlorobutadiene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.1380464	2	0.1458707	5	0.1786293
2-Hexanone	0.2	~~0~~	0.4	~~0~~	0.8	0.2895912	2	0.364217	4	0.335465	10	0.3796708
Isopropylbenzene	0.1	1.887731	0.2	1.218216	0.4	1.179339	1	1.310791	2	1.251798	5	1.371846
4-Isopropyltoluene	0.1	2.859873	0.2	2.003025	0.4	1.869356	1	2.169301	2	2.060424	5	2.279656
4-Methyl-2-pentanone (MiBK)	0.2	~~0~~	0.4	~~0~~	0.8	0.4744954	2	0.5175083	4	0.4928842	10	0.5309663
Methyl tert-butyl ether (MTBE)	0.1	~~0~~	0.2	1.579445	0.4	1.417932	1	1.506827	2	1.467389	5	1.514644
Methylene chloride	0.1	16.0071	0.2	9.048699	0.4	4.479533	1	2.101828	2	1.285325	5	0.7545547
Naphthalene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	1.746661	2	1.830397	5	2.17113
n-Propylbenzene	0.1	4.921074	0.2	3.539221	0.4	3.40701	1	3.4532	2	3.463904	5	3.605719
Styrene	0.1	~~0.7285719~~	0.2	~~0.6829973~~	0.4	0.7035558	1	0.7451157	2	0.7591029	5	0.8579021
1,1,1,2-Tetrachloroethane	0.1	~~0~~	0.2	0.1577326	0.4	0.1861921	1	0.235798	2	0.240341	5	0.2660663
1,1,2,2-Tetrachloroethane	0.1	~~0~~	0.2	0.6133926	0.4	0.6514033	1	0.689552	2	0.6972691	5	0.7564465
Tetrachloroethene (PCE)	0.1	~~0~~	0.2	~~0~~	0.4	0.2825998	1	0.3261196	2	0.3161229	5	0.3260943
Tetrahydrofuran	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.3011917	2	0.3060505	5	0.2929317
Toluene	0.1	1.91455	0.2	1.559715	0.4	1.417415	1	1.465284	2	1.398451	5	1.430782
1,2,3-Trichlorobenzene	0.1	~~0~~	0.2	~~0.4161661~~	0.4	0.4971235	1	0.5569458	2	0.5869895	5	0.6758285
1,2,4-Trichlorobenzene	0.1	~~0~~	0.2	~~0.4686392~~	0.4	~~0.4971235~~	1	0.5838071	2	0.6152168	5	0.702613
1,1,1-Trichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	0.6206453	1	0.6434255	2	0.6317866	5	0.6566269
1,1,2-Trichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2619936	1	0.3294259	2	0.3131007	5	0.3330036
Trichloroethene (TCE)	0.1	~~0~~	0.2	0.4203097	0.4	0.4327974	1	0.514002	2	0.4844169	5	0.4966641
Trichlorofluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.7209732	1	0.7066171	2	0.6767045	5	0.6873252
1,2,3-Trichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.3119879	1	0.3525964	2	0.3648522	5	0.3681708
1,2,4-Trimethylbenzene	0.1	2.723855	0.2	2.178539	0.4	2.003065	1	2.104698	2	2.16299	5	2.385935

INITIAL CALIBRATION DATA

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1405
Instrument: VOA-GCMS9
Calibration Date: 05/14/19 10:40

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,3,5-Trimethylbenzene	0.1	2.901725	0.2	2.189395	0.4	2.039064	1	2.175081	2	2.199457	5	2.382099
Vinyl chloride	0.1	1.043203	0.2	0.7092726	0.4	0.6718766	1	0.6768671	2	0.7207523	5	0.7127438
m,p-Xylene	0.2	1.604646	0.4	1.101065	0.8	1.055702	2	1.092426	4	1.083235	10	1.1457
o-Xylene	0.1	1.461614	0.2	1.122505	0.4	1.055702	1	1.143372	2	1.078928	5	1.166369
1,1,2-Trichloro-1,2,2-trifluoroethan	0.1	ϴ	0.2	ϴ	0.4	0.4285281	1	0.4568907	2	0.4670153	5	0.4400363
1,4-Difluorobenzene (Surr)	50	1.638941	50	1.65546	50	1.661711	50	1.654066	50	1.657337	50	1.647107
Toluene-d8 (Surr)	50	1.363228	50	1.37208	50	1.362817	50	1.363685	50	1.367231	50	1.361721
4-Bromofluorobenzene (Surr)	50	0.835348	50	0.8408219	50	0.8240114	50	0.8197372	50	0.827073	50	0.8158286

INITIAL CALIBRATION DATA (Continued)

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1405
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 05/14/19 10:40

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	20	0.2770972	40	0.2660777	100	0.2652277	200	0.2616864	400	0.2576903		
Benzene	10	2.007208	20	2.062104	50	1.990868	100	2.058403	200	2.088261		
Bromobenzene	10	0.7866428	20	0.7794923	50	0.7835193	100	0.8166654	200	0.8126675		
Bromochloromethane	10	0.3282053	20	0.3377375	50	0.3323714	100	0.3331043	200	0.3194115		
Bromodichloromethane	10	0.572828	20	0.6114738	50	0.6322852	100	0.663047	200	0.6857215		
Bromoform	10	0.1648746	20	0.1842444	50	0.2189655	100	0.2490303	200	0.2625376		
Bromomethane	10	0.4357301	20	0.4163611	50	0.3588224	100	0.3536765	200	0.3393252		
2-Butanone (MEK)	20	0.4313995	40	0.4329593	100	0.4469523	200	0.4484422	400	0.4524592		
n-Butylbenzene	10	2.088563	20	2.22782	50	2.143653	100	2.297093	200	2.252951		
sec-Butylbenzene	10	2.966248	20	3.036183	50	2.964635	100	3.151617	200	3.086294		
tert-Butylbenzene	10	1.384698	20	1.428901	50	1.384346	100	1.470331	200	1.442779		
Carbon disulfide	10	1.186448	20	1.239586	50	1.214528	100	1.2949	200	1.33087		
Carbon tetrachloride	10	0.5045692	20	0.5373371	50	0.5416939	100	0.5976686	200	0.6215581		
Chlorobenzene	10	0.9421699	20	0.9464687	50	0.9282327	100	0.9612176	200	0.9598066		
Chloroethane	10	0.2903363	20	0.1951013	50	0.2624246	100	0.2436485	200	~~5.766721E-02~~		
Chloroform	10	0.8737169	20	0.8962565	50	0.8662262	100	0.8909396	200	0.8990124		
Chloromethane	10	0.5936538	20	0.619696	50	0.5701514	100	0.5964574	200	0.6023799		
2-Chlorotoluene	10	0.7331129	20	0.7408672	50	0.7402384	100	0.7738455	200	0.7668968		
4-Chlorotoluene	10	2.232655	20	2.253993	50	2.229973	100	2.302422	200	2.267194		
1,2-Dibromo-3-chloropropane	10	0.1995438	20	0.2085528	50	0.2403052	100	0.2589331	200	0.2568972		
Dibromochloromethane	10	0.2684894	20	0.2935697	50	0.3277092	100	0.3529858	200	0.3614901		
1,2-Dibromoethane (EDB)	10	0.3345454	20	0.3459542	50	0.3543158	100	0.3658074	200	0.3621345		
Dibromomethane	10	0.3335139	20	0.3443312	50	0.3498385	100	0.3599149	200	0.3642706		
1,2-Dichlorobenzene	10	1.353304	20	1.358316	50	1.342012	100	1.385768	200	1.334867		
1,3-Dichlorobenzene	10	1.385531	20	1.387399	50	1.381345	100	1.428143	200	1.391711		
1,4-Dichlorobenzene	10	1.435953	20	1.439338	50	1.423602	100	1.472074	200	1.417279		
Dichlorodifluoromethane	10	0.5357542	20	0.5511053	50	0.5961018	100	0.6281192	200	0.6334542		
1,1-Dichloroethane	10	0.8335483	20	0.8659983	50	0.8331201	100	0.8560706	200	0.861065		
1,2-Dichloroethane (EDC)	10	0.6860697	20	0.7114728	50	0.6899533	100	0.7022975	200	0.7069682		
1,1-Dichloroethene	10	0.5875931	20	0.6163707	50	0.5924543	100	0.6188257	200	0.6306945		
cis-1,2-Dichloroethene	10	0.6827169	20	0.7041845	50	0.6815309	100	0.6995577	200	0.7100897		

INITIAL CALIBRATION DATA (Continued)

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1405
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 05/14/19 10:40

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
trans-1,2-Dichloroethene	10	0.6141358	20	0.6370743	50	0.6111488	100	0.6358993	200	0.6397221		
1,2-Dichloropropane	10	0.5273723	20	0.5452063	50	0.5332411	100	0.5492572	200	0.5565097		
1,3-Dichloropropane	10	0.5830379	20	0.5994219	50	0.6036443	100	0.6064755	200	0.596489		
2,2-Dichloropropane	10	0.5992847	20	0.619343	50	0.6118409	100	0.6323463	200	0.6332464		
1,1-Dichloropropene	10	0.6563677	20	0.6872617	50	0.6679681	100	0.7054656	200	0.7170951		
cis-1,3-Dichloropropene	10	0.4523573	20	0.4769152	50	0.5105047	100	0.546663	200	0.5518501		
trans-1,3-Dichloropropene	10	0.3804866	20	0.4164949	50	0.4656917	100	0.502616	200	0.5163147		
Ethylbenzene	10	1.574396	20	1.608364	50	1.570376	100	1.6617	200	1.650962		
Hexachlorobutadiene	10	0.1787213	20	0.1903619	50	0.1643554	100	0.1826623	200	0.1819505		
2-Hexanone	20	0.3888026	40	0.3921005	100	0.4127499	200	0.4228155	400	0.4000759		
Isopropylbenzene	10	1.411336	20	1.4769	50	1.455184	100	1.528494	200	1.521098		
4-Isopropyltoluene	10	2.36688	20	2.4881	50	2.428212	100	2.607954	200	2.566374		
4-Methyl-2-pentanone (MiBK)	20	0.5386759	40	0.5458092	100	0.5672749	200	0.5728734	400	0.5452033		
Methyl tert-butyl ether (MTBE)	10	1.555359	20	1.600475	50	1.592197	100	1.619561	200	1.652158		
Methylene chloride	10	0.6103102	20	0.5547154	50	0.4944765	100	0.4895562	200	0.4859493		
Naphthalene	10	2.286345	20	2.42605	50	2.617345	100	2.795285	200	2.851617		
n-Propylbenzene	10	3.604923	20	3.669433	50	3.624085	100	3.838902	200	3.83983		
Styrene	10	0.8941479	20	0.9474993	50	0.9617315	100	1.021552	200	1.0231		
1,1,1,2-Tetrachloroethane	10	0.27119	20	0.288618	50	0.2994568	100	0.3179538	200	0.3233338		
1,1,2,2-Tetrachloroethane	10	0.7188575	20	0.7184822	50	0.7324813	100	0.7480484	200	0.7094916		
Tetrachloroethene (PCE)	10	0.3295868	20	0.3335632	50	0.3276792	100	0.3471082	200	0.3488565		
Tetrahydrofuran	10	0.2977726	20	0.294269	50	0.3043361	100	0.3030538	200	0.304326		
Toluene	10	1.441649	20	1.472723	50	1.419761	100	1.4659	200	1.444465		
1,2,3-Trichlorobenzene	10	0.6936142	20	0.724432	50	0.7183532	100	0.7753209	200	0.7825327		
1,2,4-Trichlorobenzene	10	0.7305181	20	0.7575625	50	0.7390812	100	0.7938844	200	0.8001774		
1,1,1-Trichloroethane	10	0.6719494	20	0.6991395	50	0.6754155	100	0.7175141	200	0.7271069		
1,1,2-Trichloroethane	10	0.3355933	20	0.342343	50	0.342414	100	0.3463844	200	0.3401165		
Trichloroethene (TCE)	10	0.4977347	20	0.5224073	50	0.5016061	100	0.5255821	200	0.5304778		
Trichlorofluoromethane	10	0.6819432	20	0.691555	50	0.6416782	100	0.6683417	200	0.6484008		
1,2,3-Trichloropropane	10	0.3555846	20	0.3492678	50	0.3569417	100	0.3595071	200	0.3464821		
1,2,4-Trimethylbenzene	10	2.42608	20	2.508128	50	2.486428	100	2.620189	200	2.591666		

INITIAL CALIBRATION DATA (Continued)

1312/8260C

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1405
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 05/14/19 10:40

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,3,5-Trimethylbenzene	10	2.424671	20	2.507153	50	2.487846	100	2.651994	200	2.654106		
Vinyl chloride	10	0.7237668	20	0.7367886	50	0.7109242	100	0.7476255	200	0.7508829		
m,p-Xylene	20	1.182915	40	1.223091	100	1.215491	200	1.300277	400	1.305003		
o-Xylene	10	1.192729	20	1.234103	50	1.238209	100	1.293745	200	1.277288		
1,1,2-Trichloro-1,2,2-trifluoroethan	10	0.4505597	20	0.4621527	50	0.4365212	100	0.4608582	200	0.4653519		
1,4-Difluorobenzene (Surr)	50	1.661878	50	1.664606	50	1.662179	50	1.679873	50	1.682828		
Toluene-d8 (Surr)	50	1.348955	50	1.347867	50	1.344285	50	1.33883	50	1.298974		
4-Bromofluorobenzene (Surr)	50	0.804153	50	0.7803116	50	0.7843713	50	0.7726503	50	0.7591903		

SECOND-SOURCE CALIBRATION VERIFICATION

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS9	Calibration:	A9E1405
Lab File ID:	VI19051333.D		
Sequence:	9E13041	Inject Date:	05/14/19
Lab Sample ID:	9E13041-ICV1	Inject Time:	00:19

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acetone	40.0	36.6	-8.6	70 - 130
Benzene	20.0	20.0	0.2	70 - 130
Bromobenzene	20.0	20.9	4.4	70 - 130
Bromochloromethane	20.0	21.9	9.4	70 - 130
Bromodichloromethane	20.0	20.3	1.4	70 - 130
Bromoform	20.0	20.6	3.0	70 - 130
Bromomethane	20.0	17.8	-10.9	70 - 130
2-Butanone (MEK)	40.0	37.8	-5.4	70 - 130
n-Butylbenzene	20.0	21.2	5.8	70 - 130
sec-Butylbenzene	20.0	20.2	1.1	70 - 130
tert-Butylbenzene	20.0	19.8	-1.0	70 - 130
Carbon tetrachloride	20.0	21.1	5.3	70 - 130
Chlorobenzene	20.0	20.1	0.4	70 - 130
Chloroethane	20.0	14.5	-27.3	70 - 130
Chloroform	20.0	20.1	0.3	70 - 130
Chloromethane	20.0	20.0	0.02	70 - 130
2-Chlorotoluene	20.0	20.7	3.3	70 - 130
4-Chlorotoluene	20.0	19.9	-0.7	70 - 130
1,2-Dibromo-3-chloropropane	20.0	19.2	-3.9	70 - 130
Dibromochloromethane	20.0	18.6	-6.8	70 - 130
1,2-Dibromoethane (EDB)	20.0	20.8	4.2	70 - 130
Dibromomethane	20.0	20.4	2.1	70 - 130
1,2-Dichlorobenzene	20.0	20.7	3.6	70 - 130
1,3-Dichlorobenzene	20.0	20.4	2.0	70 - 130
1,4-Dichlorobenzene	20.0	19.6	-2.0	70 - 130
Dichlorodifluoromethane	20.0	18.1	-9.3	70 - 130
1,1-Dichloroethane	20.0	22.0	10.2	70 - 130
1,2-Dichloroethane (EDC)	20.0	21.3	6.3	70 - 130
1,1-Dichloroethene	20.0	23.0	14.9	70 - 130
cis-1,2-Dichloroethene	20.0	20.8	4.2	70 - 130
trans-1,2-Dichloroethene	20.0	23.0	15.0	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS9	Calibration:	A9E1405
Lab File ID:	VI19051333.D		
Sequence:	9E13041	Inject Date:	05/14/19
Lab Sample ID:	9E13041-ICV1	Inject Time:	00:19

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
1,2-Dichloropropane	20.0	20.2	1.1	70 - 130
1,3-Dichloropropane	20.0	20.2	1.1	70 - 130
2,2-Dichloropropane	20.0	18.2	-9.0	70 - 130
1,1-Dichloropropene	20.0	20.6	3.2	70 - 130
cis-1,3-Dichloropropene	20.0	19.9	-0.4	70 - 130
trans-1,3-Dichloropropene	20.0	18.5	-7.5	70 - 130
Ethylbenzene	20.0	19.2	-3.8	70 - 130
Hexachlorobutadiene	20.0	22.4	11.9	70 - 130
2-Hexanone	40.0	41.3	3.3	70 - 130
Isopropylbenzene	20.0	20.3	1.3	70 - 130
4-Isopropyltoluene	20.0	21.1	5.3	70 - 130
4-Methyl-2-pentanone (MiBK)	40.0	39.7	-0.7	70 - 130
Methyl tert-butyl ether (MTBE)	20.0	19.3	-3.5	70 - 130
Methylene chloride	20.0	20.8	3.9	70 - 130
Naphthalene	20.0	19.4	-3.0	70 - 130
n-Propylbenzene	20.0	19.1	-4.5	70 - 130
Styrene	20.0	21.5	7.6	70 - 130
1,1,1,2-Tetrachloroethane	20.0	19.3	-3.3	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.2	1.0	70 - 130
Tetrachloroethene (PCE)	20.0	20.4	1.8	70 - 130
Toluene	20.0	19.4	-3.2	70 - 130
1,2,3-Trichlorobenzene	20.0	22.1	10.6	70 - 130
1,2,4-Trichlorobenzene	20.0	21.4	7.0	70 - 130
1,1,1-Trichloroethane	20.0	21.4	7.2	70 - 130
1,1,2-Trichloroethane	20.0	20.5	2.6	70 - 130
Trichloroethene (TCE)	20.0	20.9	4.5	70 - 130
Trichlorofluoromethane	20.0	19.4	-2.9	70 - 130
1,2,3-Trichloropropane	20.0	19.6	-2.2	70 - 130
1,2,4-Trimethylbenzene	20.0	20.7	3.4	70 - 130
1,3,5-Trimethylbenzene	20.0	20.3	1.7	70 - 130
Vinyl chloride	20.0	18.6	-6.9	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS9	Calibration:	A9E1405
Lab File ID:	VI19051333.D		
Sequence:	9E13041	Inject Date:	05/14/19
Lab Sample ID:	9E13041-ICV1	Inject Time:	00:19

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
m,p-Xylene	40.0	39.8	-0.5	70 - 130
o-Xylene	20.0	20.2	1.1	70 - 130
1,4-Difluorobenzene (Surr)	50.0	49.6	-0.8	70 - 130
Toluene-d8 (Surr)	50.0	49.8	-0.4	70 - 130
4-Bromofluorobenzene (Surr)	50.0	48.7	-2.6	70 - 130

SURROGATE STANDARD RECOVERY AND RT SUMMARY

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E13041	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9E1405

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9E13041-ICV1)				Lab File ID: VI19051333.D		Analyzed: 05/14/19 00:19		
1,4-Difluorobenzene (Surr)	50.0	99	70 - 130	6.813	6.809182	0.0038	+/-1.0	
Toluene-d8 (Surr)	50.0	100	70 - 130	8.328	8.328	0.0000	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	97	70 - 130	10.993	10.99227	0.0007	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

1312/8260C

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F05032	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9E1405

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9060589-BS1)			Lab File ID: VI19060504.D		Analyzed: 06/05/19 10:51			
1,4-Difluorobenzene (Surr)	50.0	105	80 - 120	6.801	6.809182	-0.0082	+/-1.0	
Toluene-d8 (Surr)	50.0	99	80 - 120	8.316	8.328	-0.0120	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	92	80 - 120	10.986	10.99227	-0.0063	+/-1.0	
Blank (9060589-BLK1)			Lab File ID: VI19060506.D		Analyzed: 06/05/19 11:45			
1,4-Difluorobenzene (Surr)	50.0	106	80 - 120	6.801	6.809182	-0.0082	+/-1.0	
Toluene-d8 (Surr)	50.0	101	80 - 120	8.322	8.328	-0.0060	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	10.986	10.99227	-0.0063	+/-1.0	
2708-190522-011 (A9E0785-01RE1)			Lab File ID: VI19060517.D		Analyzed: 06/05/19 16:43			
1,4-Difluorobenzene (Surr)	50.0	102	80 - 120	6.801	6.809182	-0.0082	+/-1.0	
Toluene-d8 (Surr)	50.0	100	80 - 120	8.322	8.328	-0.0060	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	97	80 - 120	10.992	10.99227	-0.0003	+/-1.0	

HOLDING TIME SUMMARY

1312/8260C

Laboratory: Apex Laboratories

SDG: A9E0785

Client: Hahn and Associates

Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	06/05/19 12:17	13.82	14.00	06/05/19 16:43	14.01	14.00	*

Apex Laboratories

SDG: A9E0785

CLASS: GCMS

METHOD: EPA 8270D (SIM)

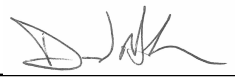
ANALYSES DATA PACKAGE COVER PAGE

EPA 8270D (SIM)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/1/2019 11:22AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D (SIM)

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Solid

Analyte	MDL	MRL	Units
Acenaphthene	5.00	10.0	ug/kg
Acenaphthylene	5.00	10.0	ug/kg
Anthracene	5.00	10.0	ug/kg
Benz(a)anthracene	5.00	10.0	ug/kg
Benzo(a)pyrene	5.00	10.0	ug/kg
Benzo(b)fluoranthene	5.00	10.0	ug/kg
Benzo(k)fluoranthene	5.00	10.0	ug/kg
Benzo(g,h,i)perylene	5.00	10.0	ug/kg
Chrysene	5.00	10.0	ug/kg
Dibenz(a,h)anthracene	5.00	10.0	ug/kg
Dibenzofuran	5.00	10.0	ug/kg
Fluoranthene	5.00	10.0	ug/kg
Fluorene	5.00	10.0	ug/kg
Indeno(1,2,3-cd)pyrene	5.00	10.0	ug/kg
1-Methylnaphthalene	5.00	10.0	ug/kg
2-Methylnaphthalene	5.00	10.0	ug/kg
Naphthalene	5.00	10.0	ug/kg
Phenanthrene	5.00	10.0	ug/kg
Pyrene	5.00	10.0	ug/kg

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

EPA 8270D (SIM)

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01	File ID:	D9060415.D
Sampled:	05/22/19 16:30	Prepared:	06/03/19 10:10	Analyzed:	06/04/19 14:56
		Preparation:	EPA 3546	Initial/Final:	1.14 g / 5 mL

Batch: 9060490 Sequence: 9F04031 Calibration: A9E0902 Instrument: SV-GCMS4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q
83-32-9	Acenaphthene	10000	9320000	D
208-96-8	Acenaphthylene	10000	439000	U
120-12-7	Anthracene	10000	6230000	D
56-55-3	Benz(a)anthracene	10000	5750000	D
50-32-8	Benzo(a)pyrene	10000	6830000	D
205-99-2	Benzo(b)fluoranthene	10000	7020000	D
207-08-9	Benzo(k)fluoranthene	10000	2840000	D
191-24-2	Benzo(g,h,i)perylene	10000	4250000	D
218-01-9	Chrysene	10000	5980000	D
53-70-3	Dibenz(a,h)anthracene	10000	904000	D
132-64-9	Dibenzofuran	10000	5590000	D
206-44-0	Fluoranthene	10000	19300000	D
86-73-7	Fluorene	10000	5240000	D
193-39-5	Indeno(1,2,3-cd)pyrene	10000	4670000	D
90-12-0	1-Methylnaphthalene	10000	2960000	D
91-57-6	2-Methylnaphthalene	10000	5650000	D
91-20-3	Naphthalene	10000	16200000	D
85-01-8	Phenanthrene	10000	20600000	D
129-00-0	Pyrene	10000	18100000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Fluorobiphenyl (Surr)	4390	0.00		44 - 120	D
p-Terphenyl-d14 (Surr)	4390	0.00		54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Naphthalene-d8 (ISTD)	335121	5.632	334708	5.626	
Acenaphthene-d10 (ISTD)	166627	7.324	168570	7.324	
Phenanthrene-d10 (ISTD)	264760	8.771	264633	8.772	
Chrysene-d12 (ISTD)	170831	11.518	176938	11.518	
Perylene-d12 (ISTD)	150679	14.016	154619	14.016	
Dibenz(a,h)anthracene-d14 (ISTD)	124001	16.354	123024	16.354	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 8270D (SIM)

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9060490 Batch Matrix: Solid Preparation: EPA 3546

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9060490-BLK1	D9060413.D	06/03/19 10:10	
LCS	9060490-BS1	D9060414.D	06/03/19 10:10	
2708-190522-011 (Dup)	9060490-DUP1	D9060416.D	06/03/19 10:10	
2708-190522-011	A9E0785-01	D9060415.D	06/03/19 10:10	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
EPA 8270D (SIM)

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	9060490-BLK1	File ID:	D9060413.D
Prepared:	06/03/19 10:10	Preparation:	EPA 3546	Initial/Final:	15 g / 2 mL
Analyzed:	06/04/19 14:03	Instrument:	SV-GCMS4		
Batch:	9060490	Sequence:	9F04031	Calibration:	A9E0902

CAS NO.	COMPOUND	CONC. (ug/kg)	Q
83-32-9	Acenaphthene	1.33	U
208-96-8	Acenaphthylene	1.33	U
120-12-7	Anthracene	1.33	U
56-55-3	Benz(a)anthracene	1.33	U
50-32-8	Benzo(a)pyrene	1.33	U
205-99-2	Benzo(b)fluoranthene	1.33	U
207-08-9	Benzo(k)fluoranthene	1.33	U
191-24-2	Benzo(g,h,i)perylene	1.33	U
218-01-9	Chrysene	1.33	U
53-70-3	Dibenz(a,h)anthracene	1.33	U
132-64-9	Dibenzofuran	1.33	U
206-44-0	Fluoranthene	1.33	U
86-73-7	Fluorene	1.33	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.33	U
90-12-0	1-Methylnaphthalene	1.33	U
91-57-6	2-Methylnaphthalene	1.33	U
91-20-3	Naphthalene	1.33	U
85-01-8	Phenanthrene	1.33	U
129-00-0	Pyrene	1.33	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Fluorobiphenyl (Surr)	333	219	66	44 - 120	
p-Terphenyl-d14 (Surr)	333	232	70	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Naphthalene-d8 (ISTD)	389347	5.631	334708	5.626	
Acenaphthene-d10 (ISTD)	202443	7.324	168570	7.324	
Phenanthrene-d10 (ISTD)	336030	8.77	264633	8.772	
Chrysene-d12 (ISTD)	228865	11.518	176938	11.518	
Perylene-d12 (ISTD)	195055	14.016	154619	14.016	
Dibenz(a,h)anthracene-d14 (ISTD)	159836	16.355	123024	16.354	

LCS / LCS DUPLICATE RECOVERY

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Solid		
Batch:	9060490	Laboratory ID:	9060490-BS1
Preparation:	EPA 3546	Initial/Final:	15 g / 2 mL

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	533	499	94	40 - 122
Acenaphthylene	533	482	90	32 - 132
Anthracene	533	475	89	47 - 123
Benz(a)anthracene	533	453	85	49 - 126
Benzo(a)pyrene	533	504	94	45 - 129
Benzo(b)fluoranthene	533	464	87	45 - 132
Benzo(k)fluoranthene	533	456	86	47 - 132
Benzo(g,h,i)perylene	533	399	75	43 - 134
Chrysene	533	459	86	50 - 124
Dibenz(a,h)anthracene	533	489	92	45 - 134
Dibenzofuran	533	501	94	44 - 120
Fluoranthene	533	504	95	50 - 127
Fluorene	533	502	94	43 - 125
Indeno(1,2,3-cd)pyrene	533	430	81	45 - 133
1-Methylnaphthalene	533	496	93	40 - 120
2-Methylnaphthalene	533	541	101	38 - 122
Naphthalene	533	802	150 *	35 - 123
Phenanthrene	533	456	86	50 - 121
Pyrene	533	510	96	47 - 127

* = Values outside of QC limits

DUPLICATES

EPA 8270D (SIM)

2708-190522-011

Laboratory: Apex Laboratories
Client: Hahn and Associates
Matrix: Solid
Batch: 9060490
Preparation: EPA 3546
Source Sample Name: 2708-190522-011

SDG: A9E0785
Project: Mult 802 Decommissioning
Laboratory ID: 9060490-DUP1
Lab Source ID: A9E0785-01
Initial/Final: 1.11 g / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/kg)	C	DUPLICATE CONCENTRATION (ug/kg)	C	RPD %	Q	METHOD
Acenaphthene	30	9320000		9630000		3		EPA 8270D (SIM)
Acenaphthylene	30	222000		ND				EPA 8270D (SIM)
Anthracene	30	6230000		6090000		2		EPA 8270D (SIM)
Benz(a)anthracene	30	5750000		5120000		12		EPA 8270D (SIM)
Benzo(a)pyrene	30	6830000		5870000		15		EPA 8270D (SIM)
Benzo(b)fluoranthene	30	7020000		6060000		15		EPA 8270D (SIM)
Benzo(k)fluoranthene	30	2840000		2470000		14		EPA 8270D (SIM)
Benzo(g,h,i)perylene	30	4250000		3630000		16		EPA 8270D (SIM)
Chrysene	30	5980000		5250000		13		EPA 8270D (SIM)
Dibenz(a,h)anthracene	30	904000		645000		34	*	EPA 8270D (SIM)
Dibenzofuran	30	5590000		5830000		4		EPA 8270D (SIM)
Fluoranthene	30	19300000		17800000		8		EPA 8270D (SIM)
Fluorene	30	5240000		5420000		3		EPA 8270D (SIM)
Indeno(1,2,3-cd)pyrene	30	4670000		3880000		18		EPA 8270D (SIM)
1-Methylnaphthalene	30	2960000		3000000		1		EPA 8270D (SIM)
2-Methylnaphthalene	30	5650000		5700000		0.7		EPA 8270D (SIM)
Naphthalene	30	16200000		16000000		1		EPA 8270D (SIM)
Phenanthrene	30	20600000		19900000		3		EPA 8270D (SIM)
Pyrene	30	18100000		16500000		10		EPA 8270D (SIM)

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E08049	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E08049-TUN1	D9050801.D	05/08/19 14:14
Initial Cal Blank	9E08049-ICB1	D9050802.D	05/08/19 14:39
Cal Standard	9E08049-CAL1	D9050803.D	05/08/19 15:06
Cal Standard	9E08049-CAL2	D9050804.D	05/08/19 15:33
Cal Standard	9E08049-CAL3	D9050805.D	05/08/19 16:00
Cal Standard	9E08049-CAL4	D9050806.D	05/08/19 16:27
Cal Standard	9E08049-CAL5	D9050807.D	05/08/19 16:53
Cal Standard	9E08049-CAL6	D9050808.D	05/08/19 17:20
Cal Standard	9E08049-CAL7	D9050809.D	05/08/19 17:47
Cal Standard	9E08049-CAL8	D9050810.D	05/08/19 18:14
Cal Standard	9E08049-CAL9	D9050811.D	05/08/19 18:40
Cal Standard	9E08049-CALA	D9050812.D	05/08/19 19:07
Initial Cal Check	9E08049-ICV1	D9050814.D	05/08/19 20:01

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04031	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F04031-TUN1	D9060401.D	06/04/19 08:49
Calibration Check	9F04031-CCV1	D9060402.D	06/04/19 09:13
Calibration Blank	9F04031-CCB1	D9060403.D	06/04/19 09:39
Blank	9060490-BLK1	D9060413.D	06/04/19 14:03
LCS	9060490-BS1	D9060414.D	06/04/19 14:30
2708-190522-011	A9E0785-01	D9060415.D	06/04/19 14:56
2708-190522-011 (Dup)	9060490-DUP1	D9060416.D	06/04/19 15:23

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	D9050801.D	Injection Date:	05/08/19
Instrument ID:	SV-GCMS4	Injection Time:	14:14
Sequence:	9E08049	Lab Sample ID:	9E08049-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 127			
m/z 275			
m/z 51			
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Base peak, 100% relative abundance	100.00	PASS
m/z 70	Less than 2% of m/z 69	0.12	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.56	PASS
m/z 365	1 - 100% of m/z 198	1.60	PASS
m/z 441	Less than 24% of m/z 443	73.96	FAIL
m/z 442	50 - 200% of m/z 198	70.78	PASS
m/z 443	15 - 24% of m/z 442	19.39	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	D9060401.D	Injection Date:	06/04/19
Instrument ID:	SV-GCMS4	Injection Time:	08:49
Sequence:	9F04031	Lab Sample ID:	9F04031-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 127			
m/z 275			
m/z 51			
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Base peak, 100% relative abundance	100.00	PASS
m/z 70	Less than 2% of m/z 69	0.00	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.67	PASS
m/z 365	1 - 100% of m/z 198	1.46	PASS
m/z 441	Less than 24% of m/z 443	74.67	FAIL
m/z 442	50 - 200% of m/z 198	60.79	PASS
m/z 443	15 - 24% of m/z 442	19.18	PASS

INITIAL CALIBRATION DATA (Summary)

EPA 8270D (SIM)

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E0902 Date: 05/09/19 09:01 Instrument: SV-GCMS4

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.20944	Ave	2.13227	7.4823	0.0118039			15	
Acenaphthylene	1.806194	Ave	2.549192	7.3116	3.623897E-02			15	
Anthracene	1.162869	Ave	2.957076	8.9795	0.0209133			15	
Benz(a)anthracene	1.206757	Ave	5.97315	11.6945	0.0276152			15	
Benzo(a)pyrene	1.109791	Ave	7.706717	14.1861	4.402349E-02			15	
Benzo(b)fluoranthene	1.291257	Ave	5.192294	13.5306	4.517746E-02			15	
Benzo(k)fluoranthene	1.279647	Ave	5.729701	13.5835	0.038912			15	
Benzo(g,h,i)perylene	1.352298	Ave	2.403502	17.2805	2.896809E-02			15	
Chrysene	1.176863	Ave	1.874504	11.7484	2.480633E-02			15	
Dibenz(a,h)anthracene	1.148022	Ave	6.34413	16.7894	0.0274937			15	
Dibenzofuran	1.61271	Ave	3.21316	7.6521	3.637474E-02			15	
Fluoranthene	0.9812934	Ave	2.68659	10.0976	1.693358E-02			15	
Fluorene	1.254987	Ave	3.649215	7.9858	3.591851E-02			15	
Indeno(1,2,3-cd)pyrene	1.257365	Ave	1.650651	16.7267	0.041807			15	
1-Methylnaphthalene	0.649979	Ave	3.081471	6.5313	9.495708E-03			15	
2-Methylnaphthalene	0.6702411	Ave	2.561479	6.4338	2.102881E-03			15	
Naphthalene	1.036658	Ave	1.613869	5.7688	1.557018E-02			15	
Phenanthrene	1.151556	Ave	1.250568	8.9295	2.939548E-02			15	
Pyrene	0.9765101	Ave	2.686084	10.3215	3.218598E-02			15	
2-Fluorobiphenyl (Surr)	1.482329	Ave	3.393744	6.7866	0.0304601			15	
p-Terphenyl-d14 (Surr)	1.058331	Ave	2.112583	10.4646	8.608343E-03			15	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

EPA 8270D (SIM)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E0902
Instrument: SV-GCMS4
Calibration Date: 05/09/19 09:01

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acenaphthene	20	1.14962	50	1.177436	100	1.224541	200	1.216566	500	1.233994	1000	1.219358
Acenaphthylene	20	1.720959	50	1.762277	100	1.799359	200	1.765521	500	1.858301	1000	1.799034
Anthracene	20	1.127439	50	1.118197	100	1.144011	200	1.141966	500	1.184349	1000	1.135995
Benz(a)anthracene	20	1.401601	50	1.228024	100	1.21182	200	1.180644	500	1.204653	1000	1.160444
Benzo(a)pyrene	20	0.9901074	50	1.000086	100	1.036487	200	1.065882	500	1.09628	1000	1.13367
Benzo(b)fluoranthene	20	1.192032	50	1.210369	100	1.239898	200	1.282788	500	1.301364	1000	1.290668
Benzo(k)fluoranthene	20	1.170821	50	1.200027	100	1.220812	200	1.234408	500	1.284677	1000	1.288247
Benzo(b+k)fluoranthene(s)	40	1.204334	100	1.21439	200	1.234224	400	1.26391	1000	1.295807	2000	1.291836
Benzo(g,h,i)perylene	20	1.308389	50	1.316757	100	1.352786	200	1.333817	500	1.411267	1000	1.371593
Carbazole	20	0.9068106	50	0.9051756	100	0.9242121	200	0.9435813	500	0.9713695	1000	0.9166436
Chrysene	20	1.153793	50	1.160291	100	1.204305	200	1.192247	500	1.211224	1000	1.170632
Dibenz(a,h)anthracene	20	1.014396	50	1.057526	100	1.119352	200	1.131707	500	1.165592	1000	1.153826
Dibenzofuran	20	1.483226	50	1.571658	100	1.631537	200	1.622476	500	1.667604	1000	1.611357
Fluoranthene	20	0.944567	50	0.9484435	100	0.9842344	200	0.9771181	500	1.006529	1000	0.9542636
Fluorene	20	1.155259	50	1.207192	100	1.254626	200	1.262059	500	1.295265	1000	1.246152
Indeno(1,2,3-cd)pyrene	20	1.268299	50	1.236069	100	1.270776	200	1.259115	500	1.302571	1000	1.264633
1-Methylnaphthalene	20	0.6014754	50	0.6320879	100	0.6520494	200	0.6627537	500	0.6587475	1000	0.6501242
2-Methylnaphthalene	20	0.6291467	50	0.65969	100	0.6683348	200	0.6747687	500	0.6740555	1000	0.6690765
Naphthalene	20	1.00582	50	1.024124	100	1.059564	200	1.059087	500	1.047925	1000	1.021718
Phenanthrene	20	1.178328	50	1.158811	100	1.153145	200	1.149678	500	1.166613	1000	1.132768
Pyrene	20	0.9435821	50	0.9594595	100	0.9719037	200	0.9801025	500	0.9910657	1000	0.9378883
2-Fluorobiphenyl (Surr)	20	1.387352	50	1.445961	100	1.535069	200	1.459327	500	1.519915	1000	1.47769
p-Terphenyl-d14 (Surr)	20	1.034845	50	1.077189	100	1.070374	200	1.027269	500	1.080729	1000	1.061559

INITIAL CALIBRATION DATA (Continued)

EPA 8270D (SIM)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E0902
Instrument: SV-GCMS4
Matrix:
Calibration Date: 05/09/19 09:01

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acenaphthene	2000	1.216207	4000	1.211287	6000	1.221677	8000	1.223715				
Acenaphthylene	2000	1.837492	4000	1.846931	6000	1.813679	8000	1.858385				
Anthracene	2000	1.163047	4000	1.212048	6000	1.193203	8000	1.208435				
Benz(a)anthracene	2000	1.16324	4000	1.171968	6000	1.167635	8000	1.17754				
Benzo(a)pyrene	2000	1.149856	4000	1.201799	6000	1.195878	8000	1.227862				
Benzo(b)fluoranthene	2000	1.273966	4000	1.381316	6000	1.355616	8000	1.384553				
Benzo(k)fluoranthene	2000	1.289374	4000	1.355655	6000	1.370476	8000	1.381974				
Benzo(b+k)fluoranthene(s)	4000	1.28342	8000	1.370036	12000	1.364516	16000	1.384568				
Benzo(g,h,i)perylene	2000	1.355634	4000	1.368542	6000	1.382511	8000	1.321681				
Carbazole	2000	0.8869042	4000	0.7390442	6000	~~0.5274994~~	8000	~~0.3751793~~				
Chrysene	2000	1.166406	4000	1.191437	6000	1.144755	8000	1.173537				
Dibenz(a,h)anthracene	2000	1.157637	4000	1.195061	6000	1.236048	8000	1.249071				
Dibenzofuran	2000	1.633982	4000	1.645541	6000	1.621759	8000	1.637963				
Fluoranthene	2000	0.9774877	4000	1.006283	6000	0.9916297	8000	1.022378				
Fluorene	2000	1.24489	4000	1.289942	6000	1.297849	8000	1.296639				
Indeno(1,2,3-cd)pyrene	2000	1.237984	4000	1.255261	6000	1.240859	8000	1.23808				
1-Methylnaphthalene	2000	0.6565403	4000	0.6710152	6000	0.650617	8000	0.6643791				
2-Methylnaphthalene	2000	0.673158	4000	0.6868806	6000	0.6744961	8000	0.6928042				
Naphthalene	2000	1.036377	4000	1.041304	6000	1.033339	8000	1.037319				
Phenanthrene	2000	1.131866	4000	1.154791	6000	1.141502	8000	1.148054				
Pyrene	2000	0.9608802	4000	1.005692	6000	1.00048	8000	1.014047				
2-Fluorobiphenyl (Surr)	2000	1.492364	4000	1.548697	6000	1.43875	8000	1.518165				
p-Terphenyl-d14 (Surr)	2000	1.055308	4000	1.09456	6000	1.044533	8000	1.03694				

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS4	Calibration:	A9E0902
Lab File ID:	D9050814.D		
Sequence:	9E08049	Inject Date:	05/08/19
Lab Sample ID:	9E08049-ICV1	Inject Time:	20:01

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acenaphthene	1000	1000	0.02	70 - 130
Acenaphthylene	1000	1020	1.9	70 - 130
Anthracene	1000	997	-0.3	70 - 130
Benz(a)anthracene	1000	975	-2.5	70 - 130
Benzo(a)pyrene	1000	1000	-0.009	70 - 130
Benzo(b)fluoranthene	1000	1010	0.7	70 - 130
Benzo(k)fluoranthene	1000	1010	1.2	70 - 130
Benzo(g,h,i)perylene	1000	988	-1.2	70 - 130
Chrysene	1000	995	-0.5	70 - 130
Dibenz(a,h)anthracene	1000	987	-1.3	70 - 130
Dibenzofuran	1000	1010	1.0	70 - 130
Fluoranthene	1000	999	-0.06	70 - 130
Fluorene	1000	1020	1.6	70 - 130
Indeno(1,2,3-cd)pyrene	1000	989	-1.1	70 - 130
1-Methylnaphthalene	1000	977	-2.3	70 - 130
2-Methylnaphthalene	1000	989	-1.1	70 - 130
Naphthalene	1000	985	-1.5	70 - 130
Phenanthrene	1000	988	-1.2	70 - 130
Pyrene	1000	1000	0.3	70 - 130
2-Fluorobiphenyl (Surr)	1000	1000	0.4	0 - 200
p-Terphenyl-d14 (Surr)	1000	984	-1.6	0 - 200

CONTINUING CALIBRATION CHECK

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS4	Calibration:	A9E0902
Lab File ID:	D9060402.D	Calibration Date:	05/09/19 09:01
Sequence:	9F04031	Injection Date:	06/04/19
Lab Sample ID:	9F04031-CCV1	Injection Time:	09:13

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	1000	1040		1.20944	1.263368	4.5	20
Acenaphthylene	Ave	1000	1070		1.806194	1.935386	7.2	20
Anthracene	Ave	1000	1060		1.162869	1.23231	6.0	20
Benz(a)anthracene	Ave	1000	998		1.206757	1.204569	-0.2	20
Benzo(a)pyrene	Ave	1000	1060		1.109791	1.181407	6.5	20
Benzo(b)fluoranthene	Ave	1000	959		1.291257	1.238192	-4.1	20
Benzo(k)fluoranthene	Ave	1000	1030		1.279647	1.312245	2.5	20
Benzo(g,h,i)perylene	Ave	1000	951		1.352298	1.286302	-4.9	20
Chrysene	Ave	1000	1080		1.176863	1.26971	7.9	20
Dibenz(a,h)anthracene	Ave	1000	1070		1.148022	1.222786	6.5	20
Dibenzofuran	Ave	1000	1090		1.61271	1.753361	8.7	20
Fluoranthene	Ave	1000	1100		0.9812934	1.07552	9.6	20
Fluorene	Ave	1000	1090		1.254987	1.363825	8.7	20
Indeno(1,2,3-cd)pyrene	Ave	1000	1000		1.257365	1.261169	0.3	20
1-Methylnaphthalene	Ave	1000	1060		0.649979	0.6872259	5.7	20
2-Methylnaphthalene	Ave	1000	1040		0.6702411	0.6971689	4.0	20
Naphthalene	Ave	1000	1030		1.036658	1.065747	2.8	20
Phenanthrene	Ave	1000	1020		1.151556	1.173686	1.9	20
Pyrene	Ave	1000	1130		0.9765101	1.103823	13.0	20

** Quadratic Curve fit may be weighted (1/a or 1/a2).

* = Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E08049	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9E08049-ICV1)				Lab File ID: D9050814.D		Analyzed: 05/08/19 20:01		
2-Fluorobiphenyl (Surr)	1000	100	0 - 200	6.786	6.7866	-0.0006	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	98	0 - 200	10.464	10.4646	-0.0006	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04031	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9F04031-CCV1)			Lab File ID: D9060402.D		Analyzed: 06/04/19 09:13			
2-Fluorobiphenyl (Surr)	1000	106	80 - 120	6.662	6.7866	-0.1246	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	87	80 - 120	10.326	10.4646	-0.1386	+/-1.0	
Calibration Blank (9F04031-CCB1)			Lab File ID: D9060403.D		Analyzed: 06/04/19 09:39			
2-Fluorobiphenyl (Surr)			44 - 120	0	6.7866	-6.7866	+/-1.0	
p-Terphenyl-d14 (Surr)			54 - 127	0	10.4646	-10.4646	+/-1.0	
Blank (9060490-BLK1)			Lab File ID: D9060413.D		Analyzed: 06/04/19 14:03			
2-Fluorobiphenyl (Surr)	333	66	44 - 120	6.661	6.7866	-0.1256	+/-1.0	
p-Terphenyl-d14 (Surr)	333	70	54 - 127	10.327	10.4646	-0.1376	+/-1.0	
LCS (9060490-BS1)			Lab File ID: D9060414.D		Analyzed: 06/04/19 14:30			
2-Fluorobiphenyl (Surr)	333	74	44 - 120	6.662	6.7866	-0.1246	+/-1.0	
p-Terphenyl-d14 (Surr)	333	65	54 - 127	10.326	10.4646	-0.1386	+/-1.0	
2708-190522-011 (A9E0785-01)			Lab File ID: D9060415.D		Analyzed: 06/04/19 14:56			
2-Fluorobiphenyl (Surr)	4390		44 - 120	0	6.7866	-6.7866	+/-1.0	*
p-Terphenyl-d14 (Surr)	4390		54 - 127	0	10.4646	-10.4646	+/-1.0	*
Duplicate (9060490-DUP1)			Lab File ID: D9060416.D		Analyzed: 06/04/19 15:23			
2-Fluorobiphenyl (Surr)	4500		44 - 120	0	6.7866	-6.7866	+/-1.0	*
p-Terphenyl-d14 (Surr)	4500		54 - 127	0	10.4646	-10.4646	+/-1.0	*

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04031	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9F04031-CCV1)			Lab File ID: D9060402.D			Analyzed: 06/04/19 09:13			
Naphthalene-d8 (ISTD)	334708	5.626	510967	5.748	66	50 - 200	-0.1220	+/-0.50	
Acenaphthene-d10 (ISTD)	168570	7.324	250878	7.452	67	50 - 200	-0.1280	+/-0.50	
Phenanthrene-d10 (ISTD)	264633	8.772	350771	8.905	75	50 - 200	-0.1330	+/-0.50	
Chrysene-d12 (ISTD)	176938	11.518	167448	11.713	106	50 - 200	-0.1950	+/-0.50	
Perylene-d12 (ISTD)	154619	14.016	116473	14.307	133	50 - 200	-0.2910	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	123024	16.354	78010	16.716	158	50 - 200	-0.3620	+/-0.50	
Calibration Blank (9F04031-CCB1)			Lab File ID: D9060403.D			Analyzed: 06/04/19 09:39			
Naphthalene-d8 (ISTD)	311649	5.626	334708	5.626	93	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	153193	7.325	168570	7.324	91	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	255561	8.771	264633	8.772	97	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	166626	11.518	176938	11.518	94	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	135807	14.015	154619	14.016	88	50 - 200	-0.0010	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	101441	16.349	123024	16.354	82	50 - 200	-0.0050	+/-0.50	
Blank (9060490-BLK1)			Lab File ID: D9060413.D			Analyzed: 06/04/19 14:03			
Naphthalene-d8 (ISTD)	389347	5.631	334708	5.626	116	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10 (ISTD)	202443	7.324	168570	7.324	120	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	336030	8.77	264633	8.772	127	50 - 200	-0.0020	+/-0.50	
Chrysene-d12 (ISTD)	228865	11.518	176938	11.518	129	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	195055	14.016	154619	14.016	126	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	159836	16.355	123024	16.354	130	50 - 200	0.0010	+/-0.50	
LCS (9060490-BS1)			Lab File ID: D9060414.D			Analyzed: 06/04/19 14:30			
Naphthalene-d8 (ISTD)	393896	5.633	334708	5.626	118	50 - 200	0.0070	+/-0.50	
Acenaphthene-d10 (ISTD)	202305	7.325	168570	7.324	120	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	331444	8.771	264633	8.772	125	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	241782	11.526	176938	11.518	137	50 - 200	0.0080	+/-0.50	
Perylene-d12 (ISTD)	206779	14.022	154619	14.016	134	50 - 200	0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	176968	16.365	123024	16.354	144	50 - 200	0.0110	+/-0.50	
2708-190522-011 (A9E0785-01)			Lab File ID: D9060415.D			Analyzed: 06/04/19 14:56			
Naphthalene-d8 (ISTD)	335121	5.632	334708	5.626	100	50 - 200	0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	166627	7.324	168570	7.324	99	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	264760	8.771	264633	8.772	100	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	170831	11.518	176938	11.518	97	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	150679	14.016	154619	14.016	97	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	124001	16.354	123024	16.354	101	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F04031	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Duplicate (9060490-DUP1)			Lab File ID: D9060416.D			Analyzed: 06/04/19 15:23			
Naphthalene-d8 (ISTD)	381493	5.626	334708	5.626	114	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	189811	7.325	168570	7.324	113	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	310597	8.771	264633	8.772	117	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	203061	11.518	176938	11.518	115	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	173802	14.015	154619	14.016	112	50 - 200	-0.0010	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	139489	16.354	123024	16.354	113	50 - 200	0.0000	+/-0.50	

HOLDING TIME SUMMARY

EPA 8270D (SIM)

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	06/03/19 10:10	11.74	14.00	06/04/19 14:56	1.20	40.00	

Apex Laboratories

SDG: A9E0785

CLASS: GCMS

METHOD: 1312/8270D (SIM)

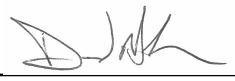
ANALYSES DATA PACKAGE COVER PAGE

1312/8270D (SIM)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/2/2019 2:02PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

1312/8270D (SIM)

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Solid

Analyte	MDL	MRL	Units
Acenaphthene	0.000100	0.000200	mg/L
Acenaphthylene	0.000100	0.000200	mg/L
Anthracene	0.000100	0.000200	mg/L
Benz(a)anthracene	0.000100	0.000200	mg/L
Benzo(a)pyrene	0.000100	0.000200	mg/L
Benzo(b)fluoranthene	0.000100	0.000200	mg/L
Benzo(k)fluoranthene	0.000100	0.000200	mg/L
Benzo(g,h,i)perylene	0.000200	0.000400	mg/L
Chrysene	0.000100	0.000200	mg/L
Dibenz(a,h)anthracene	0.000100	0.000200	mg/L
Dibenzofuran	0.000100	0.000200	mg/L
Fluoranthene	0.000100	0.000200	mg/L
Fluorene	0.000100	0.000200	mg/L
Indeno(1,2,3-cd)pyrene	0.000100	0.000200	mg/L
1-Methylnaphthalene	0.000200	0.000400	mg/L
2-Methylnaphthalene	0.000200	0.000400	mg/L
Naphthalene	0.000200	0.000400	mg/L
Phenanthrene	0.000100	0.000200	mg/L
Pyrene	0.000100	0.000200	mg/L

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

1312/8270D (SIM)

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01	File ID:	D9061107.D
Sampled:	05/22/19 16:30	Prepared:	06/10/19 10:20	Analyzed:	06/11/19 11:47
		Preparation:	EPA 1312/3510C (Acid Ext.)	Initial/Final:	200 mL / 2 mL

Batch: 9060758 Sequence: 9F11033 Calibration: A9E0902 Instrument: SV-GCMS4

CAS NO.	COMPOUND	DILUTION	CONC. (mg/L)	Q
83-32-9	Acenaphthene	1000	0.733	D
208-96-8	Acenaphthylene	1000	0.100	U
120-12-7	Anthracene	1000	0.100	U
56-55-3	Benz(a)anthracene	1000	0.100	U
50-32-8	Benzo(a)pyrene	1000	0.100	U
205-99-2	Benzo(b)fluoranthene	1000	0.100	U
207-08-9	Benzo(k)fluoranthene	1000	0.100	U
191-24-2	Benzo(g,h,i)perylene	1000	0.200	U
218-01-9	Chrysene	1000	0.100	U
53-70-3	Dibenz(a,h)anthracene	1000	0.100	U
132-64-9	Dibenzofuran	1000	0.361	D
206-44-0	Fluoranthene	1000	0.100	U
86-73-7	Fluorene	1000	0.228	D
193-39-5	Indeno(1,2,3-cd)pyrene	1000	0.100	U
90-12-0	1-Methylnaphthalene	1000	0.523	D
91-57-6	2-Methylnaphthalene	1000	0.875	D
91-20-3	Naphthalene	1000	9.95	BD
85-01-8	Phenanthrene	1000	0.267	D
129-00-0	Pyrene	1000	0.100	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl (Surr)	0.0250	0.0247	99	44 - 120	D
p-Terphenyl-d14 (Surr)	0.0250	0.0285	114	50 - 133	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Naphthalene-d8 (ISTD)	366853	5.605	376010	5.6	
Acenaphthene-d10 (ISTD)	180877	7.294	185133	7.293	
Phenanthrene-d10 (ISTD)	289857	8.744	279000	8.744	
Chrysene-d12 (ISTD)	175311	11.482	178733	11.482	
Perylene-d12 (ISTD)	139164	13.963	147801	13.959	
Dibenz(a,h)anthracene-d14 (ISTD)	109323	16.281	114622	16.282	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

1312/8270D (SIM)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Batch: 9060758 Batch Matrix: Solid Preparation: EPA 1312/3510C (Acid Ext.)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9060758-BLK1	D9061104.D	06/10/19 10:20	
LCS	9060758-BS1	D9061105.D	06/10/19 10:20	
LCS Dup	9060758-BSD1	D9061106.D	06/10/19 10:20	
2708-190522-011	A9E0785-01	D9061107.D	06/10/19 10:20	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
1312/8270D (SIM)

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	9060758-BLK1	File ID:	D9061104.D
Prepared:	06/10/19 10:20	Preparation:	EPA 1312/3510C (Acid Ext.)	Initial/Final:	200 mL / 2 mL
Analyzed:	06/11/19 10:28	Instrument:	SV-GCMS4		
Batch:	9060758	Sequence:	9F11033	Calibration:	A9E0902

CAS NO.	COMPOUND	CONC. (mg/L)	Q
83-32-9	Acenaphthene	0.000100	U
208-96-8	Acenaphthylene	0.000100	U
120-12-7	Anthracene	0.000100	U
56-55-3	Benz(a)anthracene	0.000100	U
50-32-8	Benzo(a)pyrene	0.000100	U
205-99-2	Benzo(b)fluoranthene	0.000100	U
207-08-9	Benzo(k)fluoranthene	0.000100	U
191-24-2	Benzo(g,h,i)perylene	0.000200	U
218-01-9	Chrysene	0.000100	U
53-70-3	Dibenz(a,h)anthracene	0.000100	U
132-64-9	Dibenzofuran	0.000100	U
206-44-0	Fluoranthene	0.000100	U
86-73-7	Fluorene	0.000100	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.000100	U
90-12-0	1-Methylnaphthalene	0.000200	U
91-57-6	2-Methylnaphthalene	0.000200	U
91-20-3	Naphthalene	0.00194	B
85-01-8	Phenanthrene	0.000100	U
129-00-0	Pyrene	0.000100	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl (Surr)	0.0250	0.0196	79	44 - 120	
p-Terphenyl-d14 (Surr)	0.0250	0.0196	78	50 - 133	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Naphthalene-d8 (ISTD)	392495	5.599	376010	5.6	
Acenaphthene-d10 (ISTD)	186170	7.294	185133	7.293	
Phenanthrene-d10 (ISTD)	287118	8.744	279000	8.744	
Chrysene-d12 (ISTD)	173120	11.483	178733	11.482	
Perylene-d12 (ISTD)	138659	13.958	147801	13.959	
Dibenz(a,h)anthracene-d14 (ISTD)	103576	16.281	114622	16.282	

LCS / LCS DUPLICATE RECOVERY

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Solid		
Batch:	9060758	Laboratory ID:	9060758-BS1
Preparation:	EPA 1312/3510C (Acid Ext.)	Initial/Final:	200 mL / 2 mL

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	0.0400	0.0358	89	47 - 122
Acenaphthylene	0.0400	0.0367	92	41 - 130
Anthracene	0.0400	0.0375	94	57 - 123
Benz(a)anthracene	0.0400	0.0377	94	58 - 125
Benzo(a)pyrene	0.0400	0.0404	101	54 - 128
Benzo(b)fluoranthene	0.0400	0.0376	94	53 - 131
Benzo(k)fluoranthene	0.0400	0.0391	98	57 - 129
Benzo(g,h,i)perylene	0.0400	0.0344	86	50 - 134
Chrysene	0.0400	0.0374	93	59 - 123
Dibenz(a,h)anthracene	0.0400	0.0405	101	51 - 134
Dibenzofuran	0.0400	0.0372	93	53 - 120
Fluoranthene	0.0400	0.0408	102	57 - 128
Fluorene	0.0400	0.0382	96	52 - 124
Indeno(1,2,3-cd)pyrene	0.0400	0.0364	91	52 - 133
1-Methylnaphthalene	0.0400	0.0317	79	41 - 120
2-Methylnaphthalene	0.0400	0.0322	80	40 - 121
Naphthalene	0.0400	0.0355	89	40 - 121
Phenanthrene	0.0400	0.0365	91	59 - 120
Pyrene	0.0400	0.0419	105	57 - 126

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Solid		
Batch:	9060758	Laboratory ID:	9060758-BSD1
Preparation:	EPA 1312/3510C (Acid Ext.)	Initial/Final:	200 mL / 2 mL

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS
Acenaphthene	0.0400	0.0359	90	0.3	30	47 - 122
Acenaphthylene	0.0400	0.0371	93	1	30	41 - 130
Anthracene	0.0400	0.0398	100	6	30	57 - 123
Benz(a)anthracene	0.0400	0.0388	97	3	30	58 - 125
Benzo(a)pyrene	0.0400	0.0421	105	4	30	54 - 128
Benzo(b)fluoranthene	0.0400	0.0389	97	4	30	53 - 131
Benzo(k)fluoranthene	0.0400	0.0402	100	3	30	57 - 129
Benzo(g,h,i)perylene	0.0400	0.0353	88	2	30	50 - 134
Chrysene	0.0400	0.0394	99	5	30	59 - 123
Dibenz(a,h)anthracene	0.0400	0.0418	105	3	30	51 - 134
Dibenzofuran	0.0400	0.0384	96	3	30	53 - 120
Fluoranthene	0.0400	0.0426	107	4	30	57 - 128
Fluorene	0.0400	0.0385	96	0.8	30	52 - 124
Indeno(1,2,3-cd)pyrene	0.0400	0.0378	94	4	30	52 - 133
1-Methylnaphthalene	0.0400	0.0318	79	0.1	30	41 - 120
2-Methylnaphthalene	0.0400	0.0314	79	2	30	40 - 121
Naphthalene	0.0400	0.0330	83	7	30	40 - 121
Phenanthrene	0.0400	0.0381	95	4	30	59 - 120
Pyrene	0.0400	0.0436	109	4	30	57 - 126

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E08049	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E08049-TUN1	D9050801.D	05/08/19 14:14
Initial Cal Blank	9E08049-ICB1	D9050802.D	05/08/19 14:39
Cal Standard	9E08049-CAL1	D9050803.D	05/08/19 15:06
Cal Standard	9E08049-CAL2	D9050804.D	05/08/19 15:33
Cal Standard	9E08049-CAL3	D9050805.D	05/08/19 16:00
Cal Standard	9E08049-CAL4	D9050806.D	05/08/19 16:27
Cal Standard	9E08049-CAL5	D9050807.D	05/08/19 16:53
Cal Standard	9E08049-CAL6	D9050808.D	05/08/19 17:20
Cal Standard	9E08049-CAL7	D9050809.D	05/08/19 17:47
Cal Standard	9E08049-CAL8	D9050810.D	05/08/19 18:14
Cal Standard	9E08049-CAL9	D9050811.D	05/08/19 18:40
Cal Standard	9E08049-CALA	D9050812.D	05/08/19 19:07
Initial Cal Check	9E08049-ICV1	D9050814.D	05/08/19 20:01

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F11033	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F11033-TUN1	D9061101.D	06/11/19 09:10
Calibration Check	9F11033-CCV1	D9061102.D	06/11/19 09:35
Calibration Blank	9F11033-CCB1	D9061103.D	06/11/19 10:01
Blank	9060758-BLK1	D9061104.D	06/11/19 10:28
LCS	9060758-BS1	D9061105.D	06/11/19 10:54
LCS Dup	9060758-BSD1	D9061106.D	06/11/19 11:21
2708-190522-011	A9E0785-01	D9061107.D	06/11/19 11:47

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	D9050801.D	Injection Date:	05/08/19
Instrument ID:	SV-GCMS4	Injection Time:	14:14
Sequence:	9E08049	Lab Sample ID:	9E08049-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Base peak, 100% relative abundance	100.00	PASS
m/z 70	Less than 2% of m/z 69	0.12	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.56	PASS
m/z 365	1 - 100% of m/z 198	1.60	PASS
m/z 441	Less than 150% of m/z 443	73.96	PASS
m/z 442	0.1 - 200% of m/z 198	70.78	PASS
m/z 443	15 - 24% of m/z 442	19.39	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	D9061101.D	Injection Date:	06/11/19
Instrument ID:	SV-GCMS4	Injection Time:	09:10
Sequence:	9F11033	Lab Sample ID:	9F11033-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 127			
m/z 275			
m/z 51			
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Base peak, 100% relative abundance	100.00	PASS
m/z 70	Less than 2% of m/z 69	0.00	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.64	PASS
m/z 365	1 - 100% of m/z 198	1.60	PASS
m/z 441	Less than 24% of m/z 443	75.84	FAIL
m/z 442	50 - 200% of m/z 198	57.97	PASS
m/z 443	15 - 24% of m/z 442	19.19	PASS

INITIAL CALIBRATION DATA (Summary)

1312/8270D (SIM)

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E0902 Date: 05/09/19 09:01 Instrument: SV-GCMS4

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.20944	Ave	2.13227	7.4823	0.0118039			15	
Acenaphthylene	1.806194	Ave	2.549192	7.3116	3.623897E-02			15	
Anthracene	1.162869	Ave	2.957076	8.9795	0.0209133			15	
Benz(a)anthracene	1.206757	Ave	5.97315	11.6945	0.0276152			15	
Benzo(a)pyrene	1.109791	Ave	7.706717	14.1861	4.402349E-02			15	
Benzo(b)fluoranthene	1.291257	Ave	5.192294	13.5306	4.517746E-02			15	
Benzo(k)fluoranthene	1.279647	Ave	5.729701	13.5835	0.038912			15	
Benzo(g,h,i)perylene	1.352298	Ave	2.403502	17.2805	2.896809E-02			15	
Chrysene	1.176863	Ave	1.874504	11.7484	2.480633E-02			15	
Dibenz(a,h)anthracene	1.148022	Ave	6.34413	16.7894	0.0274937			15	
Dibenzofuran	1.61271	Ave	3.21316	7.6521	3.637474E-02			15	
Fluoranthene	0.9812934	Ave	2.68659	10.0976	1.693358E-02			15	
Fluorene	1.254987	Ave	3.649215	7.9858	3.591851E-02			15	
Indeno(1,2,3-cd)pyrene	1.257365	Ave	1.650651	16.7267	0.041807			15	
1-Methylnaphthalene	0.649979	Ave	3.081471	6.5313	9.495708E-03			15	
2-Methylnaphthalene	0.6702411	Ave	2.561479	6.4338	2.102881E-03			15	
Naphthalene	1.036658	Ave	1.613869	5.7688	1.557018E-02			15	
Phenanthrene	1.151556	Ave	1.250568	8.9295	2.939548E-02			15	
Pyrene	0.9765101	Ave	2.686084	10.3215	3.218598E-02			15	
2-Fluorobiphenyl (Surr)	1.482329	Ave	3.393744	6.7866	0.0304601			15	
p-Terphenyl-d14 (Surr)	1.058331	Ave	2.112583	10.4646	8.608343E-03			15	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

1312/8270D (SIM)

Laboratory: Apex Laboratories

Client: Hahn and Associates

Calibration: A9E0902

SDG: A9E0785

Project: Mult 802 Decommissioning

Instrument: SV-GCMS4

Calibration Date: 05/09/19 09:01

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acenaphthene	20	1.14962	50	1.177436	100	1.224541	200	1.216566	500	1.233994	1000	1.219358
Acenaphthylene	20	1.720959	50	1.762277	100	1.799359	200	1.765521	500	1.858301	1000	1.799034
Anthracene	20	1.127439	50	1.118197	100	1.144011	200	1.141966	500	1.184349	1000	1.135995
Benz(a)anthracene	20	1.401601	50	1.228024	100	1.21182	200	1.180644	500	1.204653	1000	1.160444
Benzo(a)pyrene	20	0.9901074	50	1.000086	100	1.036487	200	1.065882	500	1.09628	1000	1.13367
Benzo(b)fluoranthene	20	1.192032	50	1.210369	100	1.239898	200	1.282788	500	1.301364	1000	1.290668
Benzo(k)fluoranthene	20	1.170821	50	1.200027	100	1.220812	200	1.234408	500	1.284677	1000	1.288247
Benzo(b+k)fluoranthene(s)	40	1.204334	100	1.21439	200	1.234224	400	1.26391	1000	1.295807	2000	1.291836
Benzo(g,h,i)perylene	20	1.308389	50	1.316757	100	1.352786	200	1.333817	500	1.411267	1000	1.371593
Carbazole	20	0.9068106	50	0.9051756	100	0.9242121	200	0.9435813	500	0.9713695	1000	0.9166436
Chrysene	20	1.153793	50	1.160291	100	1.204305	200	1.192247	500	1.211224	1000	1.170632
Dibenz(a,h)anthracene	20	1.014396	50	1.057526	100	1.119352	200	1.131707	500	1.165592	1000	1.153826
Dibenzofuran	20	1.483226	50	1.571658	100	1.631537	200	1.622476	500	1.667604	1000	1.611357
Fluoranthene	20	0.944567	50	0.9484435	100	0.9842344	200	0.9771181	500	1.006529	1000	0.9542636
Fluorene	20	1.155259	50	1.207192	100	1.254626	200	1.262059	500	1.295265	1000	1.246152
Indeno(1,2,3-cd)pyrene	20	1.268299	50	1.236069	100	1.270776	200	1.259115	500	1.302571	1000	1.264633
1-Methylnaphthalene	20	0.6014754	50	0.6320879	100	0.6520494	200	0.6627537	500	0.6587475	1000	0.6501242
2-Methylnaphthalene	20	0.6291467	50	0.65969	100	0.6683348	200	0.6747687	500	0.6740555	1000	0.6690765
Naphthalene	20	1.00582	50	1.024124	100	1.059564	200	1.059087	500	1.047925	1000	1.021718
Phenanthrene	20	1.178328	50	1.158811	100	1.153145	200	1.149678	500	1.166613	1000	1.132768
Pyrene	20	0.9435821	50	0.9594595	100	0.9719037	200	0.9801025	500	0.9910657	1000	0.9378883
Nitrobenzene-d5 (Surr)	20		50		100		200		500		1000	
2-Fluorobiphenyl (Surr)	20	1.387352	50	1.445961	100	1.535069	200	1.459327	500	1.519915	1000	1.47769
p-Terphenyl-d14 (Surr)	20	1.034845	50	1.077189	100	1.070374	200	1.027269	500	1.080729	1000	1.061559

INITIAL CALIBRATION DATA (Continued)

1312/8270D (SIM)

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E0902
Instrument: SV-GCMS4
Matrix:
Calibration Date: 05/09/19 09:01

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acenaphthene	2000	1.216207	4000	1.211287	6000	1.221677	8000	1.223715				
Acenaphthylene	2000	1.837492	4000	1.846931	6000	1.813679	8000	1.858385				
Anthracene	2000	1.163047	4000	1.212048	6000	1.193203	8000	1.208435				
Benz(a)anthracene	2000	1.16324	4000	1.171968	6000	1.167635	8000	1.17754				
Benzo(a)pyrene	2000	1.149856	4000	1.201799	6000	1.195878	8000	1.227862				
Benzo(b)fluoranthene	2000	1.273966	4000	1.381316	6000	1.355616	8000	1.384553				
Benzo(k)fluoranthene	2000	1.289374	4000	1.355655	6000	1.370476	8000	1.381974				
Benzo(b+k)fluoranthene(s)	4000	1.28342	8000	1.370036	12000	1.364516	16000	1.384568				
Benzo(g,h,i)perylene	2000	1.355634	4000	1.368542	6000	1.382511	8000	1.321681				
Carbazole	2000	0.8869042	4000	0.7390442	6000	~~0.5274994~~	8000	~~0.3751793~~				
Chrysene	2000	1.166406	4000	1.191437	6000	1.144755	8000	1.173537				
Dibenz(a,h)anthracene	2000	1.157637	4000	1.195061	6000	1.236048	8000	1.249071				
Dibenzofuran	2000	1.633982	4000	1.645541	6000	1.621759	8000	1.637963				
Fluoranthene	2000	0.9774877	4000	1.006283	6000	0.9916297	8000	1.022378				
Fluorene	2000	1.24489	4000	1.289942	6000	1.297849	8000	1.296639				
Indeno(1,2,3-cd)pyrene	2000	1.237984	4000	1.255261	6000	1.240859	8000	1.23808				
1-Methylnaphthalene	2000	0.6565403	4000	0.6710152	6000	0.650617	8000	0.6643791				
2-Methylnaphthalene	2000	0.673158	4000	0.6868806	6000	0.6744961	8000	0.6928042				
Naphthalene	2000	1.036377	4000	1.041304	6000	1.033339	8000	1.037319				
Phenanthrene	2000	1.131866	4000	1.154791	6000	1.141502	8000	1.148054				
Pyrene	2000	0.9608802	4000	1.005692	6000	1.00048	8000	1.014047				
Nitrobenzene-d5 (Surr)	2000		4000		6000		8000					
2-Fluorobiphenyl (Surr)	2000	1.492364	4000	1.548697	6000	1.43875	8000	1.518165				
p-Terphenyl-d14 (Surr)	2000	1.055308	4000	1.09456	6000	1.044533	8000	1.03694				

SECOND-SOURCE CALIBRATION VERIFICATION

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS4	Calibration:	A9E0902
Lab File ID:	D9050814.D		
Sequence:	9E08049	Inject Date:	05/08/19
Lab Sample ID:	9E08049-ICV1	Inject Time:	20:01

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acenaphthene	1000	1000	0.02	70 - 130
Acenaphthylene	1000	1020	1.9	70 - 130
Anthracene	1000	997	-0.3	70 - 130
Benz(a)anthracene	1000	975	-2.5	70 - 130
Benzo(a)pyrene	1000	1000	-0.009	70 - 130
Benzo(b)fluoranthene	1000	1010	0.7	70 - 130
Benzo(k)fluoranthene	1000	1010	1.2	70 - 130
Benzo(g,h,i)perylene	1000	988	-1.2	70 - 130
Chrysene	1000	995	-0.5	70 - 130
Dibenz(a,h)anthracene	1000	987	-1.3	70 - 130
Fluoranthene	1000	999	-0.06	70 - 130
Fluorene	1000	1020	1.6	70 - 130
Indeno(1,2,3-cd)pyrene	1000	989	-1.1	70 - 130
Naphthalene	1000	985	-1.5	70 - 130
Phenanthrene	1000	988	-1.2	70 - 130
Pyrene	1000	1000	0.3	70 - 130
Nitrobenzene-d5 (Surr)	1000	0.00		0 - 200
2-Fluorobiphenyl (Surr)	1000	1000	0.4	0 - 200
p-Terphenyl-d14 (Surr)	1000	984	-1.6	0 - 200

CONTINUING CALIBRATION CHECK

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS4	Calibration:	A9E0902
Lab File ID:	D9061102.D	Calibration Date:	05/09/19 09:01
Sequence:	9F11033	Injection Date:	06/11/19
Lab Sample ID:	9F11033-CCV1	Injection Time:	09:35

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	1000	1040		1.20944	1.259257	4.1	20
Acenaphthylene	Ave	1000	1070		1.806194	1.93448	7.1	20
Anthracene	Ave	1000	1070		1.162869	1.249484	7.4	20
Benz(a)anthracene	Ave	1000	996		1.206757	1.201681	-0.4	20
Benzo(a)pyrene	Ave	1000	1060		1.109791	1.177015	6.1	20
Benzo(b)fluoranthene	Ave	1000	983		1.291257	1.268828	-1.7	20
Benzo(k)fluoranthene	Ave	1000	1020		1.279647	1.299639	1.6	20
Benzo(g,h,i)perylene	Ave	1000	993		1.352298	1.342866	-0.7	20
Chrysene	Ave	1000	1040		1.176863	1.225728	4.2	20
Dibenz(a,h)anthracene	Ave	1000	1060		1.148022	1.220202	6.3	20
Fluoranthene	Ave	1000	1110		0.9812934	1.085505	10.6	20
Fluorene	Ave	1000	1060		1.254987	1.330805	6.0	20
Indeno(1,2,3-cd)pyrene	Ave	1000	1020		1.257365	1.28813	2.4	20
Naphthalene	Ave	1000	1020		1.036658	1.060951	2.3	20
Phenanthrene	Ave	1000	1020		1.151556	1.170552	1.6	20
Pyrene	Ave	1000	1140		0.9765101	1.111742	13.8	20

** Quadratic Curve fit may be weighted (1/a or 1/a2).

* = Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E08049	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9E08049-ICV1)			Lab File ID: D9050814.D		Analyzed: 05/08/19 20:01			
Nitrobenzene-d5 (Surr)	1000		0 - 200			0.0000	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	100	0 - 200	6.786	6.7866	-0.0006	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	98	0 - 200	10.464	10.4646	-0.0006	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F11033	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9F11033-CCV1)			Lab File ID: D9061102.D		Analyzed: 06/11/19 09:35			
Nitrobenzene-d5 (Surr)	1000		0 - 200			0.0000	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	103	0 - 200	6.634	6.7866	-0.1526	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	88	0 - 200	10.298	10.4646	-0.1666	+/-1.0	
Calibration Blank (9F11033-CCB1)			Lab File ID: D9061103.D		Analyzed: 06/11/19 10:01			
Nitrobenzene-d5 (Surr)			44 - 120			0.0000	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 120	0	6.7866	-6.7866	+/-1.0	
p-Terphenyl-d14 (Surr)			50 - 133	0	10.4646	-10.4646	+/-1.0	
Blank (9060758-BLK1)			Lab File ID: D9061104.D		Analyzed: 06/11/19 10:28			
2-Fluorobiphenyl (Surr)	0.0250	79	44 - 120	6.636	6.7866	-0.1506	+/-1.0	
p-Terphenyl-d14 (Surr)	0.0250	78	50 - 133	10.298	10.4646	-0.1666	+/-1.0	
LCS (9060758-BS1)			Lab File ID: D9061105.D		Analyzed: 06/11/19 10:54			
2-Fluorobiphenyl (Surr)	0.0250	84	44 - 120	6.635	6.7866	-0.1516	+/-1.0	
p-Terphenyl-d14 (Surr)	0.0250	74	50 - 133	10.297	10.4646	-0.1676	+/-1.0	
LCS Dup (9060758-BSD1)			Lab File ID: D9061106.D		Analyzed: 06/11/19 11:21			
2-Fluorobiphenyl (Surr)	0.0250	85	44 - 120	6.636	6.7866	-0.1506	+/-1.0	
p-Terphenyl-d14 (Surr)	0.0250	72	50 - 133	10.298	10.4646	-0.1666	+/-1.0	
2708-190522-011 (A9E0785-01)			Lab File ID: D9061107.D		Analyzed: 06/11/19 11:47			
2-Fluorobiphenyl (Surr)	0.0250	99	44 - 120	6.64	6.7866	-0.1466	+/-1.0	
p-Terphenyl-d14 (Surr)	0.0250	114	50 - 133	10.303	10.4646	-0.1616	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F11033	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9F11033-CCV1)			Lab File ID: D9061102.D			Analyzed: 06/11/19 09:35			
Naphthalene-d8 (ISTD)	376010	5.6	510967	5.748	74	50 - 200	-0.1480	+/-0.50	
Acenaphthene-d10 (ISTD)	185133	7.293	250878	7.452	74	50 - 200	-0.1590	+/-0.50	
Phenanthrene-d10 (ISTD)	279000	8.744	350771	8.905	80	50 - 200	-0.1610	+/-0.50	
Chrysene-d12 (ISTD)	178733	11.482	167448	11.713	107	50 - 200	-0.2310	+/-0.50	
Perylene-d12 (ISTD)	147801	13.959	116473	14.307	127	50 - 200	-0.3480	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	114622	16.282	78010	16.716	147	50 - 200	-0.4340	+/-0.50	
Calibration Blank (9F11033-CCB1)			Lab File ID: D9061103.D			Analyzed: 06/11/19 10:01			
Naphthalene-d8 (ISTD)	394534	5.599	376010	5.6	105	50 - 200	-0.0010	+/-0.50	
Acenaphthene-d10 (ISTD)	196692	7.294	185133	7.293	106	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	306334	8.745	279000	8.744	110	50 - 200	0.0010	+/-0.50	
Chrysene-d12 (ISTD)	184798	11.483	178733	11.482	103	50 - 200	0.0010	+/-0.50	
Perylene-d12 (ISTD)	151572	13.958	147801	13.959	103	50 - 200	-0.0010	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	122606	16.281	114622	16.282	107	50 - 200	-0.0010	+/-0.50	
Blank (9060758-BLK1)			Lab File ID: D9061104.D			Analyzed: 06/11/19 10:28			
Naphthalene-d8 (ISTD)	392495	5.599	376010	5.6	104	50 - 200	-0.0010	+/-0.50	
Acenaphthene-d10 (ISTD)	186170	7.294	185133	7.293	101	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	287118	8.744	279000	8.744	103	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	173120	11.483	178733	11.482	97	50 - 200	0.0010	+/-0.50	
Perylene-d12 (ISTD)	138659	13.958	147801	13.959	94	50 - 200	-0.0010	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	103576	16.281	114622	16.282	90	50 - 200	-0.0010	+/-0.50	
LCS (9060758-BS1)			Lab File ID: D9061105.D			Analyzed: 06/11/19 10:54			
Naphthalene-d8 (ISTD)	397140	5.605	376010	5.6	106	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10 (ISTD)	197423	7.293	185133	7.293	107	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	312577	8.744	279000	8.744	112	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	218280	11.483	178733	11.482	122	50 - 200	0.0010	+/-0.50	
Perylene-d12 (ISTD)	174639	13.963	147801	13.959	118	50 - 200	0.0040	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	136779	16.288	114622	16.282	119	50 - 200	0.0060	+/-0.50	
LCS Dup (9060758-BSD1)			Lab File ID: D9061106.D			Analyzed: 06/11/19 11:21			
Naphthalene-d8 (ISTD)	412081	5.599	376010	5.6	110	50 - 200	-0.0010	+/-0.50	
Acenaphthene-d10 (ISTD)	206337	7.294	185133	7.293	111	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	321745	8.744	279000	8.744	115	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	220094	11.483	178733	11.482	123	50 - 200	0.0010	+/-0.50	
Perylene-d12 (ISTD)	177944	13.964	147801	13.959	120	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	143272	16.293	114622	16.282	125	50 - 200	0.0110	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
1312/8270D (SIM)

Laboratory:	Apex Laboratories	SDG:	A9E0785
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F11033	Instrument:	SV-GCMS4
Matrix:	Solid	Calibration:	A9E0902

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
2708-190522-011 (A9E0785-01)			Lab File ID: D9061107.D			Analyzed: 06/11/19 11:47			
Naphthalene-d8 (ISTD)	366853	5.605	376010	5.6	98	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10 (ISTD)	180877	7.294	185133	7.293	98	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	289857	8.744	279000	8.744	104	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	175311	11.482	178733	11.482	98	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	139164	13.963	147801	13.959	94	50 - 200	0.0040	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	109323	16.281	114622	16.282	95	50 - 200	-0.0010	+/-0.50	

HOLDING TIME SUMMARY

1312/8270D (SIM)

Laboratory: Apex Laboratories

SDG: A9E0785

Client: Hahn and Associates

Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	06/10/19 10:20	18.74	7.00	06/11/19 11:47	1.06	40.00	*

Apex Laboratories

SDG: A9E0785

CLASS: GCMS

METHOD: EPA 1312 ZHE

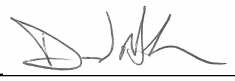
ANALYSES DATA PACKAGE COVER PAGE

EPA 1312 ZHE

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/1/2019 11:22AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 1312 ZHE

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Solid

Analyte	MDL	MRL	Units

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

EPA 1312 ZHE

2708-190522-011

Laboratory:	Apex Laboratories			SDG:	A9E0785
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Solid	Laboratory ID:	A9E0785-01	File ID:	
Sampled:	05/22/19 16:30	Prepared:	06/04/19 15:58	Analyzed:	06/04/19 15:58
		Preparation:	EPA 1312 SPLP/ZHE	Initial/Final:	15 g / 300 mL

Batch: 9060554 Sequence: Calibration: Instrument: Inst

CAS NO.	COMPOUND	DILUTION	CONC. (N/A)	Q
NA	TCLP ZHE Extraction	1	PREP	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 1312 ZHE

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Batch: 9060554 Batch Matrix: Solid Preparation: EPA 1312 SPLP/ZHE

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
2708-190522-011	A9E0785-01		06/04/19 15:58	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

HOLDING TIME SUMMARY

EPA 1312 ZHE

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	06/04/19 15:58	12.98	14.00	06/04/19 15:58	0.00		

Apex Laboratories

SDG: A9E0785

CLASS: METALS

METHOD: EPA 1312

ANALYSES DATA PACKAGE COVER PAGE

EPA 1312

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190522-011	A9E0785-01	Solid

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/1/2019 11:22AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 1312

Laboratory: Apex Laboratories **SDG:** A9E0785

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Solid

Analyte	MDL	MRL	Units

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

INORGANIC ANALYSIS DATA SHEET

EPA 1312

2708-190522-011

Laboratory: Apex Laboratories | SDG: A9E0785

Client: Hahn and Associates | Project: Mult 802 Decommissioning

Matrix: Solid | Laboratory ID: A9E0785-01

Sampled: 05/22/19 16:30 | Prepared: 06/05/19 17:15 | Analyzed: 06/05/19 17:15

Solids: N/A | Preparation: EPA 1312 (SPLP) | Initial/Final: 100 g / 2000 mL

Batch: 9060621 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (N/A)	Dilution Factor	Q	Method
SPLP	SPLP Extraction	PREP	1		EPA 1312

PREPARATION BATCH SUMMARY

EPA 1312

Laboratory: Apex Laboratories
SDG: A9E0785
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Batch: 9060621 Batch Matrix: Solid Preparation: EPA 1312 (SPLP)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
2708-190522-011	A9E0785-01		06/05/19 17:15	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

HOLDING TIME SUMMARY

EPA 1312

Laboratory: Apex Laboratories SDG: A9E0785

Client: Hahn and Associates Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190522-011	05/22/19 16:30	05/23/19 13:55	06/05/19 17:15	14.03	14.00	06/05/19 17:15	0.00		*

Raw Data

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Diesel and /or Oil Hydrocarbons by NWTPH-Dx

Benchsheet & Analysis Sequence Data

Batch 9060517

Sequence 9F03048 (A9E0785-01)

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060517 (Solid)

Prep Method: EPA 3546 (Fuels)

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9060517-BLK1		QC	06/03/19 16:03	10	5				100					
	9060517-BS1		QC	06/03/19 16:03	10	5	A19E300		100	100					
	A9E0723-03	A	NWTPH-Dx (Diesel/Oil)	06/03/19 16:03	0.56	5				100	2708-190521-009	added 5-31-19			
	9060517-DUP1		QC	06/03/19 16:03	0.53	5		A9E0723-03		100					
	A9E0785-01	A	NWTPH-Dx (Diesel/Oil)	06/03/19 16:03	0.59	5				100	2708-190522-011	added 5-31-19			
	A9E0832-02	A	NWTPH-Dx (Diesel/Oil)	06/03/19 16:03	0.51	5				100	2708-190523-013	added 5-31-19 lad			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19D007	09/30/20	DCM CHEM PROD. 186806
A19D260	10/15/19	Sodium Sulfate Lot # Q098001

Analyte Spike(s)

Std ID	Exp. Date	Description
A19E300	11/20/19	NWTPH-DX Spike in Methanol

Surrogate(s)

Std ID	Exp. Date	Description
A19E328	08/31/19	NWTPH-DX Soil Surrogate in DCM

Method 3546 digestion time and temperature achieved.
Initial:

Witness: _____

Prepared By: _____ Date

KEH 6/4/19
Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060517 (Solid)

Prep Method: EPA 3546 (Fuels)

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
11	9060517-BLK1		QC	06/03/19 16:03	~~10~~ 10	5 ✓				100					
12	9060517-BS1		QC	06/03/19 16:03	10	5 ✓	A19E300		100	100					
13	A9E0723-03	A	NWTPH-Dx (Diesel/Oil)	06/03/19 16:03	~~10~~ .56	5 ✓				100	2708-190521-009	added 5-31-19 Tar, odor			
14	9060517-DUP1		QC	06/03/19 16:03	~~10~~ .53	5 ✓		A9E0723-03		100					
15	A9E0785-01	A	NWTPH-Dx (Diesel/Oil)	06/03/19 16:03	~~10~~ .59	5 ✓				100	2708-190522-011	added 5-31-19 Tar, odor			
16	A9E0832-02	A	NWTPH-Dx (Diesel/Oil)	06/03/19 16:03	~~10~~ .51	5 ✓				100	2708-190523-013	added 5-31-19 lad Tar, odor			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19D007	09/30/20	DCM CHEM PROD. 186806
A19D260	10/15/19	Sodium Sulfate Lot # Q098001

Analyte Spike(s)

Std ID	Exp. Date	Description
A19E300	11/20/19	NWTPH-DX Spike in Methanol

JC

Surrogate(s)

Std ID	Exp. Date	Description
A19E328	08/31/19	NWTPH-DX Soil Surrogate in DCM

JC

Method 3546 digestion time and temperature achieved.
Initial: JC

Witness: JRA 06/03/19

Prepared By: JC — Date: 6/3/19 6/3/19

Reviewed By: JRA — Date: 06/03/19

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9F03048**	Instrument:	**DUALFID1F**
Date:	**06/03/19 12:35**	Calibration:	**A9D2602**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F03048-RES1	Soil	QC	QC				A19E278
2	9F03048-CCV1	Soil	QC	QC				A19E293
3	9F03048-CCV2	Soil	QC	QC				A19E294
4	9F03048-CCB1	Soil	QC	QC				
5	9060520-BLK1	Soil	QC	QC		9060520		
6	9060520-BS1	Soil	QC	QC		9060520		
7	9060520-BS2	Soil	QC	QC		9060520		
8	9060520-BS3	Soil	QC	QC		9060520		
9	9060520-BS4	Soil	QC	QC		9060520		
10	9F03048-IBL1	Soil	QC	QC				
11	9060507-BLK1	Soil	QC	QC		9060507		
12	9060507-BS1	Soil	QC	QC		9060507		
13	A9E0936-01	Soil	NWTPH-Dx (Diesel/Oil) w/SG		06/05/19	9060507		
14	9060507-DUP1	Soil	QC	QC		9060507		
15	A9E0936-02	Soil	NWTPH-Dx (Diesel/Oil) w/SG		06/05/19	9060507		
16	A9E0936-03	Soil	NWTPH-Dx (Diesel/Oil) w/SG		06/05/19	9060507		
17	A9E0978-01	Soil	NWTPH-Dx (Diesel/Oil) w/SG		06/06/19	9060507		
18	A9E0978-03	Soil	NWTPH-Dx (Diesel/Oil) w/SG		06/06/19	9060507		
19	A9E0978-05	Soil	NWTPH-Dx (Diesel/Oil) w/SG		06/06/19	9060507		
20	9F03048-IBL2	Soil	QC	QC				
21	9F03048-CCV3	Soil	QC	QC				A19E293
22	9F03048-CCV4	Soil	QC	QC				A19E294
23	9F03048-CCB2	Soil	QC	QC				
24	9060517-BLK1	Solid	QC	QC		9060517		
25	9060517-BS1	Solid	QC	QC		9060517		
26	A9E0723-03	Solid	NWTPH-Dx (Diesel/Oil)	Hahn and Associates	06/14/19	9060517		
27	9060517-DUP1	Solid	QC	QC		9060517		
28	9F03048-IBL3	Soil	QC	QC				
29	A9E0785-01	Solid	NWTPH-Dx (Diesel/Oil)	Hahn and Associates	06/14/19	9060517		
30	A9E0832-02	Solid	NWTPH-Dx (Diesel/Oil)	Hahn and Associates	06/14/19	9060517		
31	9F03048-IBL4	Soil	QC	QC				
32	9F03048-CCV5	Soil	QC	QC				A19E293
33	9F03048-CCV6	Soil	QC	QC				A19E294

Data Entered By: K2H 6/4/19

Data Reviewed By: 6/4/19

Comments:

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060302.D Vial: 94
Acq On : 3 Jun 2019 17:51 Operator: KEH
Sample : 9F03048-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:54 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	431855360	338.803	ug/ml
2)	H	Diesel	6.00	431855360	338.803	ug/mL
3)	H	DRO(C12-C24)	6.00	360353289	282.707	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	296344551	316.151	ug/ml
5)	H	TPHd (C10-C25)	6.00	377057996	325.597	ug/ml
7)	H	OIL	10.00	268702060	244.165	ug/mL
8)	H	RRO (C24-C40)	10.00	78199570	71.059	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	114422031	157.313	ug/mL
10)	H	TPHmo (C25-C36)	9.00	68644310	103.439	ug/mL

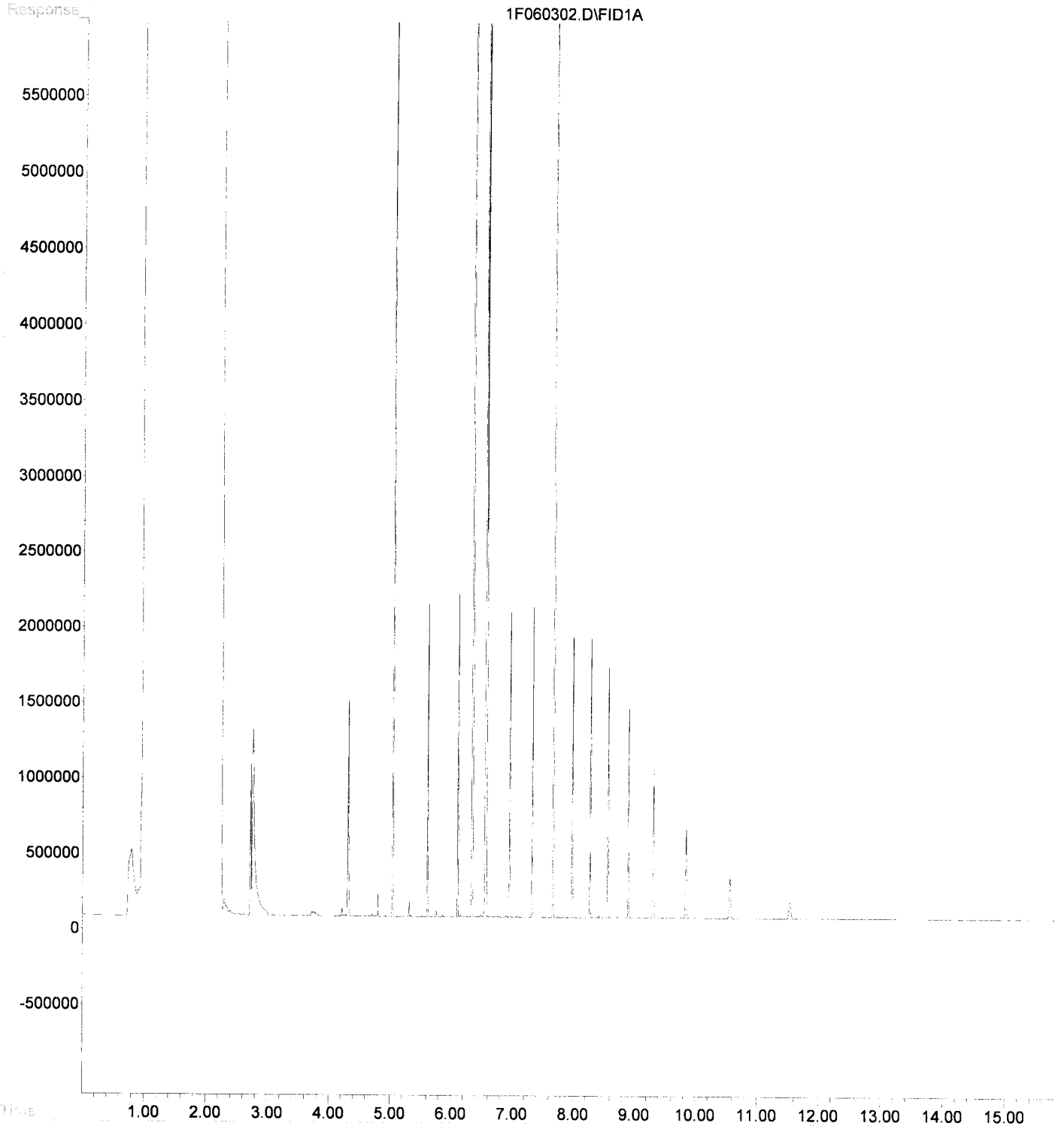
(f)=RT Delta > 1/2 window (m)=manual int.
1F060302.D 1F90425D.M Tue Jun 04 07:54:52 2019 SV-GCMS3

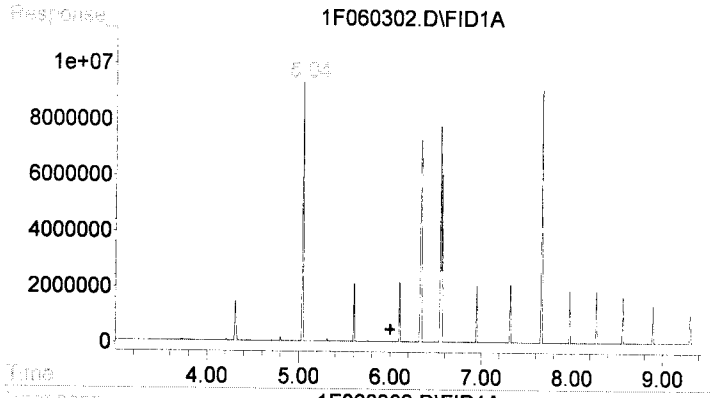
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060302.D Vial: 94
Acq On : 3 Jun 2019 17:51 Operator: KEH
Sample : 9F03048-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:54 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

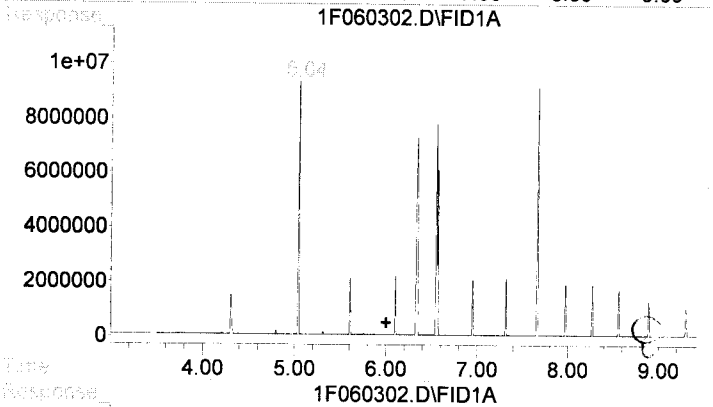
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





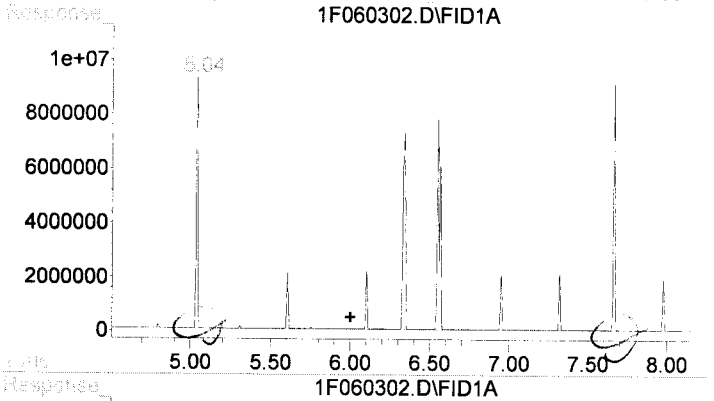
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 431855360
Conc: 338.80 ug/ml m



#2 Diesel

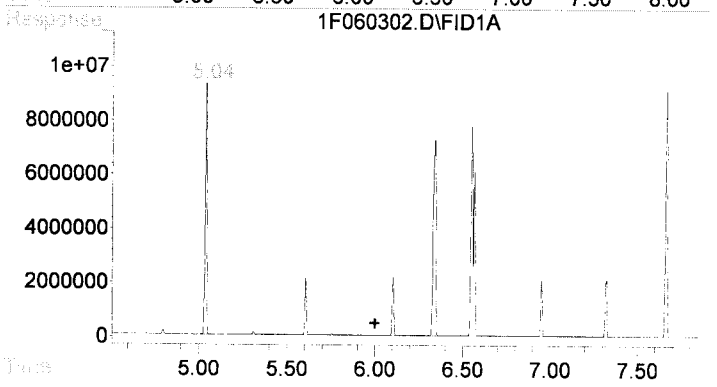
R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 431855360
Conc: 338.80 ug/mL m



#3 DRO(C12-C24)

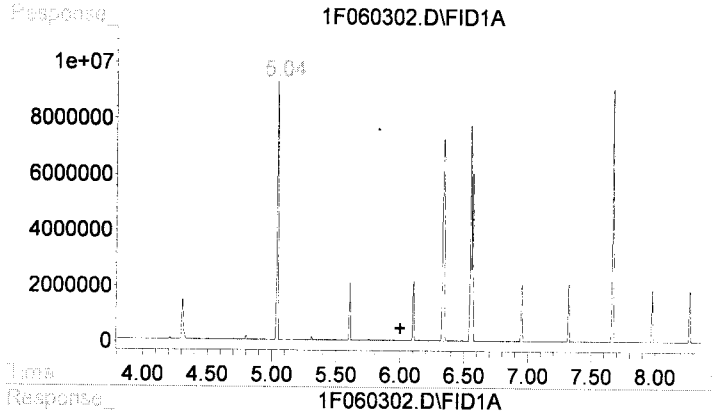
R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 360353289
Conc: 282.71 ug/mL m

KR 6/14/19



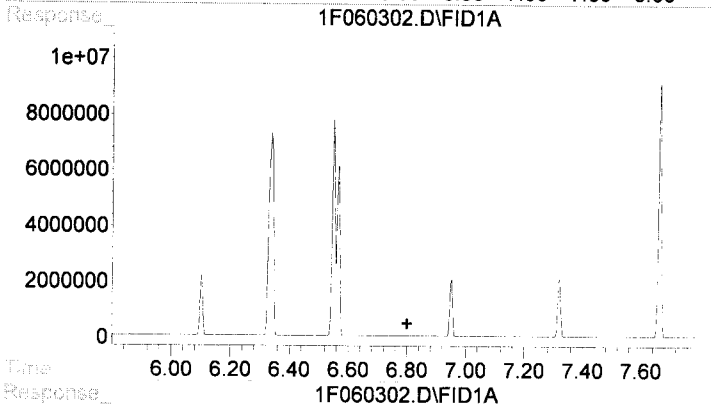
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 296344551
Conc: 316.15 ug/ml m



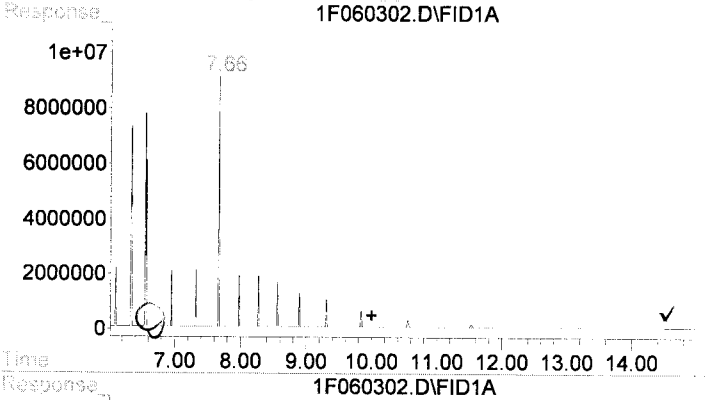
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 377057996
Conc: 325.60 ug/ml m



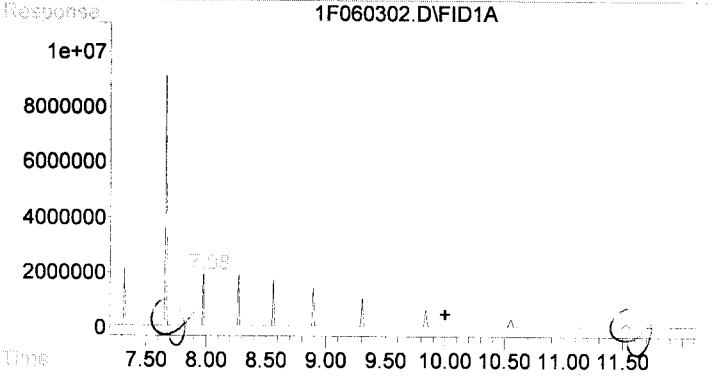
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.800 min
Response: 0
Conc: N.D.



#7 OIL

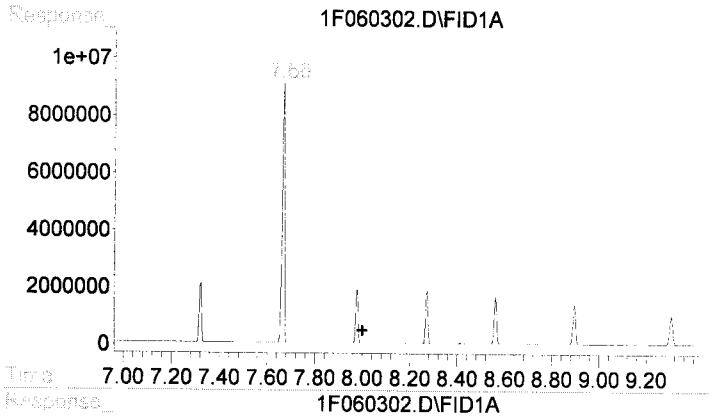
R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 268702060
Conc: 244.17 ug/mL m



#8 RRO (C24-C40)

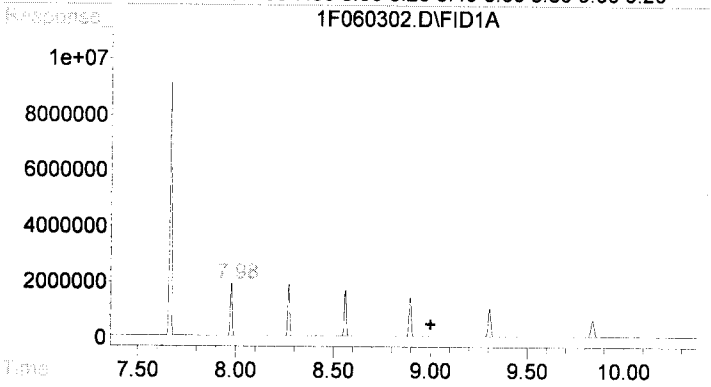
R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 78199570
Conc: 71.06 ug/mL m

AEH 6/4/19



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 114422031
Conc: 157.31 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 9.000 min
Delta R.T.: 0.000 min
Response: 68644310
Conc: 103.44 ug/mL m

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-06\9F03048\1F060303.D
Acq On : 3 Jun 2019 18:13
Sample : 9F03048-CCV1
Misc :
IntFile : SUR.E

Vial: 1
Operator: KEH
Inst : HP G1530A
Multiplr: 1.00

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	1000.000	966.684	3.3	99	0.00
2	H	Diesel	1000.000	966.684	3.3	99	0.00
3	H	DRO(C12-C24)	1000.000	774.606	22.5#	79	0.00
4	H	Ca Luft DRO (C12-C22)	1000.000	1004.894	-0.5	99	0.00
5	H	TPHd (C10-C25)	1000.000	993.708	0.6	99	0.00
6	S	o-Terphenyl	-1.000	52.414	0.0	0	0.00
7	H	OIL	-1.000	305.106	0.0	97	0.00
8	H	RRO (C24-C40)	-1.000	16.614	0.0	5	0.00
9	H	Ca Luft ORO (C23-C32)	-1.000	52.497	0.0	97	0.00
10	H	TPHmo (C25-C36)	-1.000	16.194	0.0	91	0.00

KEH 6/14/19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060303.D Vial: 1
Acq On : 3 Jun 2019 18:13 Operator: KEH
Sample : 9F03048-CCV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:54 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.80	72935467	52.414	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	1232184985	966.684	ug/ml
2)	H	Diesel	6.00	1232184985	966.684	ug/mL
3)	H	DRO(C12-C24)	6.00	987351879	774.606	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	941939798	1004.894	ug/ml
5)	H	TPHd (C10-C25)	6.00	1150765911	993.708	ug/ml
7)	H	OIL	10.00	335766868	305.106	ug/mL
8)	H	RRO (C24-C40)	10.00	18283329	16.614	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	38183504	52.497	ug/mL
10)	H	TPHmo (C25-C36)	9.00	10746492	16.194	ug/mL

KEH 6/4/19

(f)=RT Delta > 1/2 Window (m)=manual int.

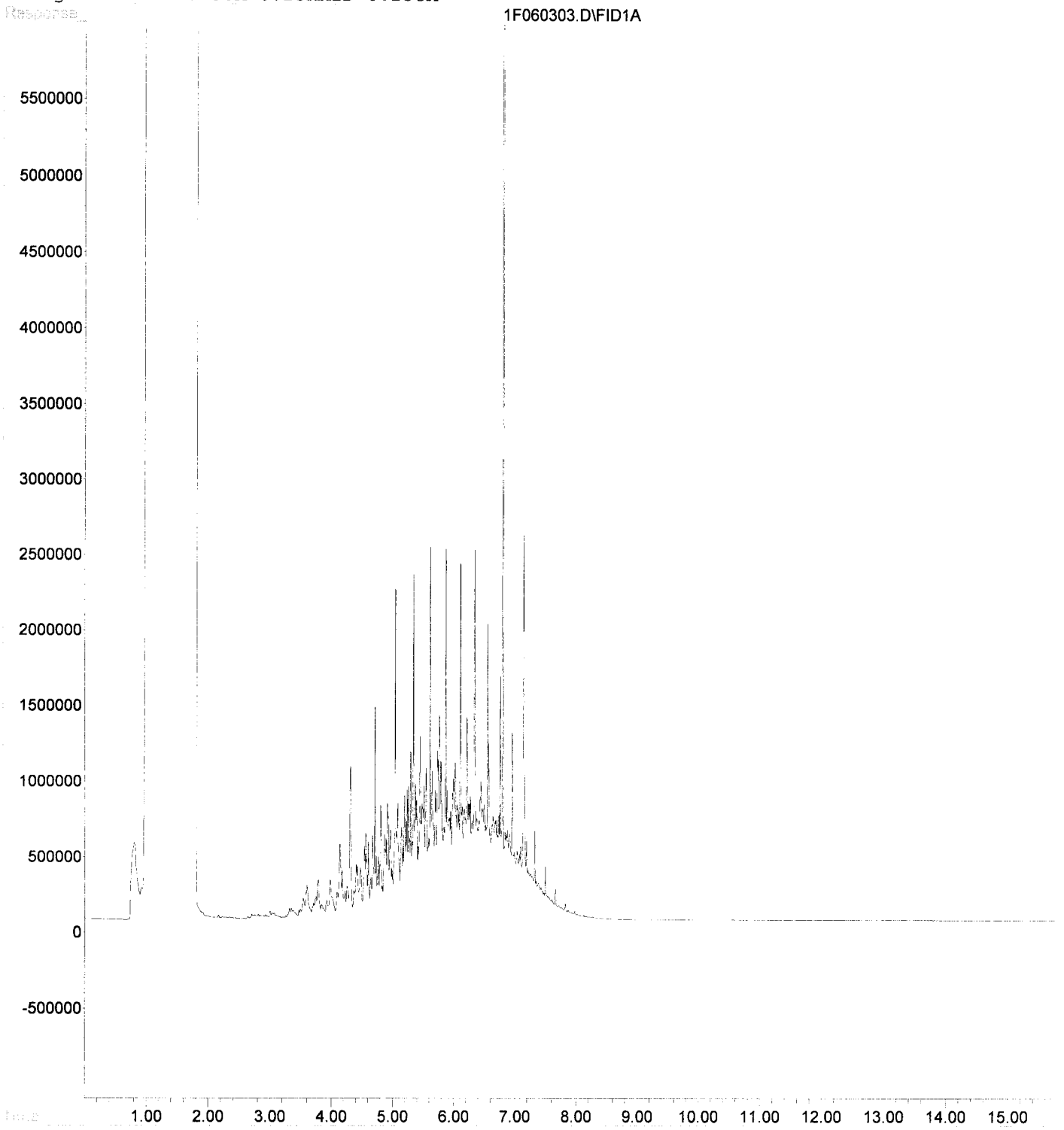
1F060303.D 1F90425D.M Tue Jun 04 07:54:55 2019 SV-GCMS3

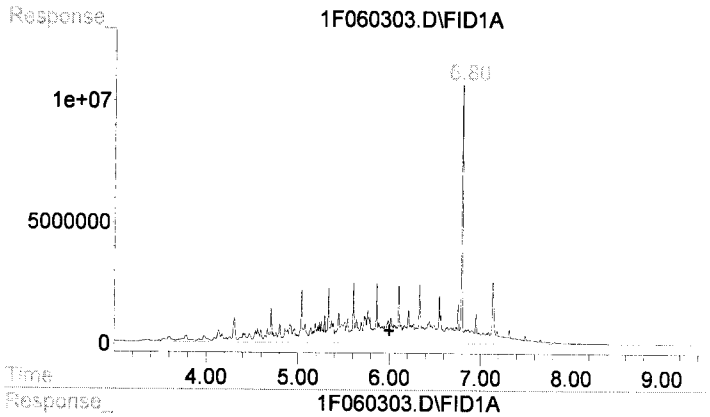
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060303.D Vial: 1
Acq On : 3 Jun 2019 18:13 Operator: KEH
Sample : 9F03048-CCV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:54 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

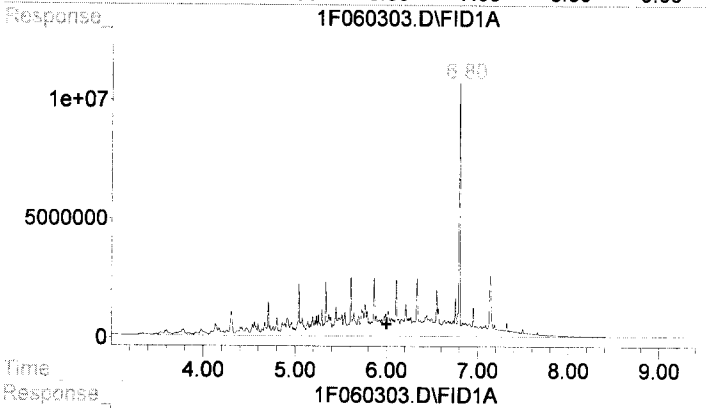
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





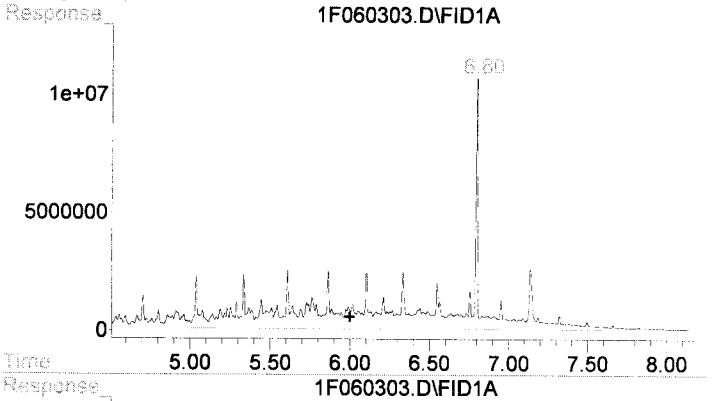
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1232184985
Conc: 966.68 ug/ml m



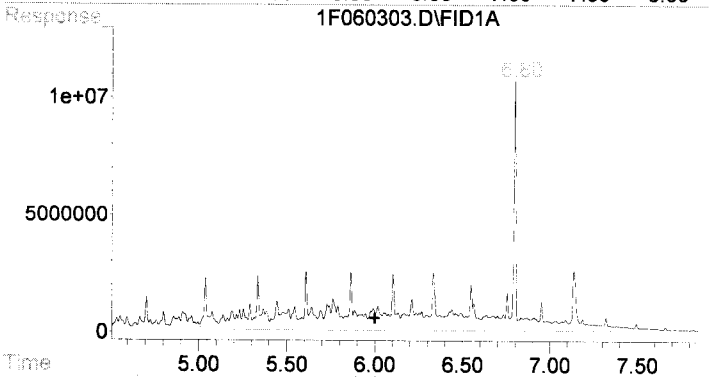
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1232184985
Conc: 966.68 ug/mL m



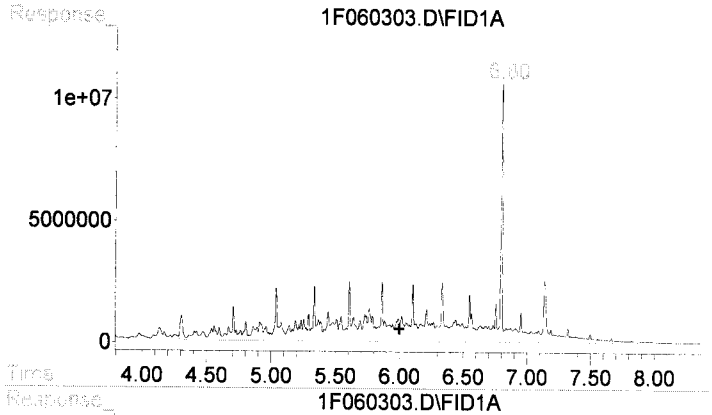
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 987351879
Conc: 774.61 ug/mL m



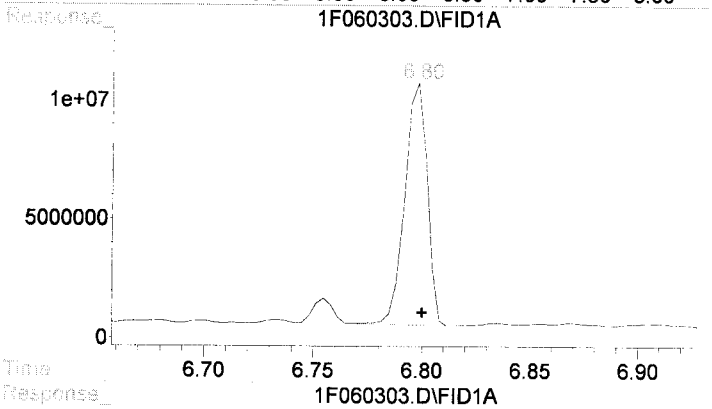
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 941939798
Conc: 1004.89 ug/ml m



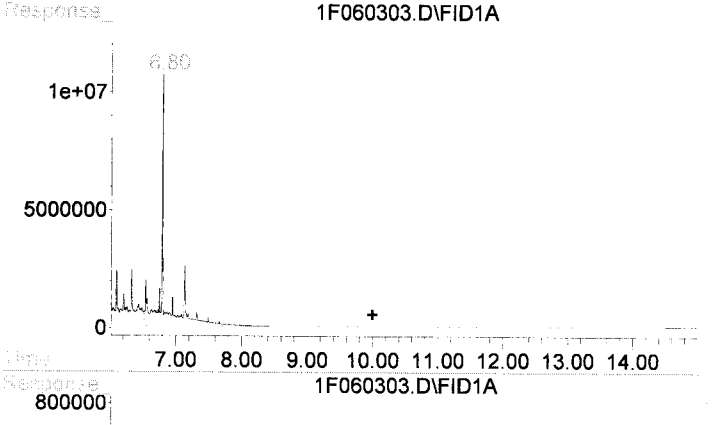
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1150765911
Conc: 993.71 ug/ml m



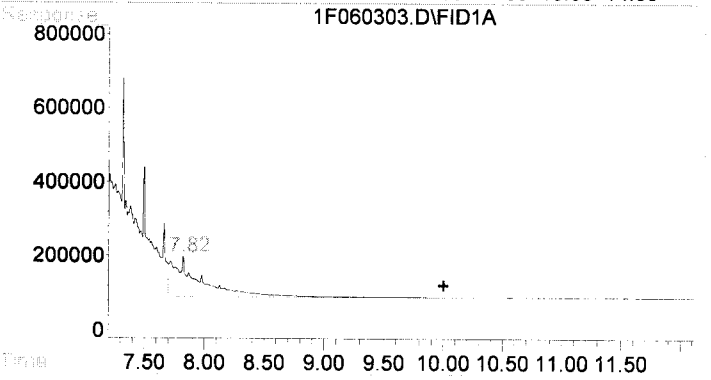
#6 o-Terphenyl

R.T.: 6.798 min
Delta R.T.: -0.002 min
Response: 72935467
Conc: 52.41 ug/mL



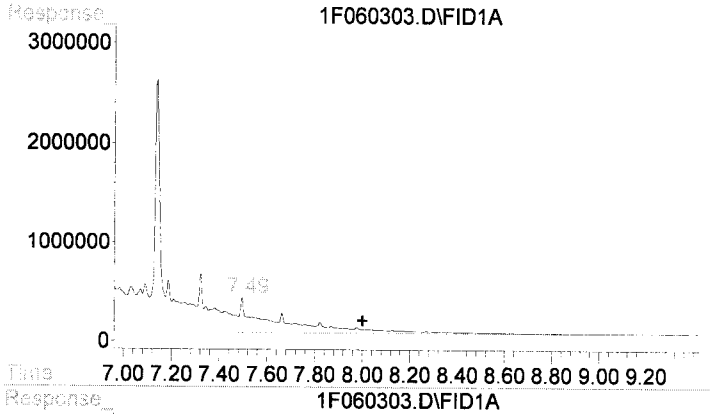
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 335766868
Conc: 305.11 ug/mL m



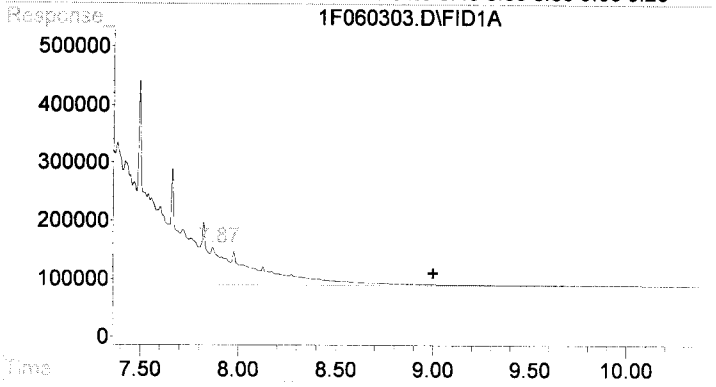
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 18283329
Conc: 16.61 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 38183504
Conc: 52.50 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 9.000 min
Delta R.T.: 0.000 min
Response: 10746492
Conc: 16.19 ug/mL m

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-06\9F03048\1F060304.D
Acq On : 3 Jun 2019 18:36
Sample : 9F03048-CCV2
Misc :
IntFile : SUR.E

Vial: 2
Operator: KEH
Inst : HP G1530A
Multiplr: 1.00

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	-1.000	334.559	0.0	99	0.00
2	H	Diesel	-1.000	334.559	0.0	99	0.00
3	H	DRO(C12-C24)	-1.000	80.447	0.0	24	0.00
4	H	Ca Luft DRO (C12-C22)	-1.000	36.972	0.0	99	0.00
5	H	TPHd (C10-C25)	-1.000	131.758	0.0	101	0.00
6	S	o-Terphenyl	-1.000	50.289	0.0	0	0.00
7	H	OIL	500.000	491.450	1.7	98	0.00
8	H	RRO (C24-C40)	500.000	385.277	22.9#	77	0.00
9	H	Ca Luft ORO (C23-C32)	500.000	503.195	-0.6	99	0.00
10	H	TPHmo (C25-C36)	500.000	497.678	0.5	98	0.00

KEH 6/4/19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060304.D Vial: 2
Acq On : 3 Jun 2019 18:36 Operator: KEH
Sample : 9F03048-CCV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:54 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	69978889	50.289 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	426445826	334.559 ug/ml
2)	H	Diesel	6.00	426445826	334.559 ug/mL
3)	H	DRO(C12-C24)	6.00	102542034	80.447 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	34656111	36.972 ug/ml
5)	H	TPHd (C10-C25)	6.00	152582558	131.758 ug/ml
7)	H	OIL	10.00	540837276	491.450 ug/mL
8)	H	RRO (C24-C40)	10.00	423995074	385.277 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	365999593	503.195 ug/mL
10)	H	TPHmo (C25-C36)	9.00	330268443	497.678 ug/mL

KEH 6/4/19

(f)=RT Delta > 1/2 Window (m)=manual int.

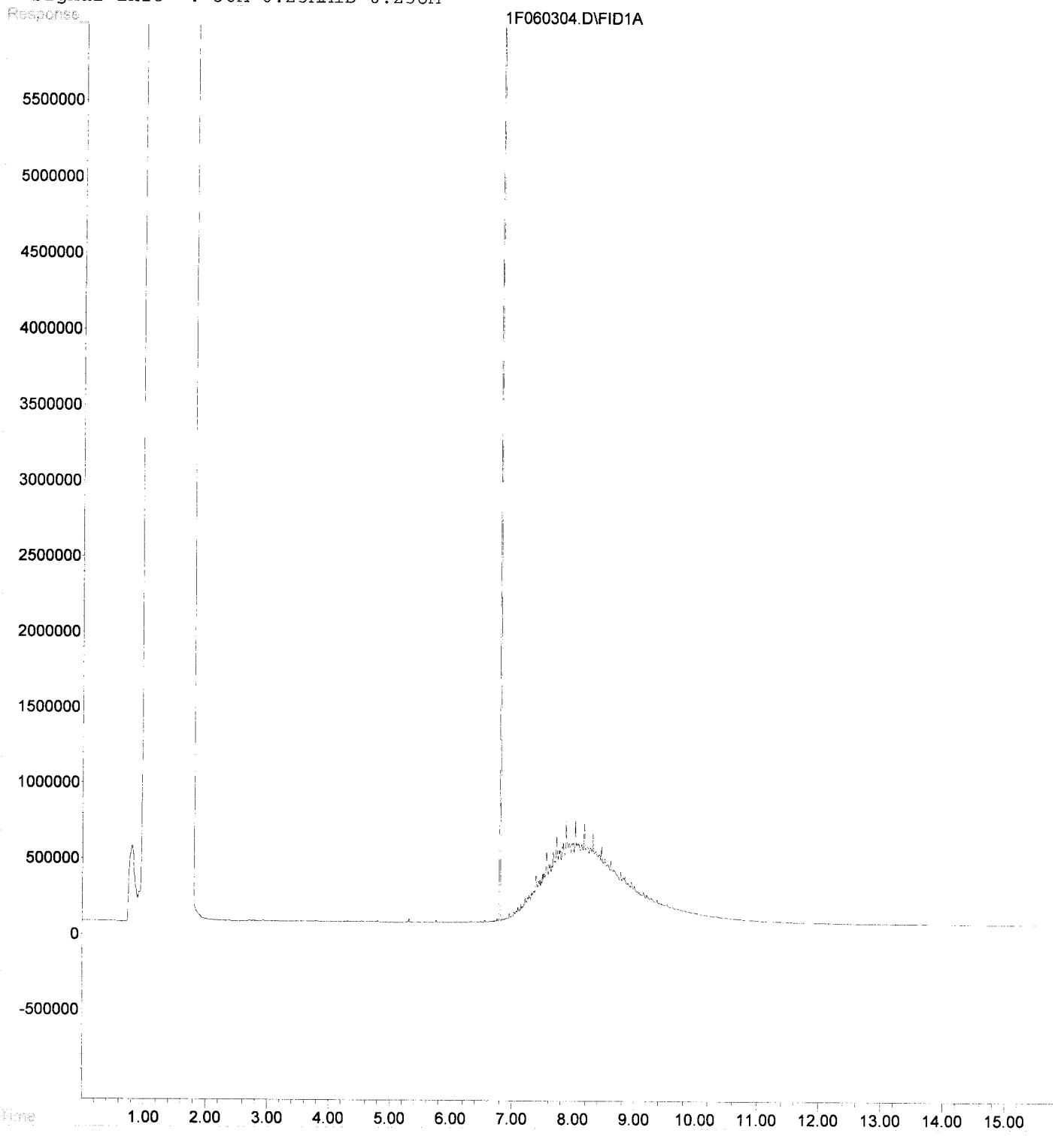
1F060304.D 1F90425D.M Tue Jun 04 07:54:58 2019 SV-GCMS3

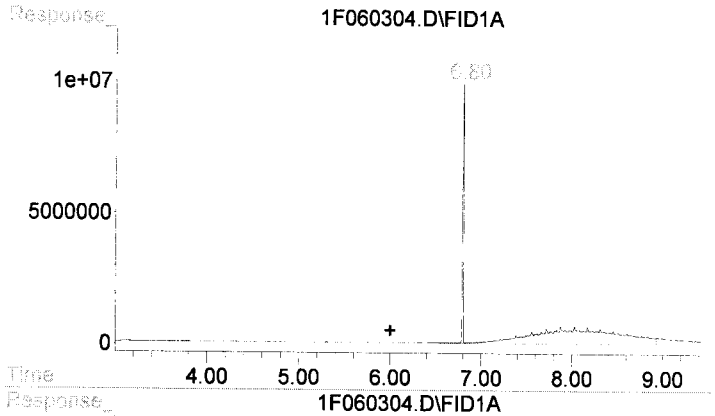
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060304.D Vial: 2
Acq On : 3 Jun 2019 18:36 Operator: KEH
Sample : 9F03048-CCV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:54 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

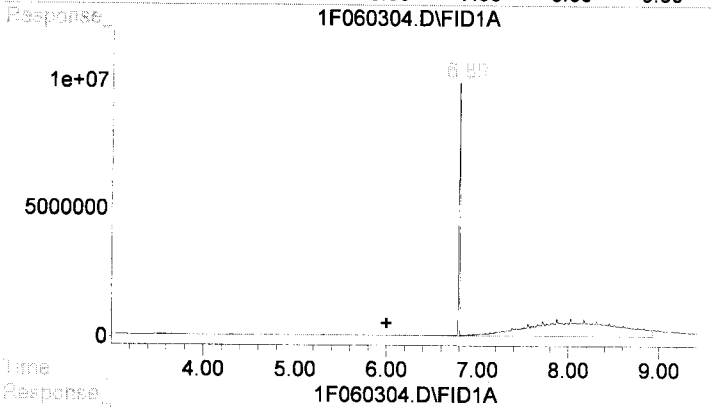
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





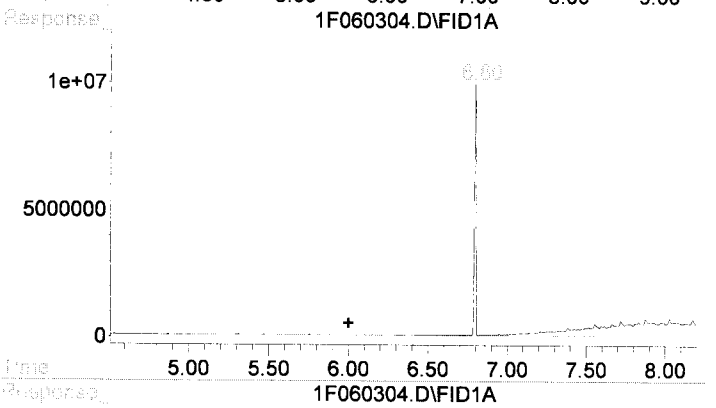
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 426445826
Conc: 334.56 ug/ml m



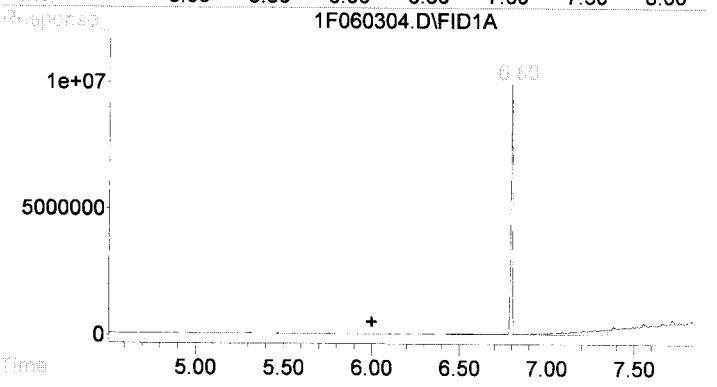
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 426445826
Conc: 334.56 ug/mL m



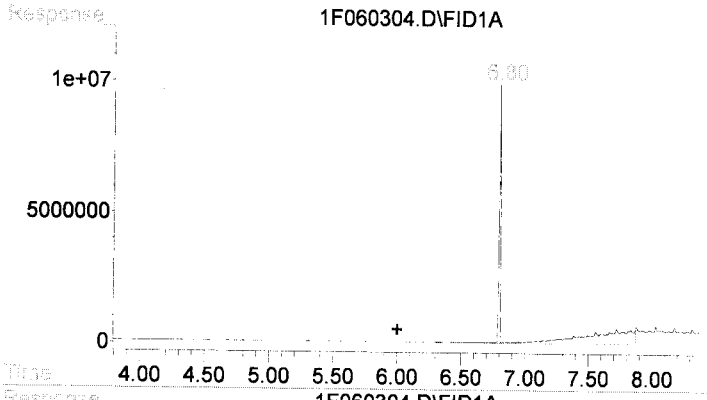
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 102542034
Conc: 80.45 ug/mL m



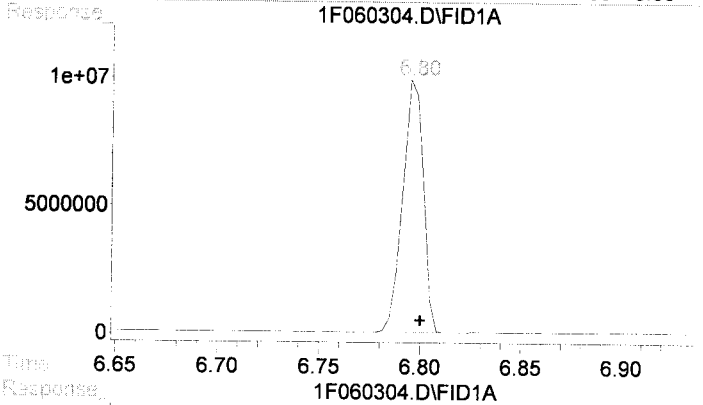
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 34656111
Conc: 36.97 ug/ml m



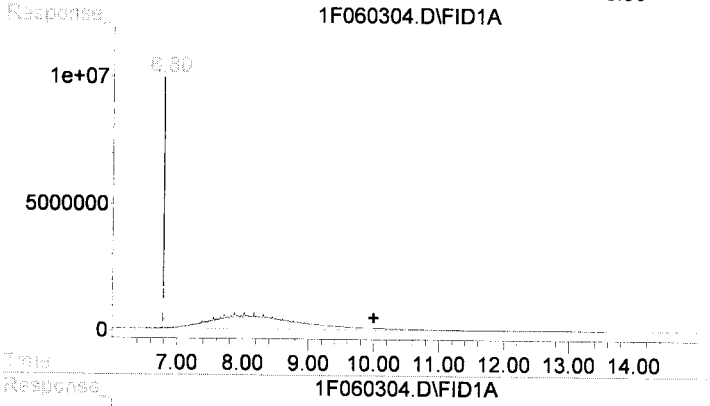
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 152582558
Conc: 131.76 ug/ml m



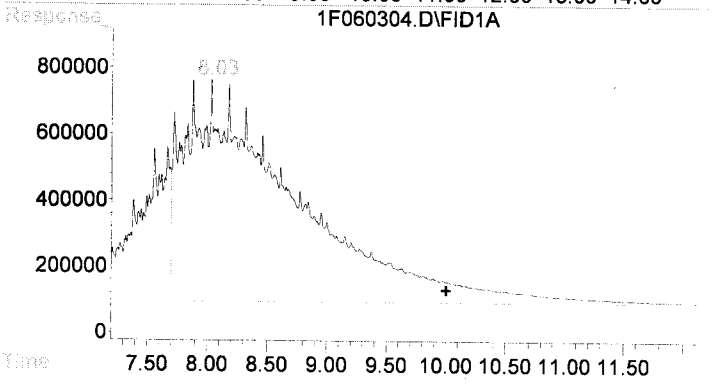
#6 o-Terphenyl

R.T.: 6.797 min
Delta R.T.: -0.003 min
Response: 69978889
Conc: 50.29 ug/mL



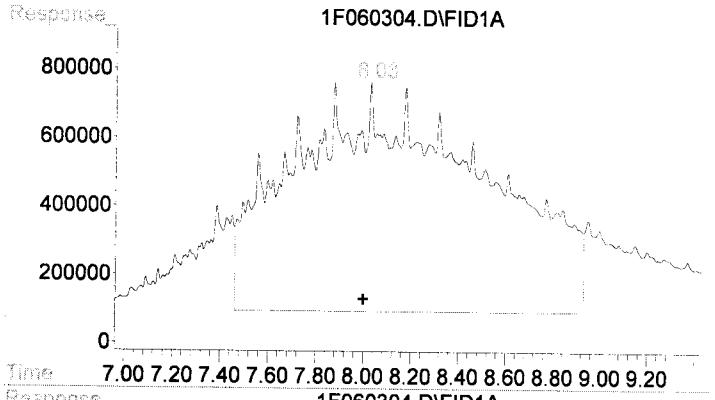
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 540837276
Conc: 491.45 ug/mL m



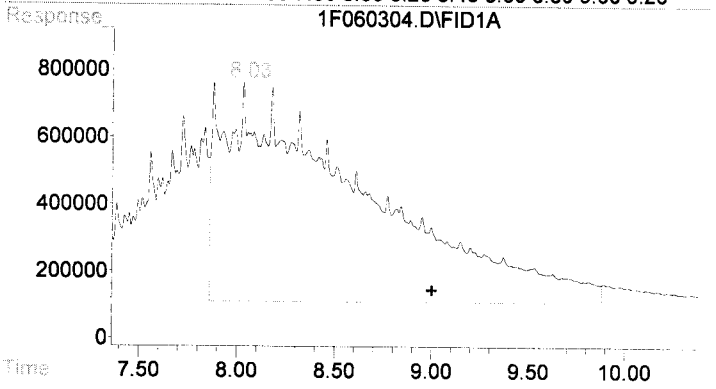
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 423995074
Conc: 385.28 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 365999593
Conc: 503.20 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 9.000 min
Delta R.T.: 0.000 min
Response: 330268443
Conc: 497.68 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060305.D Vial: 99
Acq On : 3 Jun 2019 21:56 Operator: KEH
Sample : 9F03048-CCB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	21710569	17.033	ug/ml
2)	H	Diesel	6.00	21710569	17.033	ug/mL
3)	H	DRO(C12-C24)	6.00	6072427	4.764	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	5957249	6.355	ug/ml
5)	H	TPHd (C10-C25)	6.00	14886590	12.855	ug/ml
7)	H	OIL	10.00	4885367	4.439	ug/mL
8)	H	RRO (C24-C40)	10.00	3071811	2.791	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1201655	1.652	ug/mL
10)	H	TPHmo (C25-C36)	9.00	1926759	2.903	ug/mL

< 1/2 MRL

KEH 6/4/19

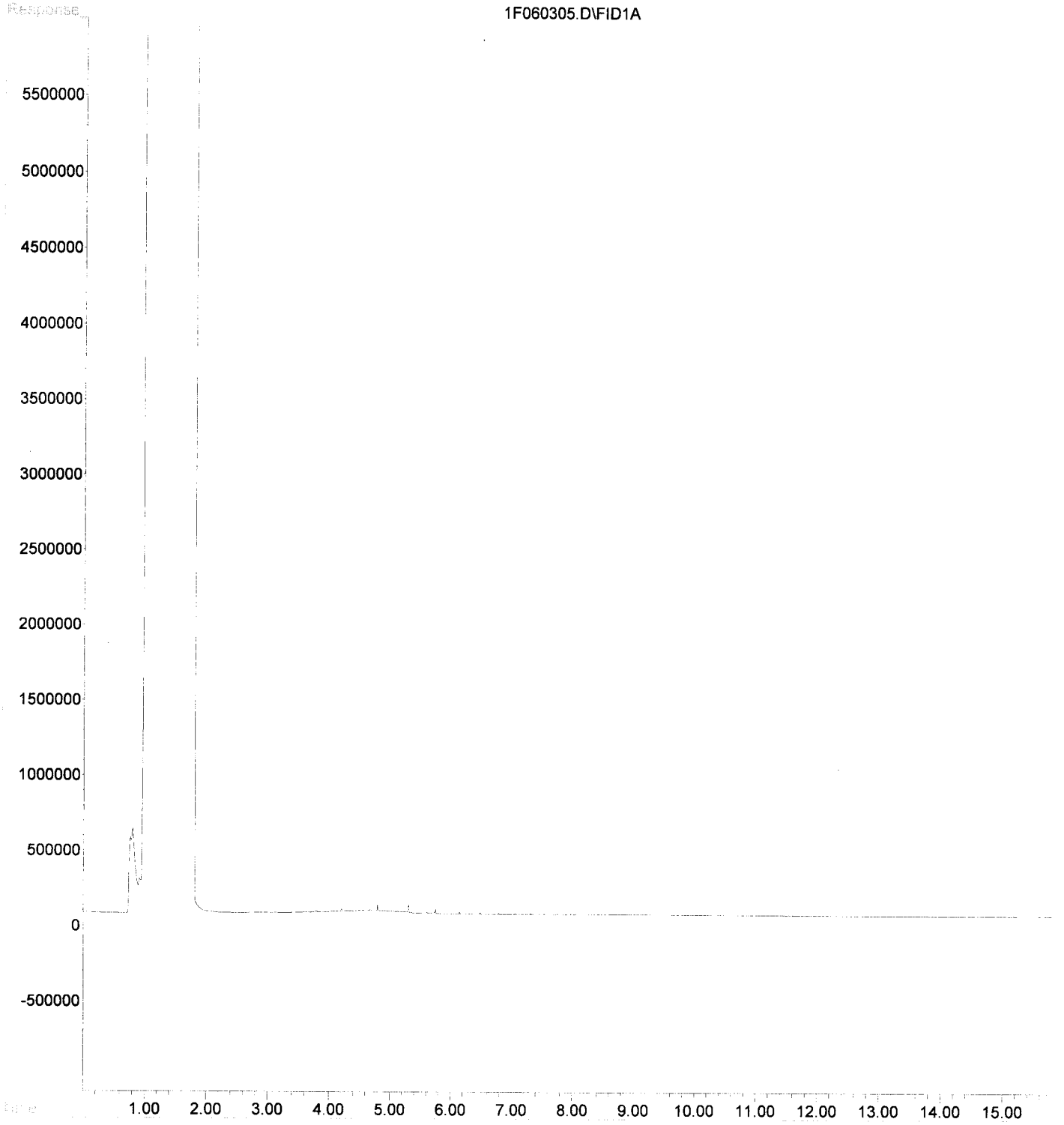
(f)=RT Delta > 1/2 Window (m)=manual int.

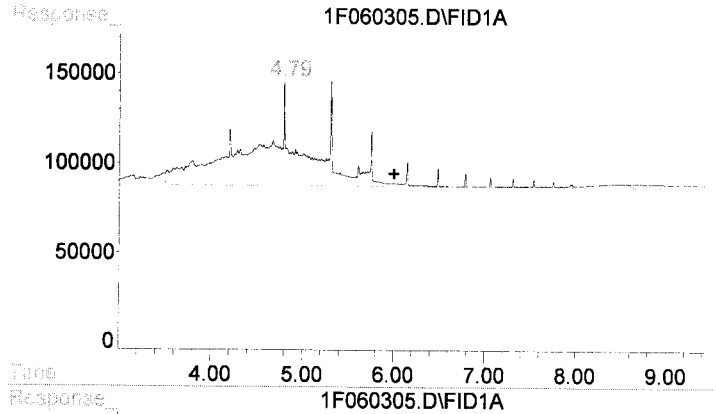
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060305.D Vial: 99
Acq On : 3 Jun 2019 21:56 Operator: KEH
Sample : 9F03048-CCB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

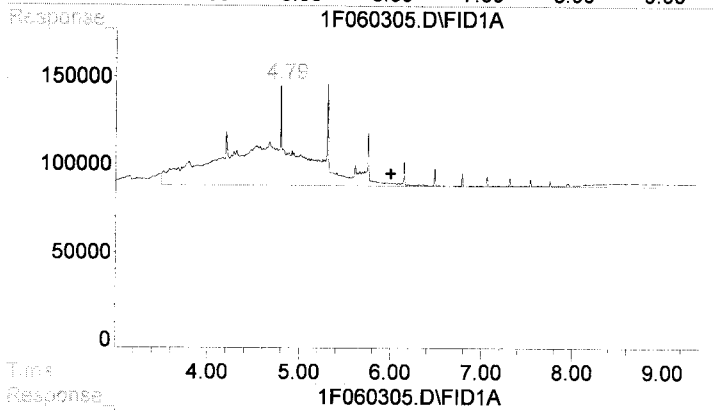
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





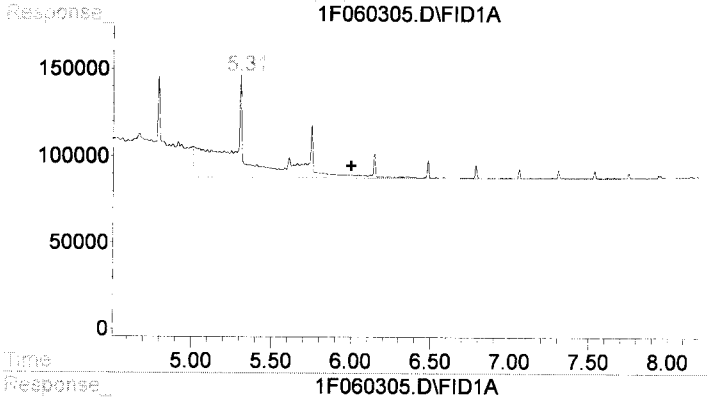
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 21710569
Conc: 17.03 ug/ml m



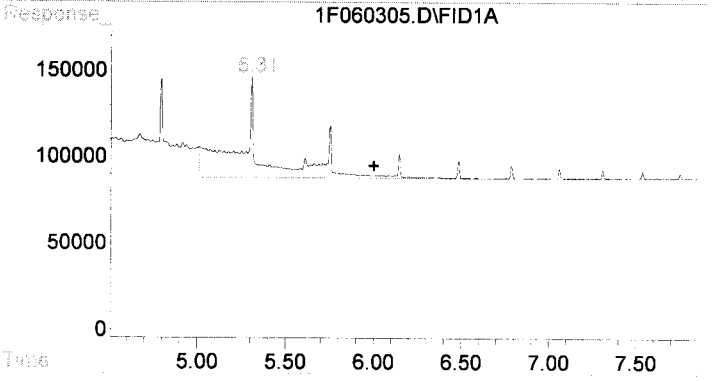
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 21710569
Conc: 17.03 ug/mL m



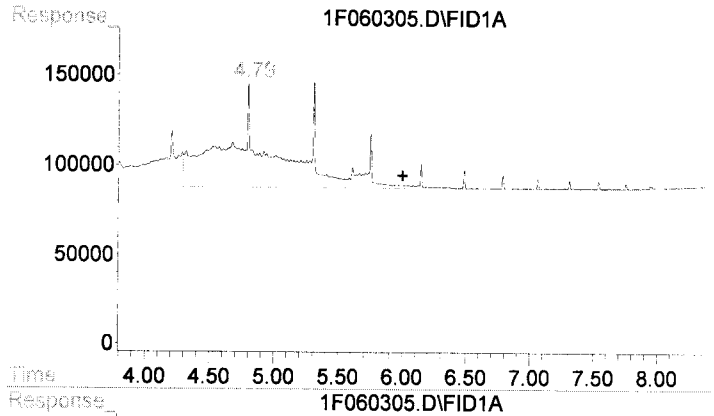
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 6072427
Conc: 4.76 ug/mL m



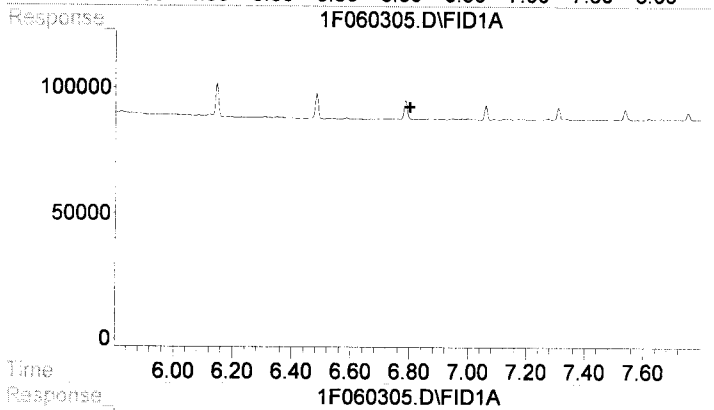
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 5957249
Conc: 6.36 ug/ml m



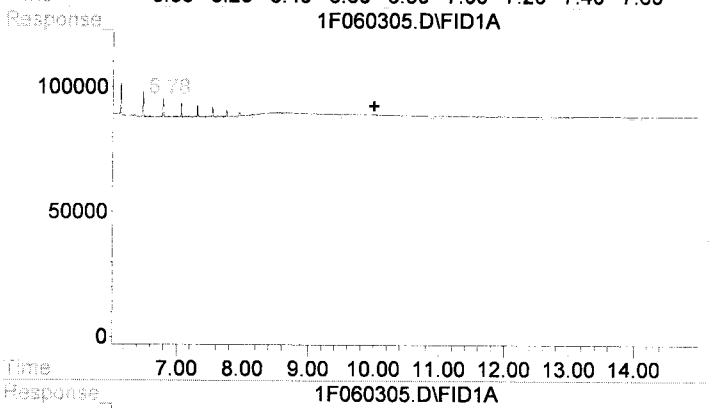
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 14886590
Conc: 12.85 ug/ml m



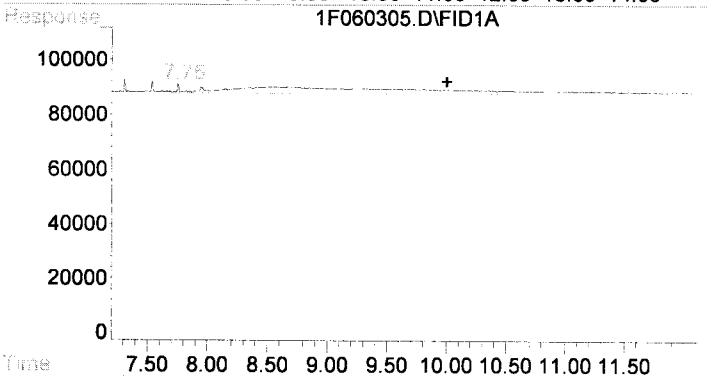
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.800 min
Response: 0
Conc: N.D.



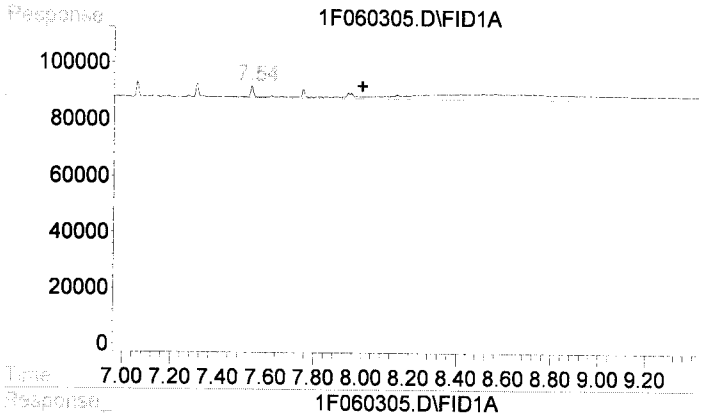
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 4885367
Conc: 4.44 ug/mL m



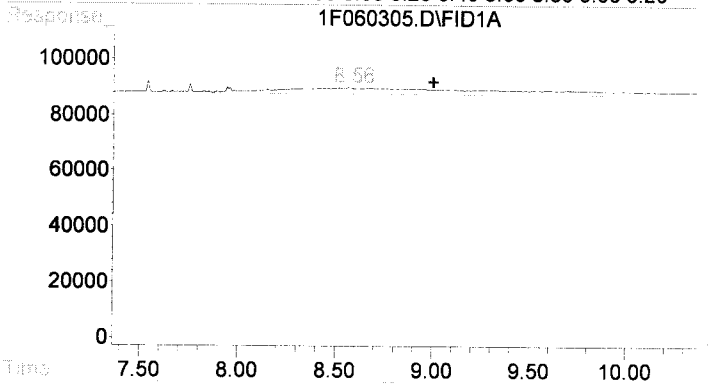
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 3071811
Conc: 2.79 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	1201655
Conc:	1.65 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	1926759
Conc:	2.90 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060306.D Vial: 3
Acq On : 3 Jun 2019 22:18 Operator: KEH
Sample : 9060520-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	68806411	49.447 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	9813081	7.699 ug/ml
2)	H	Diesel	6.00	9813081	7.699 ug/mL
3)	H	DRO(C12-C24)	6.00	3538051	2.776 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	3113539	3.322 ug/ml
5)	H	TPHd (C10-C25)	6.00	5618480	4.852 ug/ml
7)	H	OIL	10.00	11110552	10.096 ug/mL
8)	H	RRO (C24-C40)	10.00	5370306	4.880 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1536902	2.113 ug/mL
10)	H	TPHmo (C25-C36)	9.00	2531486	3.815 ug/mL

< 1/2 MRL

KEH 6/4/19

✓

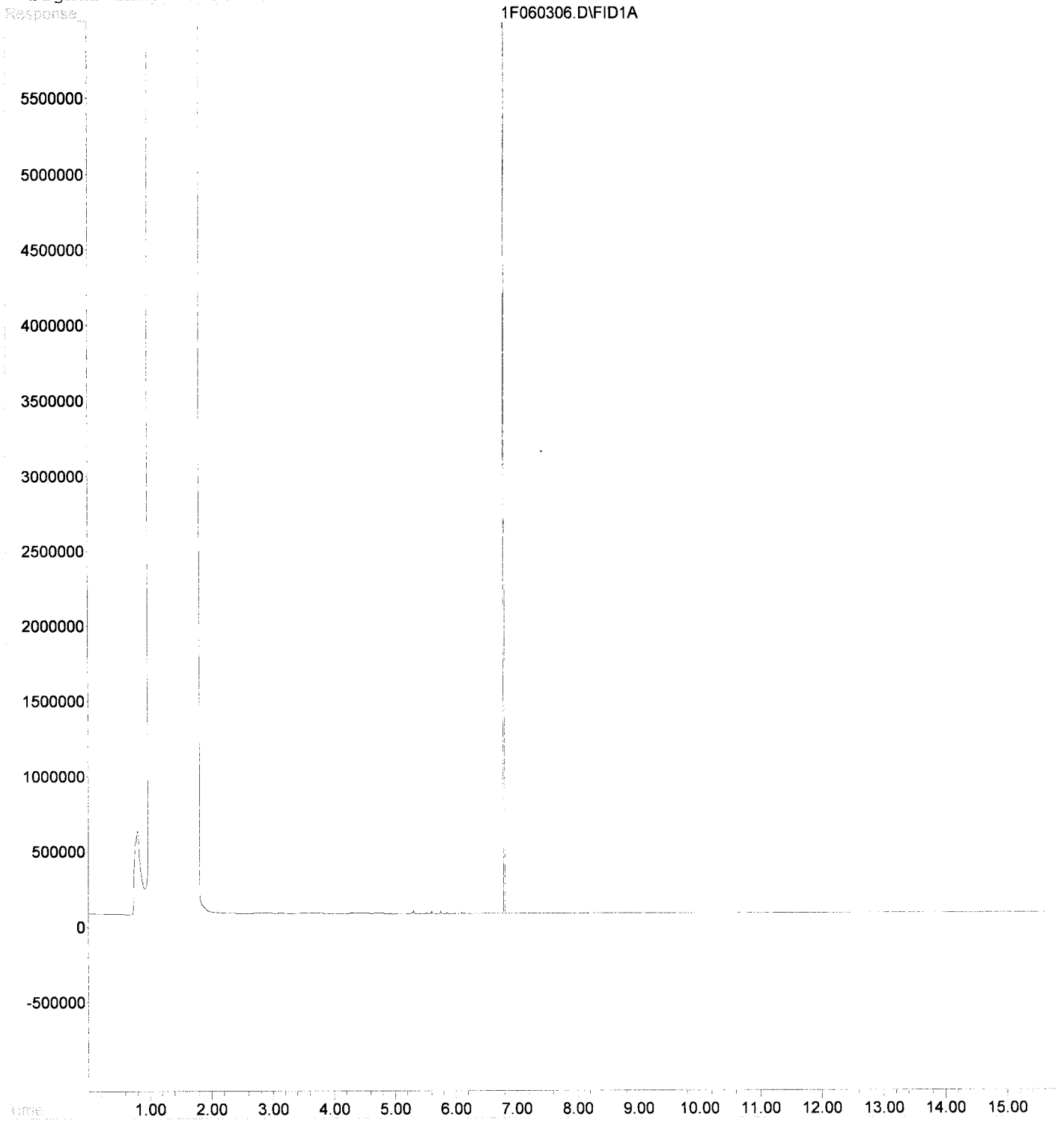
(f)=RT Delta > 1/2 Window (m)=manual int.
1F060306.D 1F90425D.M Tue Jun 04 07:55:03 2019 SV-GCMS3 Page 1

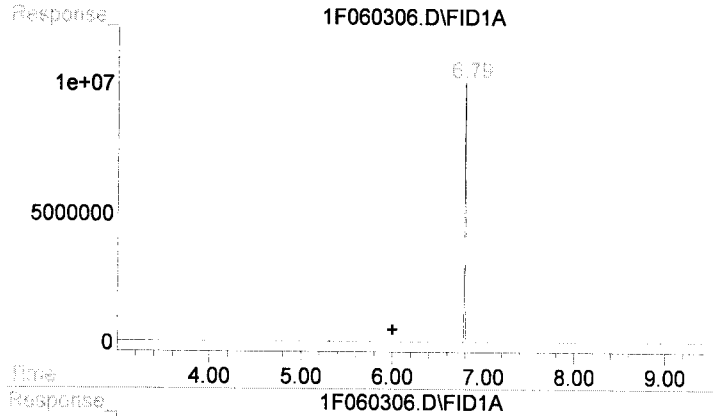
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060306.D Vial: 3
Acq On : 3 Jun 2019 22:18 Operator: KEH
Sample : 9060520-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

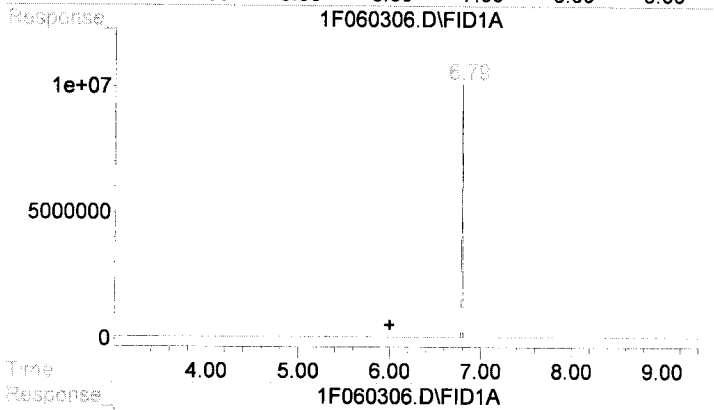
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





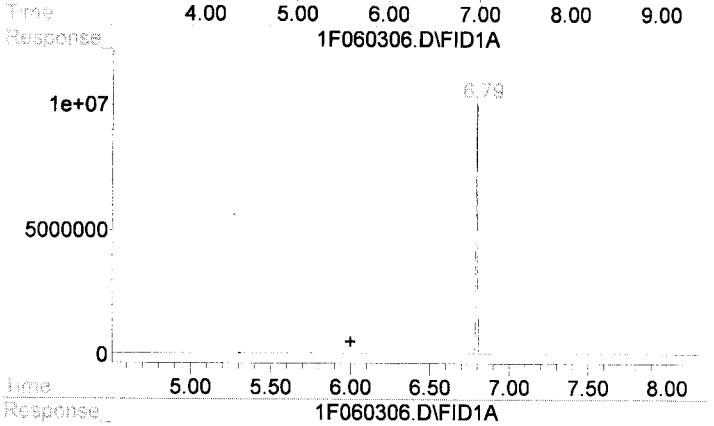
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9813081
Conc: 7.70 ug/ml m



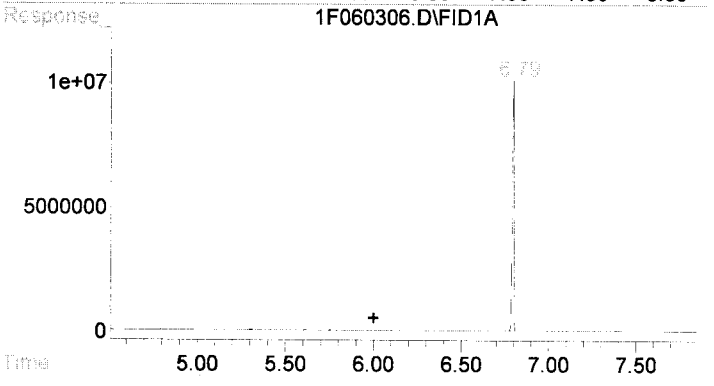
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9813081
Conc: 7.70 ug/mL m



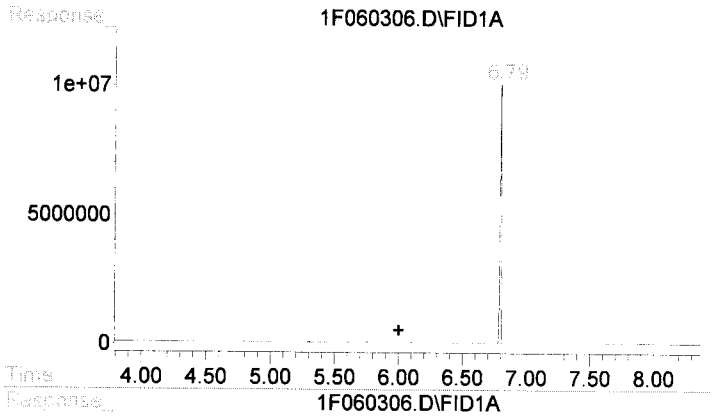
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3538051
Conc: 2.78 ug/mL m



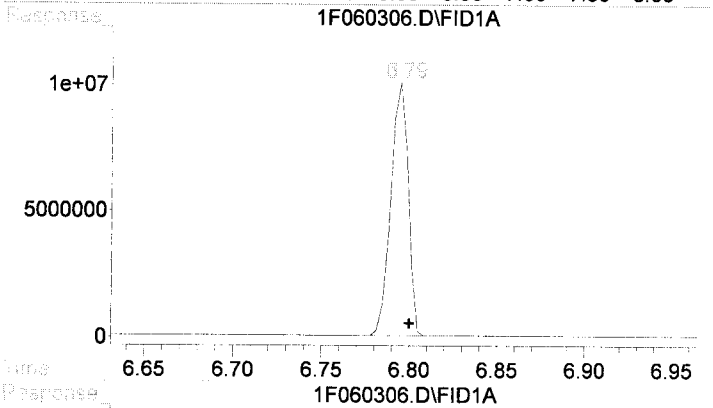
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3113539
Conc: 3.32 ug/ml m



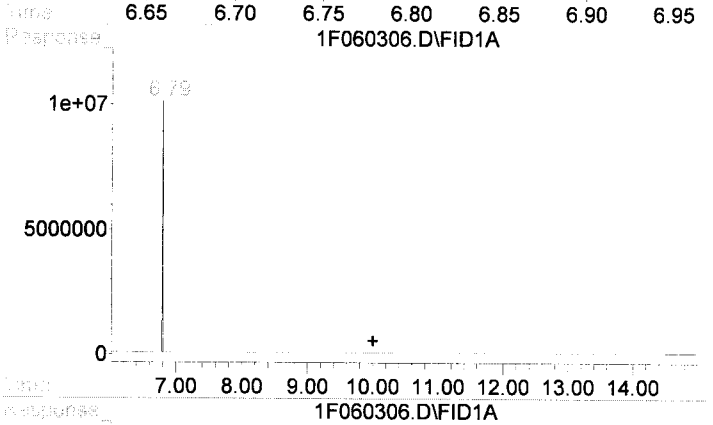
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 5618480
Conc: 4.85 ug/ml m



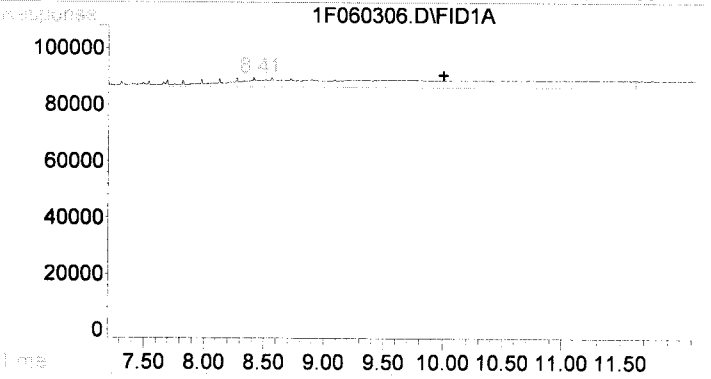
#6 o-Terphenyl

R.T.: 6.795 min
Delta R.T.: -0.005 min
Response: 68806411
Conc: 49.45 ug/mL



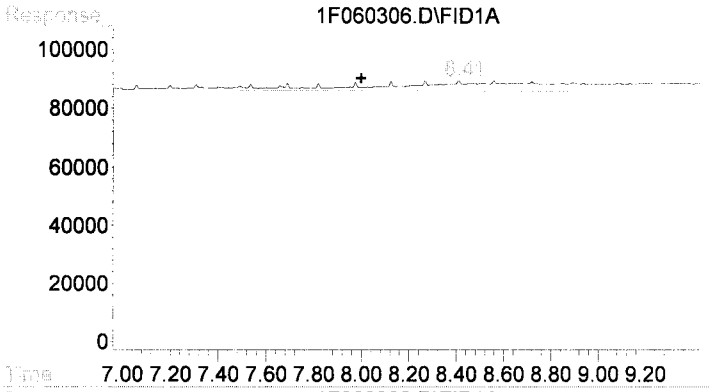
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 11110552
Conc: 10.10 ug/mL m



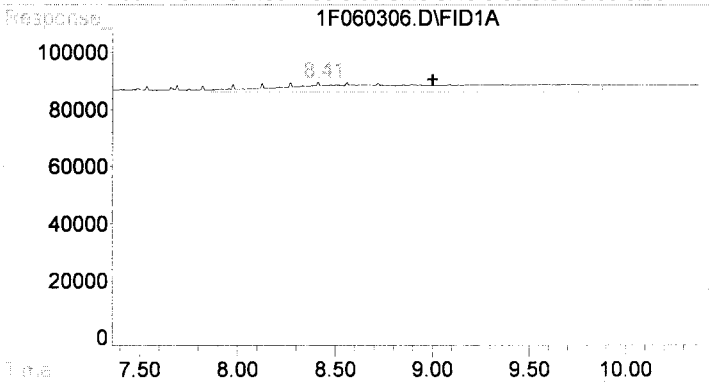
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 5370306
Conc: 4.88 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	1536902
Conc:	2.11 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2531486
Conc:	3.81 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060307.D Vial: 4
Acq On : 3 Jun 2019 22:41 Operator: KEH
Sample : 9060520-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
6)	S	o-Terphenyl	6.80	74424485	53.484	ug/mL
Target Compounds						
1)	H	Mineral Oil	6.00	227323165	178.341	ug/ml
2)	H	Diesel	6.00	227323165	178.341	ug/mL
3)	H	DRO(C12-C24)	6.00	191897763	150.549	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	180830905	192.917	ug/ml
5)	H	TPHd (C10-C25)	6.00	215356069	185.964	ug/ml
7)	H	OIL	10.00	73747594	67.013	ug/mL
8)	H	RRO (C24-C40)	10.00	4638361	4.215	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	9013205	12.392	ug/mL
10)	H	TPHmo (C25-C36)	9.00	2738155	4.126	ug/mL

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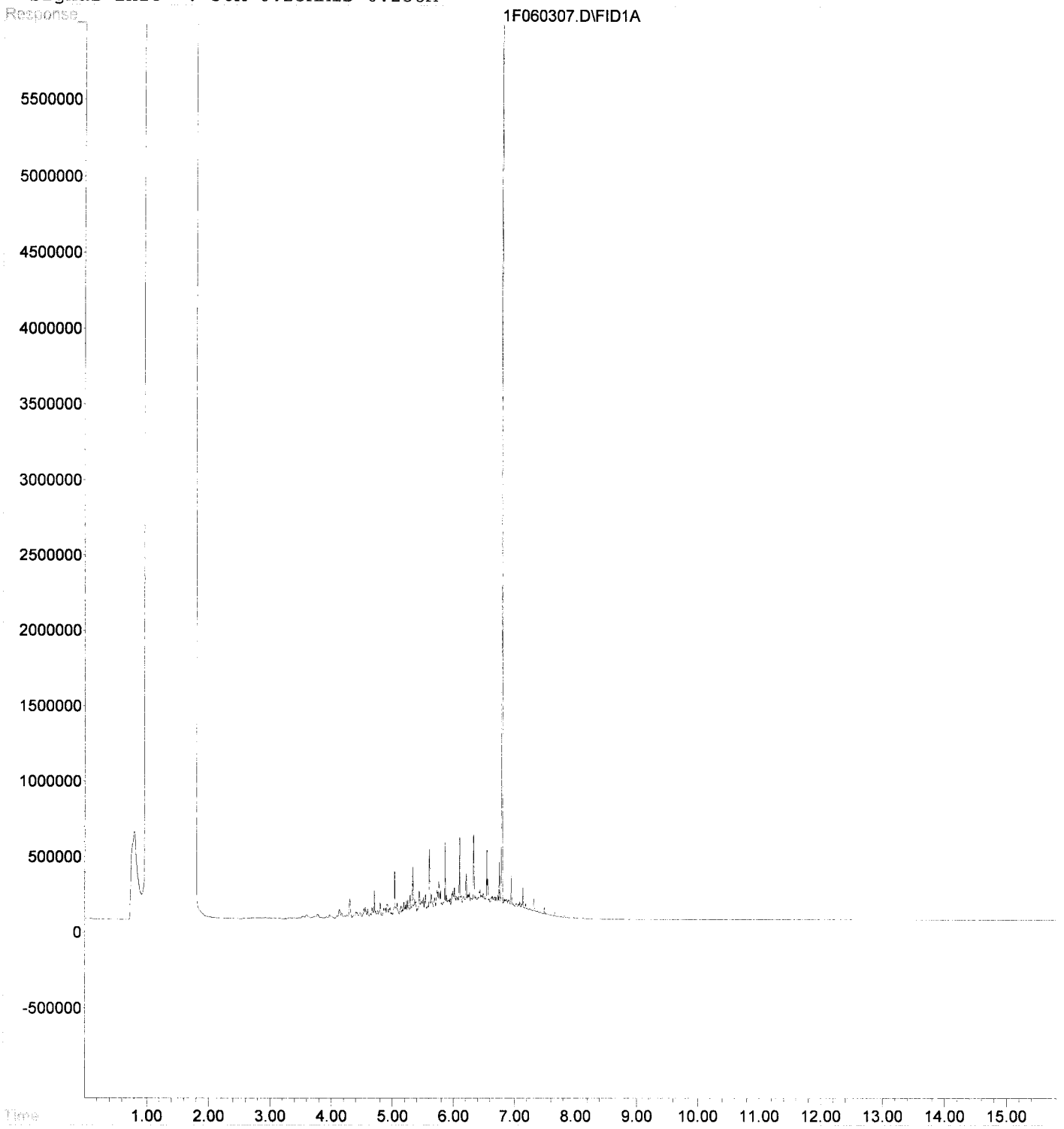
(f)=RT Delta > 1/2 Window (m)=manual int.
1F060307.D 1F90425D.M Tue Jun 04 07:55:06 2019 SV-GCMS3

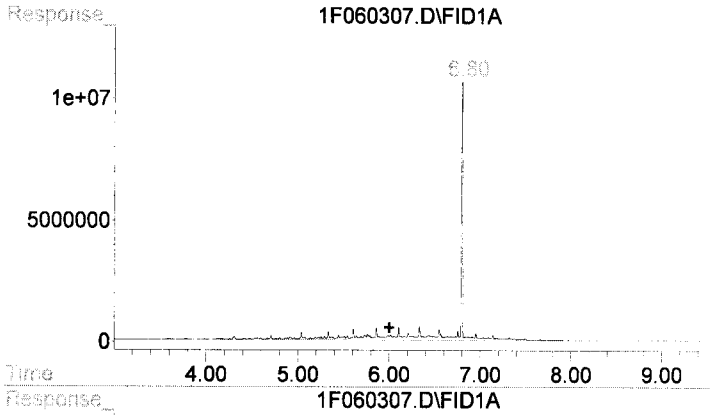
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060307.D Vial: 4
Acq On : 3 Jun 2019 22:41 Operator: KEH
Sample : 9060520-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

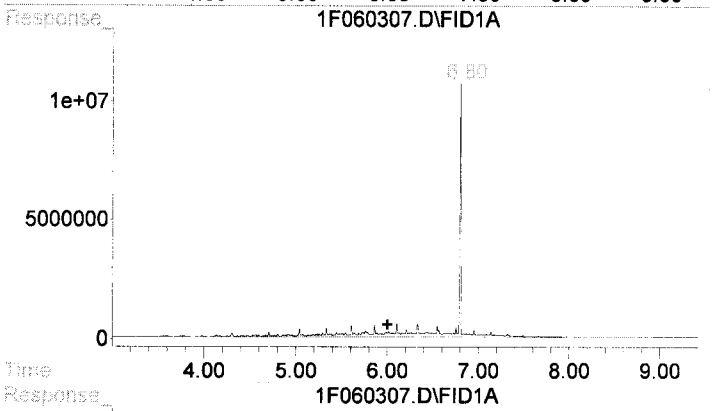
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





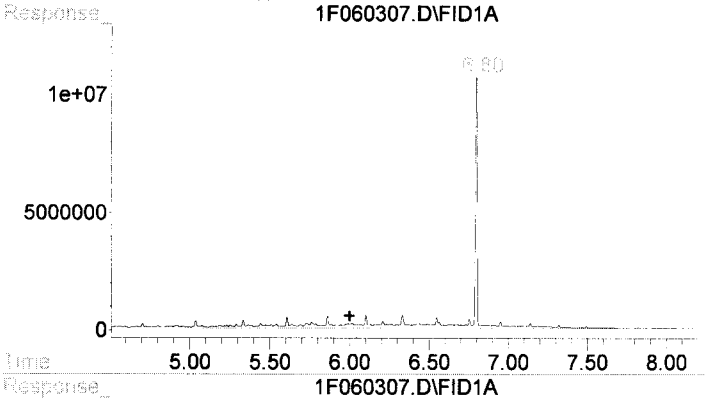
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 227323165
Conc: 178.34 ug/ml m



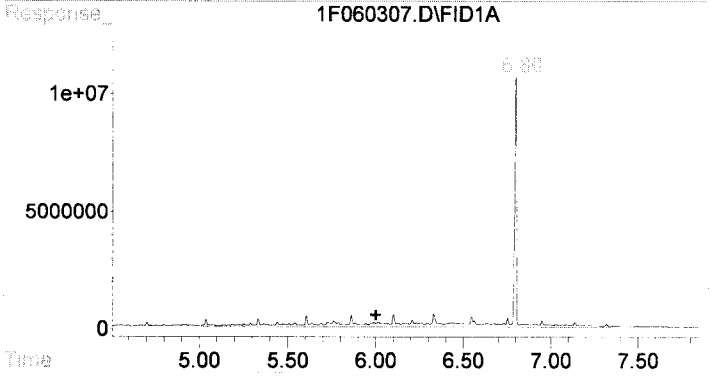
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 227323165
Conc: 178.34 ug/mL m



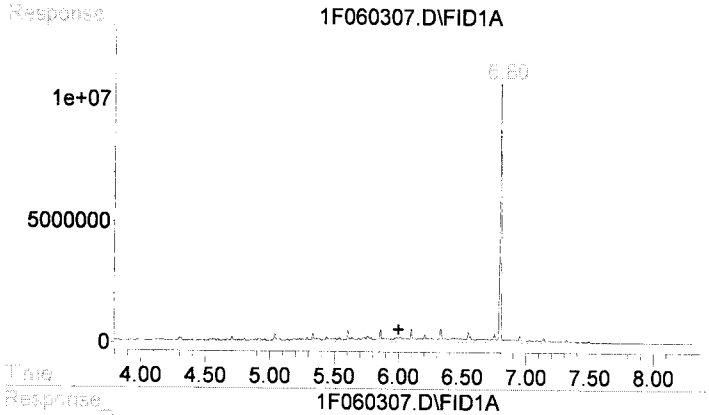
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 191897763
Conc: 150.55 ug/mL m



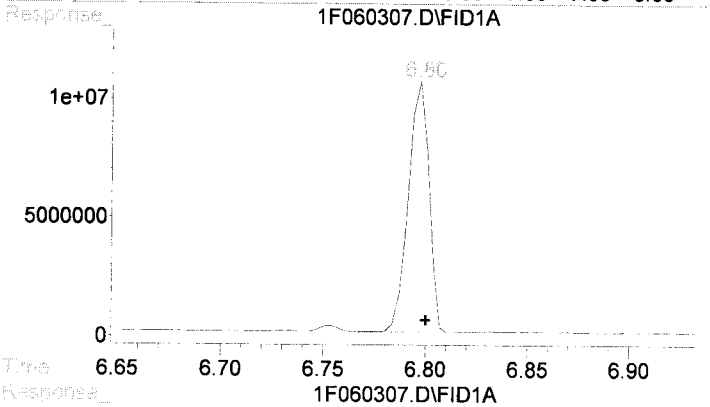
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 180830905
Conc: 192.92 ug/ml m



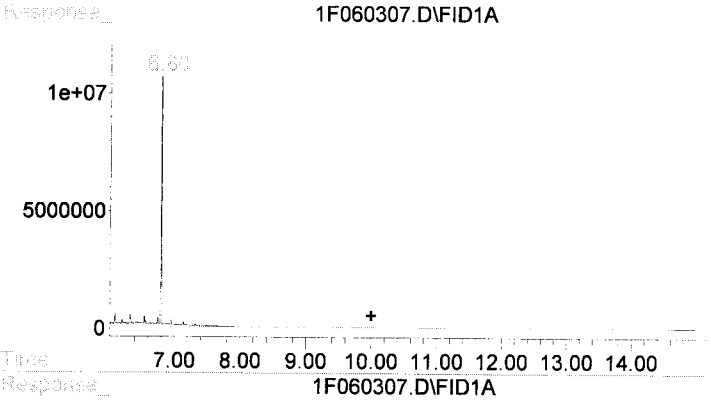
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 215356069
Conc: 185.96 ug/ml m



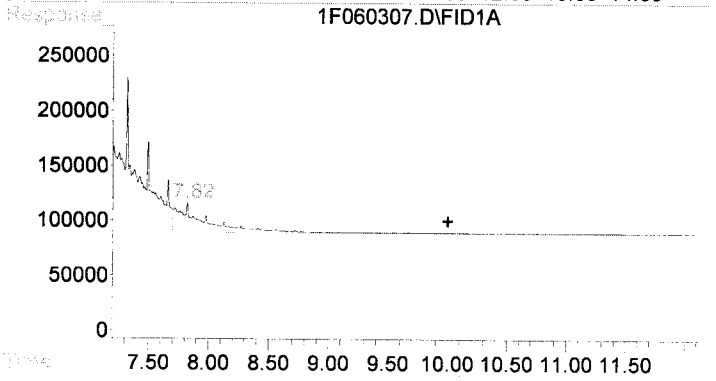
#6 o-Terphenyl

R.T.: 6.798 min
Delta R.T.: -0.002 min
Response: 74424485
Conc: 53.48 ug/mL



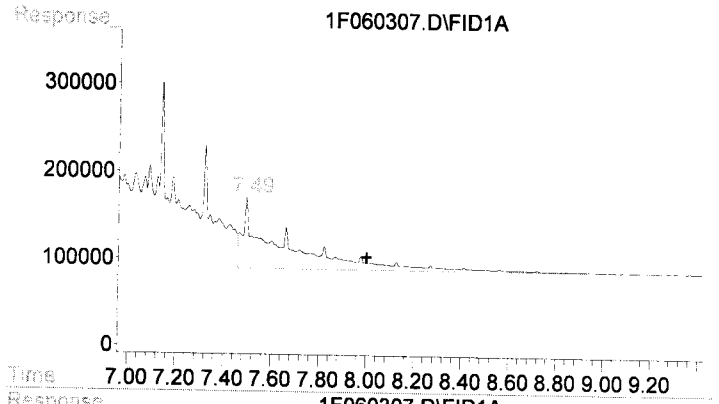
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 73747594
Conc: 67.01 ug/mL m



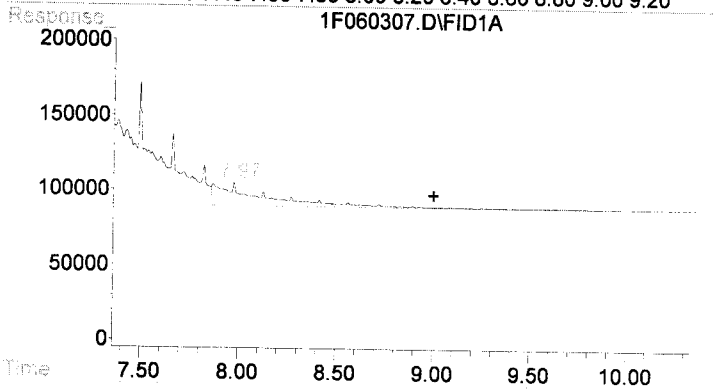
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 4638361
Conc: 4.21 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	9013205
Conc:	12.39 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2738155
Conc:	4.13 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060308.D Vial: 5
Acq On : 3 Jun 2019 23:04 Operator: KEH
Sample : 9060520-BS2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	71937997	51.697 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	249264220	195.555 ug/ml
2)	H	Diesel	6.00	249264220	195.555 ug/mL
3)	H	DRO(C12-C24)	6.00	203699649	159.808 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	193764782	206.715 ug/ml
5)	H	TPHd (C10-C25)	6.00	233669086	201.778 ug/ml
7)	H	OIL	10.00	71661650	65.118 ug/mL
8)	H	RRO (C24-C40)	10.00	4912670	4.464 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	8587919	11.807 ug/mL
10)	H	TPHmo (C25-C36)	9.00	2851452	4.297 ug/mL

KEH 6/4/19

✓

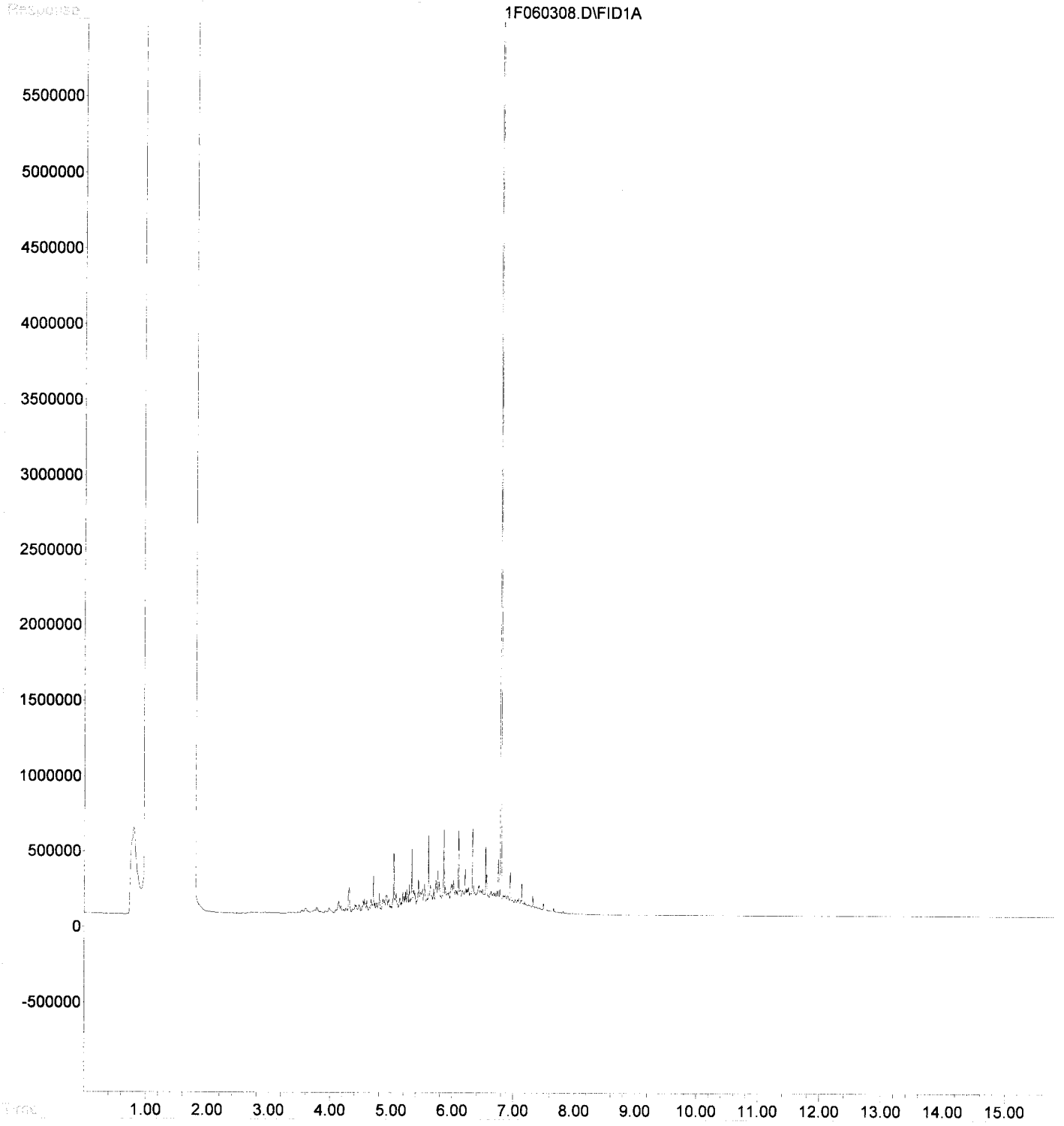
(f)=RT Delta > 1/2 Window (m)=manual int.

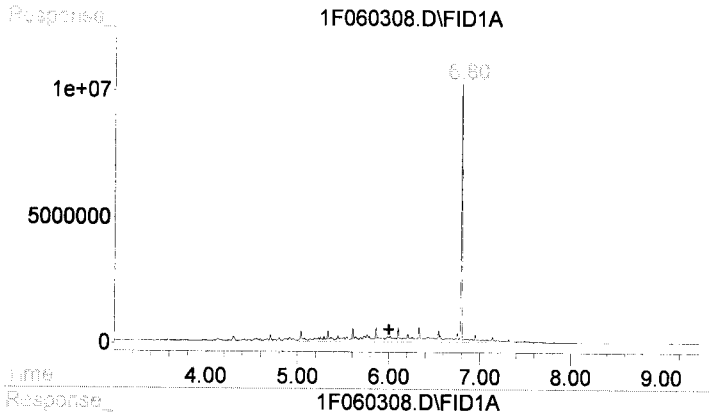
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060308.D Vial: 5
Acq On : 3 Jun 2019 23:04 Operator: KEH
Sample : 9060520-BS2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

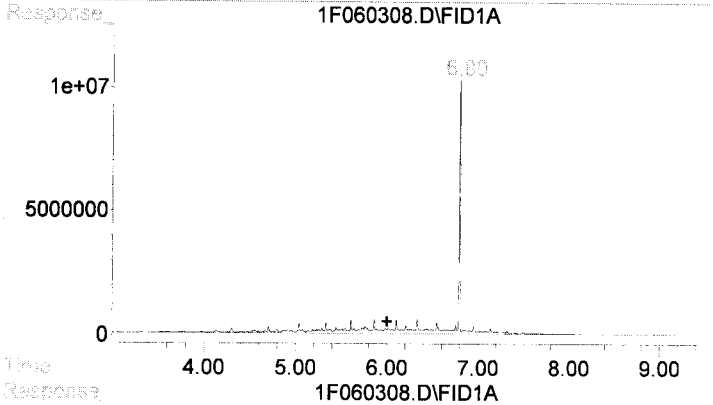
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





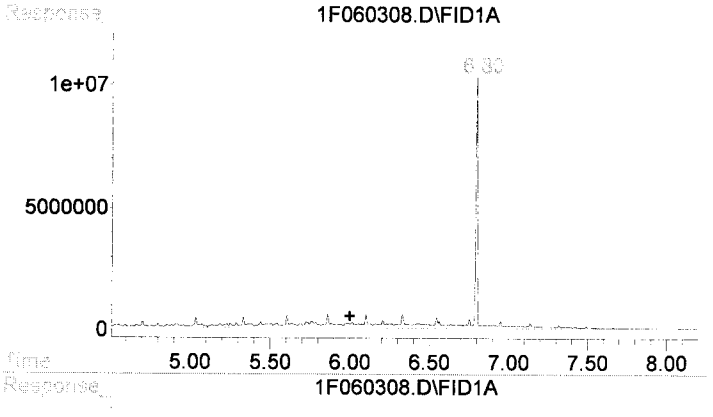
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 249264220
Conc: 195.55 ug/ml m



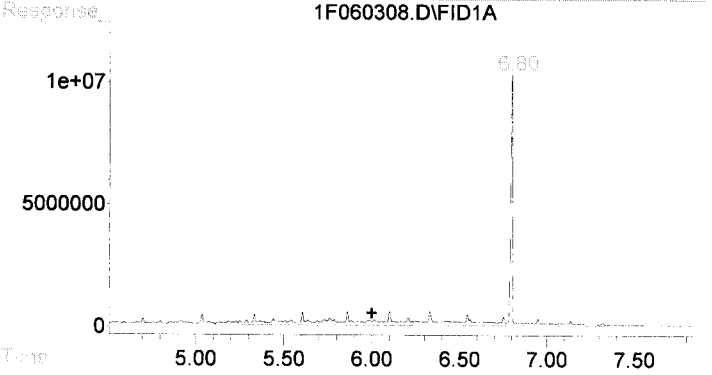
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 249264220
Conc: 195.55 ug/mL m



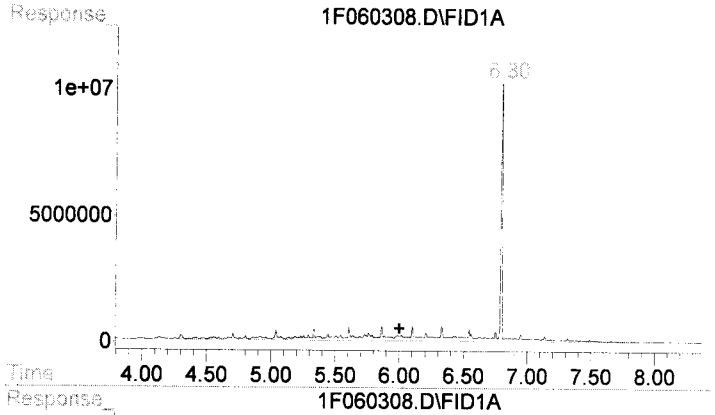
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 203699649
Conc: 159.81 ug/mL m



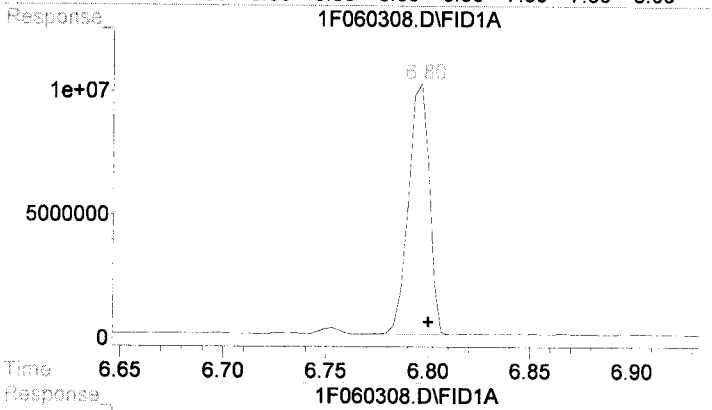
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 193764782
Conc: 206.72 ug/ml m



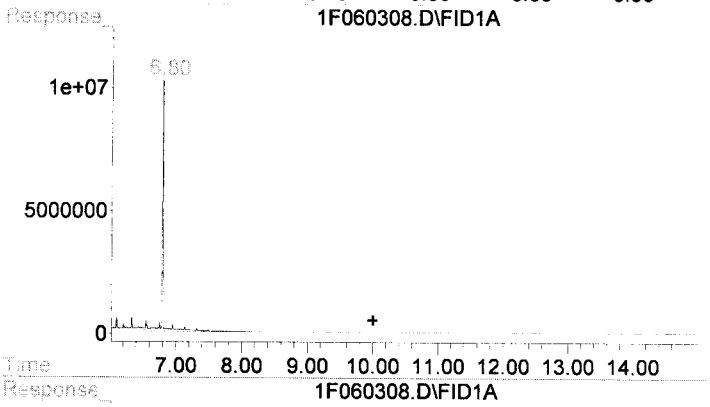
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 233669086
Conc: 201.78 ug/ml m



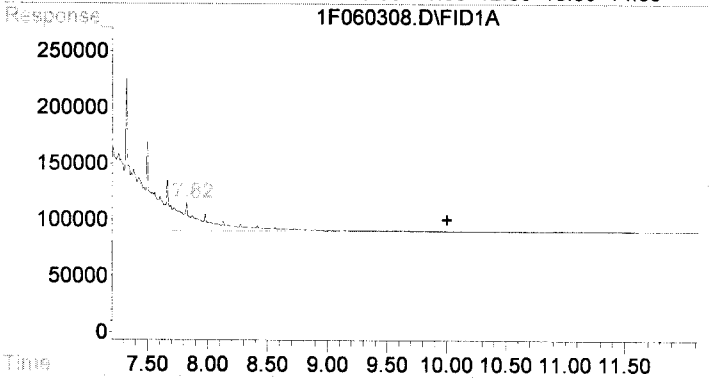
#6 o-Terphenyl

R.T.: 6.797 min
Delta R.T.: -0.003 min
Response: 71937997
Conc: 51.70 ug/mL



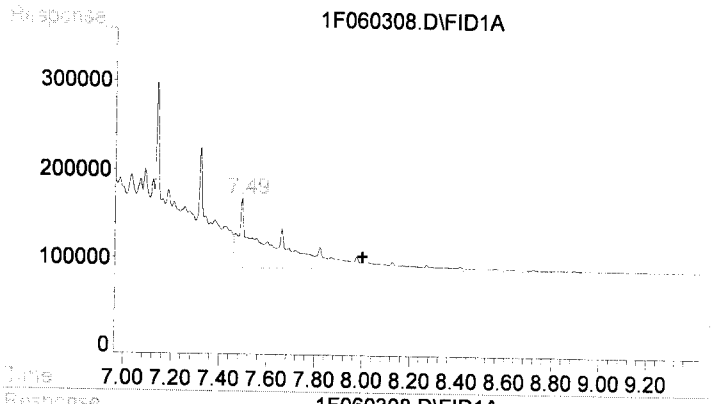
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 71661650
Conc: 65.12 ug/mL m



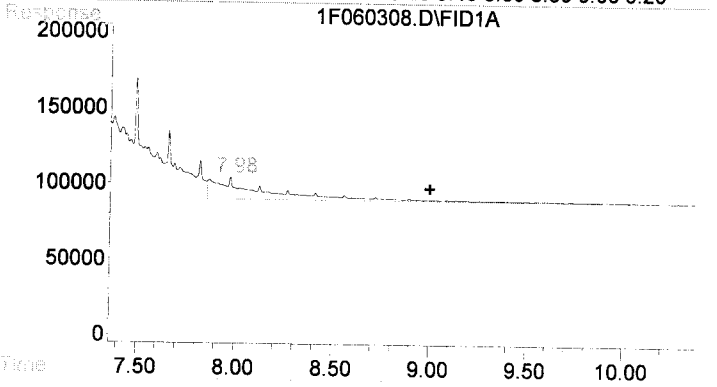
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 4912670
Conc: 4.46 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	8587919
Conc:	11.81 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2851452
Conc:	4.30 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060309.D Vial: 6
Acq On : 3 Jun 2019 23:26 Operator: KEH
Sample : 9060520-BS3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	72981790	52.447 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	249087847	195.417 ug/ml
2)	H	Diesel	6.00	249087847	195.417 ug/mL
3)	H	DRO(C12-C24)	6.00	203895187	159.962 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	193378357	206.303 ug/ml
5)	H	TPHd (C10-C25)	6.00	233580433	201.701 ug/ml
7)	H	OIL	10.00	72829365	66.179 ug/mL
8)	H	RRO (C24-C40)	10.00	4709278	4.279 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	8926136	12.272 ug/mL
10)	H	TPHmo (C25-C36)	9.00	2827983	4.261 ug/mL

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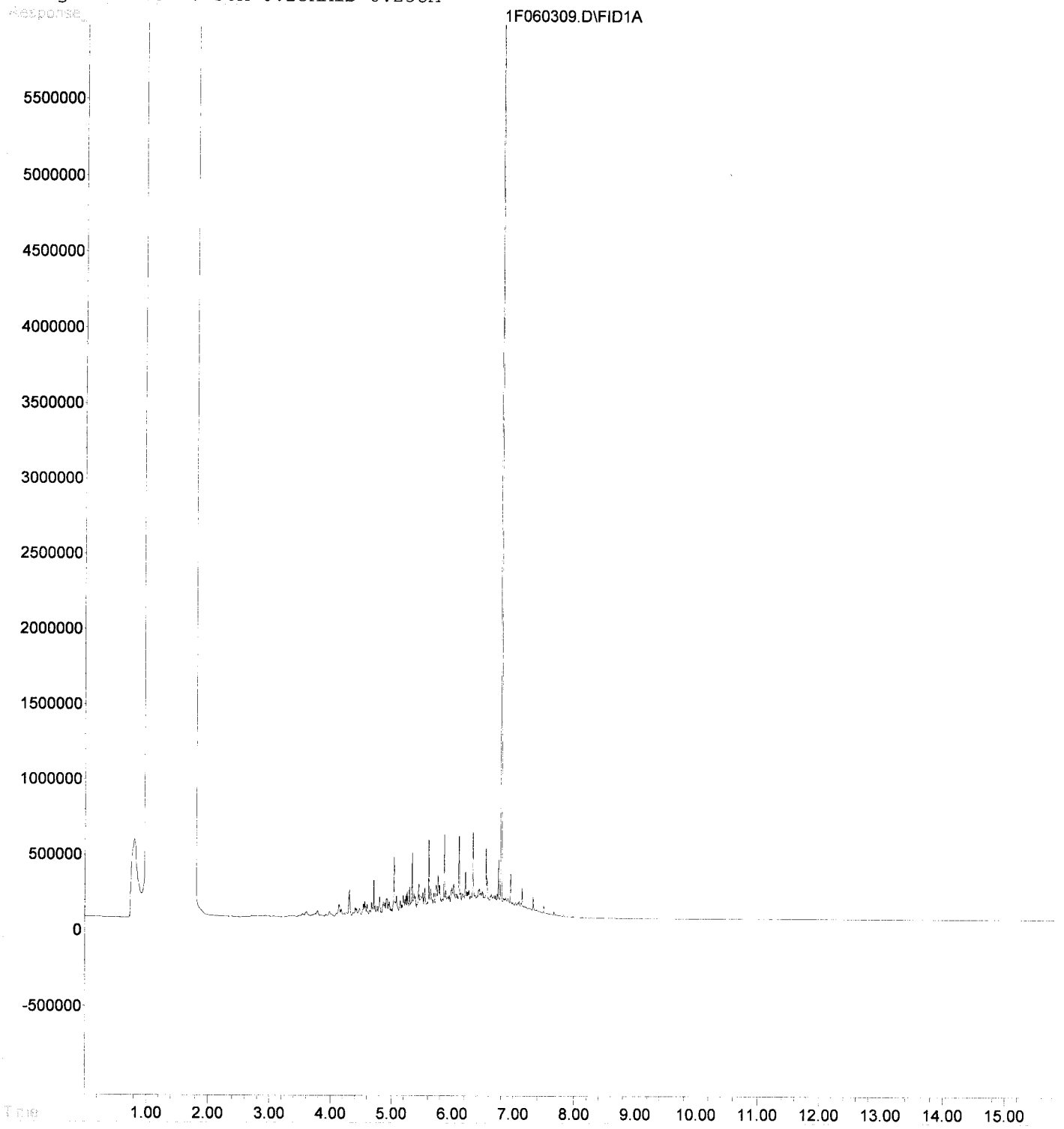
(f)=RT Delta > 1/2 Window (m)=manual int.
1F060309.D 1F90425D.M Tue Jun 04 07:55:12 2019 SV-GCMS3

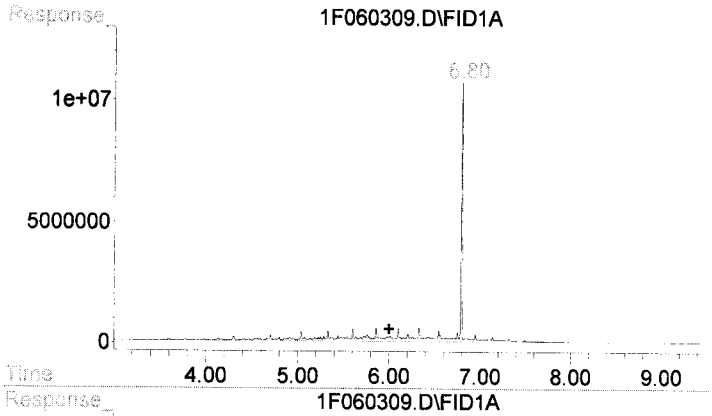
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060309.D Vial: 6
Acq On : 3 Jun 2019 23:26 Operator: KEH
Sample : 9060520-BS3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

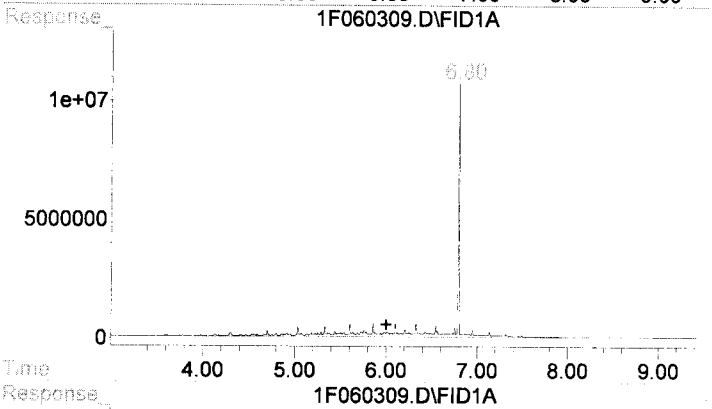
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





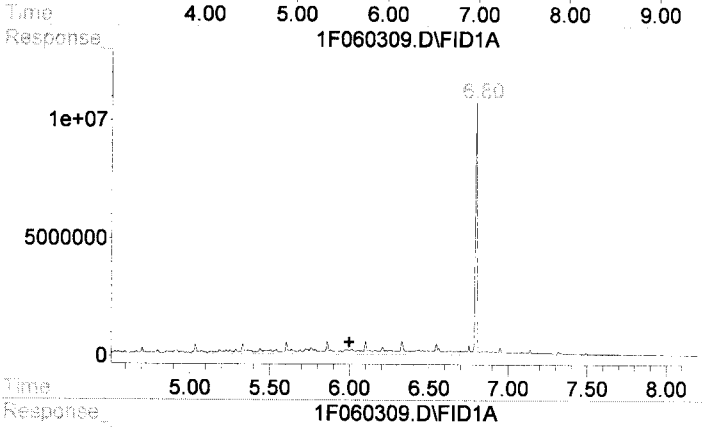
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 249087847
Conc: 195.42 ug/ml m



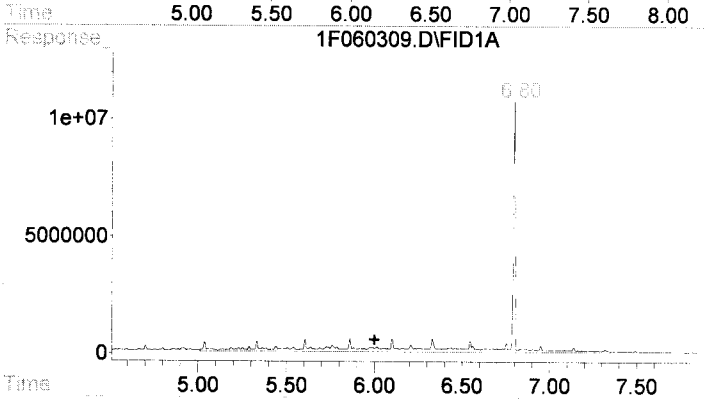
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 249087847
Conc: 195.42 ug/mL m



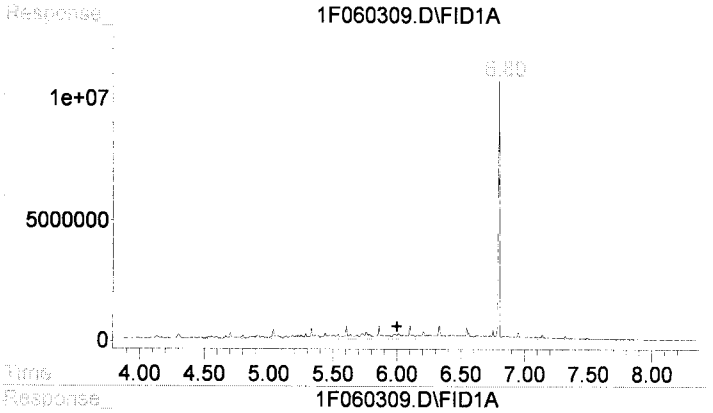
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 203895187
Conc: 159.96 ug/mL m



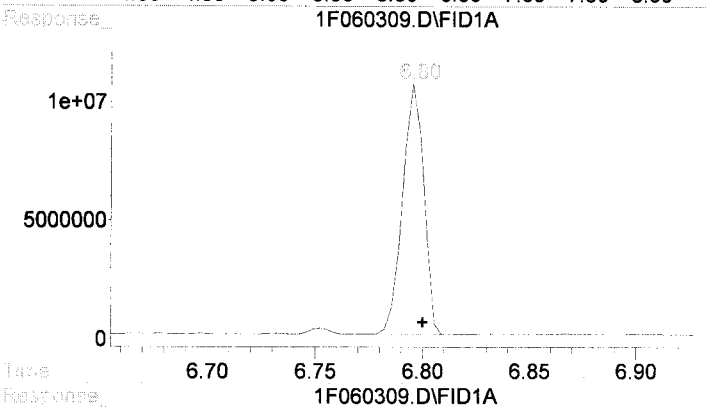
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 193378357
Conc: 206.30 ug/ml m



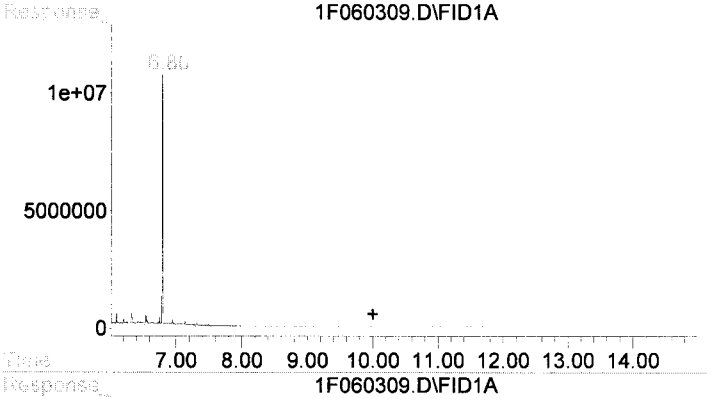
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 233580433
Conc: 201.70 ug/ml m



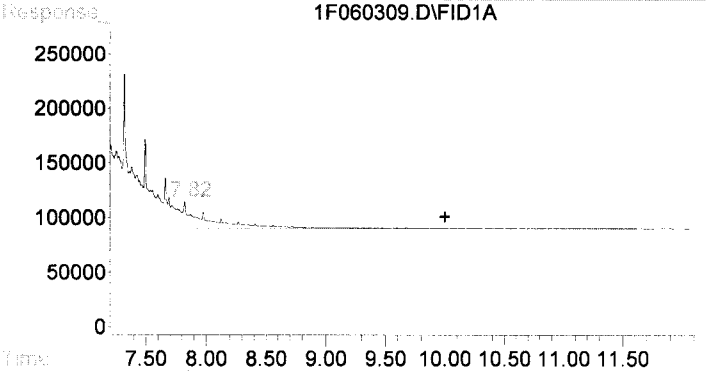
#6 o-Terphenyl

R.T.: 6.797 min
Delta R.T.: -0.003 min
Response: 72981790
Conc: 52.45 ug/mL



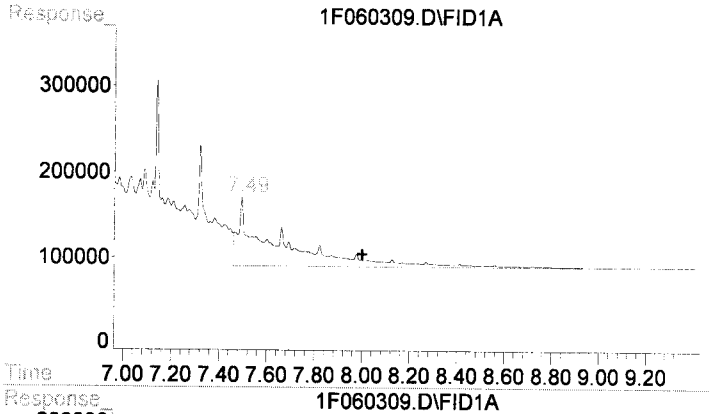
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 72829365
Conc: 66.18 ug/mL m



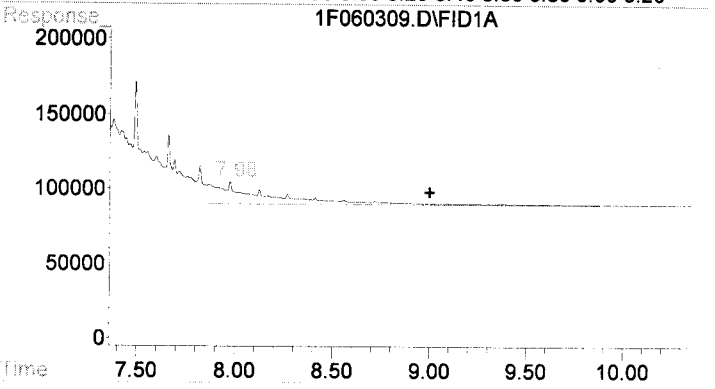
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 4709278
Conc: 4.28 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	8926136
Conc:	12.27 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2827983
Conc:	4.26 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060310.D Vial: 7
Acq On : 3 Jun 2019 23:49 Operator: KEH
Sample : 9060520-BS4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.80	69709708	50.096	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	258621742	202.896	ug/ml
2)	H	Diesel	6.00	258621742	202.896	ug/mL ✓
3)	H	DRO(C12-C24)	6.00	207678606	162.930	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	197728697	210.944	ug/ml
5)	H	TPHd (C10-C25)	6.00	241270991	208.342	ug/ml
7)	H	OIL	10.00	70398234	63.970	ug/mL
8)	H	RRO (C24-C40)	10.00	4815141	4.375	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	8720561	11.989	ug/mL
10)	H	TPHmo (C25-C36)	9.00	2834707	4.272	ug/mL

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✓

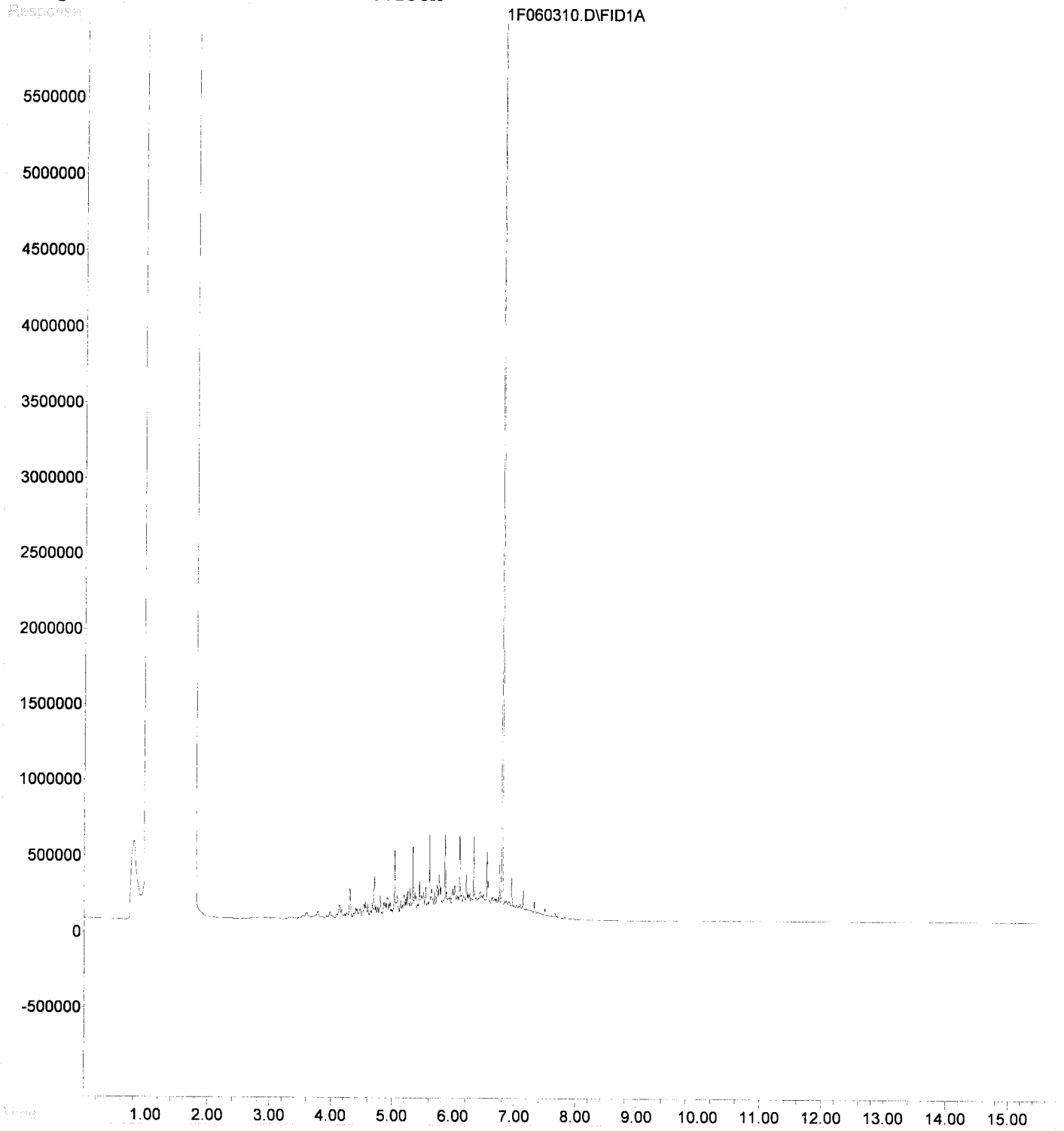
(f)=RT Delta > 1/2 Window (m)=manual int.

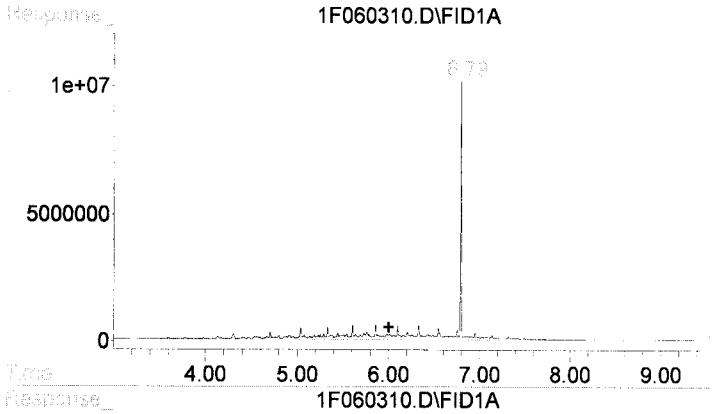
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060310.D Vial: 7
Acq On : 3 Jun 2019 23:49 Operator: KEH
Sample : 9060520-BS4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

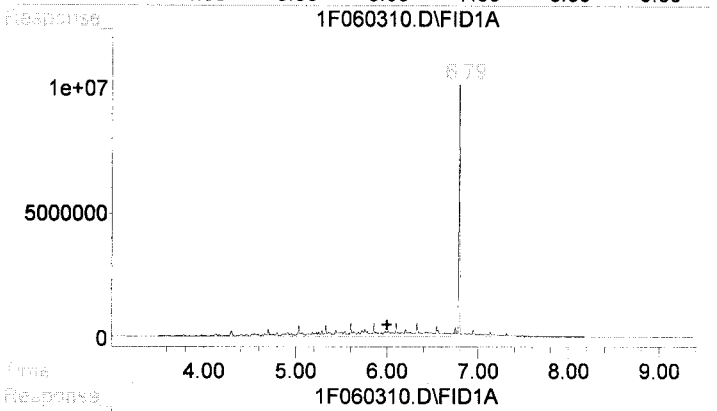
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





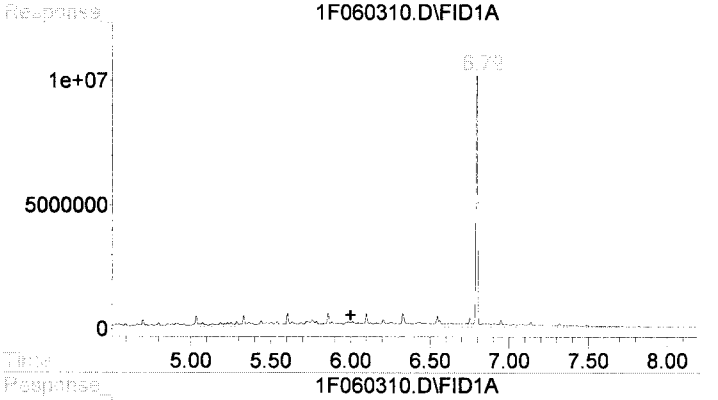
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 258621742
Conc: 202.90 ug/ml m



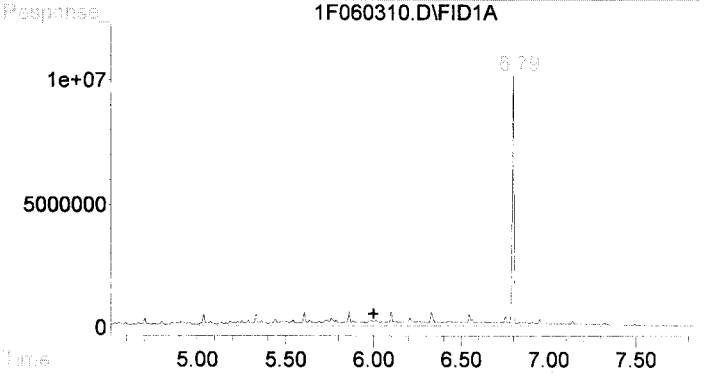
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 258621742
Conc: 202.90 ug/mL m



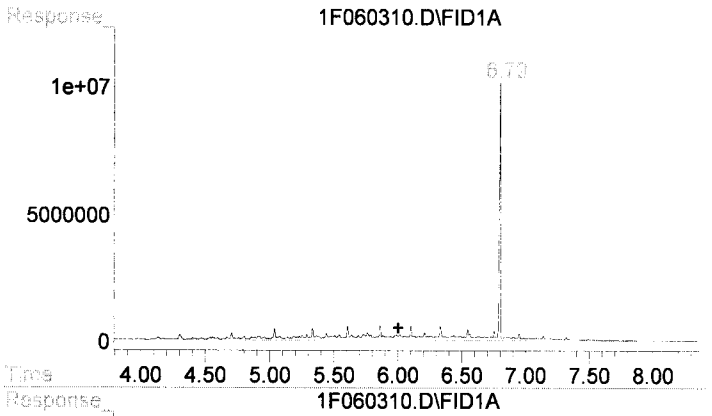
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 207678606
Conc: 162.93 ug/mL m



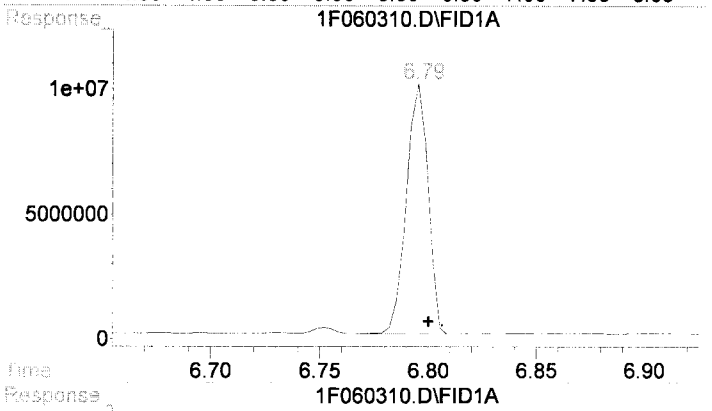
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 197728697
Conc: 210.94 ug/ml m



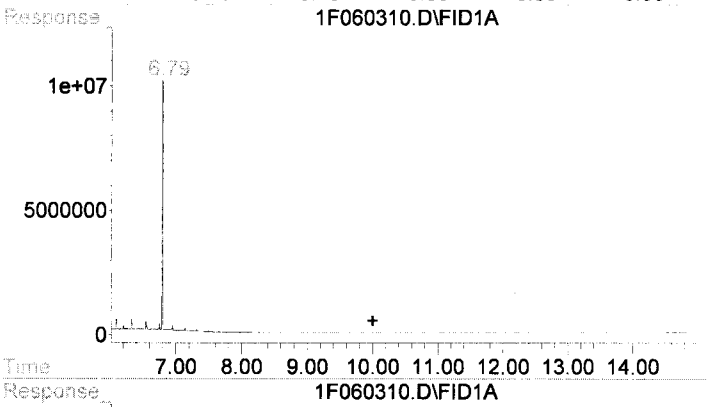
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 241270991
Conc: 208.34 ug/ml m



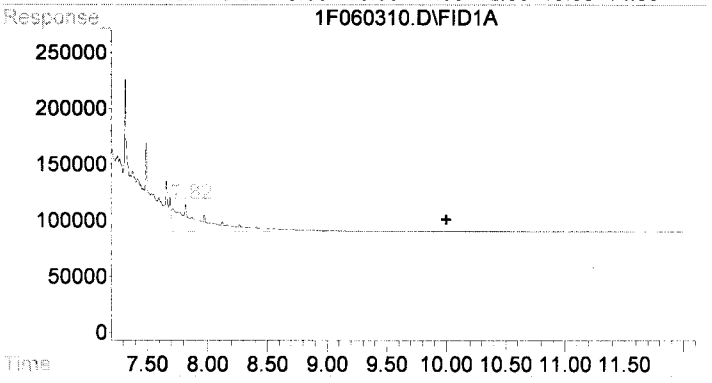
#6 o-Terphenyl

R.T.: 6.796 min
Delta R.T.: -0.004 min
Response: 69709708
Conc: 50.10 ug/mL



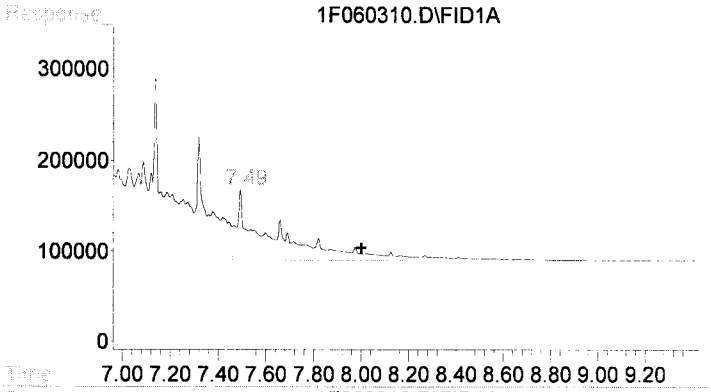
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 70398234
Conc: 63.97 ug/mL m



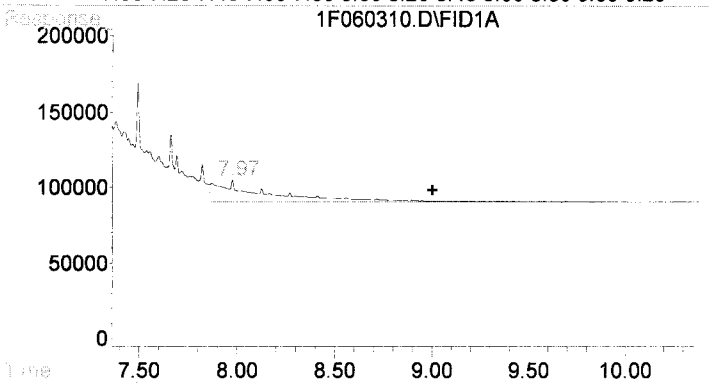
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 4815141
Conc: 4.38 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	8720561
Conc:	11.99 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2834707
Conc:	4.27 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060311.D Vial: 99
Acq On : 4 Jun 2019 00:11 Operator: KEH
Sample : 9F03048-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	9744667	7.645	ug/ml
2)	H	Diesel	6.00	9744667	7.645	ug/mL
3)	H	DRO(C12-C24)	6.00	3394859	2.663	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	3035343	3.238	ug/ml
5)	H	TPHd (C10-C25)	6.00	5522914	4.769	ug/ml
7)	H	OIL	10.00	10537152	9.575	ug/mL
8)	H	RRO (C24-C40)	10.00	5294904	4.811	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1309455	1.800	ug/mL
10)	H	TPHmo (C25-C36)	9.00	2420740	3.648	ug/mL

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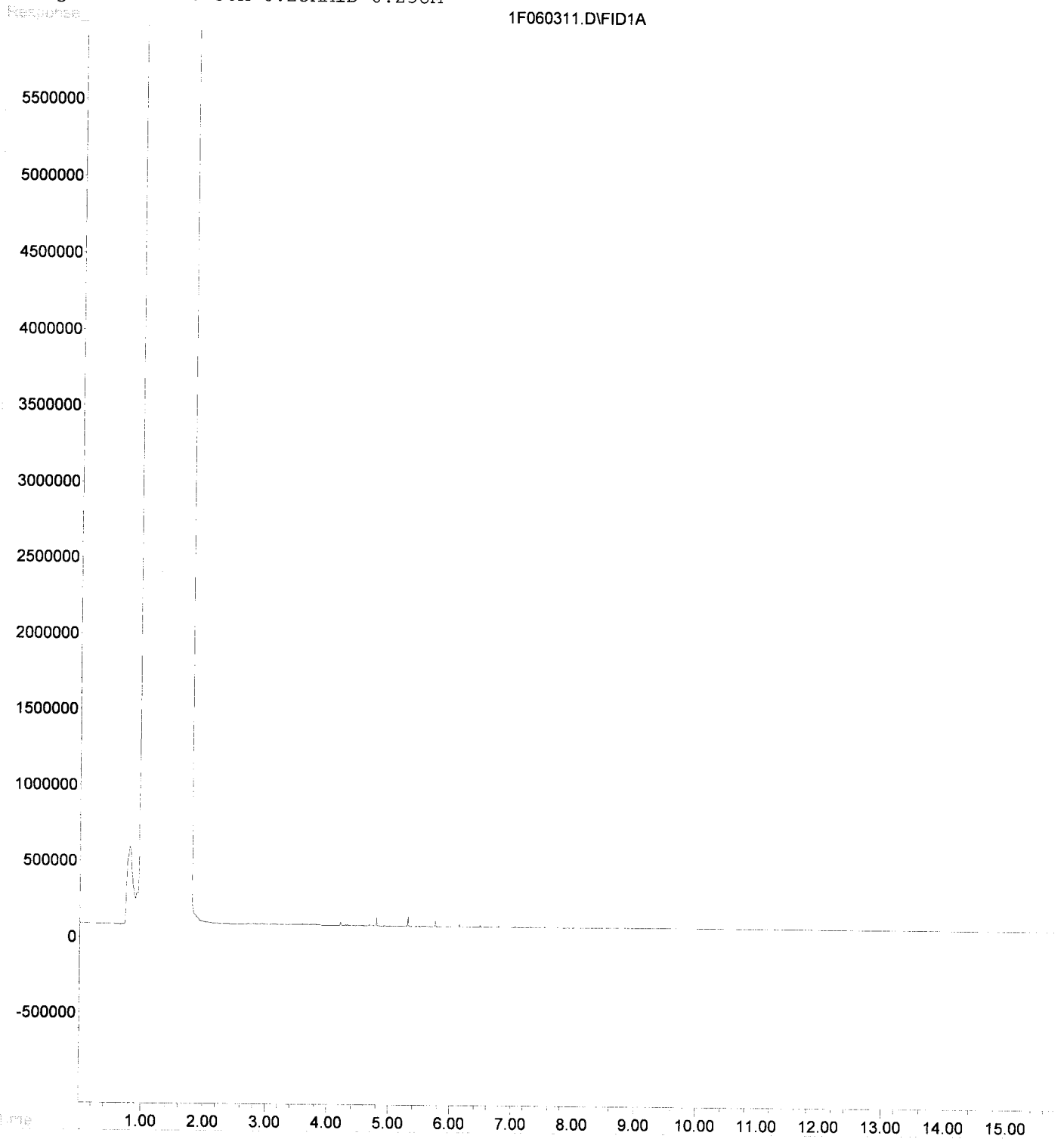
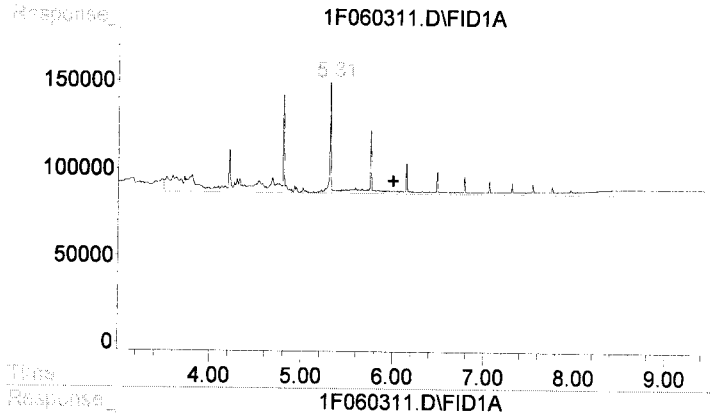
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060311.D Vial: 99
Acq On : 4 Jun 2019 00:11 Operator: KEH
Sample : 9F03048-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

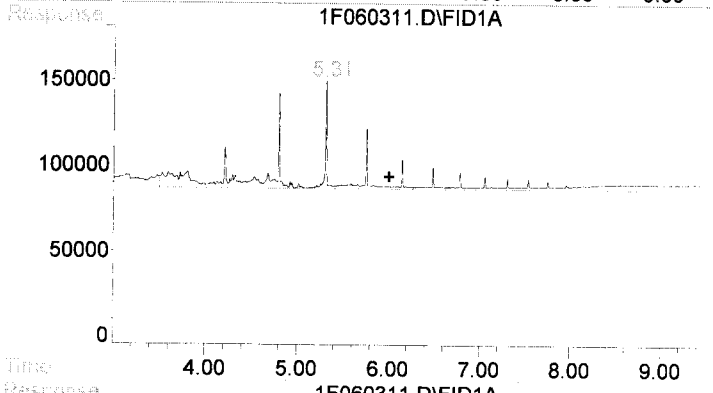
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





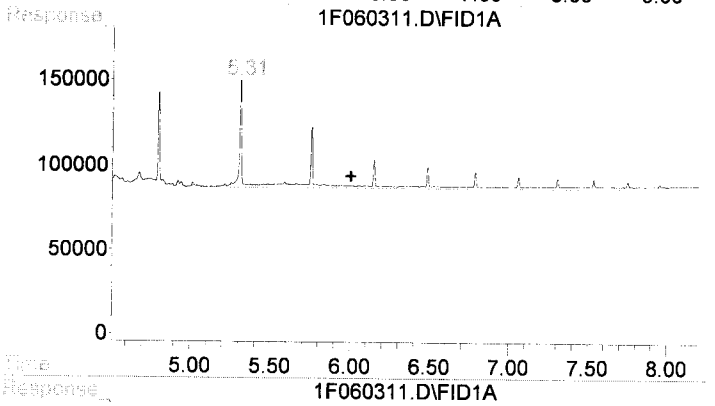
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9744667
Conc: 7.64 ug/ml m



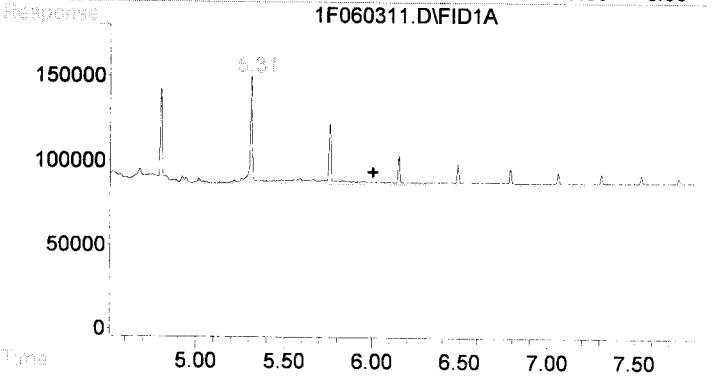
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9744667
Conc: 7.64 ug/mL m



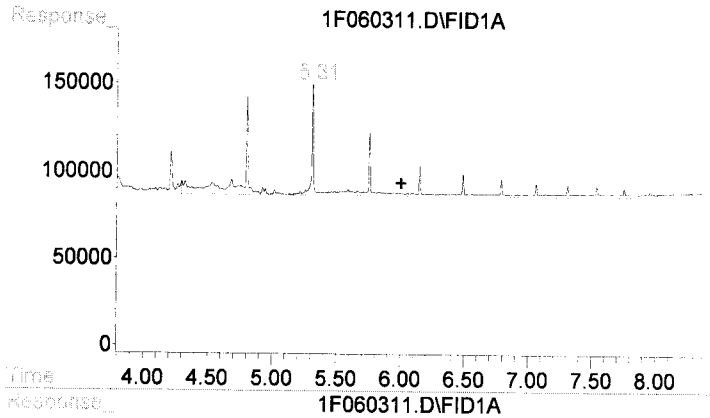
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3394859
Conc: 2.66 ug/mL m



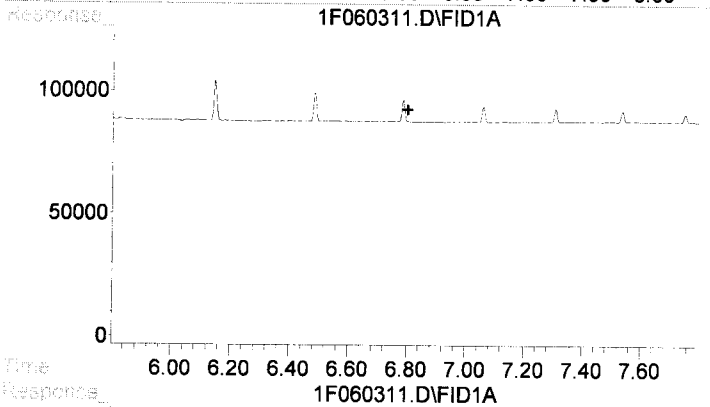
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3035343
Conc: 3.24 ug/ml m



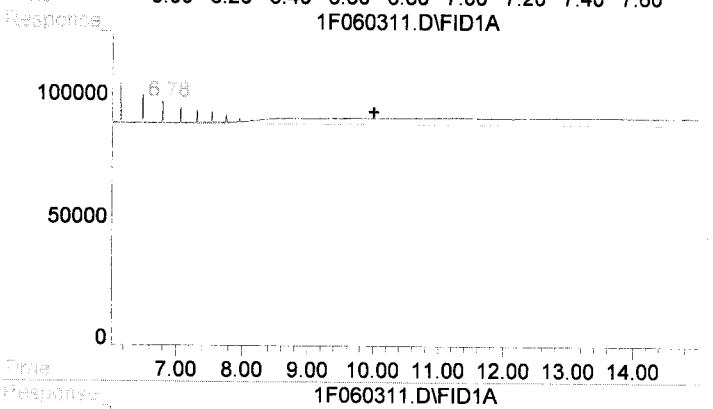
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 5522914
Conc: 4.77 ug/ml m



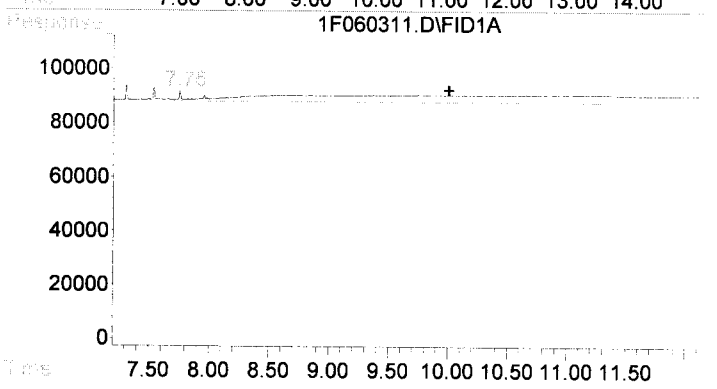
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.800 min
Response: 0
Conc: N.D.



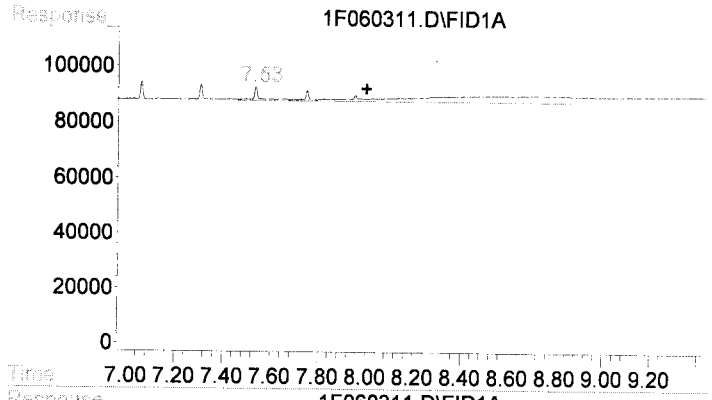
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 10537152
Conc: 9.57 ug/mL m



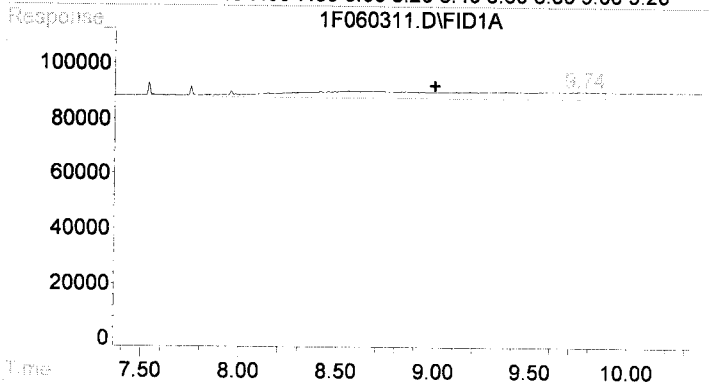
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 5294904
Conc: 4.81 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	1309455
Conc:	1.80 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2420740
Conc:	3.65 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060312.D Vial: 8
Acq On : 4 Jun 2019 00:34 Operator: KEH
Sample : 9060507-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	72831199	52.339 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	9932978	7.793 ug/ml
2)	H	Diesel	6.00	9932978	7.793 ug/mL
3)	H	DRO(C12-C24)	6.00	3126235	2.453 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2658913	2.837 ug/ml
5)	H	TPHd (C10-C25)	6.00	5077667	4.385 ug/ml
7)	H	OIL	10.00	10938974	9.940 ug/mL
8)	H	RRO (C24-C40)	10.00	5596250	5.085 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	2270216	3.121 ug/mL
10)	H	TPHmo (C25-C36)	9.00	2926806	4.410 ug/mL

1/2 mL

KEH 6/4/19

✓

(f)=RT Delta > 1/2 window (m)=manual Int.

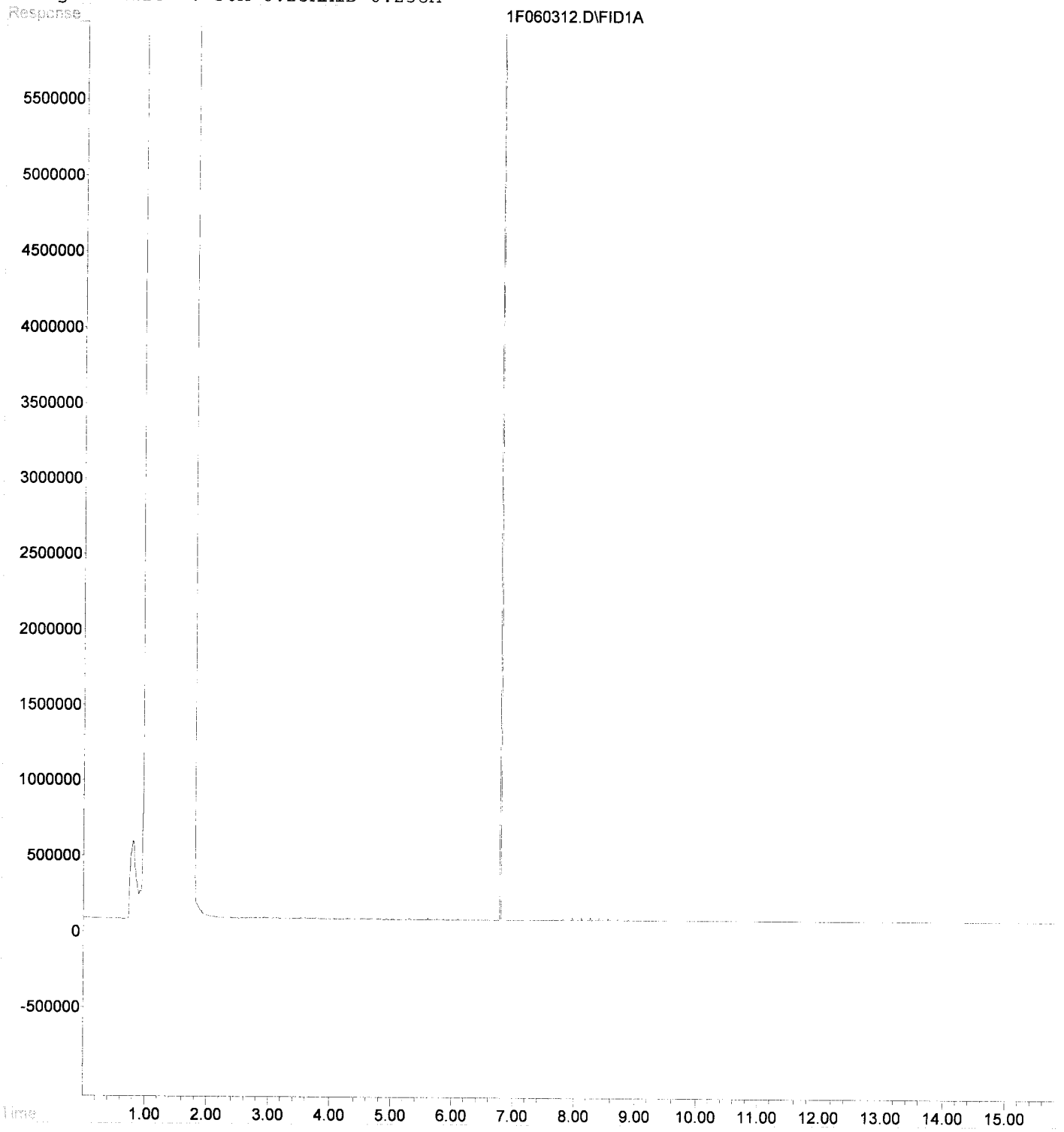
1F060312.D 1F90425D.M Tue Jun 04 07:55:21 2019 SV-GCMS3

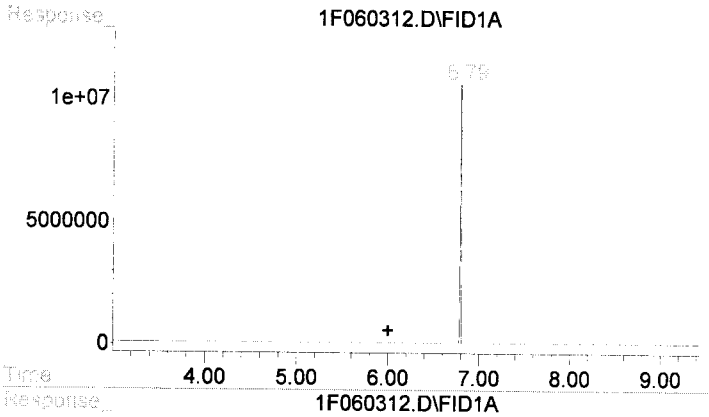
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060312.D Vial: 8
Acq On : 4 Jun 2019 00:34 Operator: KEH
Sample : 9060507-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

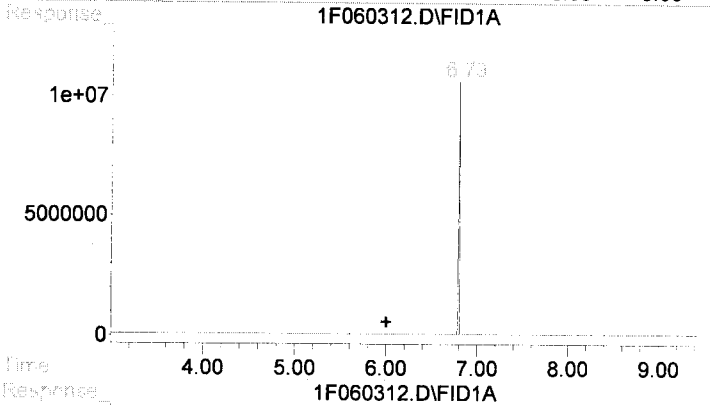
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





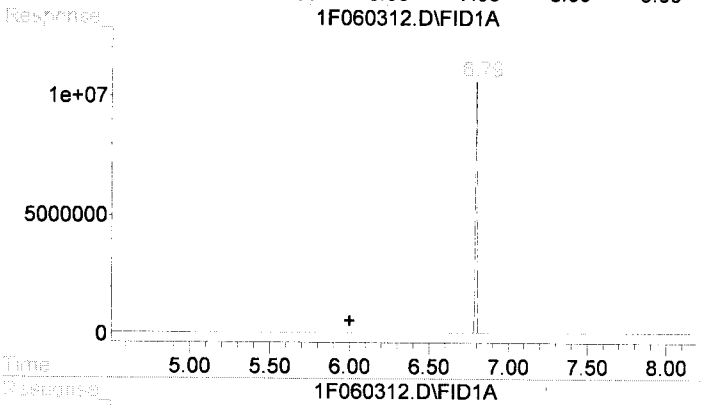
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9932978
Conc: 7.79 ug/ml m



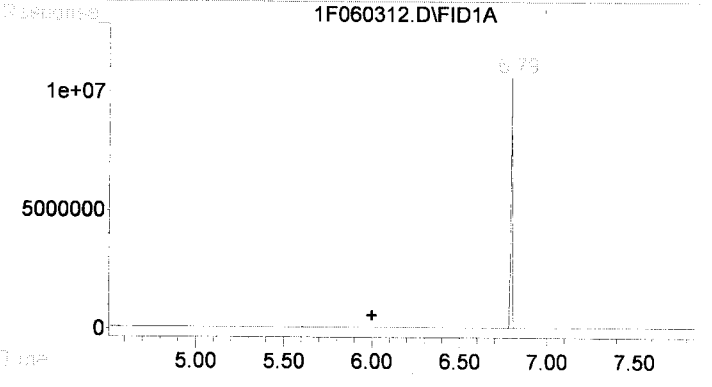
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9932978
Conc: 7.79 ug/mL m



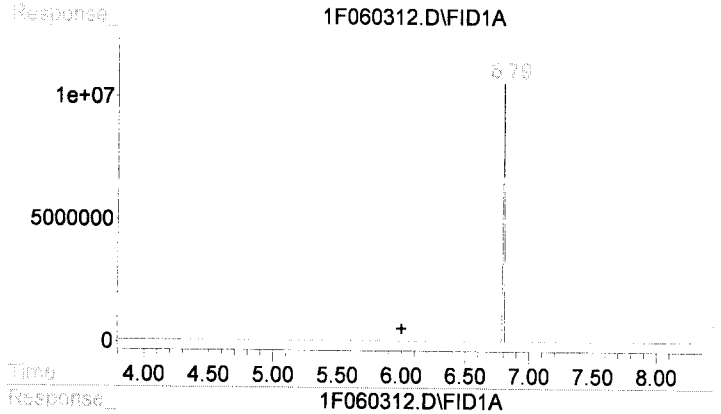
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3126235
Conc: 2.45 ug/mL m



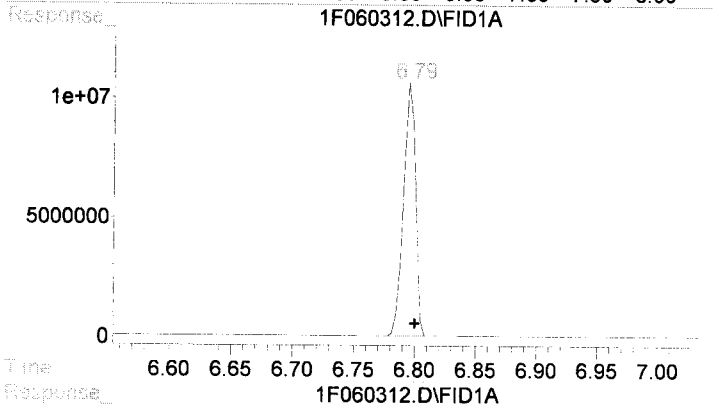
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 2658913
Conc: 2.84 ug/ml m



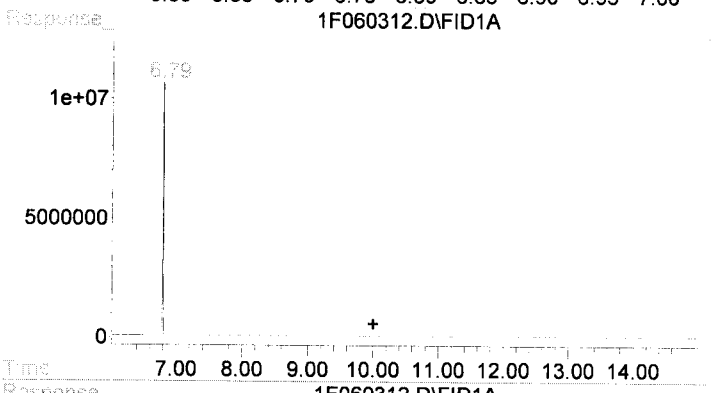
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 5077667
Conc: 4.38 ug/ml m



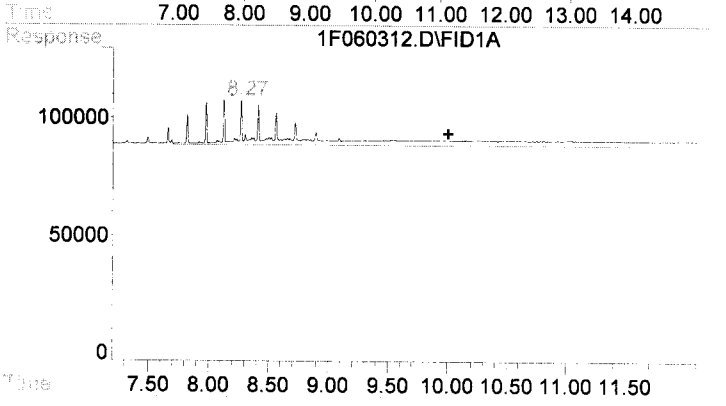
#6 o-Terphenyl

R.T.: 6.796 min
Delta R.T.: -0.004 min
Response: 72831199
Conc: 52.34 ug/mL



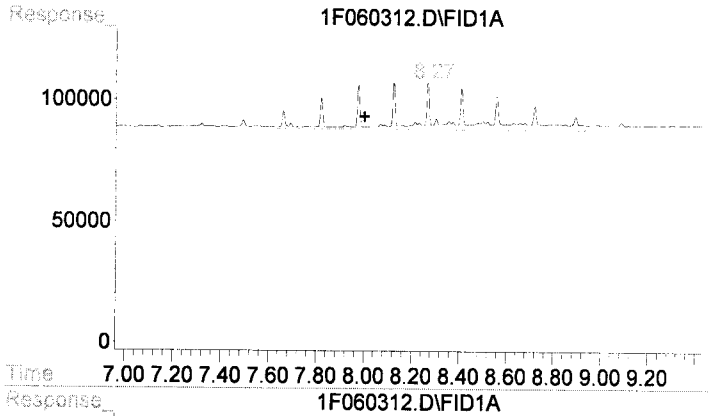
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 10938974
Conc: 9.94 ug/mL m



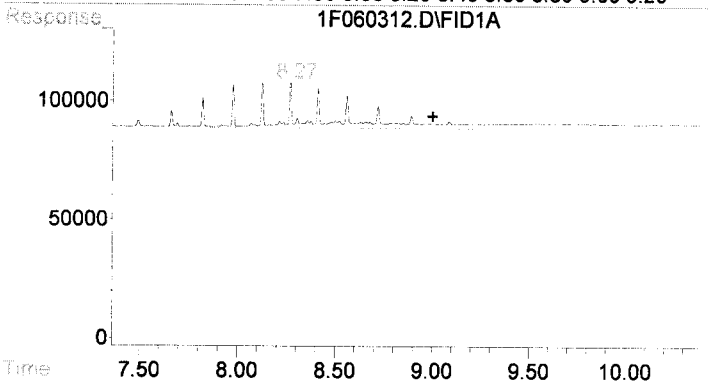
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 5596250
Conc: 5.09 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	2270216
Conc:	3.12 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2926806
Conc:	4.41 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060313.D Vial: 9
Acq On : 4 Jun 2019 00:57 Operator: KEH
Sample : 9060507-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	70205736	50.452 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	276264575	216.737 ug/ml
2)	H	Diesel	6.00	276264575	216.737 ug/mL
3)	H	DRO(C12-C24)	6.00	222014341	174.177 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	211138748	225.250 ug/ml
5)	H	TPHd (C10-C25)	6.00	258109965	222.883 ug/ml
7)	H	OIL	10.00	74831865	67.999 ug/mL
8)	H	RRO (C24-C40)	10.00	5271441	4.790 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	9461833	13.009 ug/mL
10)	H	TPHmo (C25-C36)	9.00	3195344	4.815 ug/mL

KEH 6/4/19

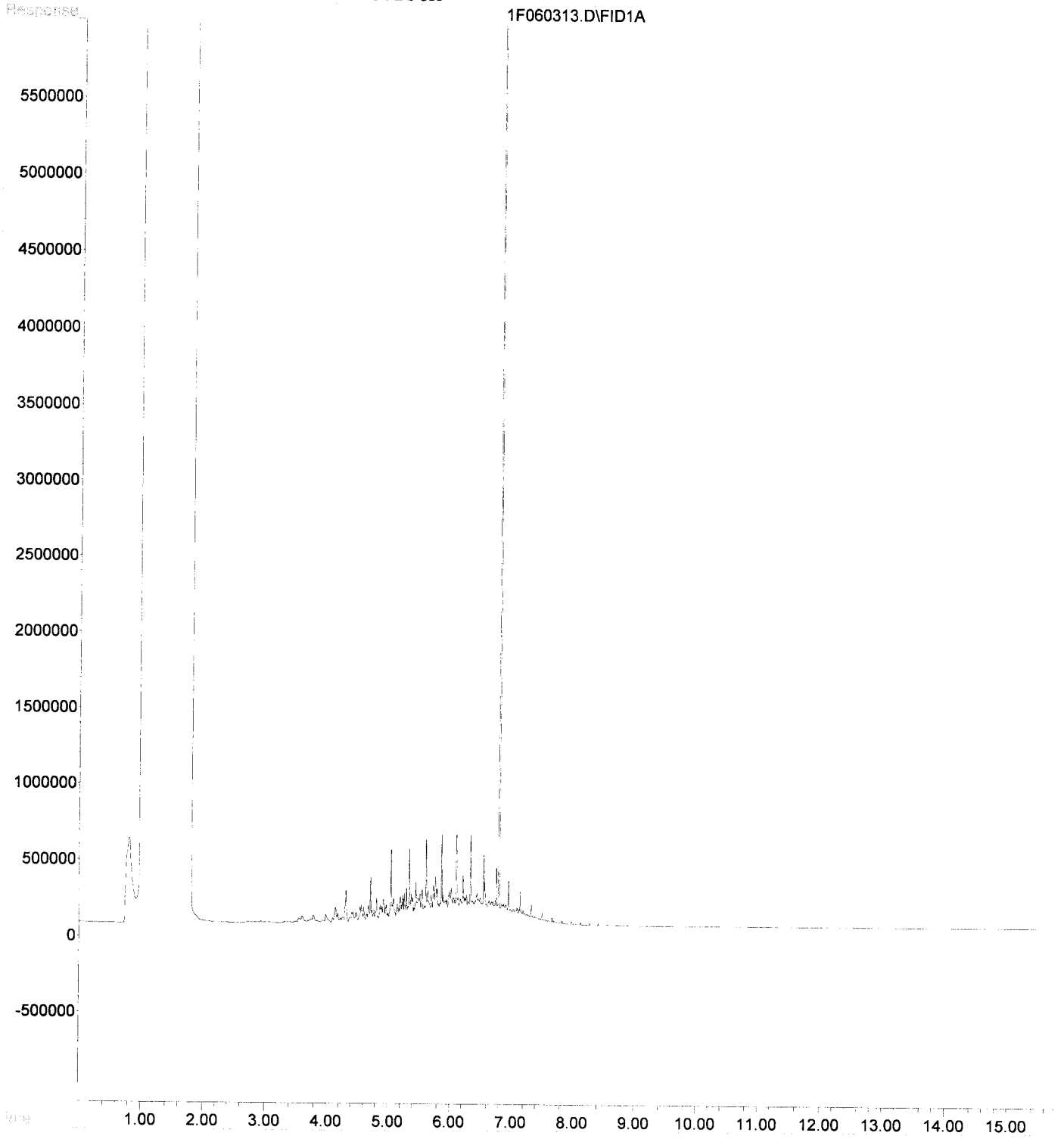
(f)=RT Delta > 1/2 window (m)=manual int.
1F060313.D 1F90425D.M Tue Jun 04 07:55:23 2019 SV-GCMS3

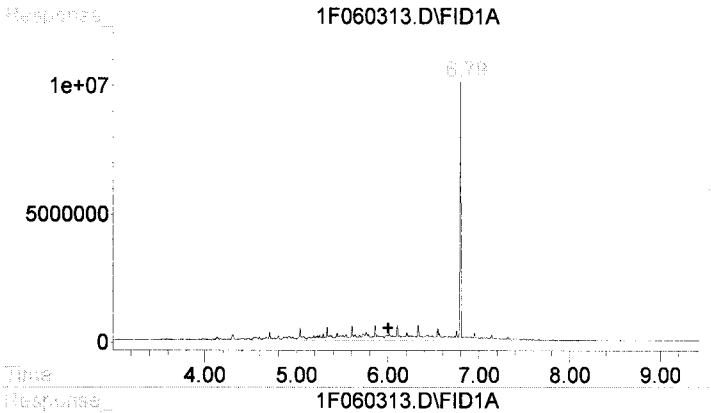
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060313.D Vial: 9
Acq On : 4 Jun 2019 00:57 Operator: KEH
Sample : 9060507-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

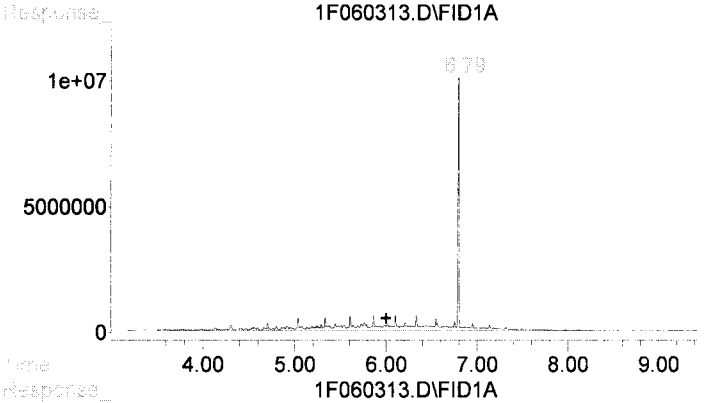
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





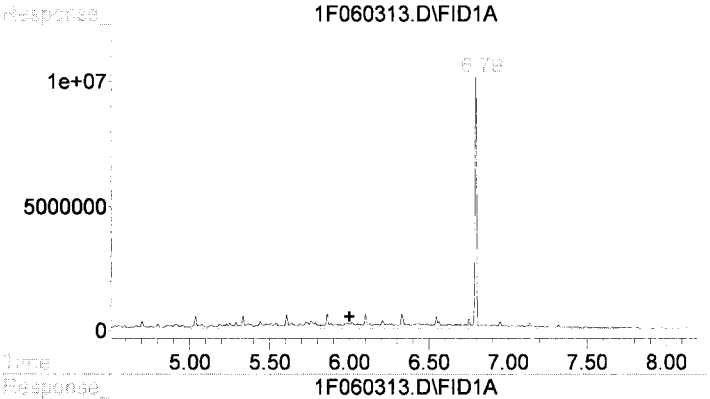
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 276264575
Conc: 216.74 ug/ml m



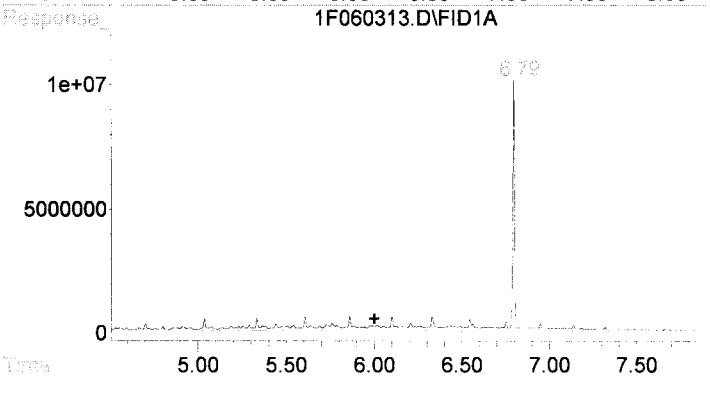
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 276264575
Conc: 216.74 ug/mL m



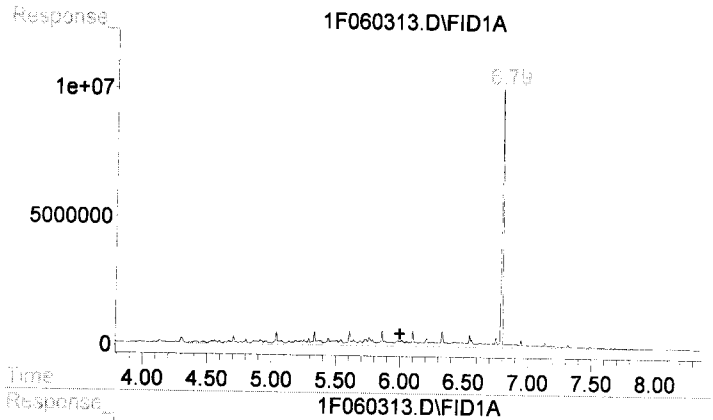
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 222014341
Conc: 174.18 ug/mL m



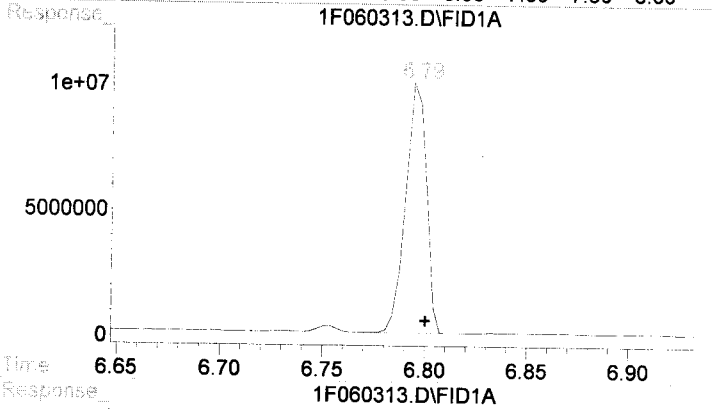
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 211138748
Conc: 225.25 ug/ml m



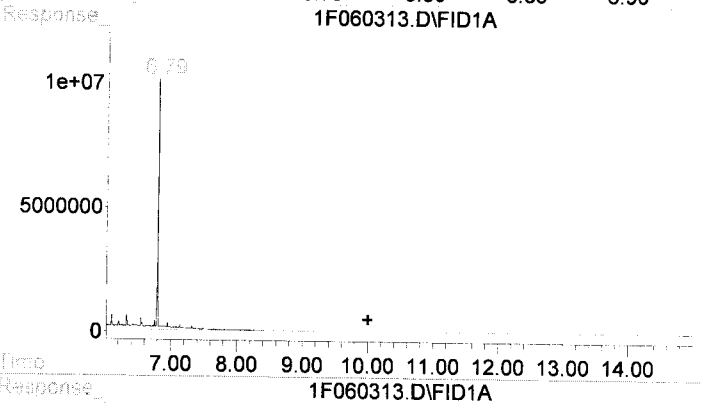
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 258109965
Conc: 222.88 ug/ml m



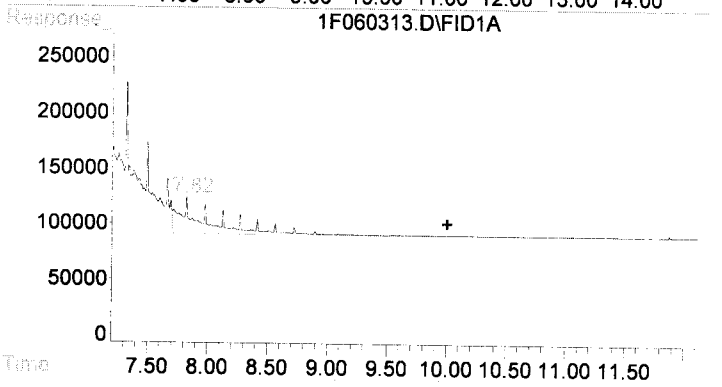
#6 o-Terphenyl

R.T.: 6.796 min
Delta R.T.: -0.004 min
Response: 70205736
Conc: 50.45 ug/mL



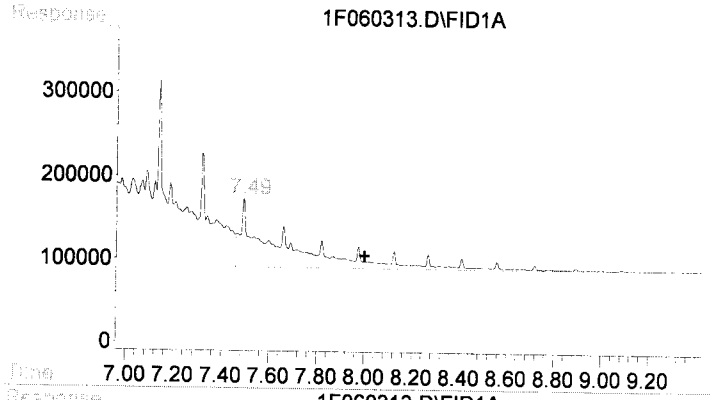
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 74831865
Conc: 68.00 ug/mL m



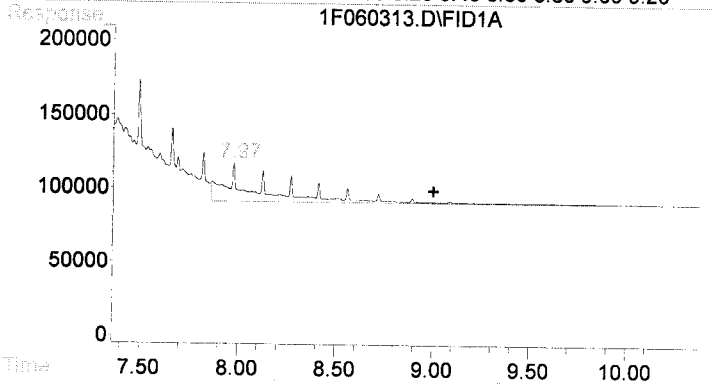
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 5271441
Conc: 4.79 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	9461833
Conc:	13.01 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	3195344
Conc:	4.82 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060314.D Vial: 10
Acq On : 4 Jun 2019 1:19 Operator: KEH
Sample : A9E0936-01 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.80	64793075	46.563	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	10297319	8.079	ug/ml
2)	H	Diesel	6.00	10297319	8.079	ug/mL
3)	H	DRO(C12-C24)	6.00	3181469	2.496	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2632678	2.809	ug/ml
5)	H	TPHd (C10-C25)	6.00	5327313	4.600	ug/ml
7)	H	OIL	10.00	9764380	8.873	ug/mL
8)	H	RRO (C24-C40)	10.00	4682081	4.255	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	2115308	2.908	ug/mL
10)	H	TPHmo (C25-C36)	9.00	2515380	3.790	ug/mL

ug/mL

KEH 6/4/19

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-06\9F03048\1F060322.D
Acq On : 4 Jun 2019 4:20
Sample : 9F03048-CCV3
Misc :
IntFile : SUR.E

Vial: 17
Operator: KEH
Inst : HP G1530A
Multiplr: 1.00

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	1000.000	969.604	3.0	99	0.00
2	H	Diesel	1000.000	969.604	3.0	99	0.00
3	H	DRO(C12-C24)	1000.000	776.714	22.3#	79	0.00
4	H	Ca Luft DRO (C12-C22)	1000.000	1007.372	-0.7	99	0.00
5	H	TPHd (C10-C25)	1000.000	996.196	0.4	99	0.00
6	S	o-Terphenyl	-1.000	52.688	0.0	0	0.00
7	H	OIL	-1.000	308.271	0.0	98	0.00
8	H	RRO (C24-C40)	-1.000	17.291	0.0	6	0.00
9	H	Ca Luft ORO (C23-C32)	-1.000	53.484	0.0	99	0.00
10	H	TPHmo (C25-C36)	-1.000	16.930	0.0	95	0.00

KEH 6/4/19

✓

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060322.D Vial: 17
Acq On : 4 Jun 2019 4:20 Operator: KEH
Sample : 9F03048-CCV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.80	73316829	52.688	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	1235907046	969.604	ug/ml
2)	H	Diesel	6.00	1235907046	969.604	ug/mL
3)	H	DRO(C12-C24)	6.00	990039435	776.714	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	944262150	1007.372	ug/ml
5)	H	TPHd (C10-C25)	6.00	1153647345	996.196	ug/ml
7)	H	OIL	10.00	339250344	308.271	ug/mL
8)	H	RRO (C24-C40)	10.00	19028523	17.291	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	38901460	53.484	ug/mL
10)	H	TPHmo (C25-C36)	9.00	11235290	16.930	ug/mL

Ket 6/14/19

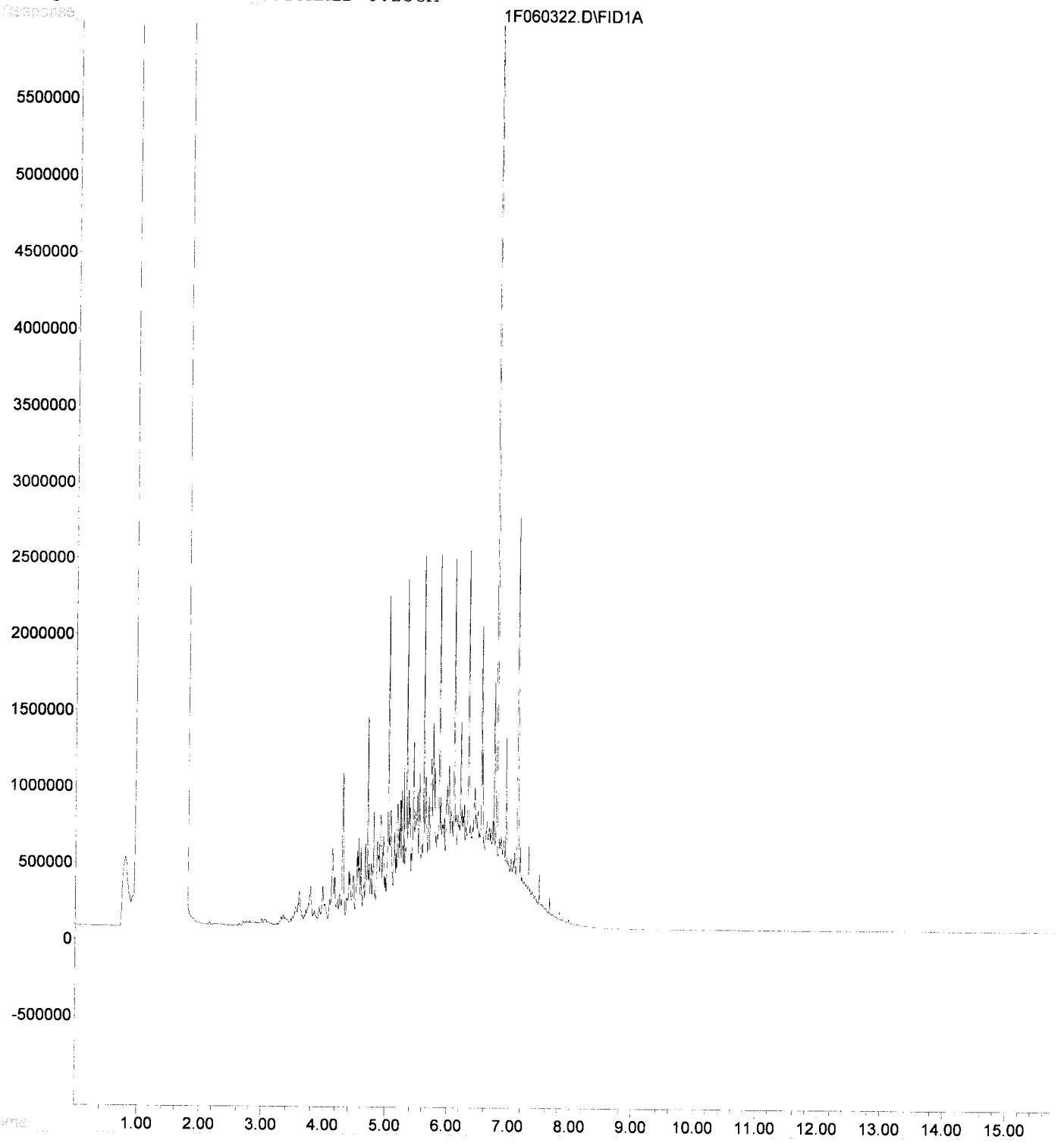
(f)=RT Delta > 1/2 Window (m)=manual int.
1F060322.D 1F90425D.M Tue Jun 04 07:55:47 2019 SV-GCMS3

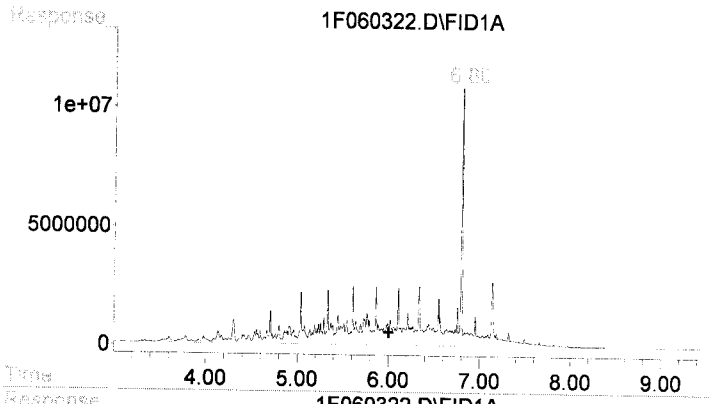
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060322.D Vial: 17
Acq On : 4 Jun 2019 4:20 Operator: KEH
Sample : 9F03048-CCV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

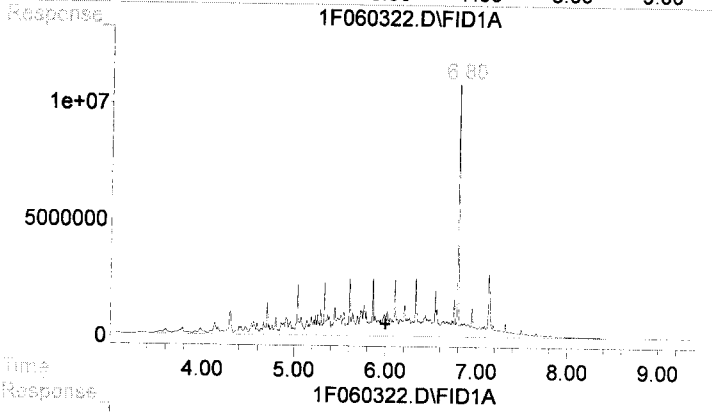
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





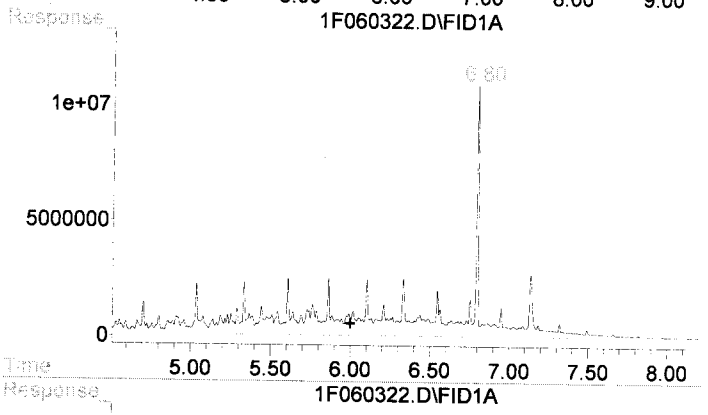
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1235907046
Conc: 969.60 ug/ml m



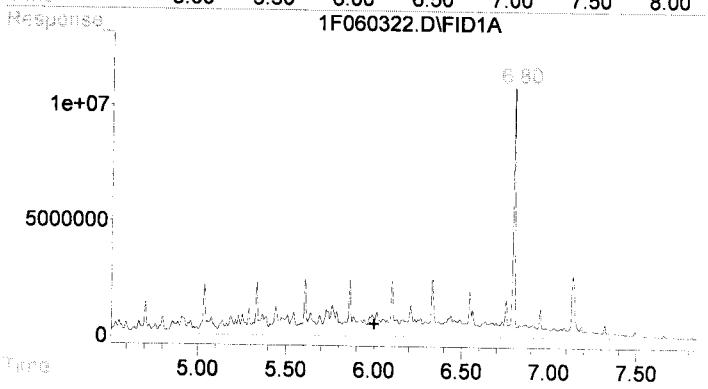
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1235907046
Conc: 969.60 ug/mL m



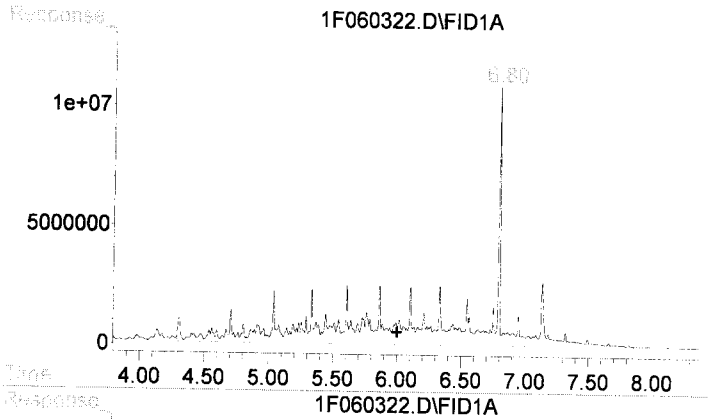
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 990039435
Conc: 776.71 ug/mL m



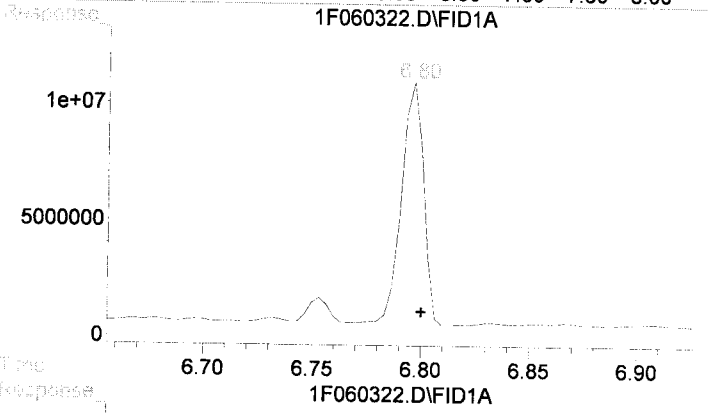
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 944262150
Conc: 1007.37 ug/ml m



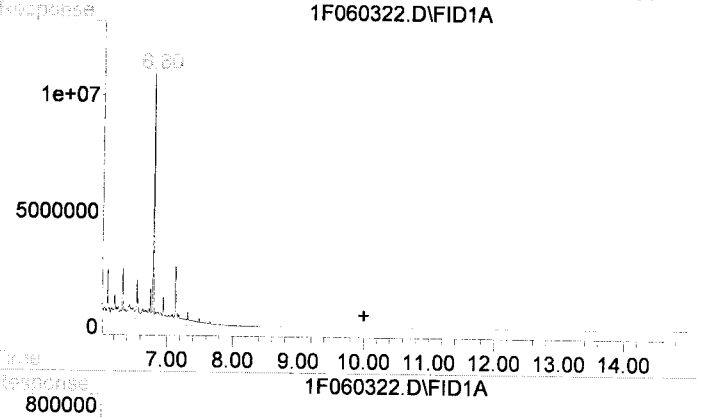
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1153647345
Conc: 996.20 ug/ml m



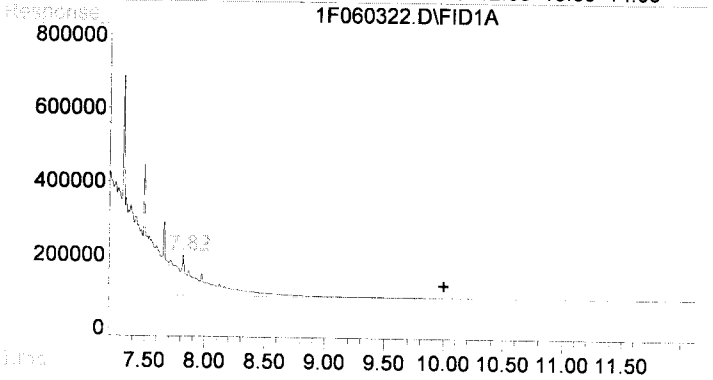
#6 o-Terphenyl

R.T.: 6.797 min
Delta R.T.: -0.003 min
Response: 73316829
Conc: 52.69 ug/mL



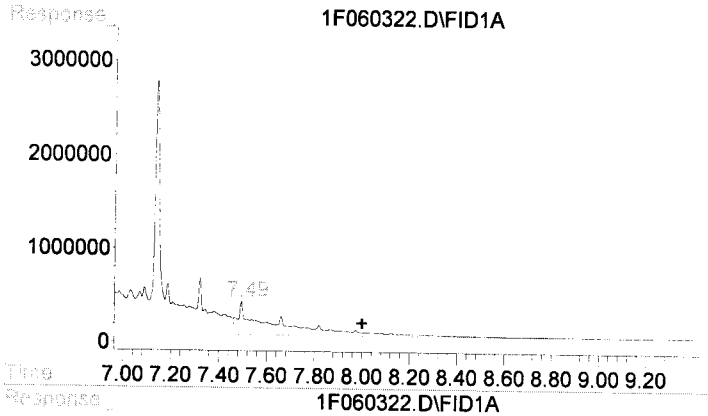
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 339250344
Conc: 308.27 ug/mL m



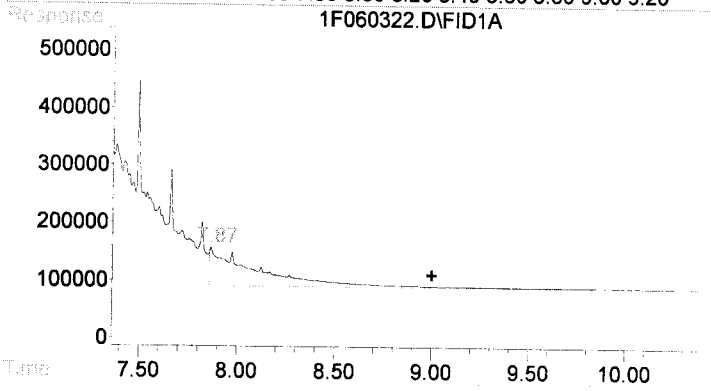
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 19028523
Conc: 17.29 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 38901460
Conc: 53.48 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 9.000 min
Delta R.T.: 0.000 min
Response: 11235290
Conc: 16.93 ug/mL m

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-06\9F03048\1F060323.D
Acq On : 4 Jun 2019 4:43
Sample : 9F03048-CCV4
Misc :
IntFile : SUR.E

Vial: 18
Operator: KEH
Inst : HP G1530A
Multiplr: 1.00

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	-1.000	339.096	0.0	100	0.00
2	H	Diesel	-1.000	339.096	0.0	100	0.00
3	H	DRO(C12-C24)	-1.000	81.847	0.0	24	0.00
4	H	Ca Luft DRO (C12-C22)	-1.000	37.682	0.0	101	0.00
5	H	TPHd (C10-C25)	-1.000	134.297	0.0	103	0.00
6	S	o-Terphenyl	-1.000	50.541	0.0	0	0.00
7	H	OIL	500.000	497.629	0.5	99	0.00
8	H	RRO (C24-C40)	500.000	390.135	22.0#	78	0.00
9	H	Ca Luft ORO (C23-C32)	500.000	510.369	-2.1	100	0.00
10	H	TPHmo (C25-C36)	500.000	500.089	-0.0	99	0.00

KEH 6/4/19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060323.D Vial: 18
Acq On : 4 Jun 2019 4:43 Operator: KEH
Sample : 9F03048-CCV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	70328970	50.541 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	432229148	339.096 ug/ml
2)	H	Diesel	6.00	432229148	339.096 ug/mL
3)	H	DRO(C12-C24)	6.00	104326048	81.847 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	35320847	37.682 ug/ml
5)	H	TPHd (C10-C25)	6.00	155522795	134.297 ug/ml
7)	H	OIL	10.00	547637352	497.629 ug/mL
8)	H	RRO (C24-C40)	10.00	429340401	390.135 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	371217575	510.369 ug/mL
10)	H	TPHmo (C25-C36)	9.00	331868606	500.089 ug/mL

KEH 6/4/19

(f)=RT Delta > 1/2 window (m)=manual int.

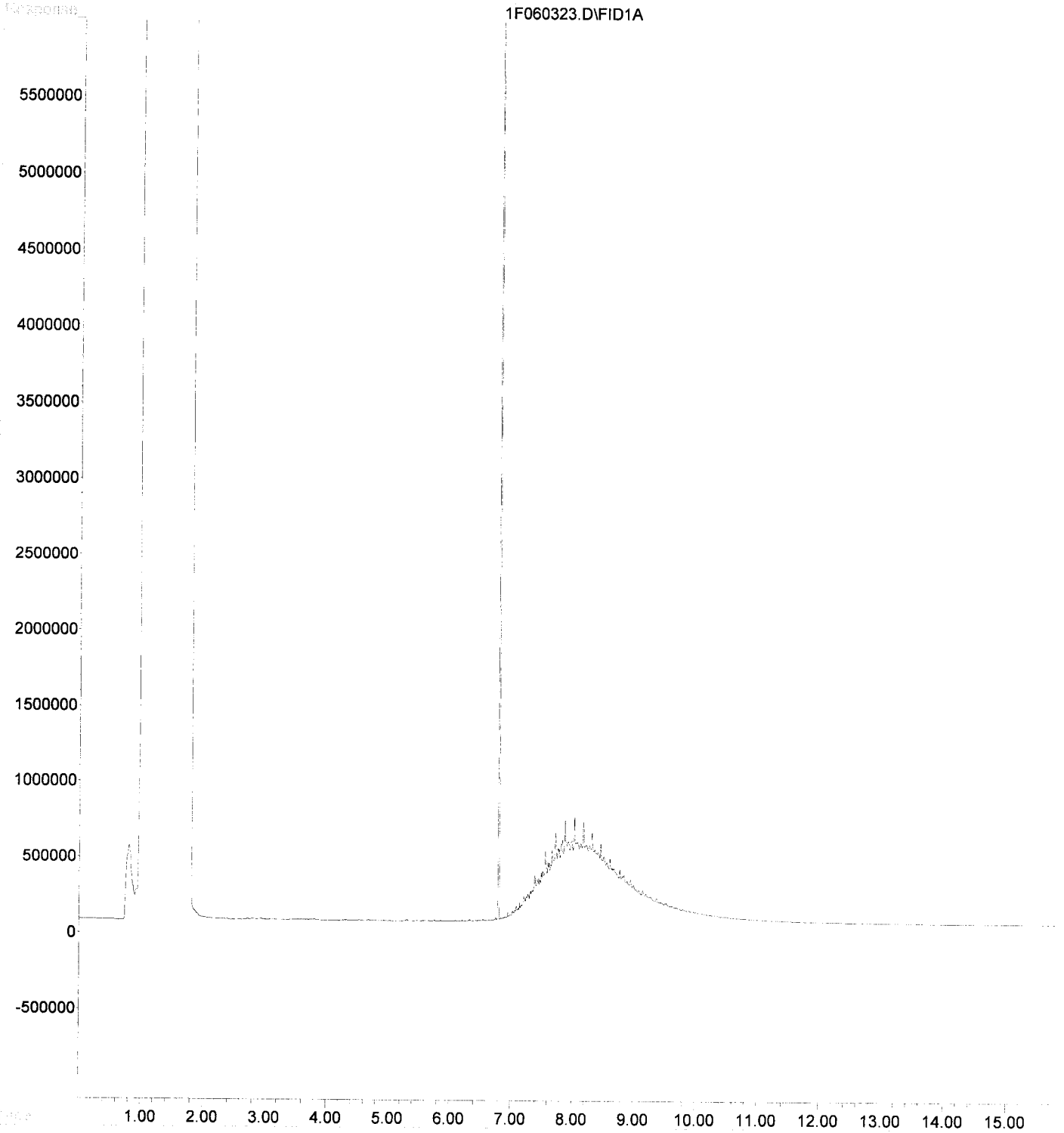
1F060323.D 1F90425D.M Tue Jun 04 07:55:50 2019 SV-GCMS3

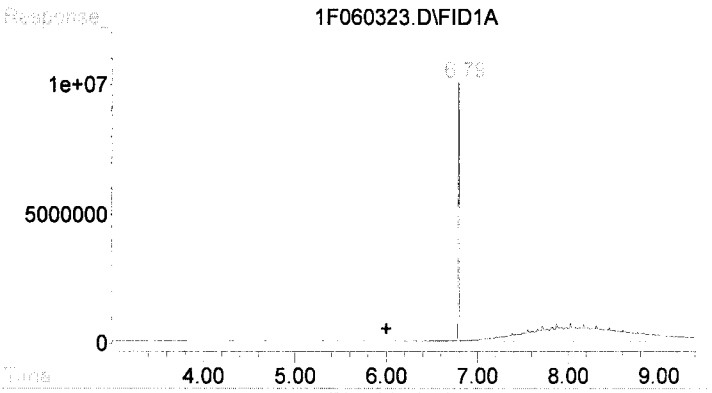
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060323.D Vial: 18
Acq On : 4 Jun 2019 4:43 Operator: KEH
Sample : 9F03048-CCV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

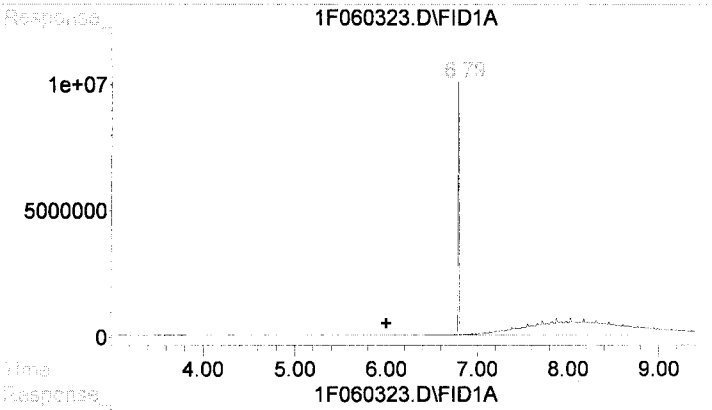
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





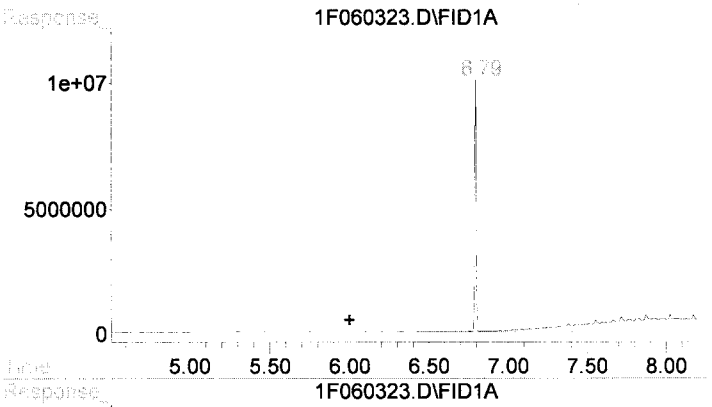
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 432229148
Conc: 339.10 ug/ml m



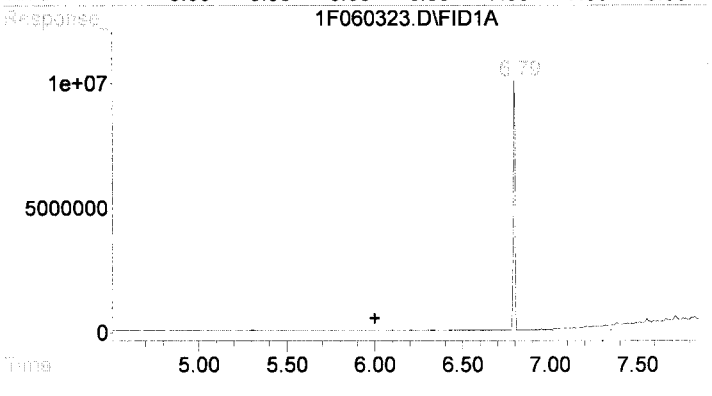
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 432229148
Conc: 339.10 ug/mL m



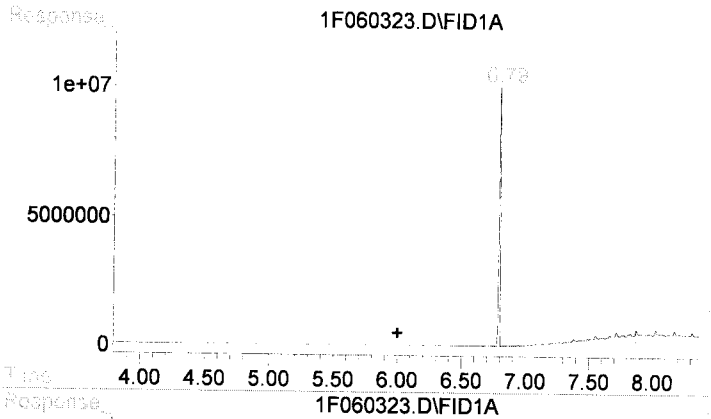
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 104326048
Conc: 81.85 ug/mL m



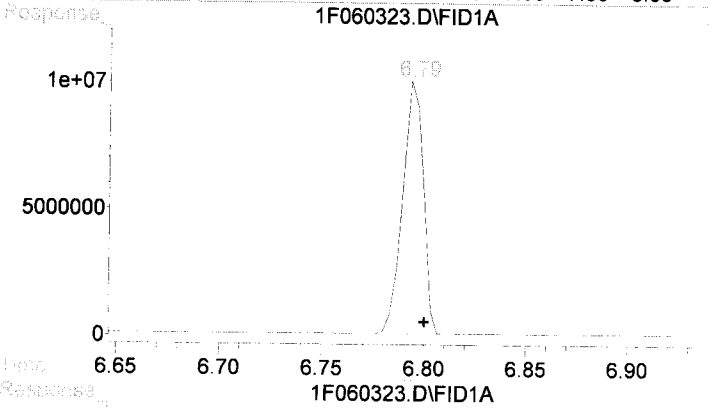
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 35320847
Conc: 37.68 ug/ml m



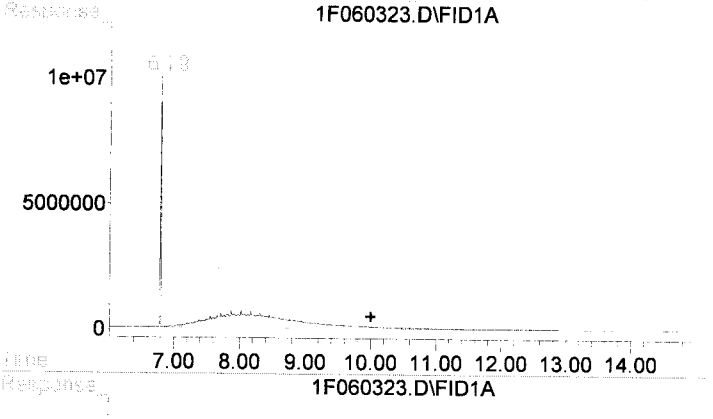
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 155522795
Conc: 134.30 ug/ml m



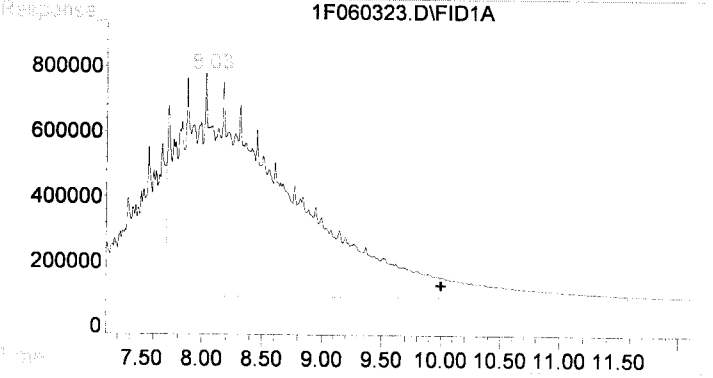
#6 o-Terphenyl

R.T.: 6.795 min
Delta R.T.: -0.005 min
Response: 70328970
Conc: 50.54 ug/mL



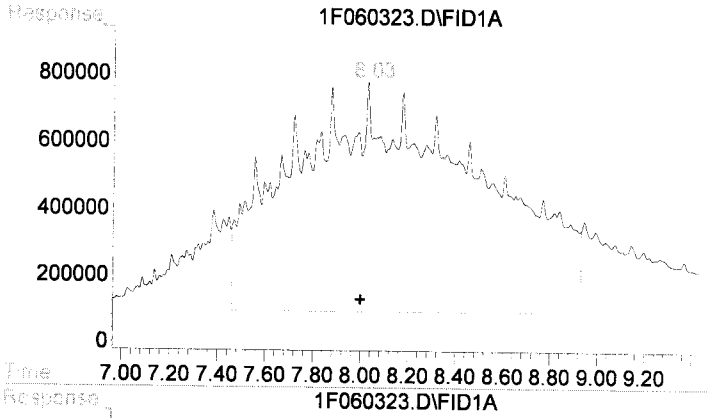
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 547637352
Conc: 497.63 ug/mL m



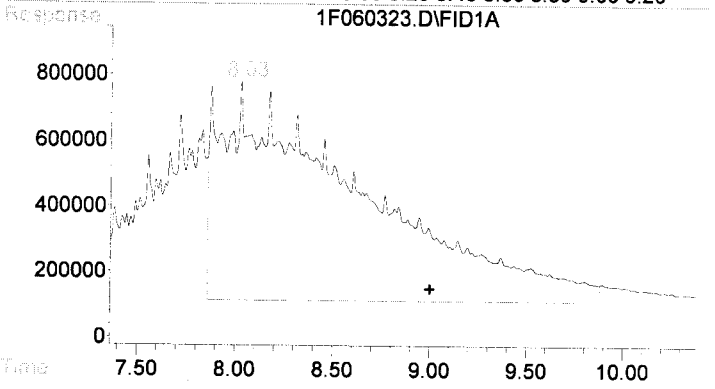
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 429340401
Conc: 390.13 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 371217575
Conc: 510.37 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 9.000 min
Delta R.T.: 0.000 min
Response: 331868606
Conc: 500.09 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060324.D Vial: 99
Acq On : 4 Jun 2019 5:05 Operator: KEH
Sample : 9F03048-CCB2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
6)	S	o-Terphenyl	6.79	95659	0.069	ug/mL
Target Compounds						
1)	H	Mineral Oil	6.00	10703274	8.397	ug/ml
2)	H	Diesel	6.00	10703274	8.397	ug/mL
3)	H	DRO(C12-C24)	6.00	3920222	3.076	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	3539456	3.776	ug/ml
5)	H	TPHd (C10-C25)	6.00	6311893	5.450	ug/ml
7)	H	OIL	10.00	9575701	8.701	ug/mL
8)	H	RRO (C24-C40)	10.00	4899321	4.452	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1411238	1.940	ug/mL
10)	H	TPHmo (C25-C36)	9.00	2380511	3.587	ug/mL

< 1/2 mRL

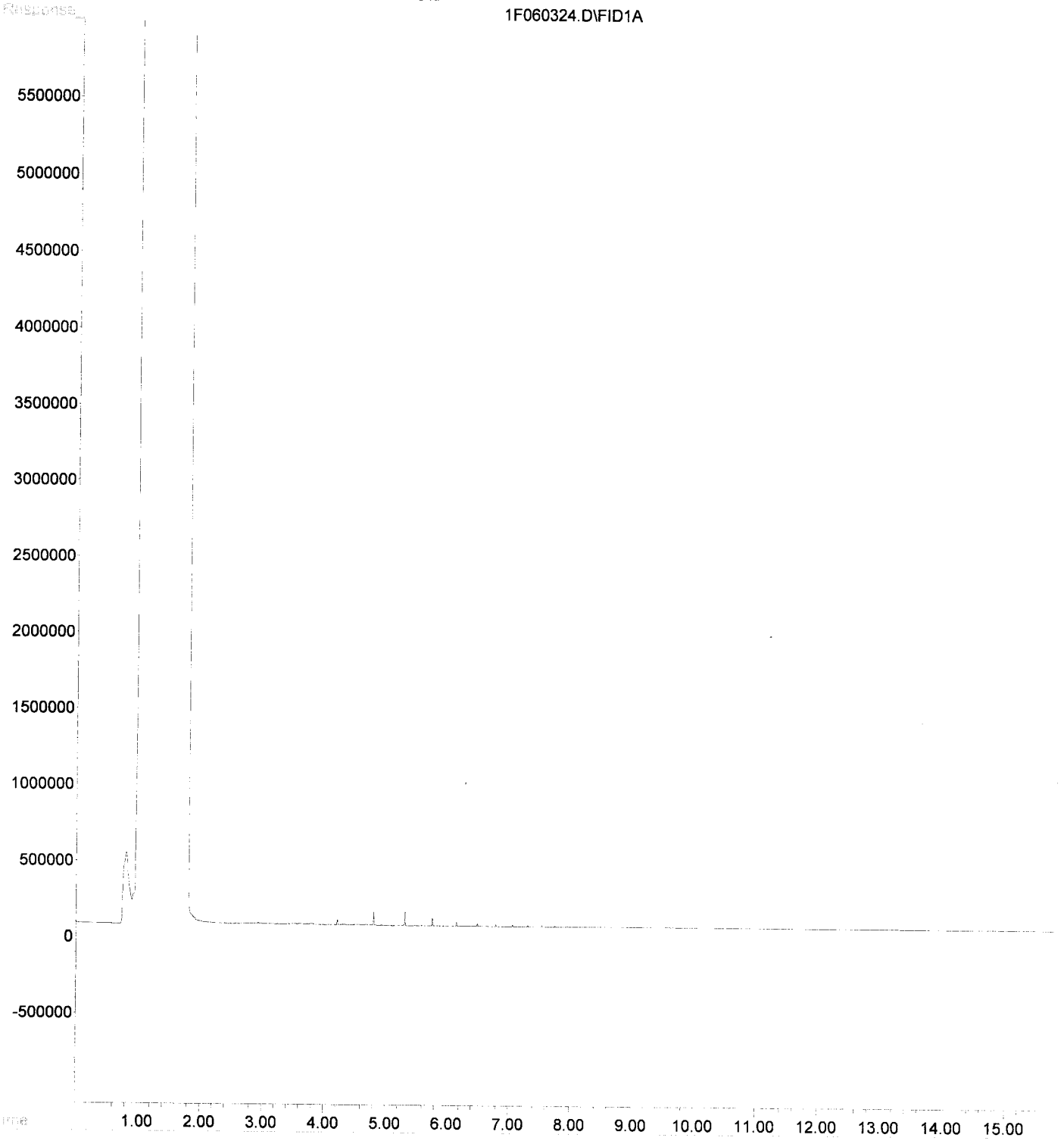
KEH 6/4/19

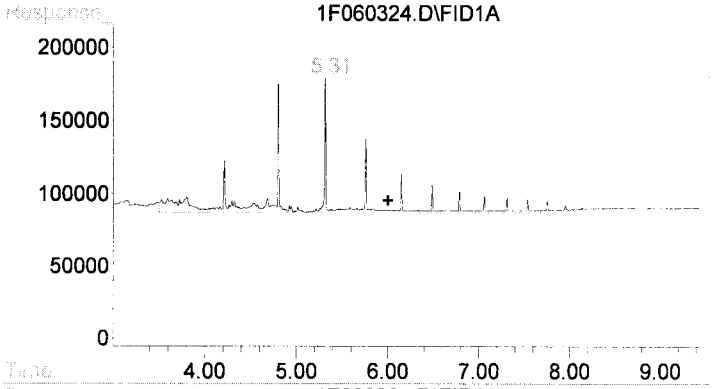
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060324.D Vial: 99
Acq On : 4 Jun 2019 5:05 Operator: KEH
Sample : 9F03048-CCB2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

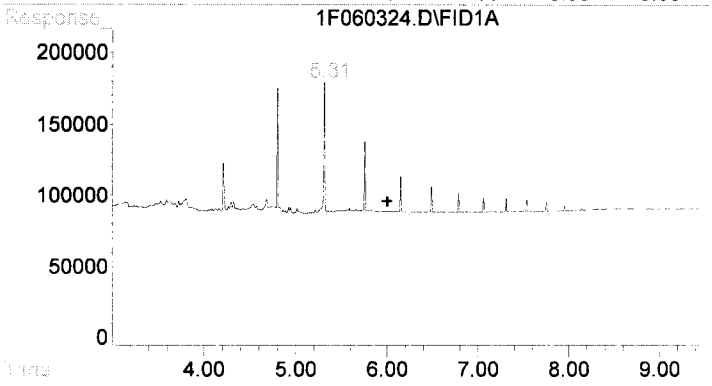
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





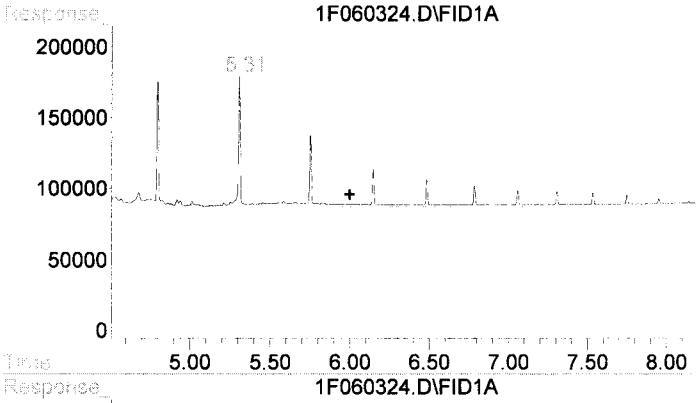
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 10703274
Conc: 8.40 ug/ml m



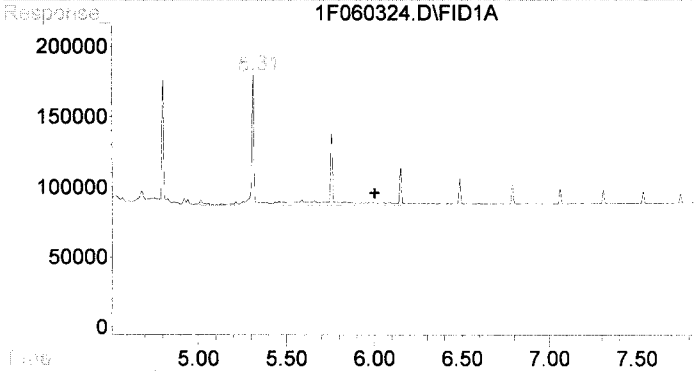
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 10703274
Conc: 8.40 ug/mL m



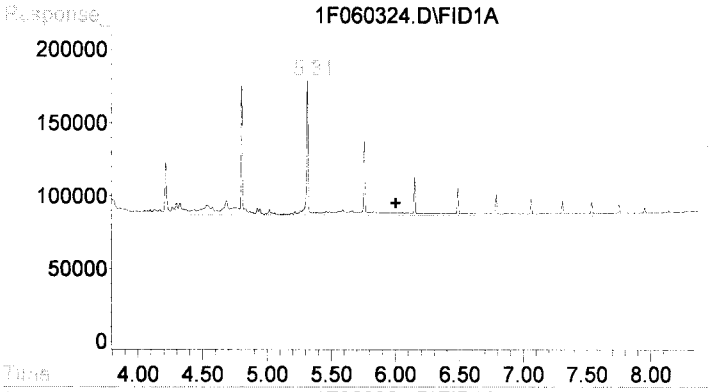
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3920222
Conc: 3.08 ug/mL m



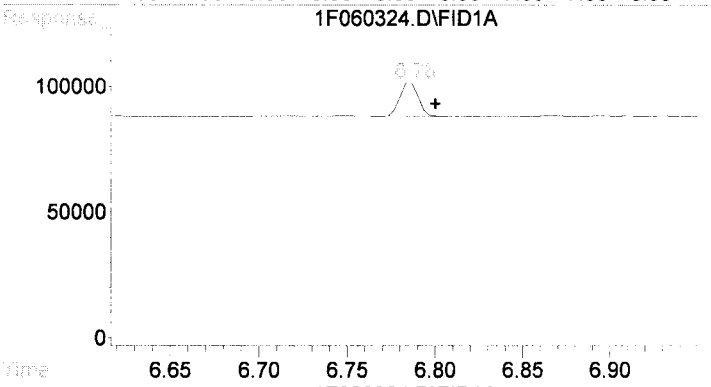
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3539456
Conc: 3.78 ug/ml m



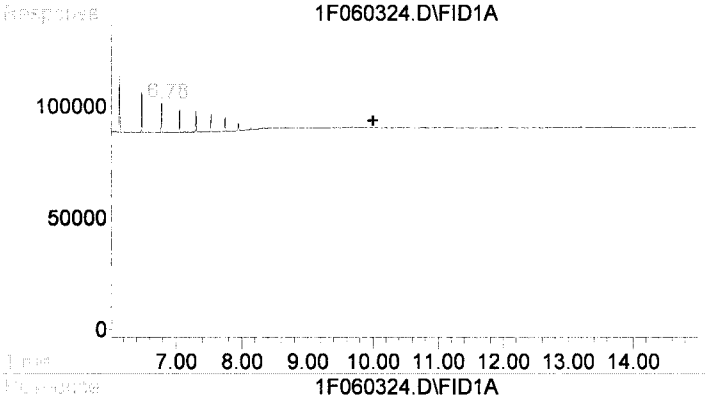
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 6311893
Conc: 5.45 ug/ml m



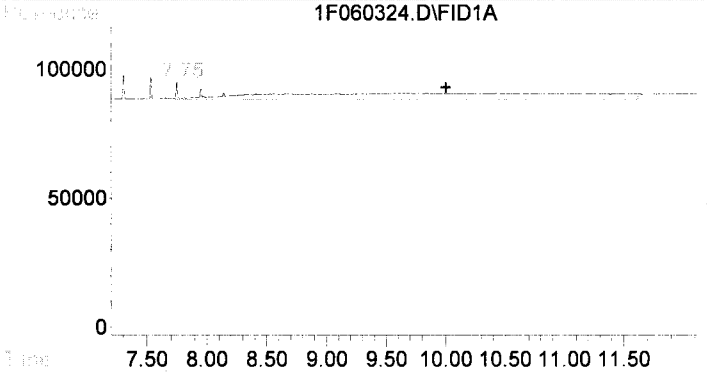
#6 o-Terphenyl

R.T.: 6.786 min
Delta R.T.: -0.014 min
Response: 95659
Conc: 0.07 ug/mL



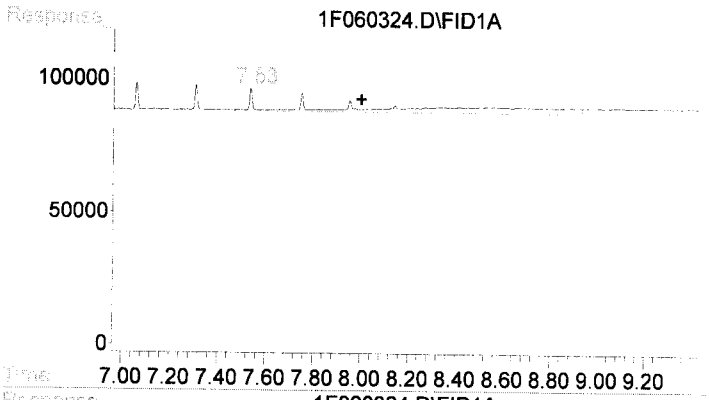
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 9575701
Conc: 8.70 ug/mL m



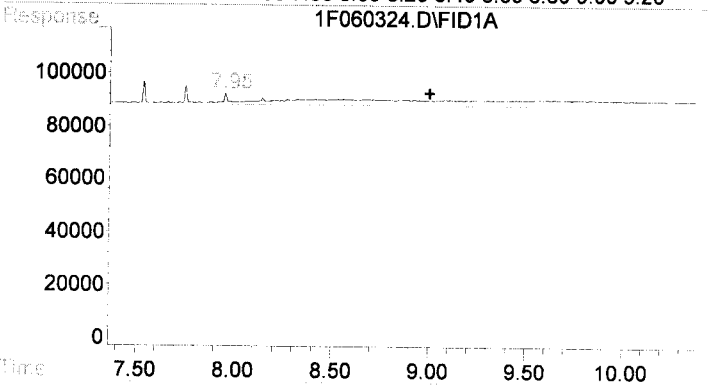
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 4899321
Conc: 4.45 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	1411238
Conc:	1.94 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	2380511
Conc:	3.59 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060325.D Vial: 19
Acq On : 4 Jun 2019 5:28 Operator: KEH
Sample : 9060517-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.79	65815618	47.297	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	10909358	8.559	ug/ml
2)	H	Diesel	6.00	10909358	8.559	ug/mL
3)	H	DRO(C12-C24)	6.00	3683494	2.890	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	3292702	3.513	ug/ml
5)	H	TPHd (C10-C25)	6.00	5771435	4.984	ug/ml
7)	H	OIL	10.00	9657837	8.776	ug/mL
8)	H	RRO (C24-C40)	10.00	5530570	5.026	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	2513997	3.456	ug/mL
10)	H	TPHmo (C25-C36)	9.00	3160447	4.762	ug/mL

< 1/2 MRL

KEH 6/4/19

(f)=RT Delta > 1/2 window (m)=manual int.

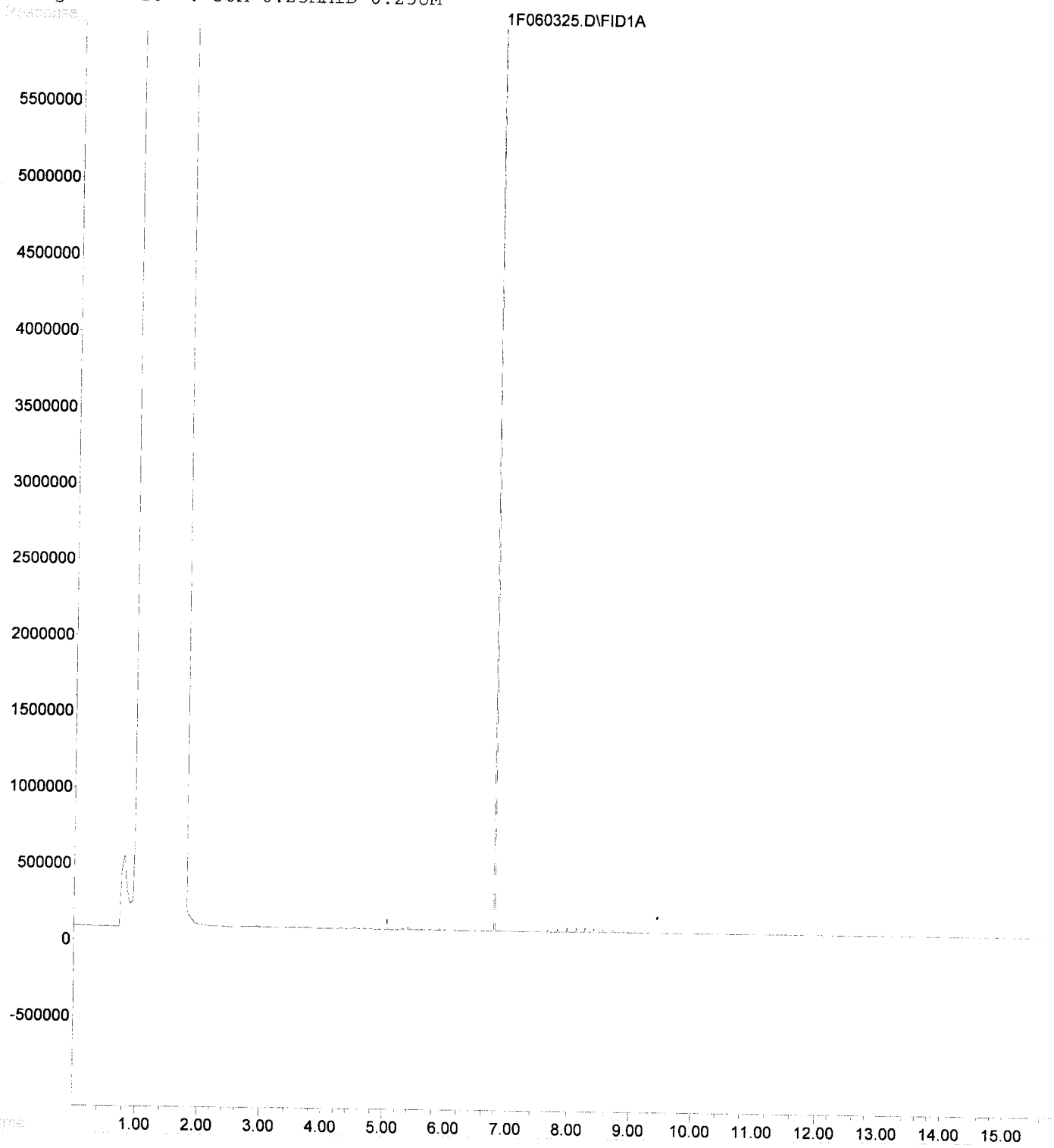
1F060325.D 1F90425D.M Tue Jun 04 07:55:55 2019 SV-GCMS3

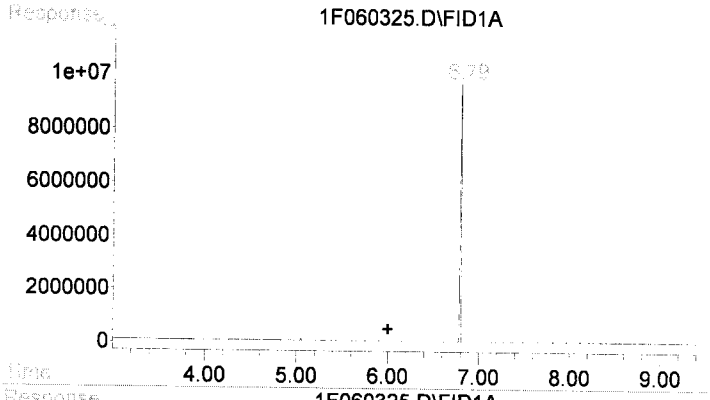
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060325.D
Acq On : 4 Jun 2019 5:28
Sample : 9060517-BLK1
Misc :
IntFile : SUR.E
Vial: 19
Operator: KEH
Inst : HP G1530A
Multiplr: 1.00
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

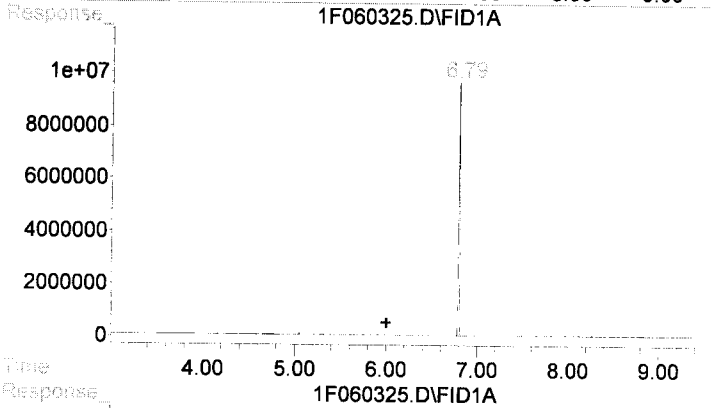
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





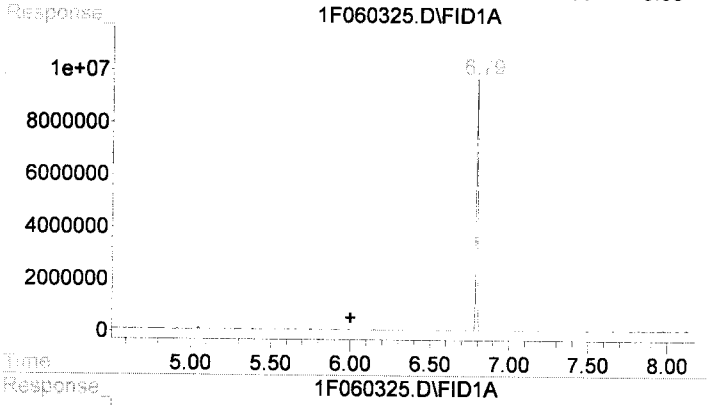
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 10909358
Conc: 8.56 ug/ml m



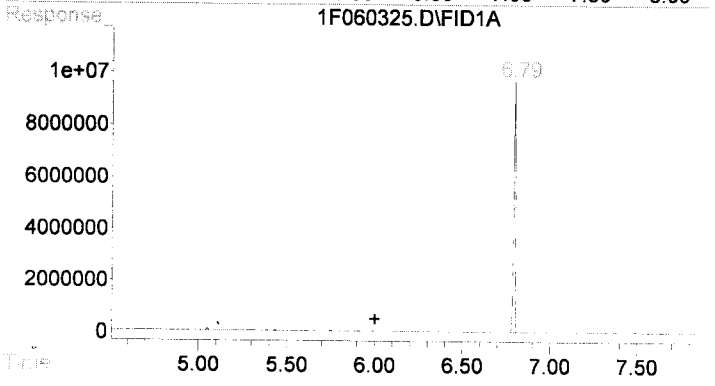
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 10909358
Conc: 8.56 ug/mL m



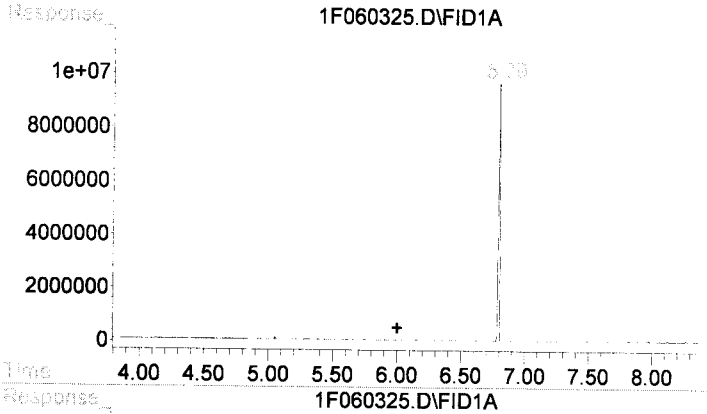
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3683494
Conc: 2.89 ug/mL m



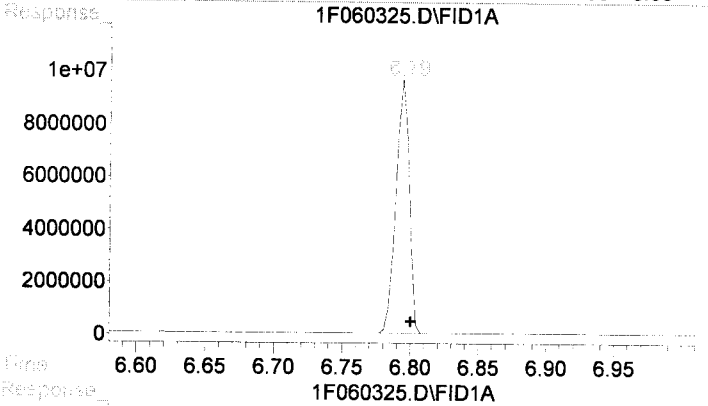
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3292702
Conc: 3.51 ug/ml m



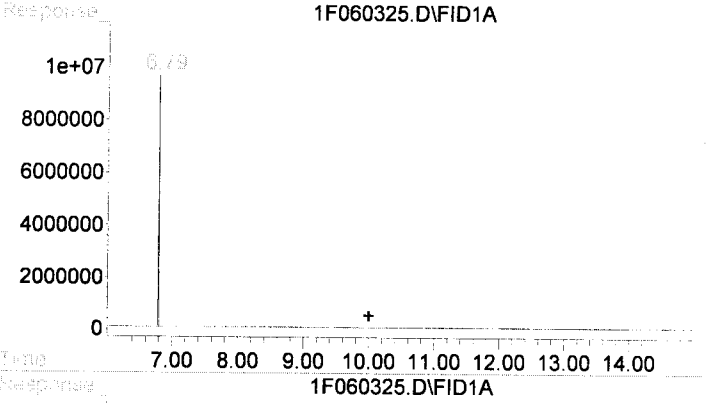
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 5771435
Conc: 4.98 ug/ml m



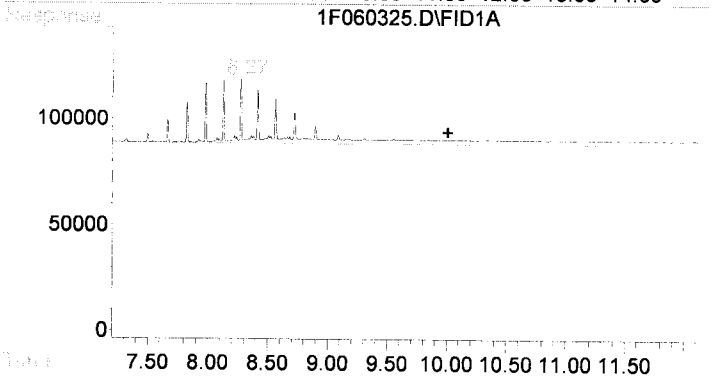
#6 o-Terphenyl

R.T.: 6.795 min
Delta R.T.: -0.005 min
Response: 65815618
Conc: 47.30 ug/mL



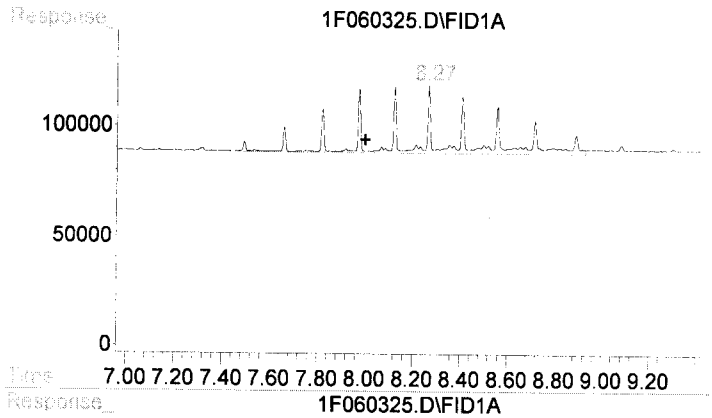
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 9657837
Conc: 8.78 ug/mL m



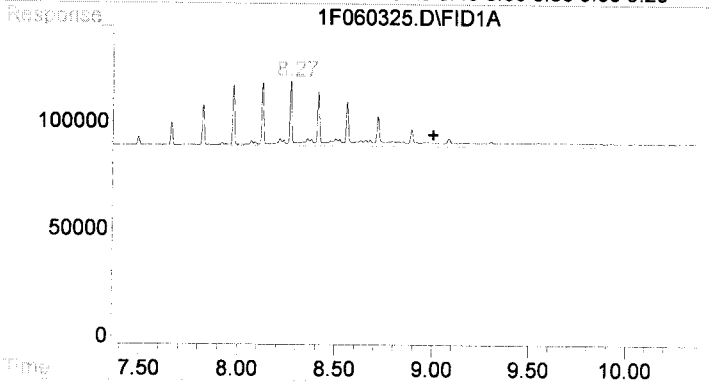
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 5530570
Conc: 5.03 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	2513997
Conc:	3.46 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	3160447
Conc:	4.76 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060326.D Vial: 20
Acq On : 4 Jun 2019 5:50 Operator: KEH
Sample : 9060517-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.80	64664572	46.470	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	295699180	231.984	ug/ml
2)	H	Diesel	6.00	295699180	231.984	ug/mL
3)	H	DRO(C12-C24)	6.00	236085113	185.215	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	224954368	239.989	ug/ml
5)	H	TPHd (C10-C25)	6.00	274900472	237.382	ug/ml
7)	H	OIL	10.00	83885641	76.226	ug/mL
8)	H	RRO (C24-C40)	10.00	7009428	6.369	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	11505484	15.818	ug/mL
10)	H	TPHmo (C25-C36)	9.00	4867342	7.335	ug/mL

KEH 6/4/19

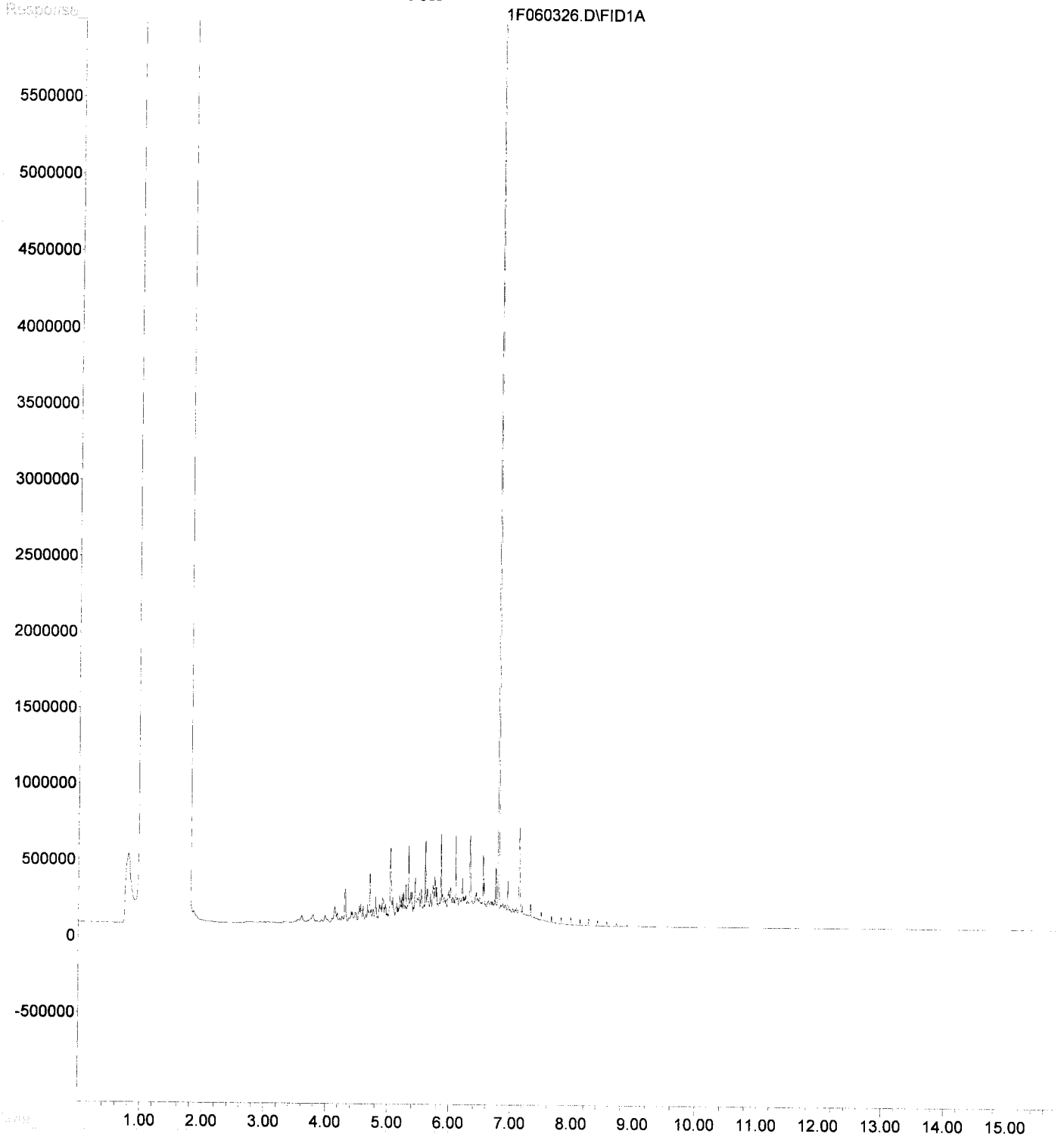
(f)=RT Delta > 1/2 Window (m)=manual int.

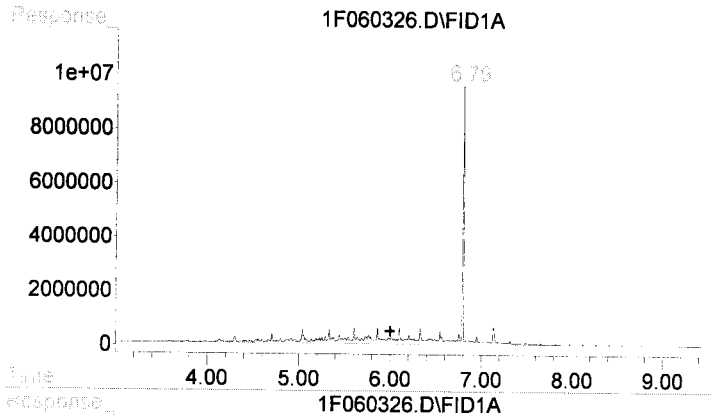
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060326.D Vial: 20
Acq On : 4 Jun 2019 5:50 Operator: KEH
Sample : 9060517-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:55 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

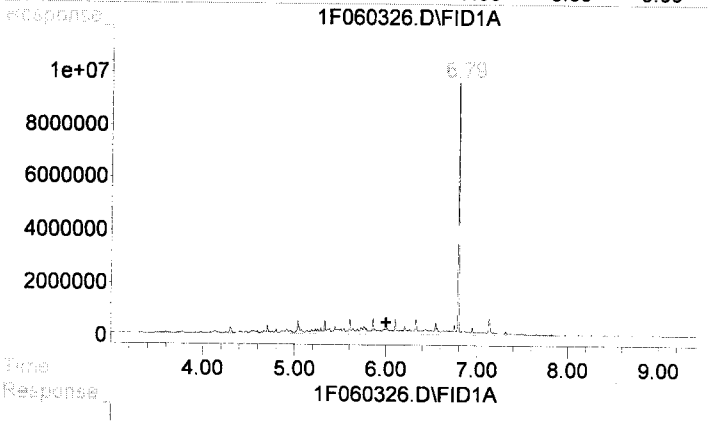
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





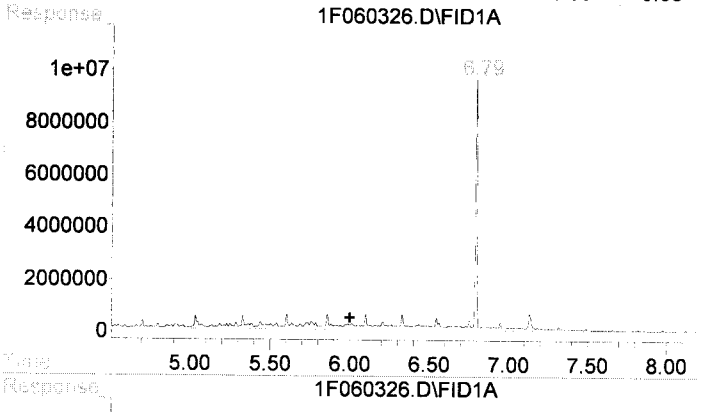
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 295699180
Conc: 231.98 ug/ml m



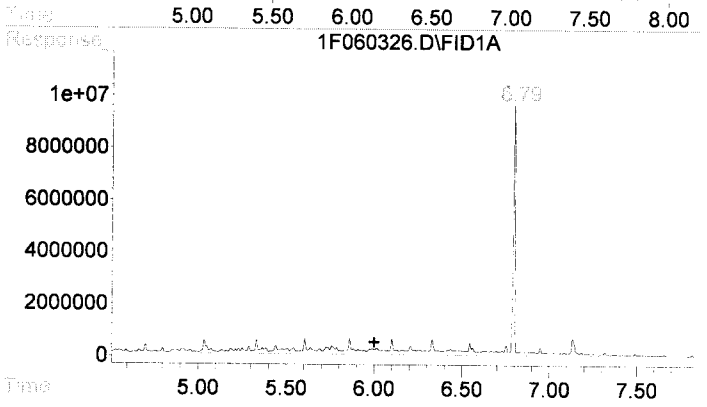
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 295699180
Conc: 231.98 ug/mL m



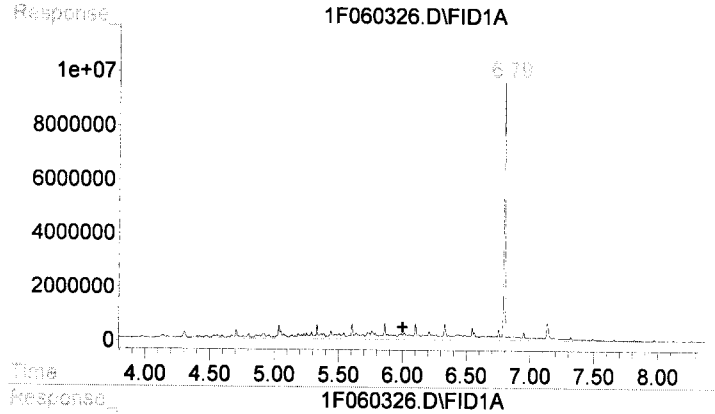
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 236085113
Conc: 185.22 ug/mL m



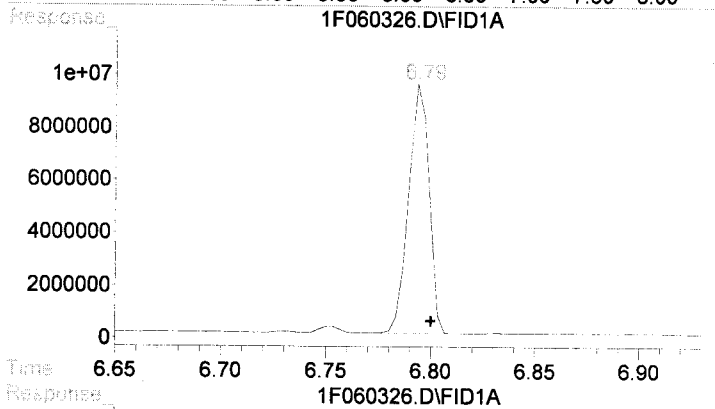
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 224954368
Conc: 239.99 ug/ml m



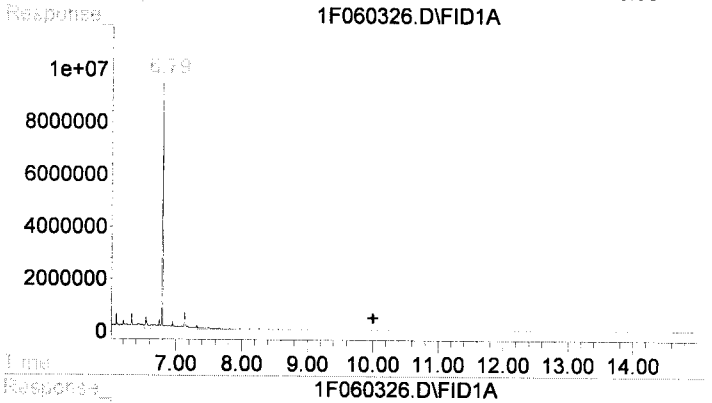
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 274900472
Conc: 237.38 ug/ml m



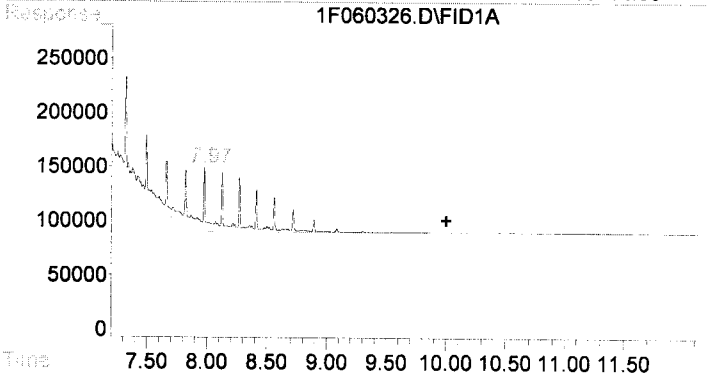
#6 o-Terphenyl

R.T.: 6.795 min
Delta R.T.: -0.005 min
Response: 64664572
Conc: 46.47 ug/mL



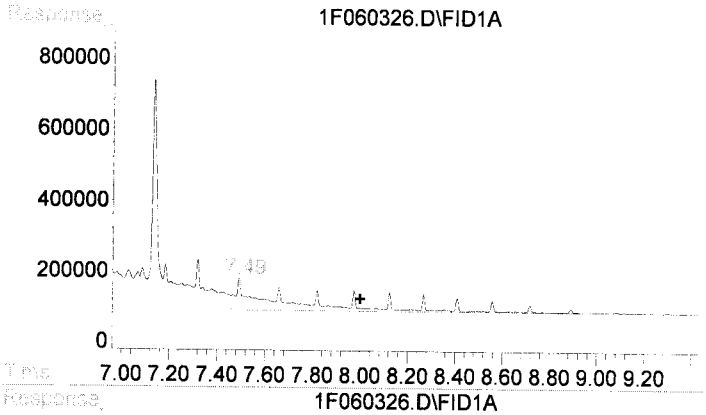
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 83885641
Conc: 76.23 ug/mL m



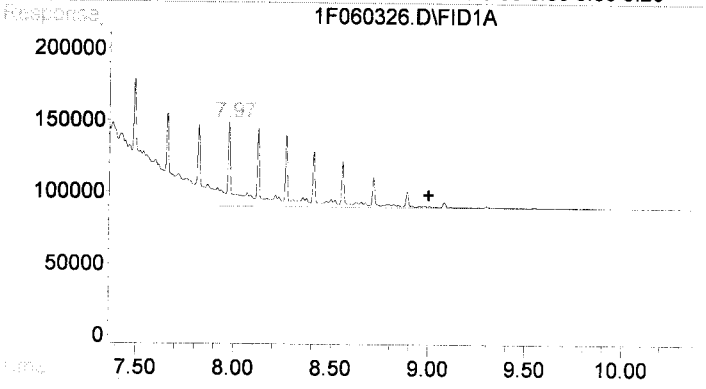
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 7009428
Conc: 6.37 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	11505484
Conc:	15.82 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	4867342
Conc:	7.33 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060327.D Vial: 21
Acq On : 4 Jun 2019 6:13 Operator: KEH
Sample : A9E0723-03@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:56 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.79	835318	0.600	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	223205041	175.111	ug/ml
2)	H	Diesel	6.00	223205041	175.111	ug/mL
3)	H	DRO(C12-C24)	6.00	166036838	130.261	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	156326866	166.775	ug/ml
5)	H	TPHd (C10-C25)	6.00	176664017	152.553	ug/ml
7)	H	OIL	10.00	152492591	138.568	ug/mL
8)	H	RRO (C24-C40)	10.00	63294372	57.515	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	49188927	67.628	ug/mL
10)	H	TPHmo (C25-C36)	9.00	52979894	79.835	ug/mL

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< MRL

create → DRO/RRO

KEH 6/4/19

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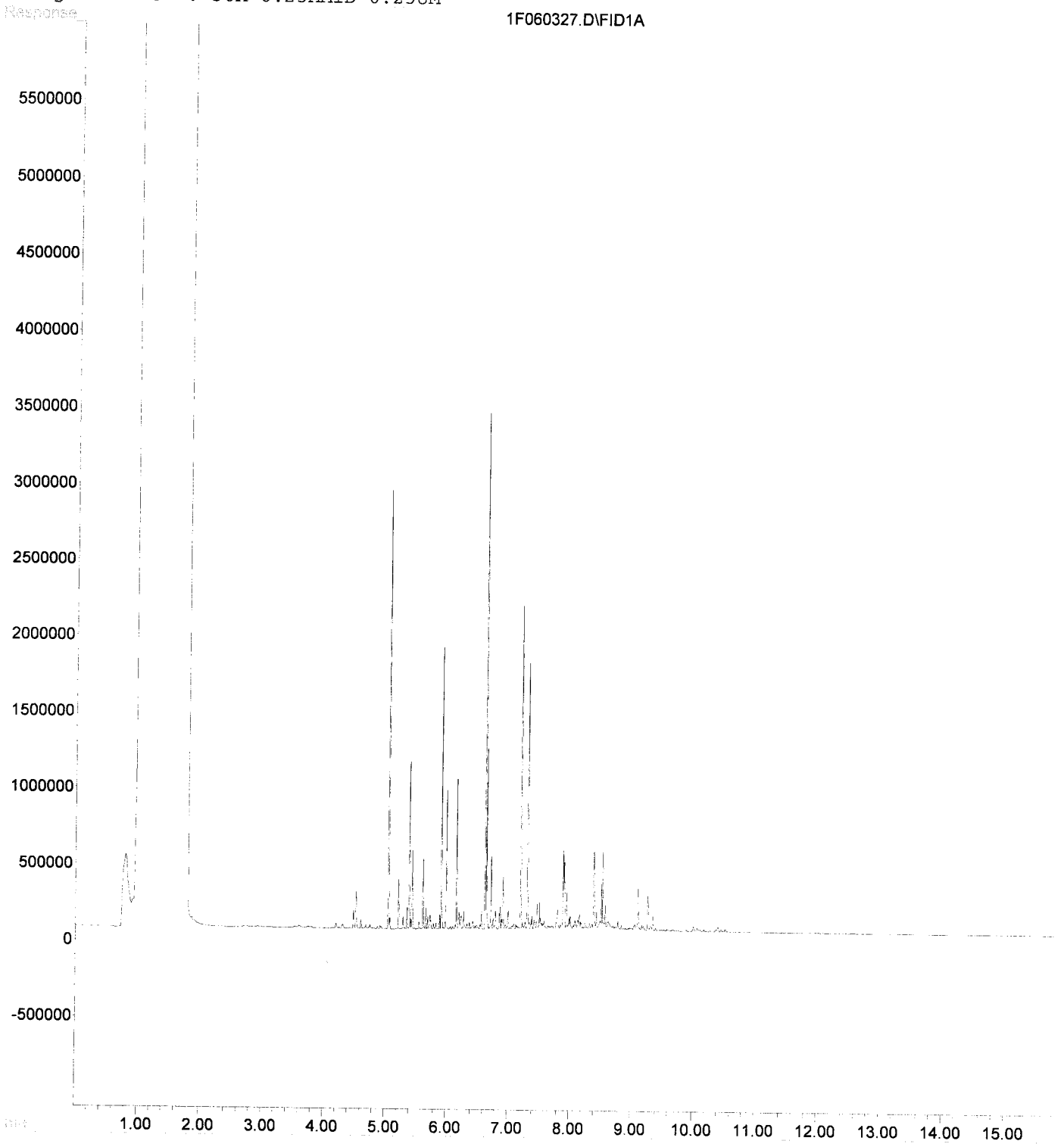
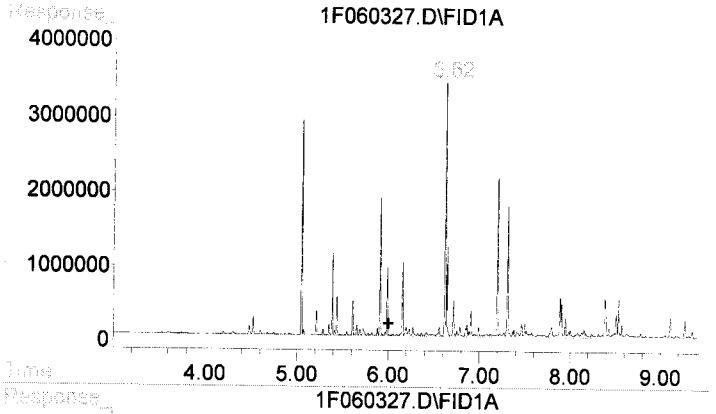
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060327.D Vial: 21
Acq On : 4 Jun 2019 6:13 Operator: KEH
Sample : A9E0723-03@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:56 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

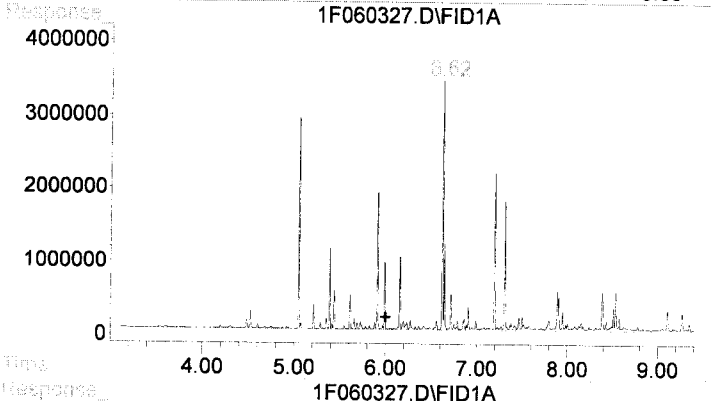
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





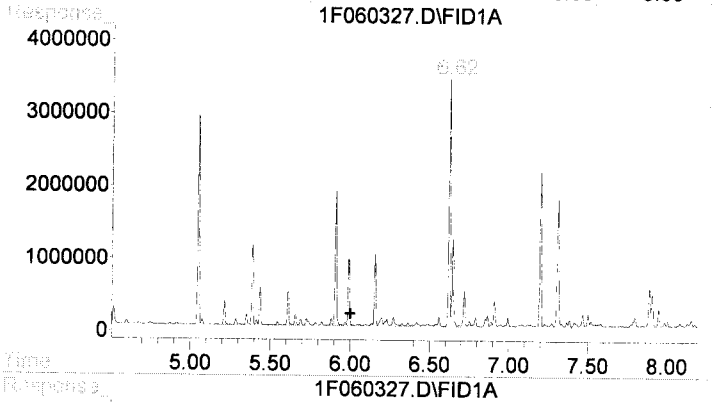
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 223205041
Conc: 175.11 ug/ml m



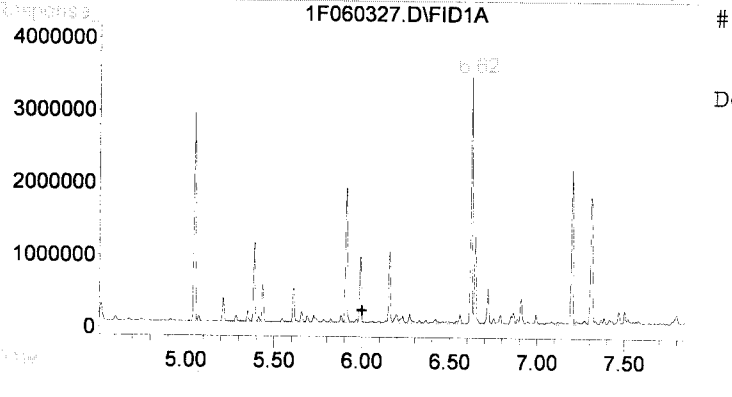
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 223205041
Conc: 175.11 ug/mL m



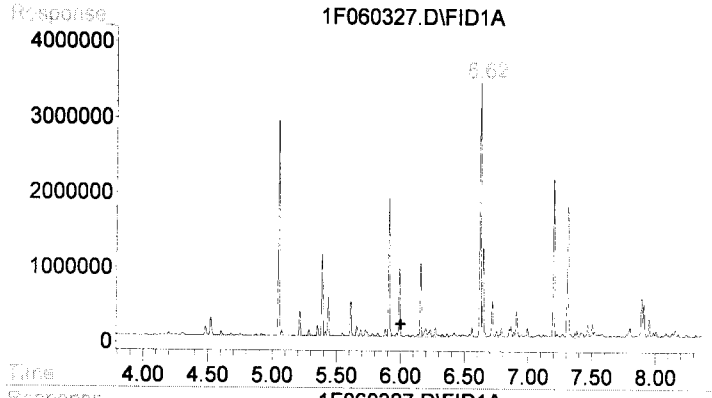
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 166036838
Conc: 130.26 ug/mL m



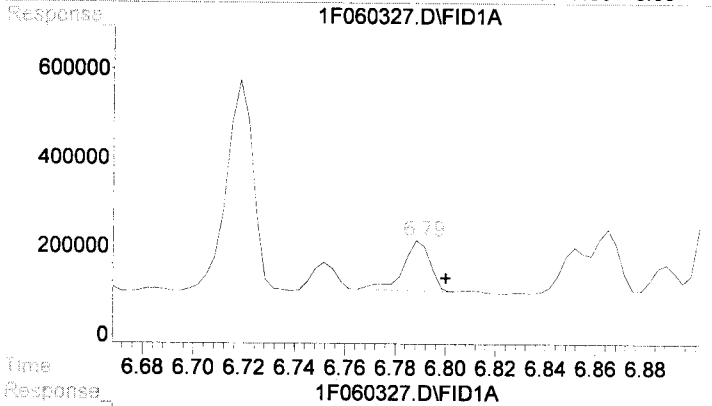
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 156326866
Conc: 166.77 ug/ml m



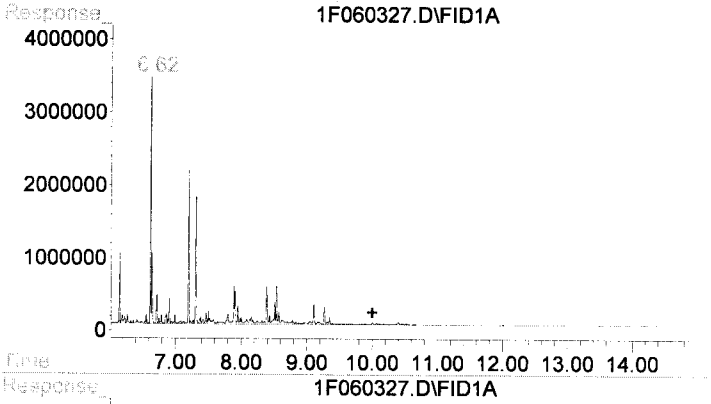
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 176664017
Conc: 152.55 ug/ml m



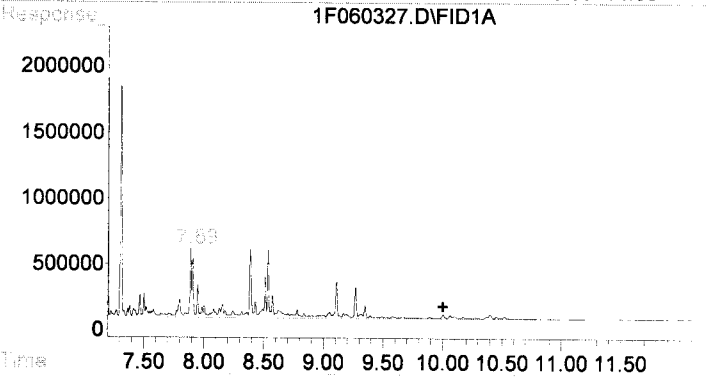
#6 o-Terphenyl

R.T.: 6.790 min
Delta R.T.: -0.010 min
Response: 835318
Conc: 0.60 ug/mL



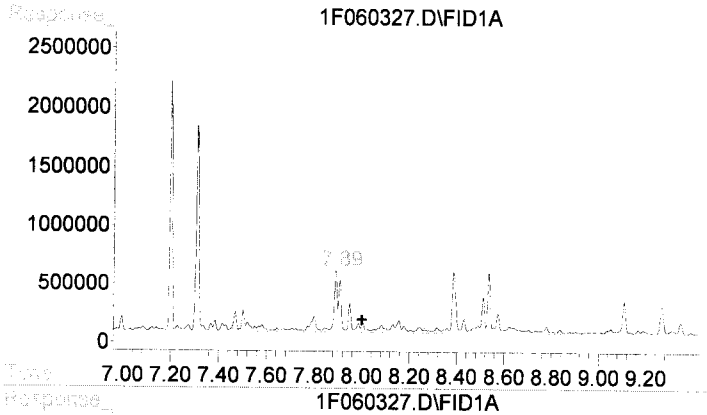
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 152492591
Conc: 138.57 ug/mL m



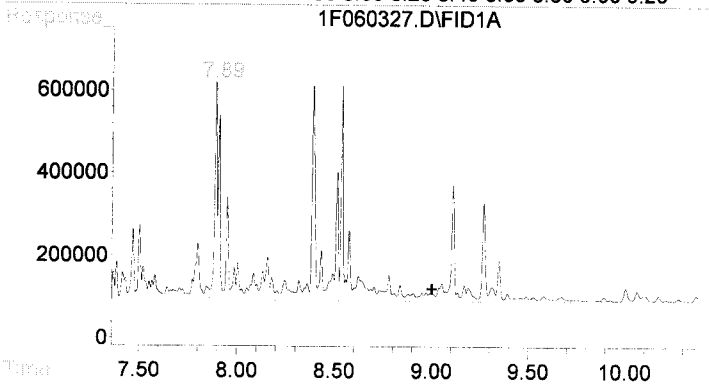
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 63294372
Conc: 57.51 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	49188927
Conc:	67.63 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	52979894
Conc:	79.83 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060328.D Vial: 22
Acq On : 4 Jun 2019 6:36 Operator: KEH
Sample : 9060517-DUP1@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:56 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.79	831046	0.597	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	210958609	165.503	ug/ml
2)	H	Diesel	6.00	210958609	165.503	ug/mL
3)	H	DRO(C12-C24)	6.00	154410926	121.140	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	144930836	154.617	ug/ml
5)	H	TPHd (C10-C25)	6.00	164841457	142.344	ug/ml
7)	H	OIL	10.00	144804426	131.581	ug/mL
8)	H	RRO (C24-C40)	10.00	62739979	57.011	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	48204277	66.274	ug/mL
10)	H	TPHmo (C25-C36)	9.00	52468167	79.064	ug/mL

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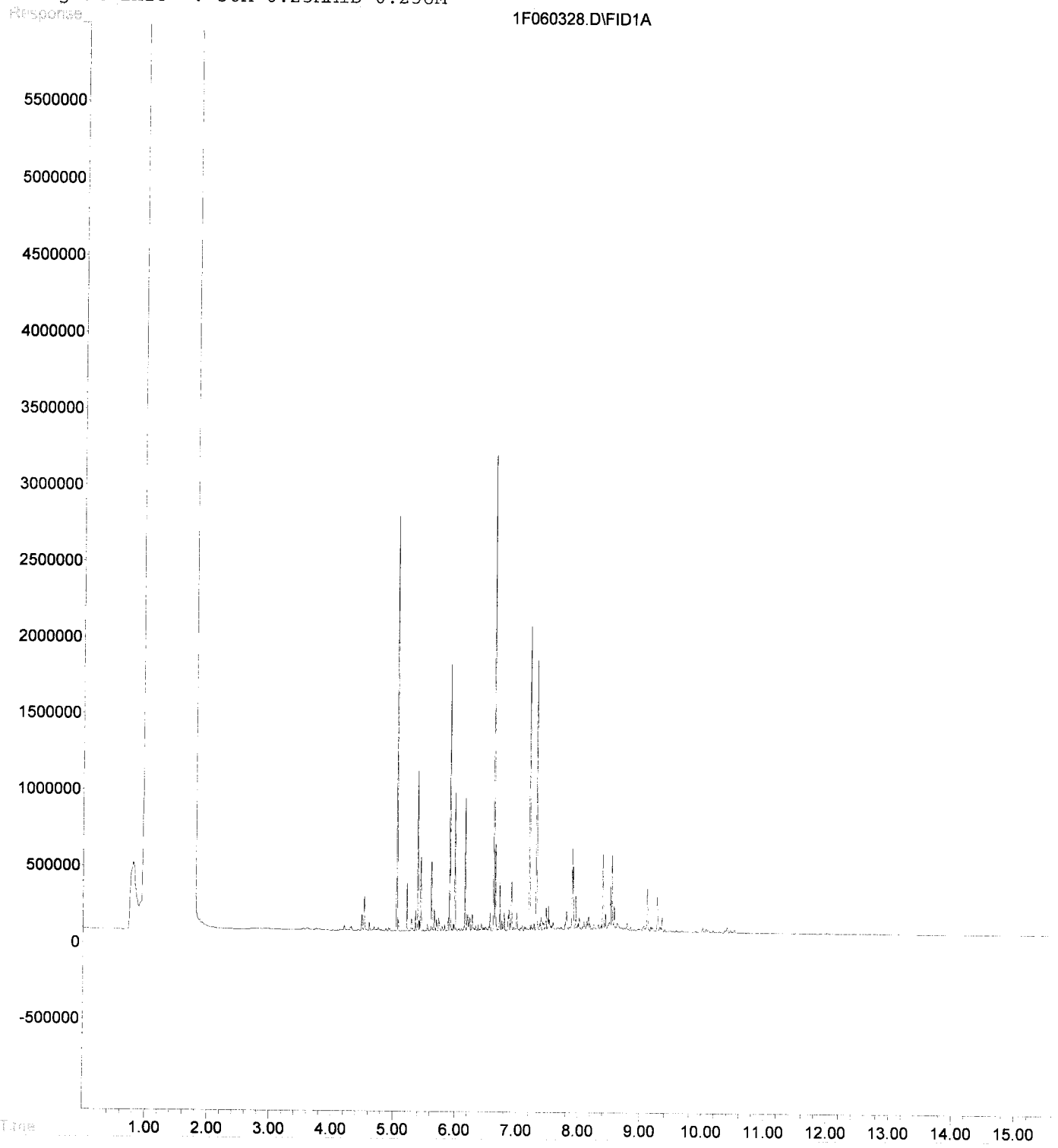
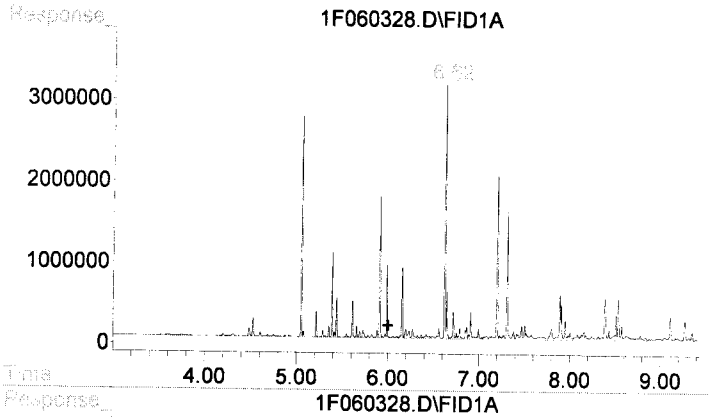
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-06\9F03048\1F060328.D Vial: 22
Acq On : 4 Jun 2019 6:36 Operator: KEH
Sample : 9060517-DUP1@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jun 4 7:56 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Mon Jun 03 07:54:50 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

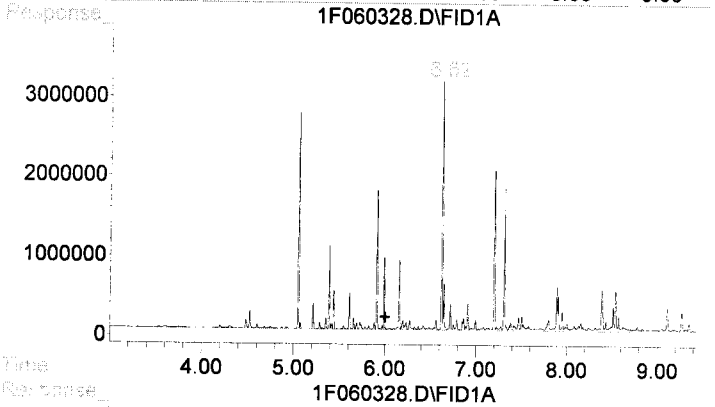
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





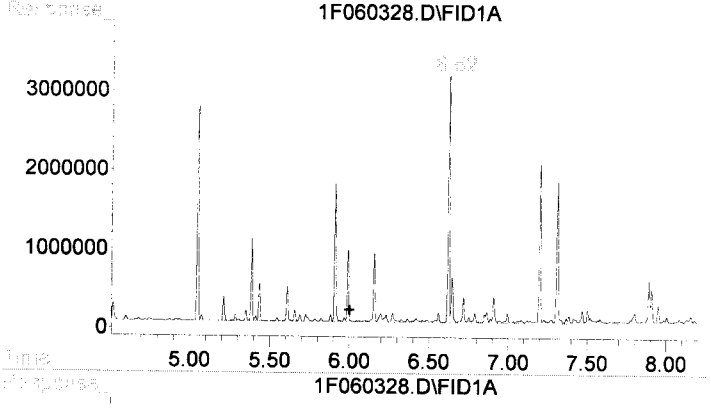
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 210958609
Conc: 165.50 ug/ml m



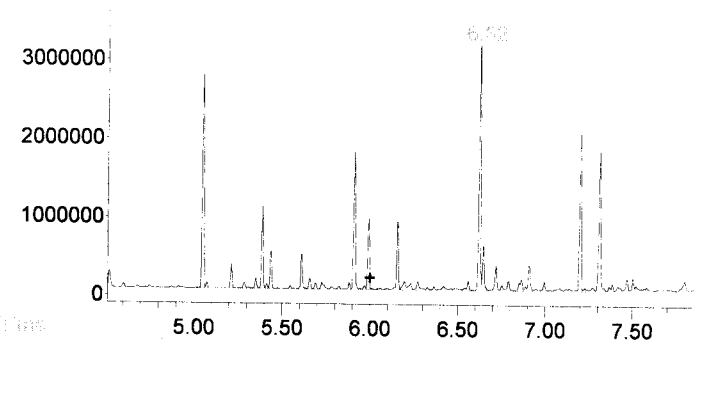
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 210958609
Conc: 165.50 ug/mL m



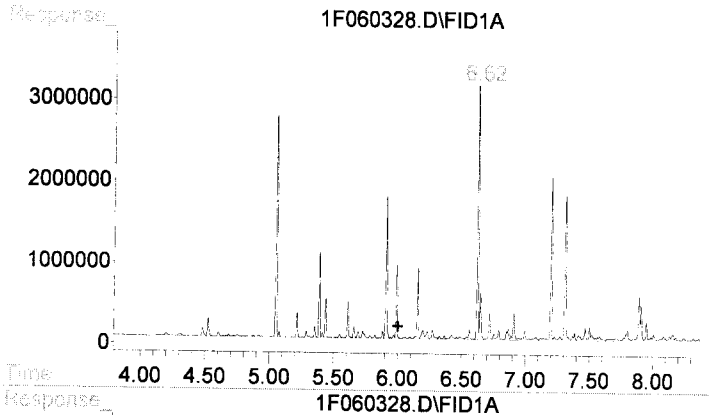
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 154410926
Conc: 121.14 ug/mL m



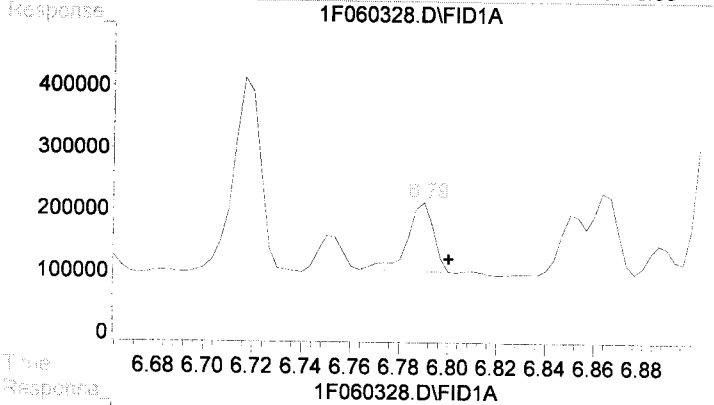
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 144930836
Conc: 154.62 ug/ml m



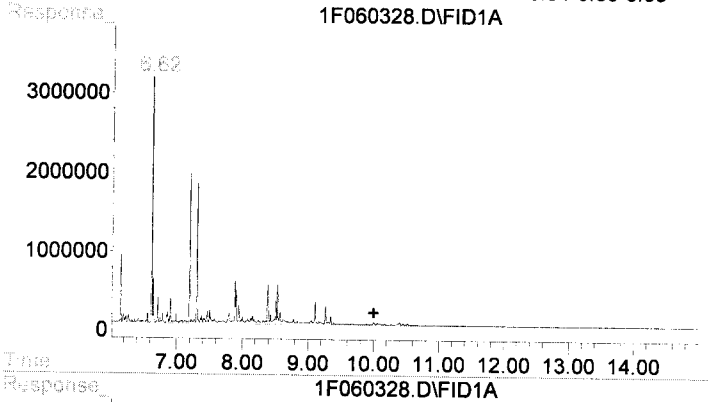
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 164841457
Conc: 142.34 ug/ml m



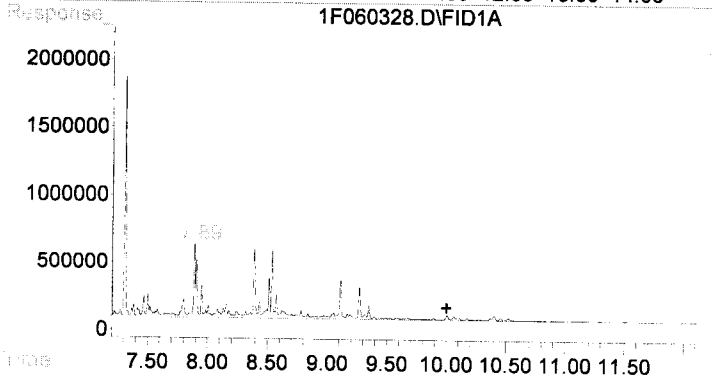
#6 o-Terphenyl

R.T.: 6.790 min
Delta R.T.: -0.010 min
Response: 831046
Conc: 0.60 ug/mL



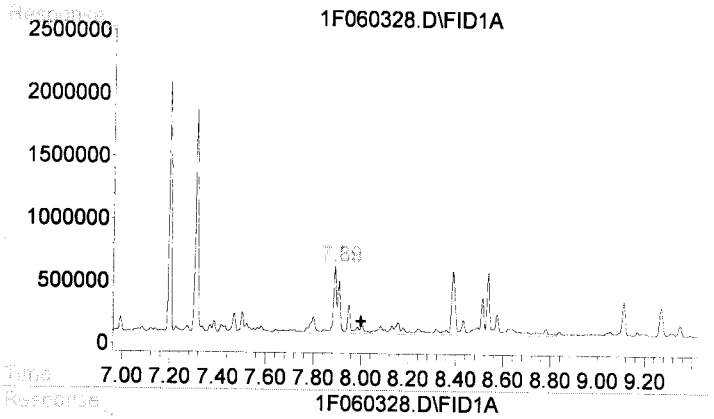
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 144804426
Conc: 131.58 ug/mL m



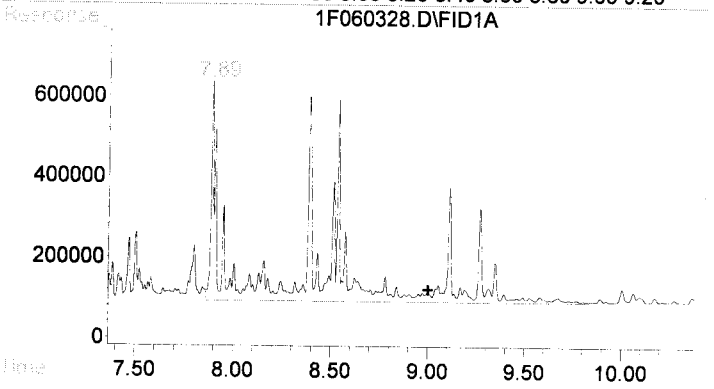
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 62739979
Conc: 57.01 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	48204277
Conc:	66.27 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	9.000 min
Delta R.T.:	0.000 min
Response:	52468167
Conc:	79.06 ug/mL m

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Diesel and /or Oil Hydrocarbons by NWTPH-Dx

Calibration Data

Sequence 9D25027 (Cal ID A9D2602) DUALFID1F

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9D25027**	Instrument:	**DUALFID1F**
Date:	**04/25/19 11:47**	Calibration:	**A9D2602**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D25027-RES1	Soil	QC	QC				A19C198
2	9D25027-ICB1	Soil	QC	QC				
3	9D25027-CAL1	Soil	QC	QC				A19C305
4	9D25027-CAL2	Soil	QC	QC				A19C306
5	9D25027-CAL3	Soil	QC	QC				A19C307
6	9D25027-CAL4	Soil	QC	QC				A19C308
7	9D25027-CAL5	Soil	QC	QC				A19C309
8	9D25027-CAL6	Soil	QC	QC				A19C310
9	9D25027-CAL7	Soil	QC	QC				A19C311
10	9D25027-CAL8	Soil	QC	QC				A19C204
11	9D25027-CAL9	Soil	QC	QC				A19D191
12	9D25027-CALA	Soil	QC	QC				A19D192
13	9D25027-CALB	Soil	QC	QC				A19D193
14	9D25027-CALC	Soil	QC	QC				A19D194
15	9D25027-CALD	Soil	QC	QC				A19C210
16	9D25027-CALE	Soil	QC	QC				A19C365
17	9D25027-CALF	Soil	QC	QC				A19C366
18	9D25027-CALG	Soil	QC	QC				A19C367
19	9D25027-CALH	Soil	QC	QC				A19C368
20	9D25027-CALI	Soil	QC	QC				A19C373
21	9D25027-CALJ	Soil	QC	QC				A19C370
22	9D25027-IBL1	Soil	QC	QC				
23	9D25027-CALK	Soil	QC	QC				A19C364
24	9D25027-IBL2	Soil	QC	QC				
25	9D25027-ICV1	Soil	QC	QC				A19D271
26	9D25027-ICV2	Soil	QC	QC				A19D272

Data Entered By: Kelt 4/26/19

Data Reviewed By: [signature] 4/26/19

Comments:

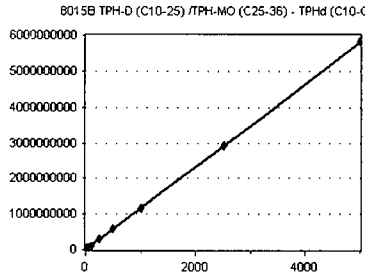
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **8015B TPH-D (C10-25) /TPH·** Instrument Cal ID: **1F90425D.m**

TPHd (C10-C25)

Curve Fit: **AVERAGE RF**

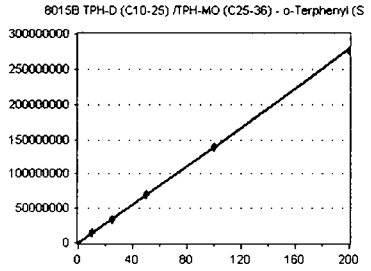


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	851515E+07	1140606.000	6.00
9D25027-CAL2	40	575255E+07	1143814.000	6.00
9D25027-CAL3	100	134596E+08	1134596.000	6.00
9D25027-CAL4	250	921196E+08	1168479.000	6.00
9D25027-CAL5	500	899296E+08	1179859.000	6.00
9D25027-CAL6	1000	164841E+09	1164841.000	6.00
9D25027-CAL7	2500	.91916E+09	1167664.000	6.00
9D25027-CAL8	5000	822794E+09	1164559.000	6.00

AVE RF **1158052.000** RF RSD **1.39** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

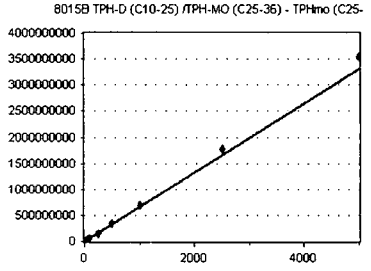


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

TPHmo (C25-C36)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	362306E+07	590576.500	9.00
9D25027-CALF	80	952232E+07	619029.000	9.00
9D25027-CALG	250	606323E+08	642529.200	9.00
9D25027-CALH	500	360458E+08	672091.600	9.00
9D25027-CALI	1000	7.0138E+08	701379.900	9.00
9D25027-CALJ	2500	775804E+09	710321.600	9.00
9D25027-CALK	5000	547022E+09	709404.400	9.00

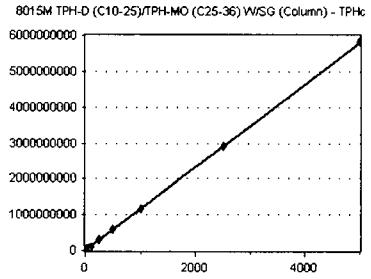
AVE RF **663618.900** RF RSD **7.16** AVE RT **9.00**

Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **8015M TPH-D (C10-25)/TPH-** Instrument Cal ID: **1F90425D.m**

TPHd (C10-C25)

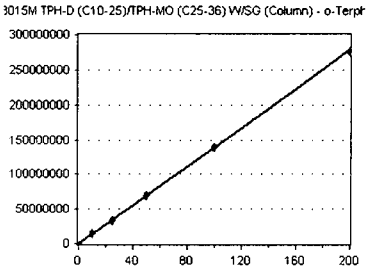


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	851515E+07	1140606.000	6.00
9D25027-CAL2	40	575255E+07	1143814.000	6.00
9D25027-CAL3	100	134596E+08	1134596.000	6.00
9D25027-CAL4	250	921196E+08	1168479.000	6.00
9D25027-CAL5	500	899296E+08	1179859.000	6.00
9D25027-CAL6	1000	164841E+09	1164841.000	6.00
9D25027-CAL7	2500	.91916E+09	1167664.000	6.00
9D25027-CAL8	5000	822794E+09	1164559.000	6.00

AVE RF **1158052.000** RF RSD **1.39** AVE RT **6.00**

o-Terphenyl (Surr)

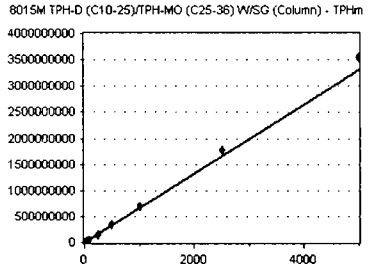


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

TPHmo (C25-C36)



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	362306E+07	590576.500	9.00
9D25027-CALF	80	952232E+07	619029.000	9.00
9D25027-CALG	250	606323E+08	642529.200	9.00
9D25027-CALH	500	360458E+08	672091.600	9.00
9D25027-CALI	1000	7.0138E+08	701379.900	9.00
9D25027-CALJ	2500	775804E+09	710321.600	9.00
9D25027-CALK	5000	547022E+09	709404.400	9.00

AVE RF **663618.900** RF RSD **7.16** AVE RT **9.00**

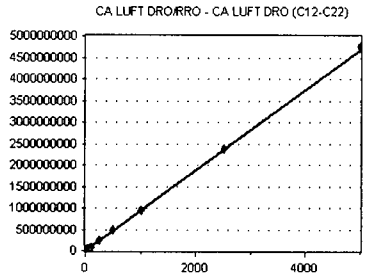
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **CA LUFT DRO/RRO** Instrument Cal ID: **1F90425D.m**

CA LUFT DRO (C12-C22)

Curve Fit: **AVERAGE RF**

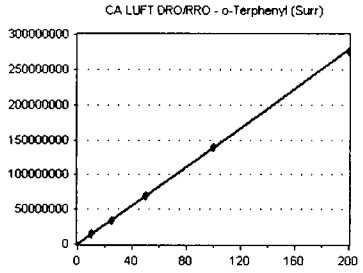


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	268475E+07	907390.000	6.00
9D25027-CAL2	40	647287E+07	911821.800	6.00
9D25027-CAL3	100	181746E+07	918174.600	6.00
9D25027-CAL4	250	370784E+08	948313.600	6.00
9D25027-CAL5	500	808429E+08	961685.800	6.00
9D25027-CAL6	1000	500637E+08	950063.700	6.00
9D25027-CAL7	2500	380626E+09	952250.400	6.00
9D25027-CAL8	5000	745589E+09	949117.900	6.00

AVE RF **937352.200** RF RSD **2.26** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

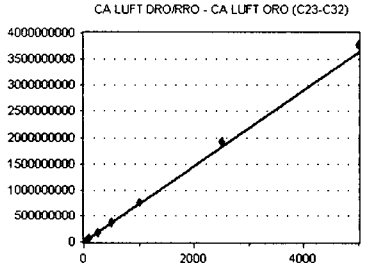


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	3.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	1.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

CA LUFT ORO (C23-C32)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	624002E+07	656000.500	8.00
9D25027-CALF	80	537953E+07	692244.100	8.00
9D25027-CALG	250	787992E+08	715196.800	8.00
9D25027-CALH	500	3.69625E+08	739250.000	8.00
9D25027-CALI	1000	7.64513E+08	764513.000	8.00
9D25027-CALJ	2500	913826E+09	765530.400	8.00
9D25027-CALK	5000	793601E+09	758720.200	8.00

AVE RF **727350.700** RF RSD **5.73** AVE RT **8.00**

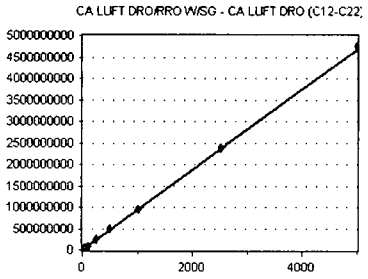
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **CA LUFT DRO/RRO W/SG** Instrument Cal ID: **1F90425D.m**

CA LUFT DRO (C12-C22)

Curve Fit: **AVERAGE RF**

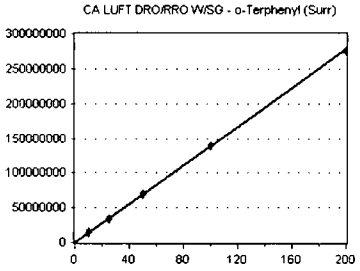


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	268475E+07	907390.000	6.00
9D25027-CAL2	40	547287E+07	911821.800	6.00
9D25027-CAL3	100	181746E+07	918174.600	6.00
9D25027-CAL4	250	370784E+08	948313.600	6.00
9D25027-CAL5	500	808429E+08	961685.800	6.00
9D25027-CAL6	1000	500637E+08	950063.700	6.00
9D25027-CAL7	2500	380626E+09	952250.400	6.00
9D25027-CAL8	5000	745589E+09	949117.900	6.00

AVE RF **937352.200** RF RSD **2.26** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

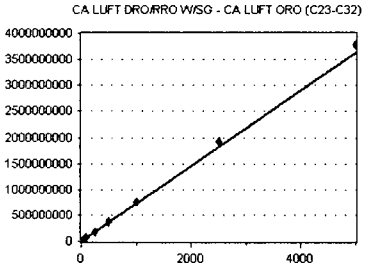


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	1.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	1.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

CA LUFT ORO (C23-C32)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	624002E+07	656000.500	8.00
9D25027-CALF	80	537953E+07	692244.100	8.00
9D25027-CALG	250	787992E+08	715196.800	8.00
9D25027-CALH	500	1.69625E+08	739250.000	8.00
9D25027-CALI	1000	7.64513E+08	764513.000	8.00
9D25027-CALJ	2500	913826E+09	765530.400	8.00
9D25027-CALK	5000	793601E+09	758720.200	8.00

AVE RF **727350.700** RF RSD **5.73** AVE RT **8.00**

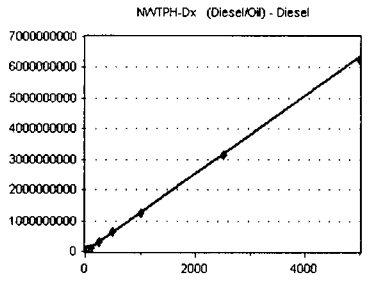
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil)** Instrument Cal ID: **1F90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

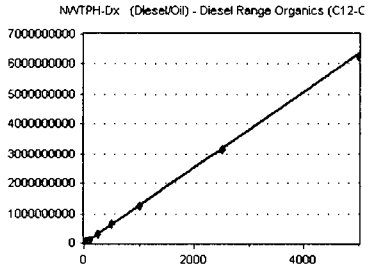


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

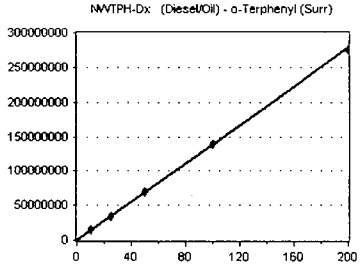


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

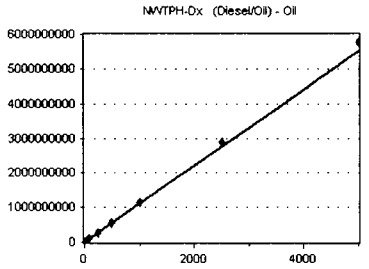


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	1.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	1.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

Oil

Curve Fit: **AVERAGE RF**

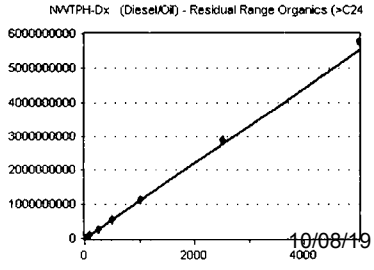


Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	1.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	1.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

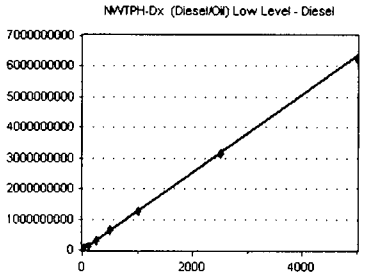
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) Low** Instrument Cal ID: **1F90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

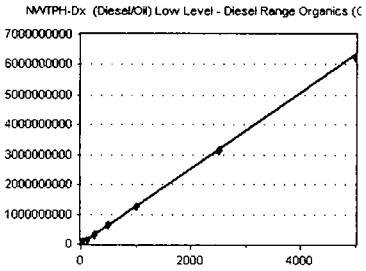


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

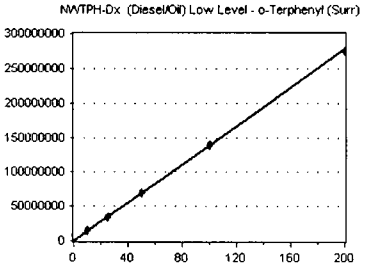


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

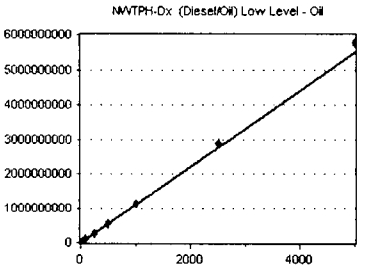


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	1.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	1.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

Oil

Curve Fit: **AVERAGE RF**

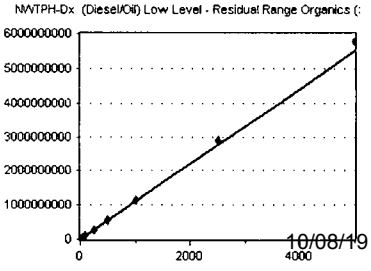


Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	5.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	5.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

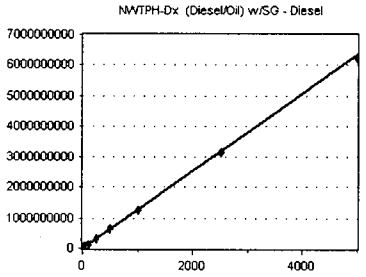
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) w/S** Instrument Cal ID: **1F90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

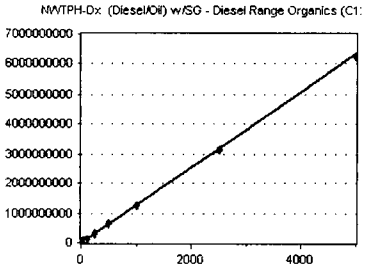


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

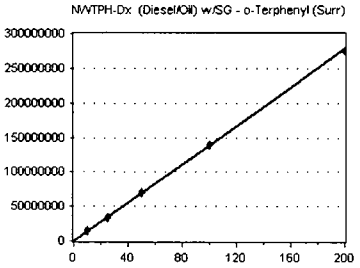


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

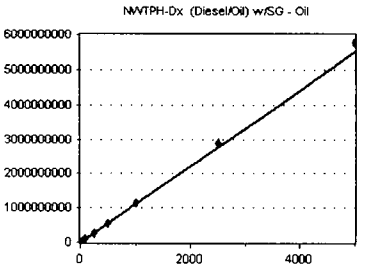


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

Oil

Curve Fit: **AVERAGE RF**

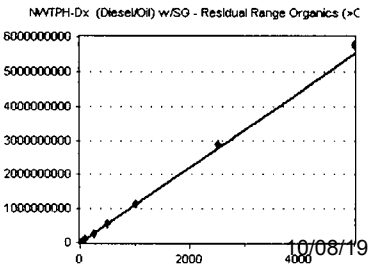


Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

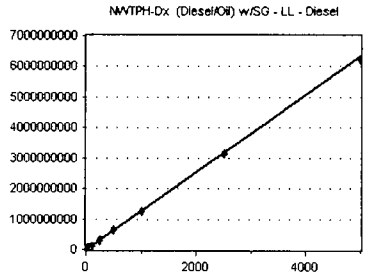
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) w/S** Instrument Cal ID: **1F90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

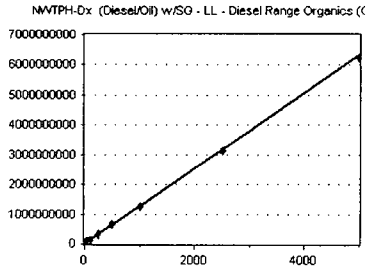


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

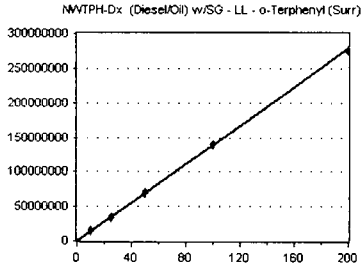


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

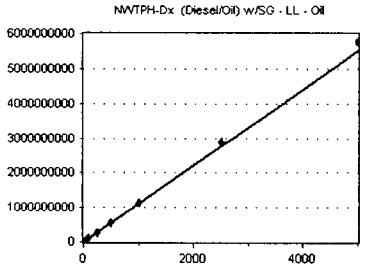


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	1.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	1.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

Oil

Curve Fit: **AVERAGE RF**

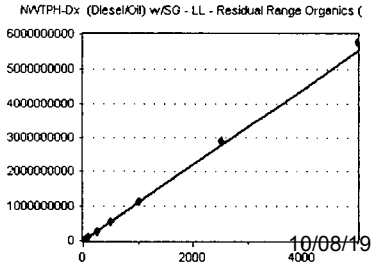


Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	5.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	5.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

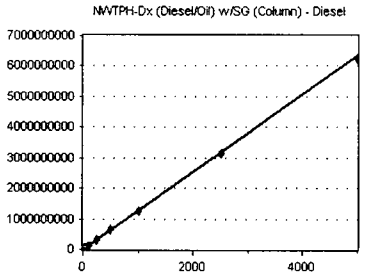
Element Calibration Review Sheet

Calibration ID: **A9D2602** Instrument: **DUALFID1F** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) w/SC** Instrument Cal ID: **1F90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

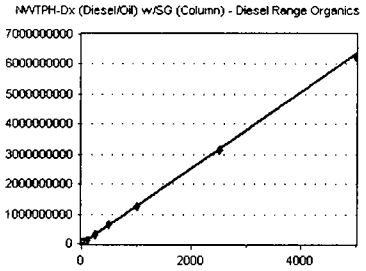


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

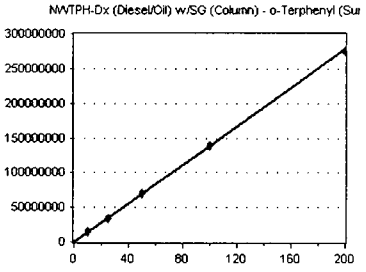


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL1	25	386099E+07	1354440.000	6.00
9D25027-CAL2	40	226552E+07	1306638.000	6.00
9D25027-CAL3	100	253969E+08	1253969.000	6.00
9D25027-CAL4	250	161261E+08	1264505.000	6.00
9D25027-CAL5	500	352581E+08	1270516.000	6.00
9D25027-CAL6	1000	249782E+09	1249782.000	6.00
9D25027-CAL7	2500	126505E+09	1250602.000	6.00
9D25027-CAL8	5000	233782E+09	1246756.000	6.00

AVE RF **1274651.000** RF RSD **2.95** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

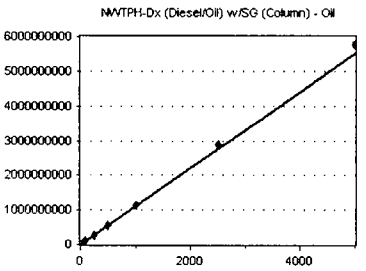


Standard	Concentration	Response	Response Factor	RT
9D25027-CAL9	10	392742E+07	1392742.000	6.79
9D25027-CALA	25	1.45403E+07	1381612.000	6.79
9D25027-CALB	50	020782E+07	1404157.000	6.79
9D25027-CALC	100	400981E+08	1400981.000	6.80
9D25027-CALD	200	1.75628E+08	1378140.000	6.80

AVE RF **1391526.000** RF RSD **0.83** AVE RT **6.79**

Oil

Curve Fit: **AVERAGE RF**

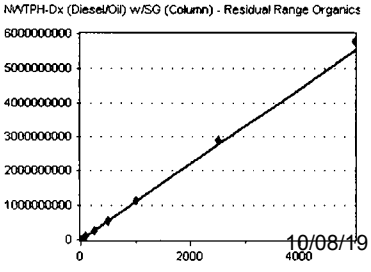


Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	1.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25027-CALE	40	065842E+07	1016461.000	10.00
9D25027-CALF	80	408106E+07	1051013.000	10.00
9D25027-CALG	250	671317E+08	1068527.000	10.00
9D25027-CALH	500	513768E+08	1102754.000	10.00
9D25027-CALI	1000	146401E+09	1146401.000	10.00
9D25027-CALJ	2500	902022E+09	1160809.000	10.00
9D25027-CALK	5000	1.78743E+09	1157486.000	10.00

AVE RF **1100493.000** RF RSD **5.18** AVE RT **10.00**

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25027 **Seq. Date: 4/26/2019**

SEQUENCE LOG

SampleID	Analysis	Matrix	STDID	Analyzed
9D25027-ICB1	8015B TPH-D (C10-25) /TPH-MO	Soil		4/25/2019 5:18:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"		"
"	+CA LUFT DRO/RRO	"		"
"	+CA LUFT DRO/RRO W/SG	"		"
"	+NWTPH-Dx (Diesel/Oil)	"		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"		"
9D25027-CAL1	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C305	4/25/2019 5:41:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C305	"
"	+CA LUFT DRO/RRO	"	A19C305	"
"	+CA LUFT DRO/RRO W/SG	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C305	"
9D25027-CAL2	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C306	4/25/2019 6:03:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C306	"
"	+CA LUFT DRO/RRO	"	A19C306	"
"	+CA LUFT DRO/RRO W/SG	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C306	"
9D25027-CAL3	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C307	4/25/2019 6:26:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C307	"
"	+CA LUFT DRO/RRO	"	A19C307	"
"	+CA LUFT DRO/RRO W/SG	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C307	"
9D25027-CAL4	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C308	4/25/2019 6:49:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C308	"
"	+CA LUFT DRO/RRO	"	A19C308	"
"	+CA LUFT DRO/RRO W/SG	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C308	"

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25027 **Seq. Date: 4/26/2019**

9D25027-CAL5	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C309	4/25/2019	7:12:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C309		"
"	+CA LUFT DRO/RRO	"	A19C309		"
"	+CA LUFT DRO/RRO W/SG	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C309		"
9D25027-CAL6	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C310	4/25/2019	7:35:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C310		"
"	+CA LUFT DRO/RRO	"	A19C310		"
"	+CA LUFT DRO/RRO W/SG	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C310		"
9D25027-CAL7	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C311	4/25/2019	7:58:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C311		"
"	+CA LUFT DRO/RRO	"	A19C311		"
"	+CA LUFT DRO/RRO W/SG	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C311		"
9D25027-CAL8	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C204	4/25/2019	8:20:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C204		"
"	+CA LUFT DRO/RRO	"	A19C204		"
"	+CA LUFT DRO/RRO W/SG	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C204		"
9D25027-CAL9	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D191	4/25/2019	8:43:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D191		"
"	+CA LUFT DRO/RRO	"	A19D191		"
"	+CA LUFT DRO/RRO W/SG	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D191		"
9D25027-CALA	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D192	4/25/2019	9:06:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D192		"
"	+CA LUFT DRO/RRO	"	A19D192		"
"	+CA LUFT DRO/RRO W/SG	"	A19D192		"

"	+NWTPH-Dx (Diesel/Oil)	"	A19D192		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D192		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D192		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D192		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D192		"
9D25027-CALB	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D193	4/25/2019 9:29:00PM	
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D193		"
"	+CA LUFT DRO/RRO	"	A19D193		"
"	+CA LUFT DRO/RRO W/SG	"	A19D193		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D193		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D193		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D193		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D193		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D193		"
9D25027-CALC	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D194	4/25/2019 9:51:00PM	
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D194		"
"	+CA LUFT DRO/RRO	"	A19D194		"
"	+CA LUFT DRO/RRO W/SG	"	A19D194		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D194		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D194		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D194		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D194		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D194		"
9D25027-CALD	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C210	4/25/2019 10:14:00PM	
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C210		"
"	+CA LUFT DRO/RRO	"	A19C210		"
"	+CA LUFT DRO/RRO W/SG	"	A19C210		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C210		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C210		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C210		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C210		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C210		"
9D25027-CALE	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C365	4/25/2019 10:37:00PM	
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C365		"
"	+CA LUFT DRO/RRO	"	A19C365		"
"	+CA LUFT DRO/RRO W/SG	"	A19C365		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C365		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C365		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C365		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C365		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C365		"
9D25027-CALF	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C366	4/25/2019 10:59:00PM	
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C366		"
"	+CA LUFT DRO/RRO	"	A19C366		"
"	+CA LUFT DRO/RRO W/SG	"	A19C366		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C366		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C366		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C366		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C366		"

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25027 **Seq. Date: 4/26/2019**

"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C366	"
9D25027-CALG	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C367	4/25/2019 11:22:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C367	"
"	+CA LUFT DRO/RRO	"	A19C367	"
"	+CA LUFT DRO/RRO W/SG	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C367	"
9D25027-CALH	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C368	4/25/2019 11:45:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C368	"
"	+CA LUFT DRO/RRO	"	A19C368	"
"	+CA LUFT DRO/RRO W/SG	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C368	"
9D25027-CALI	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C373	4/26/2019 12:07:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C373	"
"	+CA LUFT DRO/RRO	"	A19C373	"
"	+CA LUFT DRO/RRO W/SG	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C373	"
9D25027-CALJ	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C370	4/26/2019 12:30:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C370	"
"	+CA LUFT DRO/RRO	"	A19C370	"
"	+CA LUFT DRO/RRO W/SG	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C370	"
9D25027-CALK	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C364	4/26/2019 1:15:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C364	"
"	+CA LUFT DRO/RRO	"	A19C364	"
"	+CA LUFT DRO/RRO W/SG	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C364	"
9D25027-ICV1	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D271	4/26/2019 2:00:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D271	"
"	+CA LUFT DRO/RRO	"	A19D271	"

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25027 **Seq. Date: 4/26/2019**

"	+CA LUFT DRO/RRO W/SG	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D271		"
9D25027-ICV2	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D272	4/26/2019 2:23:00AM	
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D272		"
"	+CA LUFT DRO/RRO	"	A19D272		"
"	+CA LUFT DRO/RRO W/SG	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D272		"

CALIBRATION STANDARD RECOVERIES

Calibration: **A9D2602** Instrument: **DUALFID1F**

8015B TPH-D (C10-25) /TPH- Sequence: **9D25027** Matrix: **Soil**

9D25027-CAL1	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CAL2	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CAL3	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CAL4	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CAL5	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CAL6	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CAL7	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CAL8	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CALJ	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25027-CALK	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**

Compounds listed above have recalculated recoveries outside 85-115% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25027 **Seq. Date: 4/26/2019**

Analytes With Quadratic Curve Fits

Qualifier	MRL	Recalc Value	OK?	Raise MRL to ?
		_____	☐	☐ _____

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (85-115 or as specified).

ICV RECOVERIES

Calibration: **A9D2602** Instrument: **DUALFID1F**

NWTPH-Dx (Diesel/Oil) Sequence: **9D25027** Matrix: **Soil**

9D25027-ICV1	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**

9D25027-ICV2	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Calibration Status Report HP G1530A

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:45:04 2019
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	D1	25.00	0.00	F:\1\DATA\2019-04\9D25027\1F042504.D
2	D2	40.00	0.00	F:\1\DATA\2019-04\9D25027\1F042505.D
3	D3	100.00	0.00	F:\1\DATA\2019-04\9D25027\1F042506.D
4	D4	250.00	0.00	F:\1\DATA\2019-04\9D25027\1F042507.D
5	D5	500.00	0.00	F:\1\DATA\2019-04\9D25027\1F042508.D
6	D6	1000.00	0.00	F:\1\DATA\2019-04\9D25027\1F042509.D
7	D7	2500.00	0.00	F:\1\DATA\2019-04\9D25027\1F042510.D
8	D8	5000.00	0.00	F:\1\DATA\2019-04\9D25027\1F042511.D
9	S1	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042512.D
10	S2	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042513.D
11	S3	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042514.D
12	S4	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042515.D
13	S5	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042516.D
14	01	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042517.D
15	02	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042518.D
16	03	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042519.D
17	04	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042520.D
18	05	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042521.D
19	06	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042522.D
20	07	-1.00	0.00	F:\1\DATA\2019-04\9D25027\1F042524.D

A9D2602
kat 4/26/19

#	ID	Update Time	Quant Time	Acquisition Time
1	D1	Apr 26 08:37 2019	Apr 26 08:21 2019	25 Apr 2019 17:41
2	D2	Apr 26 08:37 2019	Apr 26 08:22 2019	25 Apr 2019 18:03
3	D3	Apr 26 08:37 2019	Apr 26 08:22 2019	25 Apr 2019 18:26
4	D4	Apr 26 08:38 2019	Apr 26 08:23 2019	25 Apr 2019 18:49
5	D5	Apr 26 08:38 2019	Apr 26 08:23 2019	25 Apr 2019 19:12
6	D6	Apr 26 08:38 2019	Apr 26 08:24 2019	25 Apr 2019 19:35
7	D7	Apr 26 08:38 2019	Apr 26 08:24 2019	25 Apr 2019 19:58
8	D8	Apr 26 08:38 2019	Apr 26 08:27 2019	25 Apr 2019 20:20
9	S1	Apr 26 08:39 2019	Apr 26 08:27 2019	25 Apr 2019 20:43
10	S2	Apr 26 08:39 2019	Apr 26 08:28 2019	25 Apr 2019 21:06
11	S3	Apr 26 08:39 2019	Apr 26 08:28 2019	25 Apr 2019 21:29
12	S4	Apr 26 08:39 2019	Apr 26 08:28 2019	25 Apr 2019 21:51
13	S5	Apr 26 08:39 2019	Apr 26 08:28 2019	25 Apr 2019 22:14
14	01	Apr 26 08:40 2019	Apr 26 08:29 2019	25 Apr 2019 22:37
15	02	Apr 26 08:40 2019	Apr 26 08:29 2019	25 Apr 2019 22:59
16	03	Apr 26 08:44 2019	Apr 26 08:29 2019	25 Apr 2019 23:22
17	04	Apr 26 08:44 2019	Apr 26 08:30 2019	25 Apr 2019 23:45
18	05	Apr 26 08:44 2019	Apr 26 08:30 2019	26 Apr 2019 00:07
19	06	Apr 26 08:44 2019	Apr 26 08:31 2019	26 Apr 2019 00:30
20	07	Apr 26 08:45 2019	Apr 26 08:31 2019	26 Apr 2019 1:15

✓

1F90425D.M Fri Apr 26 09:06:16 2019 SV-GCMS3

Response Factor Report HP G1530A

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:45:04 2019

Calibration Files
D1 =1F042504.D D2 =1F042505.D D3 =1F042506.D
D4 =1F042507.D D5 =1F042508.D D6 =1F042509.D

		Compound	D1	D2	D3	D4	D5	D6	Avg		%RSD
1)	H	Mineral Oil	1.354	1.307	1.254	1.265	1.271	1.250	1.275	E6	2.95
2)	H	Diesel	1.354	1.307	1.254	1.265	1.271	1.250	1.275	E6	2.95
3)	H	DRO(C12-C24)	1.354	1.307	1.254	1.265	1.271	1.250	1.275	E6	2.95
4)	H	Ca Luft DRO (C12-C2	9.074	9.118	9.182	9.483	9.617	9.501	9.374	E5	2.26
5)	H	TPHd (C10-C25)	1.141	1.144	1.135	1.168	1.180	1.165	1.158	E6	1.39
6)	S	o-Terphenyl							1.392	E6	0.83
7)	H	OIL							1.100	E6	5.18
8)	H	RRO (C24-C40)							1.100	E6	5.18
9)	H	Ca Luft ORO (C23-C3							7.274	E5	5.73
10)	H	TPHmo (C25-C36)							6.636	E5	7.16

Jcrt 4/26/19

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report HP G1530A

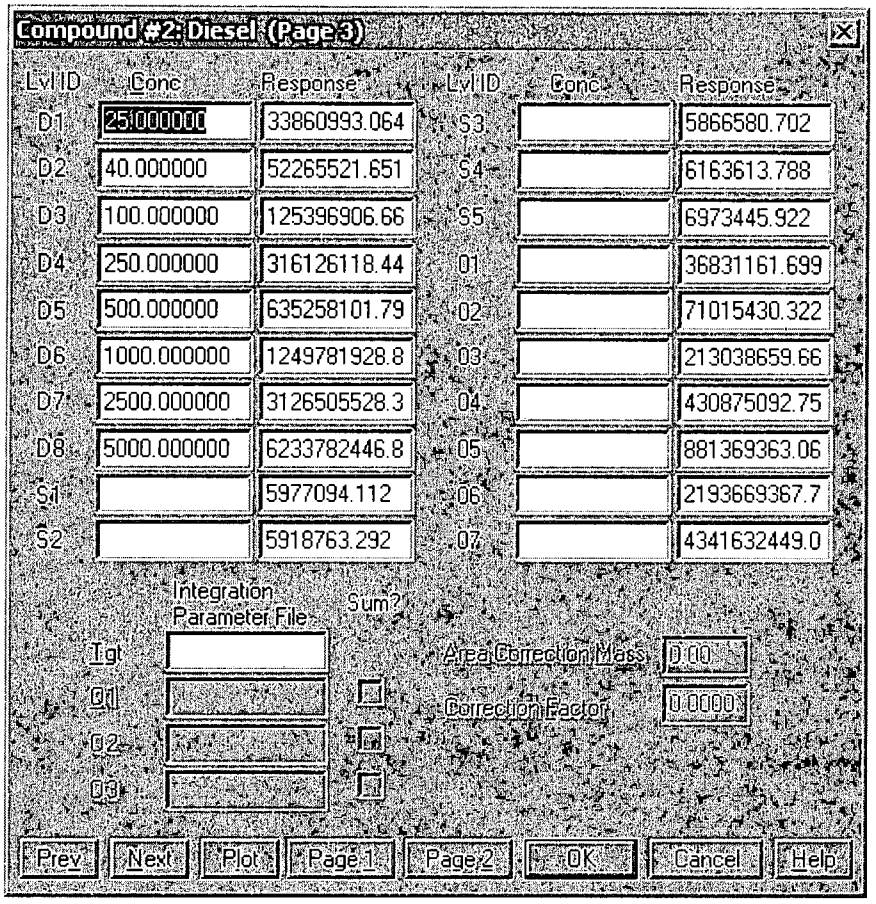
Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:45:04 2019
Response via : Initial Calibration
Total Cpnds : 10

PK#	Type	Compound Name	Exp_RT	Rel_RT	Cal	A/H	ID
1	H	Mineral Oil	6.00	1.000	A	A	A
2	H	Diesel	6.00	1.000	A	A	A
3	H	DRO(C12-C24)	6.00	1.000	A	A	A
4	H	Ca Luft DRO (C12-C22)	6.00	1.000	A	A	A
5	H	TPHd (C10-C25)	6.00	1.000	A	A	A
6	S	o-Terphenyl	6.79	1.000	A	A	R
7	H	OIL	10.00	1.000	A	A	A
8	H	RRO (C24-C40)	10.00	1.000	A	A	A
9	H	Ca Luft ORO (C23-C32)	8.00	1.000	A	A	A
10	H	TPHmo (C25-C36)	9.00	1.000	A	A	A

kat 4/26/19

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

1F90425D.M Fri Apr 26 08:52:40 2019 SV-GCMS3


Compound #2: Diesel (Page 3)
LvlID
Conc
Response
LvlID
Conc
Response
D1
25.000000
33860993.064
S3
5866580.702
D2
40.000000
52265521.651
S4
6163613.788
D3
100.000000
125396906.66
S5
6973445.922
D4
250.000000
316126118.44
01
36831161.699
D5
500.000000
635258101.79
02
71015430.322
D6
1000.000000
1249781928.8
03
213038659.66
D7
2500.000000
3126505528.3
04
430875092.75
D8
5000.000000
6233782446.8
05
881369363.06
S1
5977094.112
06
2193669367.7
S2
5918763.292
07
4341632449.0
Integration Parameter File
Sum?
Tgt
01
02
03
Area Correction Mass
0.00
Correction Factor
0.0000
Prev
Next
Plot
Page 1
Page 2
OK
Cancel
Help

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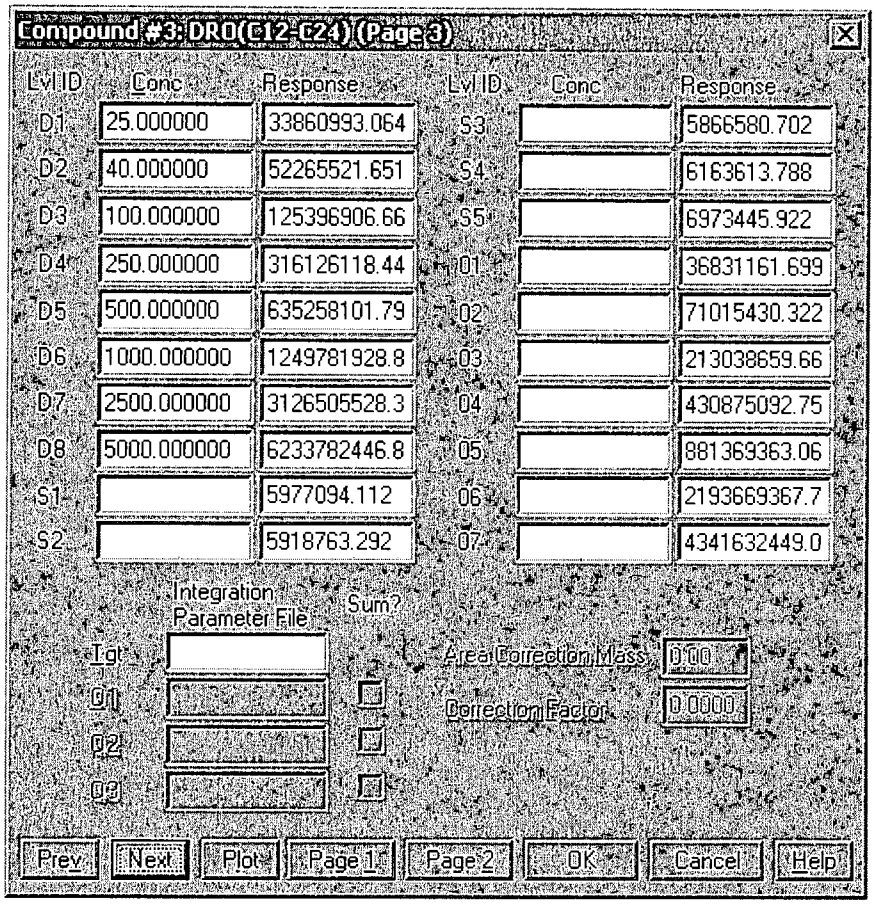
Compound #3: DRO(C12-C24) (Page 3)
Lvl ID
Conc
Response
D1 25.000000 33860993.064
D2 40.000000 52265521.651
D3 100.000000 125396906.66
D4 250.000000 316126118.44
D5 500.000000 635258101.79
D6 1000.000000 1249781928.8
D7 2500.000000 3126505528.3
D8 5000.000000 6233782446.8
S1 5977094.112
S2 5918763.292
S3 5866580.702
S4 6163613.788
S5 6973445.922
01 36831161.699
02 71015430.322
03 213038659.66
04 430875092.75
05 881369363.06
06 2193669367.7
07 4341632449.0
Integration Parameter File
Sum?
Lg
01
02
03
Area Correction Mass
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Correction Factor
0.0000
Prev
Next
Plot
Page 1
Page 2
OK
Cancel
Help

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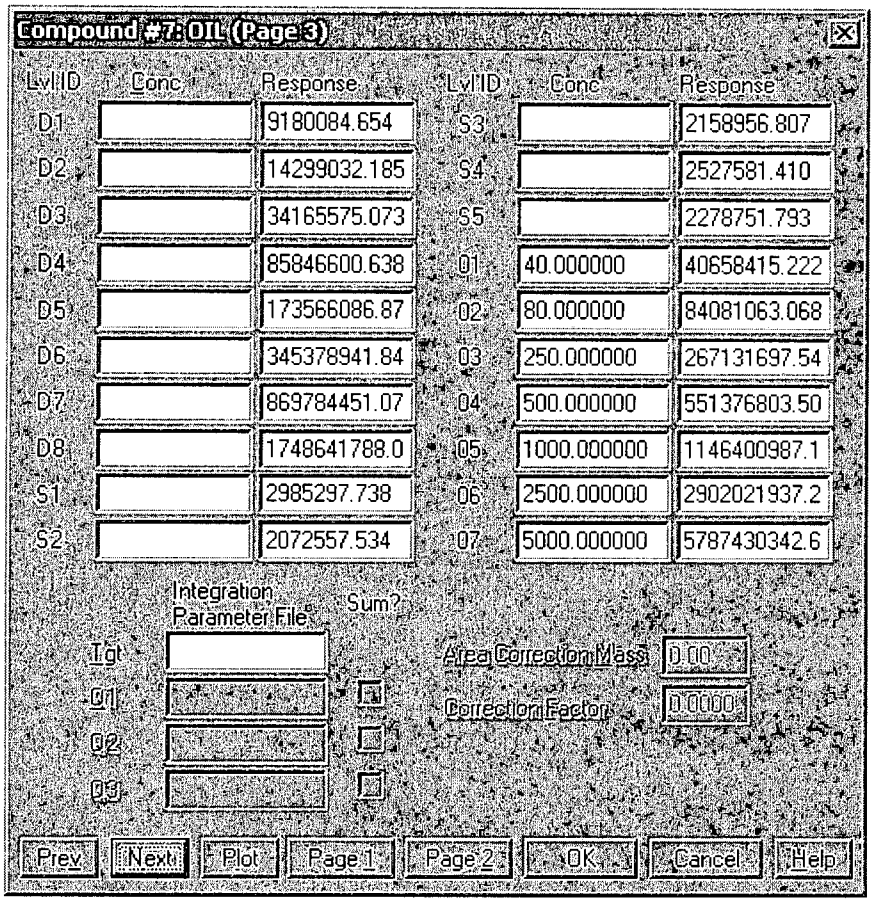
Compound #7: OIL (Page 3)
Lvl ID
Conc
Response
D1
9180084.654
D2
14299032.185
D3
34165575.073
D4
85846600.638
D5
173566086.87
D6
345378941.84
D7
869784451.07
D8
1748641788.0
S1
2985297.738
S2
2072557.534
Lvl ID
Conc
Response
S3
2158956.807
S4
2527581.410
S5
2278751.793
01
40.000000
40658415.222
02
80.000000
84081063.068
03
250.000000
267131697.54
04
500.000000
551376803.50
05
1000.000000
1146400987.1
06
2500.000000
2902021937.2
07
5000.000000
5787430342.6
Integration Parameter File
Sum?
Tgt
01
02
03
Area Correction Mass
0.00
Correction Factor
0.0000
Prev
Next
Plot
Page 1
Page 2
OK
Cancel
Help

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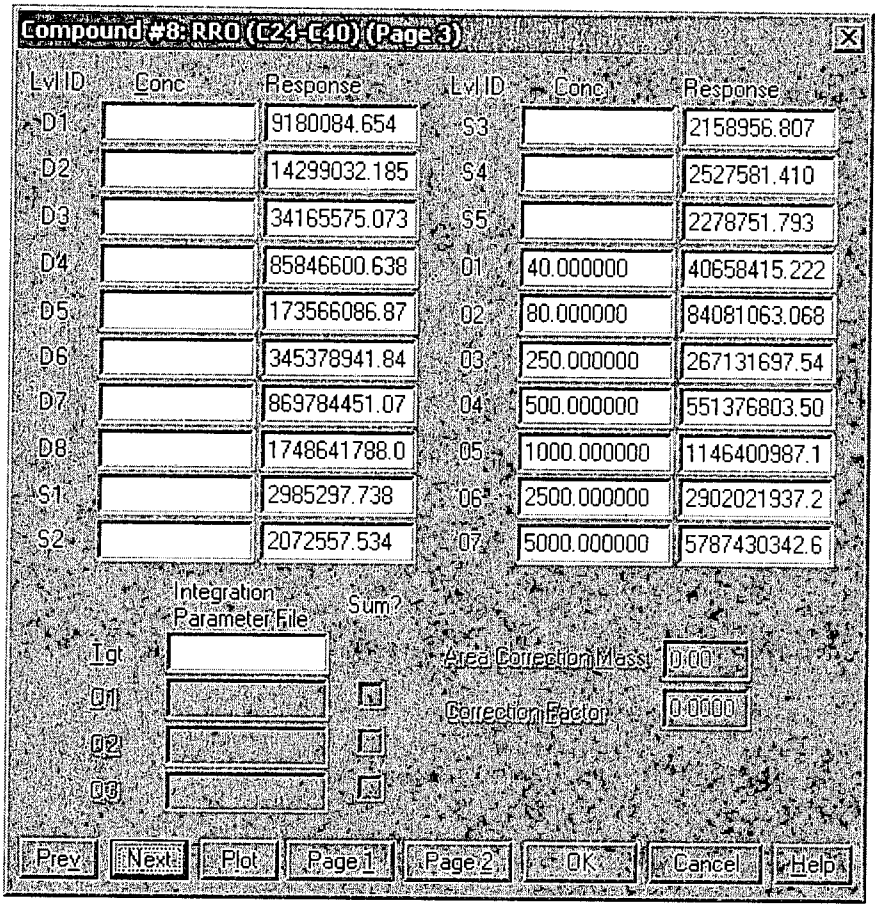

Compound #8: RRO (C24-C40) (Page 3)
Lvl ID
Conc
Response
D1
9180084.654
D2
14299032.185
D3
34165575.073
D4
85846600.638
D5
173566086.87
D6
345378941.84
D7
869784451.07
D8
1748641788.0
S1
2985297.738
S2
2072557.534
Lvl ID
Conc
Response
S3
2158956.807
S4
2527581.410
S5
2278751.793
01
40.000000
40658415.222
02
80.000000
84081063.068
03
250.000000
267131697.54
04
500.000000
551376803.50
05
1000.000000
1146400987.1
06
2500.000000
2902021937.2
07
5000.000000
5787430342.6
Integration Parameter File
Sum?
Igt
01
02
03
Area Correction Mass
0.00
Correction Factor
0.0000
Prev
Next
Plot
Page 1
Page 2
OK
Cancel
Help

kst 4/24/19

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\REQUANTF\1F042503.D Vial: 99
Acq On : 25 Apr 2019 17:18 Operator: KEH
Sample : 9D25027-ICB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:48 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:45:04 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	5781618	4.536	ug/ml
2)	H	Diesel	6.00	5781618	4.536	ug/mL
3)	H	DRO(C12-C24)	6.00	5781618	4.536	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1385695	1.478	ug/ml
5)	H	TPHd (C10-C25)	6.00	2645348	2.284	ug/ml
7)	H	OIL	10.00	3856780	3.505	ug/mL
8)	H	RRO (C24-C40)	10.00	3856780	3.505	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	808628	1.112	ug/mL
10)	H	TPHmo (C25-C36)	9.00	1042130	1.570	ug/mL

Kent 4/26/19

(f)=RT Delta > 1/2 Window (m)=manually Int.

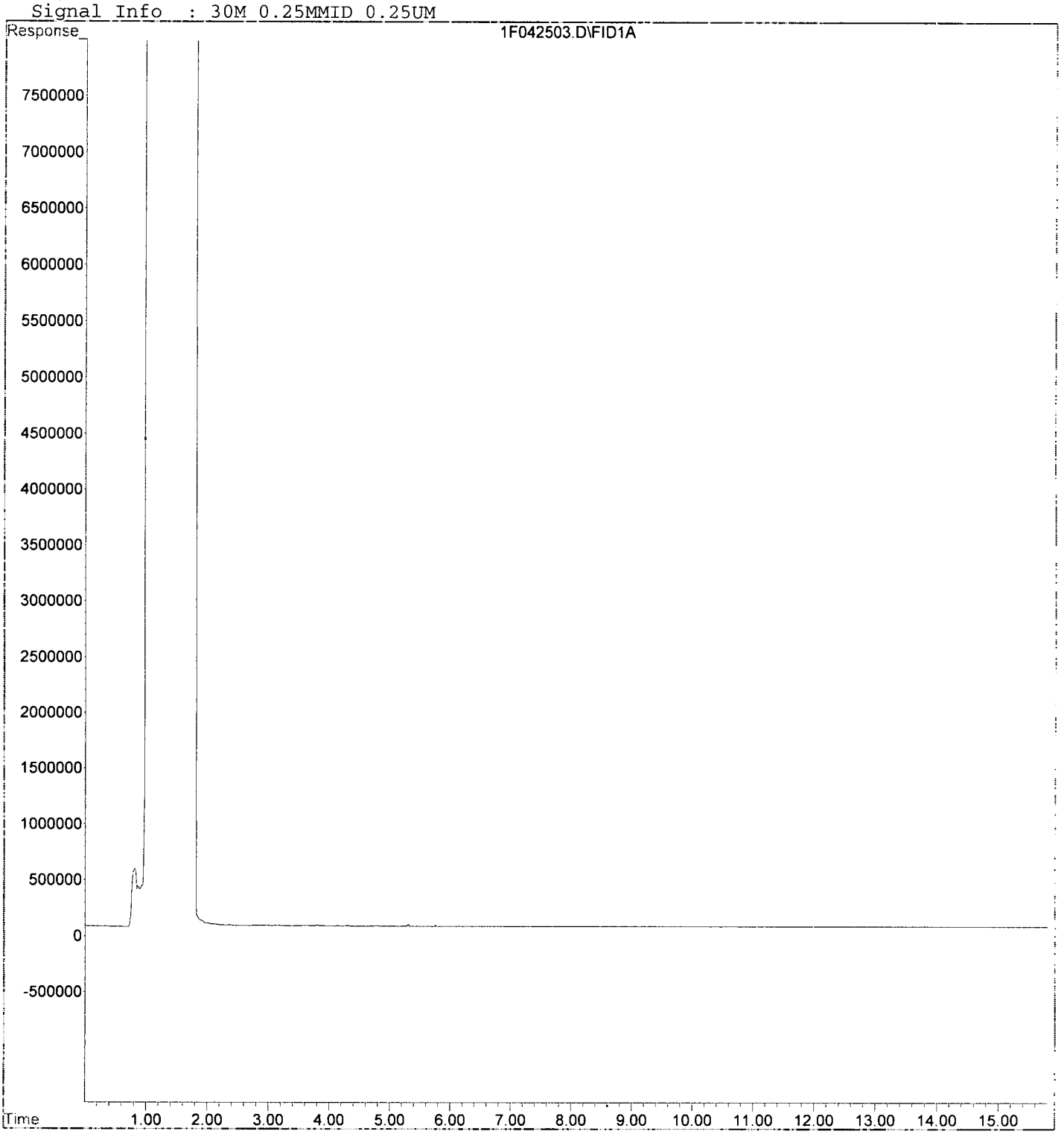
1F042503.D 1F90425D.M Fri Apr 26 09:00:05 2019 SV-GCMS3 Page 1

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\REQUANTF\1F042503.D Vial: 99
Acq On : 25 Apr 2019 17:18 Operator: KEH
Sample : 9D25027-ICB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:48 2019 Quant Results File: 1F90425D.RES

Quant Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:45:04 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-04\9D25027\REQUANTF\1F042526.D Vial: 21
Acq On : 26 Apr 2019 2:00 Operator: KEH
Sample : 9D25027-ICV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:45:04 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	1000.000	962.289	3.8	98	0.00
2	H	Diesel	1000.000	962.289	3.8	98	0.00
3	H	DRO(C12-C24)	1000.000	962.289	3.8	98	0.00
4	H	Ca Luft DRO (C12-C22)	1000.000	994.989	0.5	98	0.00
5	H	TPHd (C10-C25)	1000.000	986.382	1.4	98	0.00
7	H	OIL	-1.000	315.549	0.0	101	0.00
8	H	RRO (C24-C40)	-1.000	315.549	0.0	101	0.00
9	H	Ca Luft ORO (C23-C32)	-1.000	56.094	0.0	104	0.00
10	H	TPHmo (C25-C36)	-1.000	19.874	0.0	111	0.00

Kat 4/26/19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-04\9D25027\REQUANTF\1F042527.D Vial: 22
Acq On : 26 Apr 2019 2:23 Operator: KEH
Sample : 9D25027-ICV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E

Method : F:\1\METHODS\1F90425D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:45:04 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	-1.000	708.334	0.0	102	0.00
2	H	Diesel	-1.000	708.334	0.0	102	0.00
3	H	DRO(C12-C24)	-1.000	708.334	0.0	102	0.00
4	H	Ca Luft DRO (C12-C22)	-1.000	94.472	0.0	128	0.00
5	H	TPHd (C10-C25)	-1.000	289.474	0.0	110	0.00
7	H	OIL	1000.000	1032.482	-3.2	99	0.00
8	H	RRO (C24-C40)	1000.000	1032.482	-3.2	99	0.00
9	H	Ca Luft ORO (C23-C32)	1000.000	1040.226	-4.0	99	0.00
10	H	TPHmo (C25-C36)	1000.000	1002.532	-0.3	95	0.00

KAH 4/24/19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Sequence: C:\HPCHEM\1\SEQUENCE\9D25027.S

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 99	DCM	A1F40422	1	Sample		
2	Vial 94	9D25027-RES1	A1F40422	1	Sample		
3	Vial 99	9D25027-ICB1	A1F40422	1	Sample		
4	Vial 1	9D25027-CAL1	A1F40422	1	Sample		
5	Vial 2	9D25027-CAL2	A1F40422	1	Sample		
6	Vial 3	9D25027-CAL3	A1F40422	1	Sample		
7	Vial 4	9D25027-CAL4	A1F40422	1	Sample		
8	Vial 5	9D25027-CAL5	A1F40422	1	Sample		
9	Vial 6	9D25027-CAL6	A1F40422	1	Sample		
10	Vial 7	9D25027-CAL7	A1F40422	1	Sample		
11	Vial 8	9D25027-CAL8	A1F40422	1	Sample		
12	Vial 9	9D25027-CAL9	A1F40422	1	Sample		
13	Vial 10	9D25027-CALA	A1F40422	1	Sample		
14	Vial 11	9D25027-CALB	A1F40422	1	Sample		
15	Vial 12	9D25027-CALC	A1F40422	1	Sample		
16	Vial 13	9D25027-CALD	A1F40422	1	Sample		
17	Vial 14	9D25027-CALE	A1F40422	1	Sample		
18	Vial 15	9D25027-CALF	A1F40422	1	Sample		
19	Vial 16	9D25027-CALG	A1F40422	1	Sample		
20	Vial 17	9D25027-CALH	A1F40422	1	Sample		
21	Vial 18	9D25027-CALI	A1F40422	1	Sample		
22	Vial 19	9D25027-CALJ	A1F40422	1	Sample		
23	Vial 99	9D25027-IBL1	A1F40422	1	Sample		
24	Vial 20	9D25027-CALK	A1F40422	1	Sample		
25	Vial 99	9D25027-IBL2	A1F40422	1	Sample		
26	Vial 21	9D25027-ICV1	A1F40422	1	Sample		
27	Vial 22	9D25027-ICV2	A1F40422	1	Sample		
28	Vial 99	DCM	A1F40422	1	Sample		
29	Vial 99	DCM	A1F40422	1	Sample		

4/26/19

Sequence Table (Back Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	DCM	A1F40422	1	Sample		
2	Vial 100	DCM	A1F40422	1	Sample		
3	Vial 95	9D25028-RES1	A1F40422	1	Sample		
4	Vial 100	9D25028-ICB1	A1F40422	1	Sample		
5	Vial 1	9D25028-CAL1	A1F40422	1	Sample		
6	Vial 2	9D25028-CAL2	A1F40422	1	Sample		
7	Vial 3	9D25028-CAL3	A1F40422	1	Sample		
8	Vial 4	9D25028-CAL4	A1F40422	1	Sample		
9	Vial 5	9D25028-CAL5	A1F40422	1	Sample		
10	Vial 6	9D25028-CAL6	A1F40422	1	Sample		
11	Vial 7	9D25028-CAL7	A1F40422	1	Sample		
12	Vial 8	9D25028-CAL8	A1F40422	1	Sample		
13	Vial 9	9D25028-CAL9	A1F40422	1	Sample		
14	Vial 10	9D25028-CALA	A1F40422	1	Sample		
15	Vial 11	9D25028-CALB	A1F40422	1	Sample		
16	Vial 12	9D25028-CALC	A1F40422	1	Sample		
17	Vial 13	9D25028-CALD	A1F40422	1	Sample		
18	Vial 14	9D25028-CALE	A1F40422	1	Sample		
19	Vial 15	9D25028-CALF	A1F40422	1	Sample		
20	Vial 16	9D25028-CALG	A1F40422	1	Sample		
21	Vial 17	9D25028-CALH	A1F40422	1	Sample		

Injection Log

Directory: F:\1\DATA\2019-04\9D25027

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	99	1f042501.d	1.	DCM		25 Apr 2019 16:33
2	94	1f042502.d	1.	9D25027-RES1		25 Apr 2019 16:55
3	99	1f042503.d	1.	9D25027-ICB1		25 Apr 2019 17:18
4	1	1f042504.d	1.	9D25027-CAL1		25 Apr 2019 17:41
5	2	1f042505.d	1.	9D25027-CAL2		25 Apr 2019 18:03
6	3	1f042506.d	1.	9D25027-CAL3		25 Apr 2019 18:26
7	4	1f042507.d	1.	9D25027-CAL4		25 Apr 2019 18:49
8	5	1f042508.d	1.	9D25027-CAL5		25 Apr 2019 19:12
9	6	1f042509.d	1.	9D25027-CAL6		25 Apr 2019 19:35
10	7	1f042510.d	1.	9D25027-CAL7		25 Apr 2019 19:58
11	8	1f042511.d	1.	9D25027-CAL8		25 Apr 2019 20:20
12	9	1f042512.d	1.	9D25027-CAL9		25 Apr 2019 20:43
13	10	1f042513.d	1.	9D25027-CALA		25 Apr 2019 21:06
14	11	1f042514.d	1.	9D25027-CALB		25 Apr 2019 21:29
15	12	1f042515.d	1.	9D25027-CALC		25 Apr 2019 21:51
16	13	1f042516.d	1.	9D25027-CALD		25 Apr 2019 22:14
17	14	1f042517.d	1.	9D25027-CALE		25 Apr 2019 22:37
18	15	1f042518.d	1.	9D25027-CALF		25 Apr 2019 22:59
19	16	1f042519.d	1.	9D25027-CALG		25 Apr 2019 23:22
20	17	1f042520.d	1.	9D25027-CALH		25 Apr 2019 23:45
21	18	1f042521.d	1.	9D25027-CALI		26 Apr 2019 00:07
22	19	1f042522.d	1.	9D25027-CALJ		26 Apr 2019 00:30
23	99	1f042523.d	1.	9D25027-IBL1		26 Apr 2019 00:52
24	20	1f042524.d	1.	9D25027-CALK		26 Apr 2019 01:15
25	99	1f042525.d	1.	9D25027-IBL2		26 Apr 2019 01:38
26	21	1f042526.d	1.	9D25027-ICV1		26 Apr 2019 02:00
27	22	1f042527.d	1.	9D25027-ICV2		26 Apr 2019 02:23
28	99	1f042528.d	1.	DCM		26 Apr 2019 02:45
29	99	1f042529.d	1.	DCM		26 Apr 2019 03:08
30	100	1r042501.d	1.	DCM		25 Apr 2019 16:33
31	100	1r042502.d	1.	DCM		25 Apr 2019 16:55

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042502.D Vial: 94
Acq On : 25 Apr 2019 16:55 Operator: KEH
Sample : 9D25027-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:33 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

KEH 4/26/19

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.89f	97544	0.049	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	520082471	302.541	ug/ml
2)	H	Diesel	6.00	520082471	302.541	ug/mL
3)	H	DRO(C12-C24)	6.00	520082471	302.541	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	360736775	278.530	ug/ml
5)	H	TPHd (C10-C25)	6.00	457146954	287.017	ug/ml
7)	H	OIL	10.00	335090044	208.451	ug/mL
8)	H	RRO (C24-C40)	10.00	335090044	208.451	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	135403820	134.522	ug/mL
10)	H	TPHmo (C25-C36)	9.00	83077489	91.148	ug/mL

(f)=RT Delta > 1/2 window (m)=manual int.

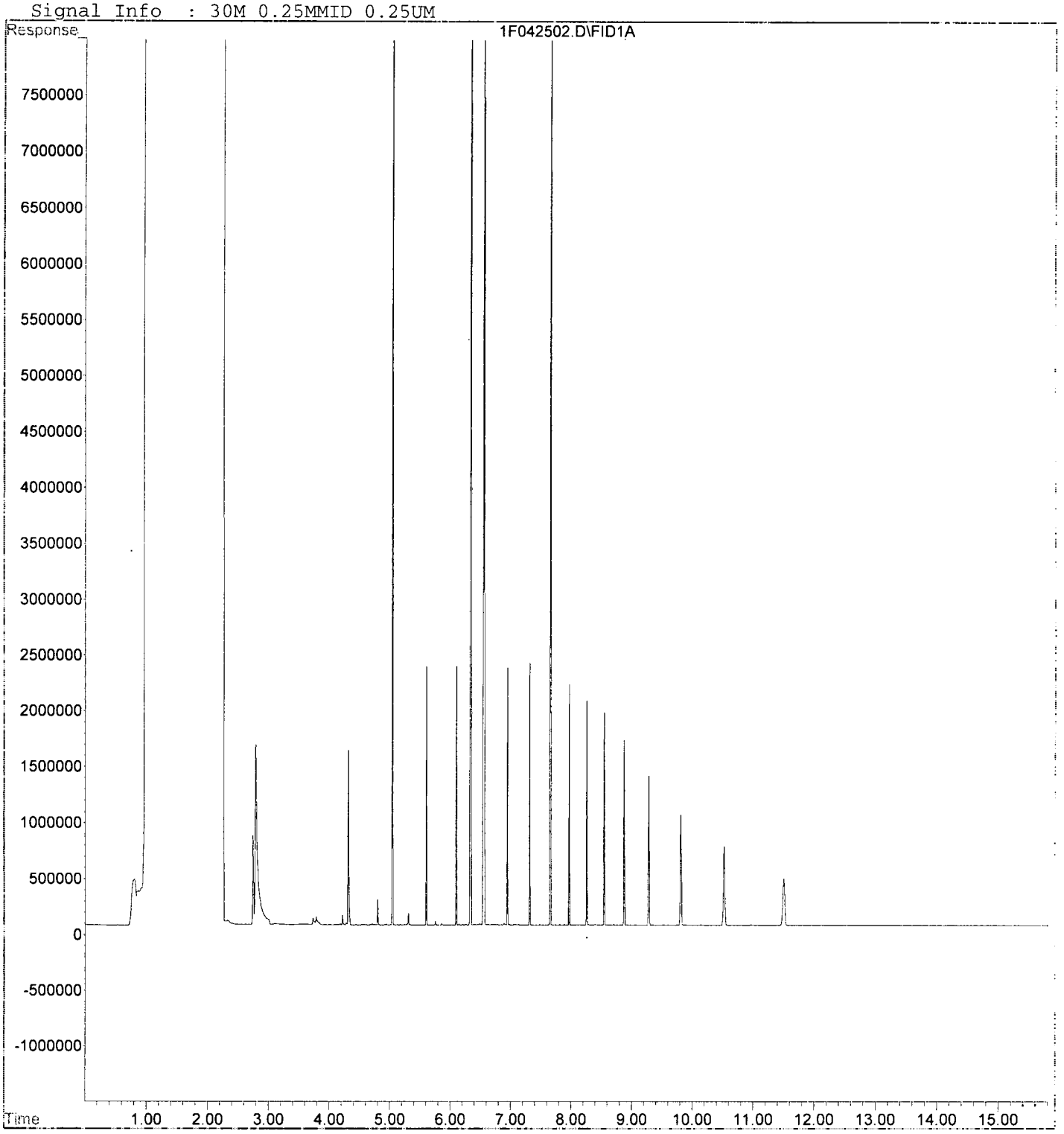
1F042502.D 1F90329D.M Fri Apr 26 08:33:50 2019 SV-GCMS3 Page 1

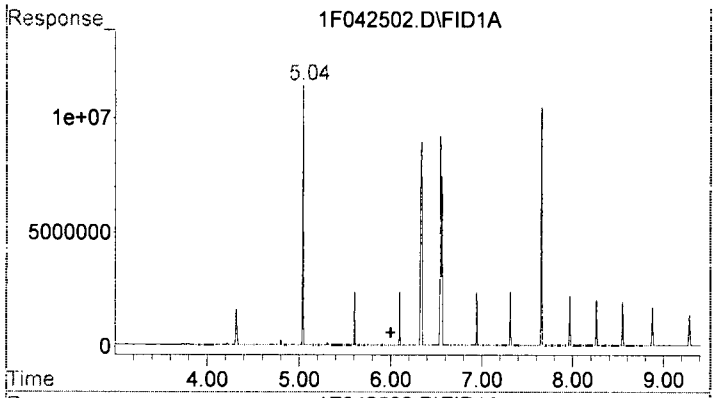
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042502.D Vial: 94
Acq On : 25 Apr 2019 16:55 Operator: KEH
Sample : 9D25027-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:33 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

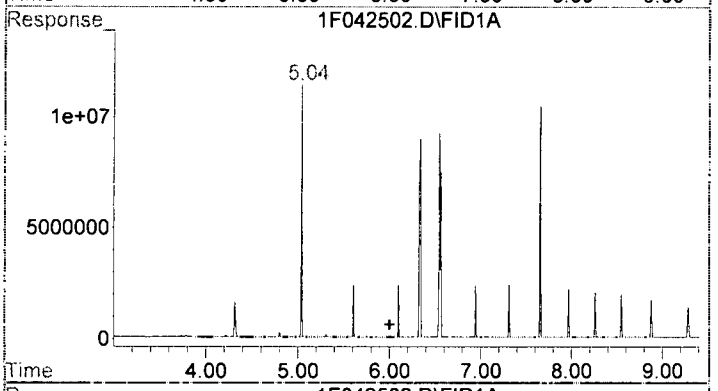
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





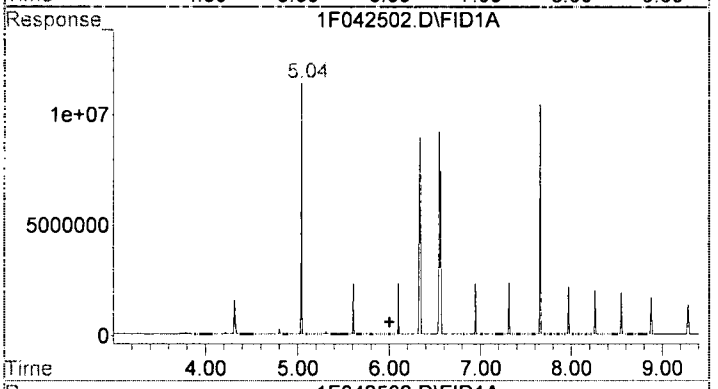
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 520082471
Conc: 302.54 ug/ml m



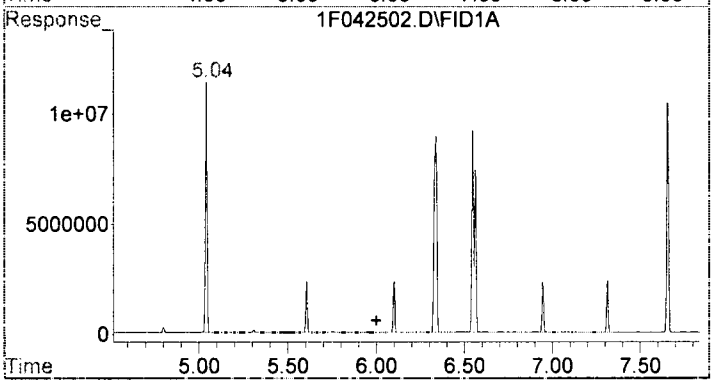
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 520082471
Conc: 302.54 ug/mL m



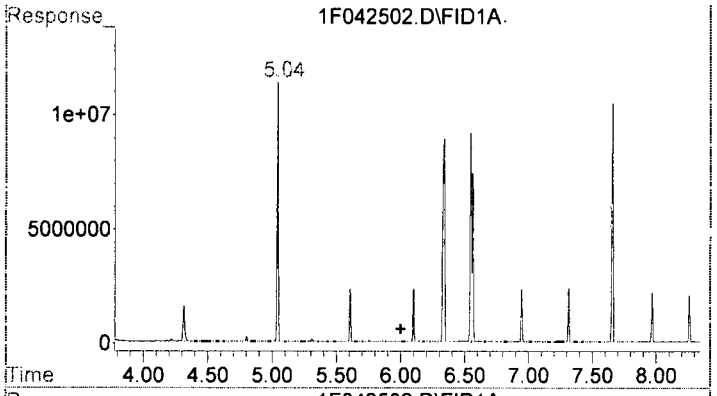
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 520082471
Conc: 302.54 ug/mL m



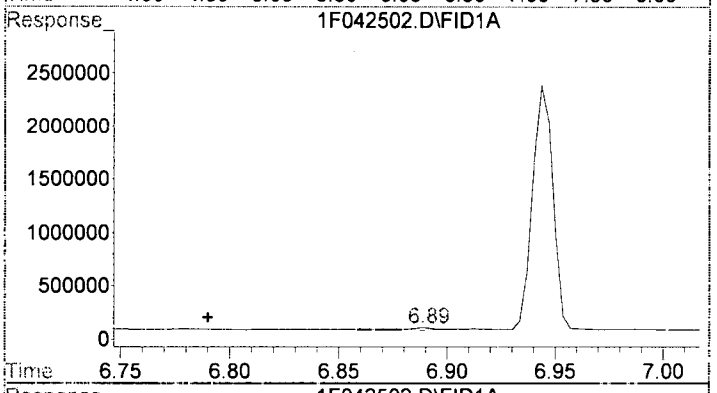
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 360736775
Conc: 278.53 ug/ml m



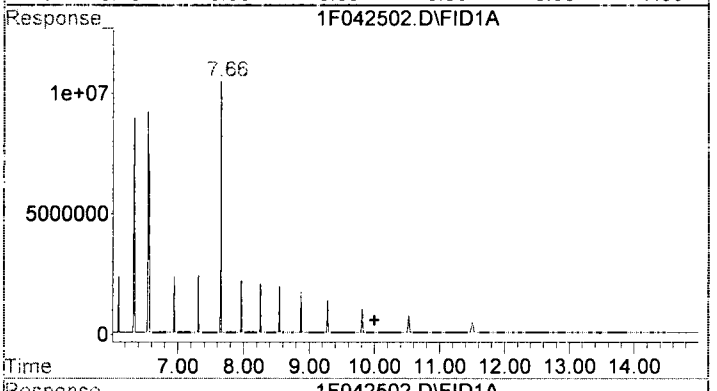
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 457146954
Conc: 287.02 ug/ml m



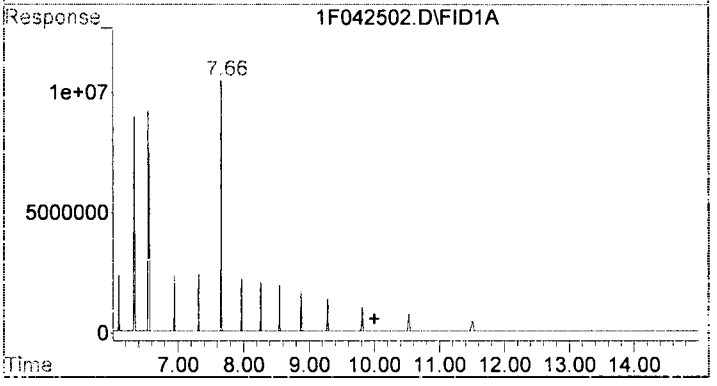
#6 o-Terphenyl

R.T.: 6.890 min
Delta R.T.: 0.100 min
Response: 97544
Conc: 0.05 ug/mL



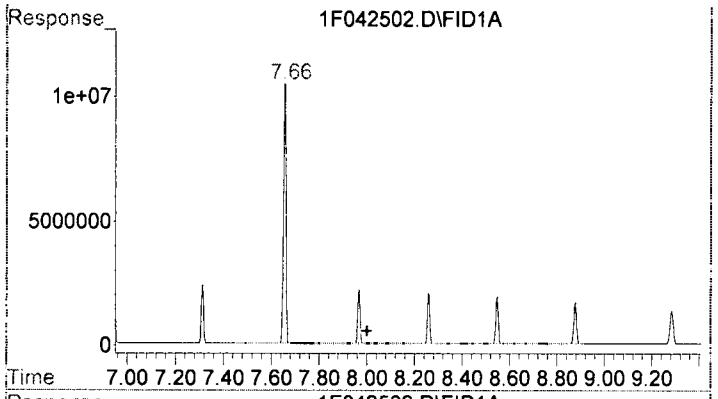
#7 OIL

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 335090044
Conc: 208.45 ug/mL m



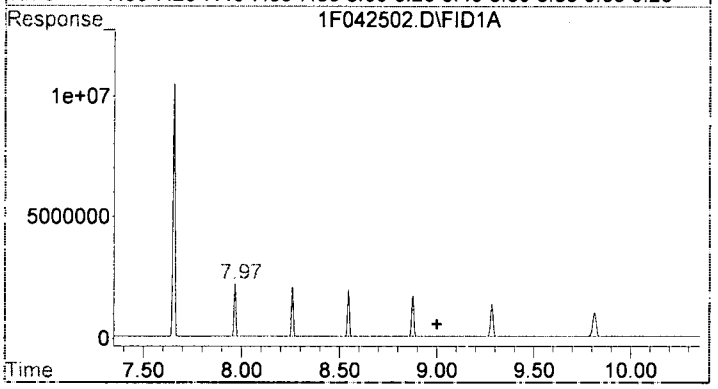
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 335090044
Conc: 208.45 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 135403820
Conc: 134.52 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 9.000 min
Delta R.T.: 0.000 min
Response: 83077489
Conc: 91.15 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042503.D Vial: 99
Acq On : 25 Apr 2019 17:18 Operator: KEH
Sample : 9D25027-ICB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:21 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

KEH 4/24/19

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	5781618	3.363	ug/ml
2)	H	Diesel	6.00	5781618	3.363	ug/mL
3)	H	DRO(C12-C24)	6.00	5781618	3.363	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1385695	1.070	ug/ml
5)	H	TPHd (C10-C25)	6.00	2645348	1.661	ug/ml
7)	H	OIL	10.00	3856780	2.399	ug/mL
8)	H	RRO (C24-C40)	10.00	3856780	2.399	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	808628	0.803	ug/mL
10)	H	TPHmo (C25-C36)	9.00	1042130	1.143	ug/mL

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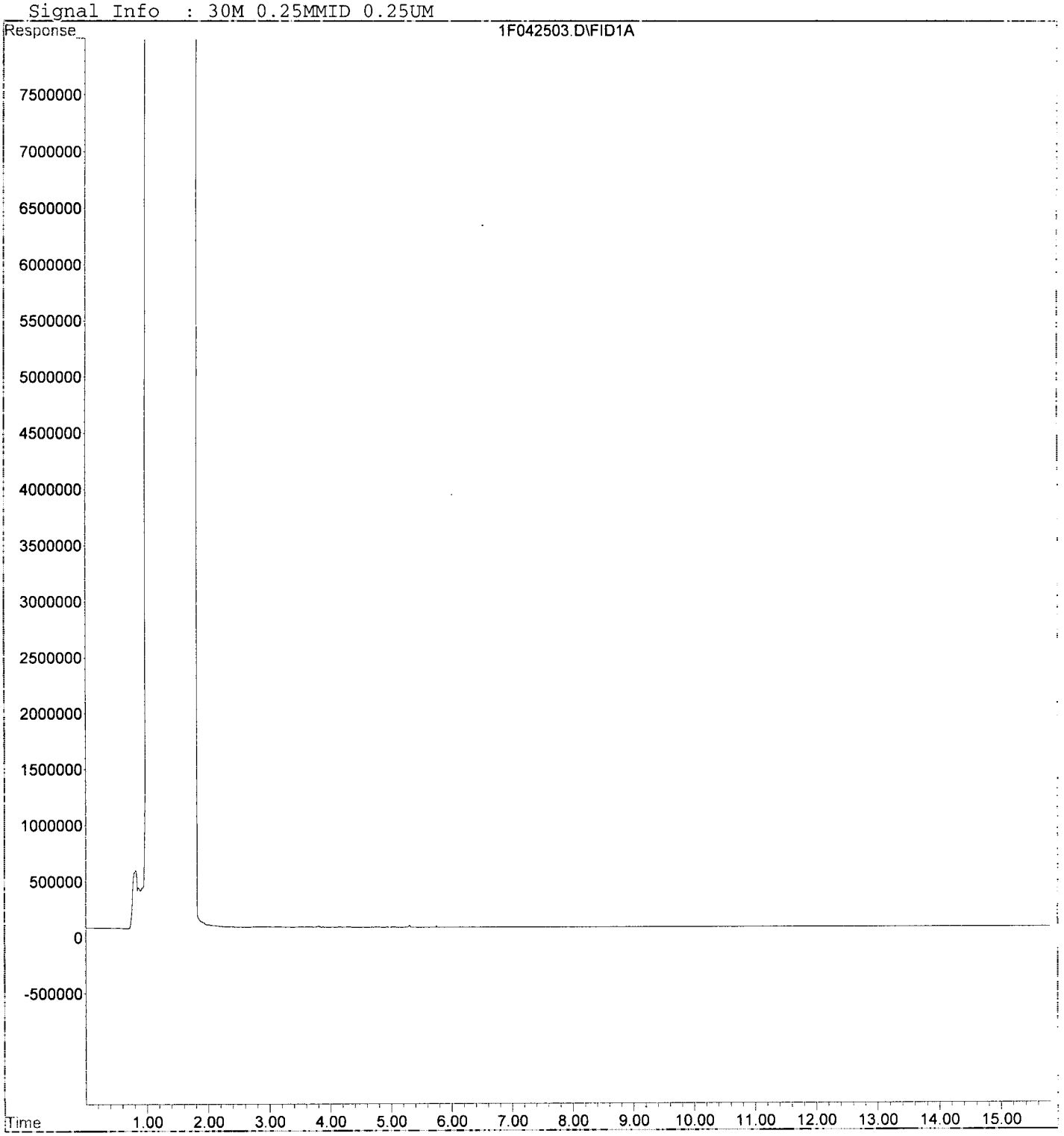
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042503.D Vial: 99
Acq On : 25 Apr 2019 17:18 Operator: KEH
Sample : 9D25027-ICB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:21 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042504.D Vial: 1
Acq On : 25 Apr 2019 17:41 Operator: KEH
Sample : 9D25027-CAL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:21 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	33860993	19.698	ug/ml
2)	H	Diesel	6.00	33860993	19.698	ug/mL
3)	H	DRO(C12-C24)	6.00	33860993	19.698	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	22684746	17.515	ug/ml
5)	H	TPHd (C10-C25)	6.00	28515147	17.903	ug/ml
7)	H	OIL	10.00	9180085	5.711	ug/mL
8)	H	RRO (C24-C40)	10.00	9180085	5.711	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1269961	1.262	ug/mL
10)	H	TPHmo (C25-C36)	9.00	801867	0.880	ug/mL

kst 4/26/19

(f)=RT Delta > 1/2 window (m)=manual int.

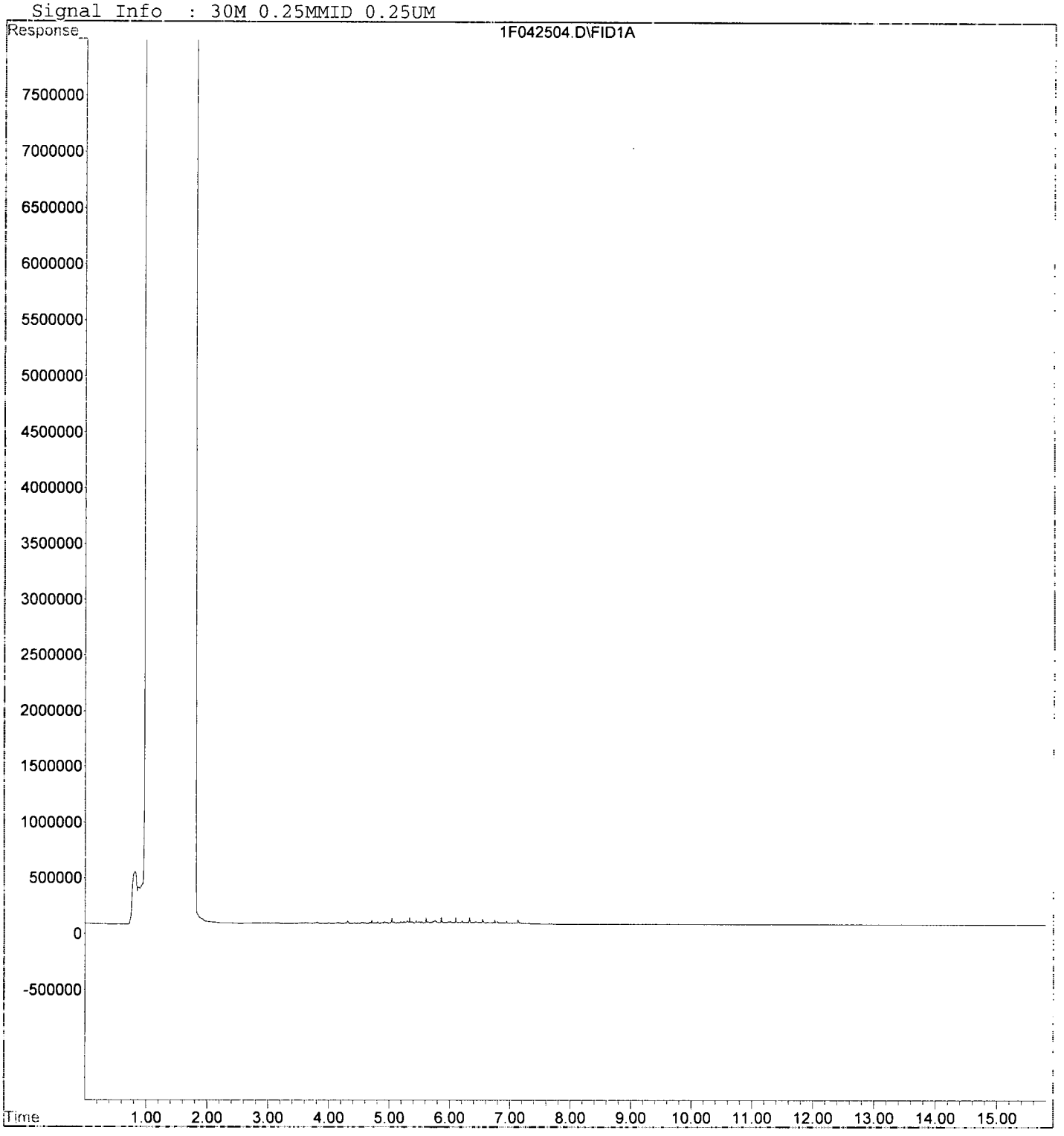
1F042504.D 1F90329D.M Fri Apr 26 08:34:14 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042504.D Vial: 1
Acq On : 25 Apr 2019 17:41 Operator: KEH
Sample : 9D25027-CAL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:21 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042505.D Vial: 2
Acq On : 25 Apr 2019 18:03 Operator: KEH
Sample : 9D25027-CAL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:22 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	52265522	30.404	ug/ml
2)	H	Diesel	6.00	52265522	30.404	ug/mL
3)	H	DRO(C12-C24)	6.00	52265522	30.404	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	36472870	28.161	ug/ml
5)	H	TPHd (C10-C25)	6.00	45752550	28.725	ug/ml
7)	H	OIL	10.00	14299032	8.895	ug/mL
8)	H	RRO (C24-C40)	10.00	14299032	8.895	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1844602	1.833	ug/mL
10)	H	TPHmo (C25-C36)	9.00	1029381	1.129	ug/mL

KEH 4/26/19

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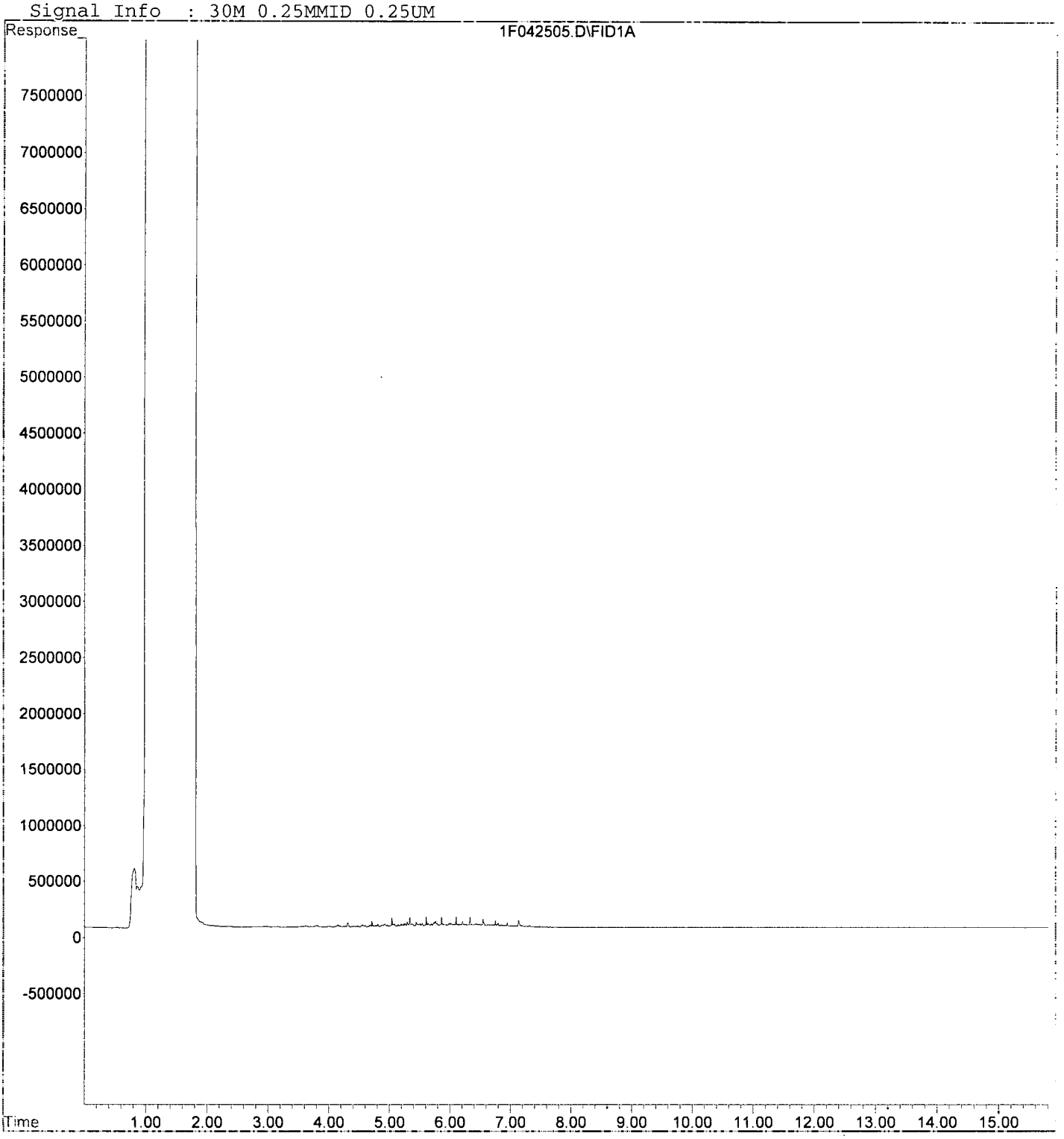
Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042505.D Vial: 2
Acq On : 25 Apr 2019 18:03 Operator: KEH
Sample : 9D25027-CAL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:22 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042506.D Vial: 3
Acq On : 25 Apr 2019 18:26 Operator: KEH
Sample : 9D25027-CAL3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:22 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	125396907	72.945	ug/ml
2)	H	Diesel	6.00	125396907	72.945	ug/mL
3)	H	DRO(C12-C24)	6.00	125396907	72.945	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	91817455	70.894	ug/ml
5)	H	TPHd (C10-C25)	6.00	113459598	71.235	ug/ml
7)	H	OIL	10.00	34165575	21.253	ug/mL
8)	H	RRO (C24-C40)	10.00	34165575	21.253	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	4041069	4.015	ug/mL
10)	H	TPHmo (C25-C36)	9.00	1688690	1.853	ug/mL

KEH 4/26/19

(f)=RT Delta > 1/2 Window (m)=manual int.

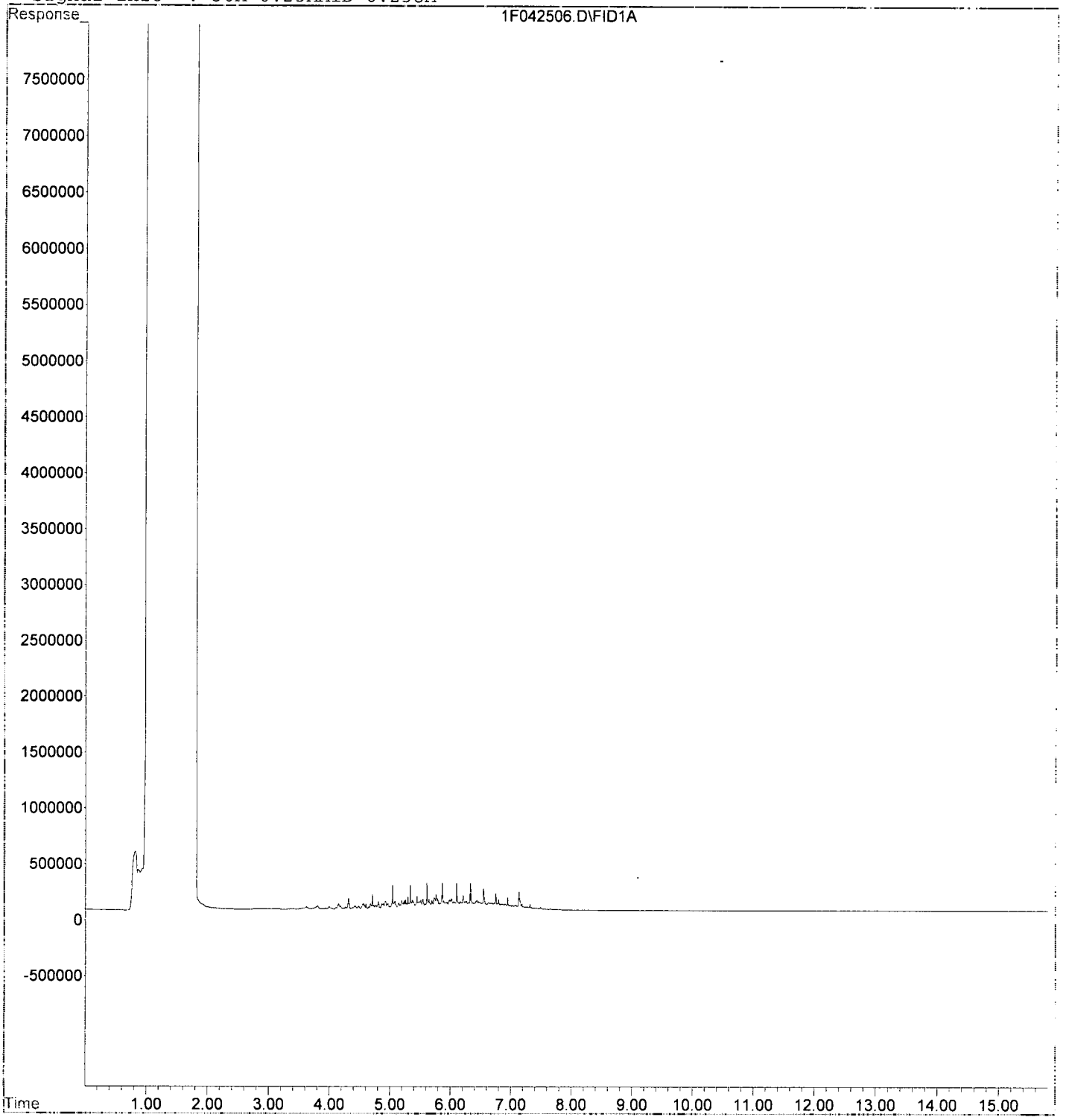
1F042506.D 1F90329D.M Fri Apr 26 08:34:16 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042506.D Vial: 3
Acq On : 25 Apr 2019 18:26 Operator: KEH
Sample : 9D25027-CAL3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:22 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042507.D Vial: 4
Acq On : 25 Apr 2019 18:49 Operator: KEH
Sample : 9D25027-CAL4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:23 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	316126118	183.896	ug/ml
2)	H	Diesel	6.00	316126118	183.896	ug/mL
3)	H	DRO(C12-C24)	6.00	316126118	183.896	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	237078422	183.052	ug/ml
5)	H	TPHd (C10-C25)	6.00	292119635	183.405	ug/ml
7)	H	OIL	10.00	85846601	53.403	ug/mL
8)	H	RRO (C24-C40)	10.00	85846601	53.403	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	9744076	9.681	ug/mL
10)	H	TPHmo (C25-C36)	9.00	3415923	3.748	ug/mL

KAH 4/26/19

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(f)=RT Delta > 1/2 Window (m)=manual Int.

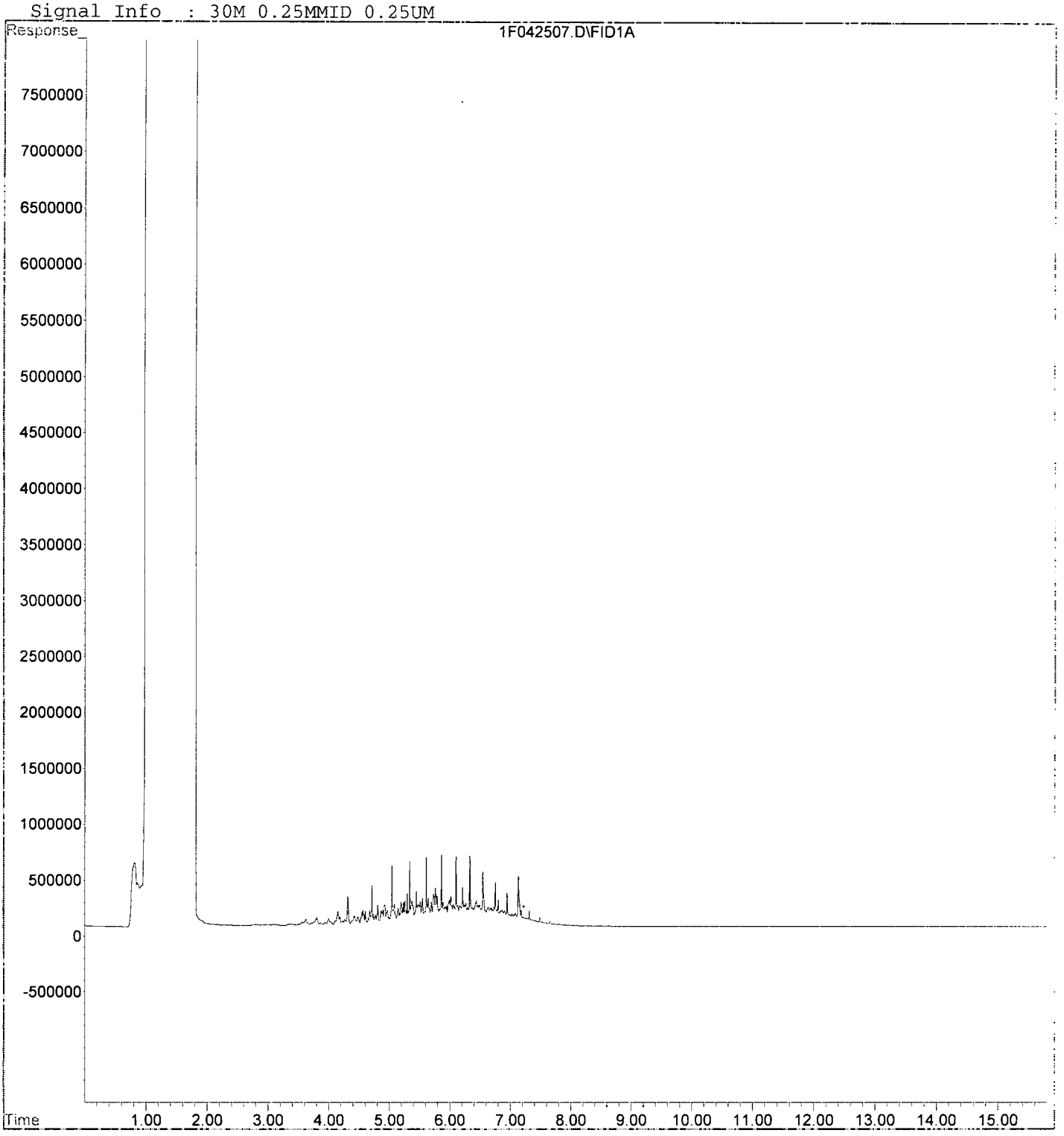
1F042507.D 1F90329D.M Fri Apr 26 08:34:16 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042507.D Vial: 4
Acq On : 25 Apr 2019 18:49 Operator: KEH
Sample : 9D25027-CAL4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:23 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042508.D Vial: 5
Acq On : 25 Apr 2019 19:12 Operator: KEH
Sample : 9D25027-CAL5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:23 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	635258102	369.540	ug/ml
2)	H	Diesel	6.00	635258102	369.540	ug/mL
3)	H	DRO(C12-C24)	6.00	635258102	369.540	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	480842896	371.266	ug/ml
5)	H	TPHd (C10-C25)	6.00	589929594	370.383	ug/ml
7)	H	OIL	10.00	173566087	107.971	ug/mL
8)	H	RRO (C24-C40)	10.00	173566087	107.971	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	19752176	19.624	ug/mL
10)	H	TPHmo (C25-C36)	9.00	6164011	6.763	ug/mL

KEH 4/26/19

(f)=RT Delta > 1/2 Window (m)=manual int.

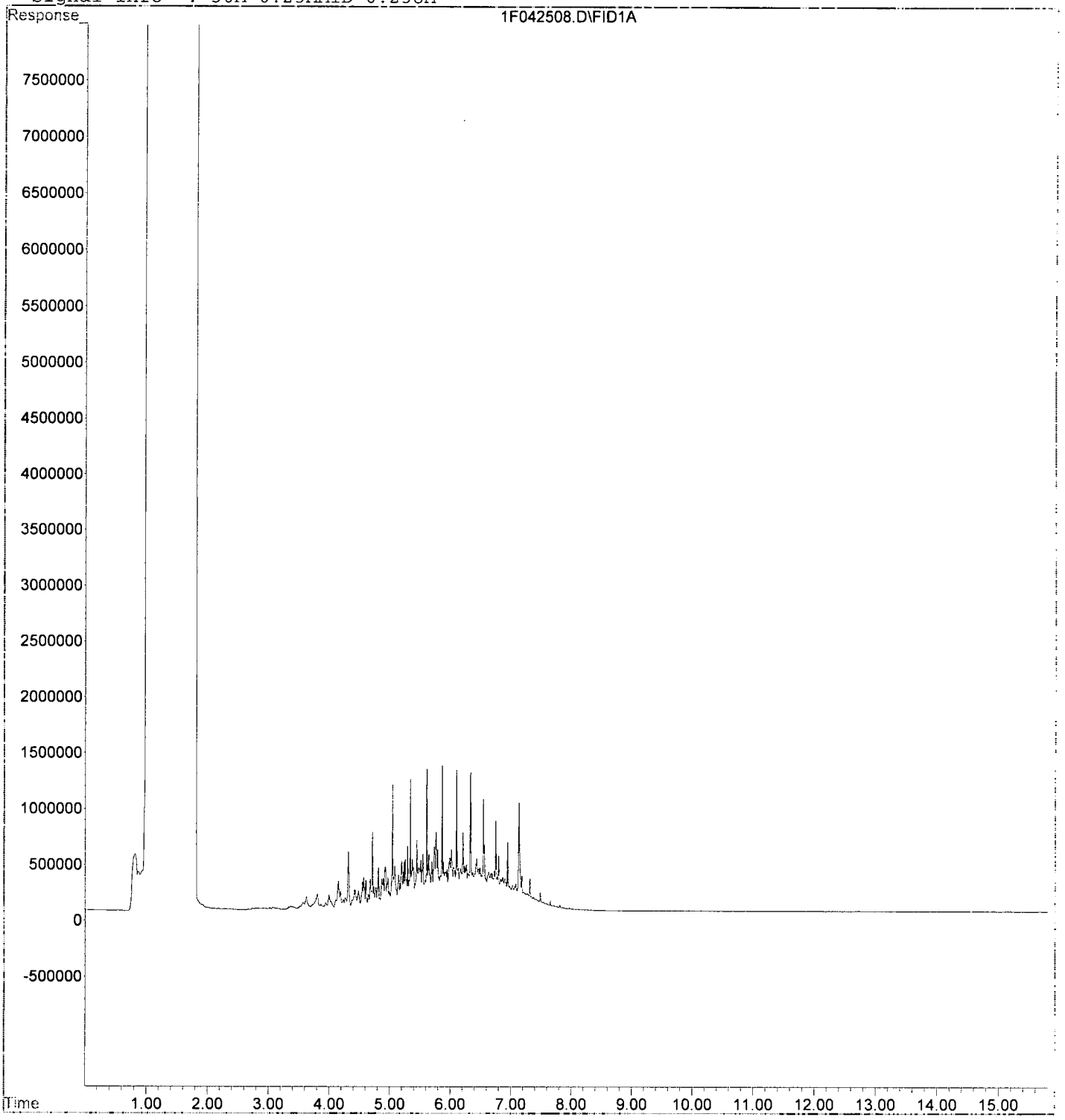
1F042508.D 1F90329D.M Fri Apr 26 08:34:17 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042508.D Vial: 5
Acq On : 25 Apr 2019 19:12 Operator: KEH
Sample : 9D25027-CAL5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:23 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042509.D Vial: 6
Acq On : 25 Apr 2019 19:35 Operator: KEH
Sample : 9D25027-CAL6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:24 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	1249781929	727.019	ug/ml
2)	H	Diesel	6.00	1249781929	727.019	ug/mL
3)	H	DRO(C12-C24)	6.00	1249781929	727.019	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	950063692	733.558	ug/ml
5)	H	TPHd (C10-C25)	6.00	1164841259	731.337	ug/ml
7)	H	OIL	10.00	345378942	214.851	ug/mL
8)	H	RRO (C24-C40)	10.00	345378942	214.851	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	39198271	38.943	ug/mL
10)	H	TPHmo (C25-C36)	9.00	11854960	13.007	ug/mL

KEH 4/24/19

(f)=RT Delta > 1/2 window (m)=manual int.

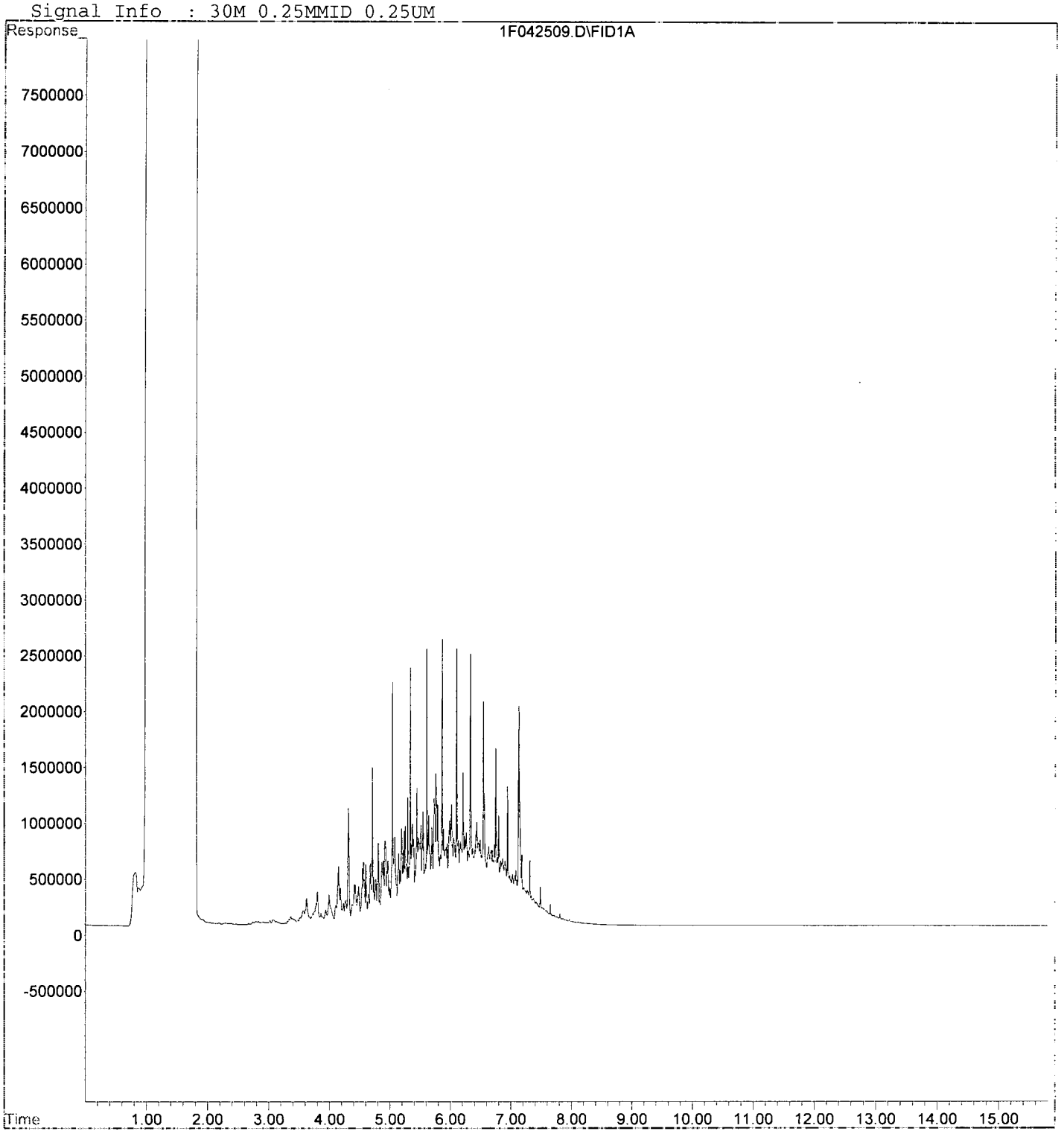
1F042509.D 1F90329D.M Fri Apr 26 08:34:17 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042509.D Vial: 6
Acq On : 25 Apr 2019 19:35 Operator: KEH
Sample : 9D25027-CAL6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:24 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042510.D Vial: 7
Acq On : 25 Apr 2019 19:58 Operator: KEH
Sample : 9D25027-CAL7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:24 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	3126505528	1818.741	ug/ml
2)	H	Diesel	6.00	3126505528	1818.741	ug/mL
3)	H	DRO(C12-C24)	6.00	3126505528	1818.741	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2380625778	1838.115	ug/ml
5)	H	TPHd (C10-C25)	6.00	2919159469	1832.774	ug/ml
7)	H	OIL	10.00	869784451	541.070	ug/mL
8)	H	RRO (C24-C40)	10.00	869784451	541.070	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	99816400	99.167	ug/mL
10)	H	TPHmo (C25-C36)	9.00	29597171	32.472	ug/mL

KEH 4/26/19

(f)=RT Delta > 1/2 window (m)=manual int.

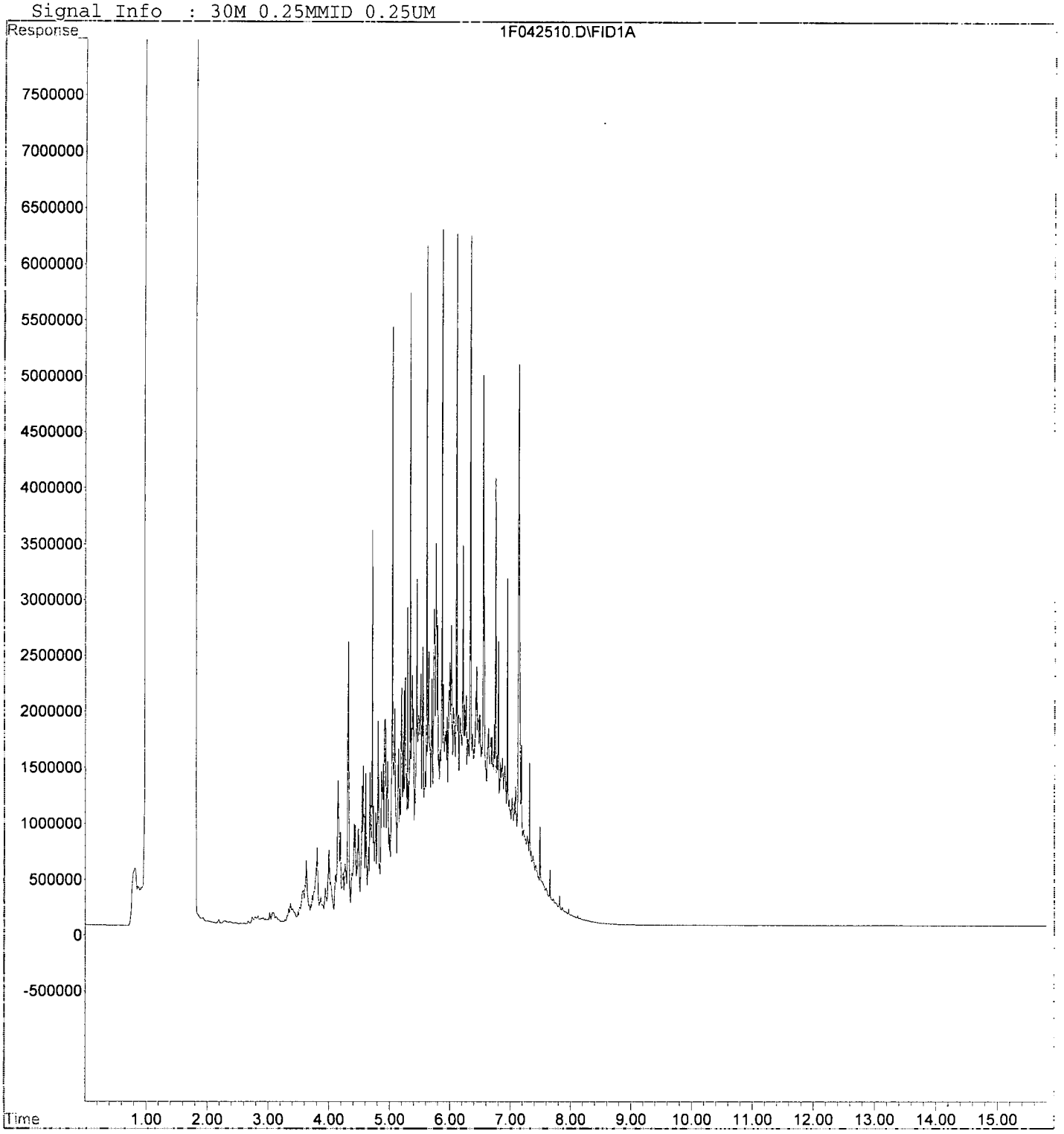
1F042510.D 1F90329D.M Fri Apr 26 08:34:18 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042510.D Vial: 7
Acq On : 25 Apr 2019 19:58 Operator: KEH
Sample : 9D25027-CAL7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:24 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042511.D Vial: 8
Acq On : 25 Apr 2019 20:20 Operator: KEH
Sample : 9D25027-CAL8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:27 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	6233782447	3626.296	ug/ml
2)	H	Diesel	6.00	6233782447	3626.296	ug/mL
3)	H	DRO(C12-C24)	6.00	6233782447	3626.296	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	4745589091	3664.137	ug/ml
5)	H	TPHd (C10-C25)	6.00	5822794146	3655.801	ug/ml
7)	H	OIL	10.00	1748641788	1087.783	ug/mL
8)	H	RRO (C24-C40)	10.00	1748641788	1087.783	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	202599923	201.281	ug/mL
10)	H	TPHmo (C25-C36)	9.00	59879783	65.697	ug/mL

KGT 4/26/19

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(f)=RT Delta > 1/2 window (m)=manual int.

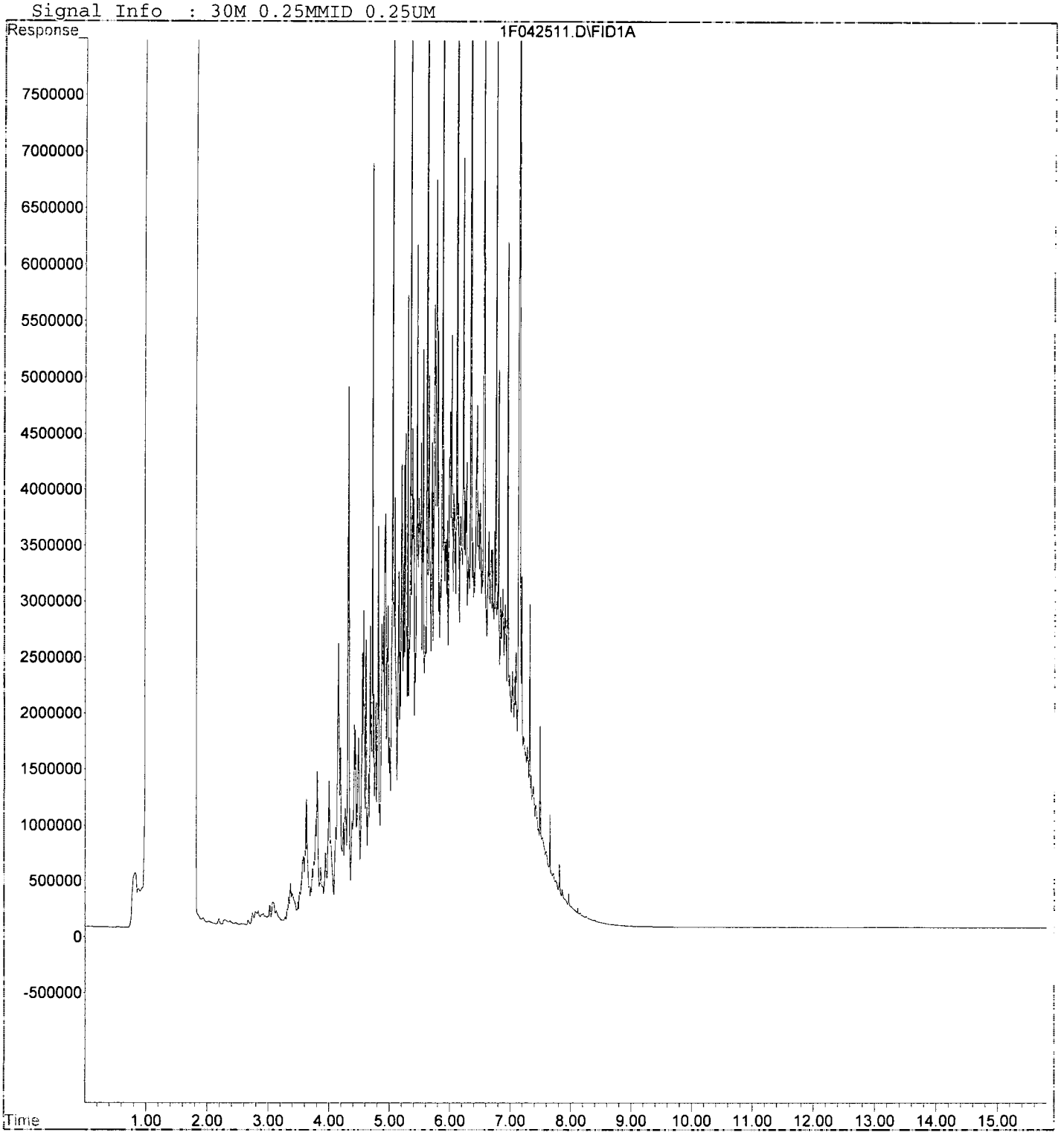
1F042511.D 1F90329D.M Fri Apr 26 08:34:19 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042511.D Vial: 8
Acq On : 25 Apr 2019 20:20 Operator: KEH
Sample : 9D25027-CAL8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:27 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:19:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042512.D Vial: 9
Acq On : 25 Apr 2019 20:43 Operator: KEH
Sample : 9D25027-CAL9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:27 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.79	13927415	6.967 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	5977094	3.477 ug/ml
2)	H	Diesel	6.00	5977094	3.477 ug/mL
3)	H	DRO(C12-C24)	6.00	5977094	3.477 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1650864	1.275 ug/ml
5)	H	TPHd (C10-C25)	6.00	2898648	1.820 ug/ml
7)	H	OIL	10.00	2985298	1.857 ug/mL
8)	H	RRO (C24-C40)	10.00	2985298	1.857 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	693563	0.689 ug/mL
10)	H	TPHmo (C25-C36)	9.00	774201	0.849 ug/mL

Fqit 4/26/19

(f)=RT Delta > 1/2 window (m)=manual int.

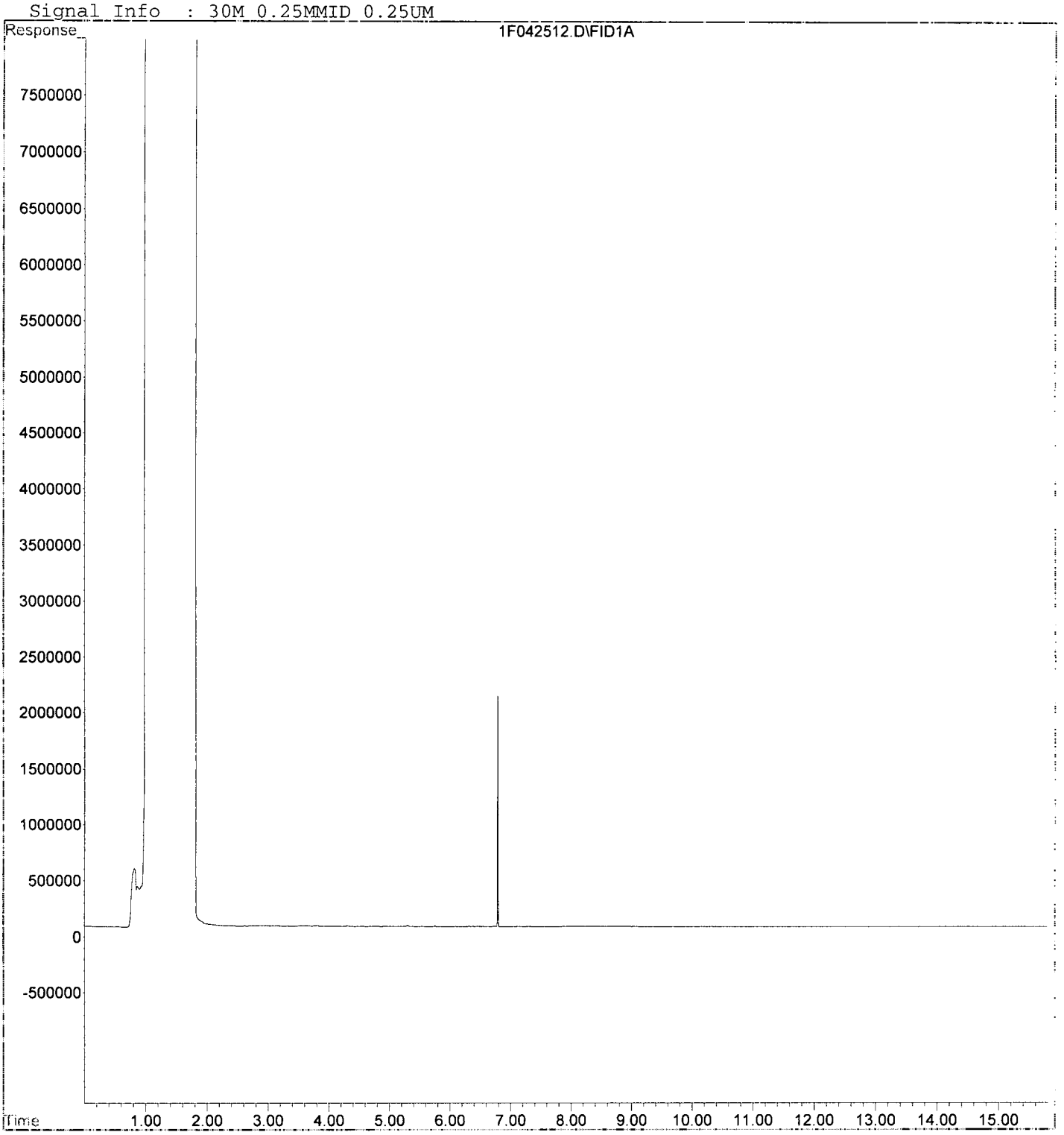
1F042512.D 1F90329D.M Fri Apr 26 08:34:19 2019 SV-GCMS3 Page 1

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042512.D Vial: 9
Acq On : 25 Apr 2019 20:43 Operator: KEH
Sample : 9D25027-CAL9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:27 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042513.D Vial: 10
Acq On : 25 Apr 2019 21:06 Operator: KEH
Sample : 9D25027-CALA Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.79	34540304	17.279 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	5918763	3.443 ug/ml
2)	H	Diesel	6.00	5918763	3.443 ug/mL
3)	H	DRO(C12-C24)	6.00	5918763	3.443 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1529139	1.181 ug/ml
5)	H	TPHd (C10-C25)	6.00	2819953	1.770 ug/ml
7)	H	OIL	10.00	2072558	1.289 ug/mL
8)	H	RRO (C24-C40)	10.00	2072558	1.289 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	674006	0.670 ug/mL
10)	H	TPHmo (C25-C36)	9.00	725827	0.796 ug/mL

KAH 4/26/19

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(f)=RT Delta > 1/2 window (m)=manual int.

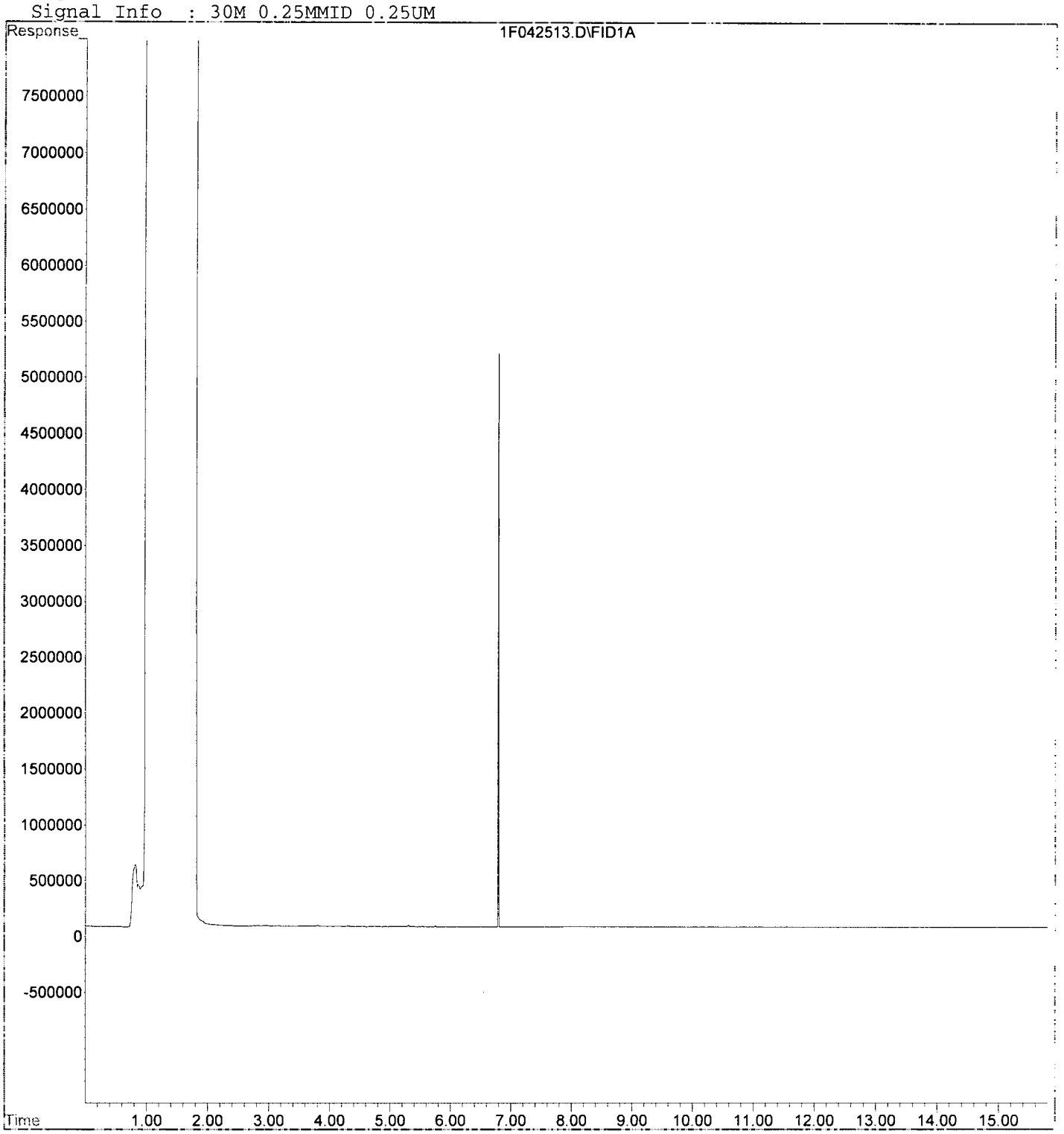
1F042513.D 1F90329D.M Fri Apr 26 08:34:20 2019 SV-GCMS3 Page 1

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042513.D Vial: 10
Acq On : 25 Apr 2019 21:06 Operator: KEH
Sample : 9D25027-CALA Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042514.D Vial: 11
Acq On : 25 Apr 2019 21:29 Operator: KEH
Sample : 9D25027-CALB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.79	70207816	35.123 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	5866581	3.413 ug/ml
2)	H	Diesel	6.00	5866581	3.413 ug/mL
3)	H	DRO(C12-C24)	6.00	5866581	3.413 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1567369	1.210 ug/ml
5)	H	TPHd (C10-C25)	6.00	2849847	1.789 ug/ml
7)	H	OIL	10.00	2158957	1.343 ug/mL
8)	H	RRO (C24-C40)	10.00	2158957	1.343 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	587997	0.584 ug/mL
10)	H	TPHmo (C25-C36)	9.00	718951	0.789 ug/mL

KEH 4/26/19

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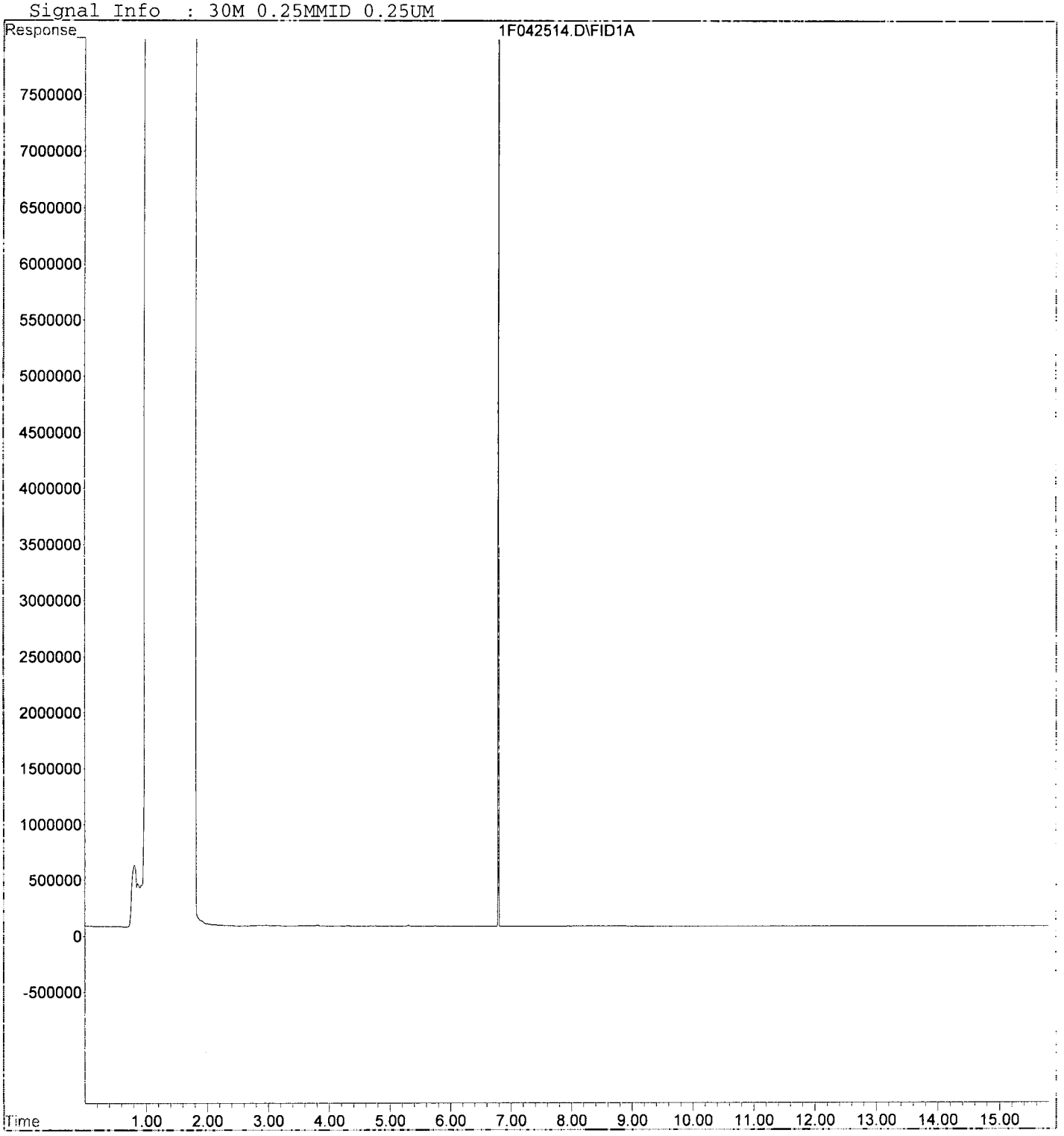
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042514.D Vial: 11
Acq On : 25 Apr 2019 21:29 Operator: KEH
Sample : 9D25027-CALB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042515.D Vial: 12
Acq On : 25 Apr 2019 21:51 Operator: KEH
Sample : 9D25027-CALC Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.80	140098135	70.087 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	6163614	3.585 ug/ml
2)	H	Diesel	6.00	6163614	3.585 ug/mL
3)	H	DRO(C12-C24)	6.00	6163614	3.585 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1722774	1.330 ug/ml
5)	H	TPHd (C10-C25)	6.00	3016373	1.894 ug/ml
7)	H	OIL	10.00	2527581	1.572 ug/mL
8)	H	RRO (C24-C40)	10.00	2527581	1.572 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	623874	0.620 ug/mL
10)	H	TPHmo (C25-C36)	9.00	687656	0.754 ug/mL

KEH 4/26/19

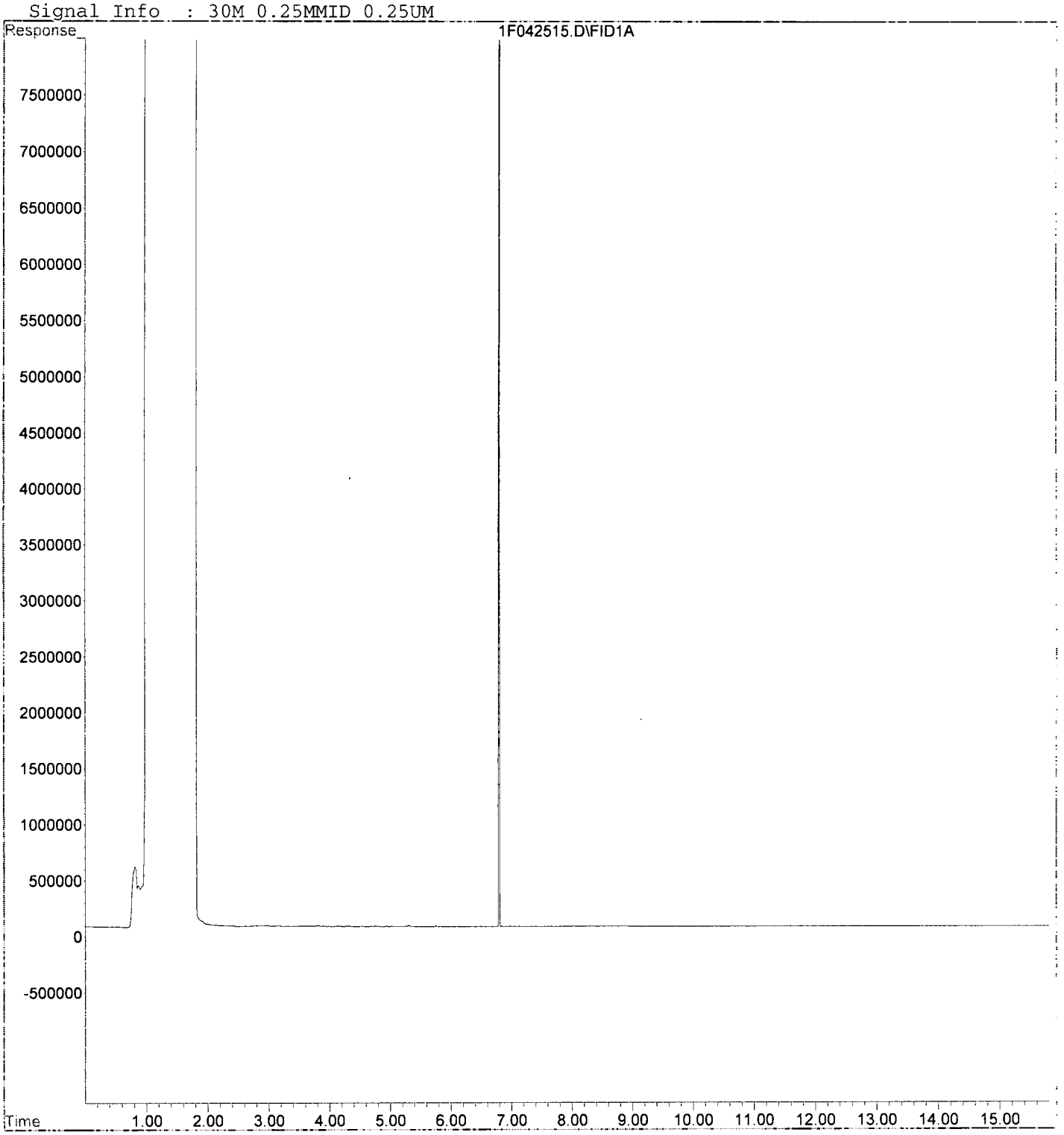
V

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042515.D Vial: 12
Acq On : 25 Apr 2019 21:51 Operator: KEH
Sample : 9D25027-CALC Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042516.D Vial: 13
Acq On : 25 Apr 2019 22:14 Operator: KEH
Sample : 9D25027-CALD Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.80	275627983	137.888	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	6973446	4.057	ug/ml
2)	H	Diesel	6.00	6973446	4.057	ug/mL
3)	H	DRO(C12-C24)	6.00	6973446	4.057	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2051907	1.584	ug/ml
5)	H	TPHd (C10-C25)	6.00	3468122	2.177	ug/ml
7)	H	OIL	10.00	2278752	1.418	ug/mL
8)	H	RRO (C24-C40)	10.00	2278752	1.418	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	639985	0.636	ug/mL
10)	H	TPHmo (C25-C36)	9.00	754331	0.828	ug/mL

KEH 4/24/19

(f)=RT Delta > 1/2 window (m)=manual int.

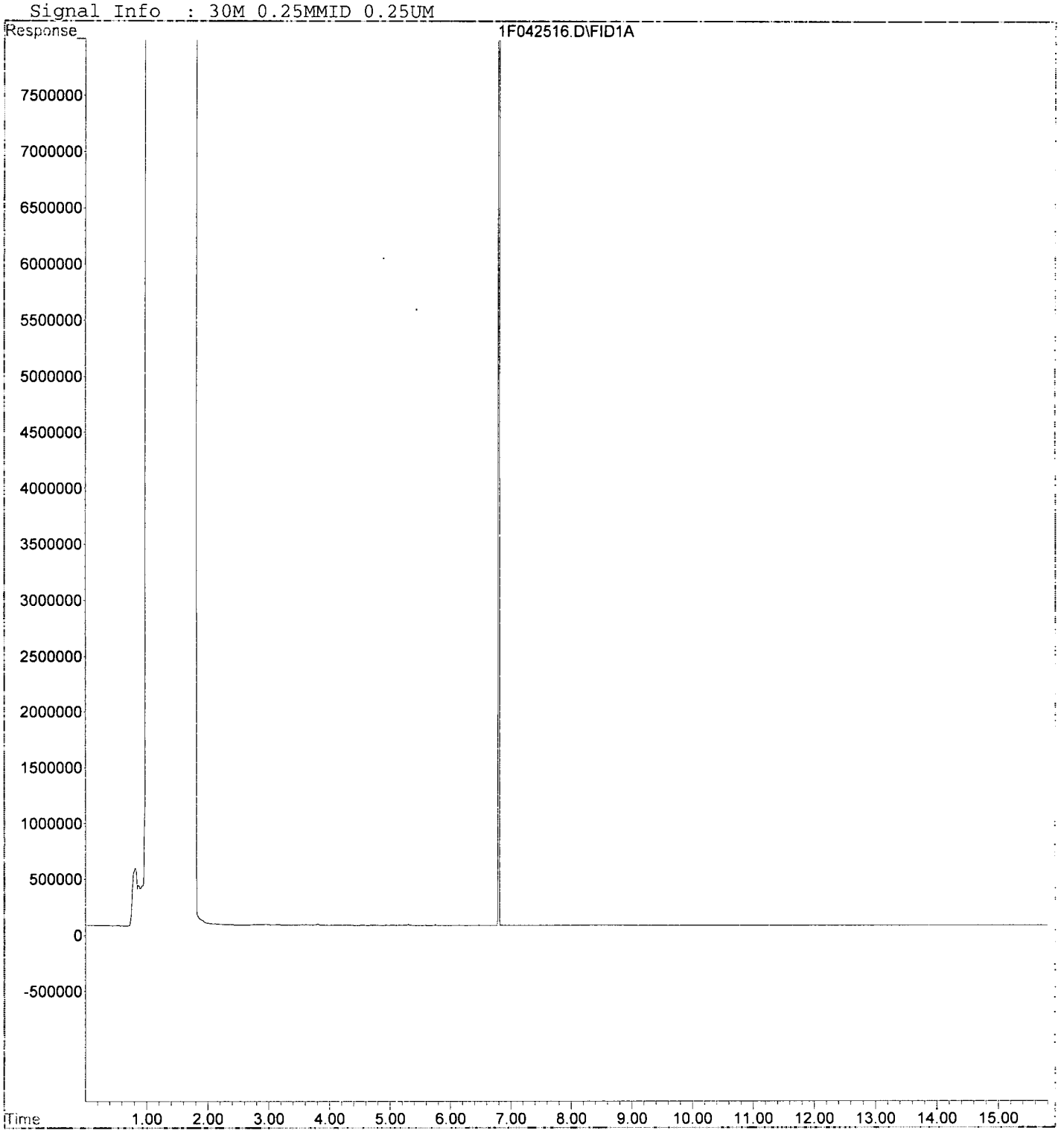
1F042516.D 1F90329D.M Fri Apr 26 08:34:21 2019 SV-GCMS3

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042516.D Vial: 13
Acq On : 25 Apr 2019 22:14 Operator: KEH
Sample : 9D25027-CALD Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:28 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042517.D Vial: 14
Acq On : 25 Apr 2019 22:37 Operator: KEH
Sample : 9D25027-CALE Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:29 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	36831162	21.425	ug/ml
2)	H	Diesel	6.00	36831162	21.425	ug/mL
3)	H	DRO(C12-C24)	6.00	36831162	21.425	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	4658754	3.597	ug/ml
5)	H	TPHd (C10-C25)	6.00	14352579	9.011	ug/ml
7)	H	OIL	10.00	40658415	25.293	ug/mL
8)	H	RRO (C24-C40)	10.00	40658415	25.293	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	26240021	26.069	ug/mL
10)	H	TPHmo (C25-C36)	9.00	23623063	25.918	ug/mL

KGH 4/26/19

(f)=RT Delta > 1/2 Window (m)=manual int.

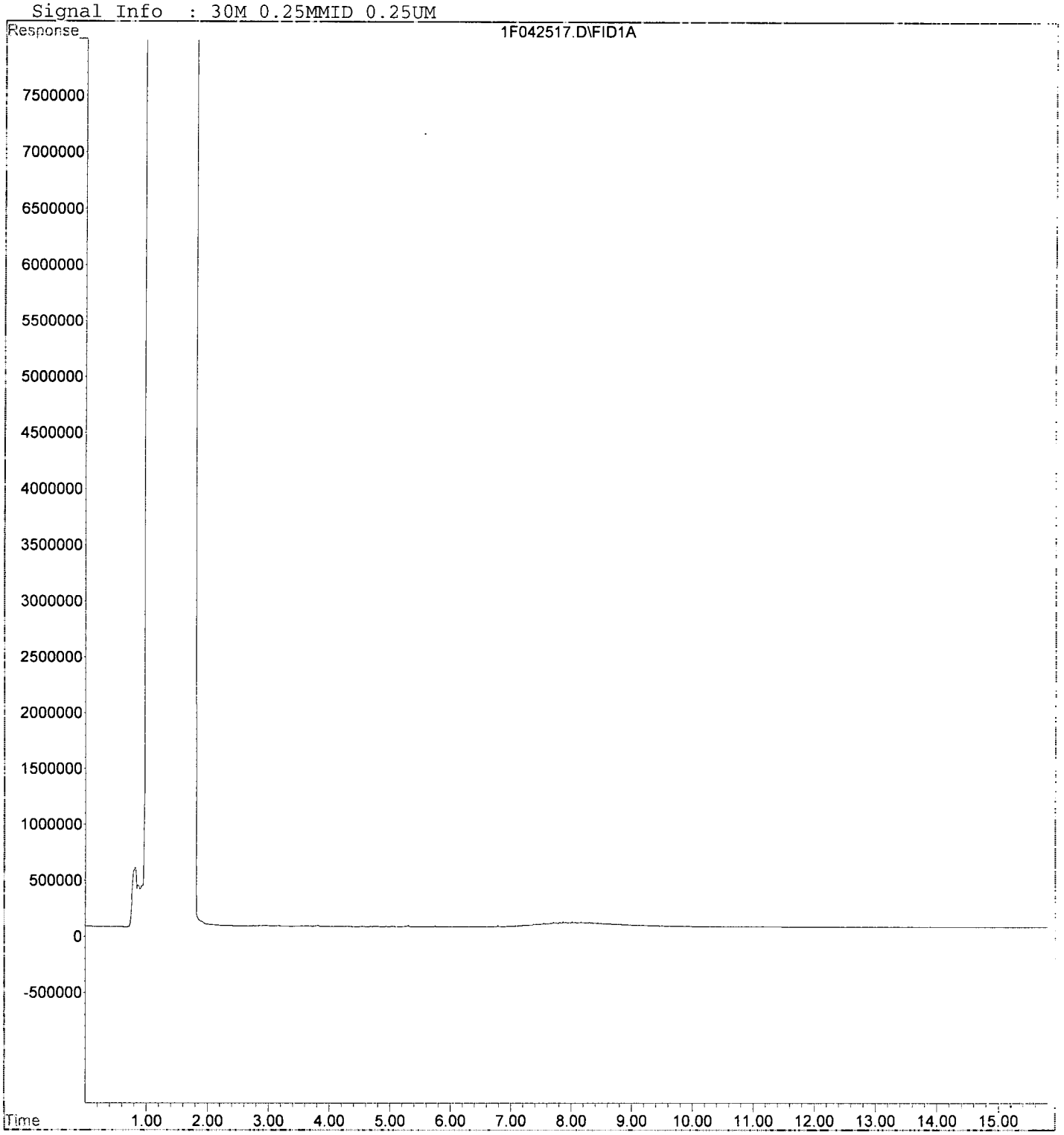
1F042517.D 1F90329D.M Fri Apr 26 08:34:22 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042517.D Vial: 14
Acq On : 25 Apr 2019 22:37 Operator: KEH
Sample : 9D25027-CALE Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:29 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042518.D Vial: 15
Acq On : 25 Apr 2019 22:59 Operator: KEH
Sample : 9D25027-CALF Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:29 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	71015430	41.311	ug/ml
2)	H	Diesel	6.00	71015430	41.311	ug/mL
3)	H	DRO(C12-C24)	6.00	71015430	41.311	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	7510524	5.799	ug/ml
5)	H	TPHd (C10-C25)	6.00	26686415	16.755	ug/ml
7)	H	OIL	10.00	84081063	52.305	ug/mL
8)	H	RRO (C24-C40)	10.00	84081063	52.305	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	55379526	55.019	ug/mL
10)	H	TPHmo (C25-C36)	9.00	49522315	54.333	ug/mL

KSH 4/26/19

(f)=RT Delta > 1/2 Window (m)=manual int.

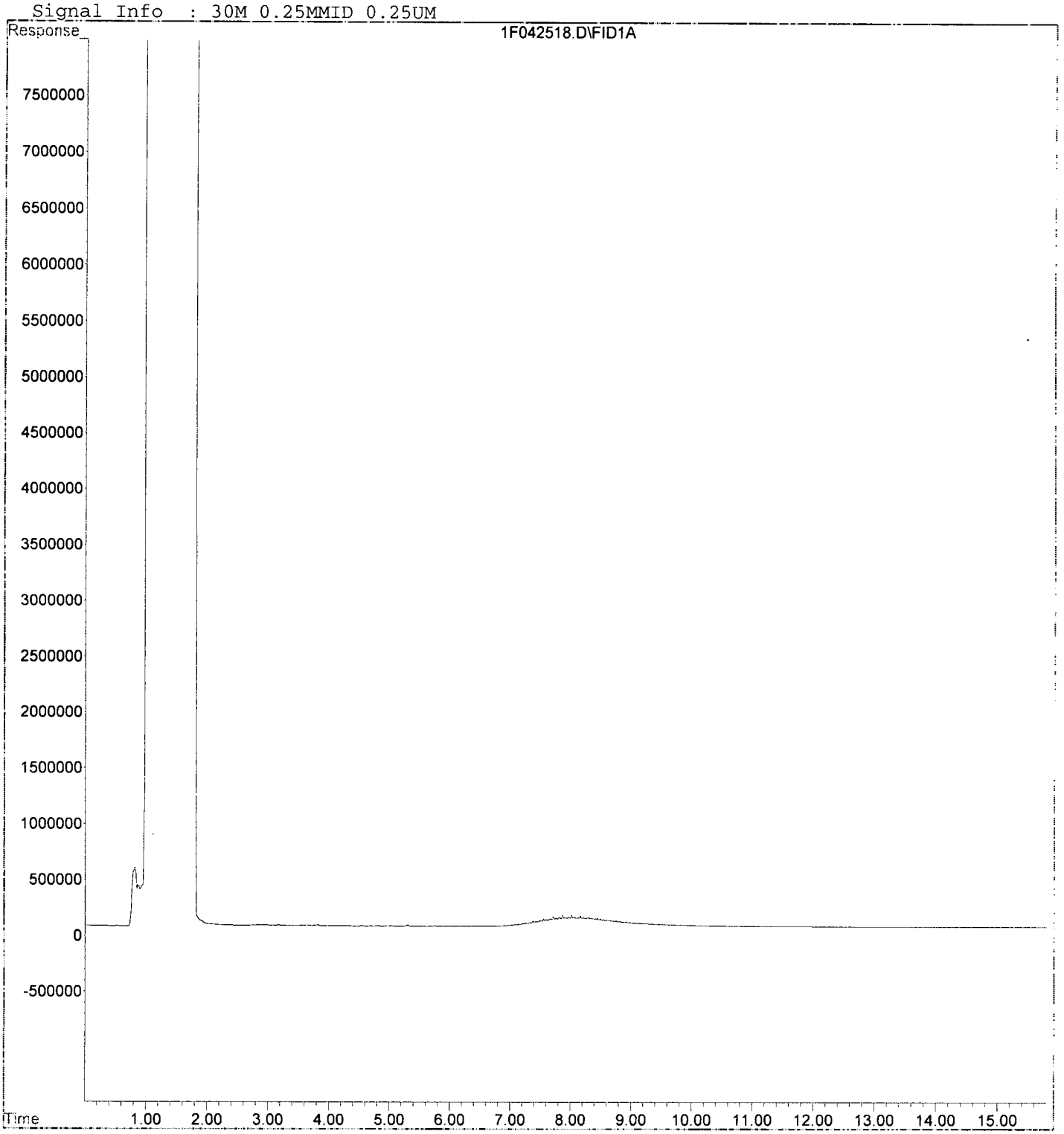
1F042518.D 1F90329D.M Fri Apr 26 08:34:23 2019 SV-GCMS3

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042518.D Vial: 15
Acq On : 25 Apr 2019 22:59 Operator: KEH
Sample : 9D25027-CALF Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:29 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042519.D Vial: 16
Acq On : 25 Apr 2019 23:22 Operator: KEH
Sample : 9D25027-CALG Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:29 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	213038660	123.928	ug/ml
2)	H	Diesel	6.00	213038660	123.928	ug/mL
3)	H	DRO(C12-C24)	6.00	213038660	123.928	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	18384233	14.195	ug/ml
5)	H	TPHd (C10-C25)	6.00	76186160	47.833	ug/ml
7)	H	OIL	10.00	267131698	166.176	ug/mL
8)	H	RRO (C24-C40)	10.00	267131698	166.176	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	178799247	177.635	ug/mL
10)	H	TPHmo (C25-C36)	9.00	160632315	176.237	ug/mL

KEH 4/26/19

✓

(f)=RT Delta > 1/2 window (m)=manual int.

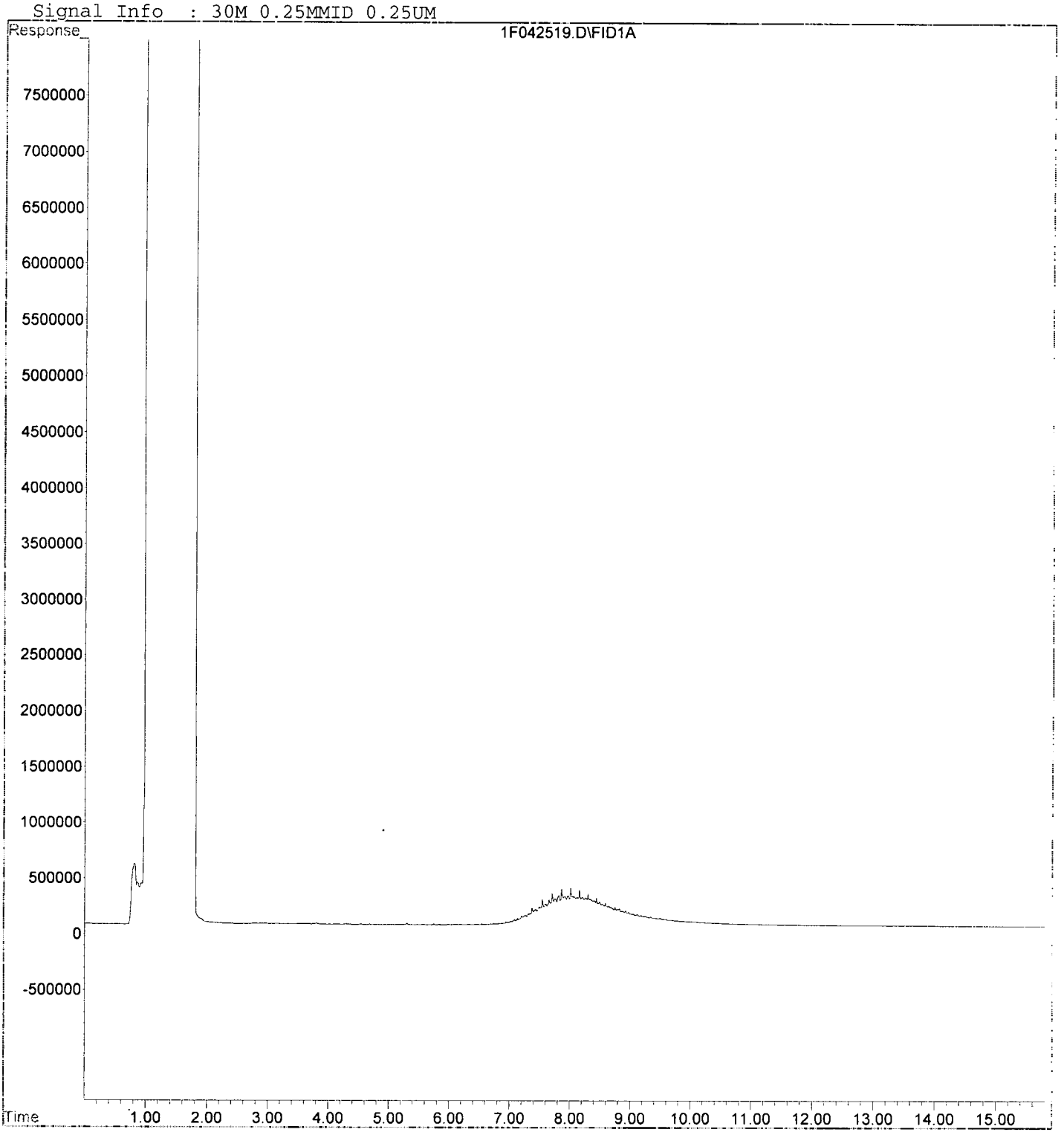
1F042519.D 1F90329D.M Fri Apr 26 08:34:23 2019 SV-GCMS3

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042519.D Vial: 16
Acq On : 25 Apr 2019 23:22 Operator: KEH
Sample : 9D25027-CALG Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:29 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042520.D Vial: 17
Acq On : 25 Apr 2019 23:45 Operator: KEH
Sample : 9D25027-CALH Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:30 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	430875093	250.647	ug/ml
2)	H	Diesel	6.00	430875093	250.647	ug/mL
3)	H	DRO(C12-C24)	6.00	430875093	250.647	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	35036900	27.052	ug/ml
5)	H	TPHd (C10-C25)	6.00	150801879	94.680	ug/ml
7)	H	OIL	10.00	551376804	342.997	ug/mL
8)	H	RRO (C24-C40)	10.00	551376804	342.997	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	369625025	367.219	ug/mL
10)	H	TPHmo (C25-C36)	9.00	336045814	368.690	ug/mL

KEH 4/26/19

✓

(f)=RT Delta > 1/2 Window (m)=manual int.

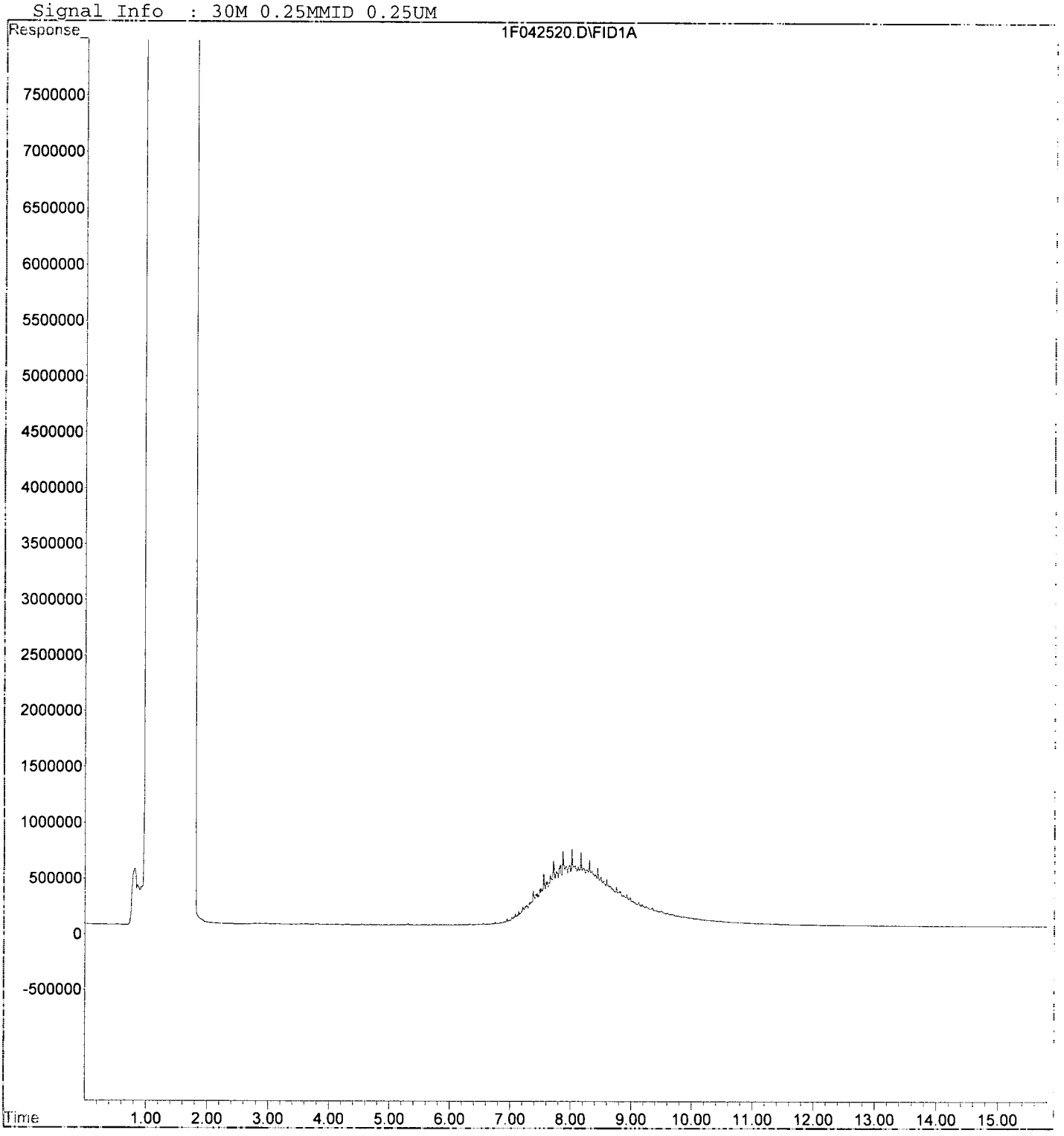
1F042520.D 1F90329D.M Fri Apr 26 08:34:24 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042520.D Vial: 17
Acq On : 25 Apr 2019 23:45 Operator: KEH
Sample : 9D25027-CALH Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:30 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042521.D Vial: 18
Acq On : 26 Apr 2019 00:07 Operator: KEH
Sample : 9D25027-CALI Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:30 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	881369363	512.707	ug/ml
2)	H	Diesel	6.00	881369363	512.707	ug/mL
3)	H	DRO(C12-C24)	6.00	881369363	512.707	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	68981455	53.262	ug/ml
5)	H	TPHd (C10-C25)	6.00	304588612	191.234	ug/ml
7)	H	OIL	10.00	1146400987	713.145	ug/mL
8)	H	RRO (C24-C40)	10.00	1146400987	713.145	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	764513007	759.536	ug/mL
10)	H	TPHmo (C25-C36)	9.00	701380034	769.514	ug/mL

KEH 4/29/19

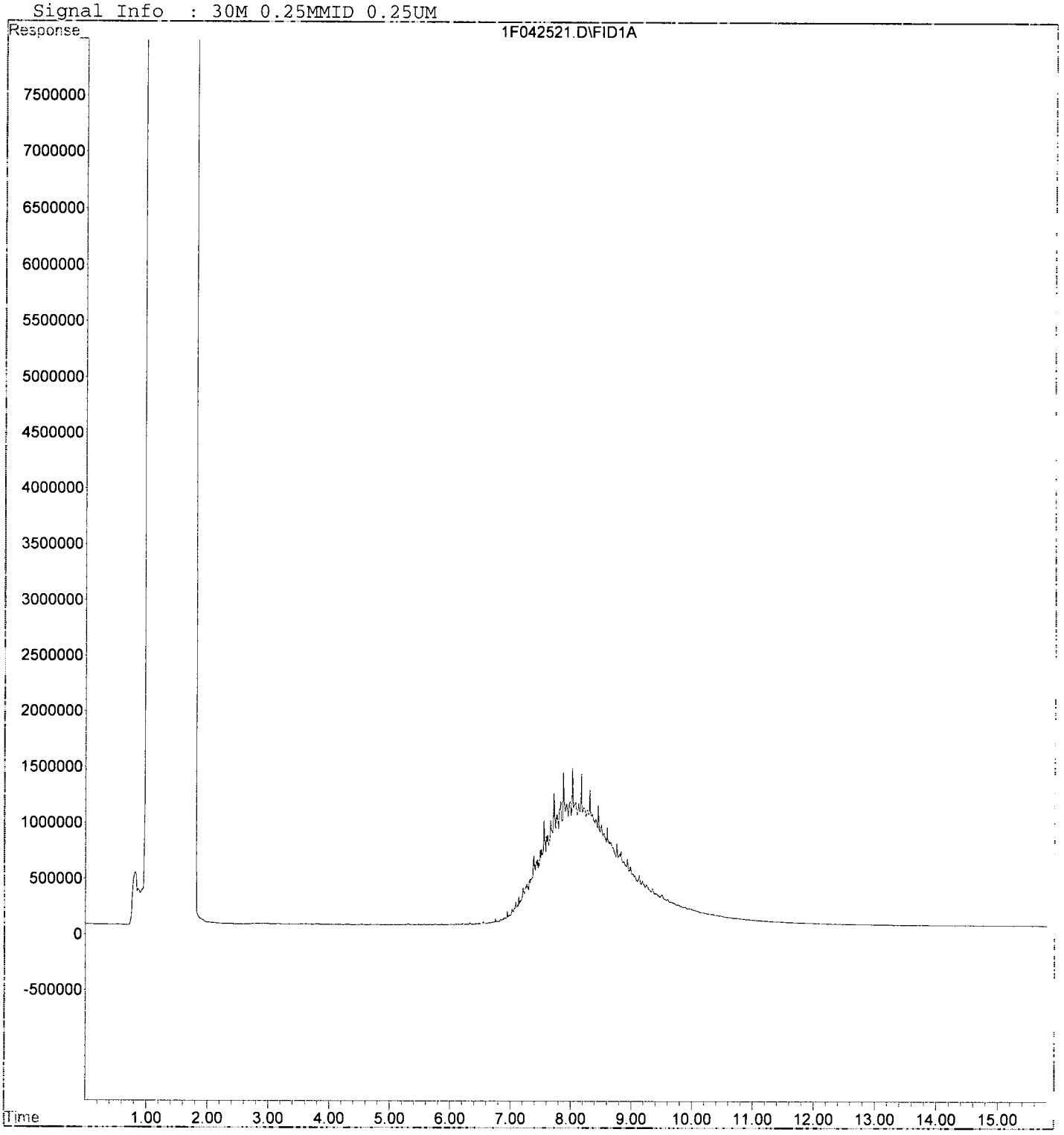
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042521.D Vial: 18
Acq On : 26 Apr 2019 00:07 Operator: KEH
Sample : 9D25027-CALI Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:30 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042522.D Vial: 19
Acq On : 26 Apr 2019 00:30 Operator: KEH
Sample : 9D25027-CALJ Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:31 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	2193669368	1276.095	ug/ml
2)	H	Diesel	6.00	2193669368	1276.095	ug/mL
3)	H	DRO(C12-C24)	6.00	2193669368	1276.095	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	167378076	129.235	ug/ml
5)	H	TPHd (C10-C25)	6.00	750009055	470.888	ug/ml
7)	H	OIL	10.00	2902021937	1805.270	ug/mL
8)	H	RRO (C24-C40)	10.00	2902021937	1805.270	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1913826307	1901.368	ug/mL
10)	H	TPHmo (C25-C36)	9.00	1775803656	1948.311	ug/mL

KAH 4/26/19

(f)=RT Delta > 1/2 Window (m) =manual int.

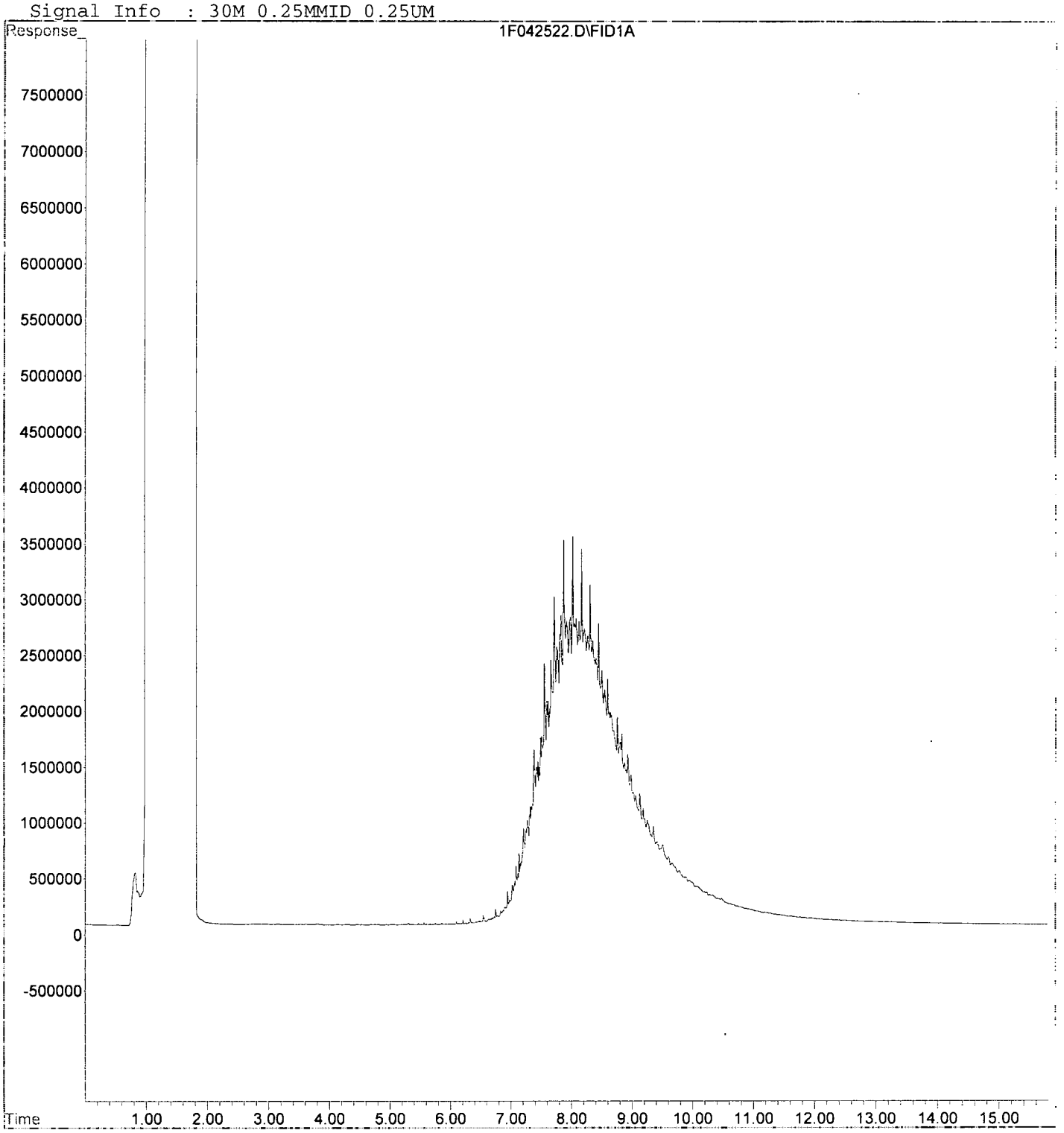
1F042522.D 1F90329D.M Fri Apr 26 08:34:25 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042522.D Vial: 19
Acq On : 26 Apr 2019 00:30 Operator: KEH
Sample : 9D25027-CALJ Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:31 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042523.D Vial: 99
Acq On : 26 Apr 2019 00:52 Operator: KEH
Sample : 9D25027-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:31 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	12553111	7.302	ug/ml
2)	H	Diesel	6.00	12553111	7.302	ug/mL
3)	H	DRO(C12-C24)	6.00	12553111	7.302	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	3043185	2.350	ug/ml
5)	H	TPHd (C10-C25)	6.00	5401700	3.391	ug/ml
7)	H	OIL	10.00	13157718	8.185	ug/mL
8)	H	RRO (C24-C40)	10.00	13157718	8.185	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	4396275	4.368	ug/mL
10)	H	TPHmo (C25-C36)	9.00	6098211	6.691	ug/mL

NK
Kat 4/26/19

(f)=RT Delta > 1/2 Window (m)=manual int.

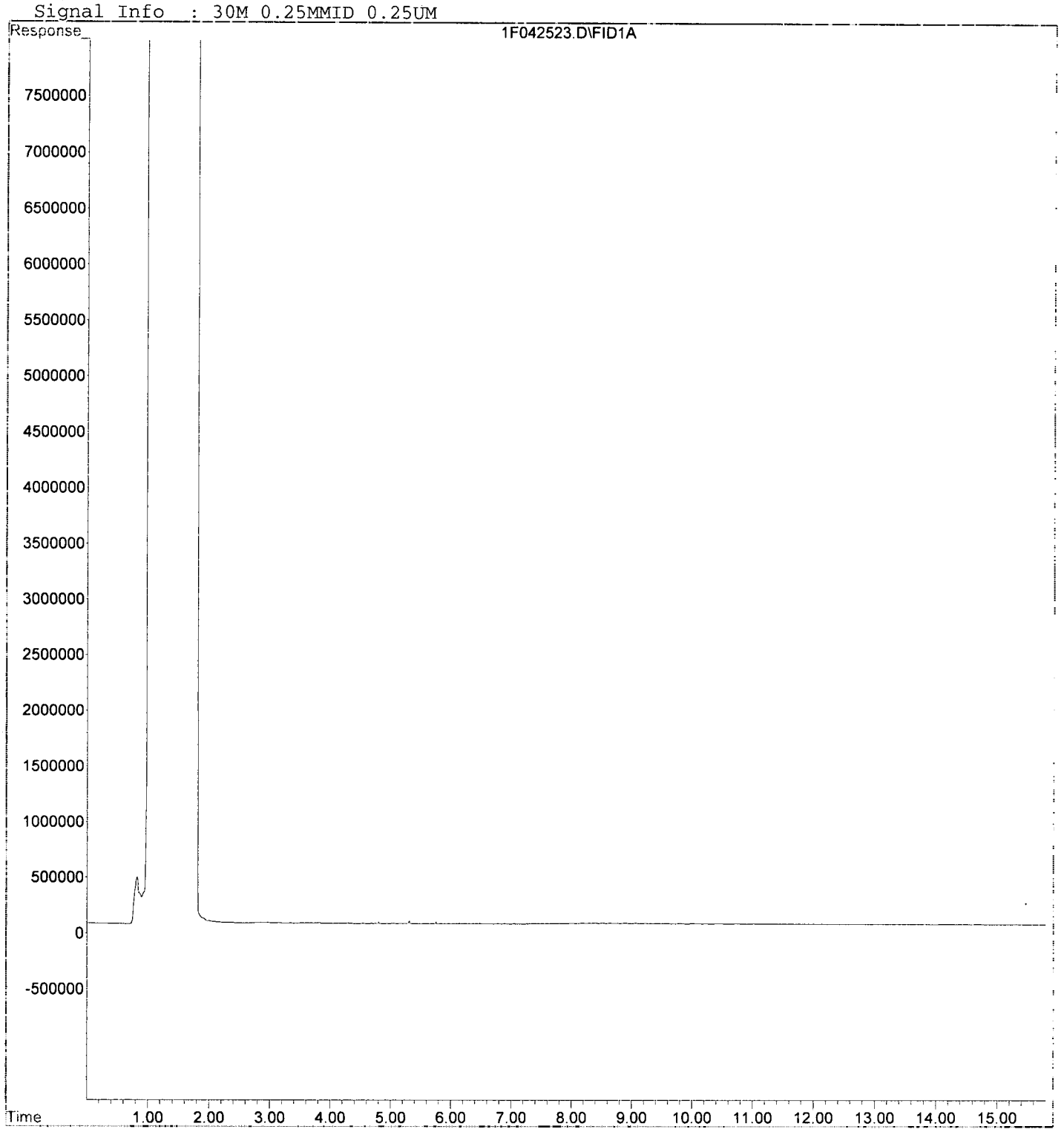
1F042523.D 1F90329D.M Fri Apr 26 08:34:25 2019 SV-GCMS3 Page 1

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042523.D Vial: 99
Acq On : 26 Apr 2019 00:52 Operator: KEH
Sample : 9D25027-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:31 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042524.D Vial: 20
Acq On : 26 Apr 2019 1:15 Operator: KEH
Sample : 9D25027-CALK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:31 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	4341632449	2525.601	ug/ml
2)	H	Diesel	6.00	4341632449	2525.601	ug/mL
3)	H	DRO(C12-C24)	6.00	4341632449	2525.601	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	330829671	255.438	ug/ml
5)	H	TPHd (C10-C25)	6.00	1477040392	927.350	ug/ml
7)	H	OIL	10.00	5787430343	3600.206	ug/mL
8)	H	RRO (C24-C40)	10.00	5787430343	3600.206	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	3793601205	3768.907	ug/mL
10)	H	TPHmo (C25-C36)	9.00	3547021564	3891.590	ug/mL

Kat 4/24/19

V

(f)=RT Delta > 1/2 Window (m)=manual int.

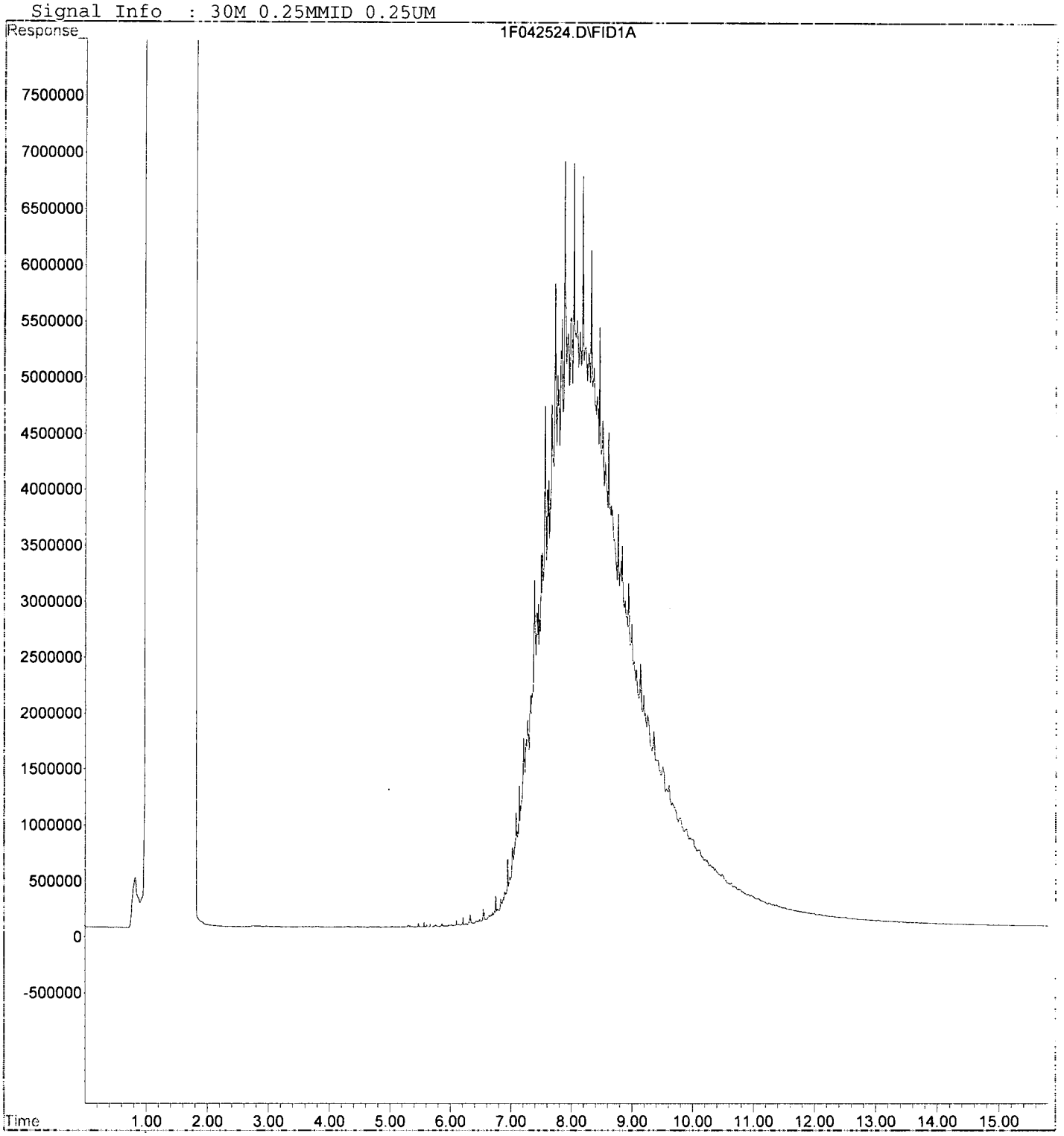
1F042524.D 1F90329D.M Fri Apr 26 08:34:26 2019 SV-GCMS3

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042524.D Vial: 20
Acq On : 26 Apr 2019 1:15 Operator: KEH
Sample : 9D25027-CALK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:31 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042525.D Vial: 99
Acq On : 26 Apr 2019 1:38 Operator: KEH
Sample : 9D25027-IBL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:32 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	17306765	10.068	ug/ml
2)	H	Diesel	6.00	17306765	10.068	ug/mL
3)	H	DRO(C12-C24)	6.00	17306765	10.068	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	3341633	2.580	ug/ml
5)	H	TPHd (C10-C25)	6.00	6442173	4.045	ug/ml
7)	H	OIL	10.00	25756096	16.022	ug/mL
8)	H	RRO (C24-C40)	10.00	25756096	16.022	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	8614639	8.559	ug/mL
10)	H	TPHmo (C25-C36)	9.00	12535043	13.753	ug/mL

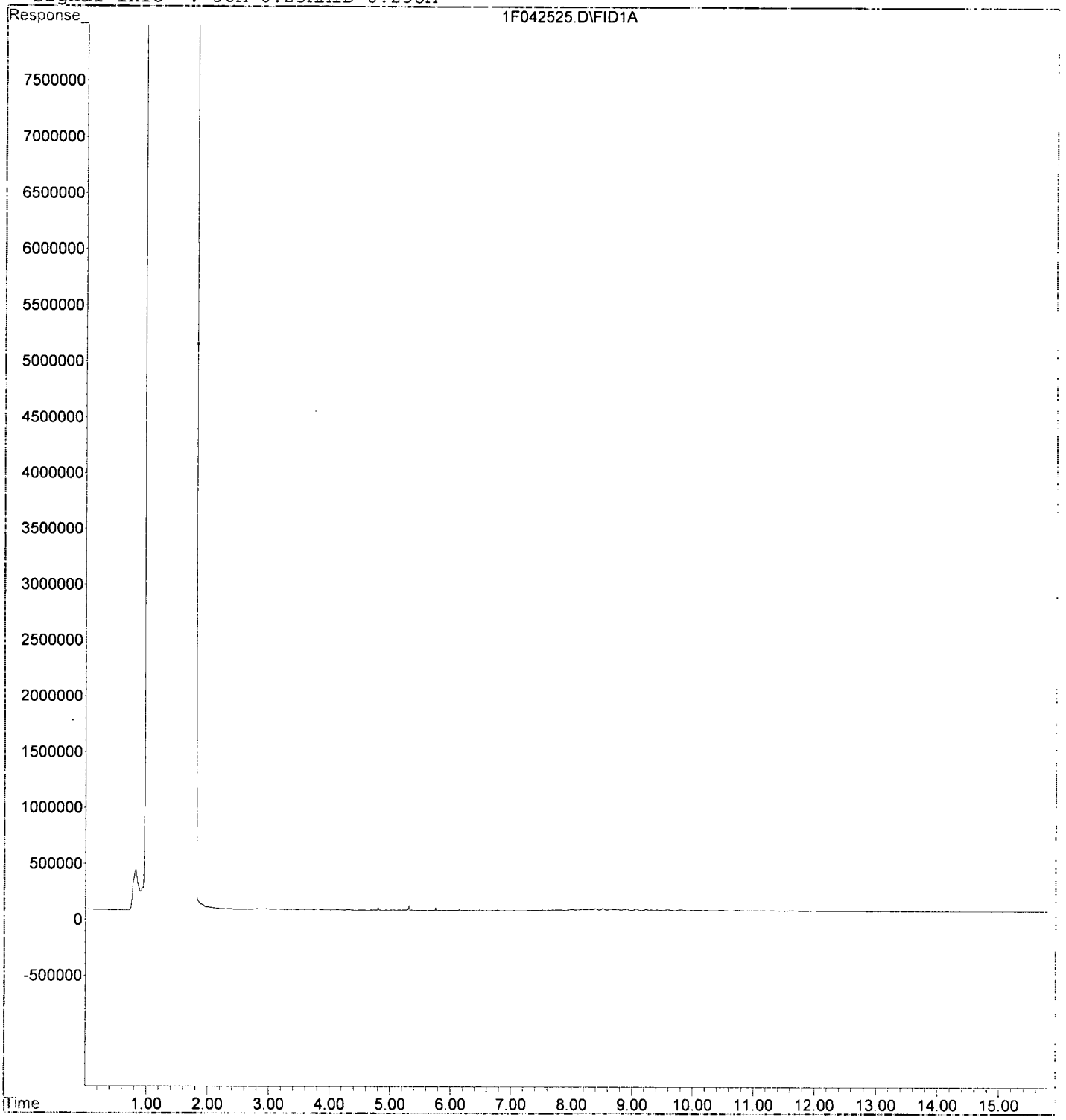
NR
Kat 4/24/19

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042525.D Vial: 99
Acq On : 26 Apr 2019 1:38 Operator: KEH
Sample : 9D25027-IBL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:32 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042526.D Vial: 21
Acq On : 26 Apr 2019 2:00 Operator: KEH
Sample : 9D25027-ICV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:32 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	1226583001	713.524	ug/ml
2)	H	Diesel	6.00	1226583001	713.524	ug/mL
3)	H	DRO(C12-C24)	6.00	1226583001	713.524	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	932655378	720.117	ug/ml
5)	H	TPHd (C10-C25)	6.00	1142282058	717.174	ug/ml
7)	H	OIL	10.00	347259589	216.021	ug/mL
8)	H	RRO (C24-C40)	10.00	347259589	216.021	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	40800192	40.535	ug/mL
10)	H	TPHmo (C25-C36)	9.00	13188744	14.470	ug/mL

KGH 4/26/19

✓

(f)=RT Delta > 1/2 Window (m)=manual Int.

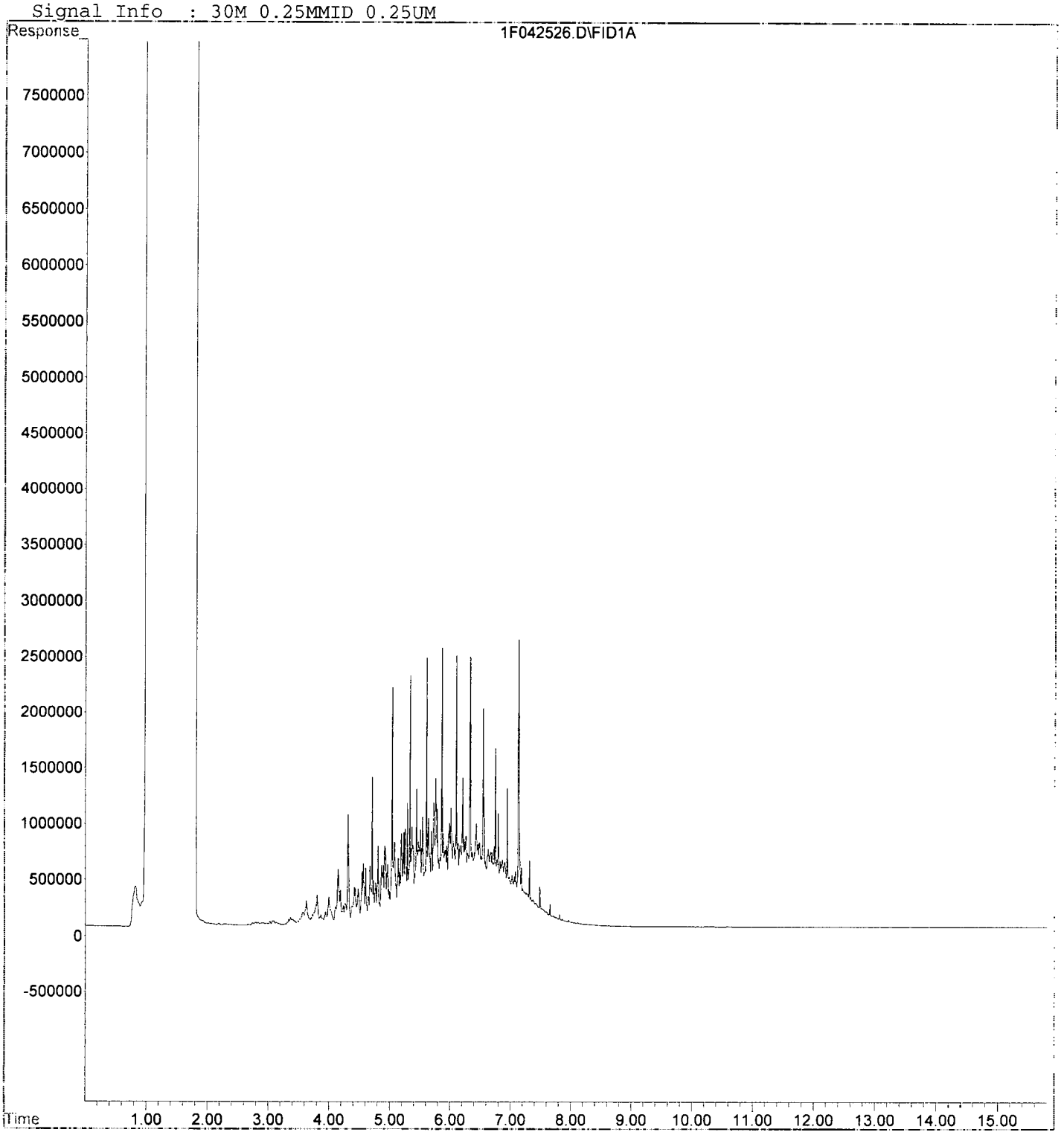
1F042526.D 1F90329D.M Fri Apr 26 08:34:27 2019 SV-GCMS3

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042526.D Vial: 21
Acq On : 26 Apr 2019 2:00 Operator: KEH
Sample : 9D25027-ICV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:32 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042527.D Vial: 22
Acq On : 26 Apr 2019 2:23 Operator: KEH
Sample : 9D25027-ICV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:33 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	902879266	525.220	ug/ml
2)	H	Diesel	6.00	902879266	525.220	ug/mL
3)	H	DRO(C12-C24)	6.00	902879266	525.220	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	88553298	68.373	ug/ml
5)	H	TPHd (C10-C25)	6.00	335225897	210.469	ug/ml
7)	H	OIL	10.00	1136238940	706.824	ug/mL
8)	H	RRO (C24-C40)	10.00	1136238940	706.824	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	756609544	751.684	ug/mL
10)	H	TPHmo (C25-C36)	9.00	665299183	729.928	ug/mL

KEH 4/26/19

✓

(f)=RT Delta > 1/2 Window (m)=manual int.

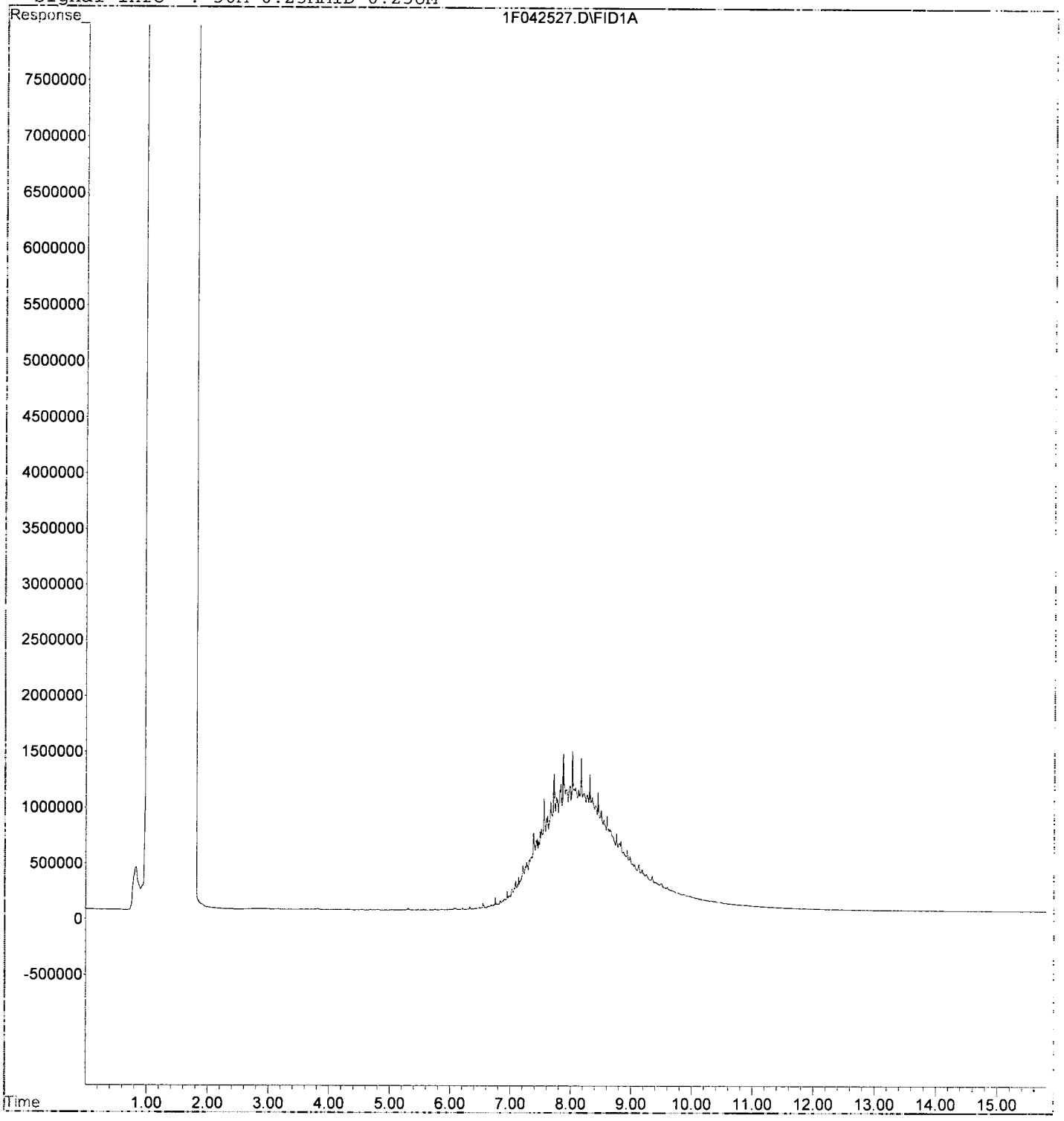
1F042527.D 1F90329D.M Fri Apr 26 08:34:28 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25027\1F042527.D Vial: 22
Acq On : 26 Apr 2019 2:23 Operator: KEH
Sample : 9D25027-ICV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 8:33 2019 Quant Results File: 1F90329D.RES

Quant Method : F:\1\METHODS\1F90329D.M (Chemstation Integrator)
Title : DUALFID1F, NWTPH-Dx/TPH-8015m
Last Update : Fri Apr 26 08:27:45 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Gasoline Range Hydrocarbons (Benzene though Naphthalene) by NWTPH-Gx

Benchsheet & Analysis Sequence Data

Batch 9060533

Sequence 9F04032 (A9E0785-01)

PREPARATION BENCH SHEET

BATCH #: 9060533 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9060533-BLK1		QC	06/04/19 09:03	7.5	5							
9060533-BS1		QC	06/04/19 09:03	5	5	A19E314		250				
9060533-BS2		QC	06/04/19 09:03	5	5	A19E311		250				
A9E0723-03	E	8260C Full List	05/31/19 15:40	1.17	5					2708-190521-009	MOD FRIDGE OUT	
A9E0723-03	E	NWTPH-Gx	05/31/19 15:40	1.17	5					2708-190521-009	MOD FRIDGE OUT	
A9E0785-01	G	8260C Full List	05/31/19 15:46	1.43	5					2708-190522-011	MOD FRIDGE OUT	
A9E0785-01	G	NWTPH-Gx	05/31/19 15:46	1.43	5					2708-190522-011	MOD FRIDGE OUT	
A9E0832-02	D	8260C Full List	05/31/19 15:54	1.08	5					2708-190523-013	MOD FRIDGE OUT	
A9E0832-02	D	NWTPH-Gx	05/31/19 15:54	1.08	5					2708-190523-013	MOD FRIDGE OUT	
A9E0932-01	B	8260C Full List	(Date Sampled)	13.07	10					PW 10 Lb--R29632PL-052919	FP FRIDGE OUT	
A9E0932-01	B	8260C BTEX	(Date Sampled)	13.07	10					PW 10 Lb--R29632PL-052919	Added for BatchQC in: 9060533	
A9E0932-01	B	NWTPH-Gx	(Date Sampled)	13.07	10					PW 10 Lb--R29632PL-052919	Added for BatchQC in: 9060533	
9060533-MS1		QC	05/29/19 11:00	13.07	10	A19E314	A9E0932-01	607			DW=83.7% @50X	
A9E0992-01RE1	D	NWTPH-Gx	(Date Sampled)	6.11	5					Stockpile	FP FRIDGE OUT	
A9E0995-01	C	NWTPH-Gx	05/31/19 19:15	5.84	5					GAS-N	MOD FRIDGE OUT	
A9E0995-02	C	NWTPH-Gx	05/31/19 19:15	5.87	5					GAS-S	MOD FRIDGE OUT	
A9F0027-01	B	NWTPH-Gx	06/03/19 15:00	5.12	5					8519192-14	MOD	
A9F0027-02	B	NWTPH-Gx	06/03/19 15:00	5.88	5					8519192-15	MOD	
A9F0027-03	B	NWTPH-Gx	06/03/19 15:00	5.49	5					8519192-16	MOD	
A9F0045-01	B	8260C BTEX	(Date Sampled)	6.31	5					TP-N-6.5	FP	
A9F0045-02	B	8260C BTEX	(Date Sampled)	6.29	5					TP-S-6.5	FP	
A9F0057-01	B	NWTPH-Gx	(Date Sampled)	6.09	5					BH-MW3-5/29/19-19.5'	FP	

Prepared By: Date

Reviewed By: 6/5/19 Date

PREPARATION BENCH SHEET

BATCH #: 9060533 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0057-02	B	8260C Full List	(Date Sampled)	6.28 ✓	5					BH-MW3-5/29/19-22'	FP	
A9F0057-02	B	8260C BTEX	(Date Sampled)	6.28 ✓	5					BH-MW3-5/29/19-22'	Added for BatchQC in: 9060533	
A9F0057-02	B	NWTPH-Gx	(Date Sampled)	6.28 ✓	5					BH-MW3-5/29/19-22'	FP	
9060533-DUP2		QC	05/29/19 11:00	5.9 ✓	5		A9F0057-02					
A9F0057-03	B	8260C Full List	(Date Sampled)	5.52 ✓	5					BH-2-5/29/19-22'	FP	
A9F0057-03	B	8260C BTEX	(Date Sampled)	5.52 ✓	5					BH-2-5/29/19-22'	Added for BatchQC in: 9060533	
A9F0057-03	B	NWTPH-Gx	(Date Sampled)	5.52 ✓	5					BH-2-5/29/19-22'	FP	
9060533-DUP1		QC	05/29/19 11:20	~~6.62~~ 6.32 tml 6/5/19	5		A9F0057-03					

*pH <2 verified_____

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A16L123	11/30/23	Sample Prep Bal 3
A19C375	09/25/19	Methanol - Fisher (P/T) #185562

Analyte Spike(s)

Std ID	Exp. Date	Description
A19E311	11/09/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19E314	11/09/19	8260B Cal. Std. B VOC Spike Mix (20-40ug/ml

Surrogate(s)

Std ID	Exp. Date	Description

SOIL MS3

Prepared By: Date

Reviewed By: Date

Worksheet

5035 Field Prep Worksheet (Validated 7/11/16)

Sample ID	Container	Container Weight (g)	Tare Weight (g)	Net Sample Weight (g)	Formula Check
A9E0932-01	B	46.97	33.9	13.07	
A9E0992-01	D	37.33	31.22	6.11	
A9F0045-01	B	39.72	33.41	6.31	
-2	B	39.37	33.08	6.29	
A9F0057-01	B	39.47	33.38	6.09	
-2	B	39.84	33.56	6.28	
-2	C	39.64	33.74	5.9	
3	B	39.58	34.06	5.52	
3	C	39.92	33.3	~~6.62~~	6.32

33.6

10/15/19

A9E0723

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0723-01 | **2708-190521-007** | Sampled: **05/21/19 10:55**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
C Solid	40 mL VOA - In House Prep - 5035 (MeOH)			5 10 15	____	@ ____	Y N	

1311/8260C TCLP/ZHE VOC R(Expires: 06/04/19 10:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold
1312/8260C SPLP/ZHE VOCs Expires: 06/04/19 10:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold
8260C Full List Expires: 05/23/19 10:55 Due: 05/23/19 17:00

A9E0723-02 | **2708-190521-008** | Sampled: **05/21/19 11:00**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
C Solid	40 mL VOA - In House Prep - 5035 (MeOH)			5 10 15	____	@ ____	Y N	

8260C Full List Expires: 05/23/19 11:00 Due: 05/23/19 17:00

A9E0723-03 | **2708-190521-009** | Sampled: **05/21/19 11:55**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
E Solid	40 mL VOA - In House Prep - 5035 (MeOH)	A	1.17	5 10 15	[illegible]	@ 5/31 1540	Y N	MOD

8260C Full List Expires: 05/23/19 11:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of extraction hold time
NWTPH-Gx Expires: 05/23/19 11:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of extraction hold time

A9E0723-04 | **2708-190521-010** | Sampled: **05/21/19 15:30**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
F Solid	40 mL VOA - In House Prep - 5035 (MeOH)			5 10 15	____	@ ____	Y N	

8260C Full List Expires: 05/23/19 15:30 Due: 05/23/19 17:00

out of temp

A9E0785

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0785-01	2708-190522-011	Sampled: 05/22/19 16:30

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
G Solid	40 mL VOA - In House Prep - 5035 (MeOH)	A	1.43	5 10 15	@	5/31/19 1546	Y N	MOD

1311/8260C TCLP/ZHE Full Lis Expires: 06/05/19 16:30 Due: 06/14/19 17:00

8260C Full List Expires: 05/24/19 16:30 Due: 06/06/19 17:00
Comments: ok to run out of extraction hold time added 5-31-19 lad

NWTPH-Gx Expires: 05/24/19 16:30 Due: 06/14/19 17:00
Comments: ok to run out of extraction hold time added 5-31-19 lad

out of temp

A9E0832

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0832-02	2708-190523-013	Sampled: 05/23/19 15:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
D Solid	40 mL VOA - In House Prep - 5035 (MeOH)	A	1.08 1.06	5 10 15	8 @ 5/31	19 1554	Y (N)	MOP

1312/8260C SPLP/ZHE VOCs - Expires: 06/06/19 15:00 Due: 06/14/19 17:00
Comments: added 5-31-19

8260C Full List Expires: 05/25/19 15:00 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold for extraction

NWTPH-Gx Expires: 05/25/19 15:00 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold for extraction

out of temp

A9E0995

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0995-01	GAS-N	Sampled: 05/31/19 09:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
E Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.84	5 10 15	AD	@ 5/31/19 0915	Y N	MeOH

NWTPH-Gx Expires: 06/02/19 09:00 Due: 06/06/19 17:00

Comments: Use E cont.

A9E0995-02	GAS-S	Sampled: 05/31/19 09:15

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
E Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.87	5 10 15	AD	@ 5/31/19 915	Y N	MeOH

NWTPH-Gx Expires: 06/02/19 09:15 Due: 06/06/19 17:00

Comments: Use E cont.

Out of temp

A9F0027

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9F0027-01 | **8519192-14** | Sampled: **06/03/19 09:20**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.12	5 10 15	[signature]	@ 6/3/19 1500	Y N	
C Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.35	5 10 15		@	Y N	Dup

NWTPH-Gx Expires: 06/05/19 09:20 Due: 06/05/19 17:00

A9F0027-02 | **8519192-15** | Sampled: **06/03/19 09:24**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.88	5 10 15		@	Y N	

NWTPH-Gx Expires: 06/05/19 09:24 Due: 06/05/19 17:00

A9F0027-03 | **8519192-16** | Sampled: **06/03/19 09:28**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.49	5 10 15	[signature]	@	Y N	

NWTPH-Gx Expires: 06/05/19 09:28 Due: 06/05/19 17:00

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

A9E0932

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9E0932-01 | **PW 10 Lb--R29632PL-052919** | Sampled: **05/29/19 11:00**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 46.97	Tare Weight (g): 33.90	Volume MeOH (mL): ~~5~~ 10 15 Other	Notes: over weight
MS **C** Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 49.71	Tare Weight (g): 33.51	Volume MeOH (mL): 5 10 15 Other	Notes: ↓

8260 Due: TAT: 5mL added 6/4/19

DW = 83.7%

out of temp

Weighed by: MS @ 5/30/19 14:53

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

A9E0992

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9E0992-01	Stockpile	Sampled: 05/31/19 14:00

D Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		37.33	31.22	(5) 10 15 Other	DW = 85.1

6T Due: TAT:

Out of Temp @ 6/4/19

FRIDGE Out

Weighed by: (8) @ 5/31/19 1815

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

Print Date: 5/31/2019 6:09:31PM

A9F0045

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0045-01 **TP-N-6.5** Sampled: **06/03/19 13:20**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		39.72	33.41	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		39.76	33.45	(5) 10 15 Other	

BTEX Due: TAT:

A9F0045-02 **TP-S-6.5** Sampled: **06/03/19 13:30**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		39.37	33.08	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		39.29	33.49	(5) 10 15 Other	

BTEX Due: TAT:

A9F0045-03 **TP-NW-7.5** Sampled: **06/03/19 15:35**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		39.49	33.47	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		39.57	33.55	(5) 10 15 Other	

Due: TAT:

A9F0045-04 **TP-EW-9** Sampled: **06/03/19 16:05**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
C Soil	40 mL VOA - 5035 (MeOH)		39.77	33.87	(5) 10 15 Other	
D Soil	40 mL VOA - 5035 (MeOH)		39.81	33.81	(5) 10 15 Other	

Due: TAT:

A9F0045-05 **TankPiping-1-2** Sampled: **06/03/19 10:05**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		38.44	33.13	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		38.06	33.13	(5) 10 15 Other	

Due: TAT:

Weighed by: AKK @ 1940 6/3/19

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

A9F0057

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0057-01 — **BH-MW3-5/29/19-19.5'** — Sampled: **05/29/19 10:50**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	39.47	33.38	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	38.39	33.23	(5) 10 15 Other	

Due: TAT:

A9F0057-02 — **BH-MW3-5/29/19-22'** — Sampled: **05/29/19 11:00**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	39.84	33.56	(5) 10 15 Other	
C Soil (Dup)	40 mL VOA - 5035 (MeOH)	39.64	33.74	(5) 10 15 Other	Dup

Due: TAT:

A9F0057-03 — **BH-2-5/29/19-22'** — Sampled: **05/29/19 11:20**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	39.58	34.06	(5) 10 15 Other	
C Soil (Dup)	40 mL VOA - 5035 (MeOH)	39.92	33.60	(5) 10 15 Other	Dup

Due: TAT:

A9F0057-04 — **BH-3-5/29/19-8'** — Sampled: **05/29/19 12:20**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	40.94	33.91	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	40.99	33.91	(5) 10 15 Other	

Due: TAT:

A9F0057-05 — **BH-3-5/29/19-22.5'** — Sampled: **05/29/19 12:30**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	40.28	33.98	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	39.41	33.52	(5) 10 15 Other	

Due: TAT:

Weighed by: [illegible] @ 6/4/19 1216

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

Volatile Soils Matrix Spike Volume Calculation (Validated 5/3/2013)

Enter the Spike Amount value into the Bench Sheet to ensure correct MS/MSD recoveries.

Batch: 9060533

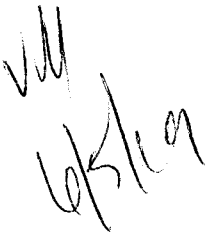
Matrix Spike

Sample Weight	Final Volume	Dilution	Dry Weight
g	mL		%
13.070	10	50	83.7
			0.837

Final Spike Level	**Spike Amount**
ug/kg	**ul**
1108.85	**607**

Assumptions:
Spiking Solution = 20ug/mL
Spike Amount into 50mL = 50ul
Dilution = 1mL of MeOH to 50mL of water
Initial Spike Concentration = 20ug/L

A9E0932-01



ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F04032	Instrument:	VOA-GCMS3
Date:	06/04/19 09:11	Calibration:	A9E3104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F04032-IBL1	Soil	QC	QC			A19C135	
2	9F04032-TUN1	Soil	QC	QC			A19C135	
3	9F04032-CCV1	Soil	QC	QC			A19C135	
4	9060533-BS1	Soil	QC	QC		9060533	A19C135	
5	9F04032-CCV2	Soil	QC	QC			A19C135	
6	9060533-BS2	Soil	QC	QC		9060533	A19C135	
7	9060533-BLK1	Soil	QC	QC		9060533	A19C135	
8	A9E0992-01RE1	Soil	NWTPH-Gx		06/03/19	9060533	A19C135	
9	A9F0045-01	Soil	8260C BTEX		06/04/19	9060533	A19C135	
10	A9F0045-02	Soil	8260C BTEX		06/04/19	9060533	A19C135	
11	9F04032-IBL2	Soil	QC	QC			A19C135	
12	9F04032-IBL3	Soil	QC	QC			A19C135	
13	A9E0932-01	Soil	8260C Full List		06/11/19	9060533	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060533	A19C135	
"	"	Soil	NWTPH-Gx	(QC Source)		9060533	A19C135	
14	9060533-MS1	Soil	QC	QC		9060533	A19C135	
15	9F04032-IBL4	Soil	QC	QC			A19C135	
16	A9E0995-01	Soil	NWTPH-Gx		06/06/19	9060533	A19C135	
17	A9E0995-02	Soil	NWTPH-Gx		06/06/19	9060533	A19C135	
18	A9F0027-01	Soil	NWTPH-Gx		06/05/19	9060533	A19C135	
19	A9F0027-02	Soil	NWTPH-Gx		06/05/19	9060533	A19C135	
20	A9F0027-03	Soil	NWTPH-Gx		06/05/19	9060533	A19C135	
21	A9E0832-02	Soil	8260C Full List	Hahn and Associates	06/14/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/14/19	9060533	A19C135	
22	A9E0785-01	Soil	8260C Full List	Hahn and Associates	06/06/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/14/19	9060533	A19C135	
23	A9E0723-03	Soil	8260C Full List	Hahn and Associates	06/14/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/14/19	9060533	A19C135	
24	9F04032-IBL5	Soil	QC	QC			A19C135	
25	A9F0057-01	Soil	NWTPH-Gx		06/07/19	9060533	A19C135	
26	A9F0057-03	Soil	8260C Full List		06/13/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060533	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060533	A19C135	
27	9060533-DUP1	Soil	QC	QC		9060533	A19C135	
28	A9F0057-02	Soil	8260C Full List		06/13/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060533	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060533	A19C135	
29	9060533-DUP2	Soil	QC	QC		9060533	A19C135	
30	9F04032-IBL6	Soil	QC	QC			A19C135	

Comments: Trip/Met DCM (055)

Data Entered By: 10/5/19

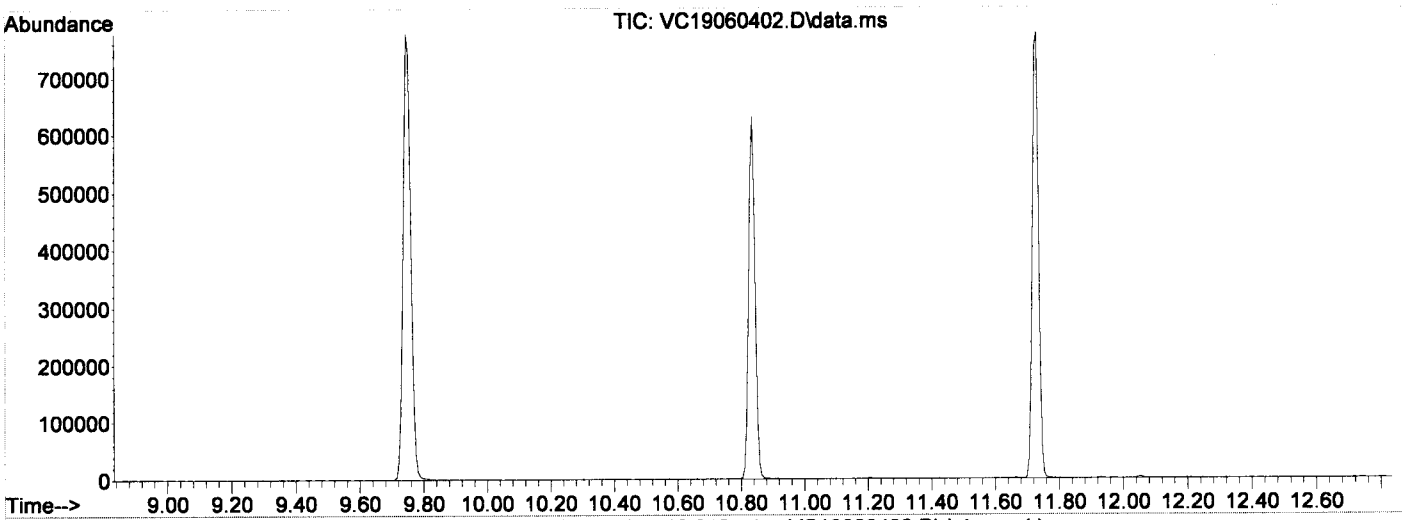
Data Reviewed By: 10/5/19

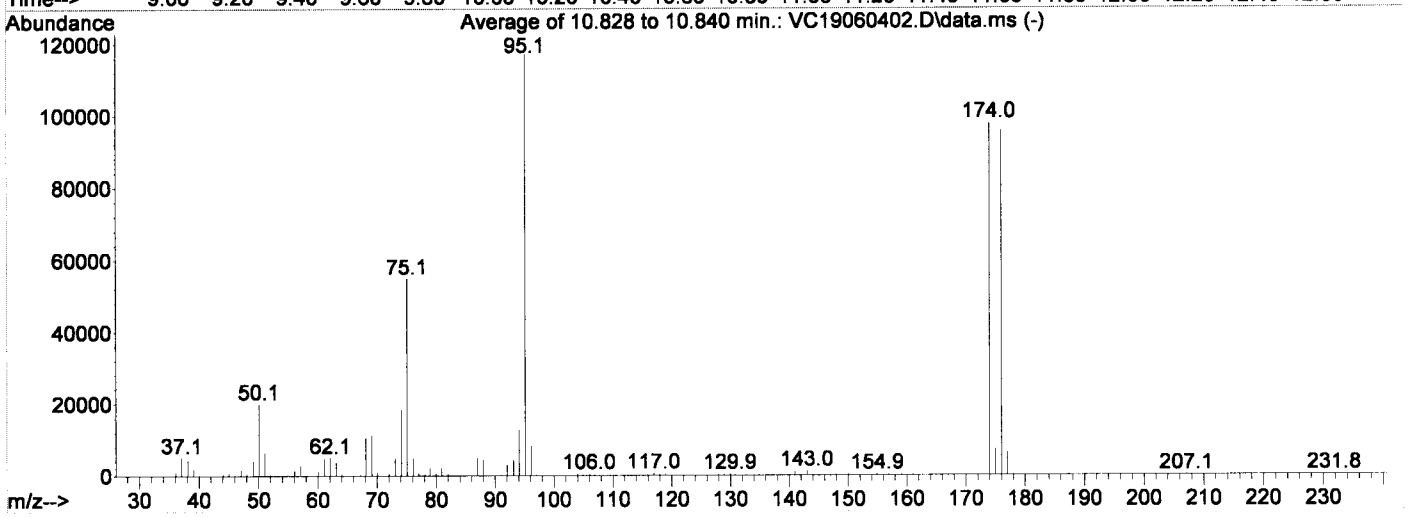
Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060402.D
Acq On : 4 Jun 2019 10:00 am
Operator : TB
Sample : 9F04032-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019

6/4/19





AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.1	19974	PASS
75	95	30	60	46.9	54874	PASS
95	95	100	100	100.0	117112	PASS
96	95	5	9	7.2	8455	PASS
173	174	0.00	2	0.2	202	PASS
174	95	50	200	83.5	97805	PASS
175	174	5	9	7.5	7319	PASS
176	174	95	101	97.9	95752	PASS
177	176	5	9	6.6	6317	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060402.D
Acq On : 4 Jun 2019 10:00 am
Operator : TB
Sample : 9F04032-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

6/4/19

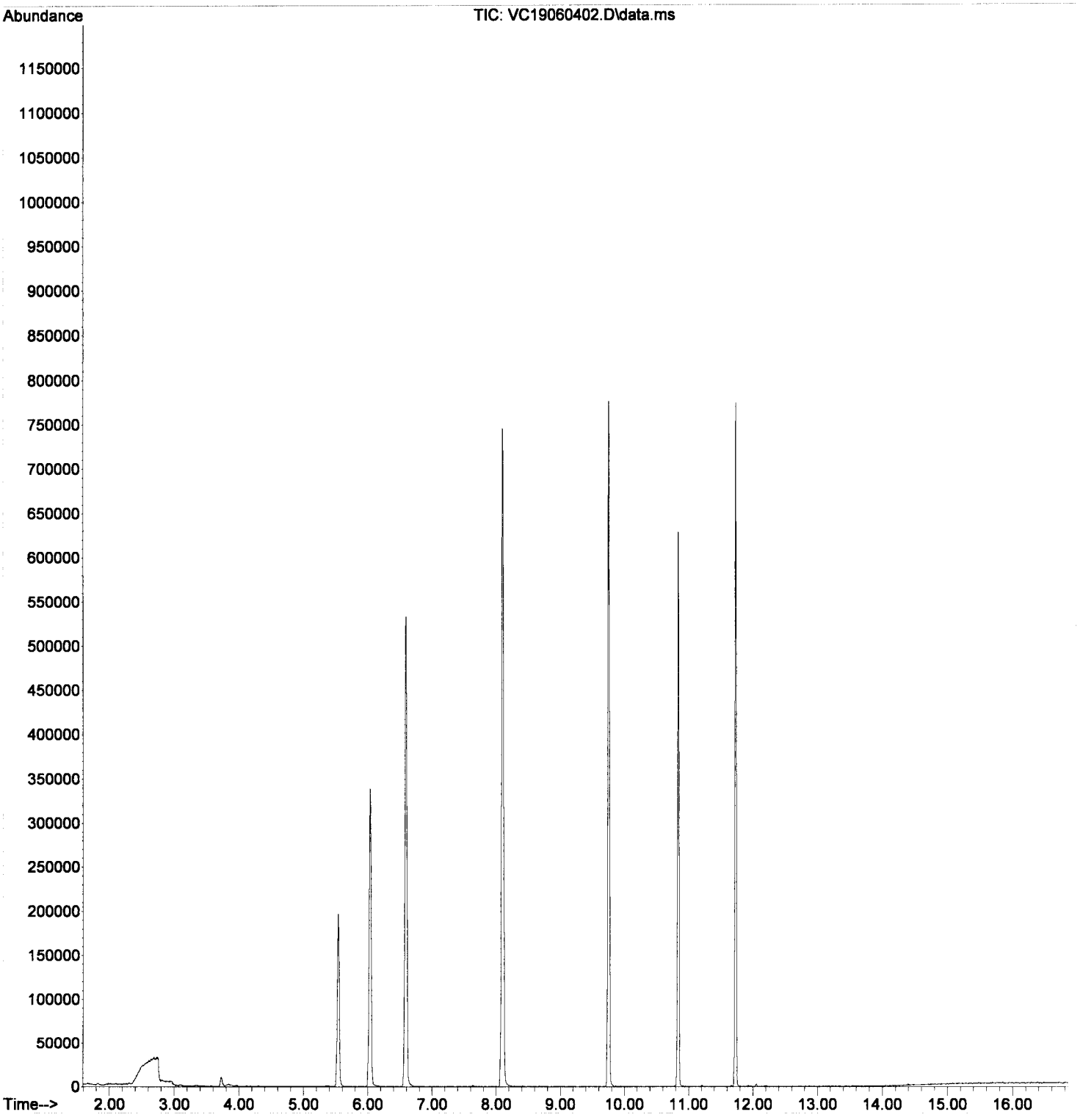
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	277639	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	443284	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	184981	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	132533	44.08	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	501397	46.95	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	596381	49.73	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	159371	49.89	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	535	0.13	ug/L		80
5) Bromomethane	2.305	96	922	0.58	ug/L		86
6) Chloroethane	2.500	64	238	0.22	ug/L	#	1
9) Carbon Disulfide	3.102	76	1110	0.25	ug/L		78
11) Iodomethane	3.236	142	136	0.86	ug/L	#	47
12) Methylene Chloride	3.729	84	5720	Below Cal			89
13) Acetone	3.845	43	3195	2.55	ug/L		90

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060402.D
Acq On : 4 Jun 2019 10:00 am
Operator : TB
Sample : 9F04032-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

6/14/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	107	0.00	
2		Dichlorodifluoromethane	20.000	19.667	1.7	107	0.00	
3	P	Chloromethane	20.000	18.029	9.9	101	0.00	
4	C	Vinyl Chloride	20.000	18.204	9.0	97	0.00	
5		Bromomethane	20.000	19.101	4.5	107	0.00	
6		Chloroethane	20.000	17.157	14.2	94	0.00	
7		Trichlorofluoromethane	20.000	19.630	1.9	103	0.00	
8	C	1,1-Dichloroethene	20.000	20.849	-4.2	112	0.00	
9		Carbon Disulfide	20.000	19.598	2.0	107	0.00	
10		Freon 113	20.000	19.496	2.5	110	0.00	
11		Iodomethane	20.000	15.616	21.9#	96	0.00	-NA
12		Methylene Chloride	20.000	14.246	28.8#	85	0.00	-Q55
13		Acetone	40.000	37.245	6.9	104	0.00	
14		t-1,2-Dichloroethene	20.000	20.403	-2.0	108	0.00	
15		n-Hexane	20.000	19.251	3.7	109	0.00	
16		Methyl-tert-butyl-ether	20.000	18.945	5.3	101	0.00	
17	P	1,1-Dichloroethane	20.000	20.543	-2.7	108	0.00	
18		Acrylonitrile	20.000	19.965	0.2	105	0.00	
19		c-1,2-Dichloroethene	20.000	19.756	1.2	105	0.00	
20		2,2-Dichloropropane	20.000	22.788	-13.9	121	0.00	
21		Bromochloromethane	20.000	20.785	-3.9	110	0.00	
22	C	Chloroform	20.000	19.323	3.4	105	0.00	
23		Carbon Tetrachloride	20.000	21.011	-5.1	113	0.00	
24		Tetrahydrofuran	20.000	18.213	8.9	106	0.00	
25		1,1,1-Trichloroethane	20.000	20.655	-3.3	108	0.00	
26	S	Dibromofluoromethane (S)	50.000	46.587	6.8	98	0.00	
27		1,1-Dichloropropene	20.000	19.392	3.0	107	0.00	
28		2-Butanone (MEK)	40.000	37.225	6.9	100	0.00	
29		Benzene	20.000	19.243	3.8	104	0.00	
30		1,2-Dichloroethane (EDC)	20.000	19.763	1.2	106	0.00	
31		iso-Butyl Alcohol	500.000	418.681	16.3	90	0.00	
32	S	1,4-Difluorobenzene (S)	50.000	47.452	5.1	101	0.00	
33		Trichloroethene (TCE)	20.000	18.600	7.0	103	0.00	
34		Dibromomethane	20.000	19.708	1.5	102	0.00	
35	C	1,2-Dichloropropane	20.000	19.825	0.9	104	0.00	
36		Bromodichloromethane	20.000	20.745	-3.7	105	0.00	
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	98	0.00	
38		c-1,3-Dichloropropene	20.000	22.438	-12.2	102	0.00	
39	S	Toluene-d8 (S)	50.000	49.747	0.5	98	0.00	
40	C	Toluene	20.000	20.446	-2.2	104	0.00	
41		Tetrachloroethene (PCE)	20.000	20.002	-0.0	106	0.00	
42		4-Methyl-2-Pentanone (MIBK)	40.000	37.907	5.2	98	0.00	
43		t-1,3-Dichloropropene	20.000	22.184	-10.9	104	0.00	
44		1,1,2-Trichloroethane	20.000	21.897	-9.5	105	0.00	
45		Dibromochloromethane	20.000	18.428	7.9	102	0.00	
46		1,3-Dichloropropane	20.000	21.215	-6.1	103	0.00	
47		1,2-Dibromoethane (EDB)	20.000	22.453	-12.3	106	0.00	
48		2-Hexanone	40.000	39.536	1.2	96	0.00	
49	P	Chlorobenzene	20.000	20.510	-2.6	104	0.00	
50	C	Ethylbenzene	20.000	20.973	-4.9	105	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		1,1,1,2-Tetrachloroethane	20.000	22.636	-13.2	106	0.00
52		m,p-Xylenes (2)	40.000	43.250	-8.1	106	0.00
53		o-Xylene	20.000	21.322	-6.6	106	0.00
54		Styrene	20.000	22.046	-10.2	101	0.00
55	P	Bromoform	20.000	18.037	9.8	104	0.00
56		Isopropylbenzene	20.000	21.335	-6.7	105	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	97	0.00
58	S	4-Bromofluorobenzene (S)	50.000	50.253	-0.5	97	0.00
59		Bromobenzene	20.000	22.430	-12.1	107	0.00
60		n-Propylbenzene	20.000	21.850	-9.3	108	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	21.061	-5.3	98	0.00
62		2-Chlorotoluene	20.000	21.807	-9.0	107	0.00
63		1,3,5-Trimethylbenzene	20.000	22.383	-11.9	107	0.00
64		1,2,3-Trichloropropane	20.000	21.038	-5.2	100	0.00
65		t-1,4-Dichloro-2-butene	20.000	19.806	1.0	102	0.00
66		4-Chlorotoluene	20.000	21.599	-8.0	106	0.00
67		tert-Butylbenzene	20.000	22.097	-10.5	110	0.00
68		1,2,4-Trimethylbenzene	20.000	22.137	-10.7	106	0.00
69		sec-Butylbenzene	20.000	22.316	-11.6	109	0.00
70		4-Isopropyltoluene	20.000	22.473	-12.4	108	0.00
71		1,3-Dichlorobenzene	20.000	20.527	-2.6	104	0.00
72		1,4-Dichlorobenzene	20.000	20.546	-2.7	105	0.00
73		n-Butylbenzene	20.000	22.232	-11.2	110	0.00
74		1,2-Dichlorobenzene	20.000	20.583	-2.9	103	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	19.497	2.5	94	0.00
76		Hexachlorobutadiene	20.000	24.086	-20.4#	112	0.00
77		1,2,4-Trichlorobenzene	20.000	21.628	-8.1	106	0.00
78		Naphthalene	20.000	21.341	-6.7	97	0.00
79		1,2,3-Trichlorobenzene	20.000	22.346	-11.7	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

-20% OK @ 6/5/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

6/4/19

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	275376	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	443366	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	185288	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	138920	46.59	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	502610	47.45	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	596667	49.75	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	160781	50.25	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	48619	19.67	ug/L		99
3) Chloromethane	1.862	50	73211	18.03	ug/L		95
4) Vinyl Chloride	1.953	62	51098	18.20	ug/L		96
5) Bromomethane	2.306	96	30243	19.10	ug/L		89
6) Chloroethane	2.446	64	18094	17.16	ug/L		77
7) Trichlorofluoromethane	2.567	101	30714	19.63	ug/L		92
8) 1,1-Dichloroethene	3.090	61	58089	20.85	ug/L		86
9) Carbon Disulfide	3.103	76	86671	19.60	ug/L		98
10) Freon 113	3.145	101	46115	19.50	ug/L		90
11) Iodomethane	3.243	142	17800	15.62	ug/L		97
12) Methylene Chloride	3.729	84	49836	14.25	ug/L		97
13) Acetone	3.833	43	46231	37.25	ug/L		99
14) t-1,2-Dichloroethene	3.887	61	65915	20.40	ug/L		95
15) n-Hexane	3.966	86	10974	19.25	ug/L	#	93
16) Methyl-tert-butyl-ether	4.039	73	181293	18.94	ug/L		99
17) 1,1-Dichloroethane	4.520	63	81788	20.54	ug/L		96
18) Acrylonitrile	4.599	53	32151	19.96	ug/L		95
19) c-1,2-Dichloroethene	5.068	61	71228	19.76	ug/L		97
20) 2,2-Dichloropropane	5.171	77	71099	22.79	ug/L		90
21) Bromochloromethane	5.268	49	44273	20.79	ug/L		97
22) Chloroform	5.347	83	91417	19.32	ug/L		95
23) Carbon Tetrachloride	5.475	117	53694	21.01	ug/L		98
24) Tetrahydrofuran	5.536	42	32829	18.21	ug/L		88
25) 1,1,1-Trichloroethane	5.548	97	74624	20.66	ug/L		98
27) 1,1-Dichloropropene	5.676	75	72119	19.39	ug/L		98
28) 2-Butanone (MEK)	5.688	43	82403	37.23	ug/L		98
29) Benzene	5.931	78	230331	19.24	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.144	62	70521	19.76	ug/L		99
31) iso-Butyl Alcohol	6.272	43	114772	418.68	ug/L		88
33) Trichloroethene (TCE)	6.546	130	62446	18.60	ug/L		97
34) Dibromomethane	6.996	93	31531	19.71	ug/L		92
35) 1,2-Dichloropropane	7.106	63	60659	19.83	ug/L		95
36) Bromodichloromethane	7.185	83	55777	20.75	ug/L		97
38) c-1,3-Dichloropropene	7.890	75	78313	22.44	ug/L		98
40) Toluene	8.152	91	239800	20.45	ug/L		99
41) Tetrachloroethene (PCE)	8.602	166	54396	20.00	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.614	43	137258	37.91	ug/L		97
43) t-1,3-Dichloropropene	8.645	75	71834	22.18	ug/L		96
44) 1,1,2-Trichloroethane	8.821	97	52465	21.90	ug/L		96
45) Dibromochloromethane	9.004	129	37037	18.43	ug/L		96
46) 1,3-Dichloropropane	9.107	76	94029	21.21	ug/L		96
47) 1,2-Dibromoethane (EDB)	9.241	107	52593	22.45	ug/L		100
48) 2-Hexanone	9.496	43	97053	39.54	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

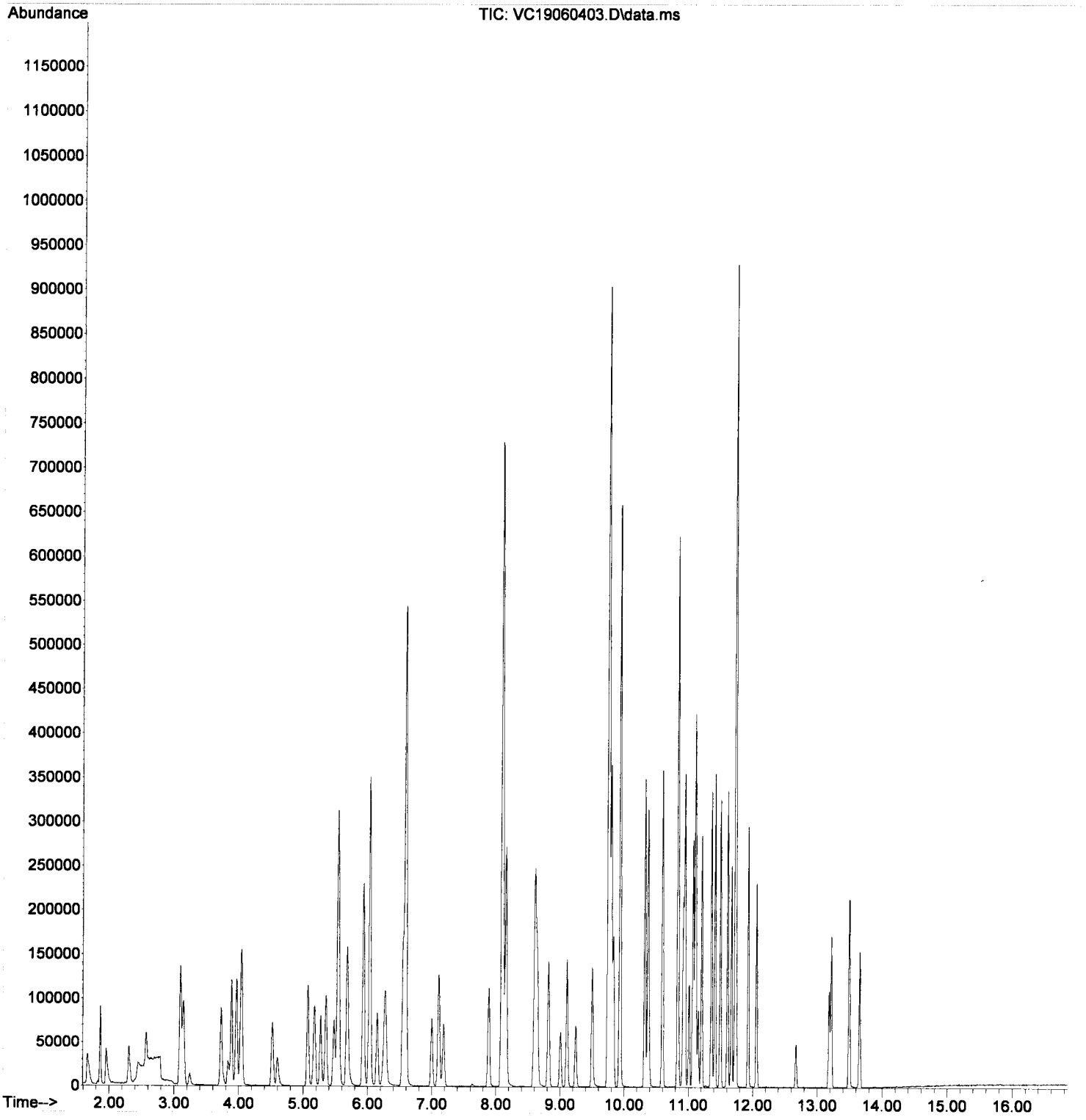
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	145909	20.51 ug/L	99
50) Ethylbenzene	9.794	91	250107	20.97 ug/L	97
51) 1,1,1,2-Tetrachloroethane	9.831	131	45426	22.64 ug/L	97
52) m,p-Xylenes (2)	9.934	91	372335	43.25 ug/L	99
53) o-Xylene	10.318	91	192939	21.32 ug/L	95
54) Styrene	10.366	104	139439	22.05 ug/L	96
55) Bromoform	10.391	173	20601	18.04 ug/L	94
56) Isopropylbenzene	10.591	105	221368	21.33 ug/L	98
59) Bromobenzene	10.920	156	54876	22.43 ug/L	97
60) n-Propylbenzene	10.944	91	243747	21.85 ug/L	99
61) 1,1,2,2-Tetrachloroethane	11.011	83	51128	21.06 ug/L	98
62) 2-Chlorotoluene	11.072	126	50359	21.81 ug/L	94
63) 1,3,5-Trimethylbenzene	11.102	105	168793	22.38 ug/L	99
64) 1,2,3-Trichloropropane	11.115	110	21060	21.04 ug/L	87
65) t-1,4-Dichloro-2-butene	11.151	88	6698	19.81 ug/L #	89
66) 4-Chlorotoluene	11.206	91	144159	21.60 ug/L	99
67) tert-Butylbenzene	11.358	91	93398	22.10 ug/L	94
68) 1,2,4-Trimethylbenzene	11.413	105	170839	22.14 ug/L	99
69) sec-Butylbenzene	11.498	105	199435	22.32 ug/L	97
70) 4-Isopropyltoluene	11.607	119	163389	22.47 ug/L	96
71) 1,3-Dichlorobenzene	11.668	146	88133	20.53 ug/L	98
72) 1,4-Dichlorobenzene	11.735	146	88130	20.55 ug/L	98
73) n-Butylbenzene	11.930	91	137473	22.23 ug/L	97
74) 1,2-Dichlorobenzene	12.057	146	81170	20.58 ug/L	99
75) 1,2-Dibromo-3-Chloropr...	12.672	157	11254	19.50 ug/L	92
76) Hexachlorobutadiene	13.183	223	13751	24.09 ug/L	98
77) 1,2,4-Trichlorobenzene	13.213	180	49657	21.63 ug/L	97
78) Naphthalene	13.493	128	164964	21.34 ug/L	97
79) 1,2,3-Trichlorobenzene	13.651	180	48606	22.35 ug/L	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060404.D
Acq On : 4 Jun 2019 10:56 am
Operator : TB
Sample : 9060533-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

6/14/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	105	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	46.745	6.5	101	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	47.468	5.1	101	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	99	0.00
5	H	CA-LUFT (C5-C12)	500.000	471.758	5.6	96	0.00
6	H	TPHg (C5-C9)	500.000	476.562	4.7	96	0.00
7	H	TPHg (C6-C10)	500.000	485.412	2.9	99	0.00
8	H	NWTPH-Gx	500.000	467.701	6.5	98	0.00
9		Benzene (NR)	-1.000	0.000	0.0	97	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	99	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	94	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	99	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	101	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060404.D
Acq On : 4 Jun 2019 10:56 am
Operator : TB
Sample : 9060533-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

6/4/19

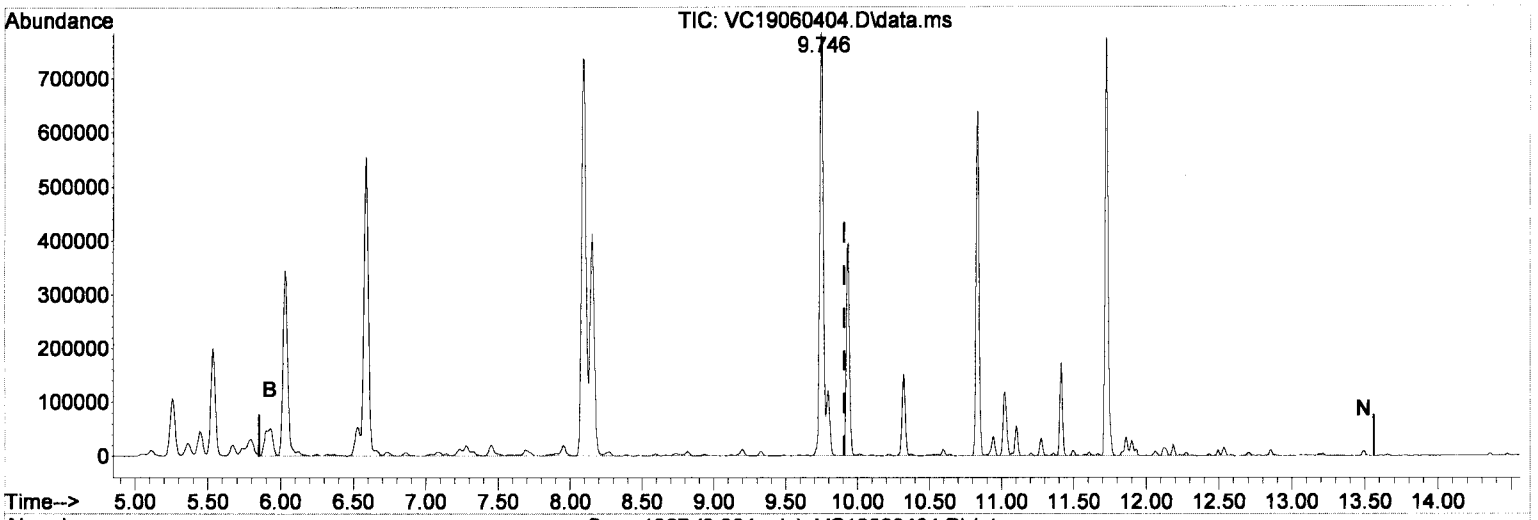
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	274188	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1194467	46.74	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	906108	47.47	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1356210	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1618399	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1130570	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6333600m	471.76	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5468579m	476.56	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4340999m	485.41	ug/L	
8) NWTPH-Gx	9.906	TIC	3631179m	467.70	ug/L	

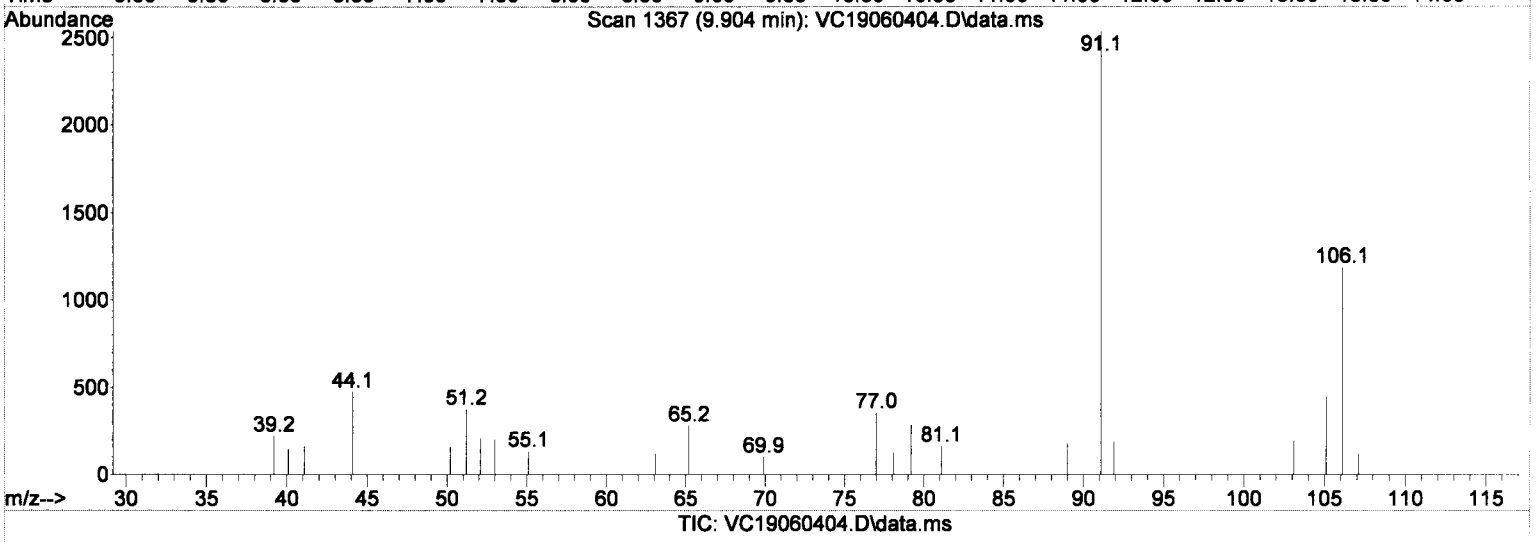
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060404.D
Acq On : 4 Jun 2019 10:56 am
Operator : TB
Sample : 9060533-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19060404.D\data.ms

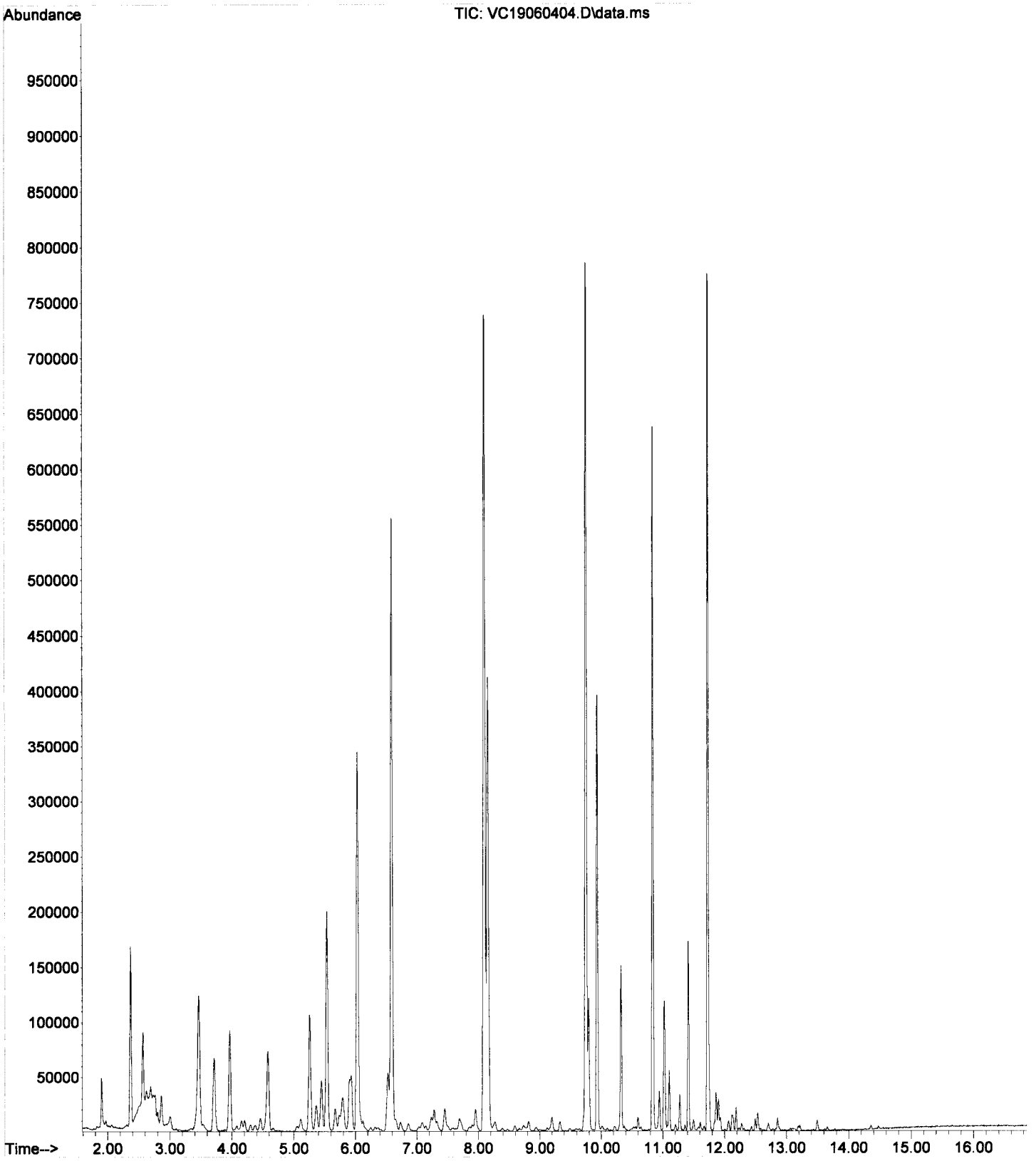
(8) NWTPH-Gx (H)

9.906min (0.000) 467.70 ug/L m

response 3631179

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.01#
0.00	0.00	0.02#
0.00	0.00	0.00

File :C:\msdchem\1\DATA\2019-06\9F04032\VC19060404.D
Operator : TB
Acquired : 4 Jun 2019 10:56 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9060533-BS2
Misc Info : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
Vial Number: 4



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060405.D
Acq On : 4 Jun 2019 11:23 am
Operator : TB
Sample : 9060533-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

6/14/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	269768	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1117243	44.44	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	893854	47.59	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1297134	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.092	TIC	1554497	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.724	TIC	1079048	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	522772m	Below Cal		
6) TPHg (C5-C9)	9.906	TIC	517295m	Below Cal		
7) TPHg (C6-C10)	9.906	TIC	425569m	7.44	ug/L	
8) NWTPH-Gx	9.906	TIC	22274m	15.40	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060405.D
Acq On : 4 Jun 2019 11:23 am
Operator : TB
Sample : 9060533-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:05:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

6/14/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	269768	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	439790	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	185883	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.531	111	128975	44.15	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.583	114	488604	47.09	ug/L		0.00
39) Toluene-d8 (S)	8.092	98	587271	49.36	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	162016	50.48	ug/L		0.00
Target Compounds							Qvalue
5) Bromomethane	2.288	96	1090	0.70	ug/L	#	41
6) Chloroethane	2.471	64	489	0.47	ug/L	#	1
11) Iodomethane	3.243	142	141	0.87	ug/L	#	47
12) Methylene Chloride	3.718	84	5744	Below Cal			95
13) Acetone	3.833	43	378	0.31	ug/L	#	42
40) Toluene	8.153	91	1756	0.15	ug/L		72
52) m,p-Xylenes (2)	9.935	91	1366	0.16	ug/L		81
68) 1,2,4-Trimethylbenzene	11.413	105	753	0.10	ug/L		64
73) n-Butylbenzene	11.930	91	741	0.12	ug/L		87
77) 1,2,4-Trichlorobenzene	13.220	180	207	0.09	ug/L	#	54

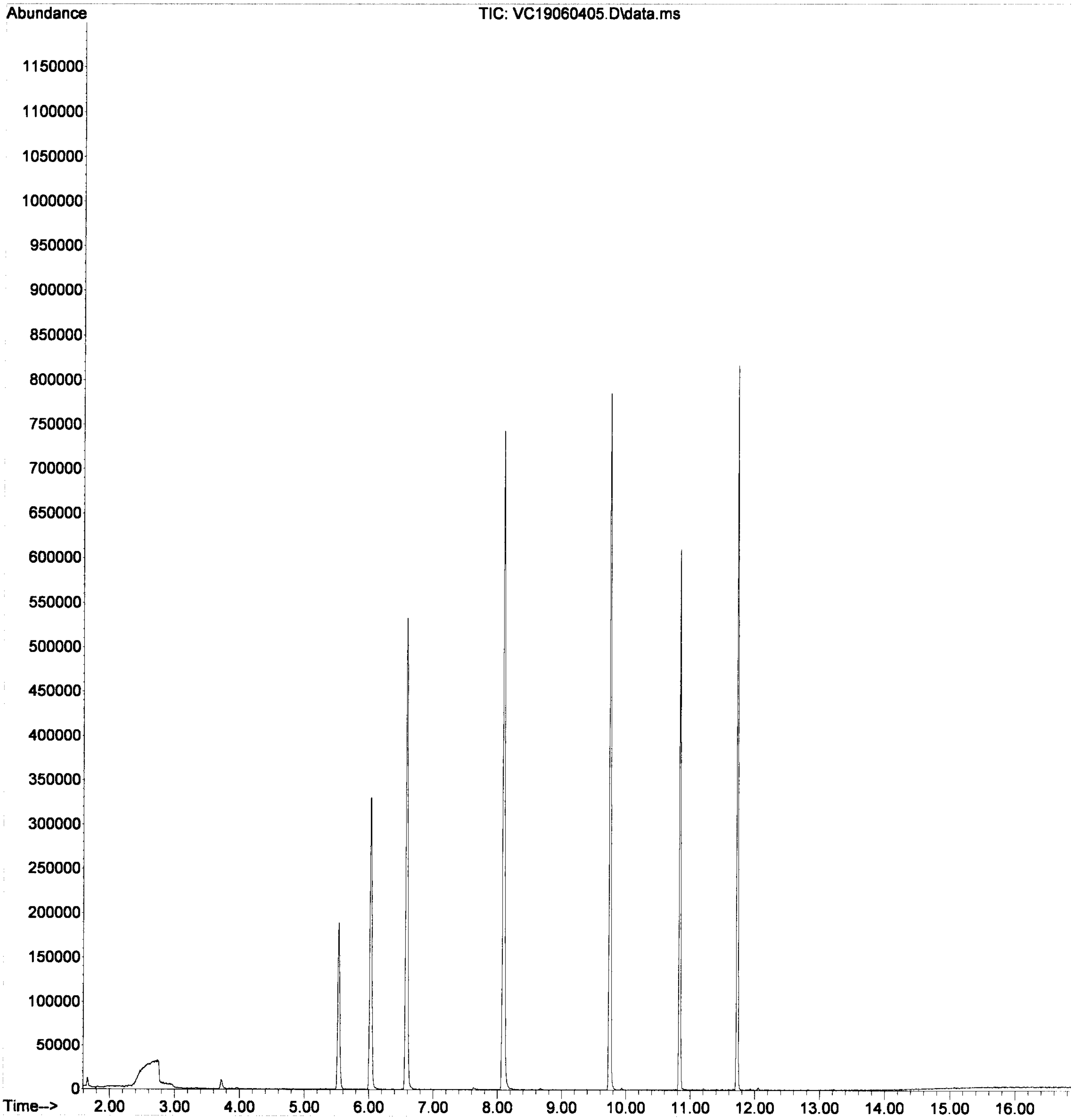
CMML

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060405.D
Acq On : 4 Jun 2019 11:23 am
Operator : TB
Sample : 9060533-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:05:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060412.D
Acq On : 4 Jun 2019 2:33 pm
Operator : TB
Sample : 9060533-MS1
Misc : 50X ~5g/5mLx1000uL/50mL 8260/QC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.034	168	335037	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.751	117	521185	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	225131	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.536	111	167295	46.11 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.588	114	593381	46.05 ug/L	0.00
39) Toluene-d8 (S)	8.097	98	699838	49.64 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	197389	50.78 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.666	85	54412	18.09 ug/L	95
3) Chloromethane	1.867	50	80771	16.35 ug/L	96
4) Vinyl Chloride	1.952	62	60283	17.65 ug/L	95
5) Bromomethane	2.305	96	34097	17.70 ug/L	95
6) Chloroethane	2.445	64	19113	14.90 ug/L	81
7) Trichlorofluoromethane	2.567	101	25785	13.54 ug/L	96
8) 1,1-Dichloroethene	3.096	61	63751	18.81 ug/L	92
9) Carbon Disulfide	3.114	76	95238	17.70 ug/L	98
10) Freon 113	3.151	101	53483	18.58 ug/L	87
11) Iodomethane	3.248	142	22626	16.26 ug/L	97
12) Methylene Chloride	3.729	84	58927	13.67 ug/L	97
13) Acetone	3.832	43	57146	37.84 ug/L	97
14) t-1,2-Dichloroethene	3.887	61	74324	18.91 ug/L	97
15) n-Hexane	3.966	86	13193	19.00 ug/L	95
16) Methyl-tert-butyl-ether	4.039	73	212492	18.25 ug/L	99
17) 1,1-Dichloroethane	4.520	63	92782	19.15 ug/L	98
18) Acrylonitrile	4.593	53	38779	19.79 ug/L	96
19) c-1,2-Dichloroethene	5.067	61	80351	18.32 ug/L	96
20) 2,2-Dichloropropane	5.177	77	74861	19.72 ug/L	87
21) Bromochloromethane	5.268	49	48517	18.72 ug/L	97
22) Chloroform	5.353	83	103322	17.95 ug/L	96
23) Carbon Tetrachloride	5.481	117	56765	18.26 ug/L	98
24) Tetrahydrofuran	5.529	42	39896	18.19 ug/L	92
25) 1,1,1-Trichloroethane	5.554	97	81460	18.53 ug/L	97
27) 1,1-Dichloropropene	5.675	75	82097	18.14 ug/L	97
28) 2-Butanone (MEK)	5.688	43	101152	37.56 ug/L	91
29) Benzene	5.931	78	267133	18.34 ug/L	99
30) 1,2-Dichloroethane (EDC)	6.150	62	76504	17.62 ug/L	97
31) iso-Butyl Alcohol	6.253	43	139679	418.80 ug/L	86
33) Trichloroethene (TCE)	6.545	130	78150	19.13 ug/L	93
34) Dibromomethane	6.996	93	37799	19.42 ug/L	94
35) 1,2-Dichloropropane	7.111	63	69259	18.61 ug/L	89
36) Bromodichloromethane	7.184	83	59995	18.42 ug/L	98
38) c-1,3-Dichloropropene	7.890	75	90153	21.97 ug/L	95
40) Toluene	8.151	91	278098	20.17 ug/L	99
41) Tetrachloroethene (PCE)	8.602	166	65424	20.47 ug/L	96
42) 4-Methyl-2-Pentanone (...	8.614	43	164304	38.60 ug/L	99
43) t-1,3-Dichloropropene	8.644	75	80756	21.22 ug/L	95
44) 1,1,2-Trichloroethane	8.821	97	62720	22.27 ug/L	96
45) Dibromochloromethane	9.003	129	44276	18.73 ug/L	94
46) 1,3-Dichloropropane	9.107	76	110888	21.28 ug/L	98
47) 1,2-Dibromoethane (EDB)	9.246	107	62139	22.57 ug/L	97
48) 2-Hexanone	9.496	43	114734	39.76 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060412.D
Acq On : 4 Jun 2019 2:33 pm
Operator : TB
Sample : 9060533-MS1
Misc : 50X ~5g/5mLx1000uL/50mL 8260/QC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

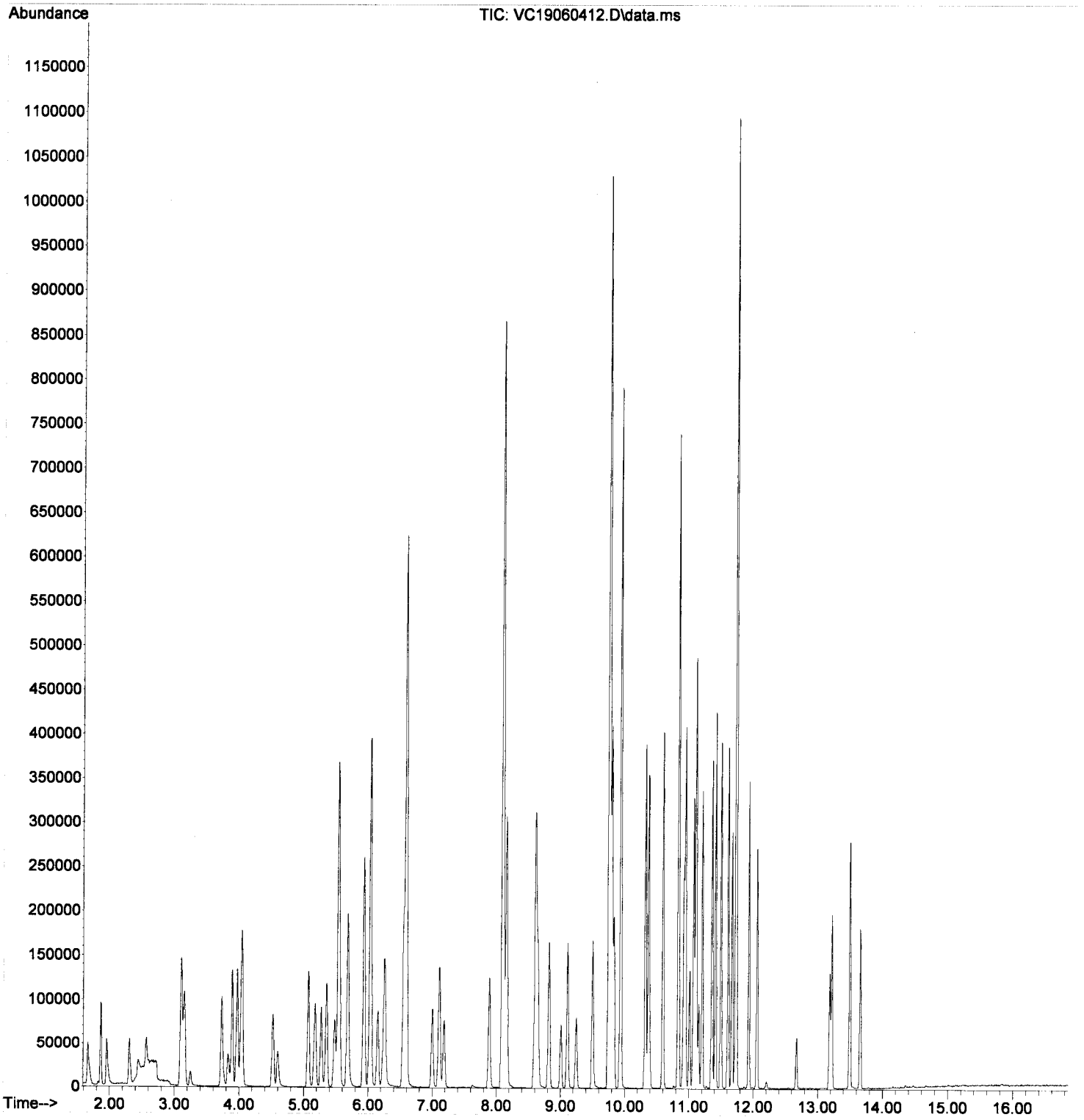
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	170639	20.41	ug/L		98
50) Ethylbenzene	9.794	91	290038	20.69	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.830	131	52515	22.26	ug/L		96
52) m,p-Xylenes (2)	9.934	91	423301	41.83	ug/L		99
53) o-Xylene	10.323	91	220096	20.69	ug/L		98
54) Styrene	10.372	104	167872	22.58	ug/L		98
55) Bromoform	10.390	173	24053	17.92	ug/L		99
56) Isopropylbenzene	10.597	105	258715	21.21	ug/L		98
59) Bromobenzene	10.919	156	66567	22.39	ug/L		97
60) n-Propylbenzene	10.944	91	282767	20.86	ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.011	83	58997	20.00	ug/L		97
62) 2-Chlorotoluene	11.072	126	59357	21.15	ug/L		88
63) 1,3,5-Trimethylbenzene	11.102	105	198759	21.69	ug/L		99
64) 1,2,3-Trichloropropane	11.114	110	25494	20.96	ug/L		82
65) t-1,4-Dichloro-2-butene	11.151	88	7194	17.63	ug/L	#	78
66) 4-Chlorotoluene	11.205	91	168548	20.78	ug/L		98
67) tert-Butylbenzene	11.357	91	104324	20.31	ug/L		98
68) 1,2,4-Trimethylbenzene	11.412	105	199719	21.30	ug/L		98
69) sec-Butylbenzene	11.497	105	231722	21.34	ug/L		99
70) 4-Isopropyltoluene	11.607	119	192645	21.81	ug/L		96
71) 1,3-Dichlorobenzene	11.668	146	106485	20.41	ug/L		99
72) 1,4-Dichlorobenzene	11.741	146	106092	20.36	ug/L		99
73) n-Butylbenzene	11.929	91	158122	21.05	ug/L		99
74) 1,2-Dichlorobenzene	12.057	146	97407	20.33	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.671	157	14143	20.12	ug/L		99
76) Hexachlorobutadiene	13.182	223	16697	24.07	ug/L		95
77) 1,2,4-Trichlorobenzene	13.213	180	61065	21.89	ug/L		98
78) Naphthalene	13.493	128	215473	22.94	ug/L		99
79) 1,2,3-Trichlorobenzene	13.651	180	59100	22.36	ug/L		95

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060412.D
Acq On : 4 Jun 2019 2:33 pm
Operator : TB
Sample : 9060533-MS1
Misc : 50X ~5g/5mLx1000uL/50mL 8260/QC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:17:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

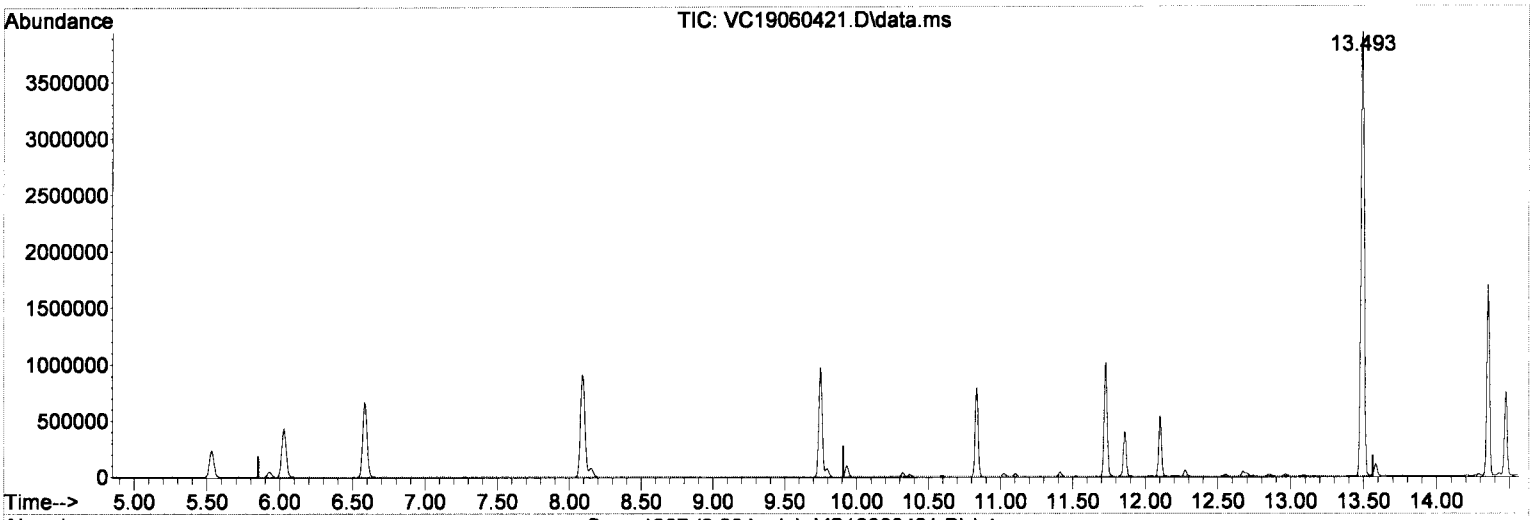
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.028	168	365546	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1416184	41.57 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	1142769	44.90 ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1644041	0.00 ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1960954	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1483713	0.00 ug/L	0.00
Target Compounds					Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	2951038m	134.46 ug/L	
6) TPHg (C5-C9)	9.906	TIC	1311865m	43.68 ug/L	
7) TPHg (C6-C10)	9.906	TIC	1115091m	56.76 ug/L	
8) NWTPH-Gx	9.906	TIC	8588713m	819.47 ug/L	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:17:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 819.47 ug/L m

response 8588713

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	3.42#
0.00	0.00	2.62#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

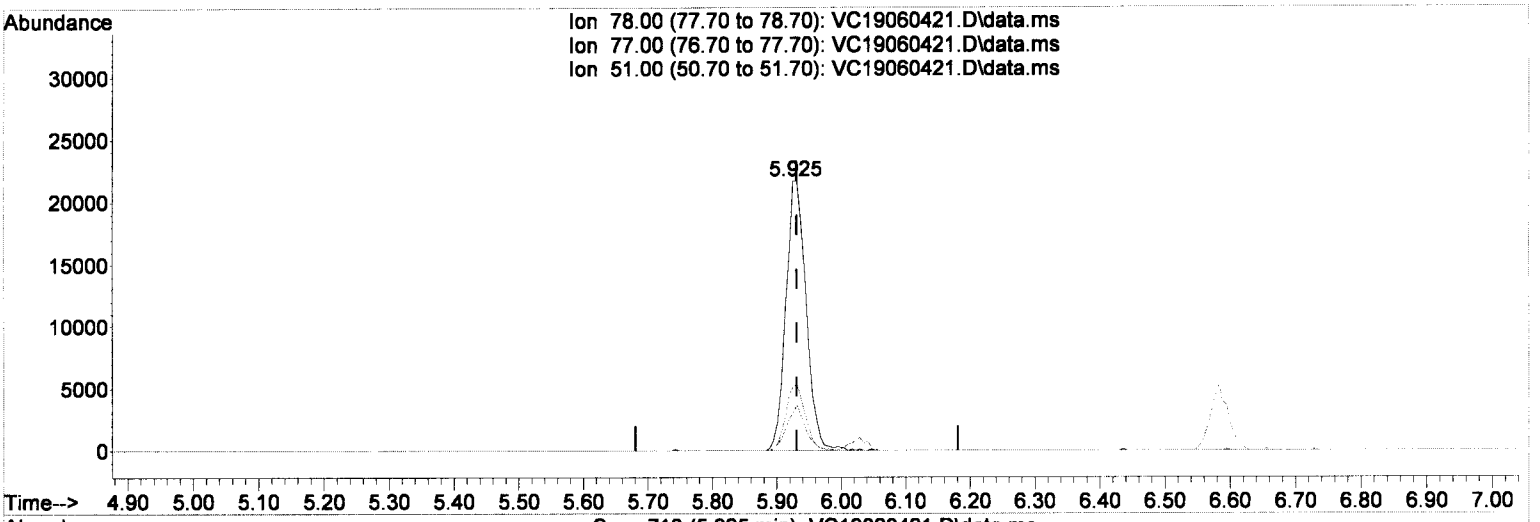
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	365546	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	569185	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	243543	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	163761	41.37	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	637886	45.37	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	754507	49.00	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	216965	51.59	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	561	0.10	ug/L		87
5) Bromomethane	2.299	96	1432	0.68	ug/L		81
6) Chloroethane	2.409	64	243	0.17	ug/L	#	1
11) Iodomethane	3.242	142	118	0.82	ug/L	#	47
12) Methylene Chloride	3.723	84	4600	Below Cal			87
13) Acetone	3.845	43	1220	0.74	ug/L		86
15) n-Hexane	3.966	86	357	Below Cal		#	72
28) 2-Butanone (MEK)	5.724	43	348	0.12	ug/L		54
29) Benzene	5.925	78	47566	2.99	ug/L		98
40) Toluene	8.152	91	65345	4.34	ug/L		98
50) Ethylbenzene	9.794	91	51630	3.37	ug/L		99
52) m,p-Xylenes (2)	9.928	91	56801	5.14	ug/L		98
53) o-Xylene	10.323	91	20291	1.75	ug/L		98
54) Styrene	10.366	104	10234	1.26	ug/L		93
56) Isopropylbenzene	10.597	105	6163	0.46	ug/L		95
60) n-Propylbenzene	10.944	91	1348	0.09	ug/L		91
63) 1,3,5-Trimethylbenzene	11.102	105	12736	1.28	ug/L		93
67) tert-Butylbenzene	11.418	91	2060	0.37	ug/L	#	52
68) 1,2,4-Trimethylbenzene	11.412	105	19176	1.89	ug/L		97
69) sec-Butylbenzene	11.498	105	1061	0.09	ug/L		75
70) 4-Isopropyltoluene	11.607	119	1111	0.12	ug/L		88
78) Naphthalene	13.493	128	2786646	274.27	ug/L		92

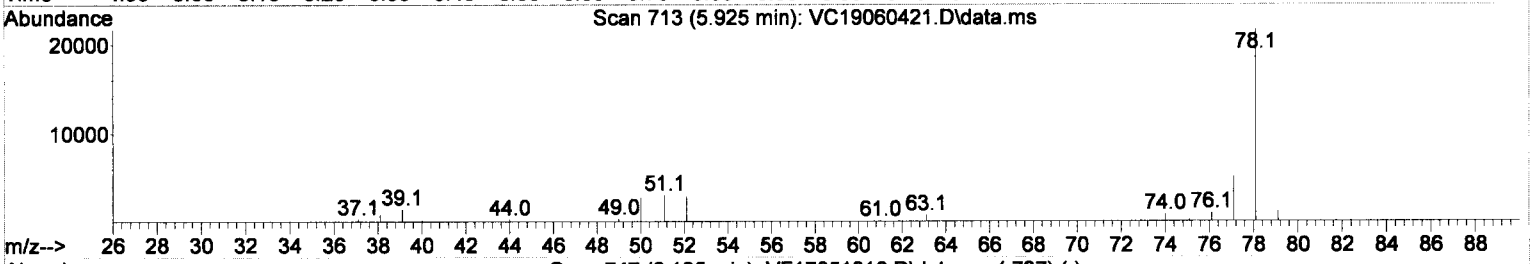
(#) = qualifier out of range (m) = manual integration (+) = signals summed

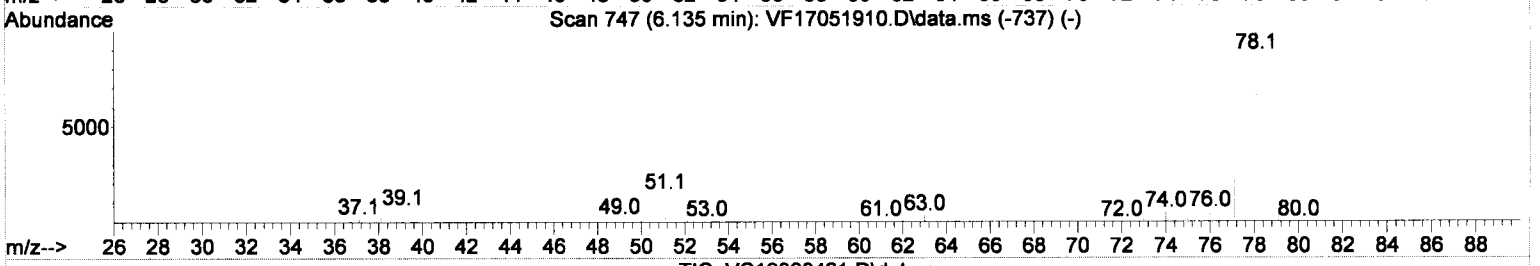
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







TIC: VC19060421.D\data.ms

(29) Benzene

5.925min (-0.006) 2.99 ug/L

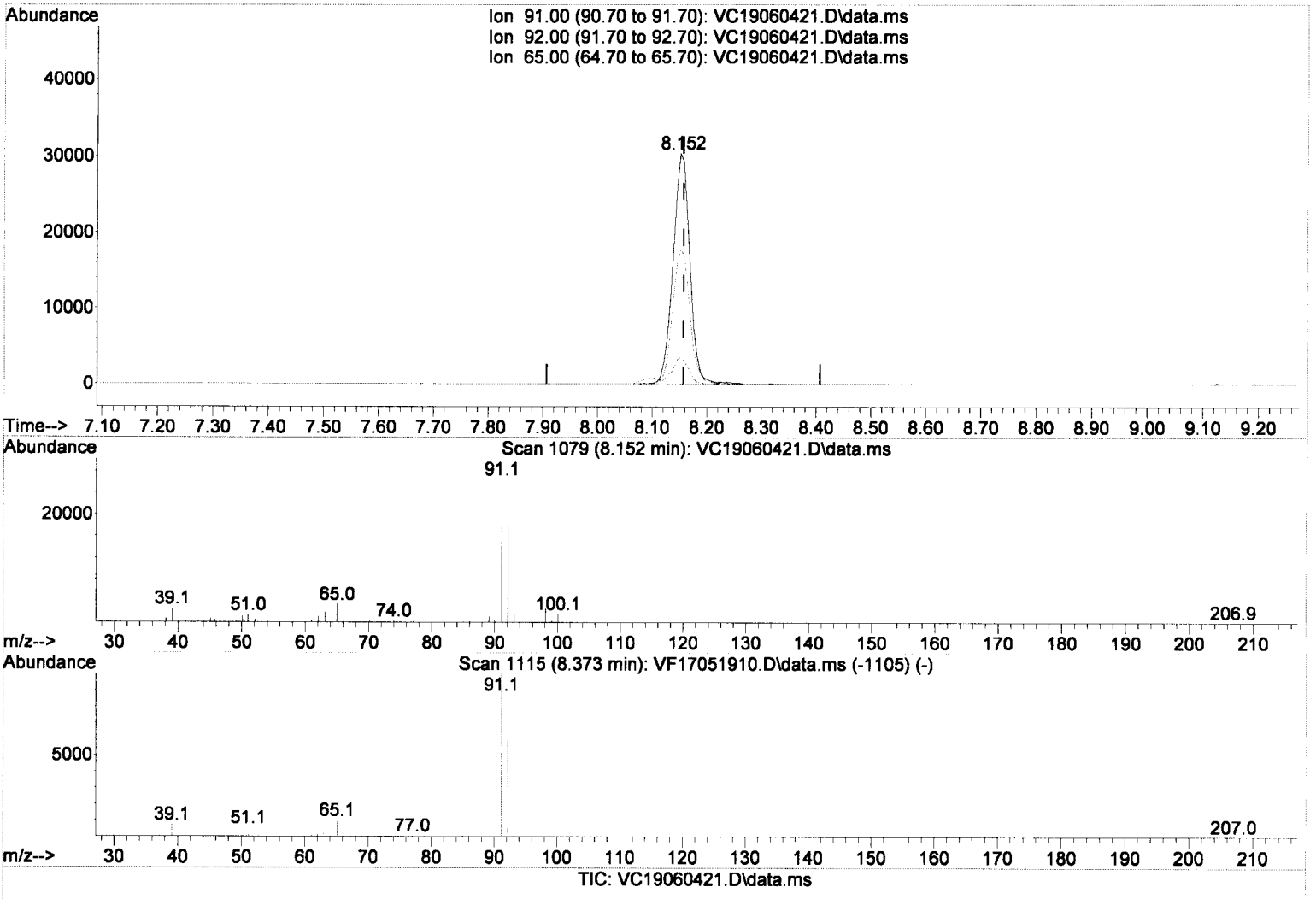
response 47566

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	23.74
51.00	15.50	14.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(40) Toluene (C)

8.152min (-0.006) 4.34 ug/L

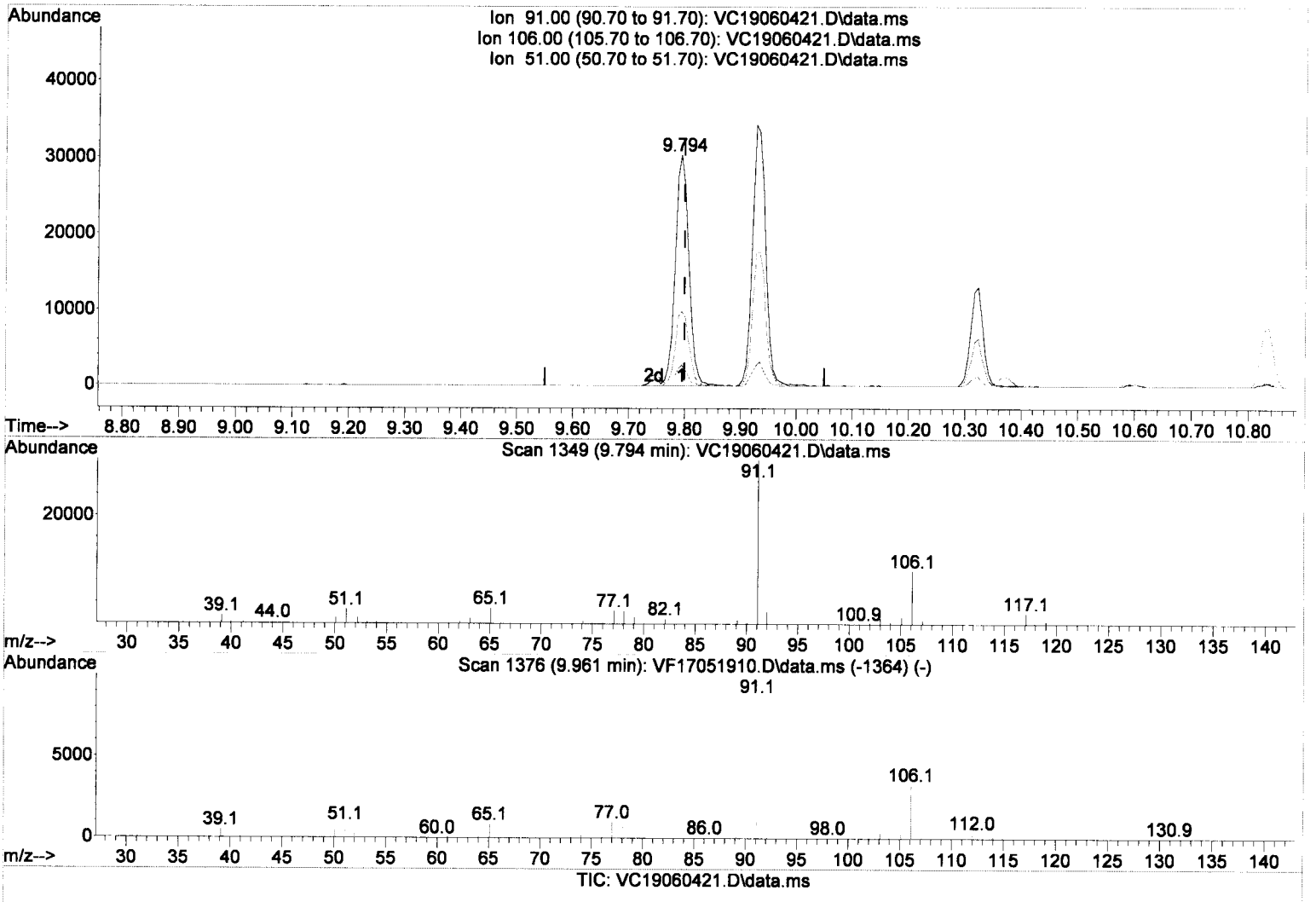
response 65345

Ion	Exp%	Act%
91.00	100	100
92.00	60.20	58.53
65.00	11.90	11.24
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(50) Ethylbenzene (C)

9.794min (-0.006) 3.37 ug/L

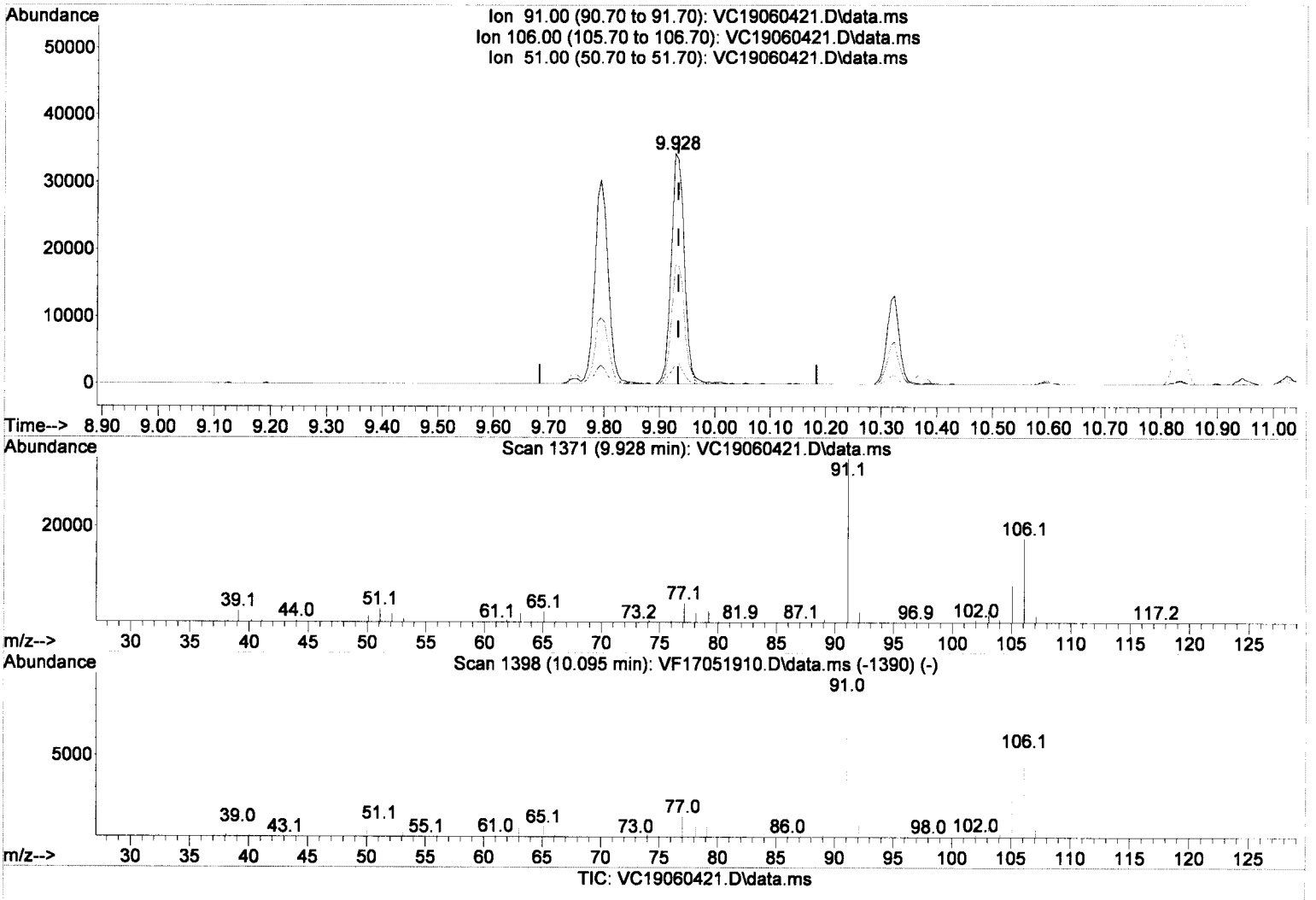
response 51630

Ion	Exp%	Act%
91.00	100	100
106.00	33.20	32.45
51.00	9.50	9.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



(52) m,p-Xylenes (2)

9.928min (-0.006) 5.14 ug/L

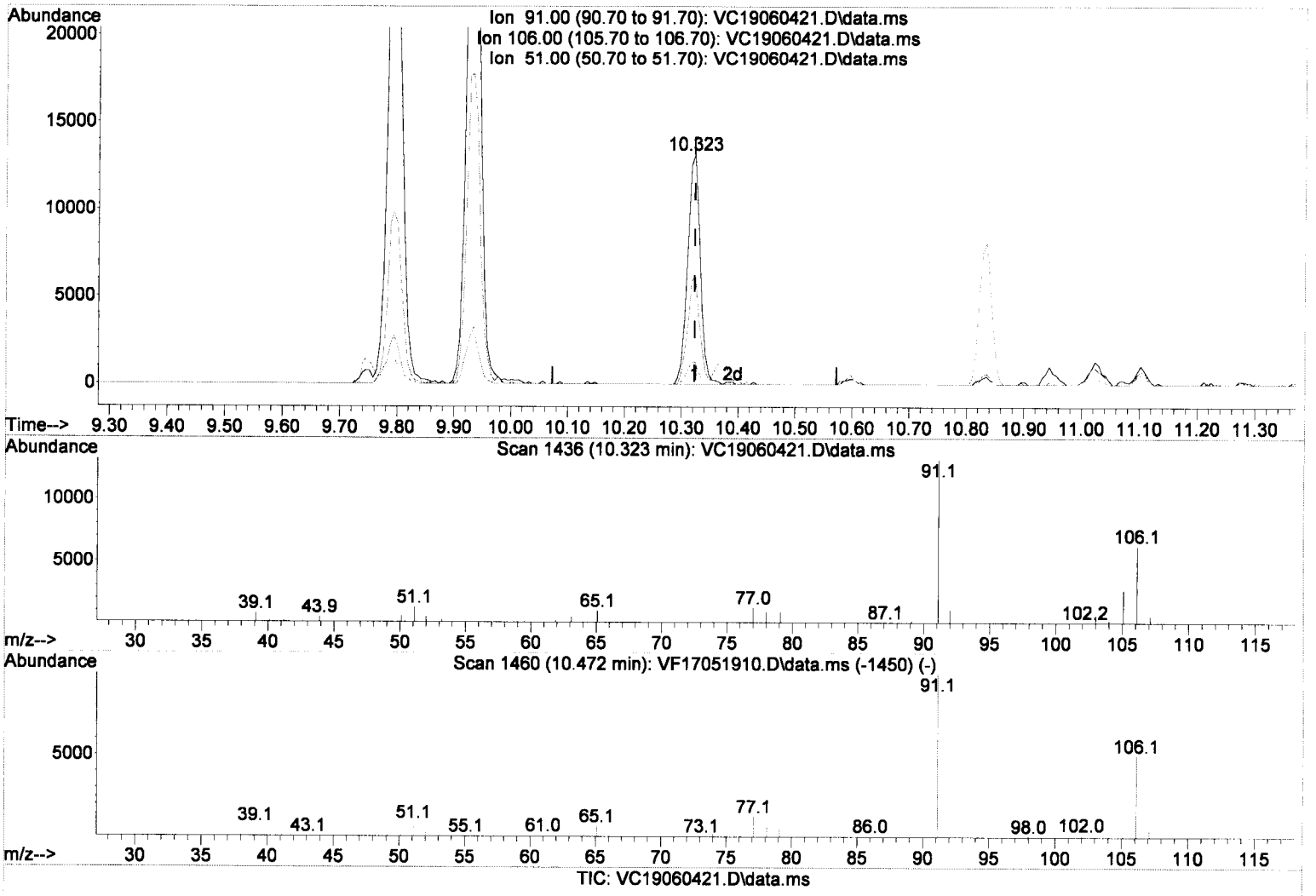
response 56801

Ion	Exp%	Act%
91.00	100	100
106.00	52.70	51.39
51.00	10.10	8.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(53) o-Xylene

10.323min (+0.000) 1.75 ug/L

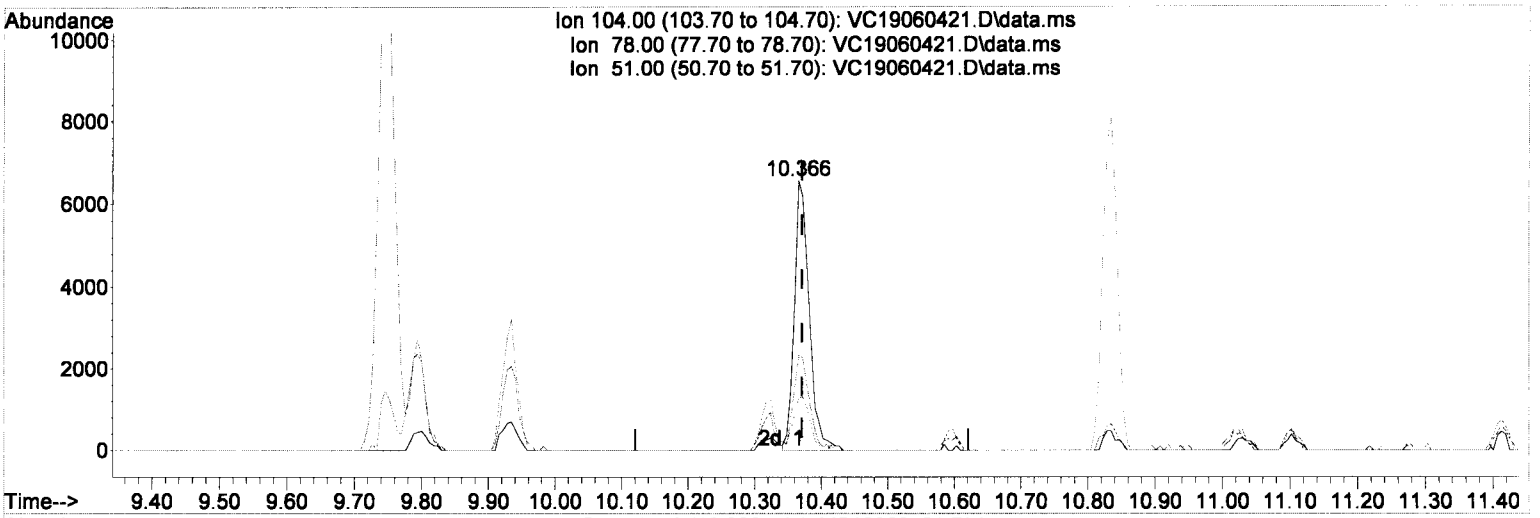
response 20291

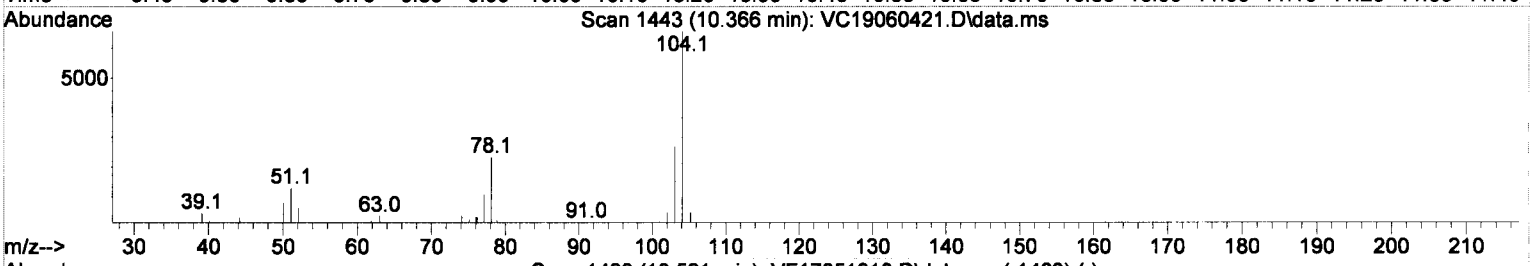
Ion	Exp%	Act%
91.00	100	100
106.00	49.40	47.74
51.00	10.00	9.78
0.00	0.00	0.00

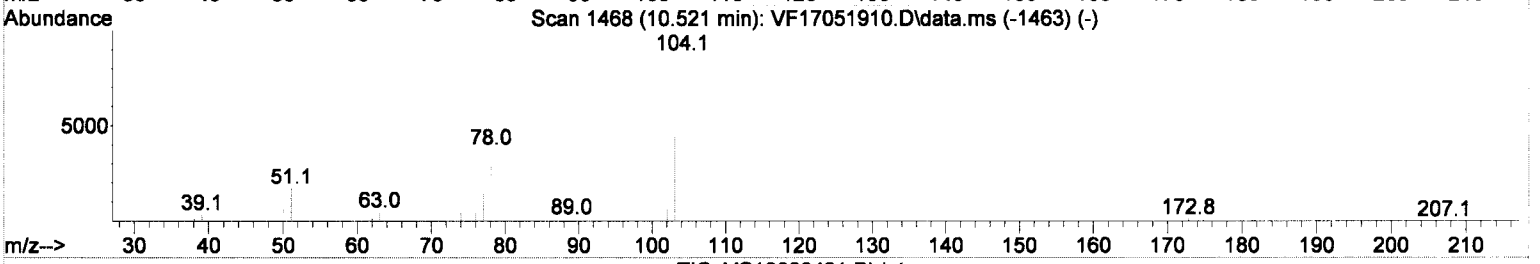
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







TIC: VC19060421.D\data.ms

(54) Styrene

10.366min (-0.005) 1.26 ug/L

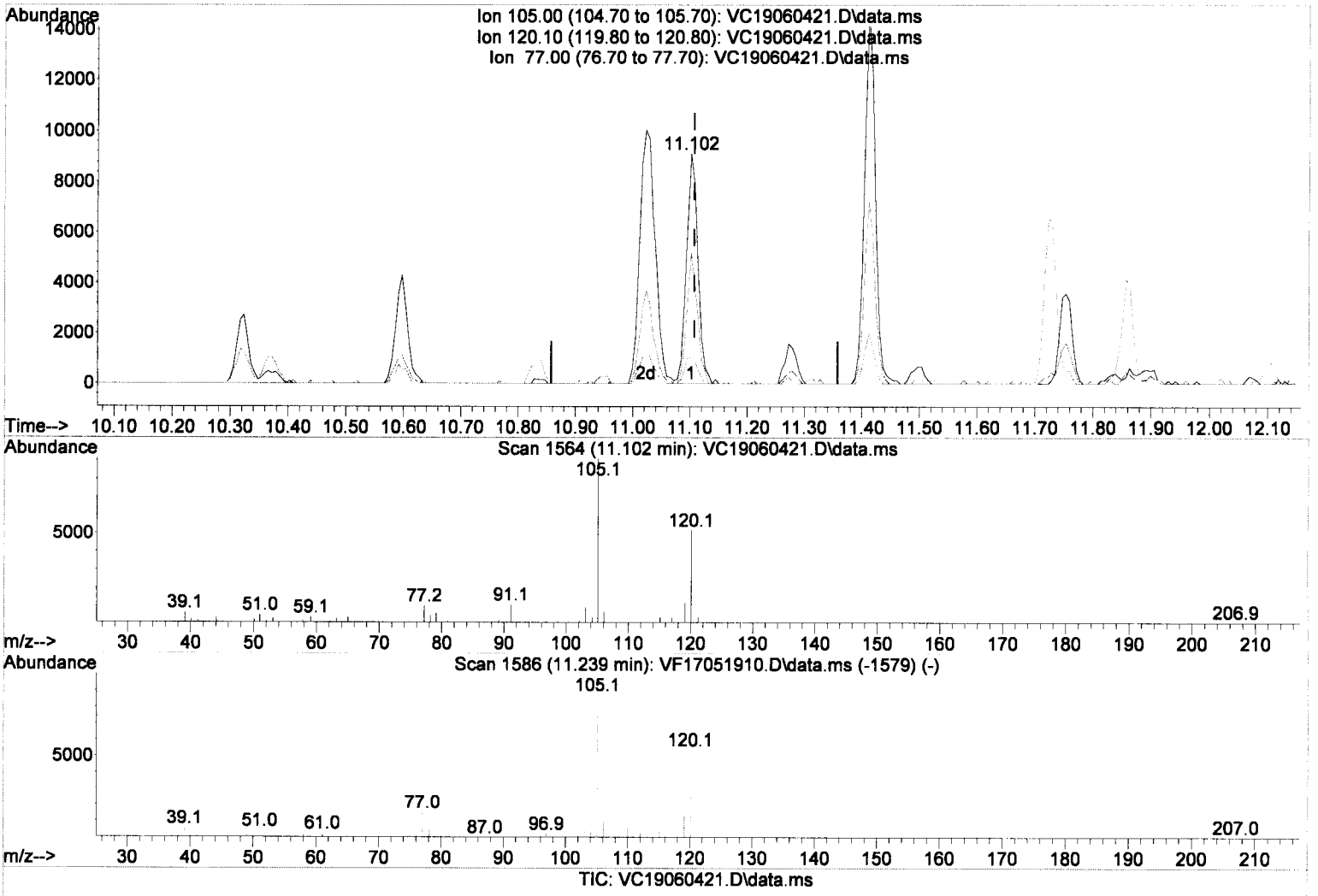
response 10234

Ion	Exp%	Act%
104.00	100	100
78.00	40.60	35.46
51.00	21.90	19.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(63) 1,3,5-Trimethylbenzene

11.102min (-0.006) 1.28 ug/L

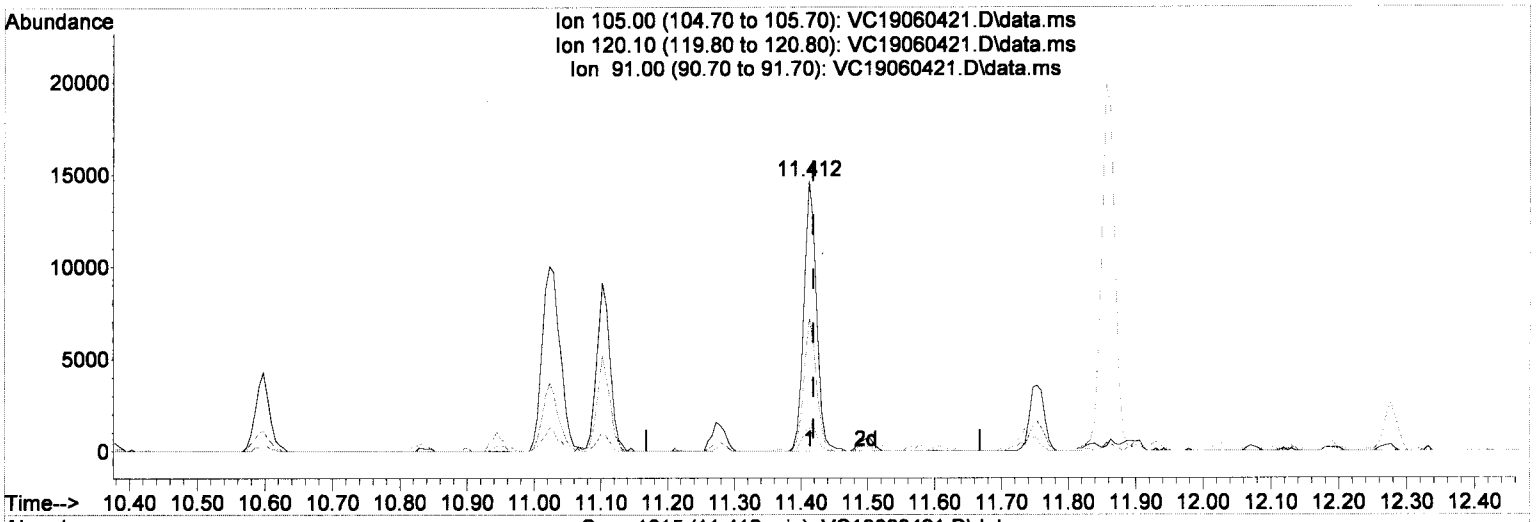
response 12736

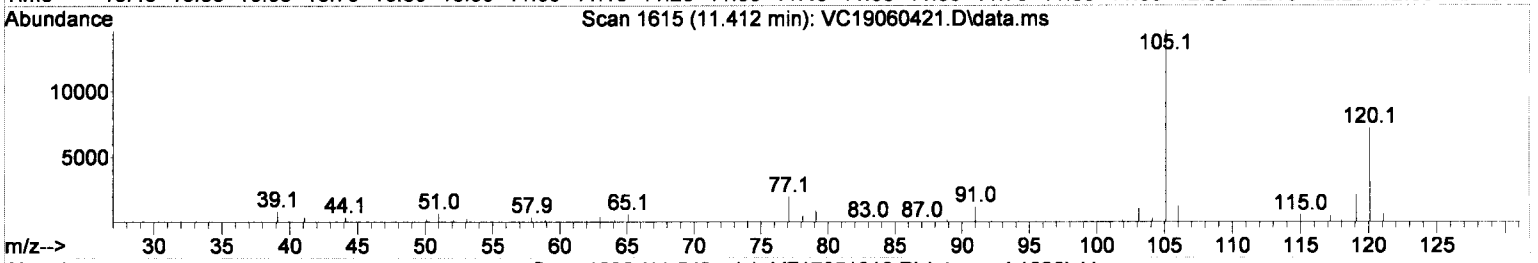
Ion	Exp%	Act%
105.00	100	100
120.10	52.70	56.92
77.00	15.40	11.24
0.00	0.00	0.00

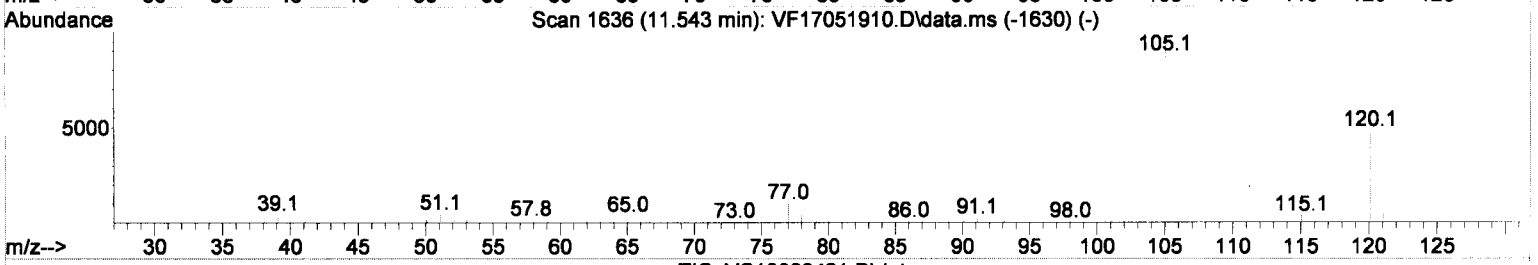
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







TIC: VC19060421.D\data.ms

(68) 1,2,4-Trimethylbenzene

11.412min (-0.006) 1.89 ug/L

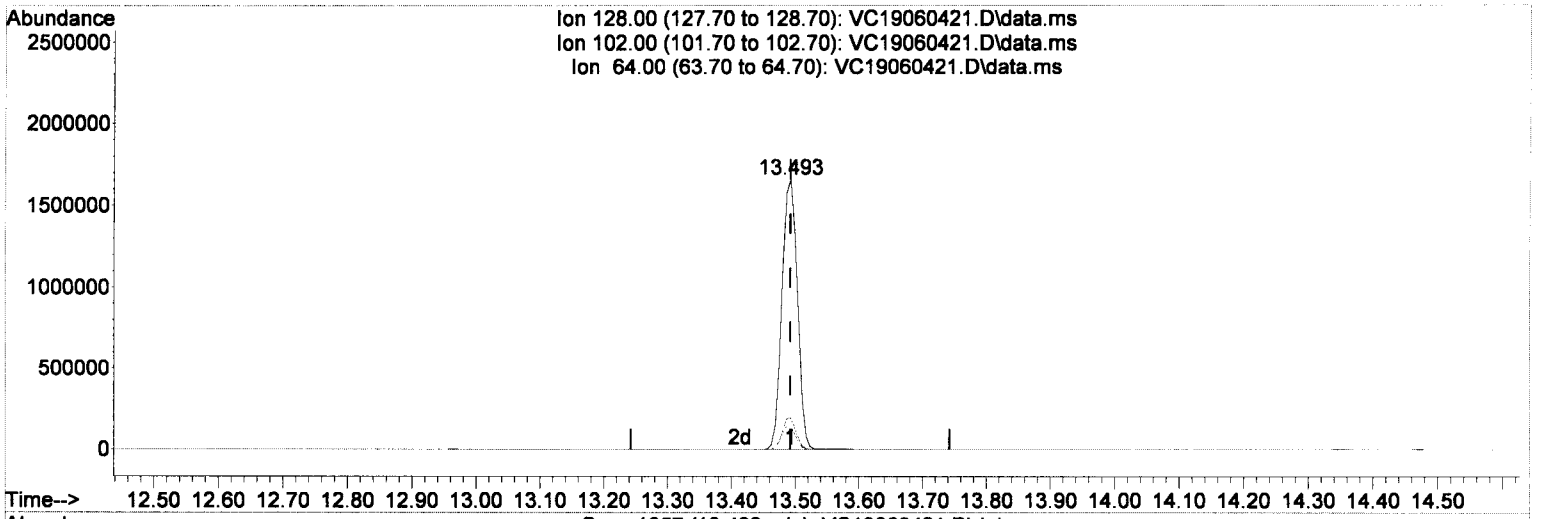
response 19176

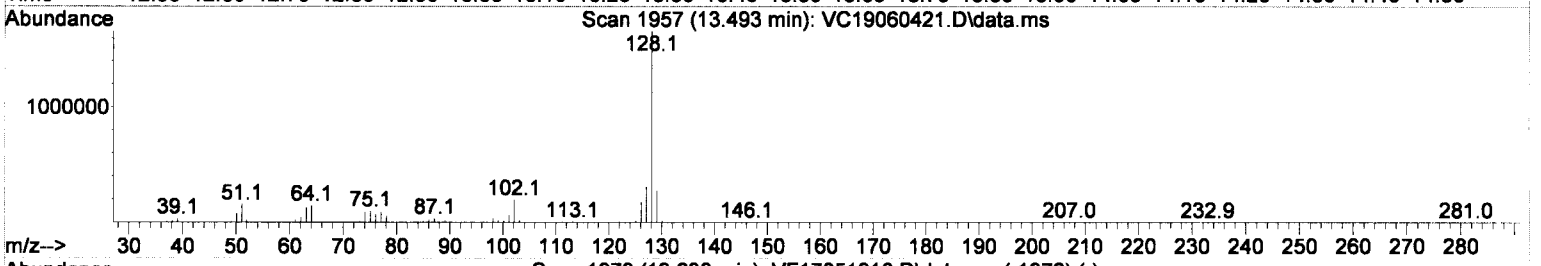
Ion	Exp%	Act%
105.00	100	100
120.10	48.00	49.30
91.00	10.60	8.57
0.00	0.00	0.00

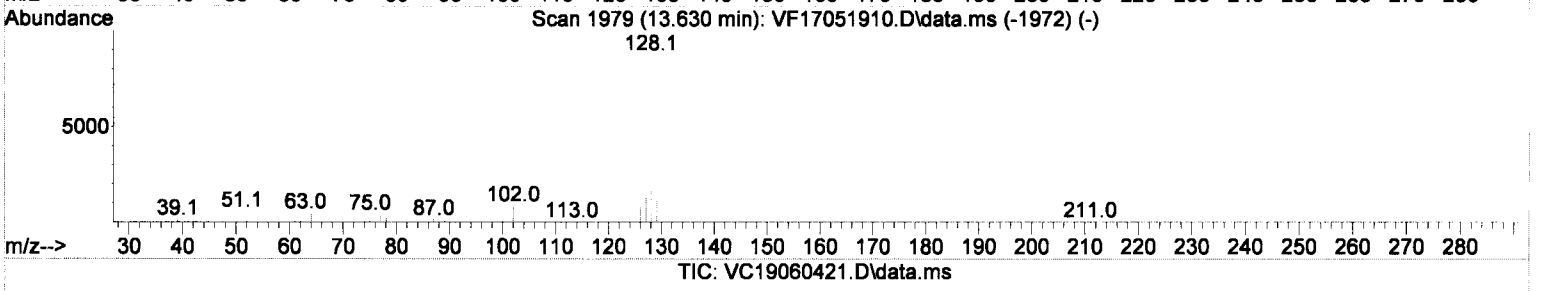
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







(78) Naphthalene

13.493min (+0.000) 274.27 ug/L

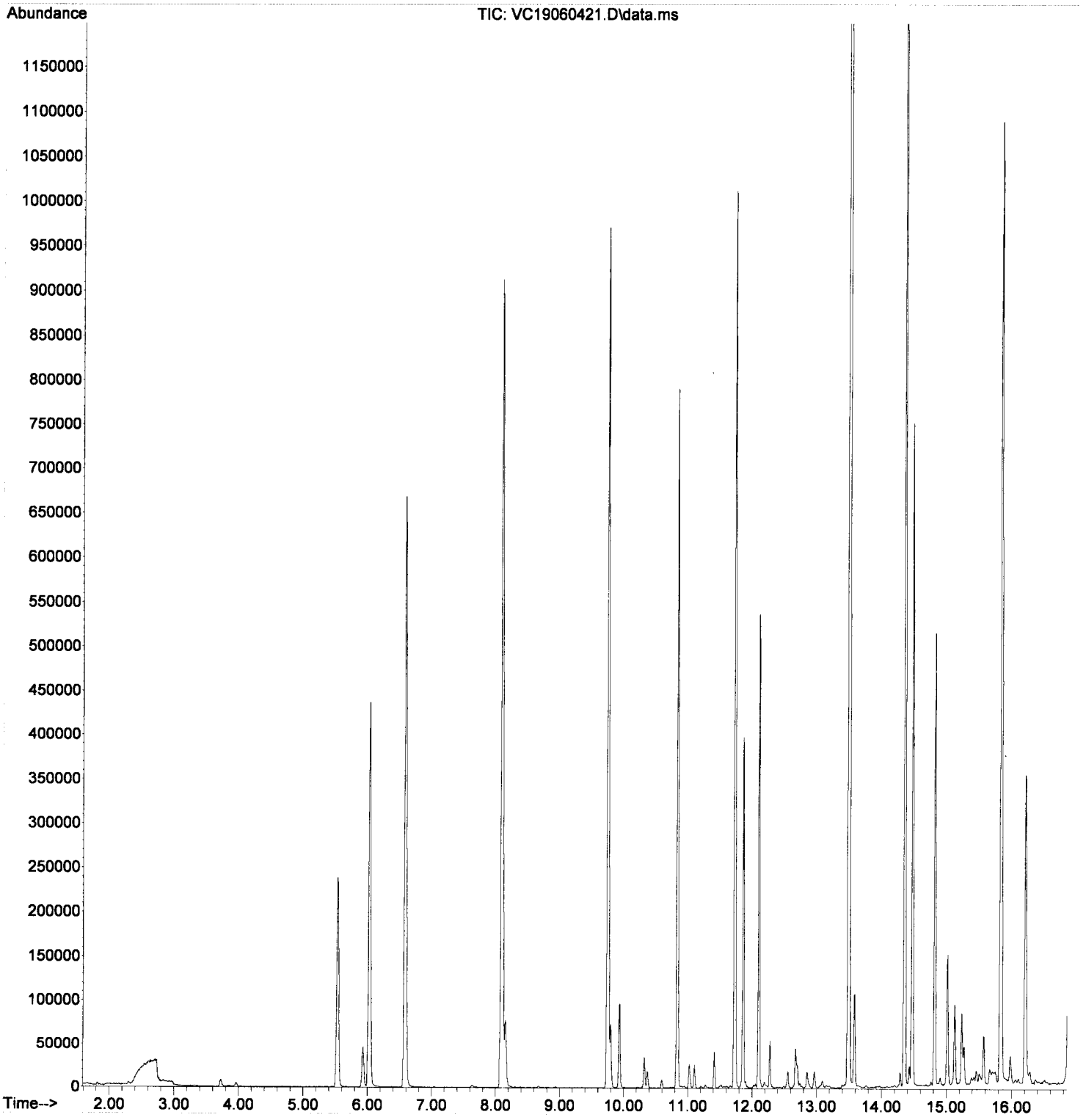
response 2786646

Ion	Exp%	Act%
128.00	100	100
102.00	8.50	11.77
64.00	6.40	8.76
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Gasoline Range Hydrocarbons (Benzene though Naphthalene) by NWTPH-Gx

Calibration Data

Sequence 9E29058 (Cal ID A9E3104) VOA-GCMS3

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9E29058	Instrument:	VOA-GCMS3
Date:	05/29/19 13:56	Calibration:	A9E3104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E29058-IBL1	Soil	QC	QC			A19C135	
2	9E29058-TUN1	Soil	QC	QC			A19C135	
3	9E29058-ICB1	Soil	QC	QC			A19C135	
4	9E29058-CAL1	Soil	QC	QC			A19C135	A19E361
5	9E29058-CAL2	Soil	QC	QC			A19C135	A19E362
6	9E29058-CAL3	Soil	QC	QC			A19C135	A19E363
7	9E29058-CAL4	Soil	QC	QC			A19C135	A19E364
8	9E29058-CAL5	Soil	QC	QC			A19C135	A19E365
9	9E29058-CAL6	Soil	QC	QC			A19C135	A19E366
10	9E29058-CAL7	Soil	QC	QC			A19C135	A19E367
11	9E29058-CAL8	Soil	QC	QC			A19C135	A19E368
12	9E29058-CAL9	Soil	QC	QC			A19C135	A19E369
13	9E29058-IBL2	Soil	QC	QC			A19C135	
14	9E29058-CALA	Soil	QC	QC			A19C135	A19E370
15	9E29058-IBL3	Soil	QC	QC			A19C135	
16	9E29058-CALB	Soil	QC	QC			A19C135	A19E371
17	9E29058-IBL4	Soil	QC	QC			A19C135	
18	9E29058-IBL5	Soil	QC	QC			A19C135	
19	9E29058-ICV1	Soil	QC	QC			A19C135	A19D180
20	9E29058-IBL6	Soil	QC	QC			A19C135	
21	9E29058-TUN2	Soil	QC	QC			A19C135	
22	9E29058-IBL7	Soil	QC	QC			A19C135	
23	9E29058-ICB2	Soil	QC	QC			A19C135	
24	9E29058-CALC	Soil	QC	QC			A19C135	A19E372
25	9E29058-CALD	Soil	QC	QC			A19C135	A19E373
26	9E29058-CALE	Soil	QC	QC			A19C135	A19E374
27	9E29058-CALF	Soil	QC	QC			A19C135	A19E375
28	9E29058-CALG	Soil	QC	QC			A19C135	A19E183
29	9E29058-CALH	Soil	QC	QC			A19C135	A19E184
30	9E29058-CALI	Soil	QC	QC			A19C135	A19E185
31	9E29058-CALJ	Soil	QC	QC			A19C135	A19E186
32	9E29058-IBL8	Soil	QC	QC			A19C135	
33	9E29058-IBL9	Soil	QC	QC			A19C135	
34	9E29058-ICV2	Soil	QC	QC			A19C135	A19B262
35	9E29058-IBLA	Soil	QC	QC			A19C135	

Data Entered By: 5/31/19

Data Reviewed By: 5/31/19

Comments:

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	-1	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052904.D
2	2	0	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052905.D
3	3	0	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052906.D
4	4	1	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052907.D
5	5	2	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052908.D
6	6	5	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052909.D
7	7	10	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052910.D
8	8	20	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052911.D
9	9	50	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052912.D
10	10	100	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052914.D
11	11	200	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052916.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	May 30 12:12 2019	May 30 11:57 2019	29 May 2019 3:40 pm
2	2	May 30 12:12 2019	May 30 12:04 2019	29 May 2019 4:07 pm
3	3	May 30 12:12 2019	May 30 12:05 2019	29 May 2019 4:35 pm
4	4	May 30 12:12 2019	May 30 12:06 2019	29 May 2019 5:02 pm
5	5	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 5:30 pm
6	6	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 5:57 pm
7	7	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 6:25 pm
8	8	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 6:52 pm
9	9	May 30 12:12 2019	May 30 11:46 2019	29 May 2019 7:20 pm
10	10	May 30 12:12 2019	May 30 11:46 2019	29 May 2019 8:15 pm
11	11	May 30 12:12 2019	May 30 11:46 2019	29 May 2019 9:10 pm

VC190529S.M Thu May 30 15:32:22 2019

Response Factor Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019
Response Via : Initial Calibration

Calibration Files
1 =VC19052904.D 2 =VC19052905.D 3 =VC19052906.D 4 =VC19052907.D 5 =VC19052908.D 6 =VC19052909.D
7 =VC19052910.D 8 =VC19052911.D 9 =VC19052912.D 10 =VC19052914.D 11 =VC19052916.D

		Compound	1	2	3	4	5	6	7	8	9	10	11	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD												
2)		Dichlorodifluo...	0.462	0.413	0.416	0.448	0.479	0.453	0.441	0.488	0.463	0.426	0.449		5.63
3)	P	Chloromethane		0.919	0.788	0.748	0.751	0.710	0.710	0.715	0.683	0.612	0.737		11.42
4)	C	Vinyl Chloride	0.501	0.520	0.508	0.516	0.529	0.502	0.513	0.527	0.510	0.470	0.510		3.26
5)		Bromomethane					0.356	0.322	0.277	0.267	0.250	0.253	0.287		14.87
6)		Chloroethane				0.197	0.206	0.182	0.187	0.191	0.203	0.176	0.191		5.76
7)		Trichlorofluor...		0.276	0.289	0.290	0.302	0.272	0.291	0.291	0.293	0.252	0.284		5.30
8)	C	1,1-Dichloroet...	0.444	0.556	0.503	0.480	0.511	0.513	0.507	0.538	0.515	0.493	0.506		6.03
9)		Carbon Disulfide	0.813	0.771	0.678	0.672	0.703	0.726	0.789	0.946	0.971	0.960	0.803		14.57
10)		Freon 113	0.587	0.460	0.437	0.383	0.410	0.409	0.407	0.419	0.399	0.384	0.429		13.96
11)		Iodomethane			0.143	0.148	0.133	0.155	0.180	0.235	0.267	0.288	0.194		31.41
12)		Methylene Chlo...				1.812	0.991	0.710	0.568	0.490	0.454	0.409	0.776		64.14
13)		Acetone				0.284	0.233	0.206	0.217	0.223	0.217	0.197	0.225		12.62
14)		t-1,2-Dichloro...	0.471	0.715	0.571	0.532	0.565	0.614	0.605	0.596	0.626	0.598	0.559	0.587	10.38
15)		n-Hexane				0.173	0.137	0.111	0.098	0.102	0.093	0.092	0.115		25.96
16)		Methyl-tert-bu...	1.793	1.755	1.807	1.734	1.721	1.760	1.742	1.752	1.781	1.699	1.570	1.738	3.66
17)	P	1,1-Dichloroet...		0.716	0.697	0.709	0.734	0.744	0.724	0.738	0.749	0.744	0.674	0.723	3.33
18)		Acrylonitrile				0.267	0.250	0.301	0.301	0.298	0.318	0.308	0.295	0.292	7.65
19)		c-1,2-Dichloro...	0.702	0.595	0.694	0.629	0.630	0.672	0.675	0.660	0.679	0.659	0.607	0.655	5.35
20)		2,2-Dichloropr...			0.574	0.545	0.539	0.566	0.585	0.573	0.593	0.574	0.548	0.566	3.26
21)		Bromochloromet...		0.441	0.324	0.379	0.376	0.400	0.402	0.394	0.402	0.388	0.360	0.387	7.92
22)	C	Chloroform			1.008	0.895	0.860	0.832	0.839	0.845	0.868	0.832	0.752	0.859	7.93
23)		Carbon Tetrach...				0.393	0.370	0.429	0.451	0.465	0.528	0.535	0.542	0.464	14.21
24)		Tetrahydrofuran			0.413	0.387	0.323	0.309	0.308	0.303	0.313	0.301	0.287	0.327	13.16
25)		1,1,1-Trichlor...		0.640	0.679	0.595	0.632	0.655	0.654	0.673	0.699	0.679	0.654	0.656	4.49
26)	S	Dibromofluorom...	0.537	0.532	0.521	0.521	0.550	0.536	0.538	0.553	0.574	0.553	0.542	0.541	2.83
27)		1,1-Dichloropr...		0.800	0.644	0.744	0.635	0.652	0.656	0.658	0.688	0.651	0.624	0.675	8.20
28)		2-Butanone (MEK)				0.453	0.361	0.413	0.402	0.403	0.416	0.392	0.376	0.402	6.86
29)		Benzene	2.357	2.260	2.235	2.284	2.147	2.202	2.176	2.160	2.184	2.046	1.856	2.173	6.11
30)		1,2-Dichloroet...		0.667	0.686	0.639	0.648	0.653	0.648	0.647	0.663	0.629	0.599	0.648	3.59
31)		iso-Butyl Alcohol						0.049	0.049	0.050	0.052	0.051	0.048	0.050	2.91
32)	S	1,4-Difluorobe...	1.899	1.916	1.909	1.926	1.948	1.932	1.903	1.931	1.951	1.905	1.934	1.923	0.93
33)		Trichloroethen...	0.689	0.758	0.518	0.610	0.611	0.597	0.585	0.590	0.613	0.587	0.547	0.610	10.65
34)		Dibromomethane			0.281	0.259	0.272	0.281	0.297	0.301	0.321	0.310	0.293	0.290	6.62
35)	C	1,2-Dichloropr...		0.580	0.525	0.530	0.550	0.566	0.554	0.570	0.581	0.565	0.534	0.556	3.68
36)		Bromodichlorom...		0.420	0.429	0.423	0.395	0.464	0.473	0.516	0.591	0.605	0.598	0.491	16.46
37)		Chlorobenzene-d5 (I)	ISTD												
38)		c-1,3-Dichloro...		0.337	0.319	0.357	0.343	0.385	0.402	0.426	0.458	0.460	0.448	0.394	13.50
39)	S	Toluene-d8 (S)	1.354	1.351	1.350	1.355	1.346	1.359	1.353	1.356	1.338	1.348	1.369	1.353	0.58
40)	C	Toluene			1.620	1.480	1.319	1.334	1.306	1.285	1.262	1.203	1.095	1.323	11.49

Method Path : C:\msdchem\1\METHODS\
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41)		Tetrachloroeth...		0.391	0.374	0.304	0.268	0.297	0.294	0.285	0.293	0.284	0.277	0.307	13.47
42)		4-Methyl-2-Pen...	0.483	0.474	0.444	0.408	0.366	0.382	0.399	0.389	0.403	0.385	0.358	0.408	10.15
43)		t-1,3-Dichloro...				0.310	0.285	0.325	0.360	0.382	0.419	0.424	0.416	0.365	14.76
44)		1,1,2-Trichlor...	0.255	0.283	0.258	0.261	0.251	0.278	0.275	0.278	0.285	0.278	0.269	0.270	4.39
45)		Dibromochlorom...		0.096	0.155	0.161	0.159	0.167	0.184	0.202	0.247	0.262	0.269	0.190	28.85
46)		1,3-Dichloropr...	0.488	0.553	0.528	0.476	0.473	0.501	0.501	0.508	0.508	0.496	0.465	0.500	5.06
47)		1,2-Dibromoeth...			0.225	0.248	0.231	0.259	0.274	0.277	0.295	0.289	0.280	0.264	9.51
48)		2-Hexanone				0.286	0.236	0.279	0.281	0.281	0.294	0.287	0.271	0.277	6.49
49)	P	Chlorobenzene		0.905	0.888	0.847	0.807	0.796	0.785	0.777	0.782	0.750	0.685	0.802	8.07
50)	C	Ethylbenzene		1.620	1.527	1.400	1.310	1.368	1.323	1.322	1.292	1.213	1.073	1.345	11.33
51)		1,1,1,2-Tetrac...			0.170	0.210	0.196	0.216	0.226	0.239	0.260	0.263	0.257	0.226	13.96
52)		m,p-Xylenes (2)		1.188	1.079	1.009	0.952	0.987	0.976	0.976	0.942	0.866	0.733	0.971	12.37
53)		o-Xylene		1.249	1.064	1.050	0.966	1.027	1.002	1.014	1.017	0.963	0.852	1.020	9.82
54)		Styrene				0.640	0.657	0.644	0.715	0.737	0.767	0.786	0.776	0.697	0.713	8.05
55)	P	Bromoform				0.053	0.072	0.075	0.091	0.099	0.111	0.144	0.159	0.168	0.108	37.80
56)		Isopropylbenzene	1.476	1.245	1.162	1.148	1.125	1.192	1.163	1.170	1.145	1.090	0.955	1.170	10.65
57)	I	1,4-Dichlorobenzen...	----------			ISTD	----------								
58)	S	4-Bromofluorob...	0.863	0.866	0.866	0.863	0.857	0.868	0.866	0.868	0.859	0.873	0.848	0.863	0.78
59)		Bromobenzene	0.455	0.670	0.691	0.705	0.677	0.700	0.693	0.673	0.687	0.686	0.625	0.660	10.81
60)		n-Propylbenzene	4.019	3.245	3.148	2.876	2.838	3.062	2.971	2.971	2.888	2.761	2.334	3.010	13.61
61)	P	1,1,2,2-Tetrac...	0.684	0.574	0.663	0.618	0.596	0.654	0.680	0.683	0.696	0.686	0.673	0.655	6.23
62)		2-Chlorotoluene	0.668	0.699	0.604	0.621	0.567	0.638	0.637	0.617	0.618	0.624	0.562	0.623	6.33
63)		1,3,5-Trimethy...		2.321	2.080	2.113	1.864	2.110	2.087	2.073	2.032	1.958	1.712	2.035	8.02
64)		1,2,3-Trichlor...		0.188	0.331	0.267	0.282	0.274	0.277	0.275	0.281	0.268	0.258	0.270	12.92
65)		t-1,4-Dichloro...				0.049	0.041	0.068	0.076	0.086	0.098	0.102	0.105	0.078	30.92
66)		4-Chlorotoluene		2.196	1.930	1.869	1.722	1.793	1.744	1.782	1.769	1.715	1.491	1.801	10.00
67)		tert-Butylbenzene	1.233	1.579	1.114	1.137	1.032	1.101	1.106	1.110	1.105	1.078	0.950	1.141	14.09
68)		1,2,4-Trimethy...	2.480	2.104	2.243	2.133	1.972	2.077	2.098	2.106	2.049	1.967	1.678	2.082	9.34
69)		sec-Butylbenzene	3.073	2.707	2.500	2.410	2.140	2.408	2.374	2.404	2.360	2.234	1.917	2.412	12.35
70)		4-Isopropyltol...		2.286	2.096	1.876	1.881	1.984	1.985	1.973	1.981	1.901	1.656	1.962	8.25
71)		1,3-Dichlorobe...	1.567	1.212	1.229	1.101	1.124	1.119	1.116	1.110	1.116	1.076	0.975	1.159	13.03
72)		1,4-Dichlorobe...		1.506	1.268	1.188	1.118	1.147	1.122	1.099	1.096	1.058	0.974	1.157	12.50
73)		n-Butylbenzene		2.179	1.783	1.756	1.570	1.646	1.648	1.636	1.604	1.512	1.354	1.669	12.96
74)		1,2-Dichlorobe...	1.370	1.089	1.162	1.034	0.981	1.055	1.026	1.036	1.033	0.994	0.927	1.064	11.05
75)		1,2-Dibromo-3-...				0.100	0.106	0.127	0.147	0.157	0.185	0.204	0.215	0.155	27.97
76)		Hexachlorobuta...				0.177	0.160	0.148	0.143	0.161	0.154	0.146	0.144	0.154	7.55
77)		1,2,4-Trichlor...		0.757	0.538	0.621	0.574	0.604	0.621	0.612	0.649	0.619	0.600	0.620	9.18
78)		Naphthalene				1.870	1.797	2.024	2.133	2.235	2.312	2.257	2.059	2.086	8.86
79)		1,2,3-Trichlor...			0.563	0.568	0.553	0.570	0.602	0.610	0.615	0.611	0.591	0.587	4.01

(#) = Out of Range

Compound List Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019
Response Via : Initial Calibration

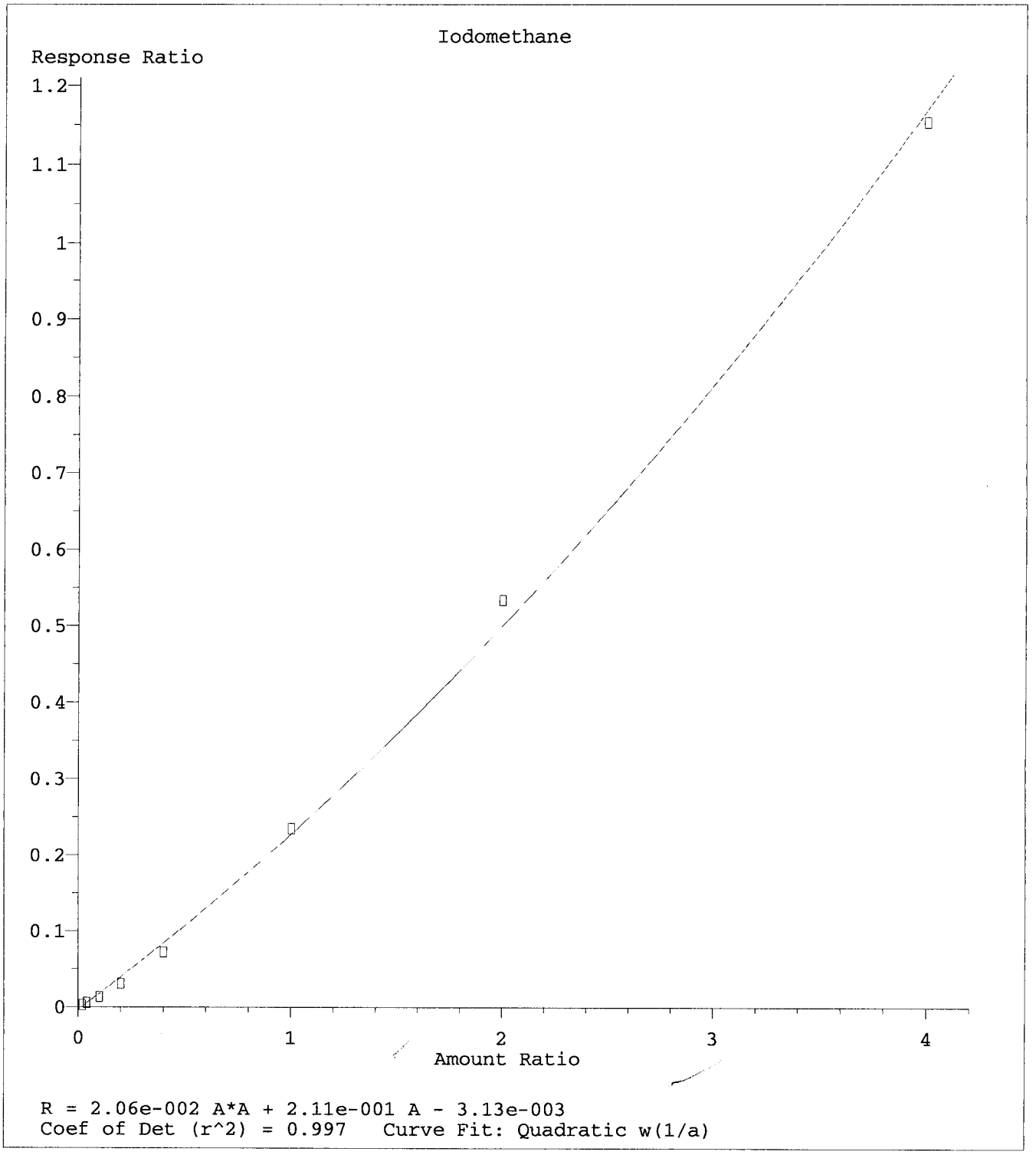
Total Cpnds : 79

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	168	6.034	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.660	0.275	A	2	A	R
3	P	Chloromethane	50	1.861	0.308	A	2	A	R
4	C	Vinyl Chloride	62	1.952	0.324	A	2	A	R
5		Bromomethane	96	2.305	0.382	A	2	A	R
6		Chloroethane	64	2.438	0.404	A	2	A	R
7		Trichlorofluoromethane	101	2.567	0.425	A	2	A	R
8	C	1,1-Dichloroethene	61	3.096	0.513	A	2	A	R
9		Carbon Disulfide	76	3.107	0.515	A	2	A	R
10		Freon 113	101	3.144	0.521	A	2	A	R
11		Iodomethane	142	3.247	0.538	Q 1/a	2	A	R
12		Methylene Chloride	84	3.728	0.618	Q 1/a	2	A	R
13		Acetone	43	3.831	0.635	A	1	A	R
14		t-1,2-Dichloroethene	61	3.893	0.645	A	2	A	R
15		n-Hexane	86	3.965	0.657	Q 1/a	3	A	R
16		Methyl-tert-butyl-ether	73	4.038	0.669	A	3	A	R
17	P	1,1-Dichloroethane	63	4.519	0.749	A	2	A	R
18		Acrylonitrile	53	4.598	0.762	A	2	A	R
19		c-1,2-Dichloroethene	61	5.067	0.840	A	2	A	R
20		2,2-Dichloropropane	77	5.170	0.857	A	2	A	R
21		Bromochloromethane	49	5.268	0.873	A	2	A	R
22	C	Chloroform	83	5.353	0.887	A	2	A	R
23		Carbon Tetrachloride	117	5.480	0.908	A	2	A	R
24		Tetrahydrofuran	42	5.535	0.917	A	2	A	R
25		1,1,1-Trichloroethane	97	5.554	0.920	A	2	A	R
26	S	Dibromofluoromethane (S)	111	5.535	0.917	A	2	A	R
27		1,1-Dichloropropene	75	5.681	0.942	A	2	A	R
28		2-Butanone (MEK)	43	5.687	0.943	A	2	A	R
29		Benzene	78	5.931	0.983	A	2	A	R
30		1,2-Dichloroethane (EDC)	62	6.150	1.019	A	2	A	R
31		iso-Butyl Alcohol	43	6.265	1.038	A	2	A	R
32	S	1,4-Difluorobenzene (S)	114	6.588	1.092	A	2	A	R
33		Trichloroethene (TCE)	130	6.551	1.086	A	2	A	R
34		Dibromomethane	93	7.001	1.160	A	2	A	R
35	C	1,2-Dichloropropane	63	7.111	1.178	A	2	A	R
36		Bromodichloromethane	83	7.183	1.190	Q 1/a2	2	A	R
37	I	Chlorobenzene-d5 (I)	117	9.751	1.000	A	2	A	R
38		c-1,3-Dichloropropene	75	7.889	0.809	A	2	A	R
39	S	Toluene-d8 (S)	98	8.096	0.830	A	2	A	R
40	C	Toluene	91	8.157	0.837	A	2	A	R
41		Tetrachloroethene (PCE)	166	8.601	0.882	A	2	A	R
42		4-Methyl-2-Pentanone (MIBK)	43	8.620	0.884	A	2	A	R
43		t-1,3-Dichloropropene	75	8.643	0.886	A	2	A	R
44		1,1,2-Trichloroethane	97	8.820	0.905	A	2	A	R
45		Dibromochloromethane	129	9.008	0.924	Q 1/a	2	A	R
46		1,3-Dichloropropane	76	9.106	0.934	A	2	A	R
47		1,2-Dibromoethane (EDB)	107	9.246	0.948	A	2	A	R
48		2-Hexanone	43	9.502	0.974	A	2	A	R
49	P	Chlorobenzene	112	9.769	1.002	A	2	A	R
50	C	Ethylbenzene	91	9.800	1.005	A	2	A	R
51		1,1,1,2-Tetrachloroethane	131	9.830	1.008	A	2	A	R
52		m,p-Xylenes (2)	91	9.934	1.019	A	2	A	R
53		o-Xylene	91	10.323	1.059	A	2	A	R
54		Styrene	104	10.371	1.064	A	2	A	R
55	P	Bromoform	173	10.389	1.065	Q 1/a	2	A	R

56		Isopropylbenzene	105	10.597	1.087	A	2	A	R
57	I	1,4-Dichlorobenzene-d4 (I)	152	11.728	1.000	A	2	A	R
58	S	4-Bromofluorobenzene (S)	174	10.840	0.924	A	2	A	R
59		Bromobenzene	156	10.919	0.931	A	2	A	R
60		n-Propylbenzene	91	10.943	0.933	A	2	A	R
61	P	1,1,2,2-Tetrachloroethane	83	11.010	0.939	A	2	A	R
62		2-Chlorotoluene	126	11.071	0.944	A	2	A	R
63		1,3,5-Trimethylbenzene	105	11.108	0.947	A	2	A	R
64		1,2,3-Trichloropropane	110	11.120	0.948	A	2	A	R
65		t-1,4-Dichloro-2-butene	88	11.150	0.951	Q	3	A	R
66		4-Chlorotoluene	91	11.205	0.955	A	2	A	R
67		tert-Butylbenzene	91	11.357	0.968	A	2	A	R
68		1,2,4-Trimethylbenzene	105	11.418	0.974	A	2	A	R
69		sec-Butylbenzene	105	11.497	0.980	A	2	A	R
70		4-Isopropyltoluene	119	11.613	0.990	A	2	A	R
71		1,3-Dichlorobenzene	146	11.673	0.995	A	2	A	R
72		1,4-Dichlorobenzene	146	11.740	1.001	A	2	A	R
73		n-Butylbenzene	91	11.929	1.017	A	2	A	R
74		1,2-Dichlorobenzene	146	12.063	1.029	A	2	A	R
75		1,2-Dibromo-3-Chloropropane	157	12.677	1.081	Q	2	A	R
76		Hexachlorobutadiene	223	13.182	1.124	A	3	A	R
77		1,2,4-Trichlorobenzene	180	13.219	1.127	A	2	A	R
78		Naphthalene	128	13.492	1.150	A	2	A	R
79		1,2,3-Trichlorobenzene	180	13.656	1.164	A	2	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VC190529S.M Thu May 30 15:32:16 2019



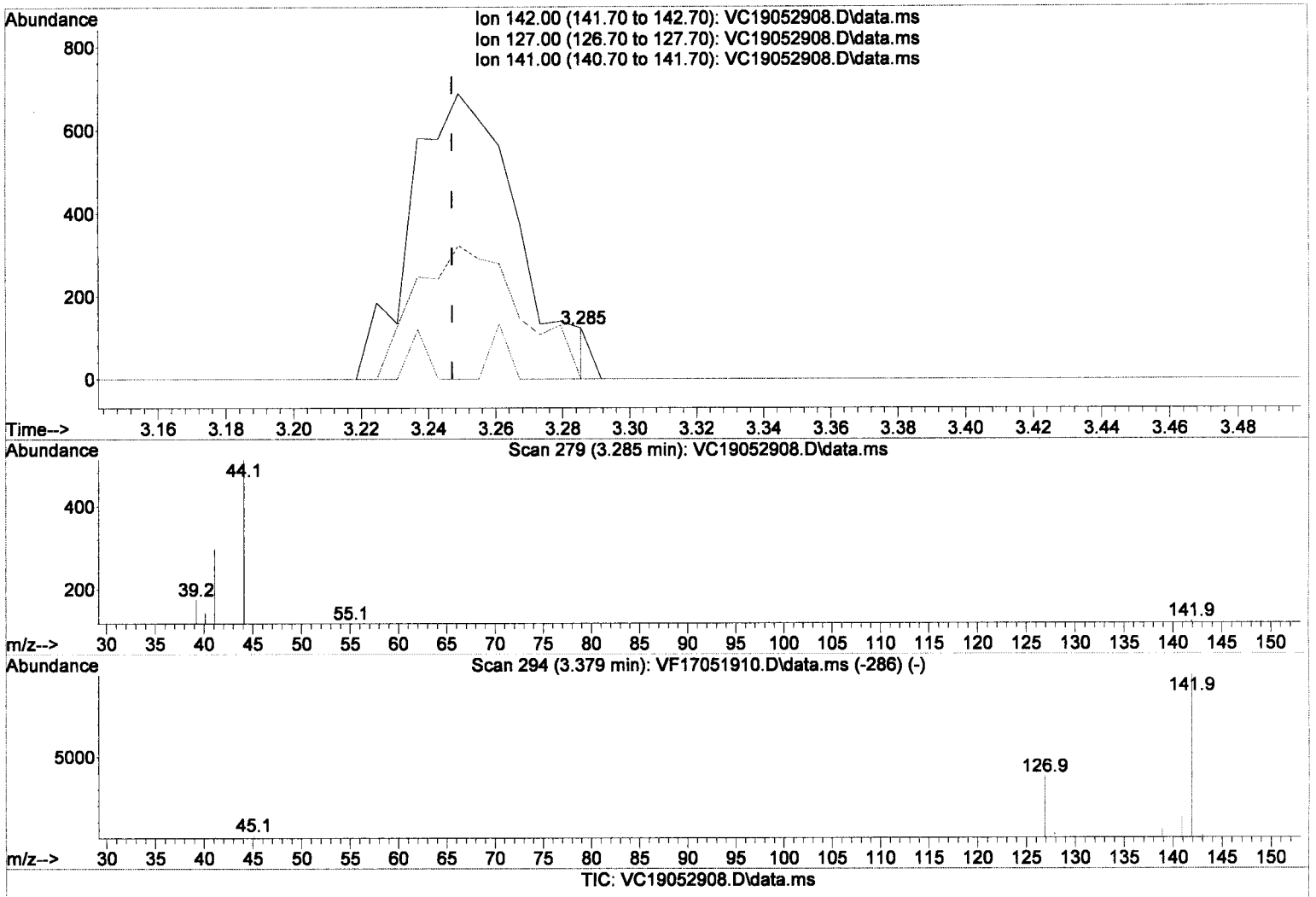
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

Int = 0.74 ✓

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



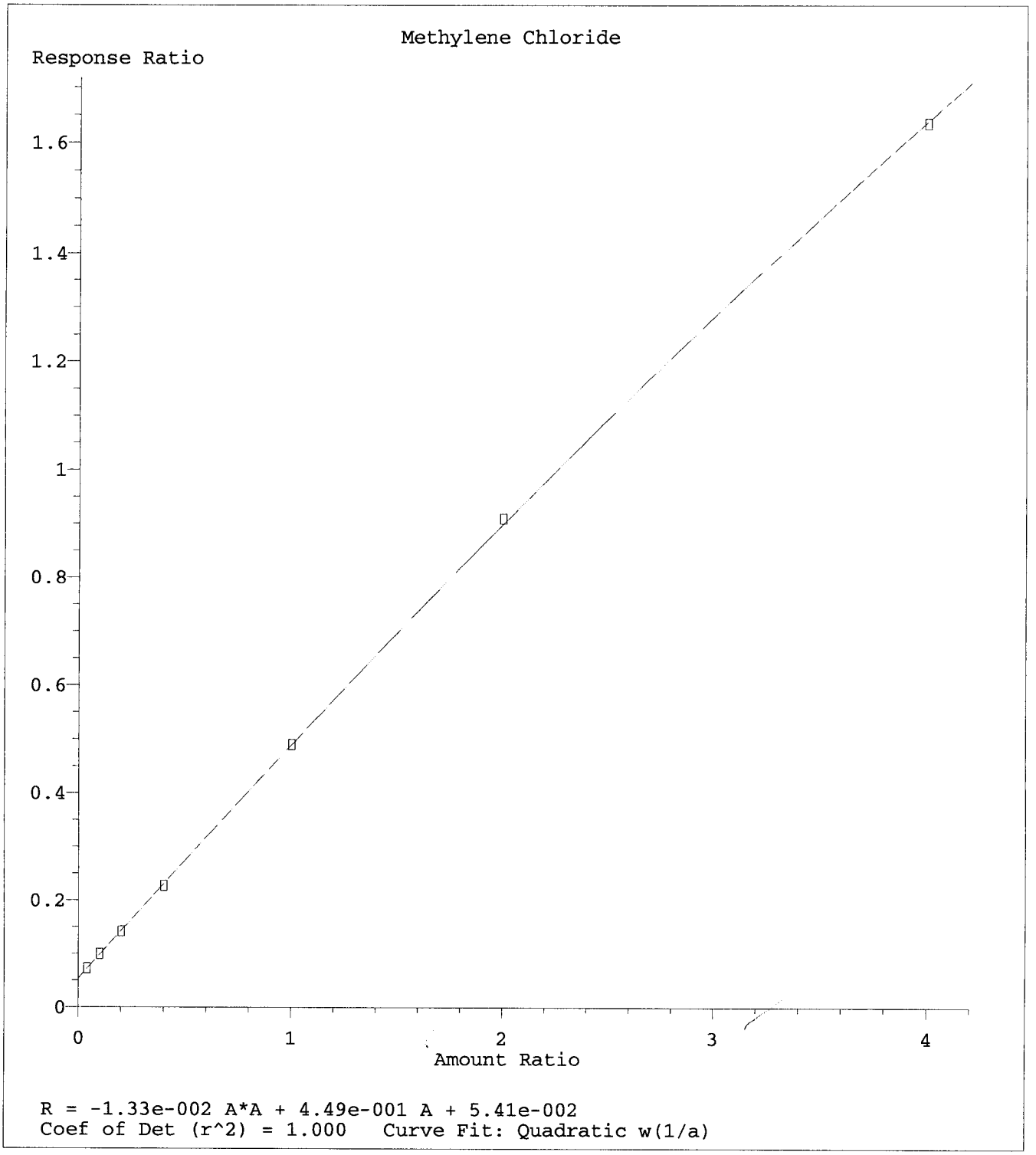
TIC: VC19052908.D\data.ms

(11) Iodomethane

3.285min (+0.038) 0.74 ug/L m

response 0

Ion	Exp%	Act%
142.00	100	0.00
127.00	35.00	0.00#
141.00	15.00	0.00#
0.00	0.00	0.00



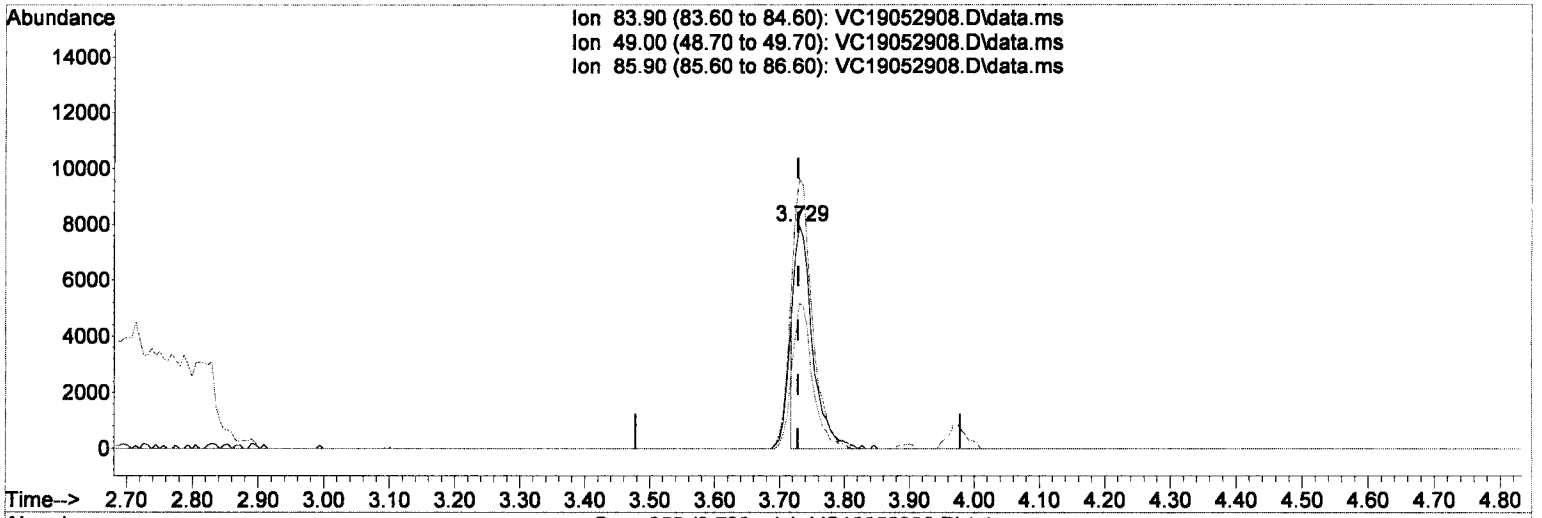
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

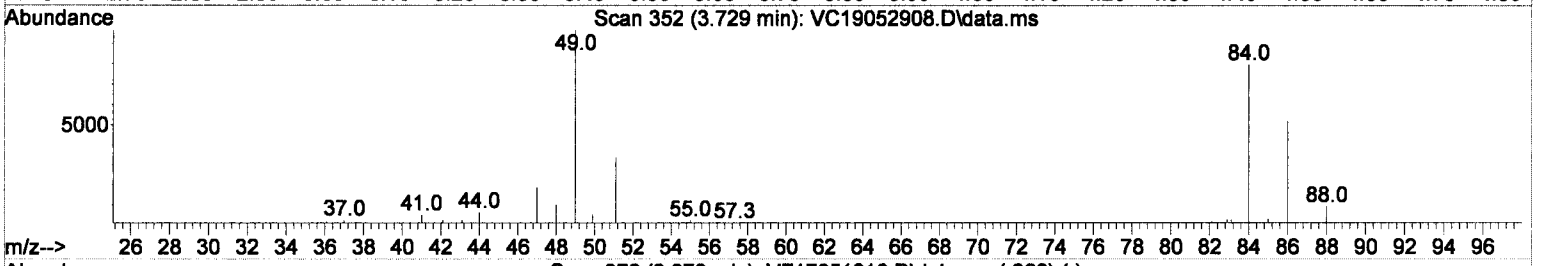
Int = (-)

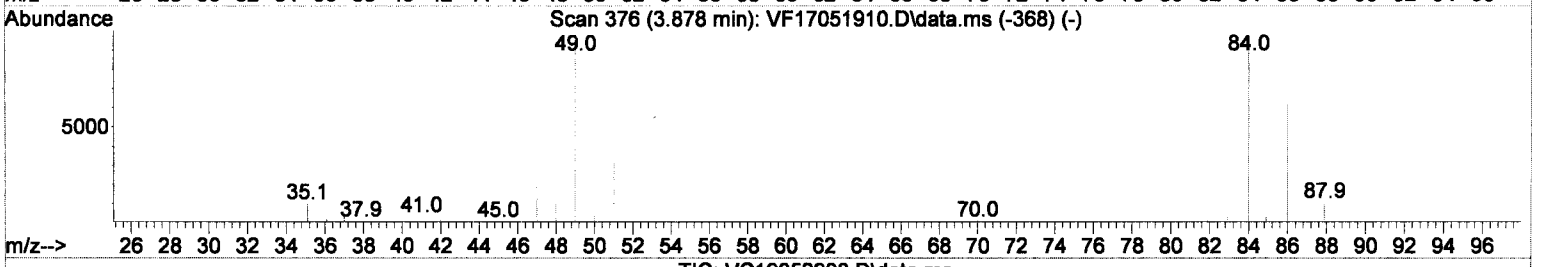
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







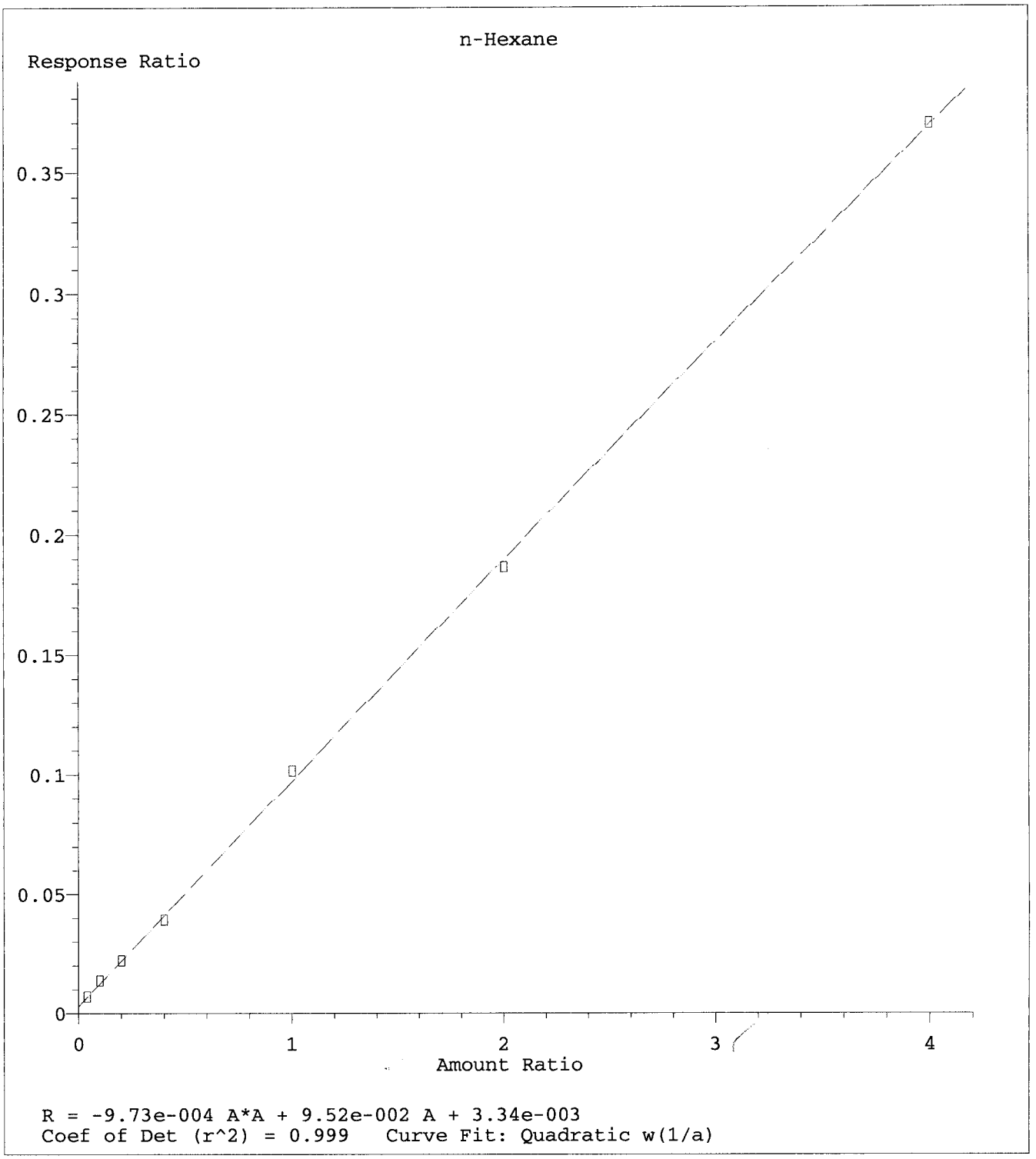
TIC: VC19052908.D\data.ms

(12) Methylene Chloride

3.729min (+0.001) 0.63 ug/L m

response 15220

Ion	Exp%	Act%
83.90	100	100
49.00	121.90	121.44
85.90	60.10	65.11
0.00	0.00	0.00



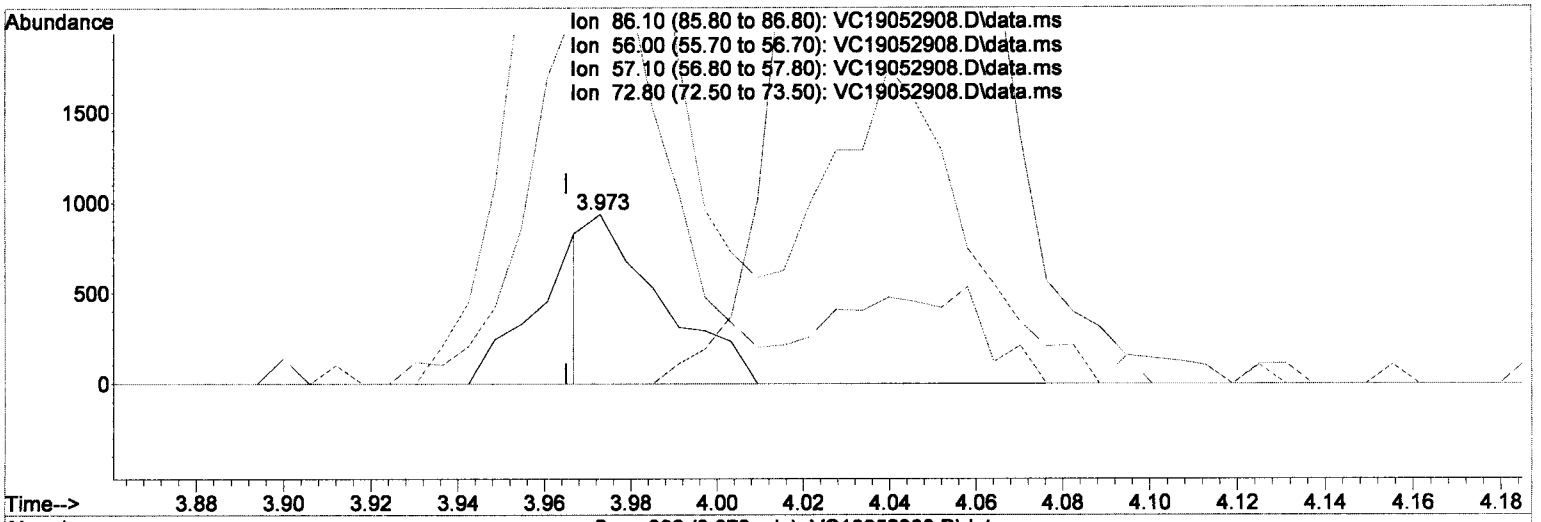
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

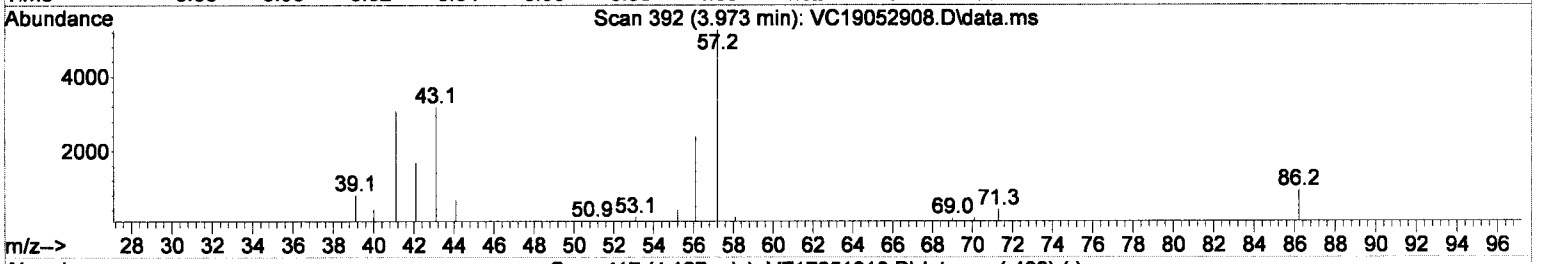
Int = (-)

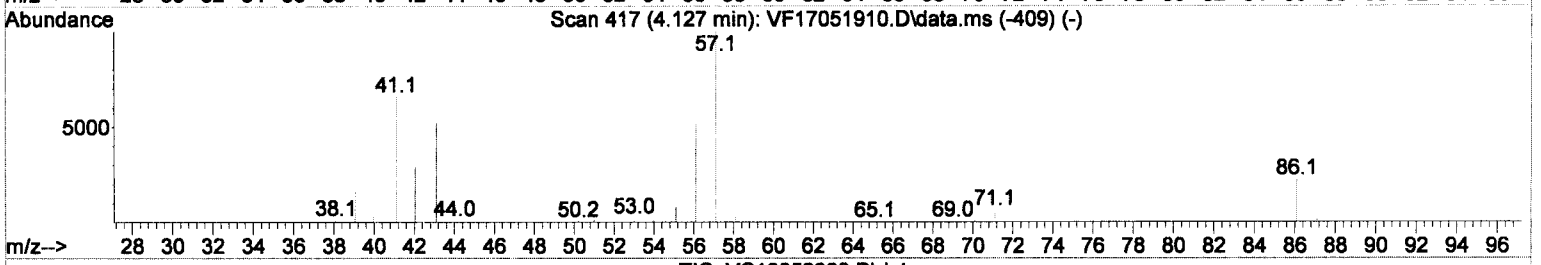
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







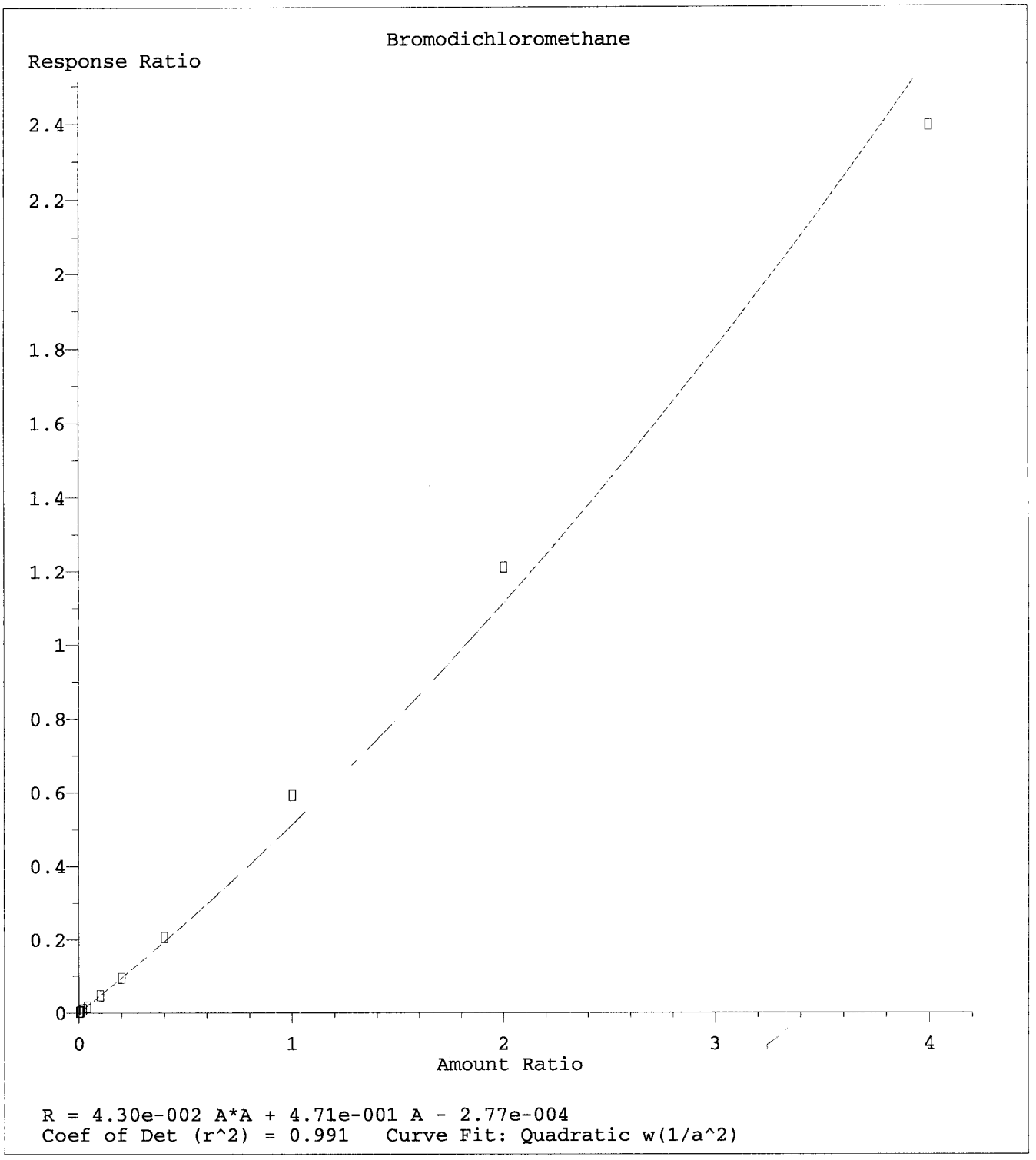
TIC: VC19052908.D\data.ms

(15) n-Hexane

3.973min (+0.008) 0.49 ug/L m

response 1088

Ion	Exp%	Act%
86.10	100	100
56.00	275.70	255.13#
57.10	523.30	562.18#
72.80	1.70	0.00



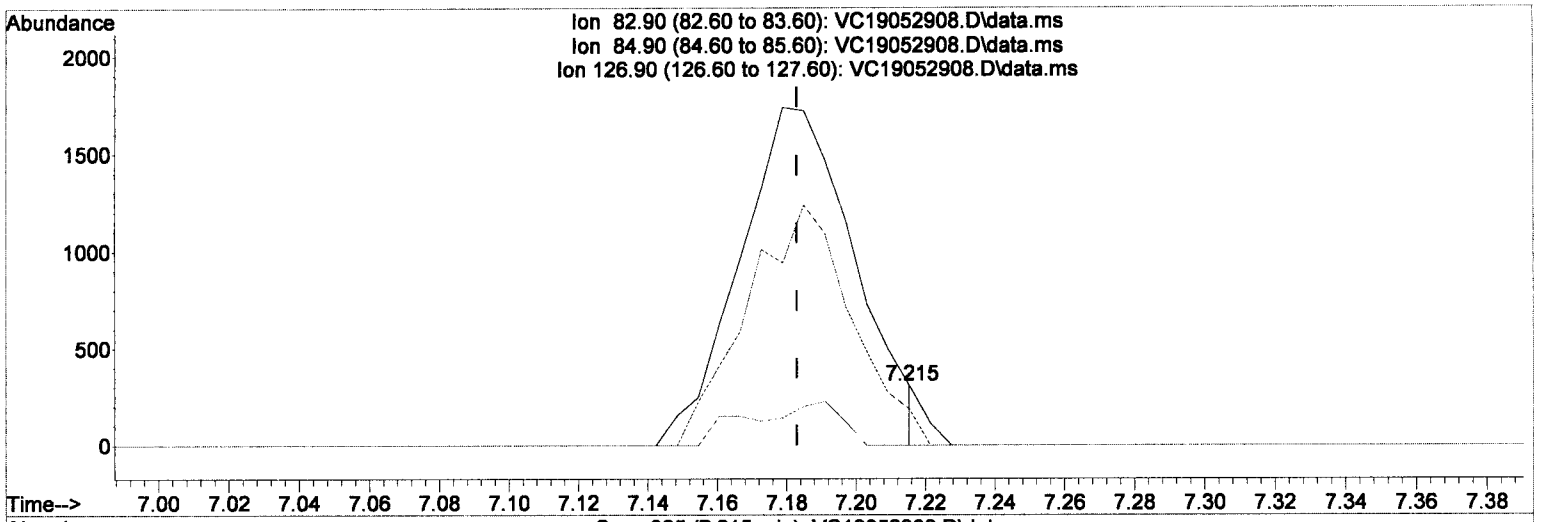
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

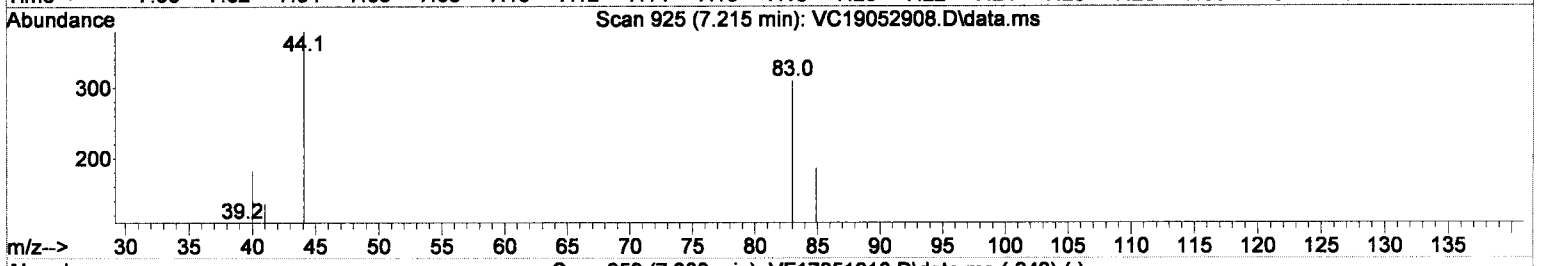
INT= 0.05

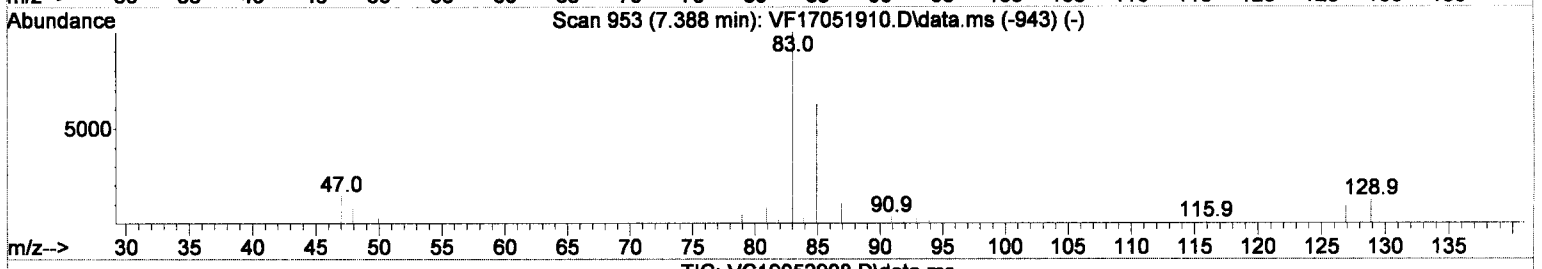
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







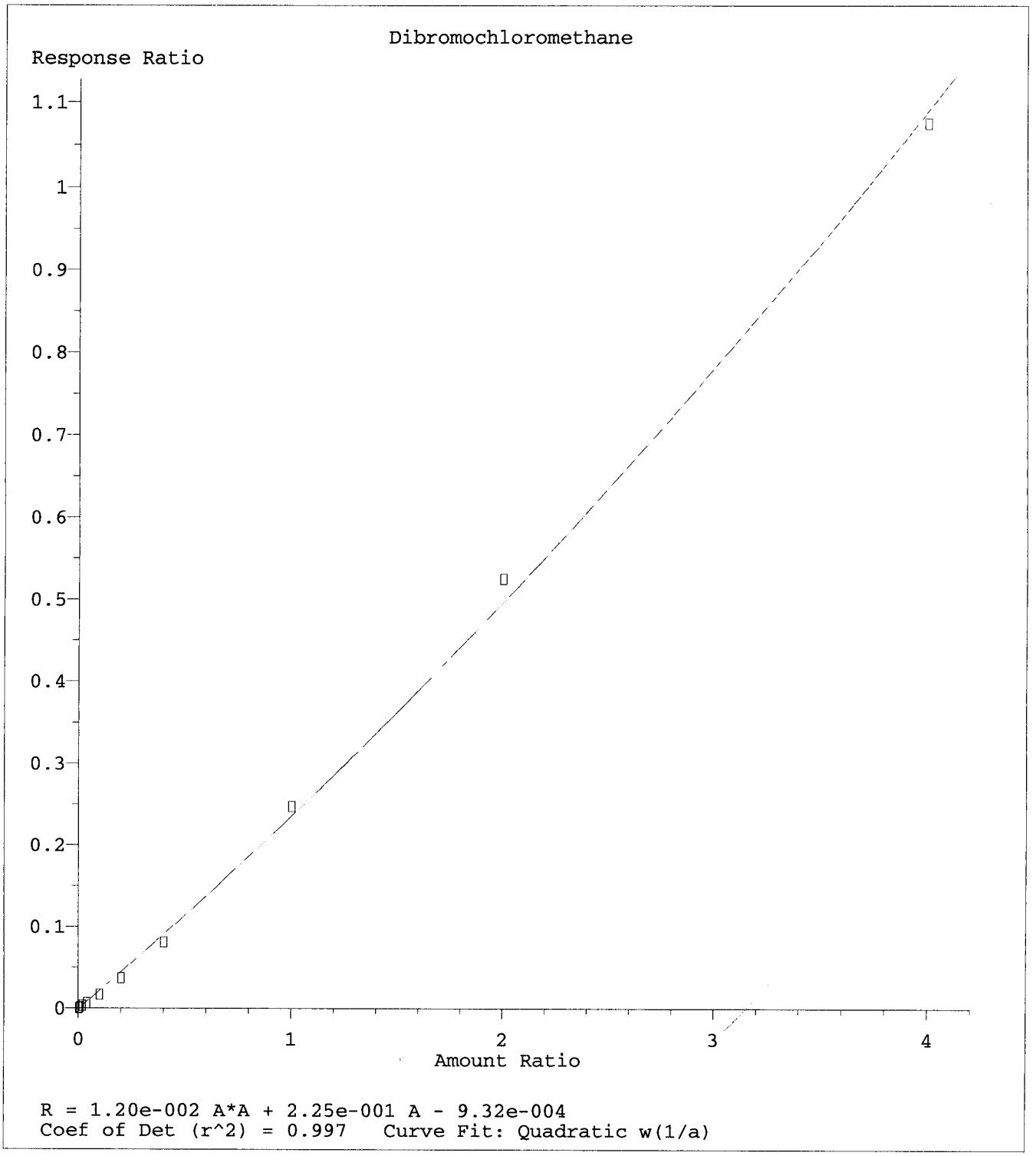
TIC: VC19052908.D\data.ms

(36) Bromodichloromethane

7.215min (+0.032) 0.05 ug/L m

response 41

Ion	Exp%	Act%
82.90	100	100
84.90	63.00	60.00
126.90	9.30	0.00
0.00	0.00	0.00



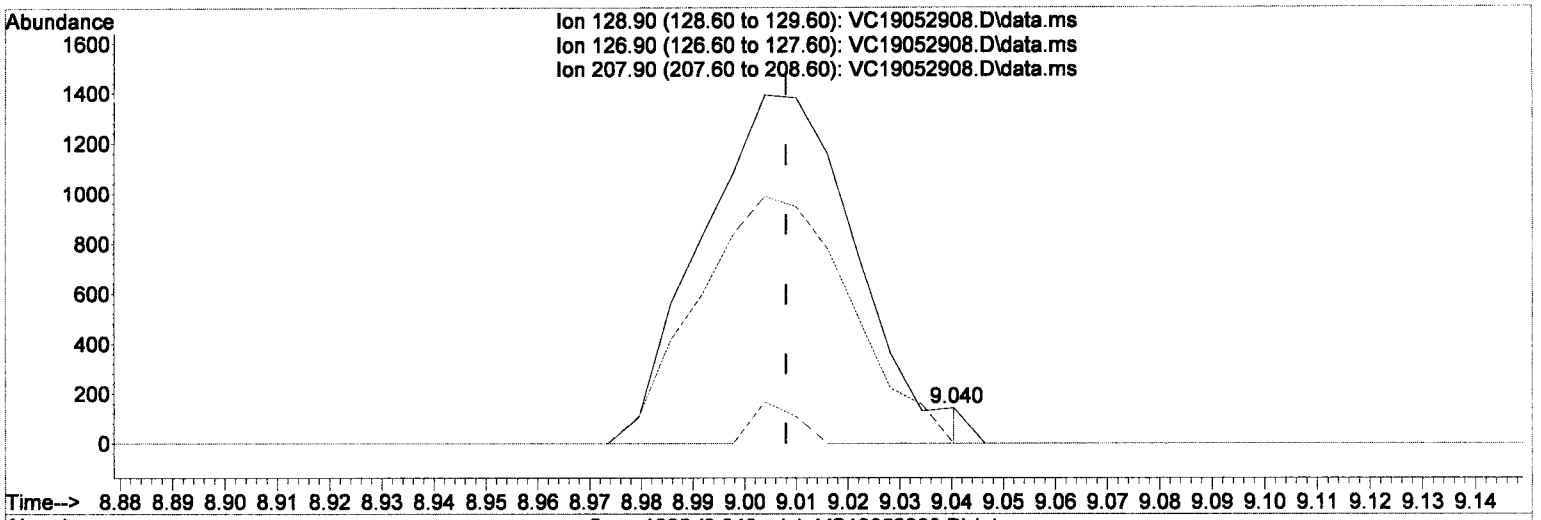
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

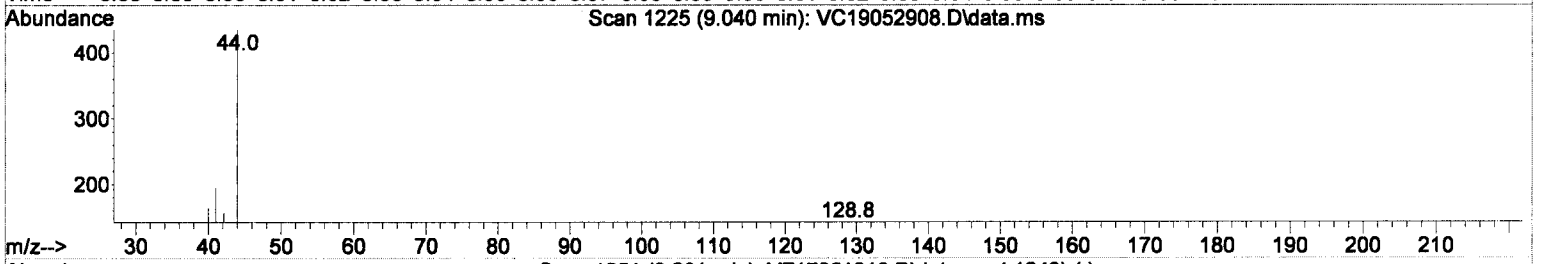
Int = 0.21

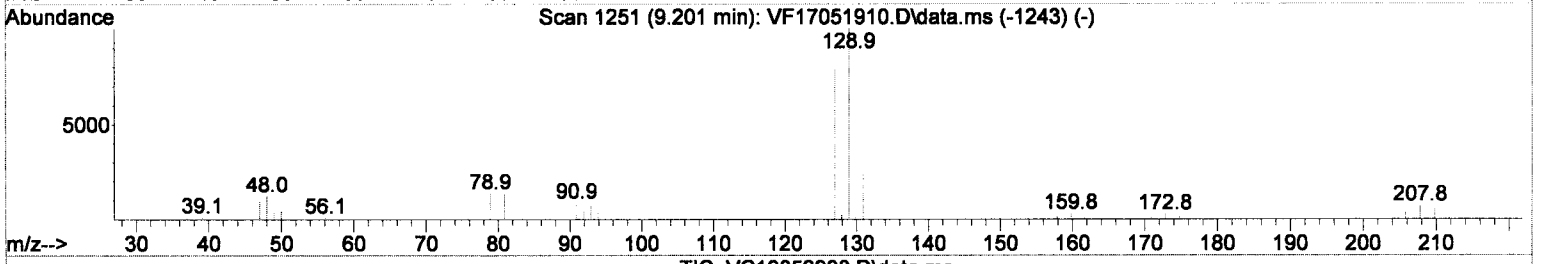
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







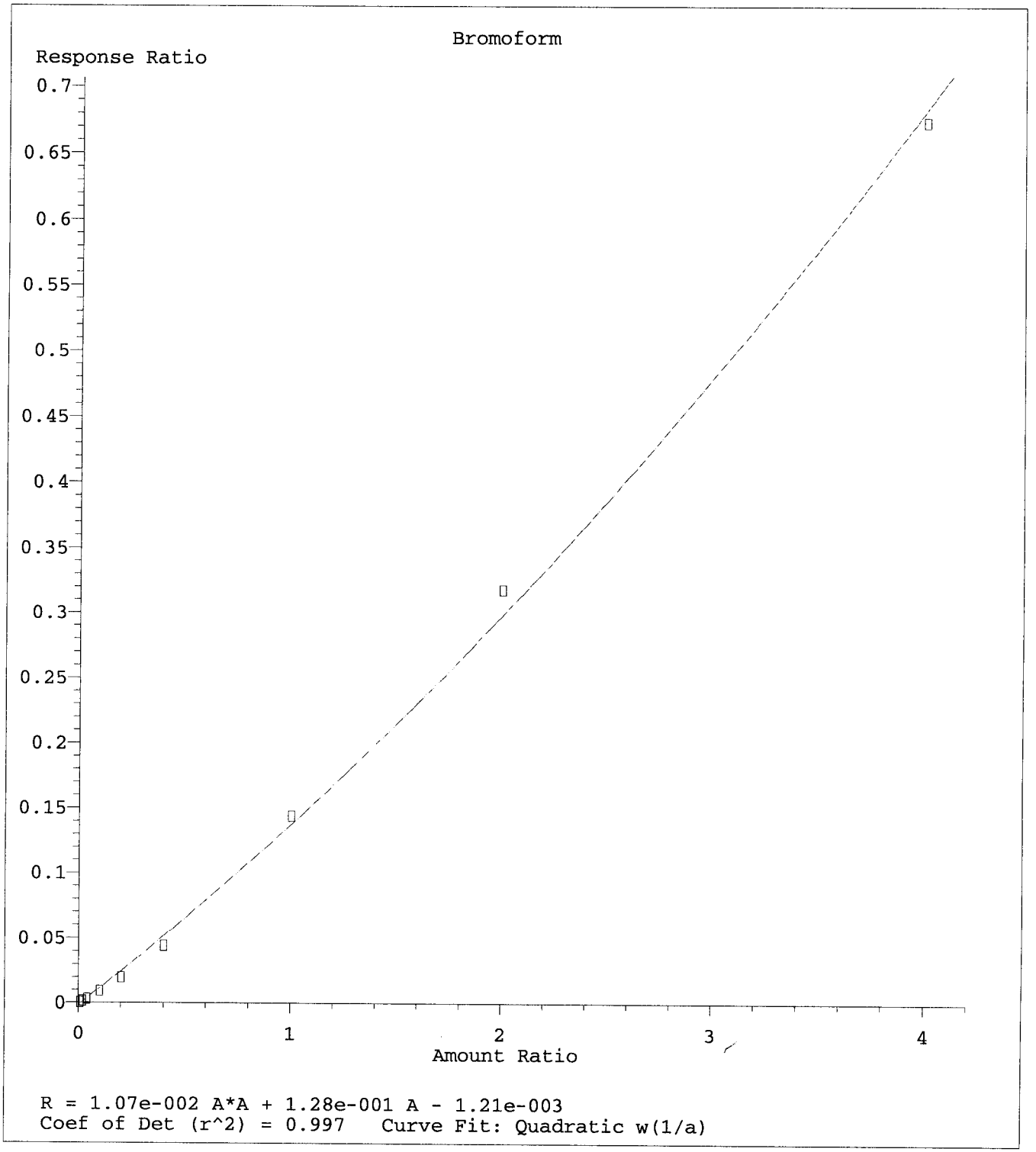
TIC: VC19052908.D\data.ms

(45) Dibromochloromethane

9.040min (+0.032) 0.21 ug/L m

response 0

Ion	Exp%	Act%
128.90	100	0.00
126.90	81.20	0.00#
207.90	7.40	0.00
0.00	0.00	0.00



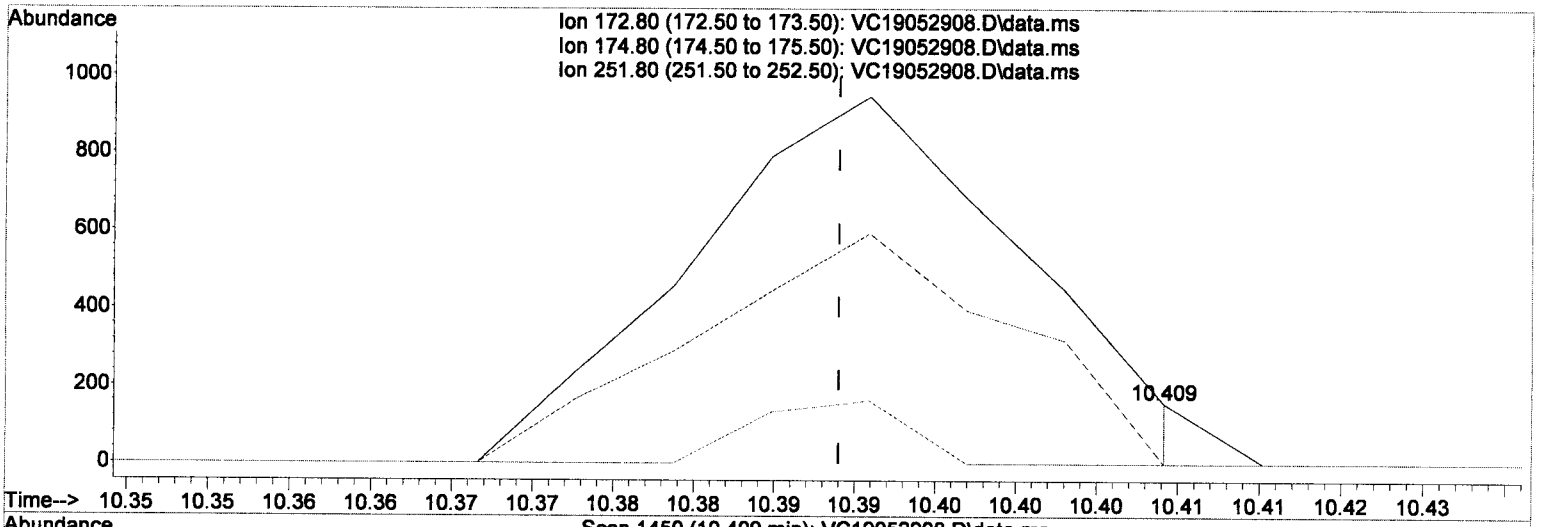
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

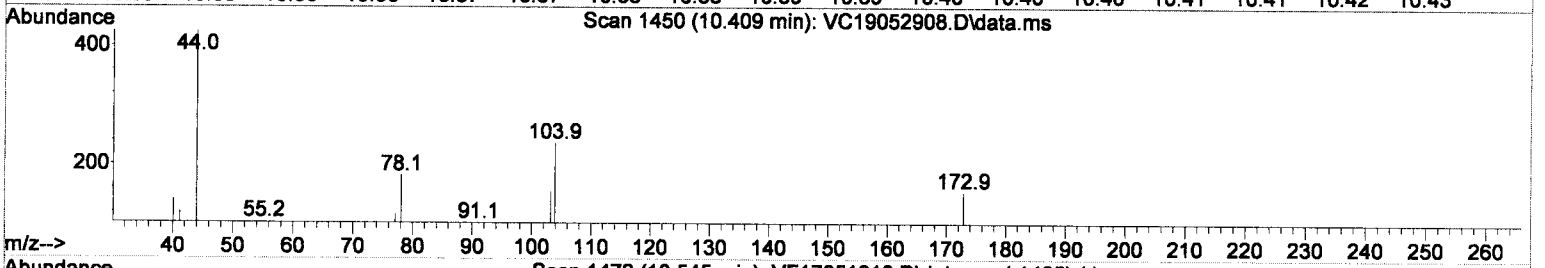
Int = 0.47

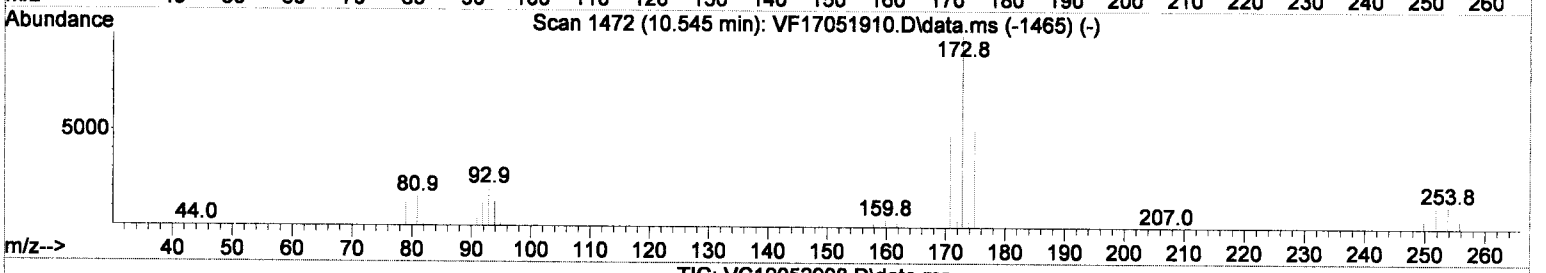
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







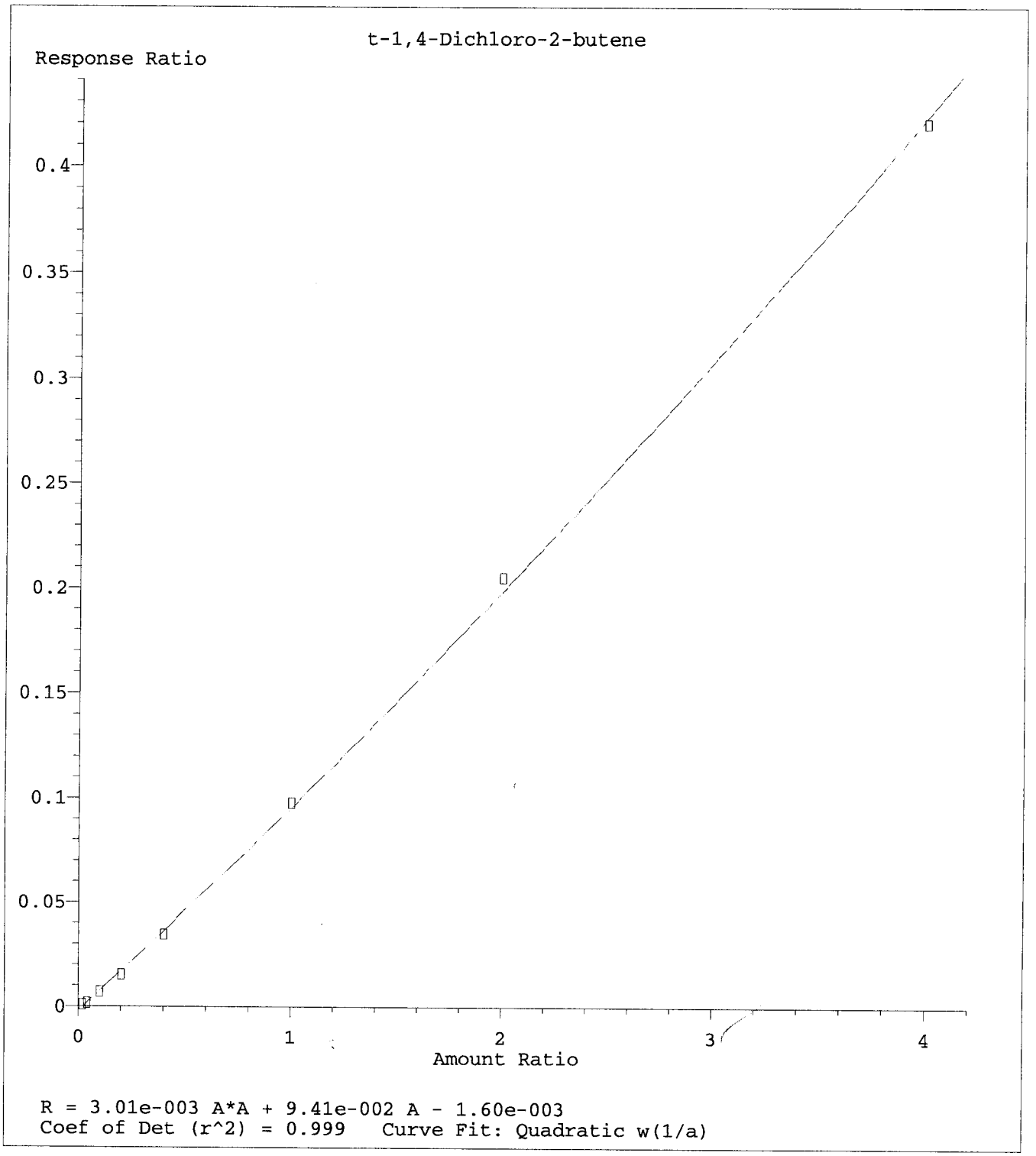
TIC: VC19052908.D\data.ms

(55) Bromoform (P)

10.409min (+0.020) 0.47 ug/L m

response 0

Ion	Exp%	Act%
172.80	100	0.00
174.80	49.10	0.00#
251.80	12.50	0.00
0.00	0.00	0.00



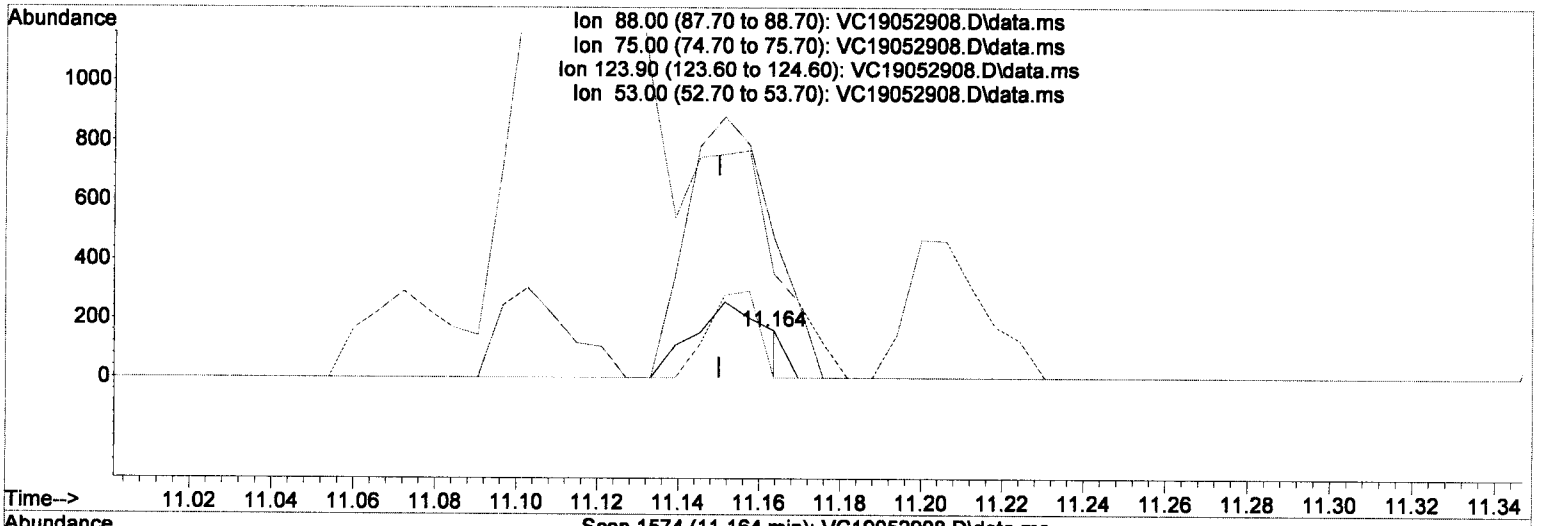
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

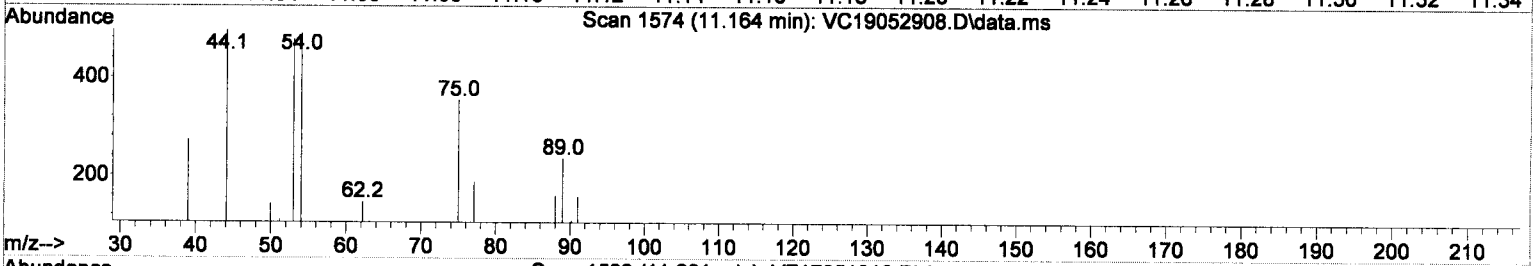
Int=0.85

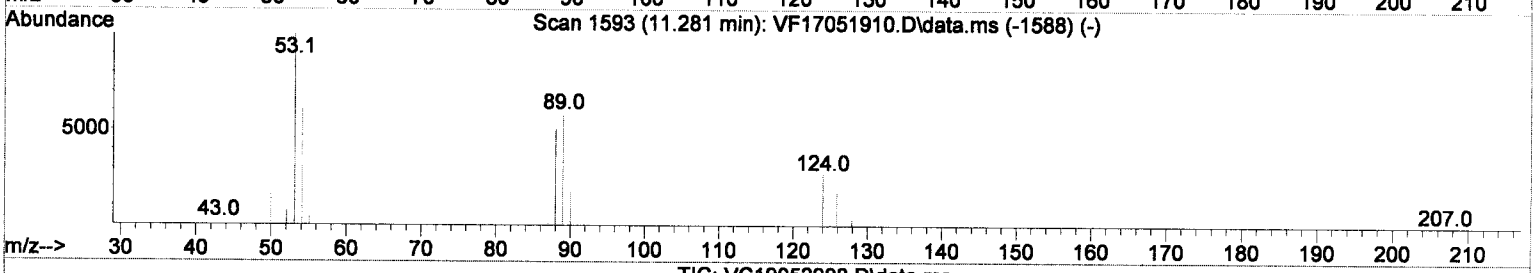
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







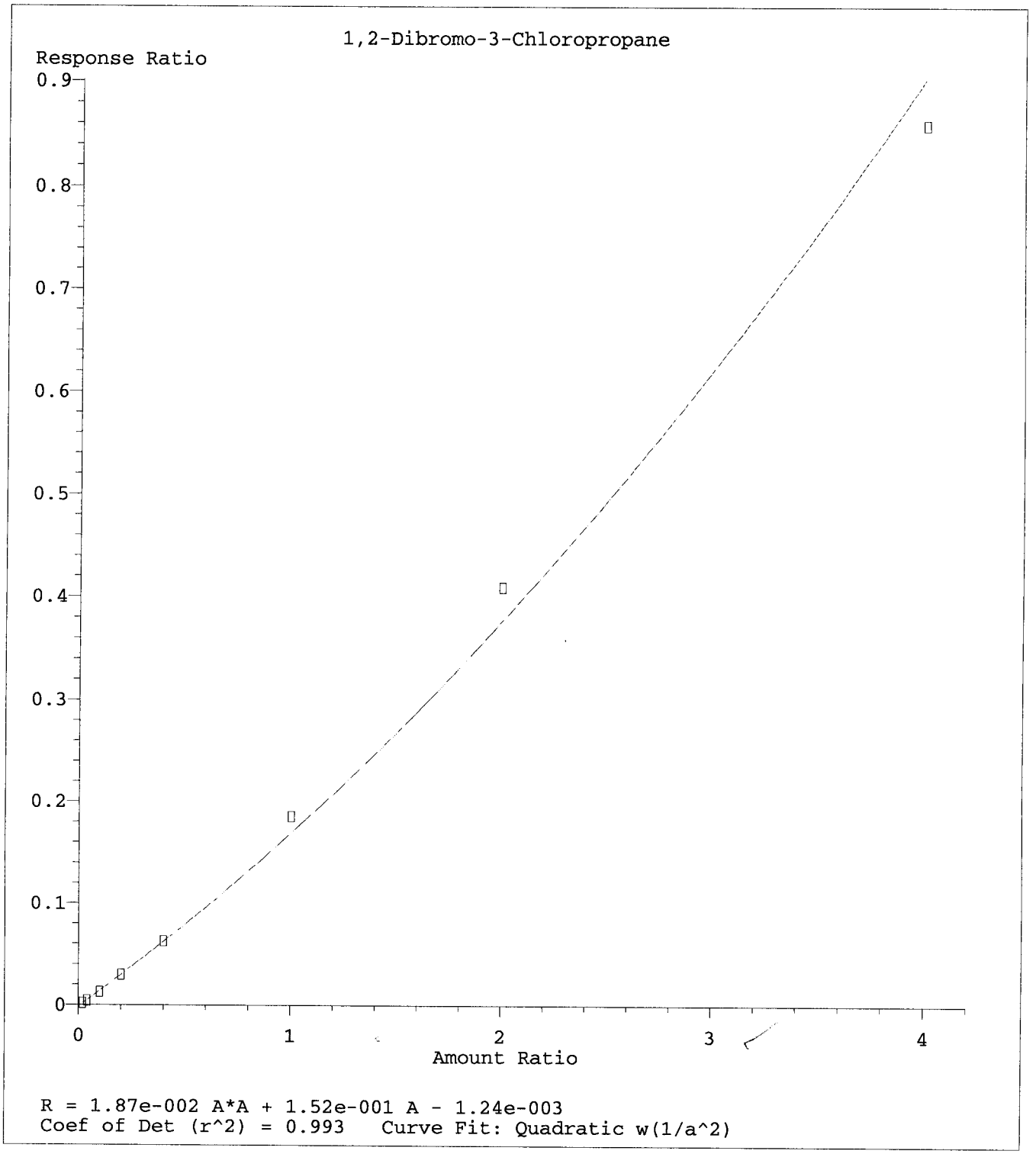
TIC: VC19052908.D\data.ms

(65) t-1,4-Dichloro-2-butene

11.164min (+0.014) 0.85 ug/L m

response 0

Ion	Exp%	Act%
88.00	100	0.00
75.00	240.20	0.00#
123.90	48.30	0.00#
53.00	249.20	0.00#



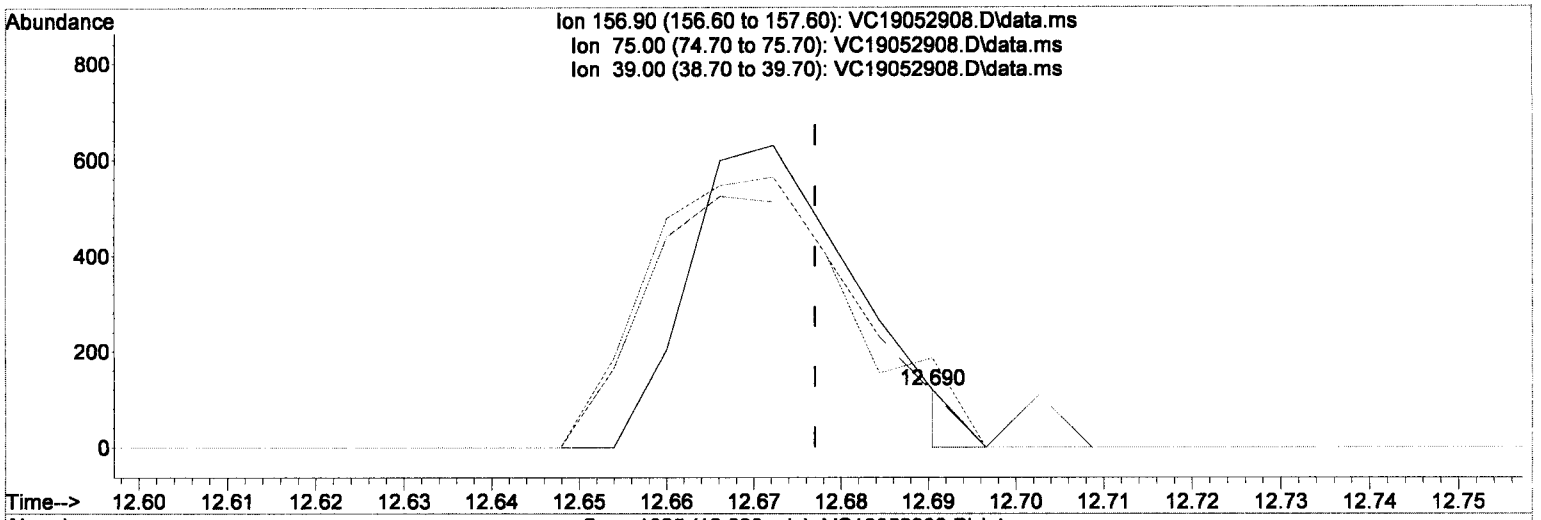
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

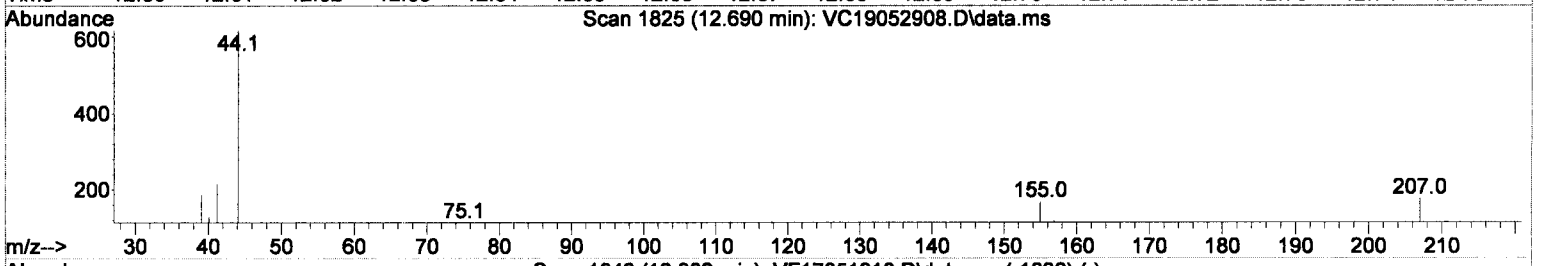
Int- 0.41

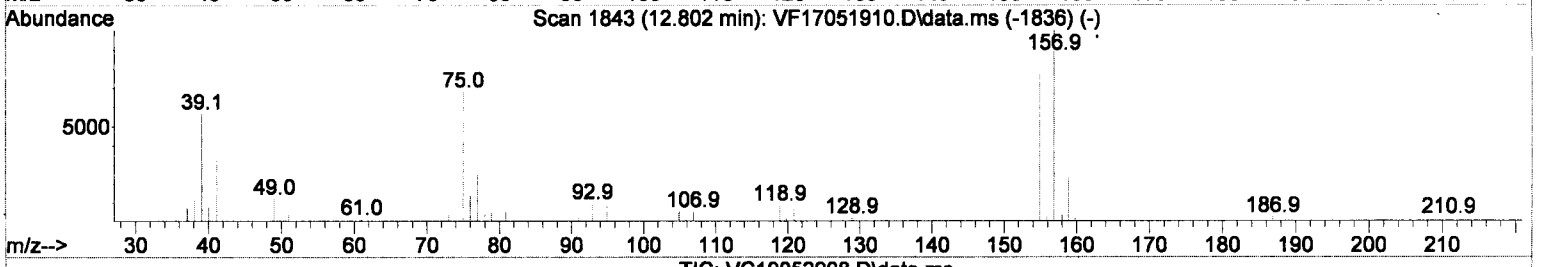
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







TIC: VC19052908.D\data.ms

(75) 1,2-Dibromo-3-Chloropropane

12.690min (+0.013) 0.41 ug/L m

response 0

Ion	Exp%	Act%
156.90	100	0.00
75.00	79.00	0.00#
39.00	63.10	0.00#
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Analysis Included
8260C Full List
8260C Iodomethane Add On

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed	
9E29058-TUN1	MS Tune	Soil		A19C135	5/29/2019	2:45:00PM
9E29058-ICB1	Initial Cal Blank	Soil		A19C135	5/29/2019	3:12:00PM
9E29058-CAL1	Cal Standard	Soil	A19E361	"	5/29/2019	3:40:00PM
9E29058-CAL2	Cal Standard	Soil	A19E362	"	5/29/2019	4:07:00PM
9E29058-CAL3	Cal Standard	Soil	A19E363	"	5/29/2019	4:35:00PM
9E29058-CAL4	Cal Standard	Soil	A19E364	"	5/29/2019	5:02:00PM
9E29058-CAL5	Cal Standard	Soil	A19E365	"	5/29/2019	5:30:00PM
9E29058-CAL6	Cal Standard	Soil	A19E366	"	5/29/2019	5:57:00PM
9E29058-CAL7	Cal Standard	Soil	A19E367	"	5/29/2019	6:25:00PM
9E29058-CAL8	Cal Standard	Soil	A19E368	"	5/29/2019	6:52:00PM
9E29058-CAL9	Cal Standard	Soil	A19E369	"	5/29/2019	7:20:00PM
9E29058-CALA	Cal Standard	Soil	A19E370	"	5/29/2019	8:15:00PM
9E29058-CALB	Cal Standard	Soil	A19E371	"	5/29/2019	9:10:00PM
9E29058-ICV1	Initial Cal Check	Soil	A19D180	"	5/29/2019	10:32:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9E29058** Matrix: **Soil**

9E29058-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9E29058** Matrix: **Soil**

9E29058-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

5/30/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	104	0.00
2		Dichlorodifluoromethane	20.000	16.601	17.0	88	0.00
3	P	Chloromethane	20.000	18.769	6.2	102	0.00
4	C	Vinyl Chloride	20.000	19.402	3.0	100	0.00
5		Bromomethane	20.000	20.910	-4.6	113	0.00
6		Chloroethane	20.000	21.410	-7.1	114	0.00
7		Trichlorofluoromethane	20.000	18.012	9.9	91	0.00
8	C	1,1-Dichloroethene	20.000	25.349	-26.7#	132	0.00
9		Carbon Disulfide	20.000	19.569	2.2	104	0.00
10		Freon 113	20.000	19.526	2.4	107	0.00
11		Iodomethane	20.000	15.925	20.4	95	0.00
12		Methylene Chloride	20.000	18.268	8.7	99	0.00
13		Acetone	40.000	40.374	-0.9	109	0.00
14		t-1,2-Dichloroethene	20.000	24.328	-21.6	125	0.00
15		n-Hexane	20.000	21.522	-7.6	117	0.00
16		Methyl-tert-butyl-ether	20.000	20.311	-1.6	105	0.00
17	P	1,1-Dichloroethane	20.000	24.105	-20.5	123	0.00
18		Acrylonitrile	20.000	20.919	-4.6	107	0.00
19		c-1,2-Dichloroethene	20.000	21.549	-7.7	111	0.00
20		2,2-Dichloropropane	20.000	19.541	2.3	101	0.00
21		Bromochloromethane	20.000	21.674	-8.4	111	0.00
22	C	Chloroform	20.000	20.682	-3.4	109	0.00
23		Carbon Tetrachloride	20.000	21.742	-8.7	113	0.00
24		Tetrahydrofuran	20.000	18.311	8.4	103	0.00
25		1,1,1-Trichloroethane	20.000	22.507	-12.5	114	0.00
26	S	Dibromofluoromethane (S)	50.000	52.205	-4.4	107	0.00
27		1,1-Dichloropropene	20.000	20.651	-3.3	110	0.00
28		2-Butanone (MEK)	40.000	40.499	-1.2	105	0.00
29		Benzene	20.000	21.213	-6.1	111	0.00
30		1,2-Dichloroethane (EDC)	20.000	21.381	-6.9	111	0.00
31		iso-Butyl Alcohol	500.000	505.534	-1.1	106	0.00
32	S	1,4-Difluorobenzene (S)	50.000	50.316	-0.6	104	0.00
33		Trichloroethene (TCE)	20.000	20.429	-2.1	110	0.00
34		Dibromomethane	20.000	21.333	-6.7	107	0.00
35	C	1,2-Dichloropropane	20.000	21.040	-5.2	107	0.00
36		Bromodichloromethane	20.000	21.954	-9.8	108	0.00
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	104	0.00
38		c-1,3-Dichloropropene	20.000	21.998	-10.0	106	0.00
39	S	Toluene-d8 (S)	50.000	49.494	1.0	103	0.00
40	C	Toluene	20.000	19.867	0.7	107	0.00
41		Tetrachloroethene (PCE)	20.000	19.350	3.2	108	0.00
42		4-Methyl-2-Pentanone (MIBK)	40.000	38.786	3.0	106	0.00
43		t-1,3-Dichloropropene	20.000	21.766	-8.8	108	0.00
44		1,1,2-Trichloroethane	20.000	21.448	-7.2	109	0.00
45		Dibromochloromethane	20.000	18.920	5.4	111	0.00
46		1,3-Dichloropropane	20.000	20.691	-3.5	106	0.00
47		1,2-Dibromoethane (EDB)	20.000	21.849	-9.2	109	0.00
48		2-Hexanone	40.000	40.703	-1.8	105	0.00
49	P	Chlorobenzene	20.000	20.140	-0.7	108	0.00
50	C	Ethylbenzene	20.000	19.824	0.9	105	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		1,1,1,2-Tetrachloroethane	20.000	22.006	-10.0	109	0.00
52		m,p-Xylenes (2)	40.000	40.543	-1.4	105	0.00
53		o-Xylene	20.000	20.062	-0.3	105	0.00
54		Styrene	20.000	21.470	-7.3	104	0.00
55	P	Bromoform	20.000	18.669	6.7	114	0.00
56		Isopropylbenzene	20.000	19.716	1.4	103	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	104	0.00
58	S	4-Bromofluorobenzene (S)	50.000	50.070	-0.1	104	0.00
59		Bromobenzene	20.000	21.439	-7.2	110	0.00
60		n-Propylbenzene	20.000	19.707	1.5	104	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	21.542	-7.7	108	0.00
62		2-Chlorotoluene	20.000	20.119	-0.6	106	0.00
63		1,3,5-Trimethylbenzene	20.000	20.761	-3.8	106	0.00
64		1,2,3-Trichloropropane	20.000	20.337	-1.7	104	0.00
65		t-1,4-Dichloro-2-butene	20.000	19.171	4.1	106	0.00
66		4-Chlorotoluene	20.000	20.304	-1.5	107	0.00
67		tert-Butylbenzene	20.000	19.432	2.8	104	0.00
68		1,2,4-Trimethylbenzene	20.000	20.219	-1.1	104	0.00
69		sec-Butylbenzene	20.000	20.188	-0.9	106	0.00
70		4-Isopropyltoluene	20.000	21.024	-5.1	109	0.00
71		1,3-Dichlorobenzene	20.000	19.621	1.9	107	0.00
72		1,4-Dichlorobenzene	20.000	19.523	2.4	107	0.00
73		n-Butylbenzene	20.000	20.206	-1.0	108	0.00
74		1,2-Dichlorobenzene	20.000	19.718	1.4	106	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	20.020	-0.1	104	0.00
76		Hexachlorobutadiene	20.000	21.571	-7.9	108	0.00
77		1,2,4-Trichlorobenzene	20.000	20.935	-4.7	111	0.00
78		Naphthalene	20.000	21.666	-8.3	106	0.00
79		1,2,3-Trichlorobenzene	20.000	20.922	-4.6	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

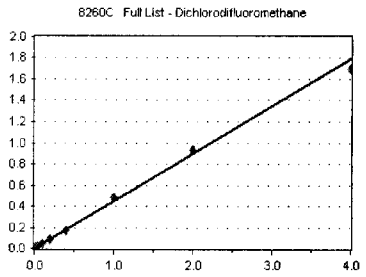
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

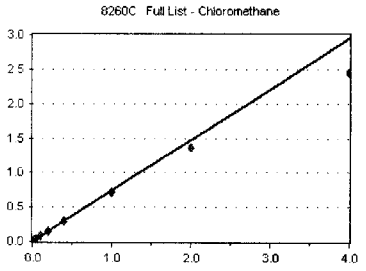


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	475	0.462	1.67
9E29058-CAL3	0.4	840	0.413	1.66
9E29058-CAL4	1	2045	0.416	1.66
9E29058-CAL5	2	4563	0.448	1.67
9E29058-CAL6	5	12196	0.479	1.67
9E29058-CAL7	10	22760	0.453	1.66
9E29058-CAL8	20	45253	0.441	1.66
9E29058-CAL9	50	122313	0.488	1.66
9E29058-CALA	100	241195	0.463	1.65
9E29058-CALB	200	453681	0.426	1.66

AVE RF **0.449** RF RSD **5.63** AVE RT **1.66**

Chloromethane

Curve Fit: **AVERAGE RF**

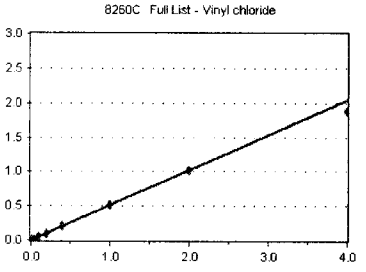


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~835~~	~~1.607~~	~~1.86~~
~~9E29058-CAL2~~	~~0.2~~	~~1572~~	~~1.531~~	~~1.87~~
9E29058-CAL3	0.4	1870	0.919	1.86
9E29058-CAL4	1	3872	0.788	1.86
9E29058-CAL5	2	7629	0.748	1.86
9E29058-CAL6	5	19122	0.751	1.86
9E29058-CAL7	10	35625	0.710	1.86
9E29058-CAL8	20	72826	0.710	1.86
9E29058-CAL9	50	179217	0.715	1.86
9E29058-CALA	100	355923	0.683	1.85
9E29058-CALB	200	652609	0.612	1.86

AVE RF **0.737** RF RSD **11.42** AVE RT **1.86**

Vinyl chloride

Curve Fit: **AVERAGE RF**

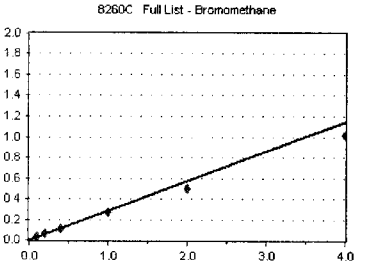


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	515	0.501	1.95
9E29058-CAL3	0.4	1058	0.520	1.96
9E29058-CAL4	1	2495	0.508	1.95
9E29058-CAL5	2	5260	0.516	1.95
9E29058-CAL6	5	13474	0.529	1.95
9E29058-CAL7	10	25219	0.502	1.94
9E29058-CAL8	20	52612	0.513	1.95
9E29058-CAL9	50	132089	0.527	1.95
9E29058-CALA	100	265790	0.510	1.94
9E29058-CALB	200	501566	0.470	1.94

AVE RF **0.510** RF RSD **3.26** AVE RT **1.95**

Bromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1488~~	~~2.863~~	~~2.31~~
~~9E29058-CAL2~~	~~0.2~~	~~1803~~	~~1.756~~	~~2.31~~
~~9E29058-CAL3~~	~~0.4~~	~~2178~~	~~1.071~~	~~2.31~~
~~9E29058-CAL4~~	~~1~~	~~2456~~	~~0.500~~	~~2.30~~
~~9E29058-CAL5~~	~~2~~	~~4475~~	~~0.439~~	~~2.31~~
9E29058-CAL6	5	9080	0.356	2.31
9E29058-CAL7	10	16179	0.322	2.30
9E29058-CAL8	20	28393	0.277	2.30
9E29058-CAL9	50	66982	0.267	2.30
9E29058-CALA	100	130087	0.250	2.30
9E29058-CALB	200	269576	0.253	2.29

AVE RF **0.287** RF RSD **14.87** AVE RT **2.30**

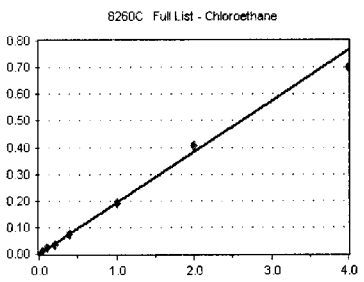
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Chloroethane

Curve Fit: **AVERAGE RF**

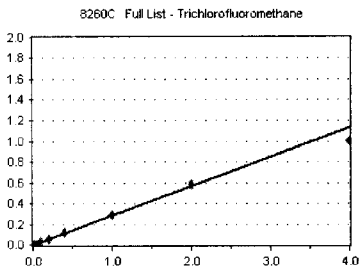


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL5	2	2003	0.197	2.44
9E29058-CAL6	5	5245	0.206	2.45
9E29058-CAL7	10	9117	0.182	2.44
9E29058-CAL8	20	19192	0.187	2.45
9E29058-CAL9	50	47938	0.191	2.45
9E29058-CALA	100	105670	0.203	2.44
9E29058-CALB	200	187116	0.176	2.43

AVE RF **0.191** RF RSD **5.76** AVE RT **2.44**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

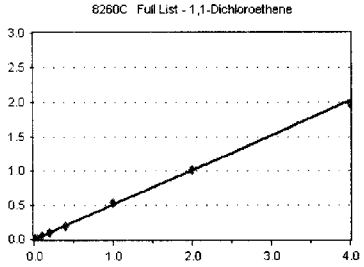


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL3	0.4	561	0.276	2.58
9E29058-CAL4	1	1421	0.289	2.57
9E29058-CAL5	2	2958	0.290	2.58
9E29058-CAL6	5	7697	0.302	2.58
9E29058-CAL7	10	13672	0.272	2.57
9E29058-CAL8	20	29898	0.291	2.58
9E29058-CAL9	50	73023	0.291	2.58
9E29058-CALA	100	152590	0.293	2.57
9E29058-CALB	200	268497	0.252	2.57

AVE RF **0.284** RF RSD **5.30** AVE RT **2.57**

1,1-Dichloroethene

Curve Fit: **AVERAGE RF**

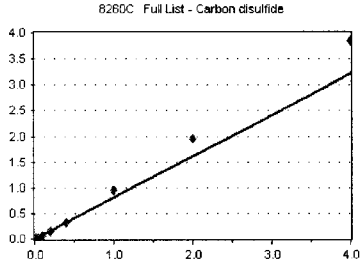


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	456	0.444	3.10
9E29058-CAL3	0.4	1130	0.556	3.11
9E29058-CAL4	1	2472	0.503	3.10
9E29058-CAL5	2	4891	0.480	3.10
9E29058-CAL6	5	13008	0.511	3.10
9E29058-CAL7	10	25751	0.513	3.09
9E29058-CAL8	20	51985	0.507	3.09
9E29058-CAL9	50	135031	0.538	3.10
9E29058-CALA	100	268375	0.515	3.09
9E29058-CALB	200	525278	0.493	3.09

AVE RF **0.506** RF RSD **6.03** AVE RT **3.10**

Carbon disulfide

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	835	0.813	3.12
9E29058-CAL3	0.4	1568	0.771	3.12
9E29058-CAL4	1	3330	0.678	3.11
9E29058-CAL5	2	6854	0.672	3.12
9E29058-CAL6	5	17910	0.703	3.11
9E29058-CAL7	10	36451	0.726	3.11
9E29058-CAL8	20	80999	0.789	3.11
9E29058-CAL9	50	237187	0.946	3.11
9E29058-CALA	100	506056	0.971	3.10
9E29058-CALB	200	1024014	0.960	3.10

AVE RF **0.803** RF RSD **14.57** AVE RT **3.11**

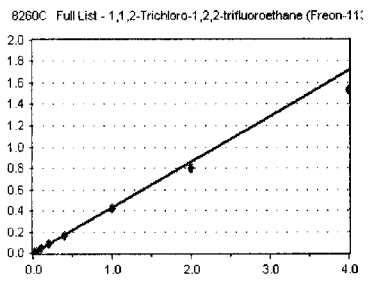
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,1,2-Trichloro-1,2,2-trifluoroetha

Curve Fit: **AVERAGE RF**

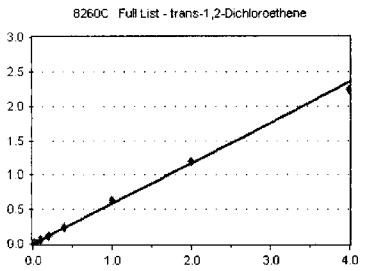


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	603	0.587	3.16
9E29058-CAL3	0.4	935	0.460	3.17
9E29058-CAL4	1	2147	0.437	3.14
9E29058-CAL5	2	3908	0.383	3.15
9E29058-CAL6	5	10435	0.410	3.15
9E29058-CAL7	10	20551	0.409	3.15
9E29058-CAL8	20	41761	0.407	3.15
9E29058-CAL9	50	104970	0.419	3.15
9E29058-CALA	100	207803	0.399	3.14
9E29058-CALB	200	409831	0.384	3.14

AVE RF **0.429** RF RSD **13.96** AVE RT **3.15**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

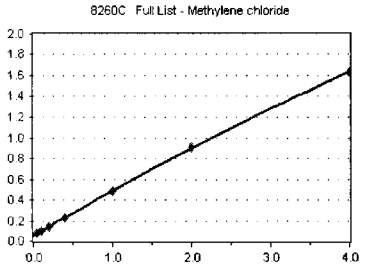


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	245	0.471	0.00
9E29058-CAL2	0.2	734	0.715	3.89
9E29058-CAL3	0.4	1162	0.571	3.90
9E29058-CAL4	1	2611	0.532	3.89
9E29058-CAL5	2	5764	0.565	3.89
9E29058-CAL6	5	15650	0.614	3.89
9E29058-CAL7	10	30362	0.605	3.88
9E29058-CAL8	20	61167	0.596	3.88
9E29058-CAL9	50	157053	0.626	3.89
9E29058-CALA	100	311743	0.598	3.88
9E29058-CALB	200	595457	0.559	3.88

AVE RF **0.587** RF RSD **10.38** AVE RT **3.54**

Methylene chloride

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

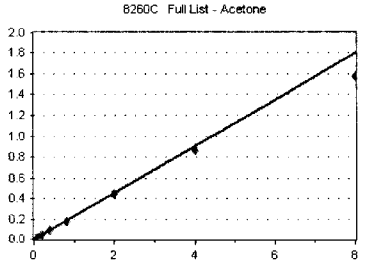


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~5028~~	~~9.674~~	~~3.72~~
~~9E29058-CAL2~~	~~0.2~~	~~14589~~	~~14.205~~	~~3.73~~
~~9E29058-CAL3~~	~~0.4~~	~~15095~~	~~7.421~~	~~3.73~~
~~9E29058-CAL4~~	~~1~~	~~15763~~	~~3.210~~	~~3.73~~
9E29058-CAL5	2	18469	1.812	3.73
9E29058-CAL6	5	25250	0.991	3.74
9E29058-CAL7	10	35620	0.710	3.72
9E29058-CAL8	20	58329	0.568	3.73
9E29058-CAL9	50	122804	0.490	3.73
9E29058-CALA	100	236890	0.454	3.72
9E29058-CALB	200	435629	0.409	3.72

AVE RF **0.776** RF RSD **64.14** AVE RT **3.73**

Acetone

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL4~~	~~2~~	~~3386~~	~~0.345~~	~~3.86~~
9E29058-CAL5	4	5795	0.284	3.85
9E29058-CAL6	10	11897	0.233	3.85
9E29058-CAL7	20	20645	0.206	3.84
9E29058-CAL8	40	44627	0.217	3.84
9E29058-CAL9	100	111792	0.223	3.84
9E29058-CALA	200	225817	0.217	3.83
9E29058-CALB	400	420741	0.197	3.83

AVE RF **0.225** RF RSD **12.62** AVE RT **3.84**

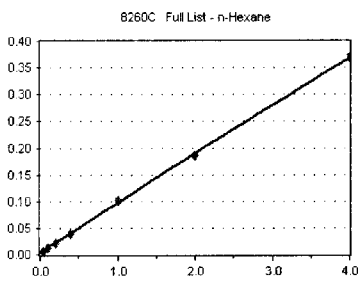
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

n-Hexane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

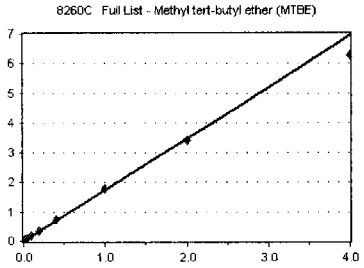


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~856~~	~~1.647~~	~~3.97~~
~~9E29058-CAL2~~	~~0.2~~	~~874~~	~~0.851~~	~~3.97~~
~~9E29058-CAL3~~	~~0.4~~	~~1123~~	~~0.552~~	~~3.98~~
~~9E29058-CAL4~~	~~1~~	~~1382~~	~~0.281~~	~~3.97~~
9E29058-CAL5	2	1767	0.173	3.97
9E29058-CAL6	5	3499	0.137	3.97
9E29058-CAL7	10	5559	0.111	3.96
9E29058-CAL8	20	10080	9.824	3.96
9E29058-CAL9	50	25466	0.102	3.97
9E29058-CALA	100	48610	9.325	3.96
9E29058-CALB	200	98461	9.235	3.96

AVE RF **0.115** RF RSD **25.96** AVE RT **3.97**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

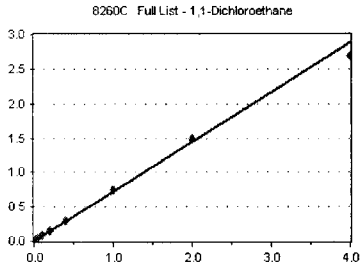


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	932	1.793	4.03
9E29058-CAL2	0.2	1802	1.755	4.03
9E29058-CAL3	0.4	3675	1.807	4.04
9E29058-CAL4	1	8517	1.734	4.03
9E29058-CAL5	2	17541	1.721	4.03
9E29058-CAL6	5	44834	1.760	4.04
9E29058-CAL7	10	87421	1.742	4.04
9E29058-CAL8	20	179725	1.752	4.04
9E29058-CAL9	50	446710	1.781	4.04
9E29058-CALA	100	885758	1.699	4.03
9E29058-CALB	200	1674237	1.570	4.03

AVE RF **1.738** RF RSD **3.66** AVE RT **4.03**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

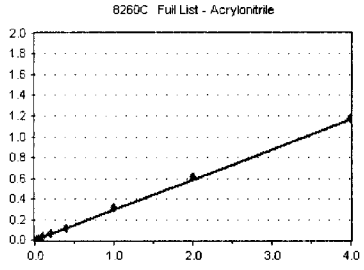


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	735	0.716	4.53
9E29058-CAL3	0.4	1418	0.697	4.53
9E29058-CAL4	1	3481	0.709	4.52
9E29058-CAL5	2	7479	0.734	4.52
9E29058-CAL6	5	18960	0.744	4.53
9E29058-CAL7	10	36342	0.724	4.52
9E29058-CAL8	20	75709	0.738	4.52
9E29058-CAL9	50	187888	0.749	4.52
9E29058-CALA	100	388015	0.744	4.52
9E29058-CALB	200	718862	0.674	4.51

AVE RF **0.723** RF RSD **3.33** AVE RT **4.52**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~342~~	~~0.168~~	~~4.62~~
9E29058-CAL4	1	1313	0.267	4.61
9E29058-CAL5	2	2550	0.250	4.61
9E29058-CAL6	5	7679	0.301	4.61
9E29058-CAL7	10	15131	0.301	4.60
9E29058-CAL8	20	30627	0.298	4.60
9E29058-CAL9	50	79642	0.318	4.60
9E29058-CALA	100	160664	0.308	4.59
9E29058-CALB	200	314097	0.295	4.59

AVE RF **0.292** RF RSD **7.65** AVE RT **4.60**

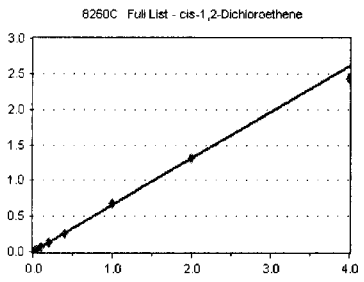
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

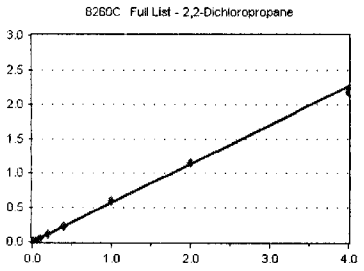


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	365	0.702	5.07
9E29058-CAL2	0.2	611	0.595	5.07
9E29058-CAL3	0.4	1412	0.694	5.08
9E29058-CAL4	1	3087	0.629	5.07
9E29058-CAL5	2	6425	0.630	5.07
9E29058-CAL6	5	17123	0.672	5.07
9E29058-CAL7	10	33881	0.675	5.07
9E29058-CAL8	20	67717	0.660	5.07
9E29058-CAL9	50	170168	0.679	5.07
9E29058-CALA	100	343281	0.659	5.06
9E29058-CALB	200	647004	0.607	5.06

AVE RF **0.655** RF RSD **5.35** AVE RT **5.07**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

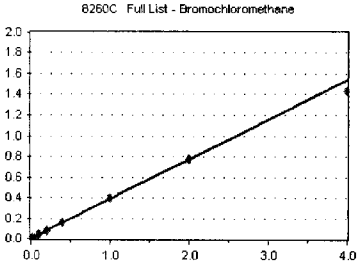


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL3	0.4	1168	0.574	5.18
9E29058-CAL4	1	2678	0.545	5.18
9E29058-CAL5	2	5498	0.539	5.18
9E29058-CAL6	5	14424	0.566	5.18
9E29058-CAL7	10	29348	0.585	5.17
9E29058-CAL8	20	58827	0.573	5.17
9E29058-CAL9	50	148829	0.593	5.17
9E29058-CALA	100	299040	0.574	5.17
9E29058-CALB	200	584639	0.548	5.17

AVE RF **0.566** RF RSD **3.26** AVE RT **5.17**

Bromochloromethane

Curve Fit: **AVERAGE RF**

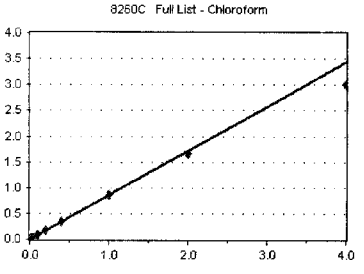


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	453	0.441	5.27
9E29058-CAL3	0.4	660	0.324	5.27
9E29058-CAL4	1	1861	0.379	5.27
9E29058-CAL5	2	3833	0.376	5.27
9E29058-CAL6	5	10200	0.400	5.27
9E29058-CAL7	10	20180	0.402	5.26
9E29058-CAL8	20	40396	0.394	5.26
9E29058-CAL9	50	100930	0.402	5.27
9E29058-CALA	100	202481	0.388	5.26
9E29058-CALB	200	383923	0.360	5.26

AVE RF **0.387** RF RSD **7.92** AVE RT **5.27**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~862~~	~~1.659~~	~~5.35~~
~~9E29058-CAL2~~	~~0.2~~	~~1314~~	~~1.279~~	~~5.35~~
9E29058-CAL3	0.4	2051	1.008	5.36
9E29058-CAL4	1	4395	0.895	5.35
9E29058-CAL5	2	8763	0.860	5.35
9E29058-CAL6	5	21196	0.832	5.35
9E29058-CAL7	10	42125	0.839	5.34
9E29058-CAL8	20	86712	0.845	5.35
9E29058-CAL9	50	217722	0.868	5.35
9E29058-CALA	100	433579	0.832	5.34
9E29058-CALB	200	802076	0.752	5.35

AVE RF **0.859** RF RSD **7.93** AVE RT **5.35**

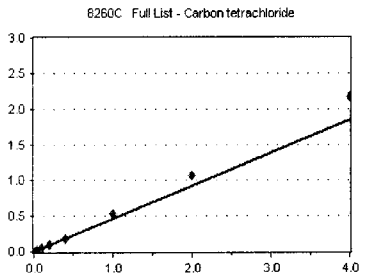
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

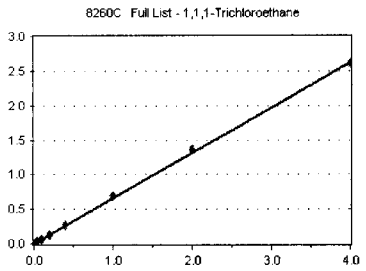


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~416~~	~~0.405~~	~~5.49~~
~~9E29058-CAL3~~	~~0.4~~	~~700~~	~~0.344~~	~~5.47~~
9E29058-CAL4	1	1931	0.393	5.47
9E29058-CAL5	2	3774	0.370	5.48
9E29058-CAL6	5	10919	0.429	5.48
9E29058-CAL7	10	22616	0.451	5.48
9E29058-CAL8	20	47689	0.465	5.48
9E29058-CAL9	50	132426	0.528	5.48
9E29058-CALA	100	278862	0.535	5.47
9E29058-CALB	200	577566	0.542	5.48

AVE RF **0.464** RF RSD **14.21** AVE RT **5.48**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**

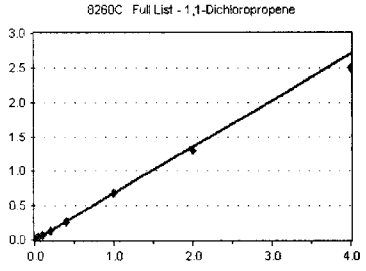


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~303~~	~~0.583~~	~~5.54~~
9E29058-CAL2	0.2	657	0.640	5.54
9E29058-CAL3	0.4	1382	0.679	5.55
9E29058-CAL4	1	2923	0.595	5.55
9E29058-CAL5	2	6438	0.632	5.55
9E29058-CAL6	5	16696	0.655	5.56
9E29058-CAL7	10	32805	0.654	5.54
9E29058-CAL8	20	69031	0.673	5.55
9E29058-CAL9	50	175402	0.699	5.55
9E29058-CALA	100	353917	0.679	5.54
9E29058-CALB	200	697341	0.654	5.54

AVE RF **0.656** RF RSD **4.49** AVE RT **5.55**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

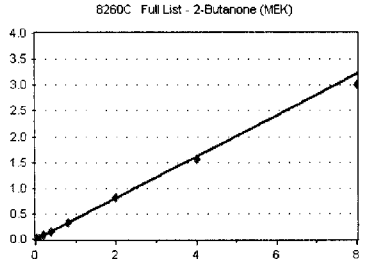


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	822	0.800	5.69
9E29058-CAL3	0.4	1310	0.644	5.69
9E29058-CAL4	1	3655	0.744	5.68
9E29058-CAL5	2	6475	0.635	5.68
9E29058-CAL6	5	16613	0.652	5.68
9E29058-CAL7	10	32947	0.656	5.67
9E29058-CAL8	20	67566	0.658	5.68
9E29058-CAL9	50	172418	0.688	5.68
9E29058-CALA	100	339212	0.651	5.67
9E29058-CALB	200	664805	0.624	5.67

AVE RF **0.675** RF RSD **8.20** AVE RT **5.68**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL4	2	4450	0.453	5.71
9E29058-CAL5	4	7369	0.361	5.70
9E29058-CAL6	10	21043	0.413	5.70
9E29058-CAL7	20	40332	0.402	5.69
9E29058-CAL8	40	82660	0.403	5.69
9E29058-CAL9	100	208404	0.416	5.68
9E29058-CALA	200	408448	0.392	5.68
9E29058-CALB	400	802082	0.376	5.68

AVE RF **0.402** RF RSD **6.86** AVE RT **5.69**

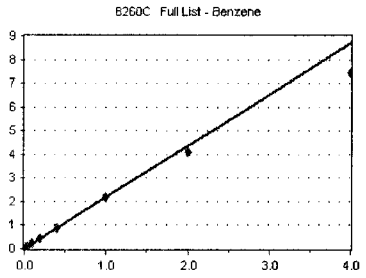
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Benzene

Curve Fit: **AVERAGE RF**

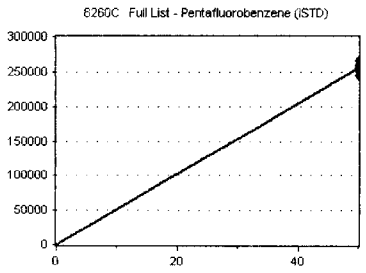


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1225	2.357	5.94
9E29058-CAL2	0.2	2321	2.260	5.93
9E29058-CAL3	0.4	4546	2.235	5.93
9E29058-CAL4	1	11217	2.284	5.94
9E29058-CAL5	2	21880	2.147	5.94
9E29058-CAL6	5	56100	2.202	5.93
9E29058-CAL7	10	109245	2.176	5.93
9E29058-CAL8	20	221601	2.160	5.93
9E29058-CAL9	50	547822	2.184	5.93
9E29058-CALA	100	1066556	2.046	5.93
9E29058-CALB	200	1978560	1.856	5.93

AVE RF **2.173** RF RSD **6.11** AVE RT **5.93**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

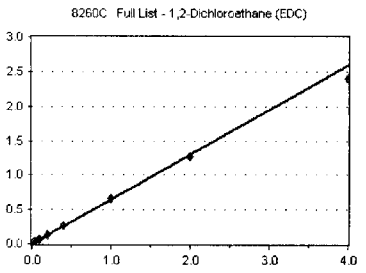


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	259869	5197.380	6.03
9E29058-CAL2	50	256759	5135.180	6.04
9E29058-CAL3	50	254275	5085.500	6.03
9E29058-CAL4	50	245560	4911.200	6.03
9E29058-CAL5	50	254825	5096.500	6.04
9E29058-CAL6	50	254773	5095.460	6.04
9E29058-CAL7	50	250992	5019.840	6.03
9E29058-CAL8	50	256524	5130.480	6.03
9E29058-CAL9	50	250786	5015.720	6.03
9E29058-CALA	50	260650	5213.000	6.03
9E29058-CALB	50	266542	5330.840	6.03

AVE RF **5111.918** RF RSD **2.19** AVE RT **6.03**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**

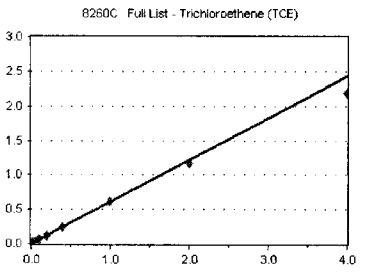


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	685	0.667	6.15
9E29058-CAL3	0.4	1395	0.686	6.15
9E29058-CAL4	1	3138	0.639	6.16
9E29058-CAL5	2	6601	0.648	6.15
9E29058-CAL6	5	16641	0.653	6.15
9E29058-CAL7	10	32514	0.648	6.15
9E29058-CAL8	20	66416	0.647	6.15
9E29058-CAL9	50	166385	0.663	6.15
9E29058-CALA	100	327724	0.629	6.15
9E29058-CALB	200	639082	0.599	6.14

AVE RF **0.648** RF RSD **3.59** AVE RT **6.15**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	358	0.689	6.56
9E29058-CAL2	0.2	778	0.758	6.55
9E29058-CAL3	0.4	1054	0.518	6.56
9E29058-CAL4	1	2995	0.610	6.55
9E29058-CAL5	2	6232	0.611	6.55
9E29058-CAL6	5	15220	0.597	6.55
9E29058-CAL7	10	29345	0.585	6.55
9E29058-CAL8	20	60590	0.590	6.55
9E29058-CAL9	50	153840	0.613	6.55
9E29058-CALA	100	306069	0.587	6.55
9E29058-CALB	200	582863	0.547	6.55

AVE RF **0.610** RF RSD **10.65** AVE RT **6.55**

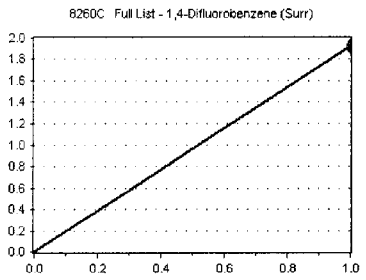
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

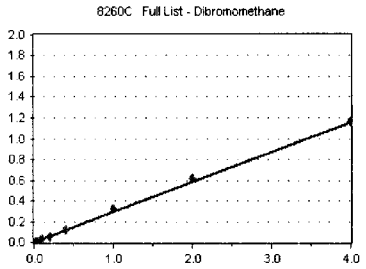


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	493490	1.899	6.59
9E29058-CAL2	50	491851	1.916	6.59
9E29058-CAL3	50	485518	1.909	6.59
9E29058-CAL4	50	472967	1.926	6.59
9E29058-CAL5	50	496387	1.948	6.59
9E29058-CAL6	50	492217	1.932	6.59
9E29058-CAL7	50	477661	1.903	6.58
9E29058-CAL8	50	495460	1.931	6.58
9E29058-CAL9	50	489311	1.951	6.59
9E29058-CALA	50	496661	1.905	6.58
9E29058-CALB	50	515449	1.934	6.58

AVE RF **1.923** RF RSD **0.93** AVE RT **6.59**

Dibromomethane

Curve Fit: **AVERAGE RF**

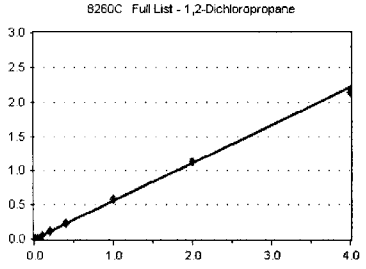


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~150~~	~~0.146~~	~~7.00~~
9E29058-CAL3	0.4	572	0.281	7.00
9E29058-CAL4	1	1272	0.259	7.00
9E29058-CAL5	2	2771	0.272	7.00
9E29058-CAL6	5	7159	0.281	7.00
9E29058-CAL7	10	14902	0.297	7.00
9E29058-CAL8	20	30886	0.301	7.00
9E29058-CAL9	50	80383	0.321	7.00
9E29058-CALA	100	161634	0.310	6.99
9E29058-CALB	200	312313	0.293	7.00

AVE RF **0.290** RF RSD **6.62** AVE RT **7.00**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

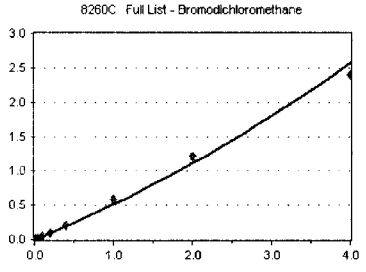


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	596	0.580	7.11
9E29058-CAL3	0.4	1068	0.525	7.11
9E29058-CAL4	1	2601	0.530	7.11
9E29058-CAL5	2	5608	0.550	7.11
9E29058-CAL6	5	14430	0.566	7.11
9E29058-CAL7	10	27791	0.554	7.11
9E29058-CAL8	20	58485	0.570	7.11
9E29058-CAL9	50	145741	0.581	7.11
9E29058-CALA	100	294477	0.565	7.10
9E29058-CALB	200	569634	0.534	7.11

AVE RF **0.556** RF RSD **3.68** AVE RT **7.11**

Bromodichloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	431	0.420	7.19
9E29058-CAL3	0.4	872	0.429	7.18
9E29058-CAL4	1	2077	0.423	7.18
9E29058-CAL5	2	4030	0.395	7.18
9E29058-CAL6	5	11827	0.464	7.19
9E29058-CAL7	10	23755	0.473	7.17
9E29058-CAL8	20	52937	0.516	7.18
9E29058-CAL9	50	148293	0.591	7.18
9E29058-CALA	100	315200	0.605	7.18
9E29058-CALB	200	637695	0.598	7.18

AVE RF **0.491** RF RSD **16.46** AVE RT **7.18**

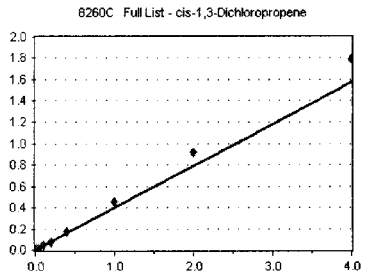
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

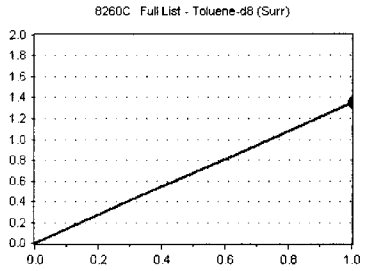


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	602	0.337	7.89
9E29058-CAL3	0.4	1128	0.319	7.90
9E29058-CAL4	1	3081	0.357	7.89
9E29058-CAL5	2	6187	0.343	7.89
9E29058-CAL6	5	17156	0.385	7.89
9E29058-CAL7	10	35060	0.402	7.89
9E29058-CAL8	20	76771	0.426	7.89
9E29058-CAL9	50	206054	0.458	7.89
9E29058-CALA	100	423217	0.460	7.89
9E29058-CALB	200	831235	0.448	7.88

AVE RF **0.394** RF RSD **13.50** AVE RT **7.89**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**

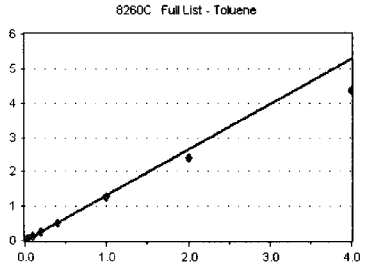


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	607580	1.354	8.10
9E29058-CAL2	50	603494	1.351	8.10
9E29058-CAL3	50	596173	1.350	8.09
9E29058-CAL4	50	583864	1.355	8.10
9E29058-CAL5	50	607810	1.346	8.10
9E29058-CAL6	50	604964	1.359	8.10
9E29058-CAL7	50	590419	1.353	8.09
9E29058-CAL8	50	610484	1.356	8.09
9E29058-CAL9	50	601358	1.338	8.09
9E29058-CALA	50	619571	1.348	8.09
9E29058-CALB	50	635623	1.369	8.09

AVE RF **1.353** RF RSD **0.58** AVE RT **8.09**

Toluene

Curve Fit: **AVERAGE RF**

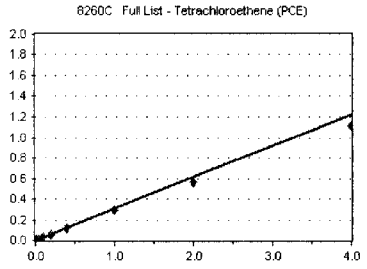


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~2496~~	~~2.781~~	~~8.15~~
~~9E29058-CAL2~~	~~0.2~~	~~3425~~	~~1.917~~	~~8.15~~
9E29058-CAL3	0.4	5721	1.620	8.16
9E29058-CAL4	1	12756	1.480	8.16
9E29058-CAL5	2	23832	1.319	8.15
9E29058-CAL6	5	59374	1.334	8.15
9E29058-CAL7	10	113987	1.306	8.15
9E29058-CAL8	20	231426	1.285	8.15
9E29058-CAL9	50	567186	1.262	8.15
9E29058-CALA	100	1105825	1.203	8.15
9E29058-CALB	200	2033618	1.095	8.15

AVE RF **1.323** RF RSD **11.49** AVE RT **8.15**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~338~~	~~0.377~~	~~8.60~~
9E29058-CAL2	0.2	698	0.391	8.60
9E29058-CAL3	0.4	1321	0.374	8.61
9E29058-CAL4	1	2616	0.304	8.60
9E29058-CAL5	2	4849	0.268	8.60
9E29058-CAL6	5	13201	0.297	8.60
9E29058-CAL7	10	25684	0.294	8.60
9E29058-CAL8	20	51386	0.285	8.60
9E29058-CAL9	50	131806	0.293	8.60
9E29058-CALA	100	260817	0.284	8.60
9E29058-CALB	200	514549	0.277	8.60

AVE RF **0.307** RF RSD **13.47** AVE RT **8.60**

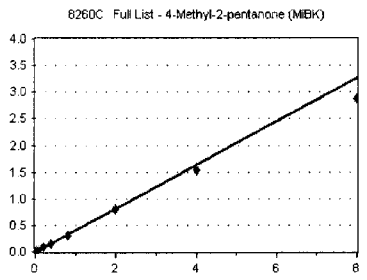
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

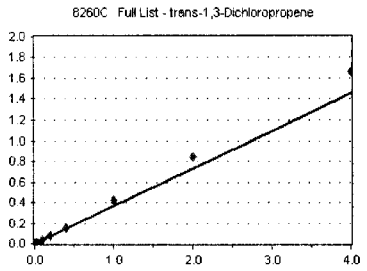


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.2	867	0.483	8.62
9E29058-CAL2	0.4	1694	0.474	8.62
9E29058-CAL3	0.8	3139	0.444	8.62
9E29058-CAL4	2	7035	0.408	8.63
9E29058-CAL5	4	13222	0.366	8.62
9E29058-CAL6	10	34042	0.382	8.62
9E29058-CAL7	20	69619	0.399	8.62
9E29058-CAL8	40	140164	0.389	8.62
9E29058-CAL9	100	362001	0.403	8.62
9E29058-CALA	200	707759	0.385	8.62
9E29058-CALB	400	1330786	0.358	8.61

AVE RF **0.408** RF RSD **10.15** AVE RT **8.62**

trans-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

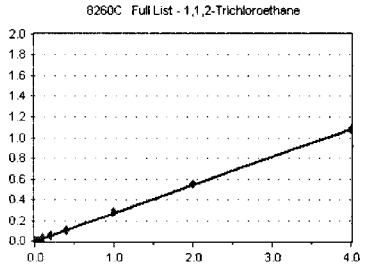


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~268~~	~~0.299~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~575~~	~~0.322~~	~~8.66~~
~~9E29058-CAL3~~	~~0.4~~	~~908~~	~~0.257~~	~~8.65~~
9E29058-CAL4	1	2671	0.310	8.64
9E29058-CAL5	2	5147	0.285	8.65
9E29058-CAL6	5	14478	0.325	8.65
9E29058-CAL7	10	31437	0.360	8.65
9E29058-CAL8	20	68797	0.382	8.64
9E29058-CAL9	50	188244	0.419	8.64
9E29058-CALA	100	389918	0.424	8.64
9E29058-CALB	200	772812	0.416	8.64

AVE RF **0.365** RF RSD **14.76** AVE RT **8.64**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

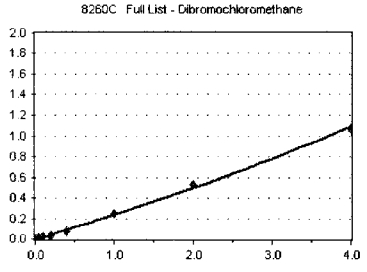


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	229	0.255	8.82
9E29058-CAL2	0.2	506	0.283	8.83
9E29058-CAL3	0.4	911	0.258	8.82
9E29058-CAL4	1	2251	0.261	8.83
9E29058-CAL5	2	4541	0.251	8.82
9E29058-CAL6	5	12374	0.278	8.82
9E29058-CAL7	10	24039	0.275	8.82
9E29058-CAL8	20	50104	0.278	8.82
9E29058-CAL9	50	128045	0.285	8.82
9E29058-CALA	100	255240	0.278	8.82
9E29058-CALB	200	500164	0.269	8.82

AVE RF **0.270** RF RSD **4.39** AVE RT **8.82**

Dibromochloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	172	9.626	9.03
9E29058-CAL3	0.4	549	0.155	9.01
9E29058-CAL4	1	1390	0.161	9.01
9E29058-CAL5	2	2873	0.159	9.00
9E29058-CAL6	5	7443	0.167	9.00
9E29058-CAL7	10	16078	0.184	9.01
9E29058-CAL8	20	36395	0.202	9.01
9E29058-CAL9	50	110966	0.247	9.01
9E29058-CALA	100	241274	0.262	9.01
9E29058-CALB	200	499033	0.269	9.00

AVE RF **0.190** RF RSD **28.85** AVE RT **9.01**

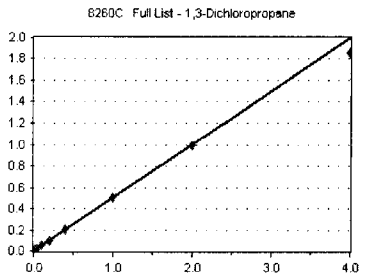
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

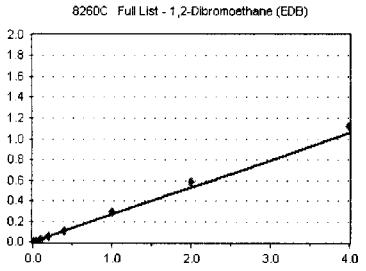


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	438	0.488	9.11
9E29058-CAL2	0.2	988	0.553	9.12
9E29058-CAL3	0.4	1866	0.528	9.12
9E29058-CAL4	1	4104	0.476	9.11
9E29058-CAL5	2	8546	0.473	9.11
9E29058-CAL6	5	22298	0.501	9.11
9E29058-CAL7	10	43756	0.501	9.10
9E29058-CAL8	20	91532	0.508	9.11
9E29058-CAL9	50	228171	0.508	9.11
9E29058-CALA	100	456442	0.496	9.10
9E29058-CALB	200	863655	0.465	9.11

AVE RF **0.500** RF RSD **5.06** AVE RT **9.11**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**

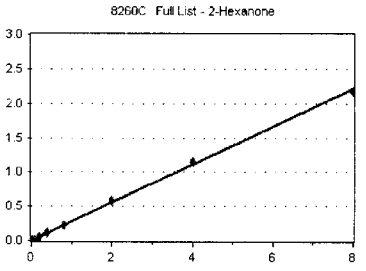


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~186~~	~~0.207~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~298~~	~~0.167~~	~~9.25~~
9E29058-CAL3	0.4	794	0.225	9.26
9E29058-CAL4	1	2135	0.248	9.24
9E29058-CAL5	2	4166	0.231	9.24
9E29058-CAL6	5	11552	0.259	9.25
9E29058-CAL7	10	23883	0.274	9.24
9E29058-CAL8	20	49836	0.277	9.24
9E29058-CAL9	50	132585	0.295	9.24
9E29058-CALA	100	266180	0.289	9.24
9E29058-CALB	200	519720	0.280	9.24

AVE RF **0.264** RF RSD **9.51** AVE RT **9.24**

2-Hexanone

Curve Fit: **AVERAGE RF**

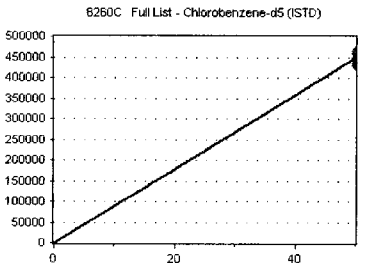


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~443~~	~~0.247~~	~~9.51~~
~~9E29058-CAL2~~	~~0.4~~	~~765~~	~~0.214~~	~~9.51~~
~~9E29058-CAL3~~	~~0.8~~	~~1839~~	~~0.260~~	~~9.51~~
9E29058-CAL4	2	4936	0.286	9.51
9E29058-CAL5	4	8511	0.236	9.51
9E29058-CAL6	10	24821	0.279	9.50
9E29058-CAL7	20	49008	0.281	9.50
9E29058-CAL8	40	101065	0.281	9.50
9E29058-CAL9	100	264271	0.294	9.50
9E29058-CALA	200	528430	0.287	9.50
9E29058-CALB	400	1007307	0.271	9.50

AVE RF **0.277** RF RSD **6.49** AVE RT **9.50**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	448840	8976.800	9.75
9E29058-CAL2	50	446684	8933.680	9.75
9E29058-CAL3	50	441530	8830.600	9.75
9E29058-CAL4	50	430913	8618.260	9.75
9E29058-CAL5	50	451536	9030.720	9.75
9E29058-CAL6	50	445170	8903.400	9.75
9E29058-CAL7	50	436340	8726.800	9.75
9E29058-CAL8	50	450201	9004.020	9.75
9E29058-CAL9	50	449432	8988.640	9.75
9E29058-CALA	50	459775	9195.500	9.75
9E29058-CALB	50	464260	9285.200	9.75

AVE RF **8953.965** RF RSD **2.12** AVE RT **9.75**

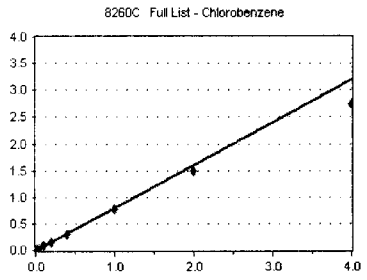
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Chlorobenzene

Curve Fit: **AVERAGE RF**

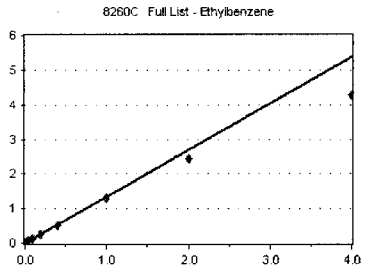


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1131~~	~~1.260~~	~~9.76~~
9E29058-CAL2	0.2	1617	0.905	9.77
9E29058-CAL3	0.4	3136	0.888	9.77
9E29058-CAL4	1	7300	0.847	9.77
9E29058-CAL5	2	14584	0.807	9.76
9E29058-CAL6	5	35456	0.796	9.77
9E29058-CAL7	10	68508	0.785	9.77
9E29058-CAL8	20	139988	0.777	9.77
9E29058-CAL9	50	351235	0.782	9.77
9E29058-CALA	100	689400	0.750	9.77
9E29058-CALB	200	1272416	0.685	9.76

AVE RF **0.802** RF RSD **8.07** AVE RT **9.77**

Ethylbenzene

Curve Fit: **AVERAGE RF**

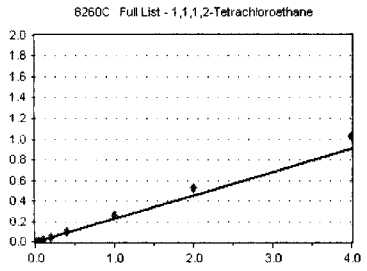


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1694~~	~~1.887~~	~~9.80~~
9E29058-CAL2	0.2	2895	1.620	9.80
9E29058-CAL3	0.4	5392	1.527	9.80
9E29058-CAL4	1	12069	1.400	9.80
9E29058-CAL5	2	23660	1.310	9.80
9E29058-CAL6	5	60912	1.368	9.80
9E29058-CAL7	10	115497	1.323	9.80
9E29058-CAL8	20	238085	1.322	9.80
9E29058-CAL9	50	580649	1.292	9.80
9E29058-CALA	100	1114972	1.213	9.79
9E29058-CALB	200	1992124	1.073	9.79

AVE RF **1.345** RF RSD **11.33** AVE RT **9.80**

1,1,1,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

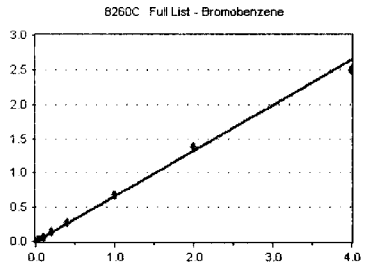


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~318~~	~~0.178~~	~~9.84~~
9E29058-CAL3	0.4	602	0.170	9.83
9E29058-CAL4	1	1810	0.210	9.82
9E29058-CAL5	2	3542	0.196	9.83
9E29058-CAL6	5	9596	0.216	9.83
9E29058-CAL7	10	19728	0.226	9.83
9E29058-CAL8	20	42996	0.239	9.83
9E29058-CAL9	50	116780	0.260	9.83
9E29058-CALA	100	242014	0.263	9.83
9E29058-CALB	200	477013	0.257	9.83

AVE RF **0.226** RF RSD **13.96** AVE RT **9.83**

Bromobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	177	0.455	0.00
9E29058-CAL2	0.2	513	0.670	10.92
9E29058-CAL3	0.4	1043	0.691	10.92
9E29058-CAL4	1	2592	0.705	10.92
9E29058-CAL5	2	5277	0.677	10.92
9E29058-CAL6	5	13190	0.700	10.92
9E29058-CAL7	10	25871	0.693	10.92
9E29058-CAL8	20	51348	0.673	10.92
9E29058-CAL9	50	134239	0.687	10.92
9E29058-CALA	100	271067	0.686	10.92
9E29058-CALB	200	503576	0.625	10.92

AVE RF **0.660** RF RSD **10.81** AVE RT **9.93**

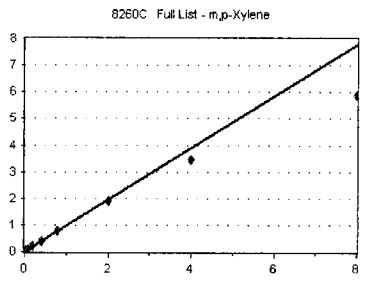
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

m,p-Xylene

Curve Fit: **AVERAGE RF**

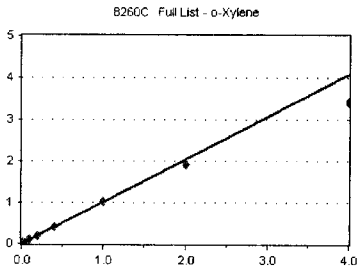


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~2487~~	~~1.385~~	~~9.94~~
9E29058-CAL2	0.4	4246	1.188	9.94
9E29058-CAL3	0.8	7624	1.079	9.94
9E29058-CAL4	2	17400	1.009	9.93
9E29058-CAL5	4	34407	0.952	9.94
9E29058-CAL6	10	87900	0.987	9.94
9E29058-CAL7	20	170308	0.976	9.93
9E29058-CAL8	40	351394	0.976	9.93
9E29058-CAL9	100	846663	0.942	9.93
9E29058-CALA	200	1592559	0.866	9.93
9E29058-CALB	400	2720941	0.733	9.93

AVE RF **0.971** RF RSD **12.37** AVE RT **9.93**

o-Xylene

Curve Fit: **AVERAGE RF**

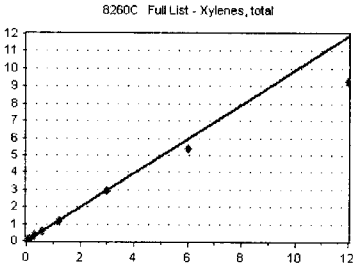


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1273~~	~~1.418~~	~~10.32~~
9E29058-CAL2	0.2	2232	1.249	10.33
9E29058-CAL3	0.4	3760	1.064	10.33
9E29058-CAL4	1	9051	1.050	10.32
9E29058-CAL5	2	17445	0.966	10.32
9E29058-CAL6	5	45708	1.027	10.32
9E29058-CAL7	10	87450	1.002	10.32
9E29058-CAL8	20	182582	1.014	10.32
9E29058-CAL9	50	457250	1.017	10.32
9E29058-CALA	100	885817	0.963	10.32
9E29058-CALB	200	1581408	0.852	10.32

AVE RF **1.020** RF RSD **9.82** AVE RT **10.32**

Xylenes, total

Curve Fit: **AVERAGE RF**

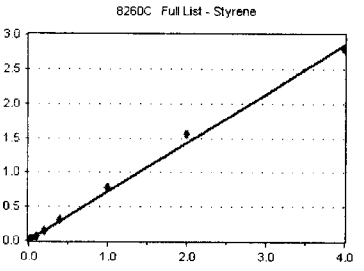


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.3~~	~~3760~~	~~1.396~~	~~10.32~~
9E29058-CAL2	0.6	6478	1.209	10.33
9E29058-CAL3	1.2	11384	1.074	10.33
9E29058-CAL4	3	26451	1.023	10.32
9E29058-CAL5	6	51852	0.957	10.32
9E29058-CAL6	15	133608	1.000	10.32
9E29058-CAL7	30	257758	0.985	10.32
9E29058-CAL8	60	533976	0.988	10.32
9E29058-CAL9	150	1303913	0.967	10.32
9E29058-CALA	300	2478376	0.898	10.32
9E29058-CALB	600	4302349	0.772	10.32

AVE RF **0.987** RF RSD **11.37** AVE RT **10.32**

Styrene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~585~~	~~0.652~~	~~10.38~~
~~9E29058-CAL2~~	~~0.2~~	~~1051~~	~~0.588~~	~~10.37~~
9E29058-CAL3	0.4	2262	0.640	10.38
9E29058-CAL4	1	5658	0.657	10.38
9E29058-CAL5	2	11631	0.644	10.37
9E29058-CAL6	5	31844	0.715	10.37
9E29058-CAL7	10	64308	0.737	10.37
9E29058-CAL8	20	138152	0.767	10.37
9E29058-CAL9	50	353430	0.786	10.37
9E29058-CALA	100	713586	0.776	10.37
9E29058-CALB	200	1293977	0.697	10.37

AVE RF **0.713** RF RSD **8.05** AVE RT **10.37**

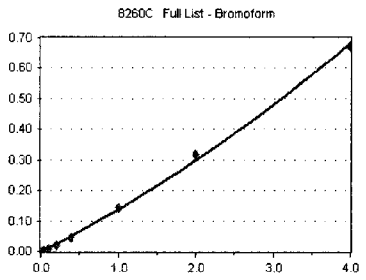
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Bromoform

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

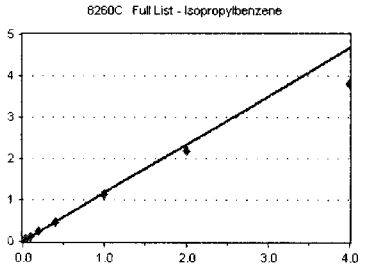


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL3	0.4	186	0.053	10.39
9E29058-CAL4	1	619	7.182	10.38
9E29058-CAL5	2	1354	7.497	10.39
9E29058-CAL6	5	4070	9.143	10.39
9E29058-CAL7	10	8679	9.945	10.39
9E29058-CAL8	20	19903	0.111	10.39
9E29058-CAL9	50	64724	0.144	10.39
9E29058-CALA	100	146040	0.159	10.39
9E29058-CALB	200	312567	0.168	10.39

AVE RF **0.108** RF RSD **37.80** AVE RT **10.39**

Isopropylbenzene

Curve Fit: **AVERAGE RF**

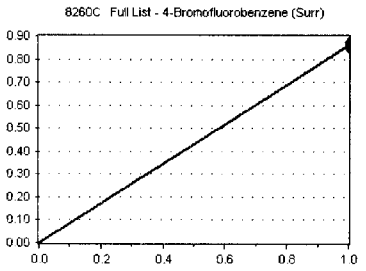


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1325	1.476	10.60
9E29058-CAL2	0.2	2225	1.245	10.59
9E29058-CAL3	0.4	4105	1.162	10.59
9E29058-CAL4	1	9890	1.148	10.60
9E29058-CAL5	2	20325	1.125	10.60
9E29058-CAL6	5	53051	1.192	10.60
9E29058-CAL7	10	101485	1.163	10.59
9E29058-CAL8	20	210609	1.170	10.59
9E29058-CAL9	50	514735	1.145	10.59
9E29058-CALA	100	1002570	1.090	10.59
9E29058-CALB	200	1774164	0.955	10.60

AVE RF **1.170** RF RSD **10.65** AVE RT **10.60**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

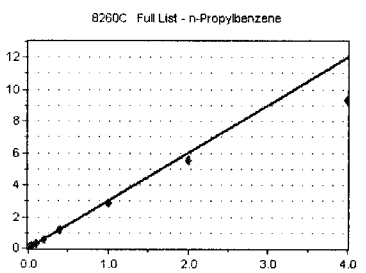


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	167905	0.863	10.84
9E29058-CAL2	50	165726	0.866	10.84
9E29058-CAL3	50	163321	0.866	10.84
9E29058-CAL4	50	158686	0.863	10.83
9E29058-CAL5	50	166852	0.857	10.84
9E29058-CAL6	50	163573	0.868	10.84
9E29058-CAL7	50	161677	0.866	10.84
9E29058-CAL8	50	165674	0.868	10.84
9E29058-CAL9	50	167723	0.859	10.84
9E29058-CALA	50	172526	0.873	10.84
9E29058-CALB	50	170853	0.848	10.83

AVE RF **0.863** RF RSD **0.78** AVE RT **10.84**

n-Propylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1564	4.019	10.94
9E29058-CAL2	0.2	2483	3.245	10.95
9E29058-CAL3	0.4	4750	3.148	10.95
9E29058-CAL4	1	10579	2.876	10.94
9E29058-CAL5	2	22107	2.838	10.95
9E29058-CAL6	5	57721	3.062	10.95
9E29058-CAL7	10	110989	2.971	10.94
9E29058-CAL8	20	226710	2.971	10.94
9E29058-CAL9	50	564190	2.888	10.94
9E29058-CALA	100	1090767	2.761	10.94
9E29058-CALB	200	1879841	2.334	10.94

AVE RF **3.010** RF RSD **13.61** AVE RT **10.94**

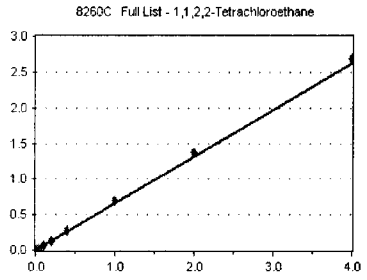
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

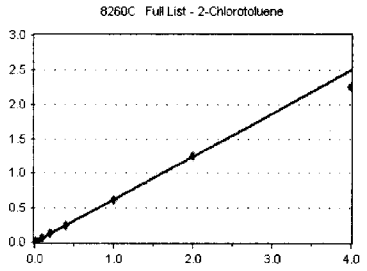


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	266	0.684	11.01
9E29058-CAL2	0.2	439	0.574	11.01
9E29058-CAL3	0.4	1001	0.663	11.01
9E29058-CAL4	1	2272	0.618	11.01
9E29058-CAL5	2	4646	0.596	11.01
9E29058-CAL6	5	12322	0.654	11.01
9E29058-CAL7	10	25383	0.680	11.01
9E29058-CAL8	20	52097	0.683	11.01
9E29058-CAL9	50	135917	0.696	11.01
9E29058-CALA	100	271157	0.686	11.01
9E29058-CALB	200	542178	0.673	11.01

AVE RF **0.655** RF RSD **6.23** AVE RT **11.01**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**

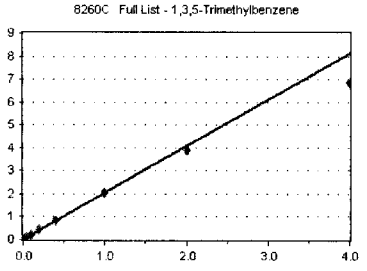


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	260	0.668	11.07
9E29058-CAL2	0.2	535	0.699	11.09
9E29058-CAL3	0.4	911	0.604	11.07
9E29058-CAL4	1	2285	0.621	11.07
9E29058-CAL5	2	4419	0.567	11.07
9E29058-CAL6	5	12024	0.638	11.07
9E29058-CAL7	10	23789	0.637	11.07
9E29058-CAL8	20	47080	0.617	11.07
9E29058-CAL9	50	120765	0.618	11.07
9E29058-CALA	100	246373	0.624	11.07
9E29058-CALB	200	452526	0.562	11.07

AVE RF **0.623** RF RSD **6.33** AVE RT **11.07**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

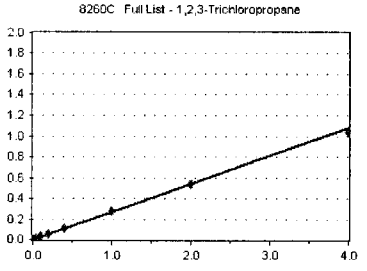


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1305~~	~~3.353~~	~~11.11~~
9E29058-CAL2	0.2	1776	2.321	11.10
9E29058-CAL3	0.4	3139	2.080	11.11
9E29058-CAL4	1	7772	2.113	11.11
9E29058-CAL5	2	14521	1.864	11.10
9E29058-CAL6	5	39774	2.110	11.10
9E29058-CAL7	10	77961	2.087	11.10
9E29058-CAL8	20	158194	2.073	11.10
9E29058-CAL9	50	396913	2.032	11.11
9E29058-CALA	100	773425	1.958	11.10
9E29058-CALB	200	1378879	1.712	11.10

AVE RF **2.035** RF RSD **8.02** AVE RT **11.10**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	144	0.188	11.12
9E29058-CAL3	0.4	500	0.331	11.12
9E29058-CAL4	1	983	0.267	11.11
9E29058-CAL5	2	2200	0.282	11.12
9E29058-CAL6	5	5164	0.274	11.12
9E29058-CAL7	10	10336	0.277	11.12
9E29058-CAL8	20	20960	0.275	11.12
9E29058-CAL9	50	54793	0.281	11.12
9E29058-CALA	100	105916	0.268	11.12
9E29058-CALB	200	207925	0.258	11.11

AVE RF **0.270** RF RSD **12.92** AVE RT **11.12**

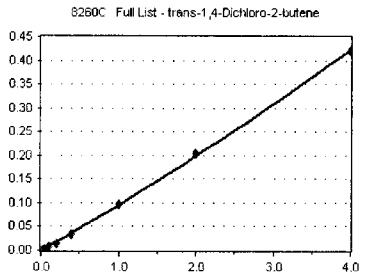
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

trans-1,4-Dichloro-2-butene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

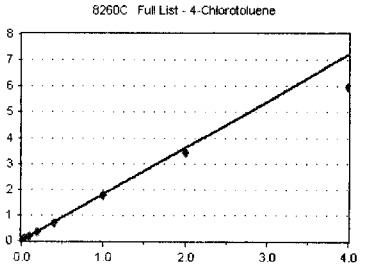


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL4	1	180	4.894	11.15
9E29058-CAL5	2	320	4.108	11.15
9E29058-CAL6	5	1285	6.817	11.15
9E29058-CAL7	10	2829	7.573	11.15
9E29058-CAL8	20	6571	8.611	11.15
9E29058-CAL9	50	19084	9.770	11.15
9E29058-CALA	100	40488	0.102	11.15
9E29058-CALB	200	84511	0.105	11.15

AVE RF **7.814** RF RSD **30.92** AVE RT **11.15**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**

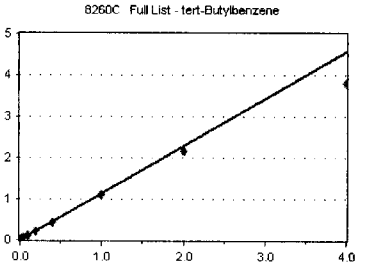


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1133~~	~~2.911~~	~~11.21~~
9E29058-CAL2	0.2	1680	2.196	11.21
9E29058-CAL3	0.4	2912	1.930	11.21
9E29058-CAL4	1	6874	1.869	11.21
9E29058-CAL5	2	13410	1.722	11.21
9E29058-CAL6	5	33806	1.793	11.21
9E29058-CAL7	10	65138	1.744	11.21
9E29058-CAL8	20	135968	1.782	11.20
9E29058-CAL9	50	345630	1.769	11.20
9E29058-CALA	100	677786	1.715	11.21
9E29058-CALB	200	1200687	1.491	11.21

AVE RF **1.801** RF RSD **10.00** AVE RT **11.21**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

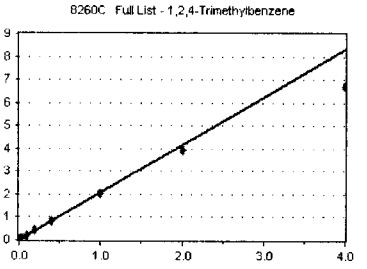


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	480	1.233	11.36
9E29058-CAL2	0.2	1208	1.579	11.36
9E29058-CAL3	0.4	1681	1.114	11.36
9E29058-CAL4	1	4182	1.137	11.36
9E29058-CAL5	2	8037	1.032	11.36
9E29058-CAL6	5	20763	1.101	11.36
9E29058-CAL7	10	41310	1.106	11.35
9E29058-CAL8	20	84715	1.110	11.35
9E29058-CAL9	50	215868	1.105	11.36
9E29058-CALA	100	425964	1.078	11.35
9E29058-CALB	200	765557	0.950	11.36

AVE RF **1.141** RF RSD **14.09** AVE RT **11.36**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	965	2.480	11.41
9E29058-CAL2	0.2	1610	2.104	11.41
9E29058-CAL3	0.4	3385	2.243	11.42
9E29058-CAL4	1	7847	2.133	11.41
9E29058-CAL5	2	15360	1.972	11.41
9E29058-CAL6	5	39159	2.077	11.41
9E29058-CAL7	10	78362	2.098	11.42
9E29058-CAL8	20	160708	2.106	11.42
9E29058-CAL9	50	400305	2.049	11.42
9E29058-CALA	100	777007	1.967	11.41
9E29058-CALB	200	1351532	1.678	11.41

AVE RF **2.082** RF RSD **9.34** AVE RT **11.41**

Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

sec-Butylbenzene

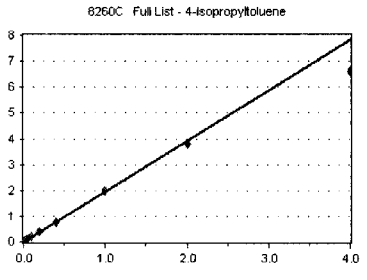
Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1196	3.073	11.50
9E29058-CAL2	0.2	2071	2.707	11.50
9E29058-CAL3	0.4	3773	2.500	11.50
9E29058-CAL4	1	8865	2.410	11.50
9E29058-CAL5	2	16671	2.140	11.50
9E29058-CAL6	5	45399	2.408	11.50
9E29058-CAL7	10	88679	2.374	11.50
9E29058-CAL8	20	183450	2.404	11.49
9E29058-CAL9	50	461029	2.360	11.49
9E29058-CALA	100	882609	2.234	11.50
9E29058-CALB	200	1543796	1.917	11.50

AVE RF **2.412** RF RSD **12.35** AVE RT **11.50**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**

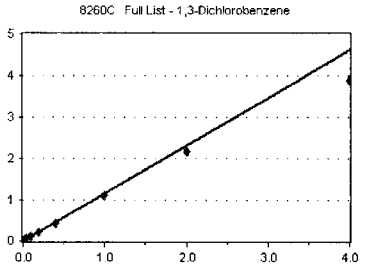


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1072~~	~~2.755~~	~~11.61~~
9E29058-CAL2	0.2	1749	2.286	11.61
9E29058-CAL3	0.4	3163	2.096	11.61
9E29058-CAL4	1	6901	1.876	11.61
9E29058-CAL5	2	14651	1.881	11.61
9E29058-CAL6	5	37395	1.984	11.61
9E29058-CAL7	10	74162	1.985	11.61
9E29058-CAL8	20	150593	1.973	11.61
9E29058-CAL9	50	386921	1.981	11.61
9E29058-CALA	100	751233	1.901	11.61
9E29058-CALB	200	1333607	1.656	11.61

AVE RF **1.962** RF RSD **8.25** AVE RT **11.61**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

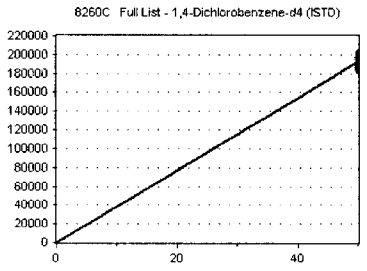


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	610	1.567	11.67
9E29058-CAL2	0.2	927	1.212	11.68
9E29058-CAL3	0.4	1855	1.229	11.68
9E29058-CAL4	1	4049	1.101	11.67
9E29058-CAL5	2	8756	1.124	11.68
9E29058-CAL6	5	21090	1.119	11.67
9E29058-CAL7	10	41681	1.116	11.67
9E29058-CAL8	20	84703	1.110	11.67
9E29058-CAL9	50	218010	1.116	11.67
9E29058-CALA	100	425300	1.076	11.67
9E29058-CALB	200	784949	0.975	11.67

AVE RF **1.159** RF RSD **13.03** AVE RT **11.67**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	194580	3891.600	11.73
9E29058-CAL2	50	191276	3825.520	11.73
9E29058-CAL3	50	188614	3772.280	11.73
9E29058-CAL4	50	183911	3678.220	11.73
9E29058-CAL5	50	194740	3894.800	11.73
9E29058-CAL6	50	188506	3770.120	11.73
9E29058-CAL7	50	186773	3735.460	11.73
9E29058-CAL8	50	190782	3815.640	11.73
9E29058-CAL9	50	195329	3906.580	11.73
9E29058-CALA	50	197554	3951.080	11.73
9E29058-CALB	50	201371	4027.420	11.73

AVE RF **3842.611** RF RSD **2.66** AVE RT **11.73**

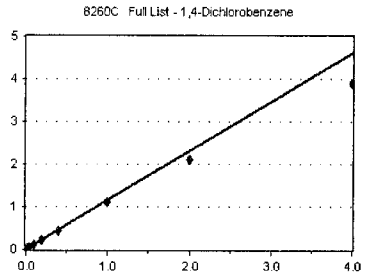
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

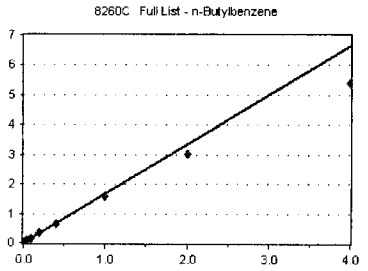


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~690~~	~~1.773~~	~~11.74~~
9E29058-CAL2	0.2	1152	1.506	11.74
9E29058-CAL3	0.4	1914	1.268	11.74
9E29058-CAL4	1	4368	1.188	11.74
9E29058-CAL5	2	8705	1.118	11.74
9E29058-CAL6	5	21623	1.147	11.74
9E29058-CAL7	10	41926	1.122	11.74
9E29058-CAL8	20	83842	1.099	11.74
9E29058-CAL9	50	214078	1.096	11.74
9E29058-CALA	100	418076	1.058	11.74
9E29058-CALB	200	784148	0.974	11.74

AVE RF **1.157** RF RSD **12.50** AVE RT **11.74**

n-Butylbenzene

Curve Fit: **AVERAGE RF**

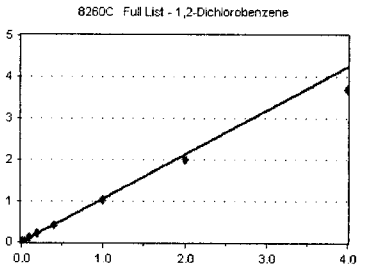


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1118~~	~~2.873~~	~~11.93~~
9E29058-CAL2	0.2	1667	2.179	11.94
9E29058-CAL3	0.4	2690	1.783	11.93
9E29058-CAL4	1	6459	1.756	11.93
9E29058-CAL5	2	12230	1.570	11.93
9E29058-CAL6	5	31024	1.646	11.93
9E29058-CAL7	10	61550	1.648	11.93
9E29058-CAL8	20	124826	1.636	11.93
9E29058-CAL9	50	313322	1.604	11.93
9E29058-CALA	100	597386	1.512	11.93
9E29058-CALB	200	1090372	1.354	11.93

AVE RF **1.669** RF RSD **12.96** AVE RT **11.93**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

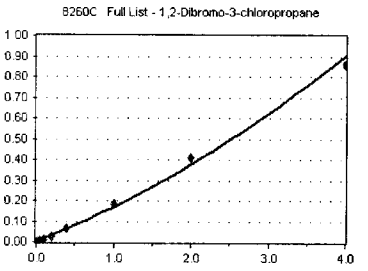


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	533	1.370	12.06
9E29058-CAL2	0.2	833	1.089	12.06
9E29058-CAL3	0.4	1753	1.162	12.06
9E29058-CAL4	1	3804	1.034	12.06
9E29058-CAL5	2	7643	0.981	12.06
9E29058-CAL6	5	19883	1.055	12.06
9E29058-CAL7	10	38321	1.026	12.06
9E29058-CAL8	20	79024	1.036	12.06
9E29058-CAL9	50	201831	1.033	12.06
9E29058-CALA	100	392931	0.994	12.06
9E29058-CALB	200	746324	0.927	12.06

AVE RF **1.064** RF RSD **11.05** AVE RT **12.06**

1,2-Dibromo-3-chloropropane

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL4	1	368	0.100	12.67
9E29058-CAL5	2	826	0.106	12.67
9E29058-CAL6	5	2389	0.127	12.67
9E29058-CAL7	10	5509	0.147	12.67
9E29058-CAL8	20	11948	0.157	12.67
9E29058-CAL9	50	36171	0.185	12.67
9E29058-CALA	100	80792	0.204	12.67
9E29058-CALB	200	172847	0.215	12.67

AVE RF **0.155** RF RSD **27.97** AVE RT **12.67**

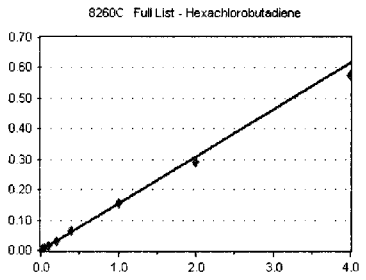
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

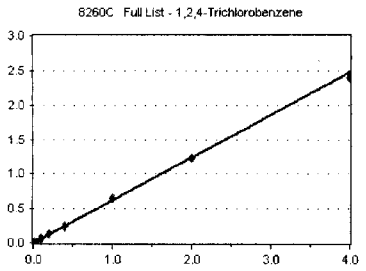


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~235~~	~~0.604~~	~~13.18~~
~~9E29058-CAL2~~	~~0.2~~	~~296~~	~~0.387~~	~~13.18~~
~~9E29058-CAL3~~	~~0.4~~	~~375~~	~~0.249~~	~~13.19~~
9E29058-CAL4	1	652	0.177	13.18
9E29058-CAL5	2	1244	0.160	13.18
9E29058-CAL6	5	2782	0.148	13.18
9E29058-CAL7	10	5351	0.143	13.18
9E29058-CAL8	20	12267	0.161	13.19
9E29058-CAL9	50	30150	0.154	13.18
9E29058-CALA	100	57553	0.146	13.19
9E29058-CALB	200	115944	0.144	13.18

AVE RF **0.154** RF RSD **7.55** AVE RT **13.18**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**

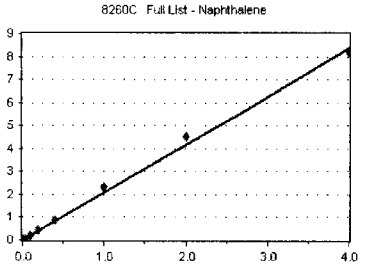


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~358~~	~~0.920~~	~~13.21~~
9E29058-CAL2	0.2	579	0.757	13.22
9E29058-CAL3	0.4	812	0.538	13.22
9E29058-CAL4	1	2286	0.621	13.22
9E29058-CAL5	2	4471	0.574	13.21
9E29058-CAL6	5	11381	0.604	13.21
9E29058-CAL7	10	23206	0.621	13.22
9E29058-CAL8	20	46713	0.612	13.22
9E29058-CAL9	50	126759	0.649	13.22
9E29058-CALA	100	244685	0.619	13.22
9E29058-CALB	200	483143	0.600	13.21

AVE RF **0.620** RF RSD **9.18** AVE RT **13.22**

Naphthalene

Curve Fit: **AVERAGE RF**

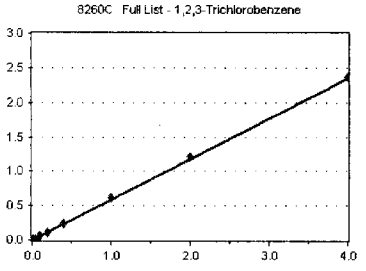


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~706~~	~~1.814~~	~~13.49~~
~~9E29058-CAL2~~	~~0.2~~	~~1368~~	~~1.788~~	~~13.50~~
~~9E29058-CAL3~~	~~0.4~~	~~2785~~	~~1.846~~	~~13.50~~
9E29058-CAL4	1	6879	1.870	13.49
9E29058-CAL5	2	14001	1.797	13.49
9E29058-CAL6	5	38161	2.024	13.49
9E29058-CAL7	10	79664	2.133	13.50
9E29058-CAL8	20	170582	2.235	13.49
9E29058-CAL9	50	451629	2.312	13.49
9E29058-CALA	100	891724	2.257	13.49
9E29058-CALB	200	1658112	2.059	13.49

AVE RF **2.086** RF RSD **8.86** AVE RT **13.49**

1,2,3-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~105~~	~~0.270~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~532~~	~~0.695~~	~~13.66~~
9E29058-CAL3	0.4	850	0.563	13.66
9E29058-CAL4	1	2090	0.568	13.66
9E29058-CAL5	2	4310	0.553	13.65
9E29058-CAL6	5	10740	0.570	13.65
9E29058-CAL7	10	22472	0.602	13.65
9E29058-CAL8	20	46516	0.610	13.65
9E29058-CAL9	50	120109	0.615	13.65
9E29058-CALA	100	241375	0.611	13.65
9E29058-CALB	200	476195	0.591	13.65

AVE RF **0.587** RF RSD **4.01** AVE RT **13.65**

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	50	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052924.D
2	2	100	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052925.D
3	3	250	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052926.D
4	4	500	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052927.D
5	5	1000	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052928.D
6	6	2500	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052929.D
7	7	5000	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052930.D
8	8	10000	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052931.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 12:49 am
2	2	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 1:17 am
3	3	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 1:44 am
4	4	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 2:12 am
5	5	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 2:39 am
6	6	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 3:07 am
7	7	May 30 15:51 2019	May 30 15:50 2019	30 May 2019 3:34 am
8	8	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 4:02 am

VC190529G.M Thu May 30 16:04:30 2019

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019
Response Via : Initial Calibration

Calibration Files
1 =VC19052924.D 2 =VC19052925.D 3 =VC19052926.D 4 =VC19052927.D 5 =VC19052928.D 6 =VC19052929.D
7 =VC19052930.D 8 =VC19052931.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	Pentafluorobenzene...	----------	----------	ISTD	----------	----------	----------	----------	----------		
2)	S	1,4-Difluorobe...	4.431	4.451	4.465	4.507	4.485	4.512	4.962	5.466	4.660	7.91
3)	S	4-Bromofluorob...	3.476	3.515	3.488	3.444	3.505	3.487	3.469	3.464	3.481	0.65
4)	S	Chlorobenzene-...									0.000	-1.00
5)	H	CA-LUFT (C5-C12)	4.380	3.196	2.608	2.520	2.348	2.108	2.313	2.163	2.705	28.02
6)	H	TPHg (C5-C9)	3.731	2.910	2.274	2.172	2.014	1.781	1.924	1.785	2.324	29.06
7)	H	TPHg (C6-C10)	2.853	2.200	1.709	1.673	1.577	1.412	1.544	1.443	1.801	27.25
8)	H	NWTPH-Gx	1.312	1.169	1.303	1.417	1.416	1.369	1.544	1.467	1.375	8.34
9)		Benzene (NR)									0.000	-1.00
10)	S	Toluene-d8 (NR)									0.000	-1.00
11)	C	Toluene (NR)									0.000	-1.00
12)	S	1,4-Dichlorobe...									0.000	-1.00
13)		Naphthalene (NR)									0.000	-1.00

(#) = Out of Range

Compound List Report VOA-GCMS3

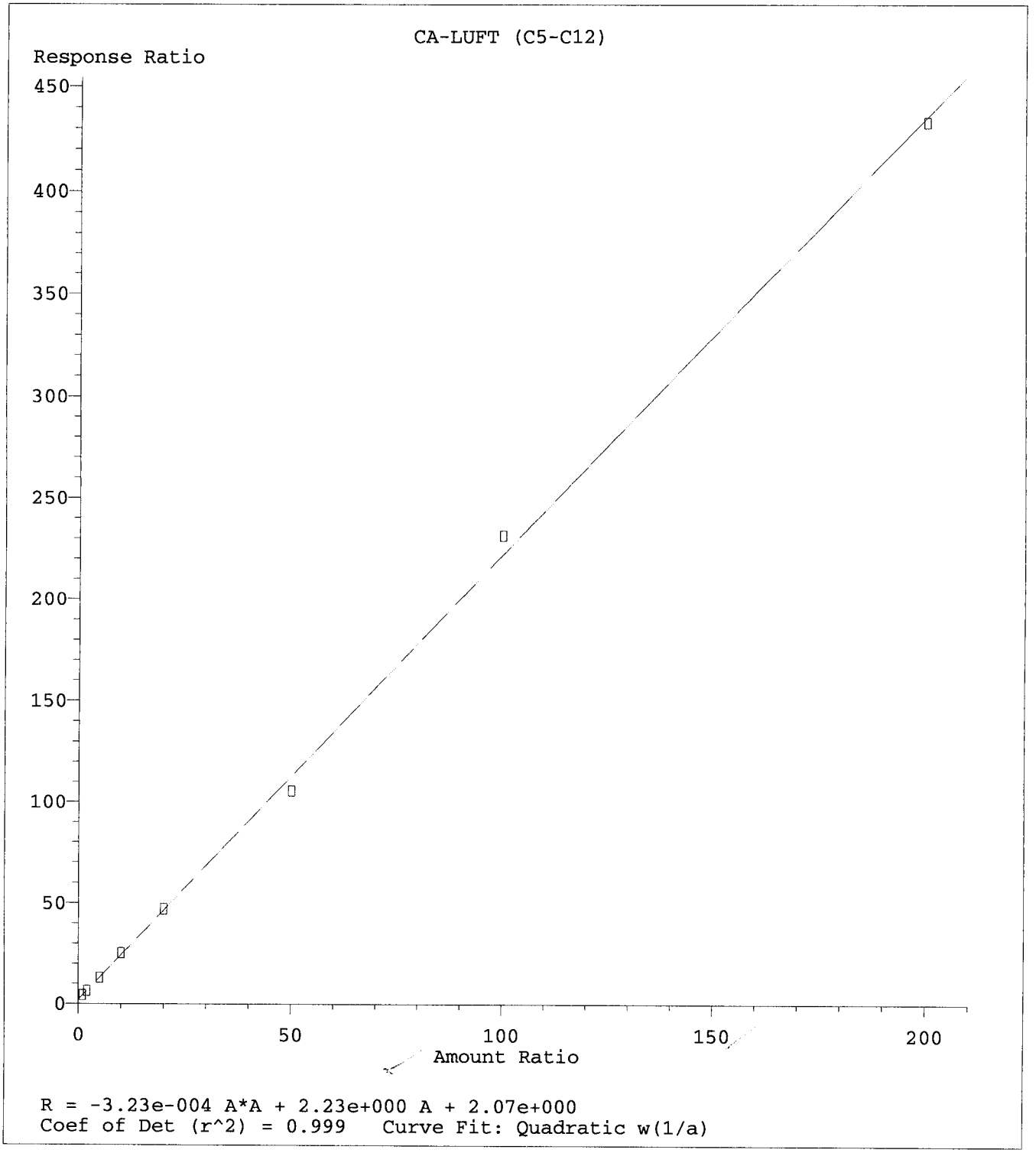
Method Path : C:\msdchem\1\METHODS\
Method File : VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.030	1.000	A	2	A	A
2	S	1,4-Difluorobenzene (Sur)	TIC	6.583	1.092	A	2	A	A
3	S	4-Bromofluorobenzene (Sur)	TIC	10.834	1.797	A	2	A	A
4	S	Chlorobenzene-d5 (NR)	TIC	9.751	1.617	A	2	A	A
5	H	CA-LUFT (C5-C12)	TIC	9.906	1.643	Q1/a	0	A	A
6	H	TPHg (C5-C9)	TIC	9.906	1.643	Q1/a	0	A	A
7	H	TPHg (C6-C10)	TIC	9.906	1.643	Q1/a	0	A	A
8	H	NWTPH-Gx	TIC	9.906	1.643	Q1/a	0	A	A
9		Benzene (NR)	78	5.932	0.984	A	2	A	A
10	S	Toluene-d8 (NR)	TIC	8.091	1.342	A	2	A	A
11	C	Toluene (NR)	91	8.152	1.352	A	2	A	A
12	S	1,4-Dichlorobenzene-d4 (NR)	TIC	11.728	1.945	A	2	A	A
13		Naphthalene (NR)	128	13.491	2.238	A	2	A	A

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VC190529G.M Thu May 30 16:04:34 2019



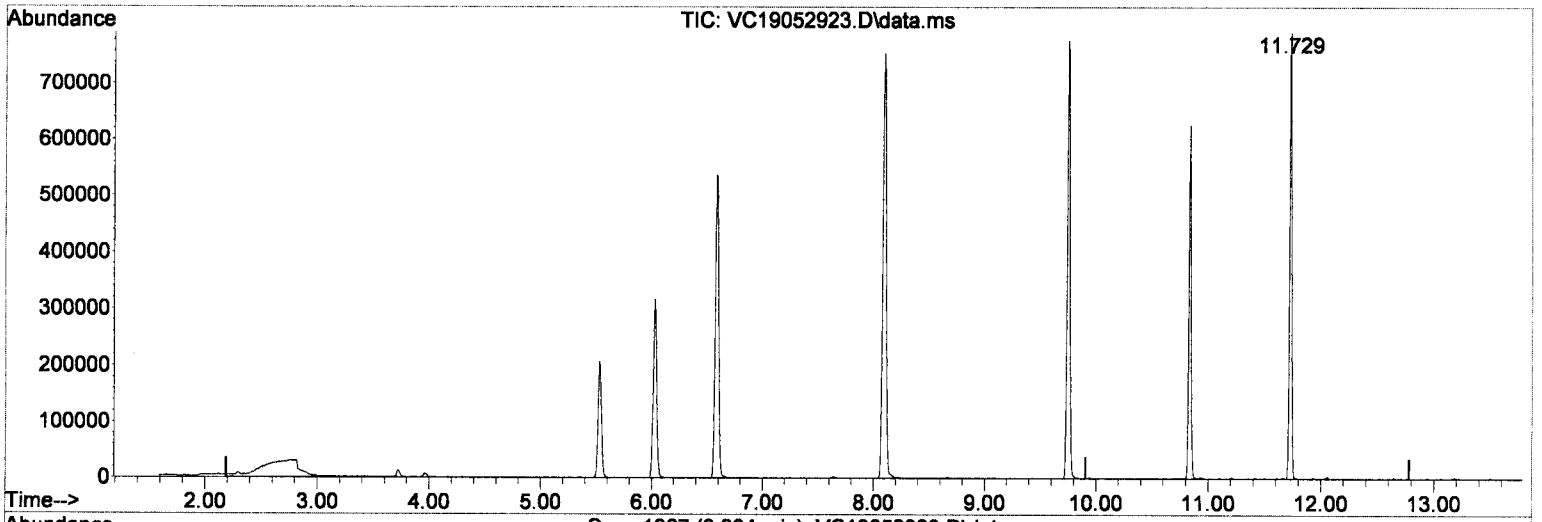
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

IWT= 9.28

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



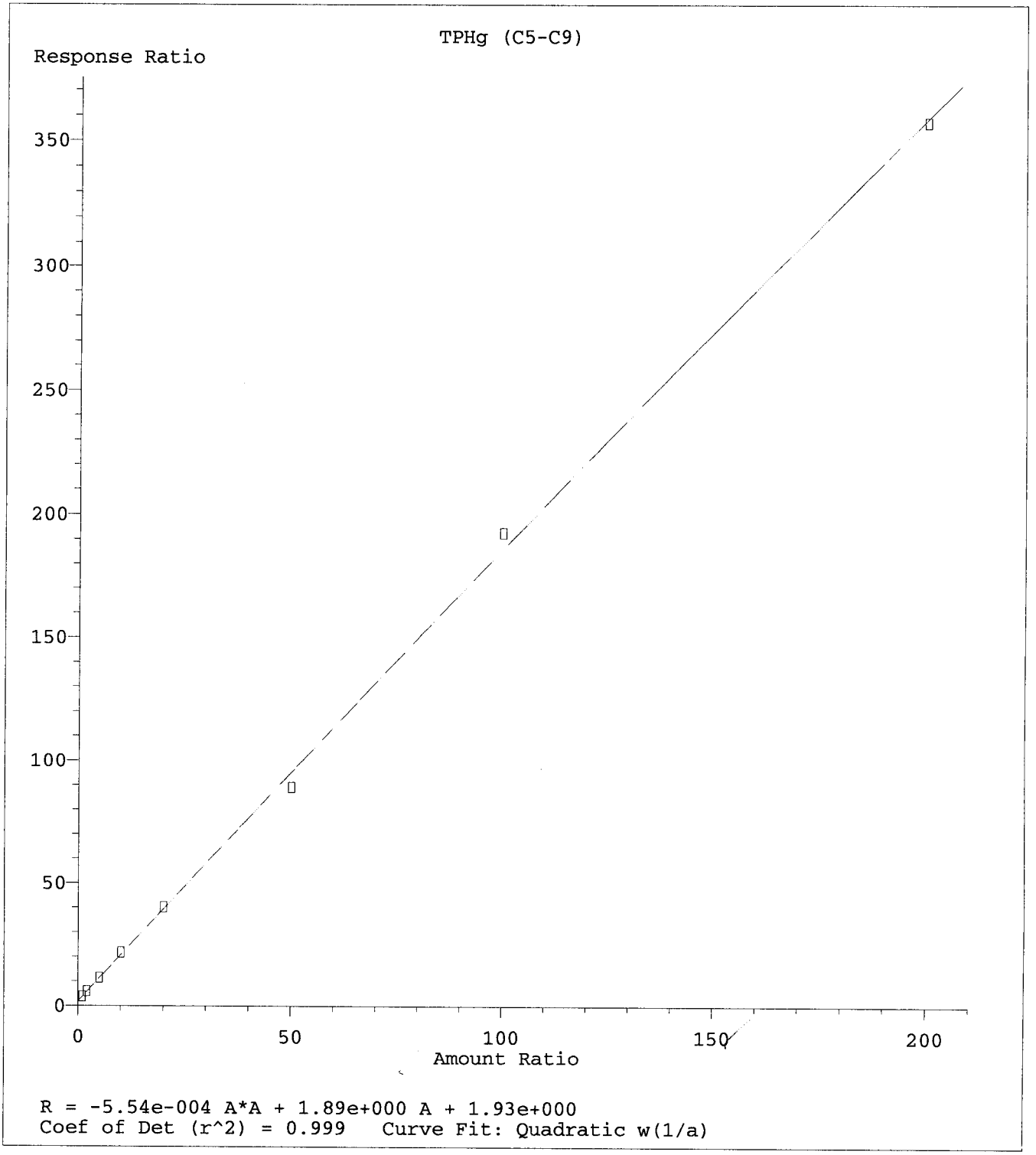
TIC: VC19052923.D\data.ms

(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 9.28 ug/L m

response 651712

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



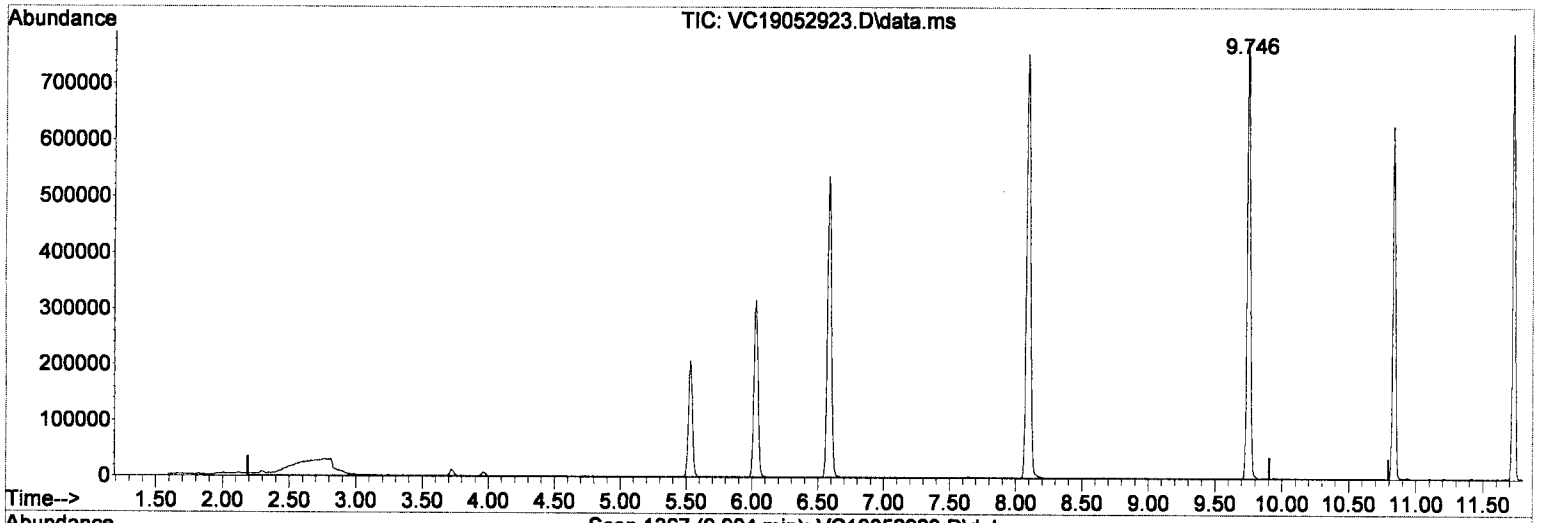
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

INT = 14.63

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



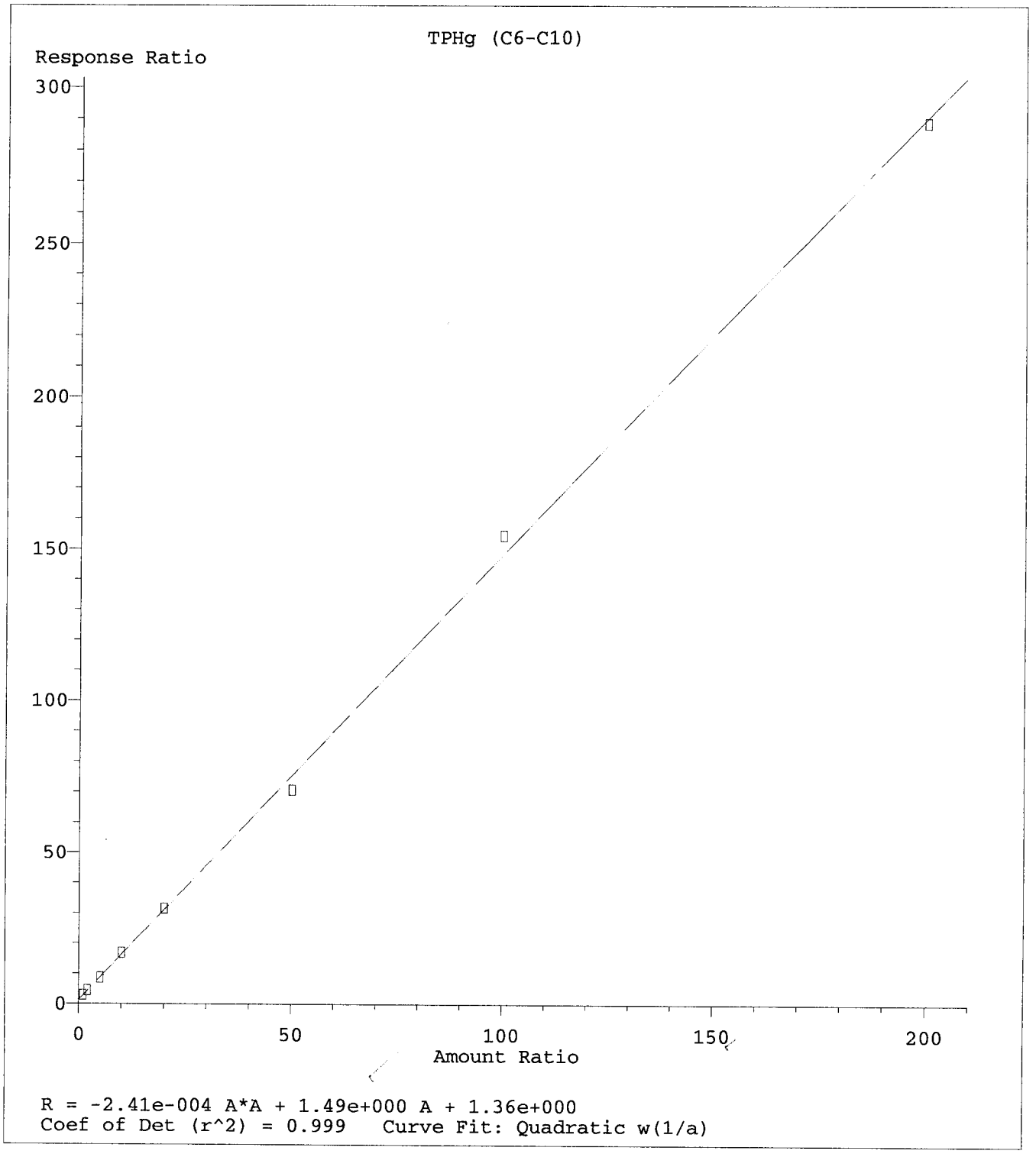
TIC: VC19052923.D\data.ms

(6) TPHg (C5-C9) (H)

9.906min (0.000) 14.63 ug/L m

response 651712

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



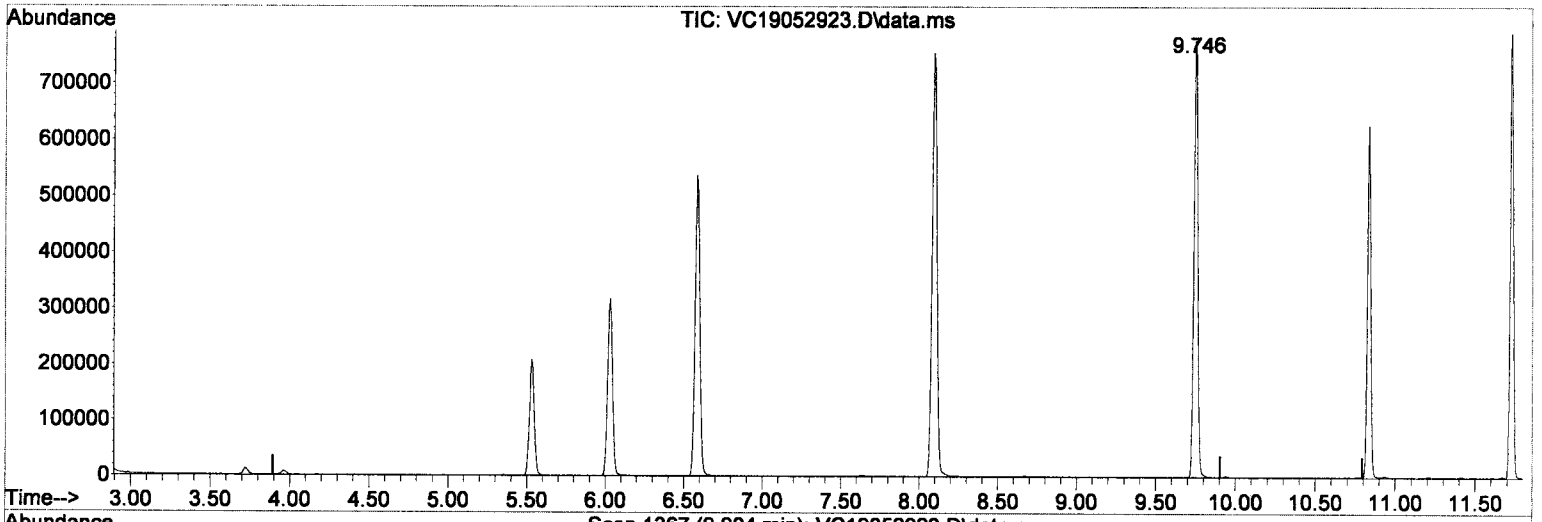
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

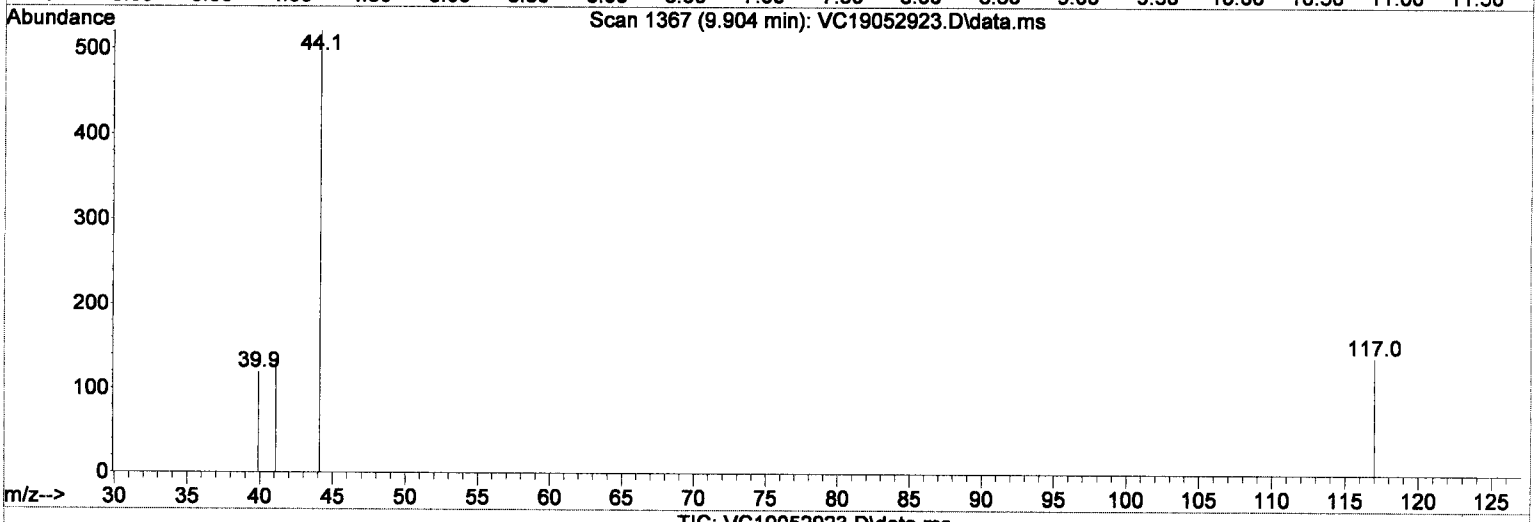
Fut = 14.02

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





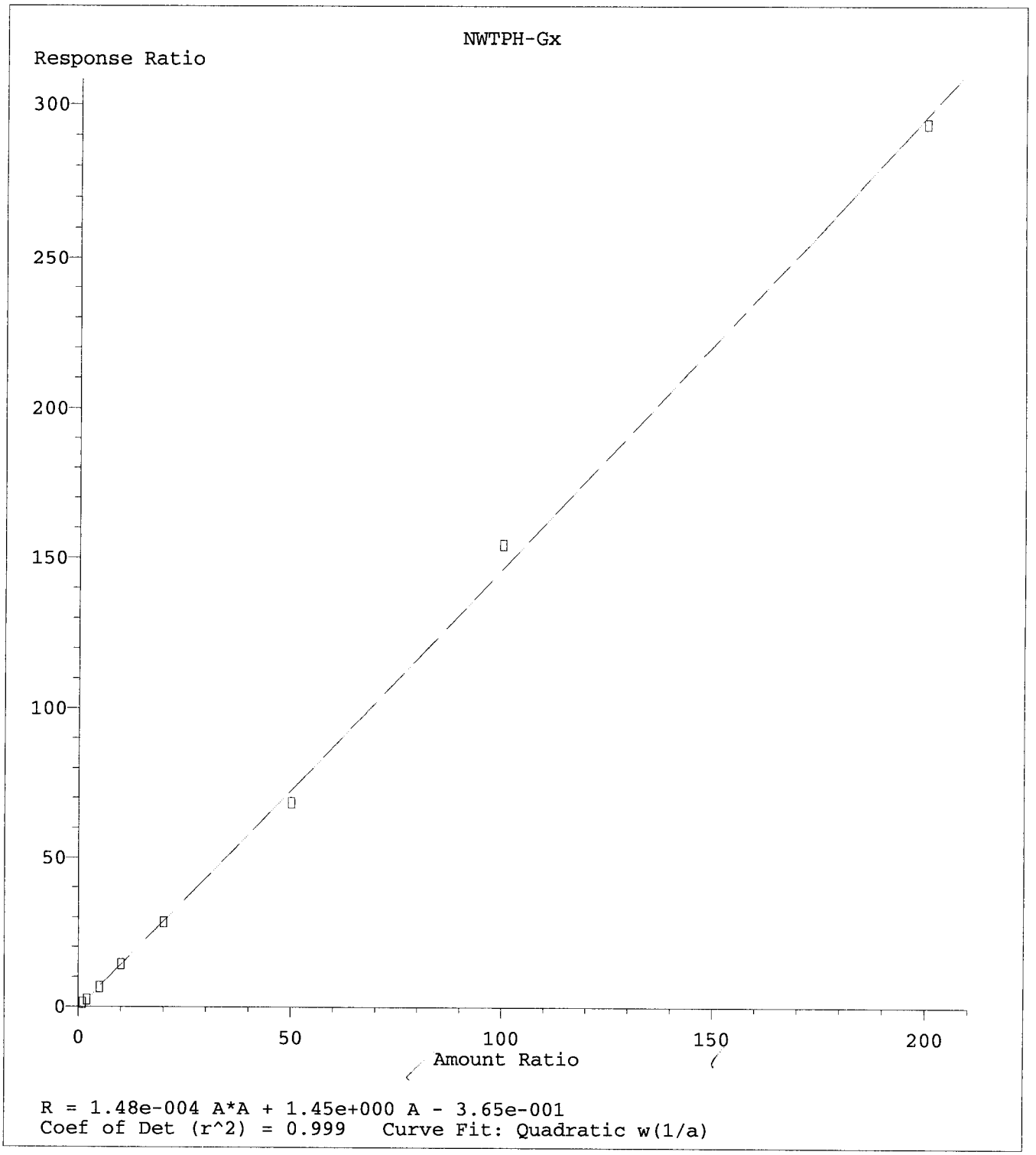
TIC: VC19052923.D\data.ms

(7) TPHg (C6-C10) (H)

9.906min (0.000) 14.02 ug/L m

response 464649

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



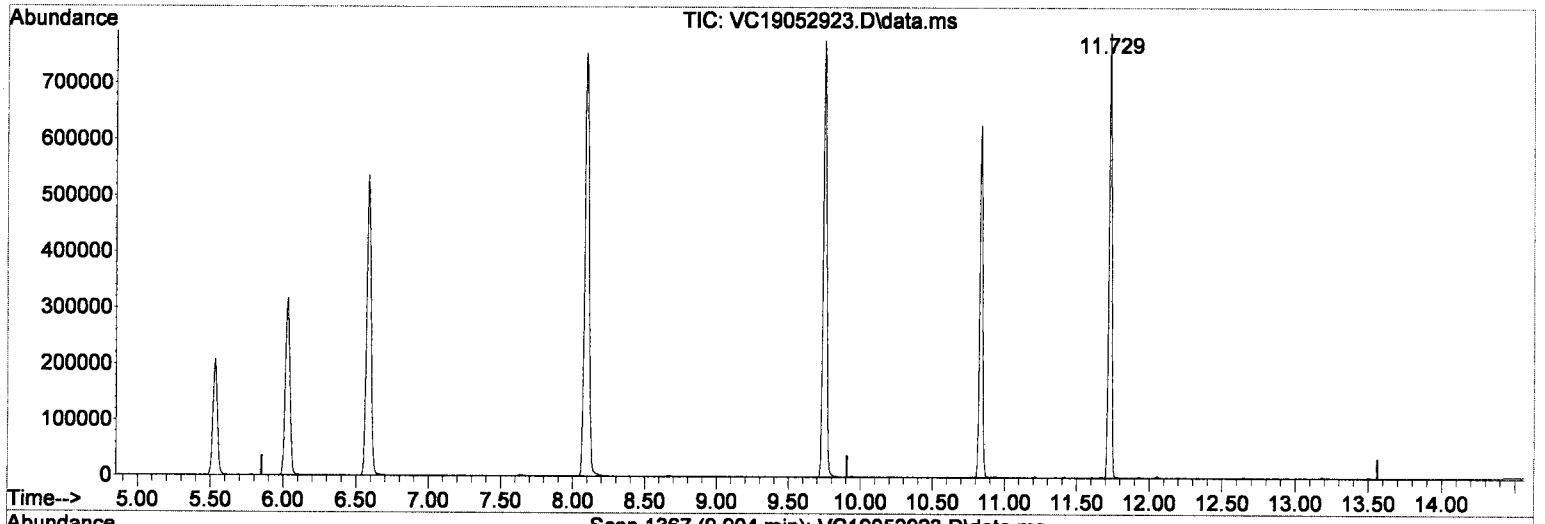
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

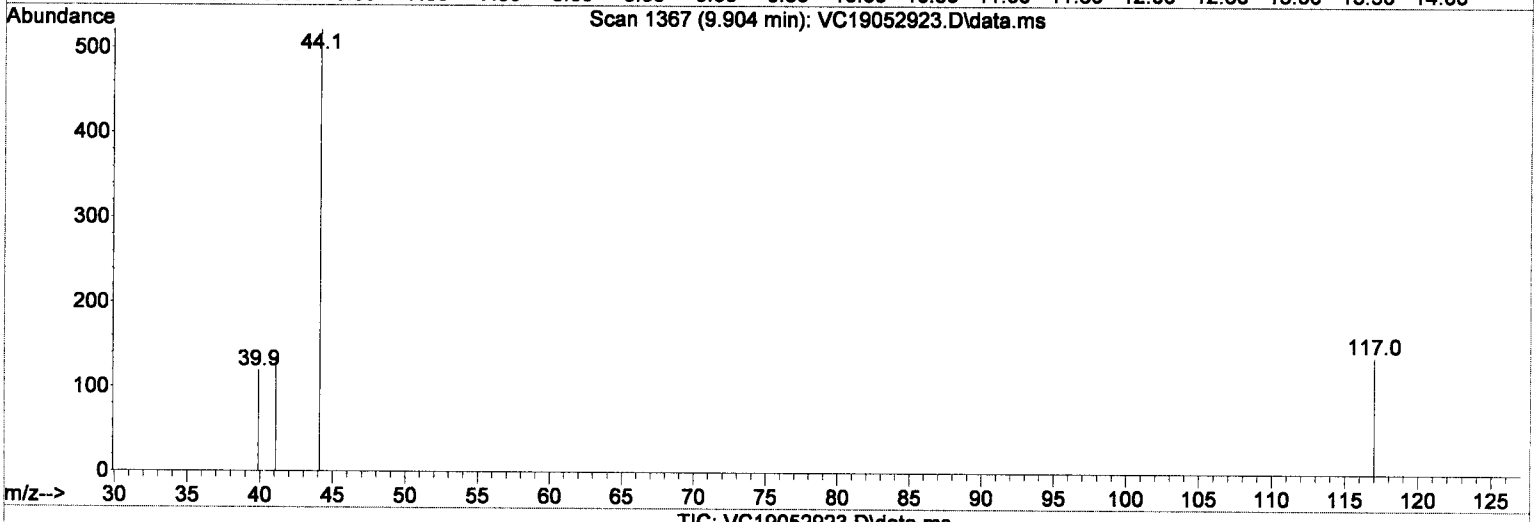
Int = 13.72

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19052923.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 13.72 ug/L m

response 8855

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Analysis Included
8015D-Mod Gasoline (C6-C10) by GC/MS
CA LUFT GRO
NWTPH-Gx

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed
9E29058-TUN2	MS Tune	Soil		A19C135	5/29/2019 11:27:00PM
9E29058-ICB2	Initial Cal Blank	Soil		A19C135	5/30/2019 12:22:00AM
9E29058-CALC	Cal Standard	Soil	A19E372	"	5/30/2019 12:49:00AM
9E29058-CALD	Cal Standard	Soil	A19E373	"	5/30/2019 1:17:00AM
9E29058-CALE	Cal Standard	Soil	A19E374	"	5/30/2019 1:44:00AM
9E29058-CALF	Cal Standard	Soil	A19E375	"	5/30/2019 2:12:00AM
9E29058-CALG	Cal Standard	Soil	A19E183	"	5/30/2019 2:39:00AM
9E29058-CALH	Cal Standard	Soil	A19E184	"	5/30/2019 3:07:00AM
9E29058-CALI	Cal Standard	Soil	A19E185	"	5/30/2019 3:34:00AM
9E29058-CALJ	Cal Standard	Soil	A19E186	"	5/30/2019 4:02:00AM
9E29058-ICV2	Initial Cal Check	Soil	A19B262	"	5/30/2019 5:25:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

8015D-Mod Gasoline (C6-C10 Sequence: **9E29058** Matrix: **Soil**

9E29058-CALC	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALD	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALJ	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

CA LUFT GRO Sequence: **9E29058** Matrix: **Soil**

9E29058-ICV2	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052934.D
Acq On : 30 May 2019 5:25 am
Operator : TB
Sample : 9E29058-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	108	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	46.602	6.8	104	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	49.352	1.3	108	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	106	0.00
5	H	CA-LUFT (C5-C12)	500.000	529.625	-5.9	110	0.00
6	H	TPHg (C5-C9)	500.000	526.029	-5.2	108	0.00
7	H	TPHg (C6-C10)	500.000	535.493	-7.1	112	0.00
8	H	NWTPH-Gx	500.000	533.680	-6.7	115	0.00
9		Benzene (NR)	-1.000	0.000	0.0	113	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	106	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	114	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	108	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	119	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

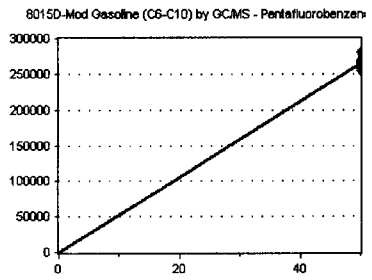
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8015D-Mod Gasoline (C6-C1** Instrument Cal ID: **A9E3104**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

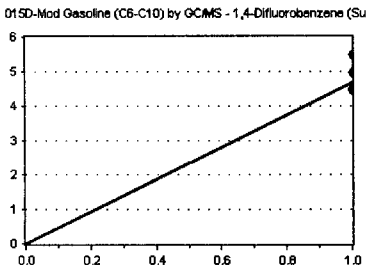


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	257140	5142.800	6.03
9E29058-CALD	50	254092	5081.840	6.03
9E29058-CALE	50	264662	5293.240	6.03
9E29058-CALF	50	261529	5230.580	6.03
9E29058-CALG	50	261111	5222.220	6.03
9E29058-CALH	50	268653	5373.060	6.03
9E29058-CALI	50	266073	5321.460	6.04
9E29058-CALJ	50	280943	5618.860	6.03

AVE RF **5285.508** RF RSD **3.11** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

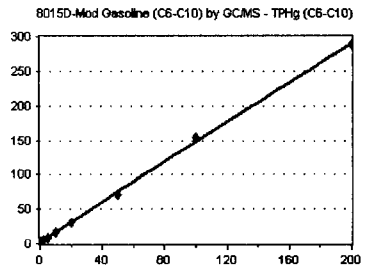


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1139443	4.431	6.59
9E29058-CALD	50	1130909	4.451	6.59
9E29058-CALE	50	1181697	4.465	6.59
9E29058-CALF	50	1178596	4.507	6.59
9E29058-CALG	50	1170992	4.485	6.59
9E29058-CALH	50	1212113	4.512	6.59
9E29058-CALI	50	1320230	4.962	6.59
9E29058-CALJ	50	1535644	5.466	6.58

AVE RF **4.660** RF RSD **7.91** AVE RT **6.59**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

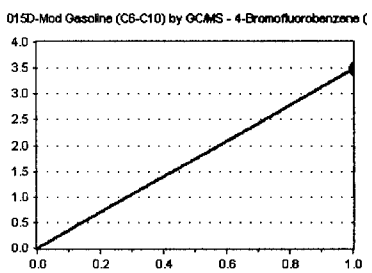


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	733539	2.853	9.91
9E29058-CALD	100	1118241	2.200	9.91
9E29058-CALE	250	2261282	1.709	9.91
9E29058-CALF	500	4374724	1.673	9.91
9E29058-CALG	1000	8234768	1.577	9.91
9E29058-CALH	2500	1.896308E+07	1.412	9.91
9E29058-CALI	5000	4.107088E+07	1.544	9.91
9E29058-CALJ	10000	8.10639E+07	1.443	9.91

AVE RF **1.801** RF RSD **27.25** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	893711	3.476	10.84
9E29058-CALD	50	893010	3.515	10.84
9E29058-CALE	50	923159	3.488	10.83
9E29058-CALF	50	900724	3.444	10.84
9E29058-CALG	50	915240	3.505	10.84
9E29058-CALH	50	936867	3.487	10.83
9E29058-CALI	50	922982	3.469	10.84
9E29058-CALJ	50	973205	3.464	10.84

AVE RF **3.481** RF RSD **0.65** AVE RT **10.84**

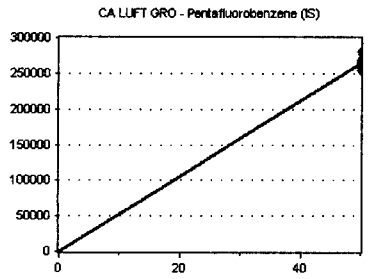
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **A9E3104**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

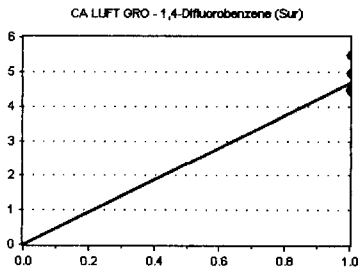


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	257140	5142.800	6.03
9E29058-CALD	50	254092	5081.840	6.03
9E29058-CALE	50	264662	5293.240	6.03
9E29058-CALF	50	261529	5230.580	6.03
9E29058-CALG	50	261111	5222.220	6.03
9E29058-CALH	50	268653	5373.060	6.03
9E29058-CALI	50	266073	5321.460	6.04
9E29058-CALJ	50	280943	5618.860	6.03

AVE RF **5285.508** RF RSD **3.11** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

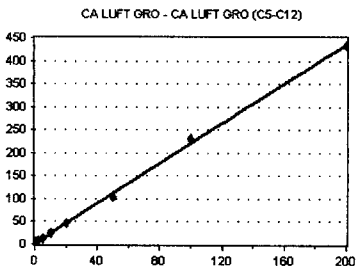


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1139443	4.431	6.59
9E29058-CALD	50	1130909	4.451	6.59
9E29058-CALE	50	1181697	4.465	6.59
9E29058-CALF	50	1178596	4.507	6.59
9E29058-CALG	50	1170992	4.485	6.59
9E29058-CALH	50	1212113	4.512	6.59
9E29058-CALI	50	1320230	4.962	6.59
9E29058-CALJ	50	1535644	5.466	6.58

AVE RF **4.660** RF RSD **7.91** AVE RT **6.59**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

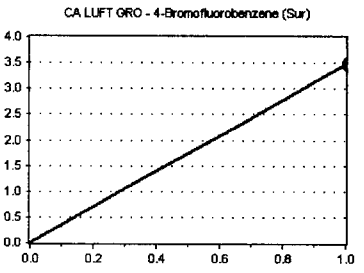


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1126234	4.380	9.91
9E29058-CALD	100	1624353	3.196	9.91
9E29058-CALE	250	3450881	2.608	9.91
9E29058-CALF	500	6589983	2.520	9.91
9E29058-CALG	1000	1.2264E+07	2.348	9.91
9E29058-CALH	2500	2.832011E+07	2.108	9.91
9E29058-CALI	5000	6.154367E+07	2.313	9.91
9E29058-CALJ	10000	1.215222E+08	2.163	9.91

AVE RF **2.705** RF RSD **28.02** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	893711	3.476	10.84
9E29058-CALD	50	893010	3.515	10.84
9E29058-CALE	50	923159	3.488	10.83
9E29058-CALF	50	900724	3.444	10.84
9E29058-CALG	50	915240	3.505	10.84
9E29058-CALH	50	936867	3.487	10.83
9E29058-CALI	50	922982	3.469	10.84
9E29058-CALJ	50	973205	3.464	10.84

AVE RF **3.481** RF RSD **0.65** AVE RT **10.84**

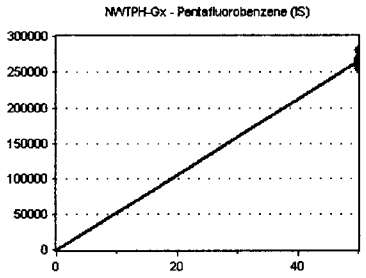
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **A9E3104**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

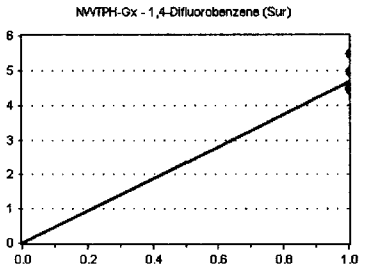


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	257140	5142.800	6.03
9E29058-CALD	50	254092	5081.840	6.03
9E29058-CALE	50	264662	5293.240	6.03
9E29058-CALF	50	261529	5230.580	6.03
9E29058-CALG	50	261111	5222.220	6.03
9E29058-CALH	50	268653	5373.060	6.03
9E29058-CALI	50	266073	5321.460	6.04
9E29058-CALJ	50	280943	5618.860	6.03

AVE RF **5285.508** RF RSD **3.11** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

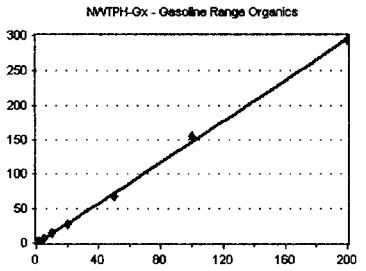


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1139443	4.431	6.59
9E29058-CALD	50	1130909	4.451	6.59
9E29058-CALE	50	1181697	4.465	6.59
9E29058-CALF	50	1178596	4.507	6.59
9E29058-CALG	50	1170992	4.485	6.59
9E29058-CALH	50	1212113	4.512	6.59
9E29058-CALI	50	1320230	4.962	6.59
9E29058-CALJ	50	1535644	5.466	6.58

AVE RF **4.660** RF RSD **7.91** AVE RT **6.59**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

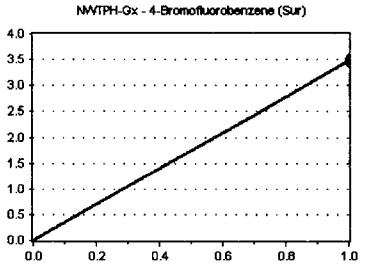


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	337341	1.312	9.91
9E29058-CALD	100	594153	1.169	9.91
9E29058-CALE	250	1724074	1.303	9.91
9E29058-CALF	500	3706703	1.417	9.91
9E29058-CALG	1000	7396048	1.416	9.91
9E29058-CALH	2500	1.838528E+07	1.369	9.91
9E29058-CALI	5000	4.106911E+07	1.544	9.91
9E29058-CALJ	10000	8.243122E+07	1.467	9.91

AVE RF **1.375** RF RSD **8.34** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	893711	3.476	10.84
9E29058-CALD	50	893010	3.515	10.84
9E29058-CALE	50	923159	3.488	10.83
9E29058-CALF	50	900724	3.444	10.84
9E29058-CALG	50	915240	3.505	10.84
9E29058-CALH	50	936867	3.487	10.83
9E29058-CALI	50	922982	3.469	10.84
9E29058-CALJ	50	973205	3.464	10.84

AVE RF **3.481** RF RSD **0.65** AVE RT **10.84**

Injection Log

Directory: j:\DATA\2019-05\9E29058

Line	Vial	FileName	Multiplier	SampleName		Misc Info	Injected
1	1	Vc19052901.d	1.	9E29058-IBL1		1X 5mL DI+MeOH	29 May 2019 14:17
2	2	Vc19052902.d	1.	9E29058-TUN1		A19C135 BFB (IS/...	29 May 2019 14:45
3	3	Vc19052903.d	1.	9E29058-ICB1		1X 5mL DI+MeOH	29 May 2019 15:12
4	4	Vc19052904.d	1.	9E29058-CAL1		1X 5mL 0.1ppb VO...	29 May 2019 15:40
5	5	Vc19052905.d	1.	9E29058-CAL2		1X 5mL 0.2ppb VO...	29 May 2019 16:07
6	6	Vc19052906.d	1.	9E29058-CAL3		1X 5mL 0.4ppb VO...	29 May 2019 16:35
7	7	Vc19052907.d	1.	9E29058-CAL4		1X 5mL 1ppb VOC ...	29 May 2019 17:02
8	8	Vc19052908.d	1.	9E29058-CAL5		1X 5mL 2ppb VOC ...	29 May 2019 17:30
9	9	Vc19052909.d	1.	9E29058-CAL6		1X 5mL 5ppb VOC ...	29 May 2019 17:57
10	10	Vc19052910.d	1.	9E29058-CAL7		1X 5mL 10ppb VOC...	29 May 2019 18:25
11	11	Vc19052911.d	1.	9E29058-CAL8		1X 5mL 20ppb VOC...	29 May 2019 18:52
12	12	Vc19052912.d	1.	9E29058-CAL9		1X 5mL 50ppb VOC...	29 May 2019 19:20
13	13	Vc19052913.d	1.	9E29058-IBL2		1X 5mL DI+MeOH	29 May 2019 19:47
14	14	Vc19052914.d	1.	9E29058-CALA		1X 5mL 100ppb VO...	29 May 2019 20:15
15	15	Vc19052915.d	1.	9E29058-IBL3		1X 5mL DI+MeOH	29 May 2019 20:42
16	16	Vc19052916.d	1.	9E29058-CALB		1X 5mL 200ppb VO...	29 May 2019 21:10
17	17	Vc19052917.d	1.	9E29058-IBL4		1X 5mL DI+MeOH	29 May 2019 21:37
18	18	Vc19052918.d	1.	9E29058-IBL5		1X 5mL DI+MeOH	29 May 2019 22:05
19	19	Vc19052919.d	1.	9E29058-ICV1		1X 5mL 20ppb VOC...	29 May 2019 22:32
20	20	Vc19052920.d	1.	9E29058-IBL6		1X 5mL DI+MeOH	29 May 2019 22:59
21	21	Vc19052921.d	1.	9E29058-TUN2	RT	A19C135 BFB (IS/...	29 May 2019 23:27
22	22	Vc19052922.d	1.	9E29058-IBL7		1X 5mL DI+MeOH	29 May 2019 23:54
23	23	Vc19052923.d	1.	9E29058-ICB2		1X 5mL DI+MeOH	30 May 2019 00:22
24	24	Vc19052924.d	1.	9E29058-CALC		1X 5mL 50ppb GX ...	30 May 2019 00:49
25	25	Vc19052925.d	1.	9E29058-CALD		1X 5mL 100ppb GX...	30 May 2019 01:17
26	26	Vc19052926.d	1.	9E29058-CALE		1X 5mL 250ppb GX...	30 May 2019 01:44
27	27	Vc19052927.d	1.	9E29058-CALF		1X 5mL 500ppb GX...	30 May 2019 02:12
28	28	Vc19052928.d	1.	9E29058-CALG		1X 5mL 1000ppb G...	30 May 2019 02:39
29	29	Vc19052929.d	1.	9E29058-CALH		1X 5mL 2500ppb G...	30 May 2019 03:07
30	30	Vc19052930.d	1.	9E29058-CALI		1X 5mL 5000ppb G...	30 May 2019 03:34
31	31	Vc19052931.d	1.	9E29058-CALJ		1X 5mL 10000ppb ...	30 May 2019 04:02
32	32	Vc19052932.d	1.	9E29058-IBL8		1X 5mL DI+MeOH	30 May 2019 04:29
33	33	Vc19052933.d	1.	9E29058-IBL9		1X 5mL DI+MeOH	30 May 2019 04:57
34	34	Vc19052934.d	1.	9E29058-ICV2		1X 5mL 500ppb GX...	30 May 2019 05:25
35	35	Vc19052935.d	1.	9E29058-IBLA		1X 5mL DI+MeOH	30 May 2019 05:52

5/30/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052901.D
Acq On : 29 May 2019 2:17 pm
Operator : TB
Sample : 9E29058-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

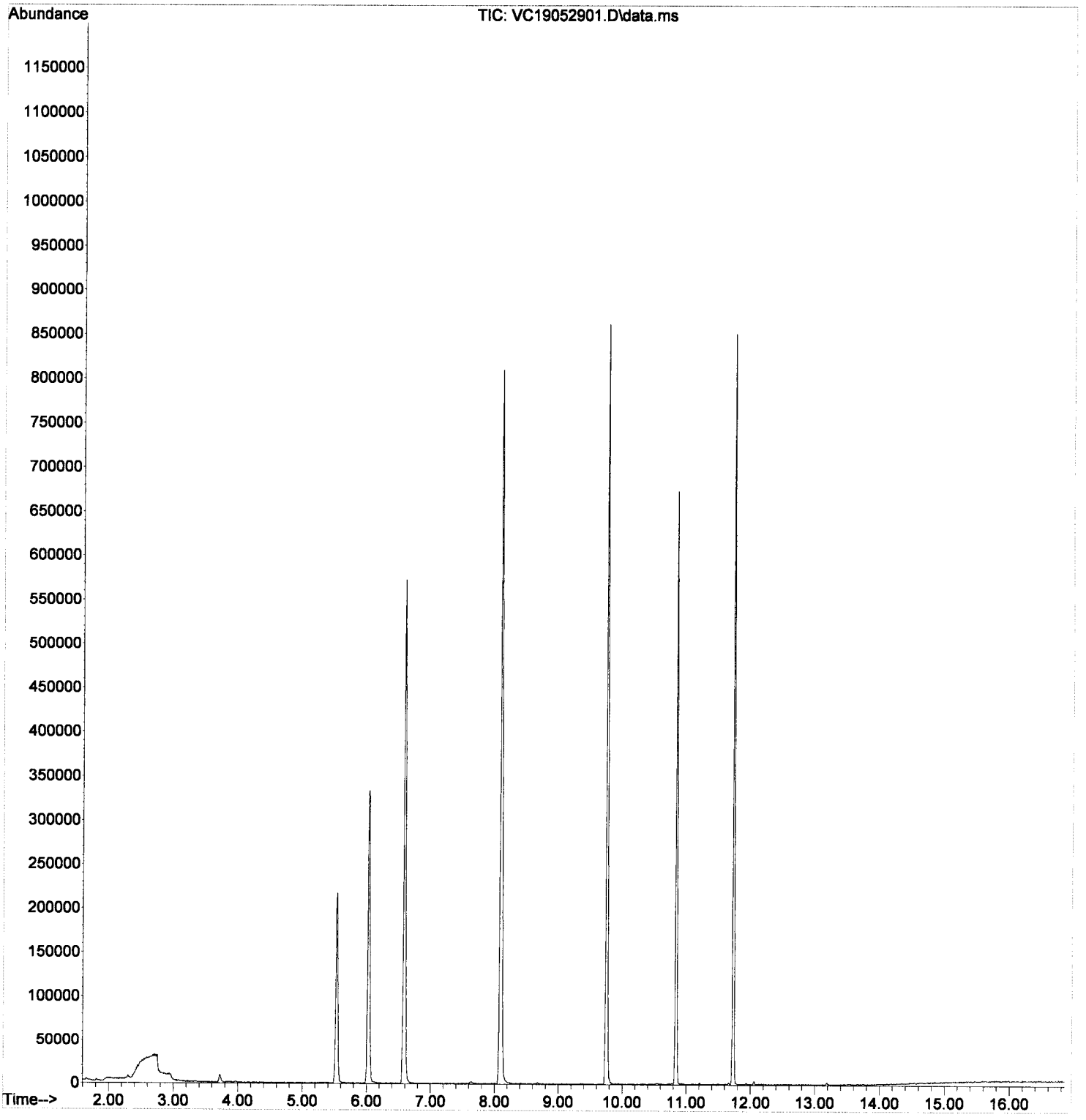
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	279040	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	484013	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	202813	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	149073	49.34	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	533928	49.75	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	650638	49.69	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	177320	50.63	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.851	50	998	0.24	ug/L		88
5) Bromomethane	2.302	96	2128	1.33	ug/L		96
6) Chloroethane	2.435	64	170	0.16	ug/L	#	1
9) Carbon Disulfide	3.111	76	570	0.13	ug/L		77
11) Iodomethane	3.226	142	606	1.26	ug/L	#	33
12) Methylene Chloride	3.719	84	4593	Below Cal			90
13) Acetone	3.847	43	1940	1.54	ug/L		95
73) n-Butylbenzene	11.938	91	860	0.13	ug/L	#	71
76) Hexachlorobutadiene	13.191	223	353	0.56	ug/L	#	74

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052901.D
Acq On : 29 May 2019 2:17 pm
Operator : TB
Sample : 9E29058-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



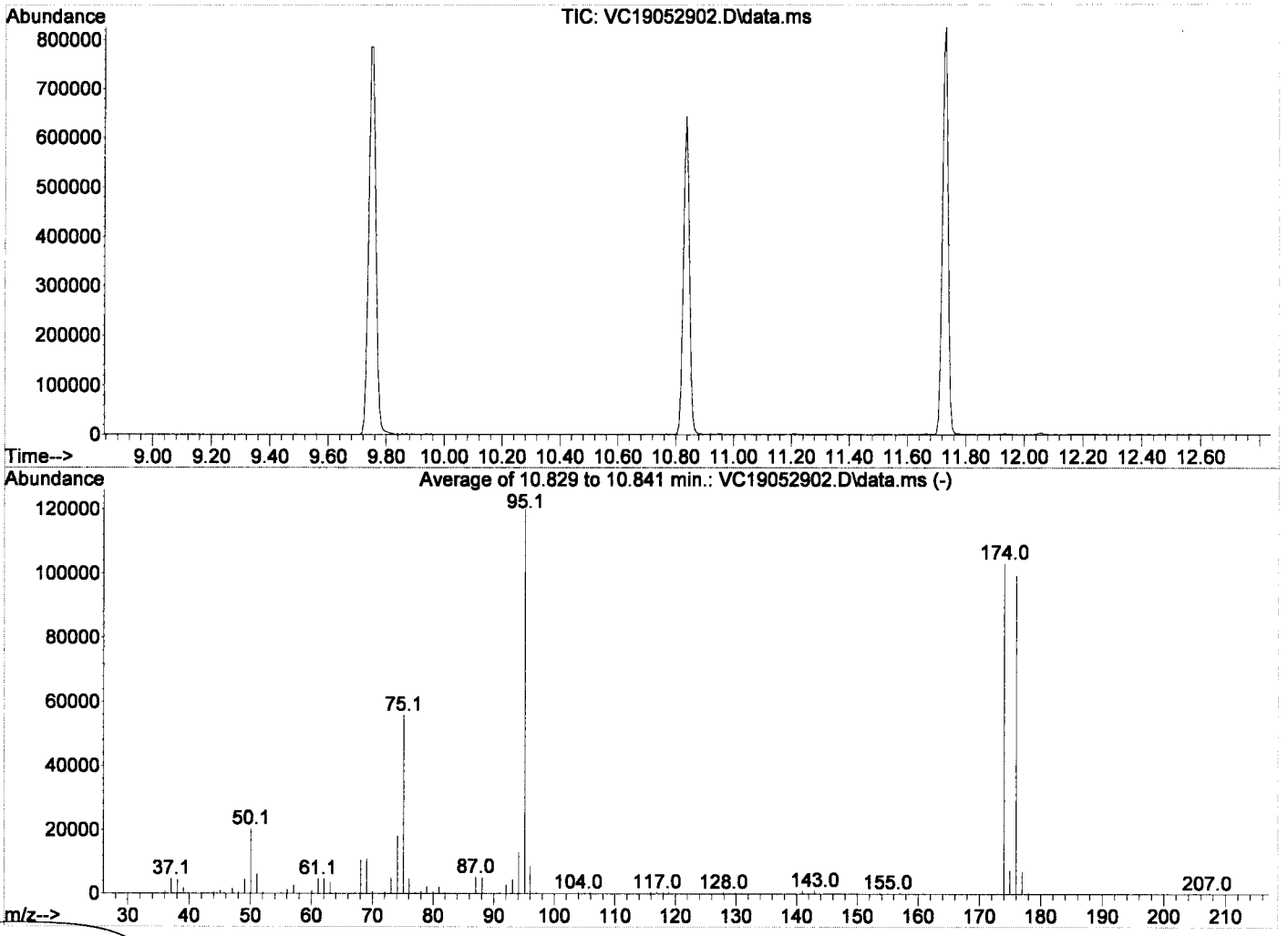
BFB

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052902.D
Acq On : 29 May 2019 2:45 pm
Operator : TB
Sample : 9E29058-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019

5/30/19



AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1511

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.0	20413	PASS
75	95	30	60	46.6	55912	PASS
95	95	100	100	100.0	119877	PASS
96	95	5	9	7.3	8724	PASS
173	174	0.00	2	0.2	243	PASS
174	95	50	200	86.1	103224	PASS
175	174	5	9	7.3	7533	PASS
176	174	95	101	96.3	99416	PASS
177	176	5	9	7.2	7119	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052902.D
Acq On : 29 May 2019 2:45 pm
Operator : TB
Sample : 9E29058-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:33 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

5/30/19

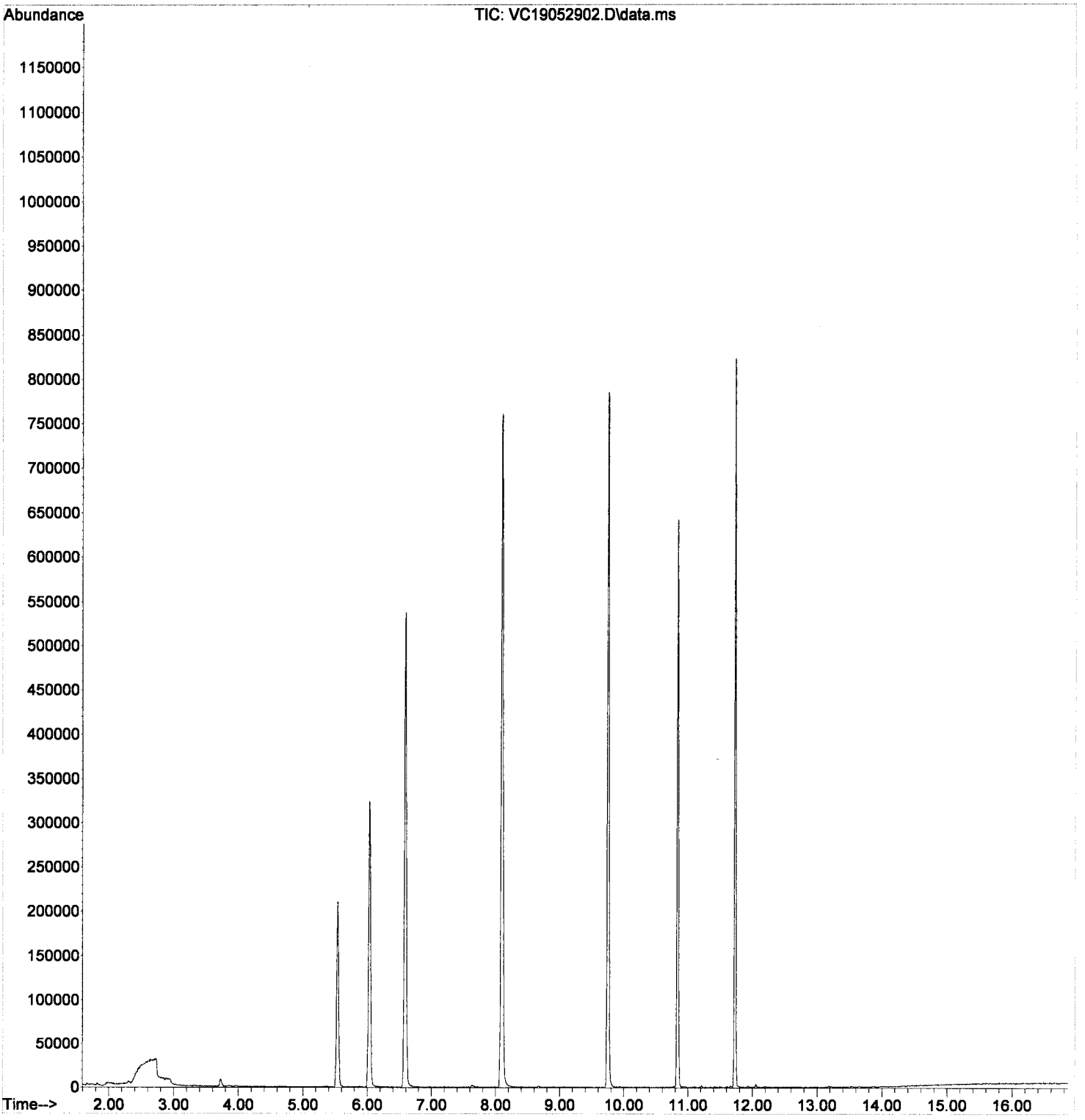
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	268009	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	467811	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.730	152	195372	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	142792	49.20	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	506916	49.17	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	624549	49.35	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	171404	50.81	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.856	50	829	0.21	ug/L		90
5) Bromomethane	2.306	96	1688	1.10	ug/L		84
6) Chloroethane	2.428	64	226	0.22	ug/L	#	1
9) Carbon Disulfide	3.115	76	490	0.11	ug/L		77
11) Iodomethane	3.255	142	488	1.17	ug/L	#	47
12) Methylene Chloride	3.730	84	4955	Below Cal			82
13) Acetone	3.851	43	2013	1.67	ug/L		81
31) iso-Butyl Alcohol	6.267	43	180	0.67	ug/L	#	17
40) Toluene	8.146	91	1018	0.08	ug/L		93
52) m,p-Xylenes (2)	9.935	91	847	0.09	ug/L		94
70) 4-Isopropyltoluene	11.608	119	747	0.10	ug/L		80
73) n-Butylbenzene	11.936	91	1010	0.15	ug/L		84
76) Hexachlorobutadiene	13.183	223	275	0.46	ug/L	#	69
77) 1,2,4-Trichlorobenzene	13.226	180	236	0.10	ug/L		79

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052902.D
Acq On : 29 May 2019 2:45 pm
Operator : TB
Sample : 9E29058-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:33 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052903.D
Acq On : 29 May 2019 3:12 pm
Operator : TB
Sample : 9E29058-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:35 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

5/30/19

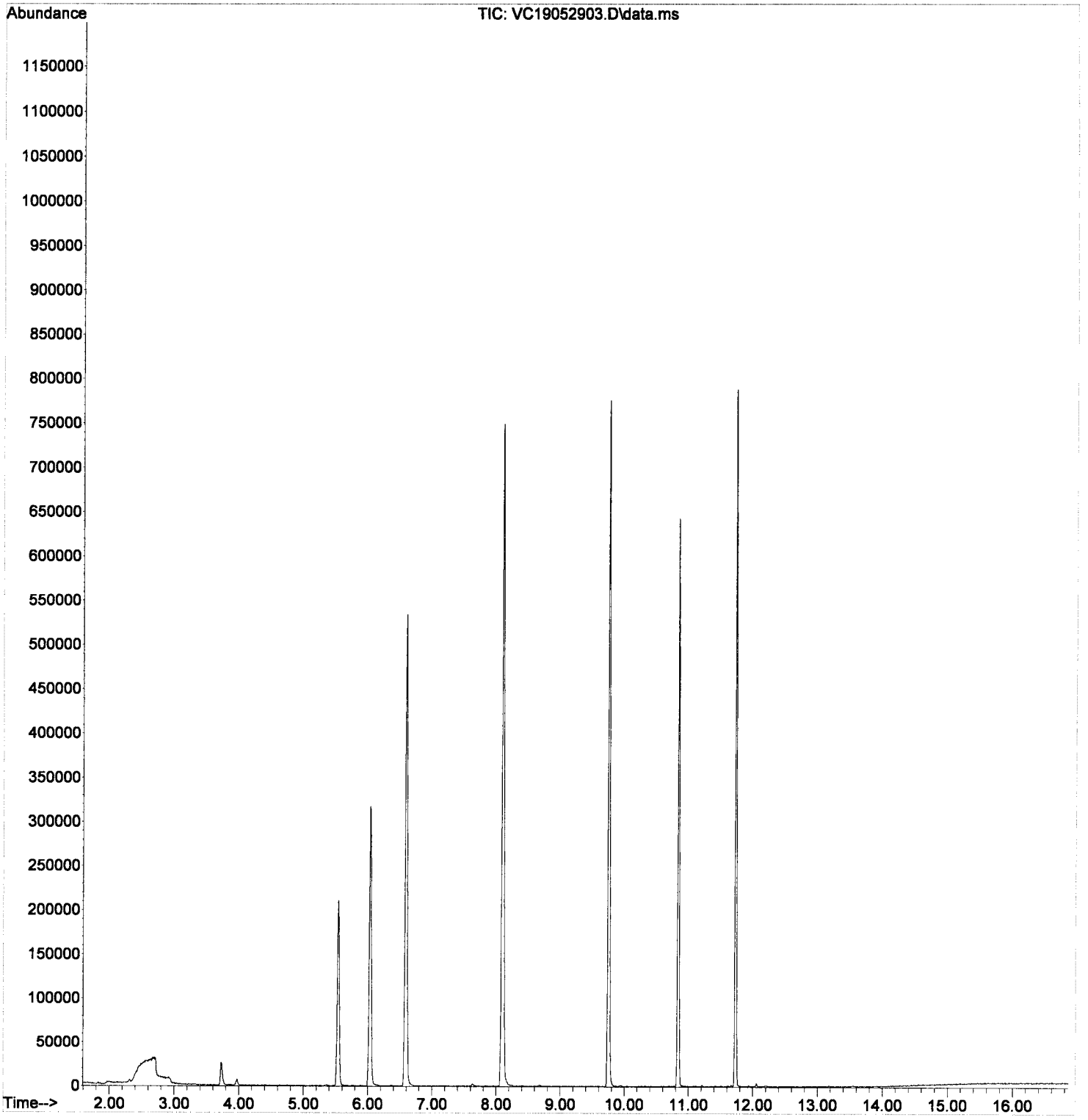
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	264985	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	454941	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.730	152	191224	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	144484	50.35	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	505611	49.61	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	616289	50.08	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	168509	51.03	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.862	50	752	0.19	ug/L		85
5) Bromomethane	2.318	96	1622	1.06	ug/L	#	70
6) Chloroethane	2.446	64	201	0.20	ug/L	#	1
9) Carbon Disulfide	3.109	76	430	0.10	ug/L		77
11) Iodomethane	3.261	142	356	1.06	ug/L	#	70
12) Methylene Chloride	3.730	84	14774	0.19	ug/L		93
13) Acetone	3.839	43	519	0.43	ug/L		94
15) n-Hexane	3.973	86	571	Below Cal		#	70
40) Toluene	8.159	91	1411	0.12	ug/L		93
52) m,p-Xylenes (2)	9.935	91	769	0.09	ug/L		77
73) n-Butylbenzene	11.930	91	689	0.11	ug/L		82

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052903.D
Acq On : 29 May 2019 3:12 pm
Operator : TB
Sample : 9E29058-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:35 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:57:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

post 5/30/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	259869	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	448840	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194580	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	139535	48.58	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	493490	49.16	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607580	49.91	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	167905	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d		
3) Chloromethane	1.855	50	835	0.23	ug/L		87
4) Vinyl Chloride	0.000		0	N.D.	d		
5) Bromomethane	2.306	96	1488	1.03	ug/L		89
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	0.000		0	N.D.			
8) 1,1-Dichloroethene	0.000		0	N.D.	d		
9) Carbon Disulfide	0.000		0	N.D.	d		
10) Freon 113	0.000		0	N.D.	d		
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.723	84	5028	1.70	ug/L		93
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.887	61	245	0.08	ug/L	#	37
15) n-Hexane	3.972	86	856	1.68	ug/L	#	89
16) Methyl-tert-butyl-ether	4.033	73	932	0.10	ug/L		75
17) 1,1-Dichloroethane	0.000		0	N.D.	d		
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.067	61	365	0.11	ug/L	#	56
20) 2,2-Dichloropropane	0.000		0	N.D.	d		
21) Bromochloromethane	0.000		0	N.D.	d		
22) Chloroform	5.347	83	862	0.20	ug/L		67
23) Carbon Tetrachloride	0.000		0	N.D.	d		
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.542	97	303	0.09	ug/L	#	65
27) 1,1-Dichloropropene	0.000		0	N.D.	d		
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.937	78	1225	0.11	ug/L		76
30) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	d		
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.558	130	358	0.12	ug/L	#	57
34) Dibromomethane	0.000		0	N.D.			
35) 1,2-Dichloropropane	0.000		0	N.D.	d		
36) Bromodichloromethane	0.000		0	N.D.	d		
38) c-1,3-Dichloropropene	0.000		0	N.D.			
40) Toluene	8.152	91	2496	0.22	ug/L		77
41) Tetrachloroethene (PCE)	8.602	166	338	0.13	ug/L	#	56
42) 4-Methyl-2-Pentanone (...	8.620	43	867	0.25	ug/L	#	41
43) t-1,3-Dichloropropene	8.657	75	268	0.08	ug/L		47
44) 1,1,2-Trichloroethane	8.821	97	229	0.09	ug/L	#	13
45) Dibromochloromethane	0.000		0	N.D.			
46) 1,3-Dichloropropane	9.113	76	438	0.10	ug/L	#	40
47) 1,2-Dibromoethane (EDB)	9.253	107	186	0.07	ug/L		78
48) 2-Hexanone	9.508	43	443	0.18	ug/L		71

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:57:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

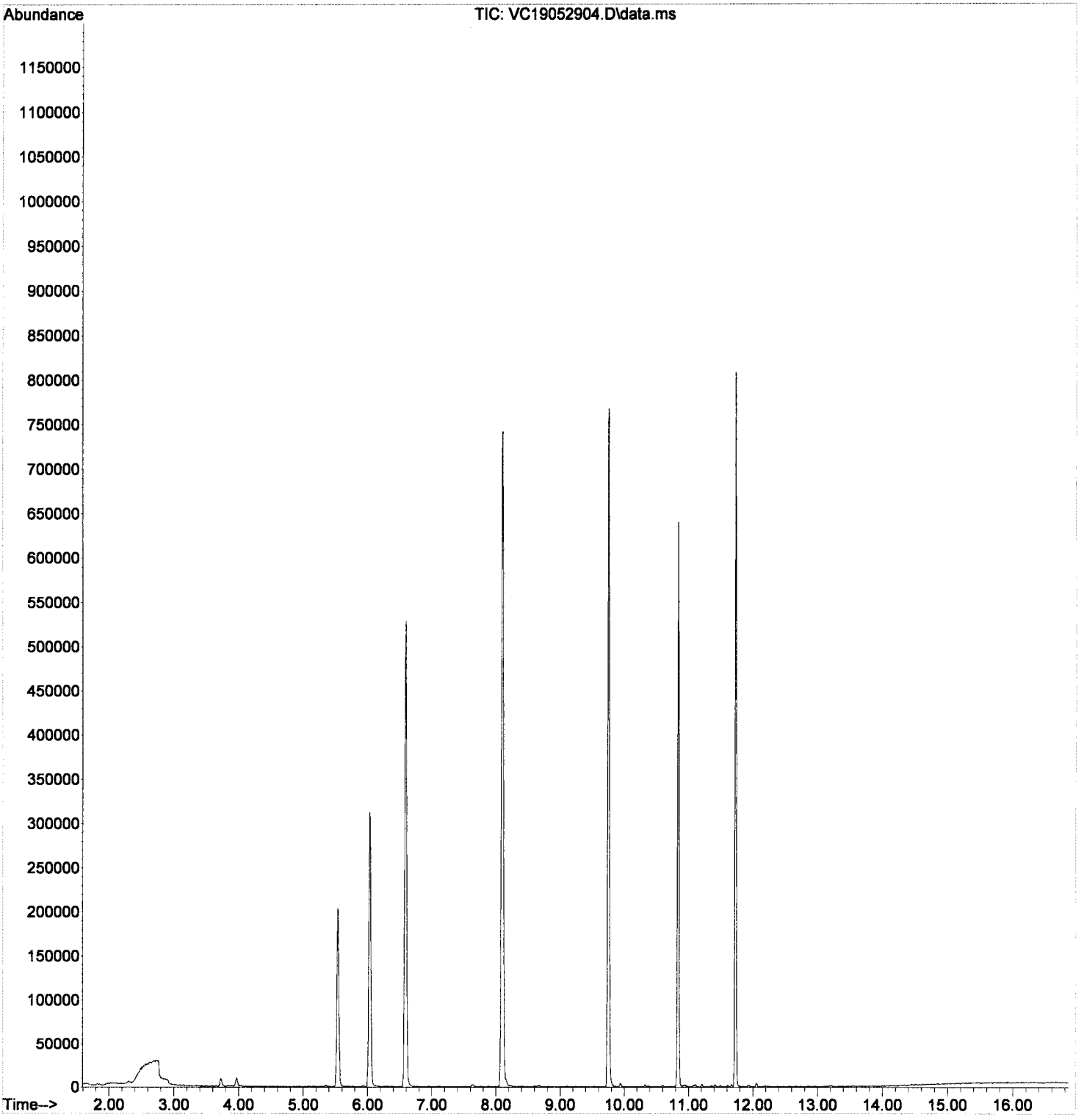
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	1131	0.16	ug/L	#	1
50) Ethylbenzene	9.800	91	1694	0.14	ug/L		86
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.940	91	2487	0.28	ug/L		90
53) o-Xylene	10.324	91	1273	0.14	ug/L		92
54) Styrene	10.378	104	585	0.08	ug/L		78
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.597	105	1325	0.13	ug/L		83
59) Bromobenzene	10.926	156	177	0.07	ug/L		87
60) n-Propylbenzene	10.944	91	1564	0.14	ug/L		86
61) 1,1,2,2-Tetrachloroethane	11.005	83	266	0.10	ug/L	#	25
62) 2-Chlorotoluene	11.072	126	260	0.11	ug/L	#	75
63) 1,3,5-Trimethylbenzene	11.108	105	1305	0.16	ug/L		84
64) 1,2,3-Trichloropropane	0.000		0	N.D.			
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.206	91	1133	0.16	ug/L		76
67) tert-Butylbenzene	11.358	91	480	0.11	ug/L	#	75
68) 1,2,4-Trimethylbenzene	11.412	105	965	0.12	ug/L		80
69) sec-Butylbenzene	11.504	105	1196	0.13	ug/L		89
70) 4-Isopropyltoluene	11.607	119	1072	0.14	ug/L		93
71) 1,3-Dichlorobenzene	11.674	146	610	0.14	ug/L		85
72) 1,4-Dichlorobenzene	11.741	146	690	0.16	ug/L	#	25
73) n-Butylbenzene	11.930	91	1118	0.18	ug/L		93
74) 1,2-Dichlorobenzene	12.063	146	533	0.13	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	13.183	223	235	0.38	ug/L	#	72
77) 1,2,4-Trichlorobenzene	13.213	180	358	0.15	ug/L		72
78) Naphthalene	13.493	128	706	0.08	ug/L		78
79) 1,2,3-Trichlorobenzene	13.663	180	105	0.04	ug/L		66

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:57:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

pre 5/30/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	259869	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	448840	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194580	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	139535	48.58	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	493490	49.16	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607580	49.91	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	167905	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.673	85	220	0.10	ug/L	#	50
3) Chloromethane	1.855	50	835	0.23	ug/L		87
4) Vinyl Chloride	1.953	62	263	0.10	ug/L	#	48
5) Bromomethane	2.306	96	1488	1.03	ug/L		89
6) Chloroethane	2.439	64	459	0.47	ug/L	#	1
7) Trichlorofluoromethane	0.000		0	N.D.			
8) 1,1-Dichloroethene	3.084	61	199	0.08	ug/L	#	63
9) Carbon Disulfide	3.109	76	586	0.14	ug/L		46
10) Freon 113	3.145	101	290	0.14	ug/L	#	18
11) Iodomethane	3.242	142	333	0.36	ug/L	#	47
12) Methylene Chloride	3.723	84	5028	1.70	ug/L		93
13) Acetone	3.808	43	123	0.11	ug/L	#	42
14) t-1,2-Dichloroethene	3.887	61	245	0.08	ug/L	#	37
15) n-Hexane	3.972	86	856	1.68	ug/L	#	89
16) Methyl-tert-butyl-ether	4.033	73	932	0.10	ug/L		75
17) 1,1-Dichloroethane	4.520	63	373	0.10	ug/L	#	49
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.067	61	365	0.11	ug/L	#	56
20) 2,2-Dichloropropane	5.177	77	202	0.07	ug/L		71
21) Bromochloromethane	5.262	49	156	0.08	ug/L	#	15
22) Chloroform	5.347	83	862	0.20	ug/L		67
23) Carbon Tetrachloride	5.481	117	134	0.06	ug/L		76
24) Tetrahydrofuran	5.530	42	135	0.09	ug/L	#	45
25) 1,1,1-Trichloroethane	5.542	97	303	0.09	ug/L	#	65
27) 1,1-Dichloropropene	5.670	75	369	0.11	ug/L	#	41
28) 2-Butanone (MEK)	5.718	43	696	0.33	ug/L		54
29) Benzene	5.937	78	1225	0.11	ug/L		76
30) 1,2-Dichloroethane (EDC)	6.156	62	233	0.07	ug/L	#	50
31) iso-Butyl Alcohol	6.260	43	192	0.75	ug/L		96
33) Trichloroethene (TCE)	6.558	130	358	0.12	ug/L	#	57
34) Dibromomethane	0.000		0	N.D.			
35) 1,2-Dichloropropane	7.111	63	306	0.10	ug/L	#	37
36) Bromodichloromethane	7.184	83	158	0.06	ug/L	#	26
38) c-1,3-Dichloropropene	0.000		0	N.D.			
40) Toluene	8.152	91	2496	0.22	ug/L		77
41) Tetrachloroethene (PCE)	8.602	166	338	0.13	ug/L	#	56
42) 4-Methyl-2-Pentanone (...	8.620	43	867	0.25	ug/L	#	41
43) t-1,3-Dichloropropene	8.657	75	268	0.08	ug/L		47
44) 1,1,2-Trichloroethane	8.821	97	229	0.09	ug/L	#	13
45) Dibromochloromethane	0.000		0	N.D.			
46) 1,3-Dichloropropane	9.113	76	438	0.10	ug/L	#	40
47) 1,2-Dibromoethane (EDB)	9.253	107	186	0.07	ug/L		78
48) 2-Hexanone	9.508	43	443	0.18	ug/L		71

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

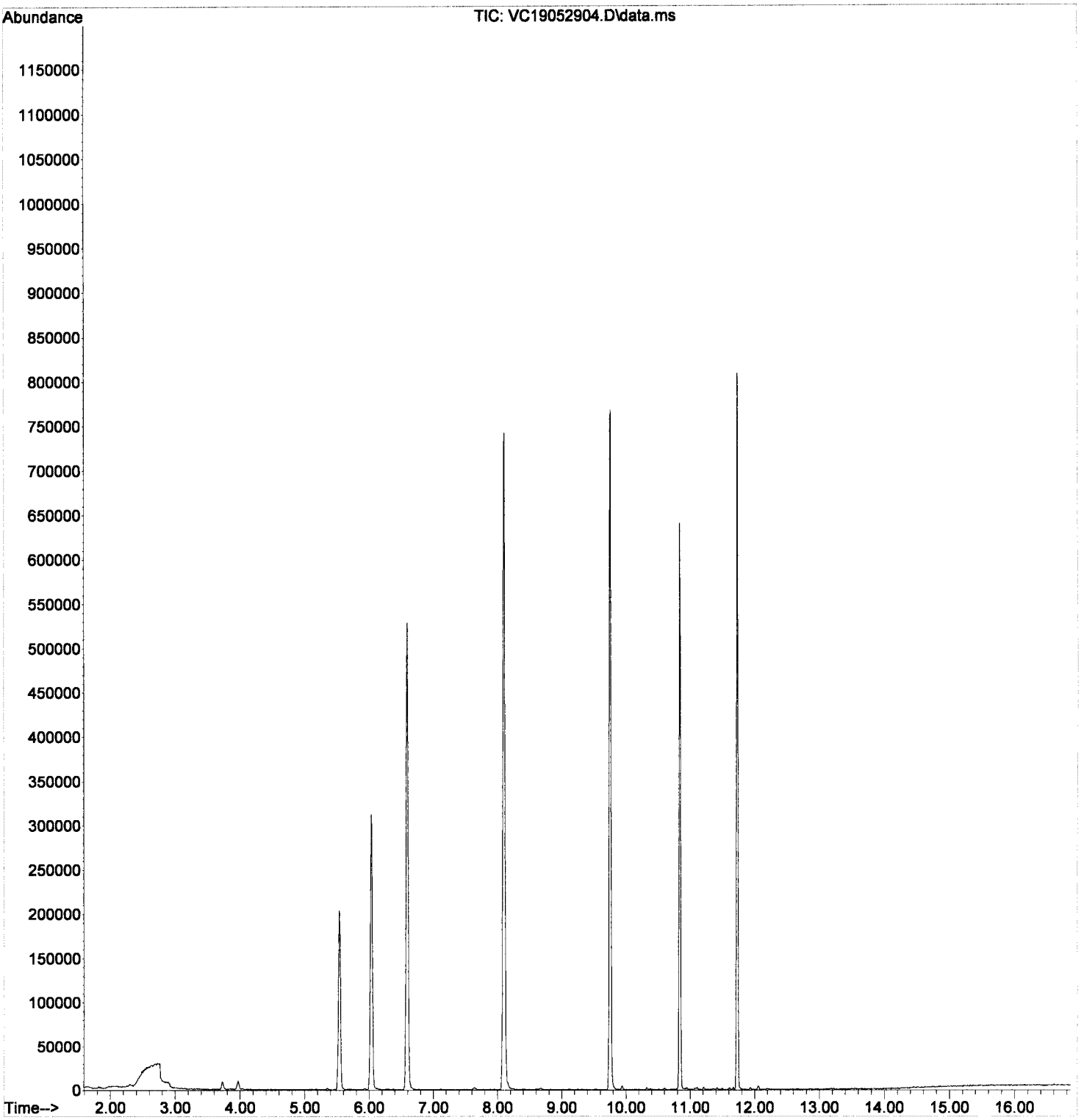
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Chlorobenzene	9.764	112	1131	0.16	ug/L #	1
50) Ethylbenzene	9.800	91	1694	0.14	ug/L	86
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.		
52) m,p-Xylenes (2)	9.940	91	2487	0.28	ug/L	90
53) o-Xylene	10.324	91	1273	0.14	ug/L	92
54) Styrene	10.378	104	585	0.08	ug/L	78
55) Bromoform	0.000		0	N.D.		
56) Isopropylbenzene	10.597	105	1325	0.13	ug/L	83
59) Bromobenzene	10.926	156	177	0.07	ug/L	87
60) n-Propylbenzene	10.944	91	1564	0.14	ug/L	86
61) 1,1,2,2-Tetrachloroethane	11.005	83	266	0.10	ug/L #	25
62) 2-Chlorotoluene	11.072	126	260	0.11	ug/L #	75
63) 1,3,5-Trimethylbenzene	11.108	105	1305	0.16	ug/L	84
64) 1,2,3-Trichloropropane	0.000		0	N.D.		
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.		
66) 4-Chlorotoluene	11.206	91	1133	0.16	ug/L	76
67) tert-Butylbenzene	11.358	91	480	0.11	ug/L #	75
68) 1,2,4-Trimethylbenzene	11.412	105	965	0.12	ug/L	80
69) sec-Butylbenzene	11.504	105	1196	0.13	ug/L	89
70) 4-Isopropyltoluene	11.607	119	1072	0.14	ug/L	93
71) 1,3-Dichlorobenzene	11.674	146	610	0.14	ug/L	85
72) 1,4-Dichlorobenzene	11.741	146	690	0.16	ug/L #	25
73) n-Butylbenzene	11.930	91	1118	0.18	ug/L	93
74) 1,2-Dichlorobenzene	12.063	146	533	0.13	ug/L	93
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.		
76) Hexachlorobutadiene	13.183	223	235	0.38	ug/L #	72
77) 1,2,4-Trichlorobenzene	13.213	180	358	0.15	ug/L	72
78) Naphthalene	13.493	128	706	0.08	ug/L	78
79) 1,2,3-Trichlorobenzene	13.663	180	105	0.04	ug/L	66

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

5/30/19 post

Quant Time: May 30 12:04:06 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	256759	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	446684	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	191276	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	136690	48.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	491851	49.59	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	603494	49.82	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	165726	49.89	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.673	85	475	0.21	ug/L		62
3) Chloromethane	1.868	50	1572	0.43	ug/L		78
4) Vinyl Chloride	1.953	62	515	0.20	ug/L		92
5) Bromomethane	2.306	96	1803	1.27	ug/L		94
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	0.000		0	N.D.	d		
8) 1,1-Dichloroethene	3.103	61	456	0.18	ug/L		93
9) Carbon Disulfide	3.115	76	835	0.21	ug/L		77
10) Freon 113	3.158	101	603	0.29	ug/L	#	9
11) Iodomethane	3.249	142	437	0.47	ug/L	#	21
12) Methylene Chloride	3.730	84	14589	5.00	ug/L		86
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.894	61	734	0.24	ug/L		80
15) n-Hexane	3.973	86	874	1.73	ug/L	#	86
16) Methyl-tert-butyl-ether	4.034	73	1802	0.20	ug/L		86
17) 1,1-Dichloroethane	4.533	63	735	0.19	ug/L		68
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.068	61	611	0.18	ug/L		78
20) 2,2-Dichloropropane	0.000		0	N.D.	d		
21) Bromochloromethane	5.269	49	453	0.22	ug/L		87
22) Chloroform	5.348	83	1314	0.30	ug/L		90
23) Carbon Tetrachloride	5.488	117	416	0.17	ug/L	#	52
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.536	97	657m	0.19	ug/L		
27) 1,1-Dichloropropene	5.688	75	822	0.24	ug/L	#	65
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.932	78	2321	0.21	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.151	62	685	0.21	ug/L	#	50
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.552	130	778	0.26	ug/L	#	69
34) Dibromomethane	7.003	93	150	0.10	ug/L		83
35) 1,2-Dichloropropane	7.106	63	596	0.20	ug/L		91
36) Bromodichloromethane	7.185	83	431	0.16	ug/L	#	26
38) c-1,3-Dichloropropene	7.891	75	602	0.16	ug/L	#	74
40) Toluene	8.152	91	3425	0.30	ug/L		91
41) Tetrachloroethene (PCE)	8.602	166	698	0.27	ug/L		88
42) 4-Methyl-2-Pentanone (...	8.621	43	1694	0.49	ug/L		92
43) t-1,3-Dichloropropene	8.657	75	575	0.17	ug/L		47
44) 1,1,2-Trichloroethane	8.828	97	506	0.20	ug/L	#	46
45) Dibromochloromethane	9.028	129	172	0.10	ug/L	#	15
46) 1,3-Dichloropropane	9.120	76	988	0.22	ug/L		83
47) 1,2-Dibromoethane (EDB)	9.247	107	298	0.12	ug/L		82
48) 2-Hexanone	9.509	43	765	0.31	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:04:06 2019
Quant Method : C:\msdchem\1\METHODS\VC~~190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.770	112	1617	0.23	ug/L	#	58
50) Ethylbenzene	9.801	91	2895	0.25	ug/L		70
51) 1,1,1,2-Tetrachloroethane	9.837	131	318	0.15	ug/L	#	81
52) m,p-Xylenes (2)	9.941	91	4246	0.49	ug/L		88
53) o-Xylene	10.330	91	2232	0.25	ug/L		99
54) Styrene	10.373	104	1051	0.15	ug/L		100
55) Bromoform	0.000		0	N.D.	d		
56) Isopropylbenzene	10.592	105	2225	0.21	ug/L		92
59) Bromobenzene	10.920	156	513	0.20	ug/L	#	70
60) n-Propylbenzene	10.945	91	2483	0.22	ug/L		88
61) 1,1,2,2-Tetrachloroethane	11.012	83	439	0.17	ug/L		70
62) 2-Chlorotoluene	11.085	126	535	0.23	ug/L	#	51
63) 1,3,5-Trimethylbenzene	11.103	105	1776	0.22	ug/L		91
64) 1,2,3-Trichloropropane	11.121	110	144	0.14	ug/L	#	84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.212	91	1680	0.25	ug/L		95
67) tert-Butylbenzene	11.358	91	1208	0.28	ug/L		82
68) 1,2,4-Trimethylbenzene	11.413	105	1610	0.20	ug/L		86
69) sec-Butylbenzene	11.498	105	2071	0.23	ug/L		92
70) 4-Isopropyltoluene	11.608	119	1749	0.23	ug/L		94
71) 1,3-Dichlorobenzene	11.675	146	927	0.22	ug/L		86
72) 1,4-Dichlorobenzene	11.735	146	1152	0.27	ug/L	#	32
73) n-Butylbenzene	11.936	91	1667	0.27	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	833	0.21	ug/L		80
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	13.177	223	296	0.48	ug/L	#	65
77) 1,2,4-Trichlorobenzene	13.220	180	579	0.25	ug/L		74
78) Naphthalene	13.500	128	1368	0.16	ug/L		76
79) 1,2,3-Trichlorobenzene	13.658	180	532	0.23	ug/L		86

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	256759	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	446684	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	191276	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	136690	48.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	491851	49.59	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	603494	49.82	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	165726	49.89	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.673	85	475	0.21	ug/L		62
3) Chloromethane	1.868	50	1572	0.43	ug/L		78
4) Vinyl Chloride	1.953	62	515	0.20	ug/L		92
5) Bromomethane	2.306	96	1803	1.27	ug/L		94
6) Chloroethane	2.501	64	307	0.32	ug/L	#	1
7) Trichlorofluoromethane	2.568	101	138	0.09	ug/L	#	1
8) 1,1-Dichloroethene	3.103	61	456	0.18	ug/L		93
9) Carbon Disulfide	3.115	76	835	0.21	ug/L		77
10) Freon 113	3.158	101	603	0.29	ug/L	#	9
11) Iodomethane	3.249	142	437	0.47	ug/L	#	21
12) Methylene Chloride	3.730	84	14589	5.00	ug/L		86
13) Acetone	3.845	43	1953	1.75	ug/L		90
14) t-1,2-Dichloroethene	3.894	61	734	0.24	ug/L		80
15) n-Hexane	3.973	86	874	1.73	ug/L	#	86
16) Methyl-tert-butyl-ether	4.034	73	1802	0.20	ug/L		86
17) 1,1-Dichloroethane	4.533	63	735	0.19	ug/L		68
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.068	61	611	0.18	ug/L		78
20) 2,2-Dichloropropane	5.165	77	653	0.22	ug/L		83
21) Bromochloromethane	5.269	49	453	0.22	ug/L		87
22) Chloroform	5.348	83	1314	0.30	ug/L		90
23) Carbon Tetrachloride	5.488	117	416	0.17	ug/L	#	52
24) Tetrahydrofuran	5.542	42	330	0.21	ug/L	#	67
25) 1,1,1-Trichloroethane	~~5.549~~	~~97~~	~~430~~	~~0.13~~	~~ug/L~~		~~79~~ MI
27) 1,1-Dichloropropene	5.688	75	822	0.24	ug/L	#	65
28) 2-Butanone (MEK)	5.731	43	1214	0.59	ug/L		54
29) Benzene	5.932	78	2321	0.21	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.151	62	685	0.21	ug/L	#	50
31) iso-Butyl Alcohol	6.285	43	738	2.90	ug/L		74
33) Trichloroethene (TCE)	6.552	130	778	0.26	ug/L	#	69
34) Dibromomethane	7.003	93	150	0.10	ug/L		83
35) 1,2-Dichloropropane	7.106	63	596	0.20	ug/L		91
36) Bromodichloromethane	7.185	83	431	0.16	ug/L	#	26
38) c-1,3-Dichloropropene	7.891	75	602	0.16	ug/L	#	74
40) Toluene	8.152	91	3425	0.30	ug/L		91
41) Tetrachloroethene (PCE)	8.602	166	698	0.27	ug/L		88
42) 4-Methyl-2-Pentanone (...	8.621	43	1694	0.49	ug/L		92
43) t-1,3-Dichloropropene	8.657	75	575	0.17	ug/L		47
44) 1,1,2-Trichloroethane	8.828	97	506	0.20	ug/L	#	46
45) Dibromochloromethane	9.028	129	172	0.10	ug/L	#	15
46) 1,3-Dichloropropane	9.120	76	988	0.22	ug/L		83
47) 1,2-Dibromoethane (EDB)	9.247	107	298	0.12	ug/L		82
48) 2-Hexanone	9.509	43	765	0.31	ug/L		89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

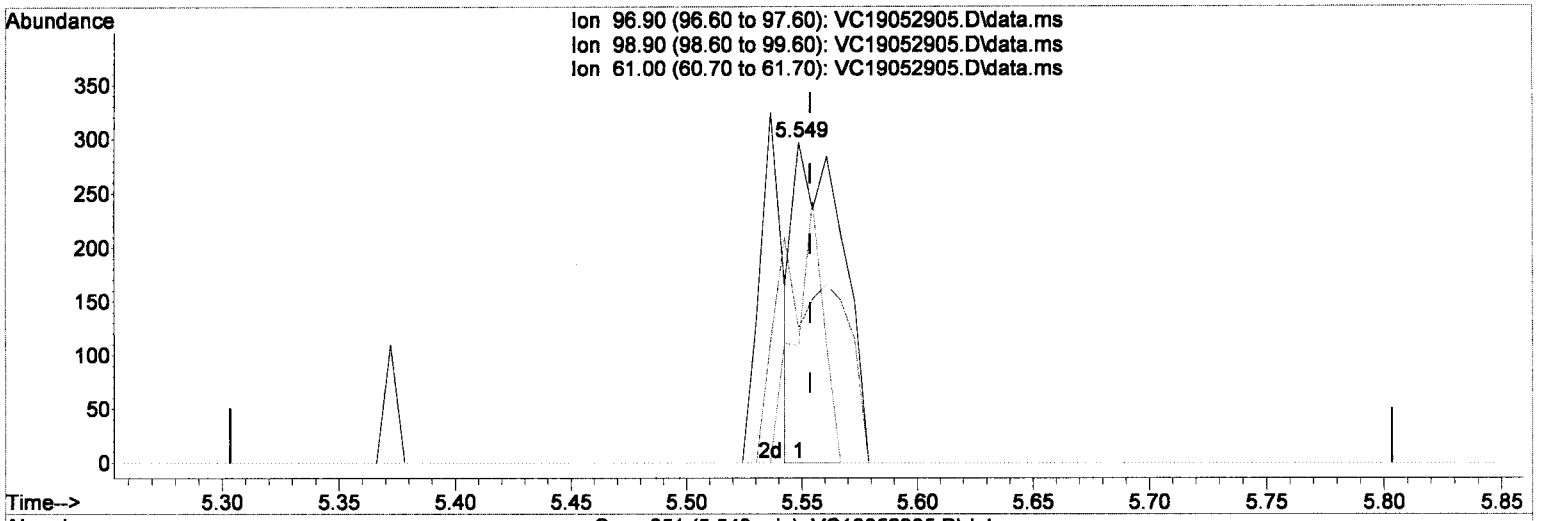
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.770	112	1617	0.23	ug/L	#	58
50) Ethylbenzene	9.801	91	2895	0.25	ug/L		70
51) 1,1,1,2-Tetrachloroethane	9.837	131	318	0.15	ug/L	#	81
52) m,p-Xylenes (2)	9.941	91	4246	0.49	ug/L		88
53) o-Xylene	10.330	91	2232	0.25	ug/L		99
54) Styrene	10.373	104	1051	0.15	ug/L		100
55) Bromoform	10.391	173	127	0.13	ug/L	#	36
56) Isopropylbenzene	10.592	105	2225	0.21	ug/L		92
59) Bromobenzene	10.920	156	513	0.20	ug/L	#	70
60) n-Propylbenzene	10.945	91	2483	0.22	ug/L		88
61) 1,1,2,2-Tetrachloroethane	11.012	83	439	0.17	ug/L		70
62) 2-Chlorotoluene	11.085	126	535	0.23	ug/L	#	51
63) 1,3,5-Trimethylbenzene	11.103	105	1776	0.22	ug/L		91
64) 1,2,3-Trichloropropane	11.121	110	144	0.14	ug/L	#	84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.212	91	1680	0.25	ug/L		95
67) tert-Butylbenzene	11.358	91	1208	0.28	ug/L		82
68) 1,2,4-Trimethylbenzene	11.413	105	1610	0.20	ug/L		86
69) sec-Butylbenzene	11.498	105	2071	0.23	ug/L		92
70) 4-Isopropyltoluene	11.608	119	1749	0.23	ug/L		94
71) 1,3-Dichlorobenzene	11.675	146	927	0.22	ug/L		86
72) 1,4-Dichlorobenzene	11.735	146	1152	0.27	ug/L	#	32
73) n-Butylbenzene	11.936	91	1667	0.27	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	833	0.21	ug/L		80
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	13.177	223	296	0.48	ug/L	#	65
77) 1,2,4-Trichlorobenzene	13.220	180	579	0.25	ug/L		74
78) Naphthalene	13.500	128	1368	0.16	ug/L		76
79) 1,2,3-Trichlorobenzene	13.658	180	532	0.23	ug/L		86

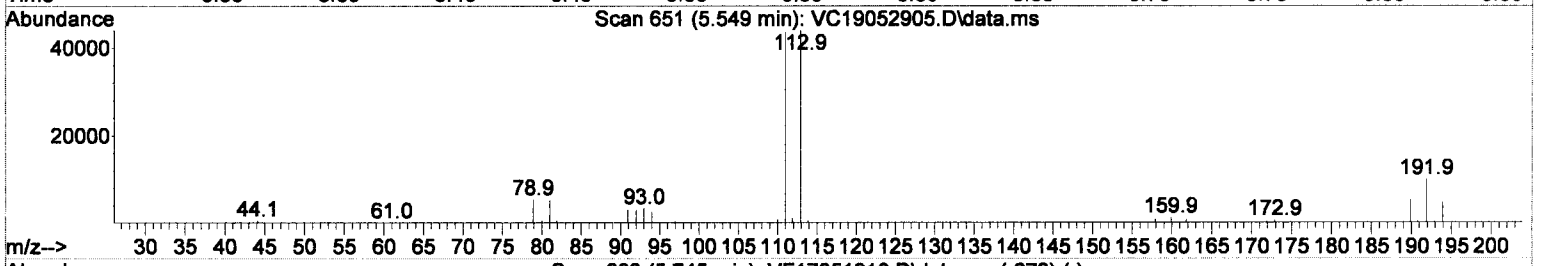
(#) = qualifier out of range (m) = manual integration (+) = signals summed

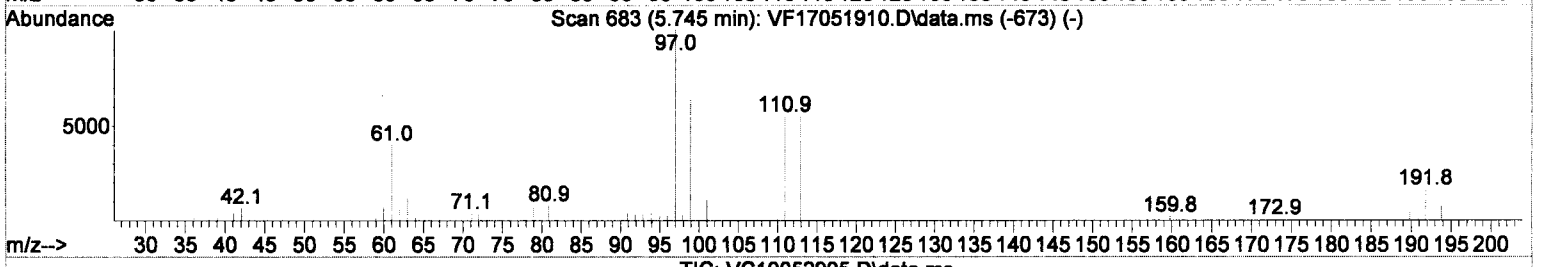
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052905.D\data.ms

(25) 1,1,1-Trichloroethane

5.549min (-0.005) 0.12 ug/L

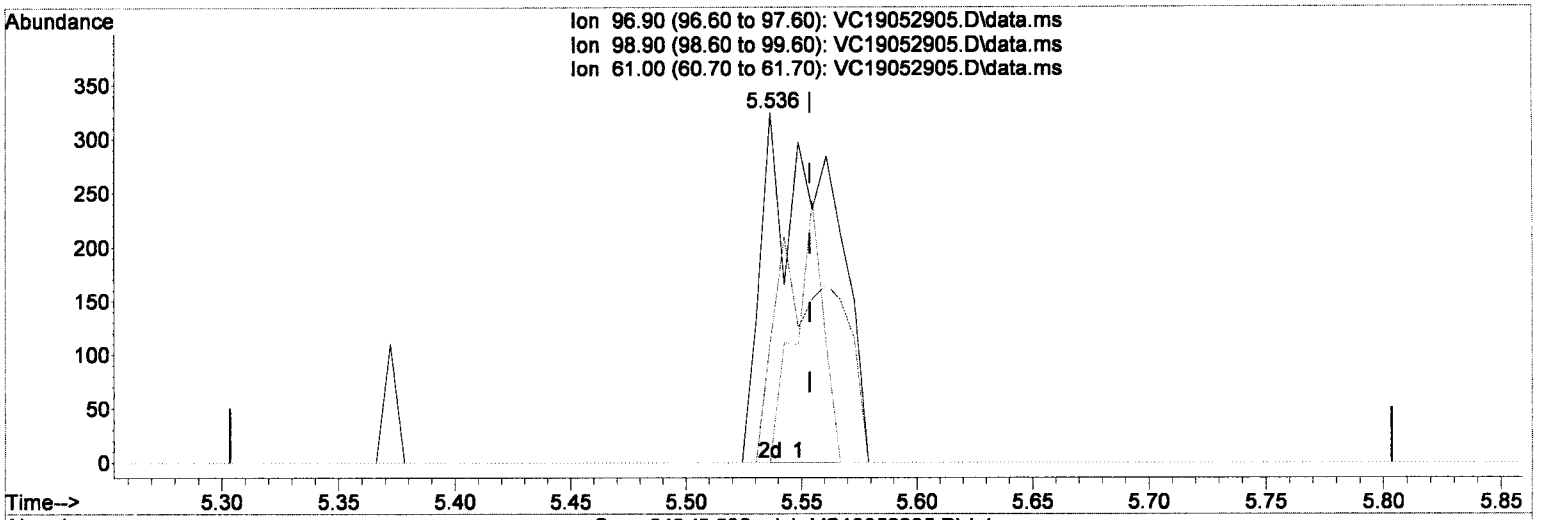
response 430

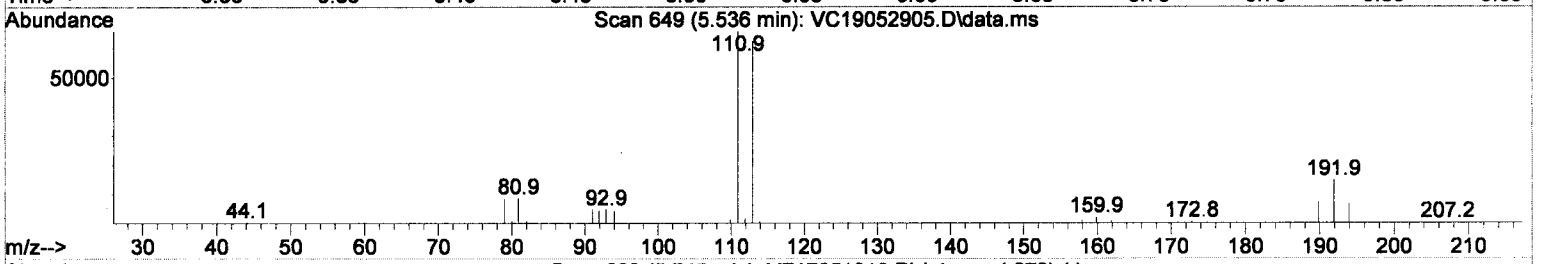
Ion	Exp%	Act%
96.90	100	100
98.90	65.60	42.09
61.00	42.20	36.70
0.00	0.00	0.00

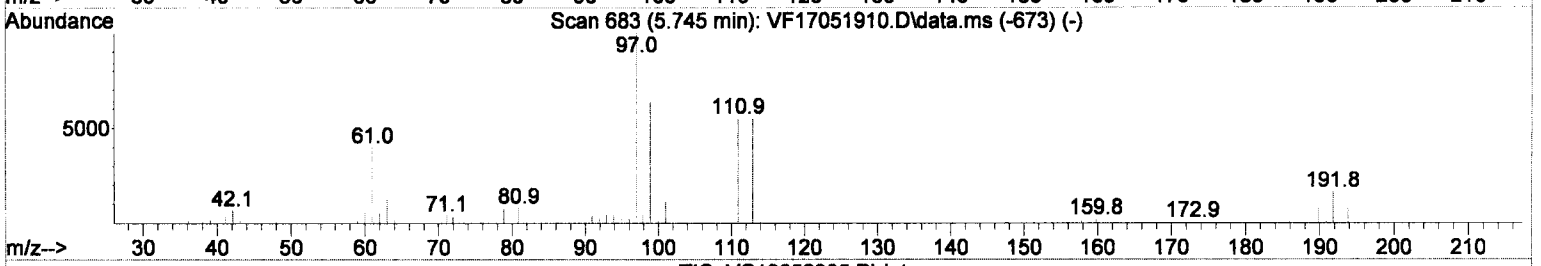
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052905.D\data.ms

(25) 1,1,1-Trichloroethane

5.536min (-0.017) 0.19 ug/L m

response 657

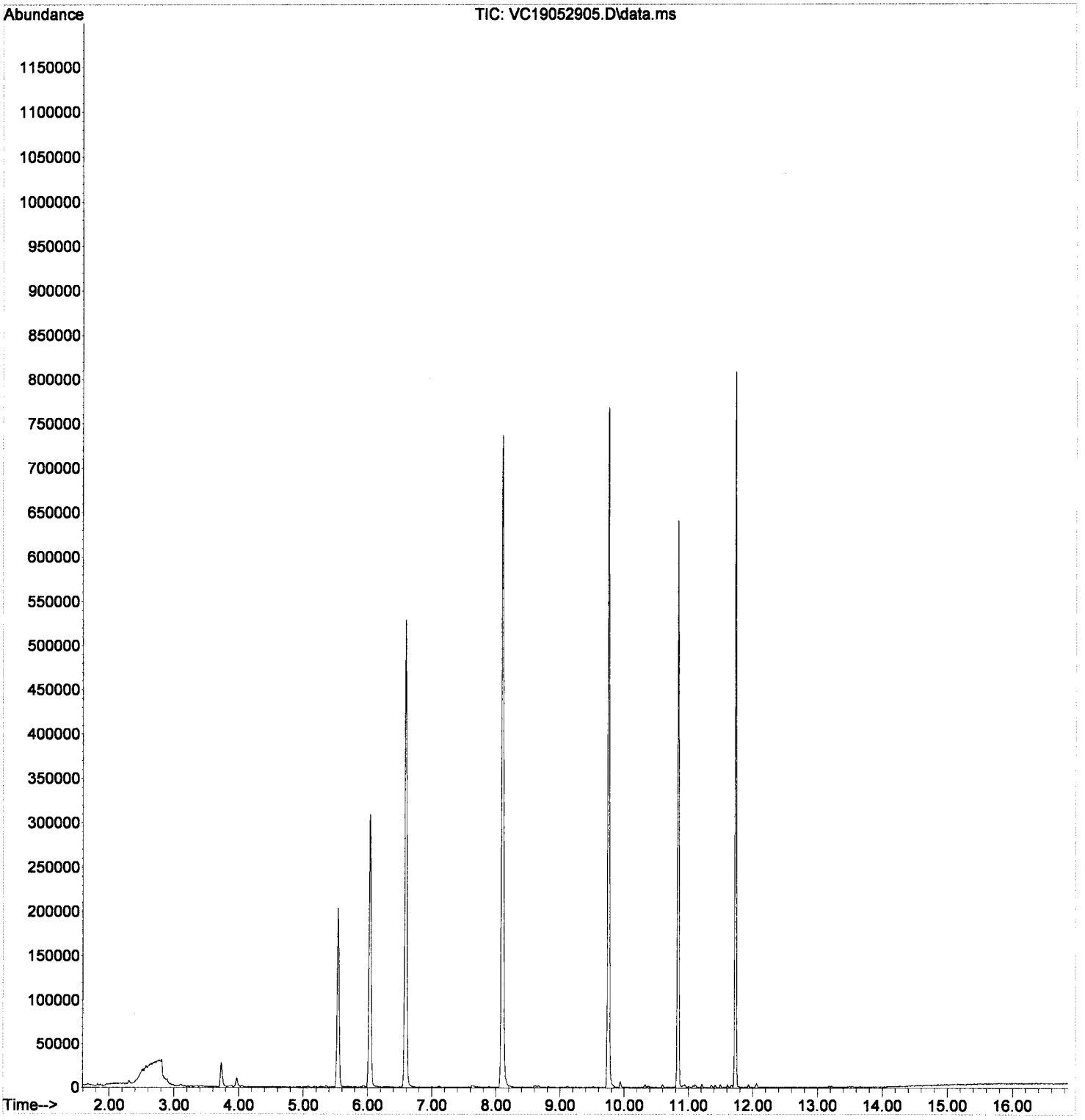
Ion	Exp%	Act%
96.90	100	100
98.90	65.60	64.37
61.00	42.20	0.00# - present
0.00	0.00	0.00

5/30/19

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:04:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

post
5/30/19

Quant Time: May 30 12:05:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.032	168	254275	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	441530	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	188614	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.539	111	132413	47.12	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	485518	49.43	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	596173	49.79	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	163321	49.86	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.664	85	840	0.37	ug/L		88
3) Chloromethane	1.864	50	1870	0.52	ug/L		99
4) Vinyl Chloride	1.956	62	1058	0.41	ug/L		74
5) Bromomethane	2.308	96	2178	1.55	ug/L		97
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	2.582	101	561	0.38	ug/L		76
8) 1,1-Dichloroethene	3.105	61	1130	0.44	ug/L		91
9) Carbon Disulfide	3.118	76	1568	0.39	ug/L		74
10) Freon 113	3.166	101	935	0.45	ug/L	#	48
11) Iodomethane	3.245	142	415	0.45	ug/L	#	76
12) Methylene Chloride	3.732	84	15095	5.22	ug/L		96
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.902	61	1162	0.38	ug/L		85
15) n-Hexane	3.975	86	1123	2.25	ug/L	#	74
16) Methyl-tert-butyl-ether	4.042	73	3675	0.41	ug/L		88
17) 1,1-Dichloroethane	4.529	63	1418	0.38	ug/L		82
18) Acrylonitrile	4.620	53	342	0.23	ug/L		97
19) c-1,2-Dichloroethene	5.076	61	1412	0.42	ug/L		85
20) 2,2-Dichloropropane	5.180	77	1168	0.40	ug/L		77
21) Bromochloromethane	5.271	49	660	0.33	ug/L		82
22) Chloroform	5.356	83	2051	0.48	ug/L		94
23) Carbon Tetrachloride	5.472	117	700	0.30	ug/L		87
24) Tetrahydrofuran	5.539	42	841	0.55	ug/L	#	66
25) 1,1,1-Trichloroethane	5.545	97	1382	0.40	ug/L		83
27) 1,1-Dichloropropene	5.691	75	1310	0.39	ug/L		90
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.934	78	4546	0.41	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.147	62	1395	0.42	ug/L		80
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.561	130	1054	0.35	ug/L	#	72
34) Dibromomethane	6.999	93	572	0.37	ug/L	#	68
35) 1,2-Dichloropropane	7.114	63	1068	0.37	ug/L		95
36) Bromodichloromethane	7.181	83	872	0.33	ug/L		86
38) c-1,3-Dichloropropene	7.899	75	1128	0.30	ug/L		93
40) Toluene	8.161	91	5721	0.50	ug/L		99
41) Tetrachloroethene (PCE)	8.605	166	1321	0.52	ug/L		77
42) 4-Methyl-2-Pentanone (...	8.623	43	3139	0.91	ug/L		80
43) t-1,3-Dichloropropene	8.654	75	908	0.27	ug/L		95
44) 1,1,2-Trichloroethane	8.818	97	911	0.37	ug/L		82
45) Dibromochloromethane	9.006	129	549	0.31	ug/L		81
46) 1,3-Dichloropropane	9.116	76	1866	0.42	ug/L		96
47) 1,2-Dibromoethane (EDB)	9.256	107	794	0.32	ug/L		70
48) 2-Hexanone	9.511	43	1839	0.74	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:05:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

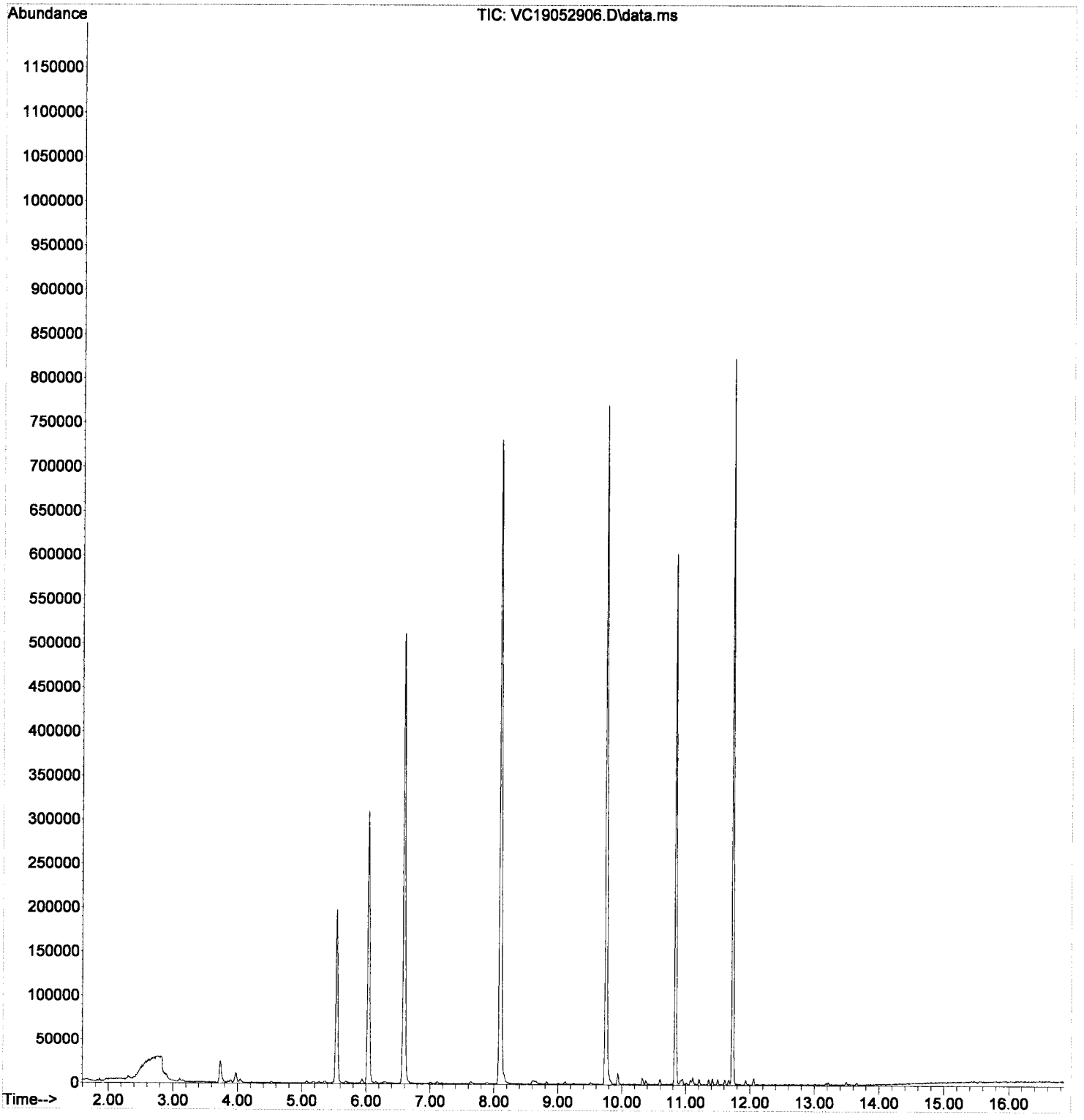
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.767	112	3136	0.46	ug/L	#	64
50) Ethylbenzene	9.797	91	5392	0.46	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.834	131	602	0.29	ug/L		90
52) m,p-Xylenes (2)	9.937	91	7624	0.88	ug/L		90
53) o-Xylene	10.326	91	3760	0.42	ug/L		92
54) Styrene	10.375	104	2262	0.33	ug/L		95
55) Bromoform	10.393	173	186	0.19	ug/L		93
56) Isopropylbenzene	10.594	105	4105	0.40	ug/L		94
59) Bromobenzene	10.917	156	1043	0.41	ug/L		83
60) n-Propylbenzene	10.947	91	4750	0.42	ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.008	83	1001	0.39	ug/L		71
62) 2-Chlorotoluene	11.069	126	911	0.39	ug/L	#	77
63) 1,3,5-Trimethylbenzene	11.105	105	3139	0.40	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	500	0.48	ug/L		84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.209	91	2912	0.43	ug/L		97
67) tert-Butylbenzene	11.361	91	1681	0.40	ug/L		93
68) 1,2,4-Trimethylbenzene	11.415	105	3385	0.43	ug/L		90
69) sec-Butylbenzene	11.501	105	3773	0.42	ug/L		92
70) 4-Isopropyltoluene	11.610	119	3163	0.42	ug/L		98
71) 1,3-Dichlorobenzene	11.677	146	1855	0.44	ug/L		90
72) 1,4-Dichlorobenzene	11.744	146	1914	0.46	ug/L		95
73) n-Butylbenzene	11.932	91	2690	0.44	ug/L		91
74) 1,2-Dichlorobenzene	12.060	146	1753	0.45	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	d		
76) Hexachlorobutadiene	13.192	223	375	0.62	ug/L	#	37
77) 1,2,4-Trichlorobenzene	13.216	180	812	0.35	ug/L		90
78) Naphthalene	13.496	128	2785	0.33	ug/L		94
79) 1,2,3-Trichlorobenzene	13.660	180	850	0.37	ug/L		92

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:05:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:48 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.032	168	254275	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	441530	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	188614	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.539	111	132413	47.12	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	485518	49.43	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	596173	49.79	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	163321	49.86	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.664	85	840	0.37	ug/L		88
3) Chloromethane	1.864	50	1870	0.52	ug/L		99
4) Vinyl Chloride	1.956	62	1058	0.41	ug/L		74
5) Bromomethane	2.308	96	2178	1.55	ug/L		97
6) Chloroethane	2.442	64	407	0.43	ug/L	#	1
7) Trichlorofluoromethane	2.582	101	561	0.38	ug/L		76
8) 1,1-Dichloroethene	3.105	61	1130	0.44	ug/L		91
9) Carbon Disulfide	3.118	76	1568	0.39	ug/L		74
10) Freon 113	3.166	101	935	0.45	ug/L	#	48
11) Iodomethane	3.245	142	415	0.45	ug/L	#	76
12) Methylene Chloride	3.732	84	15095	5.22	ug/L		96
13) Acetone	3.854	43	2175	1.97	ug/L		93
14) t-1,2-Dichloroethene	3.902	61	1162	0.38	ug/L		85
15) n-Hexane	3.975	86	1123	2.25	ug/L	#	74
16) Methyl-tert-butyl-ether	4.042	73	3675	0.41	ug/L		88
17) 1,1-Dichloroethane	4.529	63	1418	0.38	ug/L		82
18) Acrylonitrile	4.620	53	342	0.23	ug/L		97
19) c-1,2-Dichloroethene	5.076	61	1412	0.42	ug/L		85
20) 2,2-Dichloropropane	5.180	77	1168	0.40	ug/L		77
21) Bromochloromethane	5.271	49	660	0.33	ug/L		82
22) Chloroform	5.356	83	2051	0.48	ug/L		94
23) Carbon Tetrachloride	5.472	117	700	0.30	ug/L		87
24) Tetrahydrofuran	5.539	42	841	0.55	ug/L	#	66
25) 1,1,1-Trichloroethane	5.545	97	1382	0.40	ug/L		83
27) 1,1-Dichloropropene	5.691	75	1310	0.39	ug/L		90
28) 2-Butanone (MEK)	5.721	43	1770	0.86	ug/L		91
29) Benzene	5.934	78	4546	0.41	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.147	62	1395	0.42	ug/L		80
31) iso-Butyl Alcohol	6.287	43	1484	5.89	ug/L		90
33) Trichloroethene (TCE)	6.561	130	1054	0.35	ug/L	#	72
34) Dibromomethane	6.999	93	572	0.37	ug/L	#	68
35) 1,2-Dichloropropane	7.114	63	1068	0.37	ug/L		95
36) Bromodichloromethane	7.181	83	872	0.33	ug/L		86
38) c-1,3-Dichloropropene	7.899	75	1128	0.30	ug/L		93
40) Toluene	8.161	91	5721	0.50	ug/L		99
41) Tetrachloroethene (PCE)	8.605	166	1321	0.52	ug/L		77
42) 4-Methyl-2-Pentanone (...	8.623	43	3139	0.91	ug/L		80
43) t-1,3-Dichloropropene	8.654	75	908	0.27	ug/L		95
44) 1,1,2-Trichloroethane	8.818	97	911	0.37	ug/L		82
45) Dibromochloromethane	9.006	129	549	0.31	ug/L		81
46) 1,3-Dichloropropane	9.116	76	1866	0.42	ug/L		96
47) 1,2-Dibromoethane (EDB)	9.256	107	794	0.32	ug/L		70
48) 2-Hexanone	9.511	43	1839	0.74	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

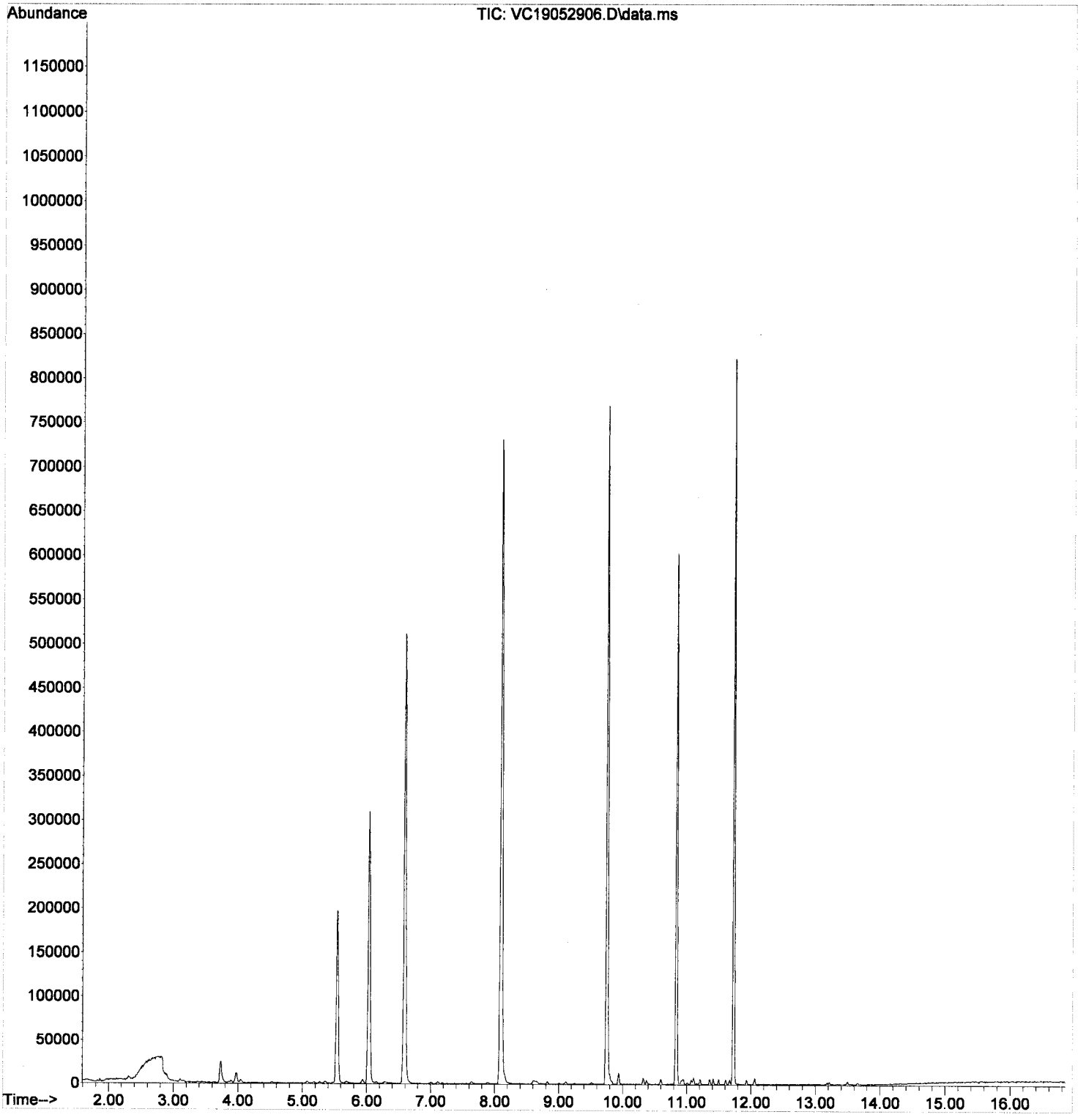
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.767	112	3136	0.46	ug/L	#	64
50) Ethylbenzene	9.797	91	5392	0.46	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.834	131	602	0.29	ug/L		90
52) m,p-Xylenes (2)	9.937	91	7624	0.88	ug/L		90
53) o-Xylene	10.326	91	3760	0.42	ug/L		92
54) Styrene	10.375	104	2262	0.33	ug/L		95
55) Bromoform	10.393	173	186	0.19	ug/L		93
56) Isopropylbenzene	10.594	105	4105	0.40	ug/L		94
59) Bromobenzene	10.917	156	1043	0.41	ug/L		83
60) n-Propylbenzene	10.947	91	4750	0.42	ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.008	83	1001	0.39	ug/L		71
62) 2-Chlorotoluene	11.069	126	911	0.39	ug/L	#	77
63) 1,3,5-Trimethylbenzene	11.105	105	3139	0.40	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	500	0.48	ug/L		84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.209	91	2912	0.43	ug/L		97
67) tert-Butylbenzene	11.361	91	1681	0.40	ug/L		93
68) 1,2,4-Trimethylbenzene	11.415	105	3385	0.43	ug/L		90
69) sec-Butylbenzene	11.501	105	3773	0.42	ug/L		92
70) 4-Isopropyltoluene	11.610	119	3163	0.42	ug/L		98
71) 1,3-Dichlorobenzene	11.677	146	1855	0.44	ug/L		90
72) 1,4-Dichlorobenzene	11.744	146	1914	0.46	ug/L		95
73) n-Butylbenzene	11.932	91	2690	0.44	ug/L		91
74) 1,2-Dichlorobenzene	12.060	146	1753	0.45	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	12.681	157	107	0.18	ug/L	#	30
76) Hexachlorobutadiene	13.192	223	375	0.62	ug/L	#	37
77) 1,2,4-Trichlorobenzene	13.216	180	812	0.35	ug/L		90
78) Naphthalene	13.496	128	2785	0.33	ug/L		94
79) 1,2,3-Trichlorobenzene	13.660	180	850	0.37	ug/L		92

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:06:59 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

post
5/30/19
5/30/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	245560	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	430913	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	183911	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	127981	47.16	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	472967	49.86	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	583864	49.96	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	158686	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.660	85	2045	0.94	ug/L		78
3) Chloromethane	1.861	50	3872	1.11	ug/L		98
4) Vinyl Chloride	1.952	62	2495	0.99	ug/L		83
5) Bromomethane	2.299	96	2456	1.81	ug/L		96
7) Trichlorofluoromethane	2.572	101	1421	0.99	ug/L		82
8) 1,1-Dichloroethene	3.102	61	2472	0.99	ug/L		91
9) Carbon Disulfide	3.108	76	3330	0.86	ug/L		96
10) Freon 113	3.144	101	2147	1.07	ug/L		80
11) Iodomethane	3.242	142	702	0.79	ug/L	#	79
12) Methylene Chloride	3.728	84	15763	5.65	ug/L		93
13) Acetone	3.856	43	3386m	3.17	ug/L		
14) t-1,2-Dichloroethene	3.886	61	2611	0.89	ug/L		93
15) n-Hexane	3.972	86	1382	2.86	ug/L	#	79
16) Methyl-tert-butyl-ether	4.032	73	8517	0.99	ug/L		93
17) 1,1-Dichloroethane	4.519	63	3481	0.96	ug/L		99
18) Acrylonitrile	4.610	53	1313	0.90	ug/L		73
19) c-1,2-Dichloroethene	5.067	61	3087	0.95	ug/L		97
20) 2,2-Dichloropropane	5.176	77	2678	0.95	ug/L		90
21) Bromochloromethane	5.267	49	1861	0.96	ug/L		85
22) Chloroform	5.353	83	4395	1.06	ug/L		96
23) Carbon Tetrachloride	5.474	117	1931	0.85	ug/L		90
24) Tetrahydrofuran	5.547	42	1903	1.28	ug/L		93
25) 1,1,1-Trichloroethane	5.547	97	2923	0.88	ug/L		88
27) 1,1-Dichloropropene	5.675	75	3655	1.13	ug/L		88
28) 2-Butanone (MEK)	5.705	43	4450	2.25	ug/L		97
29) Benzene	5.937	78	11217	1.06	ug/L		93
30) 1,2-Dichloroethane (EDC)	6.156	62	3138	0.99	ug/L		92
31) iso-Butyl Alcohol	6.296	43	6030m	24.77	ug/L		
33) Trichloroethene (TCE)	6.551	130	2995	1.03	ug/L		92
34) Dibromomethane	6.995	93	1272	0.86	ug/L		86
35) 1,2-Dichloropropane	7.111	63	2601	0.93	ug/L		79
36) Bromodichloromethane	7.178	83	2077	0.82	ug/L		94
38) c-1,3-Dichloropropene	7.889	75	3081	0.84	ug/L		77
40) Toluene	8.157	91	12756	1.15	ug/L		99
41) Tetrachloroethene (PCE)	8.595	166	2616	1.06	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.626	43	7035	2.10	ug/L		93
43) t-1,3-Dichloropropene	8.644	75	2671	0.81	ug/L		78
44) 1,1,2-Trichloroethane	8.826	97	2251	0.94	ug/L		92
45) Dibromochloromethane	9.009	129	1390	0.80	ug/L		87
46) 1,3-Dichloropropane	9.106	76	4104	0.94	ug/L		88
47) 1,2-Dibromoethane (EDB)	9.240	107	2135	0.90	ug/L		79
48) 2-Hexanone	9.508	43	4936	2.04	ug/L		93
49) Chlorobenzene	9.769	112	7300	1.09	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:06:59 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

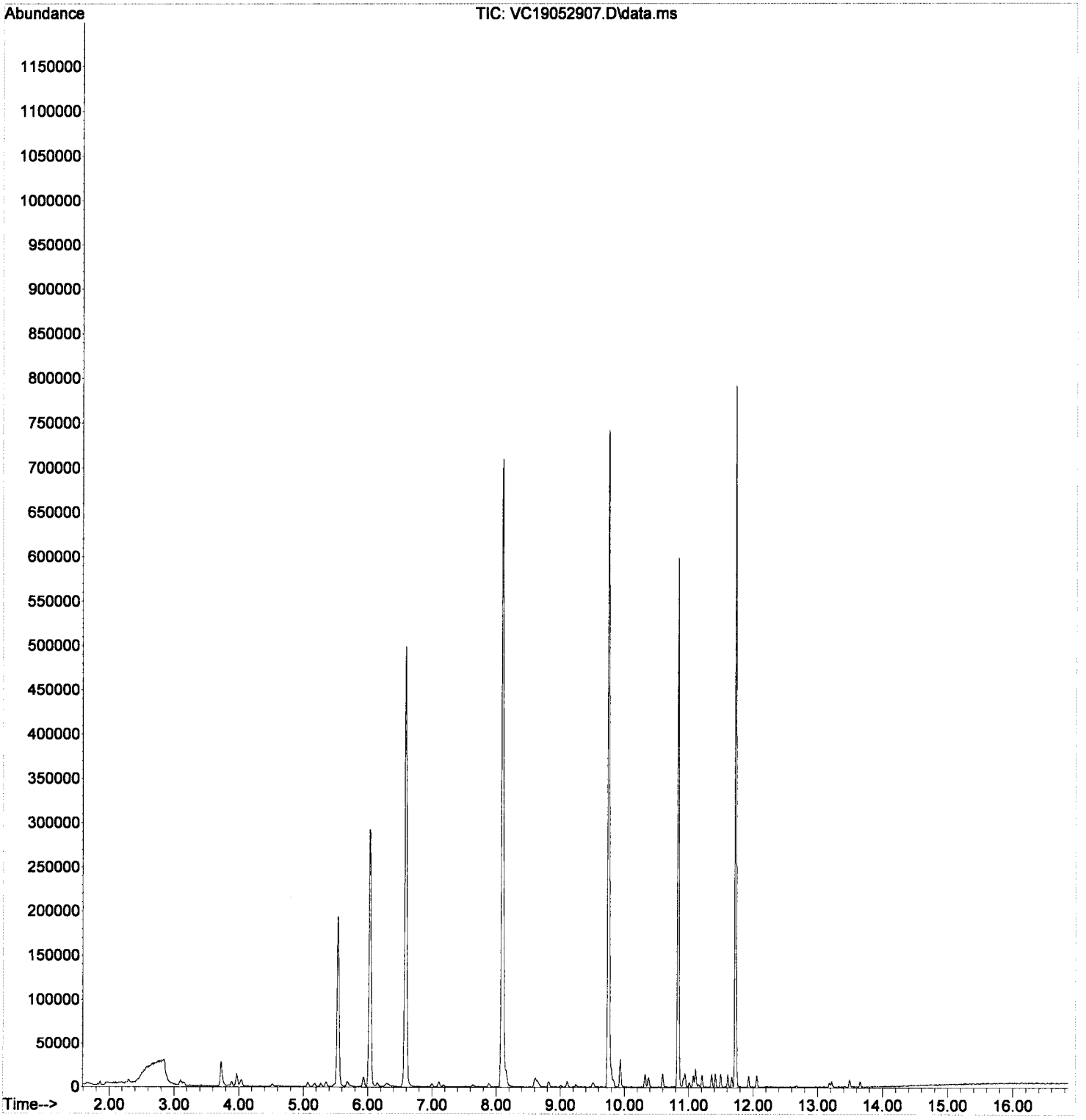
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
50) Ethylbenzene	9.800	91	12069	1.06	ug/L		95
51) 1,1,1,2-Tetrachloroethane	9.824	131	1810	0.88	ug/L	#	73
52) m,p-Xylenes (2)	9.933	91	17400	2.07	ug/L		97
53) o-Xylene	10.323	91	9051	1.04	ug/L		99
54) Styrene	10.378	104	5658	0.86	ug/L		93
55) Bromoform	10.384	173	619	0.65	ug/L		91
56) Isopropylbenzene	10.597	105	9890	0.98	ug/L		93
59) Bromobenzene	10.919	156	2592	1.05	ug/L	#	82
60) n-Propylbenzene	10.943	91	10579	0.97	ug/L		95
61) 1,1,2,2-Tetrachloroethane	11.010	83	2272	0.90	ug/L		86
62) 2-Chlorotoluene	11.071	126	2285	1.01	ug/L		86
63) 1,3,5-Trimethylbenzene	11.108	105	7772	1.02	ug/L		97
64) 1,2,3-Trichloropropane	11.114	110	983	0.97	ug/L		90
65) t-1,4-Dichloro-2-butene	11.150	88	180	0.57	ug/L	#	63
66) 4-Chlorotoluene	11.211	91	6874	1.05	ug/L		98
67) tert-Butylbenzene	11.357	91	4182	1.02	ug/L		88
68) 1,2,4-Trimethylbenzene	11.412	105	7847	1.01	ug/L		93
69) sec-Butylbenzene	11.497	105	8865	1.00	ug/L		96
70) 4-Isopropyltoluene	11.606	119	6901	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.667	146	4049	0.99	ug/L		96
72) 1,4-Dichlorobenzene	11.740	146	4368	1.08	ug/L		75
73) n-Butylbenzene	11.929	91	6459	1.07	ug/L		87
74) 1,2-Dichlorobenzene	12.063	146	3804	1.00	ug/L		86
75) 1,2-Dibromo-3-Chloropr...	12.671	157	368	0.64	ug/L	#	45
76) Hexachlorobutadiene	13.182	223	652	1.10	ug/L	#	70
77) 1,2,4-Trichlorobenzene	13.219	180	2286	1.02	ug/L		91
78) Naphthalene	13.492	128	6879	0.84	ug/L		97
79) 1,2,3-Trichlorobenzene	13.657	180	2090	0.93	ug/L		95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:06:59 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	245560	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	430913	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	183911	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	127981	47.16	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	472967	49.86	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	583864	49.96	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	158686	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.660	85	2045	0.94	ug/L		78
3) Chloromethane	1.861	50	3872	1.11	ug/L		98
4) Vinyl Chloride	1.952	62	2495	0.99	ug/L		83
5) Bromomethane	2.299	96	2456	1.81	ug/L		96
6) Chloroethane	2.445	64	782	0.85	ug/L	#	1
7) Trichlorofluoromethane	2.572	101	1421	0.99	ug/L		82
8) 1,1-Dichloroethene	3.102	61	2472	0.99	ug/L		91
9) Carbon Disulfide	3.108	76	3330	0.86	ug/L		96
10) Freon 113	3.144	101	2147	1.07	ug/L		80
11) Iodomethane	3.242	142	702	0.79	ug/L	#	79
12) Methylene Chloride	3.728	84	15763	5.65	ug/L		93
13) Acetone	~~3.838~~	~~43~~	~~1378~~	~~1.29~~	~~ug/L~~		~~82~~ MI
14) t-1,2-Dichloroethene	3.886	61	2611	0.89	ug/L		93
15) n-Hexane	3.972	86	1382	2.86	ug/L	#	79
16) Methyl-tert-butyl-ether	4.032	73	8517	0.99	ug/L		93
17) 1,1-Dichloroethane	4.519	63	3481	0.96	ug/L		99
18) Acrylonitrile	4.610	53	1313	0.90	ug/L		73
19) c-1,2-Dichloroethene	5.067	61	3087	0.95	ug/L		97
20) 2,2-Dichloropropane	5.176	77	2678	0.95	ug/L		90
21) Bromochloromethane	5.267	49	1861	0.96	ug/L		85
22) Chloroform	5.353	83	4395	1.06	ug/L		96
23) Carbon Tetrachloride	5.474	117	1931	0.85	ug/L		90
24) Tetrahydrofuran	5.547	42	1903	1.28	ug/L		93
25) 1,1,1-Trichloroethane	5.547	97	2923	0.88	ug/L		88
27) 1,1-Dichloropropene	5.675	75	3655	1.13	ug/L		88
28) 2-Butanone (MEK)	5.705	43	4450	2.25	ug/L		97
29) Benzene	5.937	78	11217	1.06	ug/L		93
30) 1,2-Dichloroethane (EDC)	6.156	62	3138	0.99	ug/L		92
31) iso-Butyl Alcohol	~~6.296~~	~~43~~	~~3491~~	~~14.34~~	~~ug/L~~		~~90~~ MI
33) Trichloroethene (TCE)	6.551	130	2995	1.03	ug/L		92
34) Dibromomethane	6.995	93	1272	0.86	ug/L		86
35) 1,2-Dichloropropane	7.111	63	2601	0.93	ug/L		79
36) Bromodichloromethane	7.178	83	2077	0.82	ug/L		94
38) c-1,3-Dichloropropene	7.889	75	3081	0.84	ug/L		77
40) Toluene	8.157	91	12756	1.15	ug/L		99
41) Tetrachloroethene (PCE)	8.595	166	2616	1.06	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.626	43	7035	2.10	ug/L		93
43) t-1,3-Dichloropropene	8.644	75	2671	0.81	ug/L		78
44) 1,1,2-Trichloroethane	8.826	97	2251	0.94	ug/L		92
45) Dibromochloromethane	9.009	129	1390	0.80	ug/L		87
46) 1,3-Dichloropropane	9.106	76	4104	0.94	ug/L		88
47) 1,2-Dibromoethane (EDB)	9.240	107	2135	0.90	ug/L		79
48) 2-Hexanone	9.508	43	4936	2.04	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

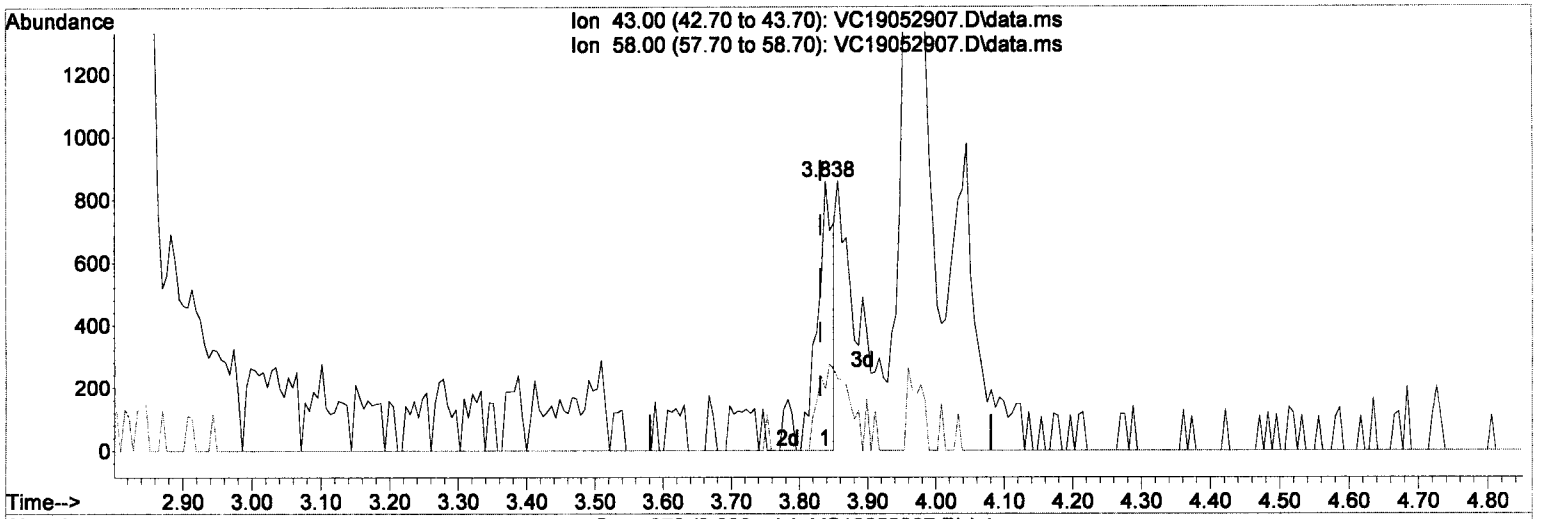
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.769	112	7300	1.09	ug/L		98
50) Ethylbenzene	9.800	91	12069	1.06	ug/L		95
51) 1,1,1,2-Tetrachloroethane	9.824	131	1810	0.88	ug/L	#	73
52) m,p-Xylenes (2)	9.933	91	17400	2.07	ug/L		97
53) o-Xylene	10.323	91	9051	1.04	ug/L		99
54) Styrene	10.378	104	5658	0.86	ug/L		93
55) Bromoform	10.384	173	619	0.65	ug/L		91
56) Isopropylbenzene	10.597	105	9890	0.98	ug/L		93
59) Bromobenzene	10.919	156	2592	1.05	ug/L	#	82
60) n-Propylbenzene	10.943	91	10579	0.97	ug/L		95
61) 1,1,2,2-Tetrachloroethane	11.010	83	2272	0.90	ug/L		86
62) 2-Chlorotoluene	11.071	126	2285	1.01	ug/L		86
63) 1,3,5-Trimethylbenzene	11.108	105	7772	1.02	ug/L		97
64) 1,2,3-Trichloropropane	11.114	110	983	0.97	ug/L		90
65) t-1,4-Dichloro-2-butene	11.150	88	180	0.57	ug/L	#	63
66) 4-Chlorotoluene	11.211	91	6874	1.05	ug/L		98
67) tert-Butylbenzene	11.357	91	4182	1.02	ug/L		88
68) 1,2,4-Trimethylbenzene	11.412	105	7847	1.01	ug/L		93
69) sec-Butylbenzene	11.497	105	8865	1.00	ug/L		96
70) 4-Isopropyltoluene	11.606	119	6901	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.667	146	4049	0.99	ug/L		96
72) 1,4-Dichlorobenzene	11.740	146	4368	1.08	ug/L		75
73) n-Butylbenzene	11.929	91	6459	1.07	ug/L		87
74) 1,2-Dichlorobenzene	12.063	146	3804	1.00	ug/L		86
75) 1,2-Dibromo-3-Chloropr...	12.671	157	368	0.64	ug/L	#	45
76) Hexachlorobutadiene	13.182	223	652	1.10	ug/L	#	70
77) 1,2,4-Trichlorobenzene	13.219	180	2286	1.02	ug/L		91
78) Naphthalene	13.492	128	6879	0.84	ug/L		97
79) 1,2,3-Trichlorobenzene	13.657	180	2090	0.93	ug/L		95

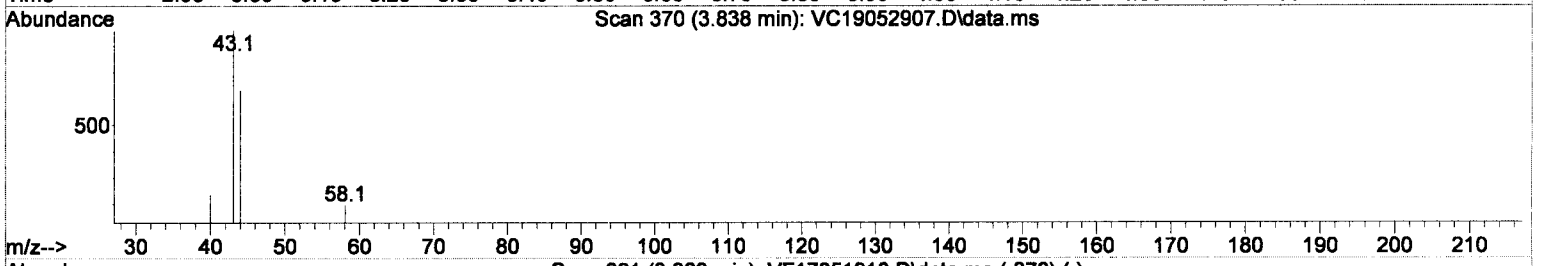
(#) = qualifier out of range (m) = manual integration (+) = signals summed

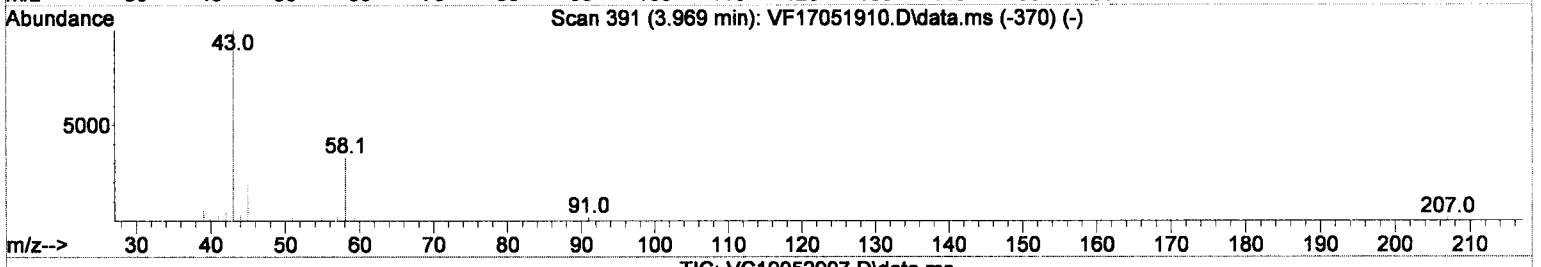
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052907.D\data.ms

(13) Acetone

3.838min (+0.007) 1.29 ug/L

response 1378

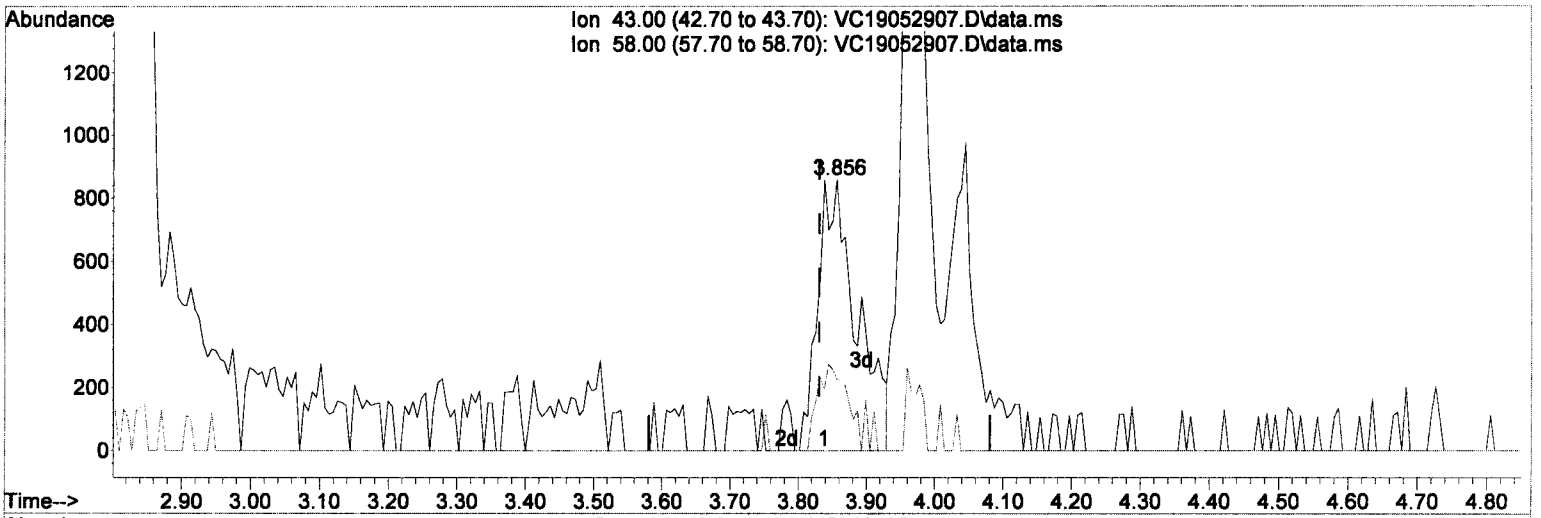
Ion	Exp%	Act%
43.00	100	100
58.00	33.10	22.75
0.00	0.00	0.00
0.00	0.00	0.00

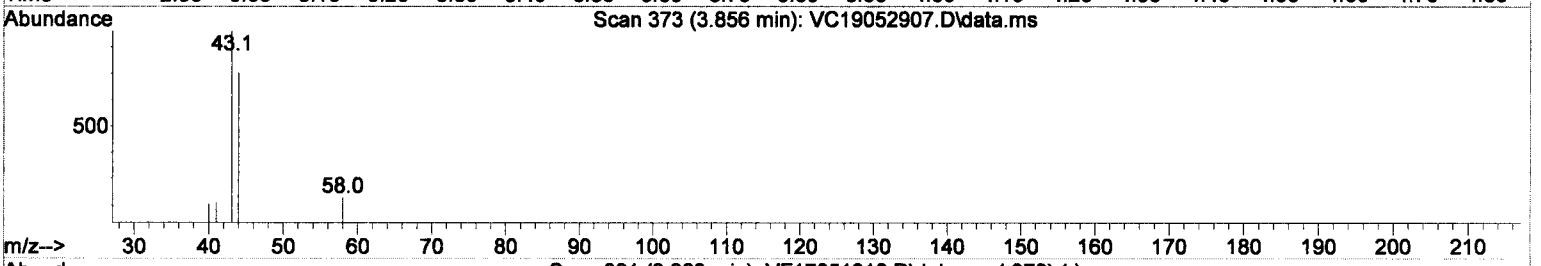
MT

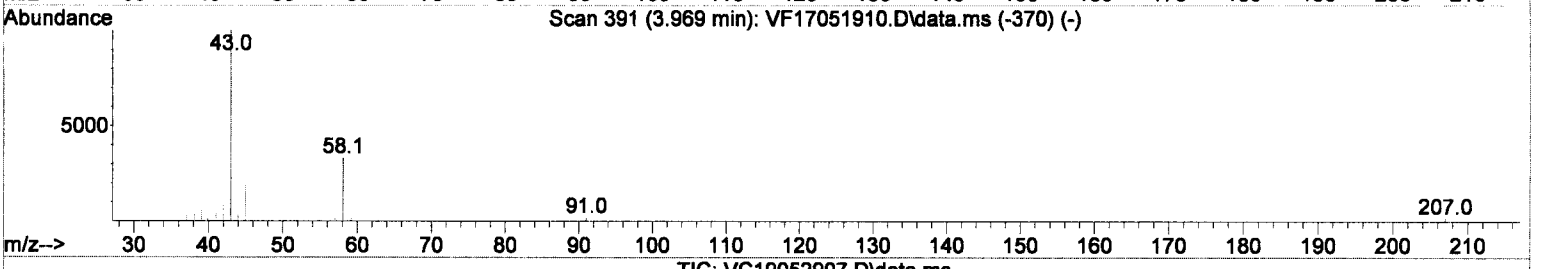
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052907.D\data.ms

(13) Acetone

3.856min (+0.025) 3.17 ug/L m

response 3386

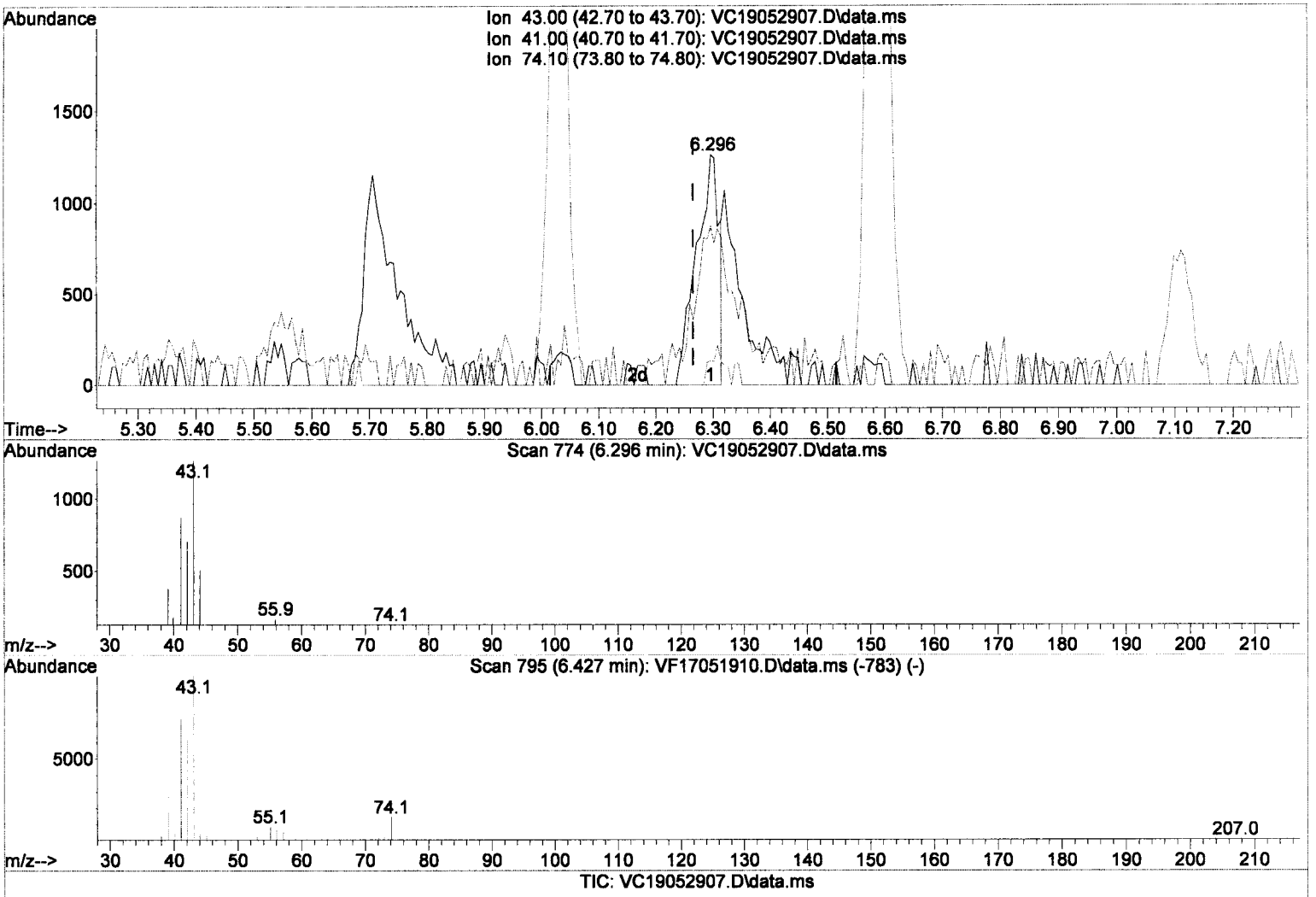
Ion	Exp%	Act%
43.00	100	100
58.00	33.10	26.51
0.00	0.00	0.00
0.00	0.00	0.00

5/30/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



TIC: VC19052907.D\data.ms

(31) iso-Butyl Alcohol

6.296min (+0.030) 14.34 ug/L

response 3491

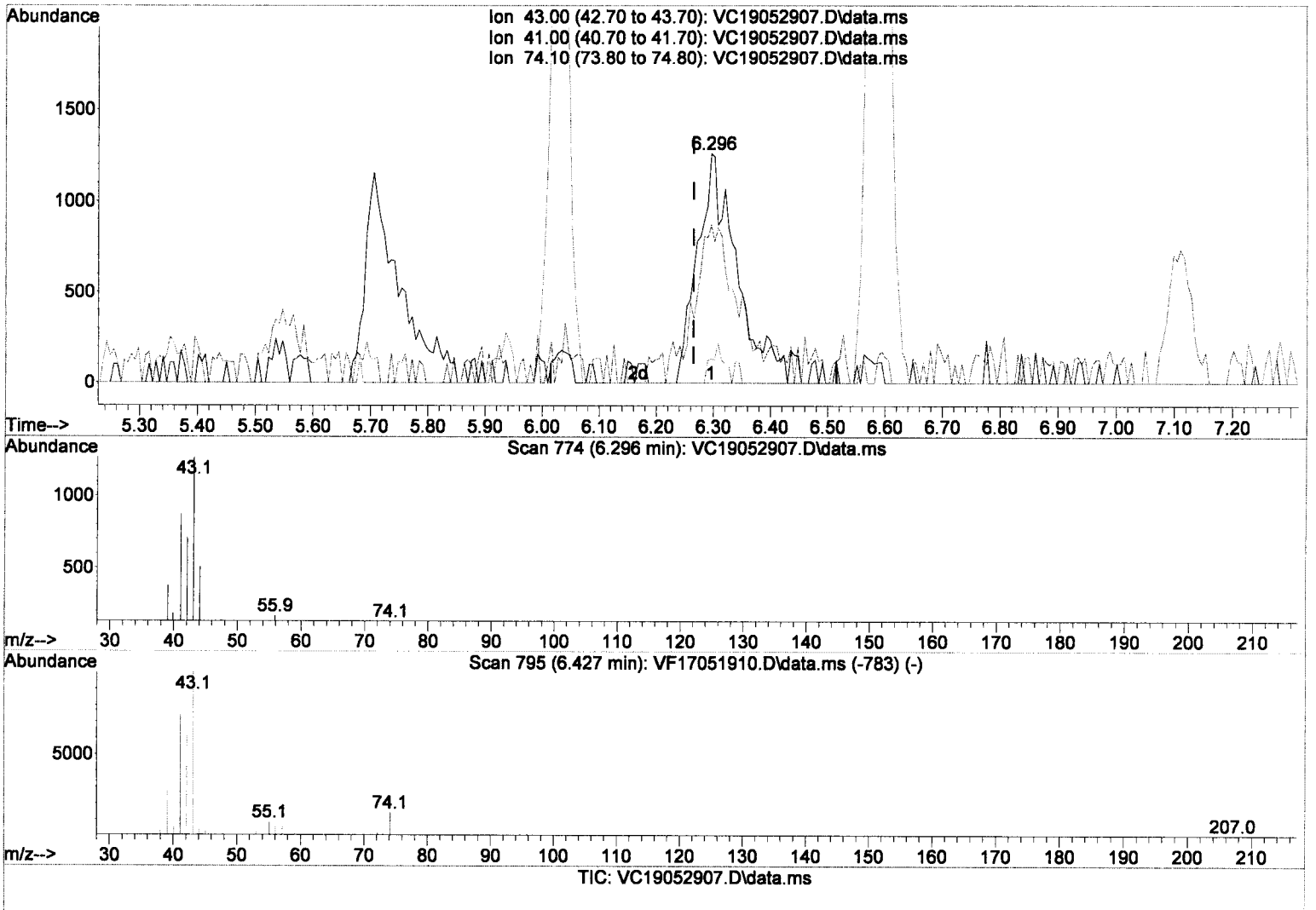
Ion	Exp%	Act%
43.00	100	100
41.00	78.40	68.99
74.10	9.40	10.55
0.00	0.00	0.00

MF

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



TIC: VC19052907.D\data.ms

(31) iso-Butyl Alcohol

6.296min (+0.030) 24.77 ug/L m

response 6030

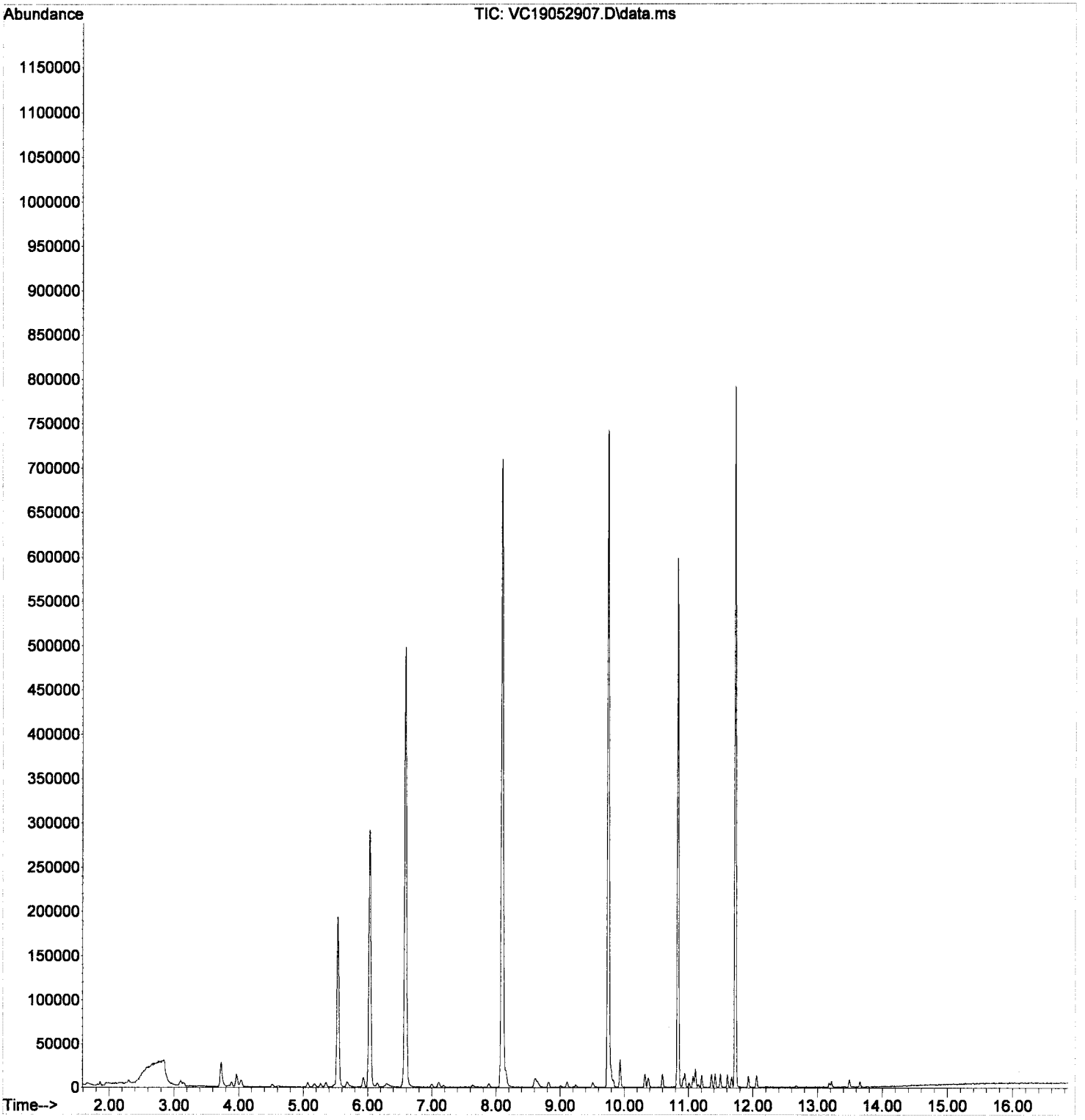
Ion	Exp%	Act%
43.00	100	100
41.00	78.40	68.99
74.10	9.40	10.55
0.00	0.00	0.00

5/30/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

5/30/19 post

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	254825	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	451536	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194740	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	140136	49.76	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	496387	50.43	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607810	49.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	166852	49.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	4563	2.03	ug/L		94
3) Chloromethane	1.862	50	7629	2.11	ug/L		94
4) Vinyl Chloride	1.953	62	5260	2.01	ug/L		91
5) Bromomethane	2.306	96	4475	3.17	ug/L		92
6) Chloroethane	2.440	64	2003	2.10	ug/L	#	1
7) Trichlorofluoromethane	2.580	101	2958	1.99	ug/L		94
8) 1,1-Dichloroethene	3.103	61	4891	1.89	ug/L		88
9) Carbon Disulfide	3.115	76	6854	1.70	ug/L		98
10) Freon 113	3.152	101	3908	1.88	ug/L		85
11) Iodomethane	3.249	142	1507	1.64	ug/L	#	75
12) Methylene Chloride	3.729	84	18469	6.37	ug/L		98
13) Acetone	3.845	43	5795	5.23	ug/L		94
14) t-1,2-Dichloroethene	3.894	61	5764	1.90	ug/L		99
15) n-Hexane	3.973	86	1767	3.53	ug/L	#	87
16) Methyl-tert-butyl-ether	4.034	73	17541	1.96	ug/L		91
17) 1,1-Dichloroethane	4.520	63	7479	1.99	ug/L		93
18) Acrylonitrile	4.606	53	2550	1.68	ug/L		86
19) c-1,2-Dichloroethene	5.068	61	6425	1.91	ug/L		99
20) 2,2-Dichloropropane	5.177	77	5498	1.88	ug/L		96
21) Bromochloromethane	5.269	49	3833	1.91	ug/L		98
22) Chloroform	5.354	83	8763	2.03	ug/L		98
23) Carbon Tetrachloride	5.475	117	3774	1.59	ug/L		92
24) Tetrahydrofuran	5.542	42	3294	2.13	ug/L		88
25) 1,1,1-Trichloroethane	5.548	97	6438	1.88	ug/L		98
27) 1,1-Dichloropropene	5.682	75	6475	1.93	ug/L		95
28) 2-Butanone (MEK)	5.701	43	7369	3.59	ug/L		94
29) Benzene	5.938	78	21880	1.99	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.151	62	6601	2.00	ug/L		99
31) iso-Butyl Alcohol	6.291	43	11367	45.00	ug/L		84
33) Trichloroethene (TCE)	6.546	130	6232	2.07	ug/L		87
34) Dibromomethane	6.996	93	2771	1.81	ug/L		87
35) 1,2-Dichloropropane	7.112	63	5608	1.93	ug/L		92
36) Bromodichloromethane	7.179	83	4030	1.53	ug/L		90
38) c-1,3-Dichloropropene	7.891	75	6187	1.61	ug/L		95
40) Toluene	8.152	91	23832	2.05	ug/L		88
41) Tetrachloroethene (PCE)	8.602	166	4849	1.88	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.615	43	13222	3.76	ug/L		91
43) t-1,3-Dichloropropene	8.645	75	5147	1.49	ug/L		98
44) 1,1,2-Trichloroethane	8.821	97	4541	1.81	ug/L		88
45) Dibromochloromethane	9.004	129	2873	1.57	ug/L		88
46) 1,3-Dichloropropane	9.107	76	8546	1.86	ug/L		93
47) 1,2-Dibromoethane (EDB)	9.241	107	4166	1.67	ug/L		100
48) 2-Hexanone	9.509	43	8511	3.36	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

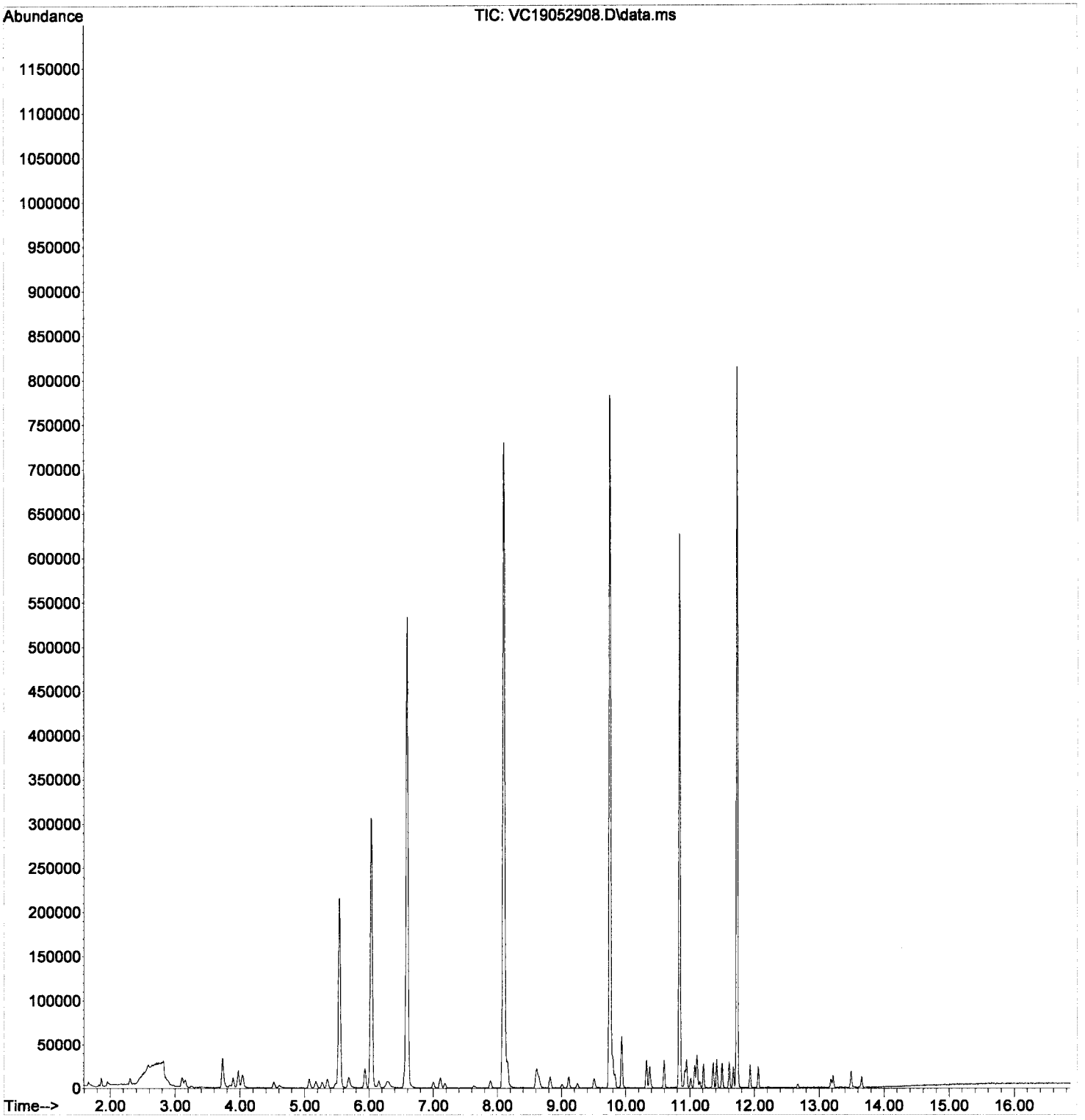
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	14584	2.08	ug/L		98
50) Ethylbenzene	9.795	91	23660	1.98	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.831	131	3542	1.64	ug/L		95
52) m,p-Xylenes (2)	9.935	91	34407	3.91	ug/L		98
53) o-Xylene	10.324	91	17445	1.91	ug/L		99
54) Styrene	10.373	104	11631	1.68	ug/L		95
55) Bromoform	10.391	173	1354	1.36	ug/L		82
56) Isopropylbenzene	10.598	105	20325	1.92	ug/L		96
59) Bromobenzene	10.920	156	5277	2.01	ug/L		89
60) n-Propylbenzene	10.945	91	22107	1.91	ug/L		92
61) 1,1,2,2-Tetrachloroethane	11.011	83	4646	1.75	ug/L		96
62) 2-Chlorotoluene	11.066	126	4419	1.84	ug/L		97
63) 1,3,5-Trimethylbenzene	11.103	105	14521	1.80	ug/L		94
64) 1,2,3-Trichloropropane	11.115	110	2200	2.06	ug/L		91
65) t-1,4-Dichloro-2-butene	11.151	88	320	0.95	ug/L	#	52
66) 4-Chlorotoluene	11.206	91	13410	1.93	ug/L		98
67) tert-Butylbenzene	11.358	91	8037	1.86	ug/L		97
68) 1,2,4-Trimethylbenzene	11.413	105	15360	1.87	ug/L		99
69) sec-Butylbenzene	11.498	105	16671	1.78	ug/L		99
70) 4-Isopropyltoluene	11.608	119	14651	1.91	ug/L		99
71) 1,3-Dichlorobenzene	11.675	146	8756	2.03	ug/L		92
72) 1,4-Dichlorobenzene	11.741	146	8705	2.03	ug/L		92
73) n-Butylbenzene	11.930	91	12230	1.92	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	7643	1.90	ug/L		89
75) 1,2-Dibromo-3-Chloropr...	12.672	157	826	1.35	ug/L		83
76) Hexachlorobutadiene	13.183	223	1244	1.99	ug/L	#	83
77) 1,2,4-Trichlorobenzene	13.214	180	4471	1.88	ug/L		92
78) Naphthalene	13.493	128	14001	1.61	ug/L		96
79) 1,2,3-Trichlorobenzene	13.652	180	4310	1.82	ug/L		94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	254825	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	451536	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194740	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	140136	49.76	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	496387	50.43	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607810	49.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	166852	49.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	4563	2.03	ug/L		94
3) Chloromethane	1.862	50	7629	2.11	ug/L		94
4) Vinyl Chloride	1.953	62	5260	2.01	ug/L		91
5) Bromomethane	2.306	96	4475	3.17	ug/L		92
6) Chloroethane	2.440	64	2003	2.10	ug/L	#	1
7) Trichlorofluoromethane	2.580	101	2958	1.99	ug/L		94
8) 1,1-Dichloroethene	3.103	61	4891	1.89	ug/L		88
9) Carbon Disulfide	3.115	76	6854	1.70	ug/L		98
10) Freon 113	3.152	101	3908	1.88	ug/L		85
11) Iodomethane	3.249	142	1507	1.64	ug/L	#	75
12) Methylene Chloride	3.729	84	18469	6.37	ug/L		98
13) Acetone	3.845	43	5795	5.23	ug/L		94
14) t-1,2-Dichloroethene	3.894	61	5764	1.90	ug/L		99
15) n-Hexane	3.973	86	1767	3.53	ug/L	#	87
16) Methyl-tert-butyl-ether	4.034	73	17541	1.96	ug/L		91
17) 1,1-Dichloroethane	4.520	63	7479	1.99	ug/L		93
18) Acrylonitrile	4.606	53	2550	1.68	ug/L		86
19) c-1,2-Dichloroethene	5.068	61	6425	1.91	ug/L		99
20) 2,2-Dichloropropane	5.177	77	5498	1.88	ug/L		96
21) Bromochloromethane	5.269	49	3833	1.91	ug/L		98
22) Chloroform	5.354	83	8763	2.03	ug/L		98
23) Carbon Tetrachloride	5.475	117	3774	1.59	ug/L		92
24) Tetrahydrofuran	5.542	42	3294	2.13	ug/L		88
25) 1,1,1-Trichloroethane	5.548	97	6438	1.88	ug/L		98
27) 1,1-Dichloropropene	5.682	75	6475	1.93	ug/L		95
28) 2-Butanone (MEK)	5.701	43	7369	3.59	ug/L		94
29) Benzene	5.938	78	21880	1.99	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.151	62	6601	2.00	ug/L		99
31) iso-Butyl Alcohol	6.291	43	11367	45.00	ug/L		84
33) Trichloroethene (TCE)	6.546	130	6232	2.07	ug/L		87
34) Dibromomethane	6.996	93	2771	1.81	ug/L		87
35) 1,2-Dichloropropane	7.112	63	5608	1.93	ug/L		92
36) Bromodichloromethane	7.179	83	4030	1.53	ug/L		90
38) c-1,3-Dichloropropene	7.891	75	6187	1.61	ug/L		95
40) Toluene	8.152	91	23832	2.05	ug/L		88
41) Tetrachloroethene (PCE)	8.602	166	4849	1.88	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.615	43	13222	3.76	ug/L		91
43) t-1,3-Dichloropropene	8.645	75	5147	1.49	ug/L		98
44) 1,1,2-Trichloroethane	8.821	97	4541	1.81	ug/L		88
45) Dibromochloromethane	9.004	129	2873	1.57	ug/L		88
46) 1,3-Dichloropropane	9.107	76	8546	1.86	ug/L		93
47) 1,2-Dibromoethane (EDB)	9.241	107	4166	1.67	ug/L		100
48) 2-Hexanone	9.509	43	8511	3.36	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

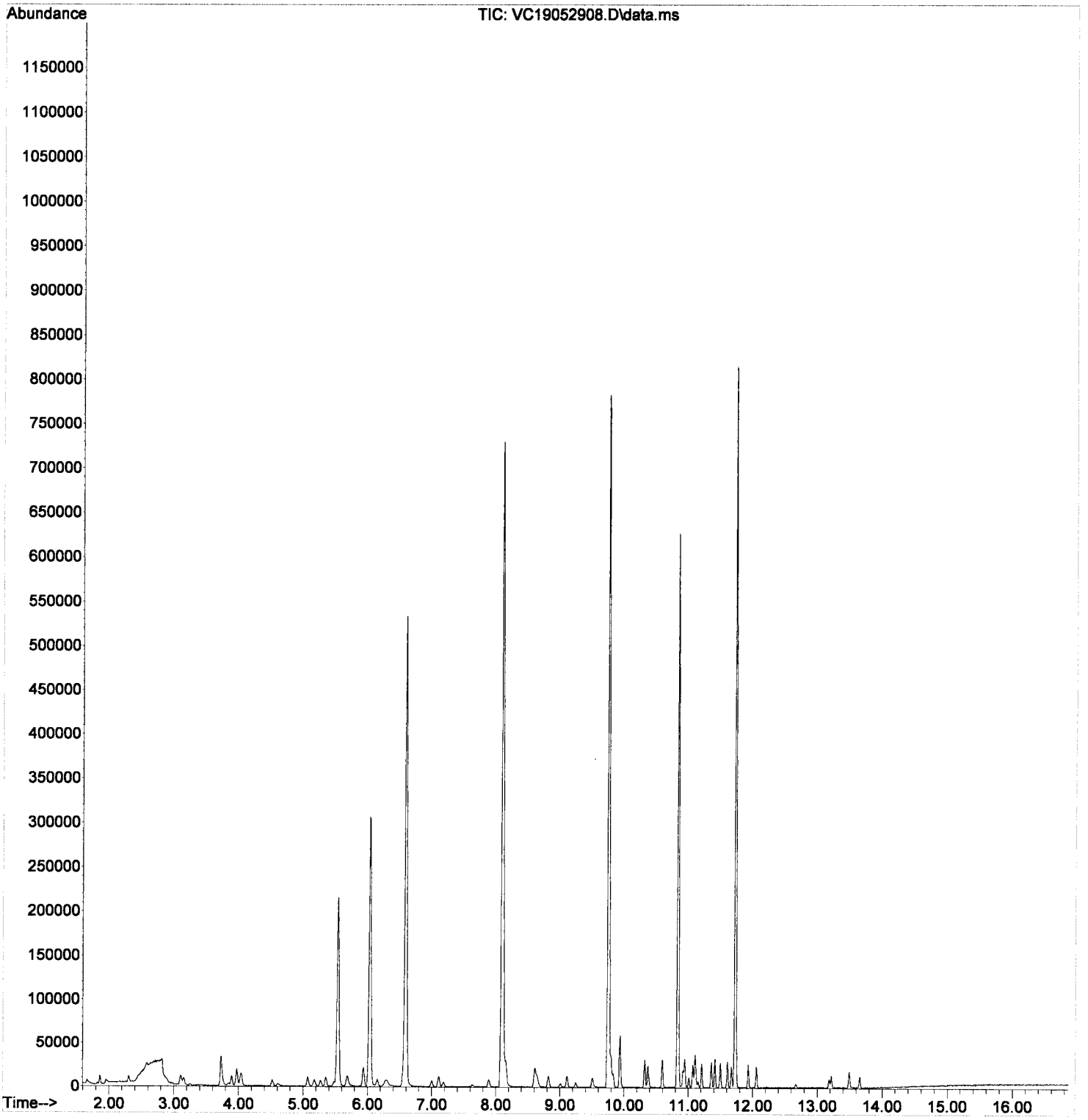
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	14584	2.08	ug/L		98
50) Ethylbenzene	9.795	91	23660	1.98	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.831	131	3542	1.64	ug/L		95
52) m,p-Xylenes (2)	9.935	91	34407	3.91	ug/L		98
53) o-Xylene	10.324	91	17445	1.91	ug/L		99
54) Styrene	10.373	104	11631	1.68	ug/L		95
55) Bromoform	10.391	173	1354	1.36	ug/L		82
56) Isopropylbenzene	10.598	105	20325	1.92	ug/L		96
59) Bromobenzene	10.920	156	5277	2.01	ug/L		89
60) n-Propylbenzene	10.945	91	22107	1.91	ug/L		92
61) 1,1,2,2-Tetrachloroethane	11.011	83	4646	1.75	ug/L		96
62) 2-Chlorotoluene	11.066	126	4419	1.84	ug/L		97
63) 1,3,5-Trimethylbenzene	11.103	105	14521	1.80	ug/L		94
64) 1,2,3-Trichloropropane	11.115	110	2200	2.06	ug/L		91
65) t-1,4-Dichloro-2-butene	11.151	88	320	0.95	ug/L	#	52
66) 4-Chlorotoluene	11.206	91	13410	1.93	ug/L		98
67) tert-Butylbenzene	11.358	91	8037	1.86	ug/L		97
68) 1,2,4-Trimethylbenzene	11.413	105	15360	1.87	ug/L		99
69) sec-Butylbenzene	11.498	105	16671	1.78	ug/L		99
70) 4-Isopropyltoluene	11.608	119	14651	1.91	ug/L		99
71) 1,3-Dichlorobenzene	11.675	146	8756	2.03	ug/L		92
72) 1,4-Dichlorobenzene	11.741	146	8705	2.03	ug/L		92
73) n-Butylbenzene	11.930	91	12230	1.92	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	7643	1.90	ug/L		89
75) 1,2-Dibromo-3-Chloropr...	12.672	157	826	1.35	ug/L		83
76) Hexachlorobutadiene	13.183	223	1244	1.99	ug/L	#	83
77) 1,2,4-Trichlorobenzene	13.214	180	4471	1.88	ug/L		92
78) Naphthalene	13.493	128	14001	1.61	ug/L		96
79) 1,2,3-Trichlorobenzene	13.652	180	4310	1.82	ug/L		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052909.D
Acq On : 29 May 2019 5:57 pm
Operator : TB
Sample : 9E29058-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:54 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19
no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.036	168	254773	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.753	117	445170	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.730	152	188506	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	136458	48.46	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	492217	50.01	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	604964	50.11	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	163573	49.96	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.668	85	12196	5.43	ug/L		96
3) Chloromethane	1.862	50	19122	5.29	ug/L		98
4) Vinyl Chloride	1.954	62	13474	5.16	ug/L		99
5) Bromomethane	2.306	96	9080	6.44	ug/L		91
6) Chloroethane	2.452	64	5245	5.50	ug/L	#	43
7) Trichlorofluoromethane	2.580	101	7697	5.18	ug/L		99
8) 1,1-Dichloroethene	3.097	61	13008	5.04	ug/L		85
9) Carbon Disulfide	3.109	76	17910	4.45	ug/L		99
10) Freon 113	3.152	101	10435	5.03	ug/L		94
11) Iodomethane	3.249	142	3398	3.70	ug/L		98
12) Methylene Chloride	3.736	84	25250	8.72	ug/L		97
13) Acetone	3.846	43	11897	10.74	ug/L		94
14) t-1,2-Dichloroethene	3.894	61	15650	5.15	ug/L		94
15) n-Hexane	3.973	86	3499	6.99	ug/L	#	90
16) Methyl-tert-butyl-ether	4.040	73	44834	5.02	ug/L		98
17) 1,1-Dichloroethane	4.527	63	18960	5.04	ug/L		98
18) Acrylonitrile	4.606	53	7679	5.05	ug/L		94
19) c-1,2-Dichloroethene	5.068	61	17123	5.09	ug/L		95
20) 2,2-Dichloropropane	5.178	77	14424	4.94	ug/L		93
21) Bromochloromethane	5.269	49	10200	5.08	ug/L		90
22) Chloroform	5.354	83	21196	4.92	ug/L		97
23) Carbon Tetrachloride	5.482	117	10919	4.61	ug/L		95
24) Tetrahydrofuran	5.537	42	7878	5.10	ug/L		94
25) 1,1,1-Trichloroethane	5.555	97	16696	4.87	ug/L		96
27) 1,1-Dichloropropene	5.677	75	16613	4.95	ug/L		98
28) 2-Butanone (MEK)	5.701	43	21043	10.25	ug/L		96
29) Benzene	5.932	78	56100	5.10	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.151	62	16641	5.05	ug/L		97
31) iso-Butyl Alcohol	6.297	43	31527	124.84	ug/L		83
33) Trichloroethene (TCE)	6.547	130	15220	5.06	ug/L		92
34) Dibromomethane	7.003	93	7159	4.67	ug/L		99
35) 1,2-Dichloropropane	7.112	63	14430	4.97	ug/L		91
36) Bromodichloromethane	7.185	83	11827	4.50	ug/L		99
38) c-1,3-Dichloropropene	7.885	75	17156	4.52	ug/L		98
40) Toluene	8.153	91	59374	5.19	ug/L		98
41) Tetrachloroethene (PCE)	8.603	166	13201	5.20	ug/L		97
42) 4-Methyl-2-Pentanone (...	8.615	43	34042	9.82	ug/L		97
43) t-1,3-Dichloropropene	8.645	75	14478	4.26	ug/L		94
44) 1,1,2-Trichloroethane	8.816	97	12374	5.00	ug/L		96
45) Dibromochloromethane	9.004	129	7443	4.14	ug/L		86
46) 1,3-Dichloropropane	9.108	76	22298	4.93	ug/L		97
47) 1,2-Dibromoethane (EDB)	9.248	107	11552	4.69	ug/L		95
48) 2-Hexanone	9.503	43	24821	9.93	ug/L		95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052909.D
Acq On : 29 May 2019 5:57 pm
Operator : TB
Sample : 9E29058-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

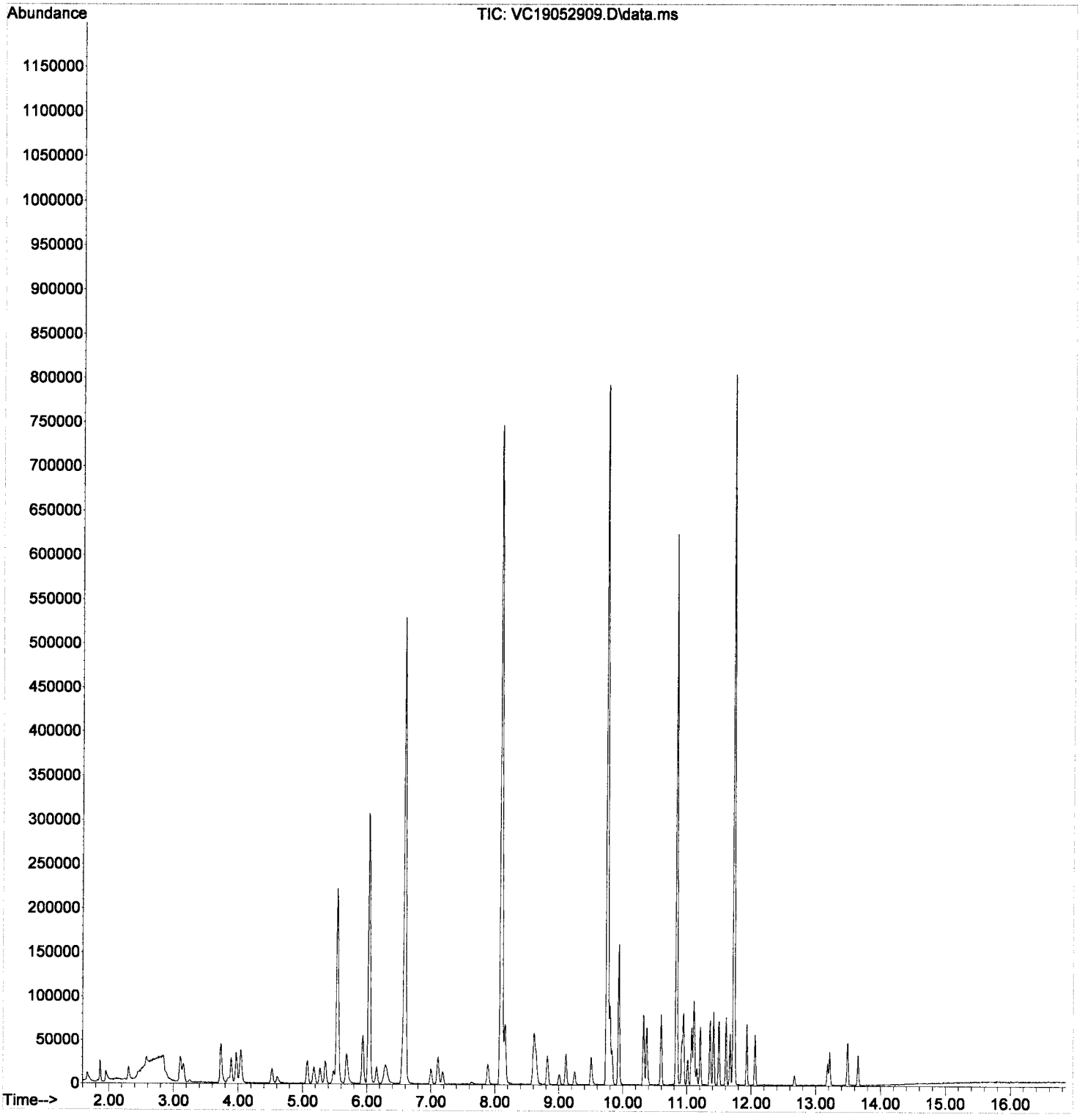
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.765	112	35456	5.12	ug/L		94
50) Ethylbenzene	9.795	91	60912	5.17	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.832	131	9596	4.51	ug/L		94
52) m,p-Xylenes (2)	9.935	91	87900	10.12	ug/L		97
53) o-Xylene	10.324	91	45708	5.06	ug/L		98
54) Styrene	10.373	104	31844	4.66	ug/L		97
55) Bromoform	10.385	173	4070	4.14	ug/L		92
56) Isopropylbenzene	10.598	105	53051	5.09	ug/L		94
59) Bromobenzene	10.921	156	13190	5.20	ug/L		96
60) n-Propylbenzene	10.945	91	57721	5.15	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.006	83	12322	4.79	ug/L		96
62) 2-Chlorotoluene	11.073	126	12024	5.17	ug/L	#	84
63) 1,3,5-Trimethylbenzene	11.103	105	39774	5.09	ug/L		98
64) 1,2,3-Trichloropropane	11.115	110	5164	4.99	ug/L		86
65) t-1,4-Dichloro-2-butene	11.152	88	1285	3.96	ug/L	#	83
66) 4-Chlorotoluene	11.207	91	33806	5.03	ug/L		94
67) tert-Butylbenzene	11.359	91	20763	4.96	ug/L		95
68) 1,2,4-Trimethylbenzene	11.413	105	39159	4.93	ug/L		99
69) sec-Butylbenzene	11.499	105	45399	5.01	ug/L		97
70) 4-Isopropyltoluene	11.608	119	37395	5.03	ug/L		97
71) 1,3-Dichlorobenzene	11.669	146	21090	5.04	ug/L		96
72) 1,4-Dichlorobenzene	11.736	146	21623	5.22	ug/L		95
73) n-Butylbenzene	11.930	91	31024	5.03	ug/L		96
74) 1,2-Dichlorobenzene	12.058	146	19883	5.09	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	12.673	157	2389	4.05	ug/L		96
76) Hexachlorobutadiene	13.184	223	2782	4.59	ug/L	#	75
77) 1,2,4-Trichlorobenzene	13.214	180	11381	4.93	ug/L		97
78) Naphthalene	13.494	128	38161	4.53	ug/L		98
79) 1,2,3-Trichlorobenzene	13.652	180	10740	4.67	ug/L		90

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052909.D
Acq On : 29 May 2019 5:57 pm
Operator : TB
Sample : 9E29058-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052910.D
Acq On : 29 May 2019 6:25 pm
Operator : TB
Sample : 9E29058-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:56 2019
Quant Method : C:\msdchem\1\METHODS\VC~~190529S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19
no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	250992	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	436340	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	186773	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	135028	48.67	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	477661	49.27	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	590419	49.89	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	161677	49.84	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.657	85	22760	10.28	ug/L		97
3) Chloromethane	1.857	50	35625	10.00	ug/L		98
4) Vinyl Chloride	1.943	62	25219	9.80	ug/L		95
5) Bromomethane	2.296	96	16179	11.65	ug/L		94
6) Chloroethane	2.435	64	9117	9.71	ug/L	#	67
7) Trichlorofluoromethane	2.569	101	13672	9.35	ug/L		94
8) 1,1-Dichloroethene	3.092	61	25751	10.13	ug/L		85
9) Carbon Disulfide	3.105	76	36451	9.20	ug/L		97
10) Freon 113	3.147	101	20551	10.06	ug/L		84
11) Iodomethane	3.238	142	7794	8.61	ug/L		93
12) Methylene Chloride	3.719	84	35620	12.48	ug/L		97
13) Acetone	3.835	43	20645	18.91	ug/L		96
14) t-1,2-Dichloroethene	3.883	61	30362	10.15	ug/L		98
15) n-Hexane	3.962	86	5559	11.27	ug/L	#	92
16) Methyl-tert-butyl-ether	4.035	73	87421	9.94	ug/L		98
17) 1,1-Dichloroethane	4.516	63	36342	9.81	ug/L		95
18) Acrylonitrile	4.595	53	15131	10.10	ug/L		98
19) c-1,2-Dichloroethene	5.070	61	33881	10.23	ug/L		96
20) 2,2-Dichloropropane	5.173	77	29348	10.20	ug/L		85
21) Bromochloromethane	5.264	49	20180	10.21	ug/L		92
22) Chloroform	5.343	83	42125	9.93	ug/L		98
23) Carbon Tetrachloride	5.477	117	22616	9.69	ug/L		95
24) Tetrahydrofuran	5.538	42	15478	10.18	ug/L		96
25) 1,1,1-Trichloroethane	5.544	97	32805	9.71	ug/L		98
27) 1,1-Dichloropropene	5.672	75	32947	9.97	ug/L		97
28) 2-Butanone (MEK)	5.690	43	40332	19.95	ug/L		95
29) Benzene	5.927	78	109245	10.08	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.146	62	32514	10.01	ug/L		95
31) iso-Butyl Alcohol	6.286	43	61468	247.07	ug/L		89
33) Trichloroethene (TCE)	6.548	130	29345	9.90	ug/L		95
34) Dibromomethane	6.998	93	14902	9.86	ug/L		94
35) 1,2-Dichloropropane	7.108	63	27791	9.71	ug/L		93
36) Bromodichloromethane	7.174	83	23755	9.17	ug/L		94
38) c-1,3-Dichloropropene	7.886	75	35060	9.42	ug/L		97
40) Toluene	8.154	91	113987	10.16	ug/L		99
41) Tetrachloroethene (PCE)	8.598	166	25684	10.31	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.616	43	69619	20.50	ug/L		98
43) t-1,3-Dichloropropene	8.647	75	31437	9.43	ug/L		99
44) 1,1,2-Trichloroethane	8.817	97	24039	9.90	ug/L		88
45) Dibromochloromethane	9.006	129	16078	9.12	ug/L		92
46) 1,3-Dichloropropane	9.103	76	43756	9.86	ug/L		98
47) 1,2-Dibromoethane (EDB)	9.243	107	23883	9.89	ug/L		91
48) 2-Hexanone	9.498	43	49008	20.01	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052910.D
Acq On : 29 May 2019 6:25 pm
Operator : TB
Sample : 9E29058-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

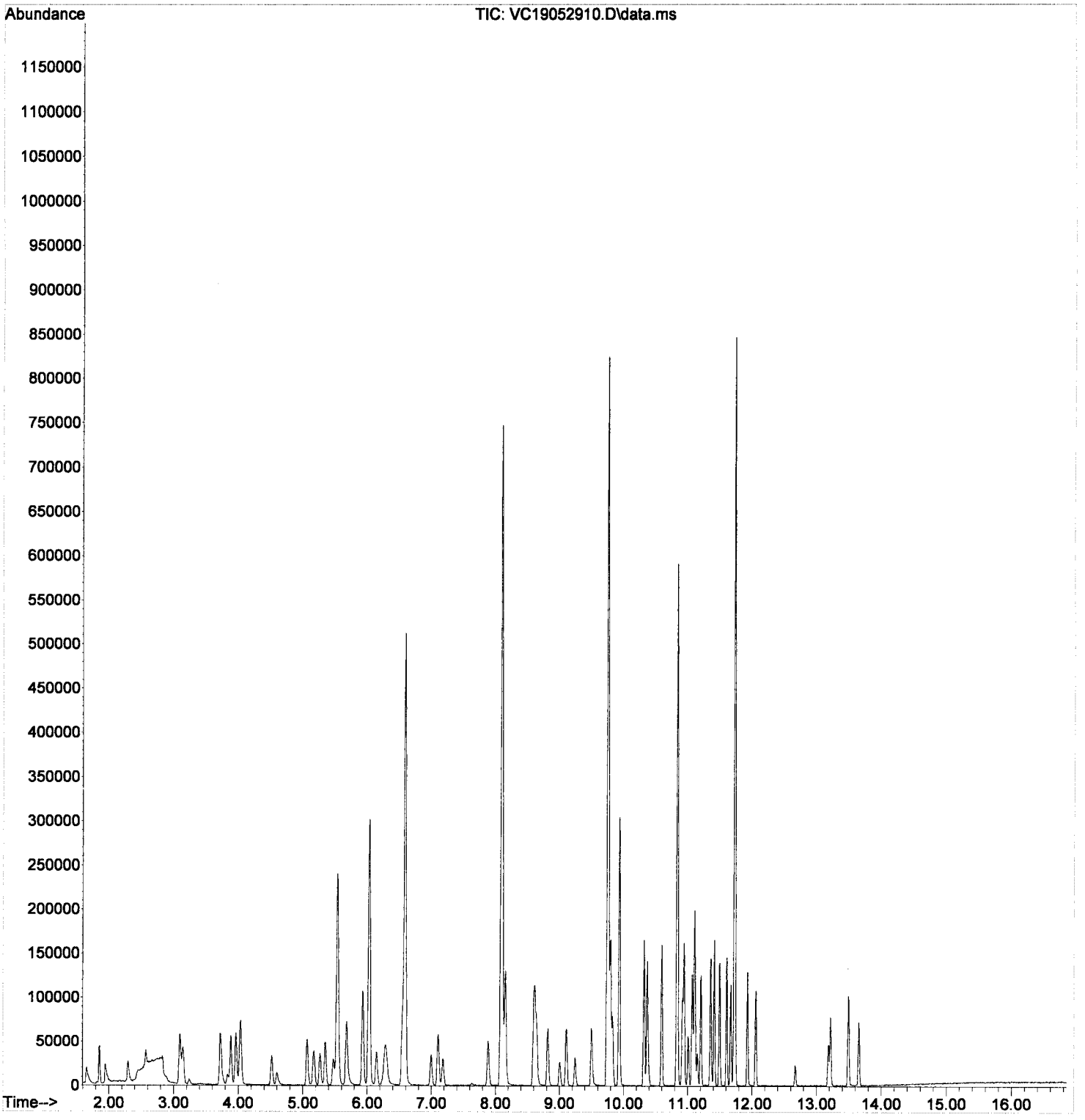
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	68508	10.10	ug/L		96
50) Ethylbenzene	9.796	91	115497	10.01	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.827	131	19728	9.47	ug/L		96
52) m,p-Xylenes (2)	9.930	91	170308	20.00	ug/L		99
53) o-Xylene	10.320	91	87450	9.88	ug/L		99
54) Styrene	10.368	104	64308	9.61	ug/L		99
55) Bromoform	10.387	173	8679	9.00	ug/L		95
56) Isopropylbenzene	10.593	105	101485	9.94	ug/L		97
59) Bromobenzene	10.916	156	25871	10.29	ug/L		87
60) n-Propylbenzene	10.940	91	110989	10.00	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	25383	9.95	ug/L		99
62) 2-Chlorotoluene	11.068	126	23789	10.32	ug/L	#	79
63) 1,3,5-Trimethylbenzene	11.104	105	77961	10.07	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	10336	10.07	ug/L	#	81
65) t-1,4-Dichloro-2-butene	11.153	88	2829	8.80	ug/L		94
66) 4-Chlorotoluene	11.208	91	65138	9.79	ug/L		98
67) tert-Butylbenzene	11.354	91	41310	9.96	ug/L		96
68) 1,2,4-Trimethylbenzene	11.415	105	78362	9.96	ug/L		99
69) sec-Butylbenzene	11.500	105	88679	9.88	ug/L		98
70) 4-Isopropyltoluene	11.609	119	74162	10.06	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	41681	10.05	ug/L		97
72) 1,4-Dichlorobenzene	11.737	146	41926	10.22	ug/L		96
73) n-Butylbenzene	11.932	91	61550	10.07	ug/L		98
74) 1,2-Dichlorobenzene	12.059	146	38321	9.91	ug/L		98
75) 1,2-Dibromo-3-Chloropr...	12.674	157	5509	9.42	ug/L		96
76) Hexachlorobutadiene	13.179	223	5351	8.91	ug/L		94
77) 1,2,4-Trichlorobenzene	13.215	180	23206	10.15	ug/L		93
78) Naphthalene	13.495	128	79664	9.54	ug/L		98
79) 1,2,3-Trichlorobenzene	13.653	180	22472	9.87	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052910.D
Acq On : 29 May 2019 6:25 pm
Operator : TB
Sample : 9E29058-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052911.D
Acq On : 29 May 2019 6:52 pm
Operator : TB
Sample : 9E29058-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19
no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	256524	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	450201	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	190782	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	141761	50.00	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	495460	50.00	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	610484	50.00	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	165674	50.00	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.657	85	45253	20.00	ug/L		97
3) Chloromethane	1.858	50	72826	20.00	ug/L		100
4) Vinyl Chloride	1.949	62	52612	20.00	ug/L		95
5) Bromomethane	2.296	96	28393	20.00	ug/L		98
6) Chloroethane	2.448	64	19192	20.00	ug/L		88
7) Trichlorofluoromethane	2.575	101	29898	20.00	ug/L		99
8) 1,1-Dichloroethene	3.093	61	51985	20.00	ug/L		90
9) Carbon Disulfide	3.105	76	80999	20.00	ug/L		99
10) Freon 113	3.147	101	41761	20.00	ug/L		87
11) Iodomethane	3.245	142	18507	20.00	ug/L		97
12) Methylene Chloride	3.725	84	58329	20.00	ug/L		96
13) Acetone	3.835	43	44627	40.00	ug/L		100
14) t-1,2-Dichloroethene	3.883	61	61167	20.00	ug/L		98
15) n-Hexane	3.962	86	10080	20.00	ug/L	#	90
16) Methyl-tert-butyl-ether	4.035	73	179725	20.00	ug/L		99
17) 1,1-Dichloroethane	4.516	63	75709	20.00	ug/L		95
18) Acrylonitrile	4.595	53	30627	20.00	ug/L		96
19) c-1,2-Dichloroethene	5.070	61	67717	20.00	ug/L		96
20) 2,2-Dichloropropane	5.173	77	58827	20.00	ug/L		89
21) Bromochloromethane	5.264	49	40396	20.00	ug/L		94
22) Chloroform	5.349	83	86712	20.00	ug/L		98
23) Carbon Tetrachloride	5.477	117	47689	20.00	ug/L		93
24) Tetrahydrofuran	5.532	42	31084	20.00	ug/L		92
25) 1,1,1-Trichloroethane	5.550	97	69031	20.00	ug/L		99
27) 1,1-Dichloropropene	5.678	75	67566	20.00	ug/L		98
28) 2-Butanone (MEK)	5.690	43	82660	40.00	ug/L		99
29) Benzene	5.934	78	221601	20.00	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.146	62	66416	20.00	ug/L		99
31) iso-Butyl Alcohol	6.286	43	127134	500.00	ug/L		91
33) Trichloroethene (TCE)	6.548	130	60590	20.00	ug/L		97
34) Dibromomethane	6.998	93	30886	20.00	ug/L		91
35) 1,2-Dichloropropane	7.108	63	58485	20.00	ug/L		89
36) Bromodichloromethane	7.181	83	52937	20.00	ug/L		97
38) c-1,3-Dichloropropene	7.886	75	76771	20.00	ug/L		99
40) Toluene	8.154	91	231426	20.00	ug/L		97
41) Tetrachloroethene (PCE)	8.598	166	51386	20.00	ug/L		97
42) 4-Methyl-2-Pentanone (...	8.616	43	140164	40.00	ug/L		99
43) t-1,3-Dichloropropene	8.641	75	68797	20.00	ug/L		97
44) 1,1,2-Trichloroethane	8.817	97	50104	20.00	ug/L		96
45) Dibromochloromethane	9.006	129	36395	20.00	ug/L		97
46) 1,3-Dichloropropane	9.109	76	91532	20.00	ug/L		99
47) 1,2-Dibromoethane (EDB)	9.243	107	49836	20.00	ug/L		94
48) 2-Hexanone	9.498	43	101065	40.00	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052911.D
Acq On : 29 May 2019 6:52 pm
Operator : TB
Sample : 9E29058-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

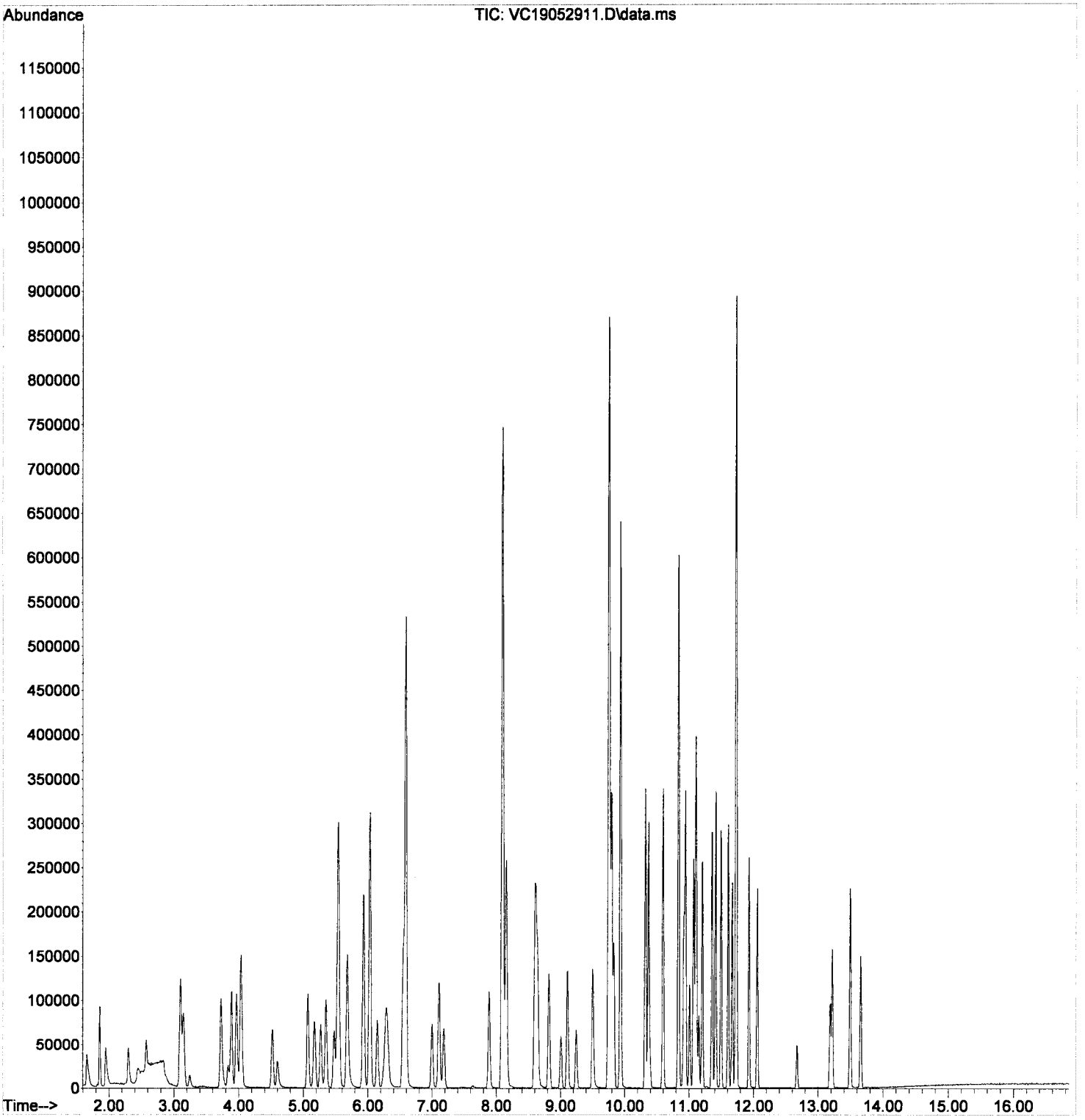
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	139988	20.00	ug/L		95
50) Ethylbenzene	9.797	91	238085	20.00	ug/L		100
51) 1,1,1,2-Tetrachloroethane	9.827	131	42996	20.00	ug/L		99
52) m,p-Xylenes (2)	9.930	91	351394	40.00	ug/L		100
53) o-Xylene	10.320	91	182582	20.00	ug/L		98
54) Styrene	10.368	104	138152	20.00	ug/L		99
55) Bromoform	10.387	173	19903	20.00	ug/L		100
56) Isopropylbenzene	10.593	105	210609	20.00	ug/L		98
59) Bromobenzene	10.916	156	51348	20.00	ug/L		91
60) n-Propylbenzene	10.940	91	226710	20.00	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	52097	20.00	ug/L		99
62) 2-Chlorotoluene	11.068	126	47080	20.00	ug/L	#	83
63) 1,3,5-Trimethylbenzene	11.104	105	158194	20.00	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	20960	20.00	ug/L		88
65) t-1,4-Dichloro-2-butene	11.153	88	6571	20.00	ug/L	#	78
66) 4-Chlorotoluene	11.202	91	135968	20.00	ug/L		98
67) tert-Butylbenzene	11.354	91	84715	20.00	ug/L		95
68) 1,2,4-Trimethylbenzene	11.415	105	160708	20.00	ug/L		98
69) sec-Butylbenzene	11.494	105	183450	20.00	ug/L		97
70) 4-Isopropyltoluene	11.609	119	150593	20.00	ug/L		99
71) 1,3-Dichlorobenzene	11.670	146	84703	20.00	ug/L		97
72) 1,4-Dichlorobenzene	11.737	146	83842	20.00	ug/L		98
73) n-Butylbenzene	11.932	91	124826	20.00	ug/L		99
74) 1,2-Dichlorobenzene	12.060	146	79024	20.00	ug/L		97
75) 1,2-Dibromo-3-Chloropr...	12.674	157	11948	20.00	ug/L		92
76) Hexachlorobutadiene	13.185	223	12267	20.00	ug/L		97
77) 1,2,4-Trichlorobenzene	13.215	180	46713	20.00	ug/L		98
78) Naphthalene	13.489	128	170582	20.00	ug/L		98
79) 1,2,3-Trichlorobenzene	13.653	180	46516	20.00	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052911.D
Acq On : 29 May 2019 6:52 pm
Operator : TB
Sample : 9E29058-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052912.D
Acq On : 29 May 2019 7:20 pm
Operator : TB
Sample : 9E29058-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19

no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	250786	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	449432	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	195329	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	143870	51.90	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	489311	50.51	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	601358	49.34	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	167723	49.44	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	122313	55.29	ug/L		99
3) Chloromethane	1.864	50	179217	50.34	ug/L		99
4) Vinyl Chloride	1.949	62	132089	51.36	ug/L		97
5) Bromomethane	2.302	96	66982	48.26	ug/L		99
6) Chloroethane	2.448	64	47938	51.10	ug/L		86
7) Trichlorofluoromethane	2.576	101	73023	49.97	ug/L		98
8) 1,1-Dichloroethene	3.099	61	135031	53.14	ug/L		87
9) Carbon Disulfide	3.111	76	237187	59.91	ug/L		99
10) Freon 113	3.148	101	104970	51.42	ug/L		89
11) Iodomethane	3.245	142	58902	65.11	ug/L		98
12) Methylene Chloride	3.726	84	122804	43.07	ug/L		98
13) Acetone	3.835	43	111792	102.49	ug/L		94
14) t-1,2-Dichloroethene	3.890	61	157053	52.53	ug/L		99
15) n-Hexane	3.969	86	25466	51.68	ug/L	#	84
16) Methyl-tert-butyl-ether	4.036	73	446710	50.85	ug/L		97
17) 1,1-Dichloroethane	4.523	63	187888	50.77	ug/L		99
18) Acrylonitrile	4.596	53	79642	53.20	ug/L		96
19) c-1,2-Dichloroethene	5.070	61	170168	51.41	ug/L		99
20) 2,2-Dichloropropane	5.173	77	148829	51.76	ug/L		88
21) Bromochloromethane	5.265	49	100930	51.11	ug/L		97
22) Chloroform	5.350	83	217722	51.37	ug/L		98
23) Carbon Tetrachloride	5.478	117	132426	56.81	ug/L		93
24) Tetrahydrofuran	5.532	42	78409	51.60	ug/L		93
25) 1,1,1-Trichloroethane	5.551	97	175402	51.98	ug/L		98
27) 1,1-Dichloropropene	5.678	75	172418	52.20	ug/L		98
28) 2-Butanone (MEK)	5.684	43	208404	103.16	ug/L		95
29) Benzene	5.934	78	547822	50.57	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.147	62	166385	51.25	ug/L		97
31) iso-Butyl Alcohol	6.281	43	325134	1307.96	ug/L		87
33) Trichloroethene (TCE)	6.548	130	153840	51.94	ug/L		99
34) Dibromomethane	6.998	93	80383	53.24	ug/L		93
35) 1,2-Dichloropropane	7.108	63	145741	50.98	ug/L		92
36) Bromodichloromethane	7.181	83	148293	57.31	ug/L		99
38) c-1,3-Dichloropropene	7.887	75	206054	53.77	ug/L		97
40) Toluene	8.154	91	567186	49.10	ug/L		100
41) Tetrachloroethene (PCE)	8.598	166	131806	51.39	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.617	43	362001	103.48	ug/L		99
43) t-1,3-Dichloropropene	8.641	75	188244	54.82	ug/L		96
44) 1,1,2-Trichloroethane	8.817	97	128045	51.20	ug/L		96
45) Dibromochloromethane	9.006	129	110966	61.08	ug/L		98
46) 1,3-Dichloropropane	9.109	76	228171	49.94	ug/L		100
47) 1,2-Dibromoethane (EDB)	9.243	107	132585	53.30	ug/L		98
48) 2-Hexanone	9.499	43	264271	104.77	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052912.D
Acq On : 29 May 2019 7:20 pm
Operator : TB
Sample : 9E29058-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:00 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

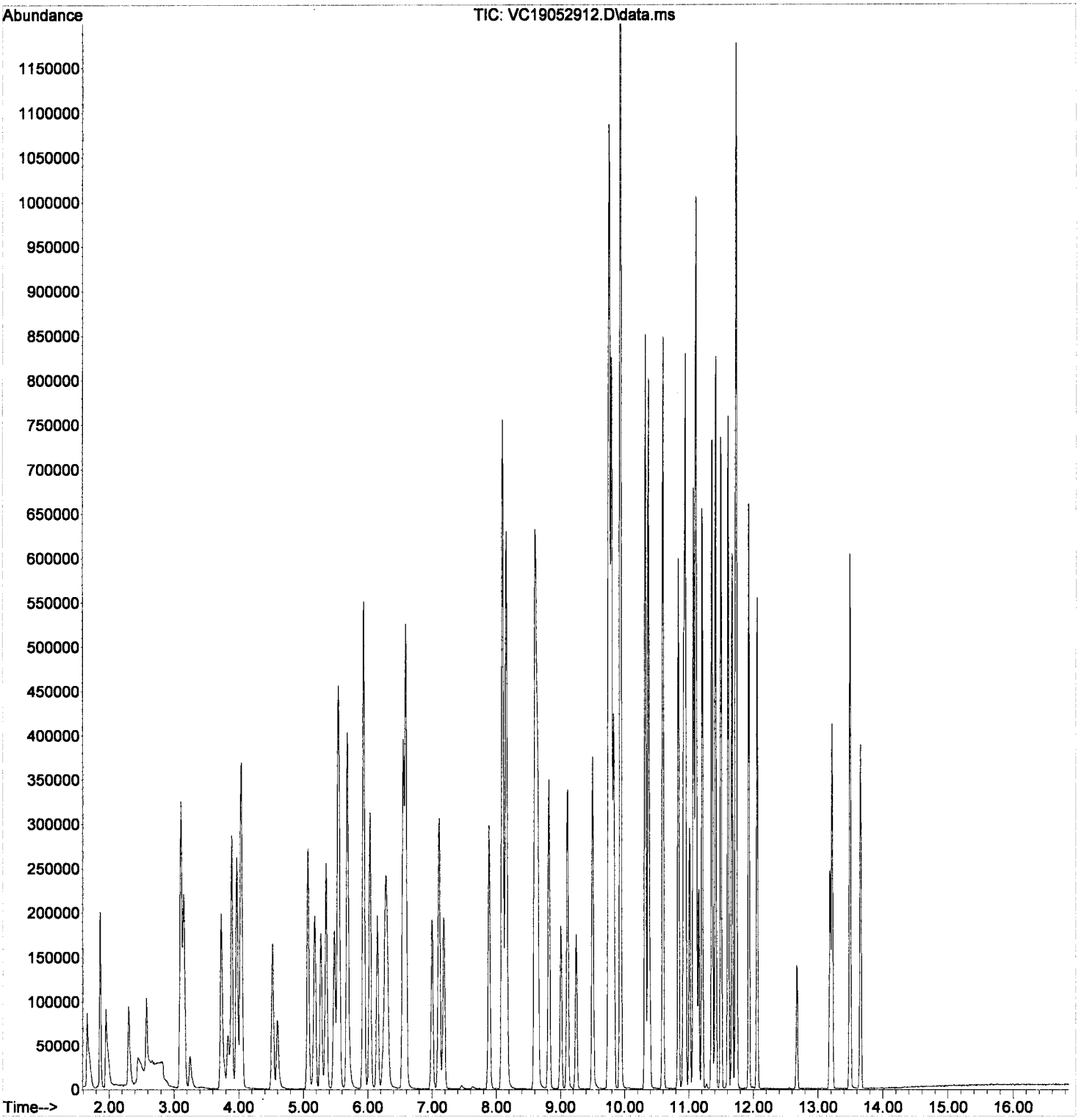
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	351235	50.27	ug/L		97
50) Ethylbenzene	9.797	91	580649	48.86	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.827	131	116780	54.41	ug/L		96
52) m,p-Xylenes (2)	9.931	91	846663	96.54	ug/L		98
53) o-Xylene	10.320	91	457250	50.17	ug/L		99
54) Styrene	10.369	104	353430	51.25	ug/L		98
55) Bromoform	10.387	173	64724	65.15	ug/L		97
56) Isopropylbenzene	10.594	105	514735	48.96	ug/L		100
59) Bromobenzene	10.916	156	134239	51.07	ug/L		92
60) n-Propylbenzene	10.941	91	564190	48.61	ug/L		100
61) 1,1,2,2-Tetrachloroethane	11.008	83	135917	50.96	ug/L		98
62) 2-Chlorotoluene	11.068	126	120765	50.11	ug/L		86
63) 1,3,5-Trimethylbenzene	11.105	105	396913	49.01	ug/L		97
64) 1,2,3-Trichloropropane	11.117	110	54793	51.07	ug/L		92
65) t-1,4-Dichloro-2-butene	11.154	88	19084	56.73	ug/L	#	77
66) 4-Chlorotoluene	11.202	91	345630	49.66	ug/L		98
67) tert-Butylbenzene	11.360	91	215868	49.78	ug/L		96
68) 1,2,4-Trimethylbenzene	11.415	105	400305	48.66	ug/L		98
69) sec-Butylbenzene	11.494	105	461029	49.09	ug/L		97
70) 4-Isopropyltoluene	11.610	119	386921	50.19	ug/L		97
71) 1,3-Dichlorobenzene	11.671	146	218010	50.28	ug/L		98
72) 1,4-Dichlorobenzene	11.738	146	214078	49.88	ug/L		100
73) n-Butylbenzene	11.926	91	313322	49.03	ug/L		98
74) 1,2-Dichlorobenzene	12.060	146	201831	49.89	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.674	157	36171	59.14	ug/L		93
76) Hexachlorobutadiene	13.179	223	30150	48.01	ug/L		97
77) 1,2,4-Trichlorobenzene	13.216	180	126759	53.01	ug/L		97
78) Naphthalene	13.490	128	451629	51.72	ug/L		99
79) 1,2,3-Trichlorobenzene	13.654	180	120109	50.44	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052912.D
Acq On : 29 May 2019 7:20 pm
Operator : TB
Sample : 9E29058-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052913.D
Acq On : 29 May 2019 7:47 pm
Operator : TB
Sample : 9E29058-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

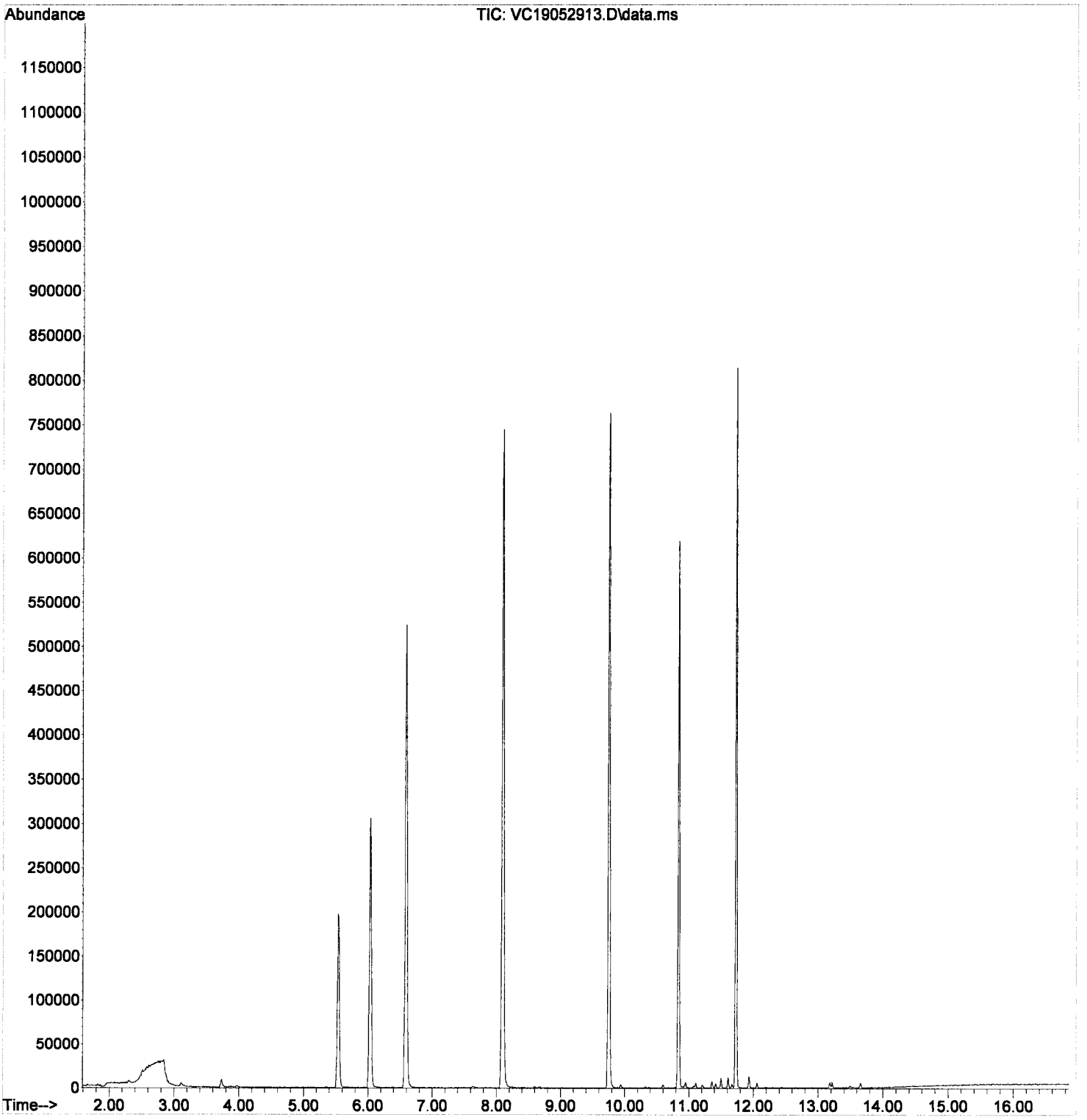
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.034	168	251569	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	444742	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	190416	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.535	111	134463	49.36 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	487332	50.36 ug/L		0.00
39) Toluene-d8 (S)	8.096	98	596282	49.56 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	163307	49.67 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.666	85	357	0.16 ug/L	#	50
3) Chloromethane	1.867	50	976	0.26 ug/L		84
5) Bromomethane	2.311	96	1740	1.20 ug/L		77
6) Chloroethane	2.524	64	106	0.11 ug/L	#	1
9) Carbon Disulfide	3.114	76	5278	1.31 ug/L		93
10) Freon 113	3.144	101	240	0.11 ug/L	#	73
11) Iodomethane	3.260	142	820	1.51 ug/L	#	78
12) Methylene Chloride	3.734	84	4772	Below Cal		93
13) Acetone	3.807	43	145	0.13 ug/L	#	42
14) t-1,2-Dichloroethene	3.886	61	405	0.14 ug/L	#	69
27) 1,1-Dichloropropene	5.681	75	506	0.15 ug/L		65
33) Trichloroethene (TCE)	6.551	130	349	0.11 ug/L	#	74
40) Toluene	8.157	91	1535	0.13 ug/L		81
41) Tetrachloroethene (PCE)	8.595	166	515	0.19 ug/L	#	55
49) Chlorobenzene	9.763	112	913	0.13 ug/L	#	1
50) Ethylbenzene	9.794	91	1643	0.14 ug/L		90
52) m,p-Xylenes (2)	9.940	91	2720	0.31 ug/L		91
53) o-Xylene	10.323	91	959	0.11 ug/L		80
54) Styrene	10.378	104	575	0.09 ug/L		80
56) Isopropylbenzene	10.597	105	2561	0.25 ug/L		82
59) Bromobenzene	10.919	156	356	0.14 ug/L		91
60) n-Propylbenzene	10.949	91	4592	0.40 ug/L		96
62) 2-Chlorotoluene	11.077	126	404	0.17 ug/L	#	82
63) 1,3,5-Trimethylbenzene	11.108	105	2985	0.39 ug/L		86
66) 4-Chlorotoluene	11.205	91	1724	0.25 ug/L		92
67) tert-Butylbenzene	11.357	91	2078	0.48 ug/L	#	78
68) 1,2,4-Trimethylbenzene	11.418	105	2595	0.33 ug/L		98
69) sec-Butylbenzene	11.497	105	7228	0.79 ug/L		94
70) 4-Isopropyltoluene	11.606	119	6170	0.83 ug/L		92
71) 1,3-Dichlorobenzene	11.673	146	1236	0.28 ug/L		91
72) 1,4-Dichlorobenzene	11.740	146	1354	0.31 ug/L	#	35
73) n-Butylbenzene	11.929	91	6549	1.03 ug/L		96
74) 1,2-Dichlorobenzene	12.063	146	829	0.20 ug/L		92
76) Hexachlorobutadiene	13.176	223	818	1.39 ug/L	#	74
77) 1,2,4-Trichlorobenzene	13.219	180	2228	0.94 ug/L		77
78) Naphthalene	13.492	128	2214	0.28 ug/L		84
79) 1,2,3-Trichlorobenzene	13.657	180	1953	0.87 ug/L		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052913.D
Acq On : 29 May 2019 7:47 pm
Operator : TB
Sample : 9E29058-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052914.D
Acq On : 29 May 2019 8:15 pm
Operator : TB
Sample : 9E29058-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19

no change

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.031	168	260650	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.748	117	459775	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	197554	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.532	111	144066	50.01	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.584	114	496661	49.33	ug/L	0.00
39) Toluene-d8 (S)	8.093	98	619571	49.69	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172526	50.28	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.650	85	241195	104.91	ug/L	98
3) Chloromethane	1.851	50	355923	96.20	ug/L	99
4) Vinyl Chloride	1.942	62	265790	99.44	ug/L	98
5) Bromomethane	2.295	96	130087	90.18	ug/L	93
6) Chloroethane	2.441	64	105670	108.38	ug/L	98
7) Trichlorofluoromethane	2.569	101	152590	100.46	ug/L	99
8) 1,1-Dichloroethene	3.086	61	268375	101.62	ug/L	88
9) Carbon Disulfide	3.098	76	506056	122.98	ug/L	99
10) Freon 113	3.141	101	207803	97.94	ug/L	88
11) Iodomethane	3.238	142	139044	147.88	ug/L	99
12) Methylene Chloride	3.719	84	236890	79.94	ug/L	94
13) Acetone	3.828	43	225817	199.20	ug/L	94
14) t-1,2-Dichloroethene	3.883	61	311743	100.32	ug/L	96
15) n-Hexane	3.962	86	48610	94.92	ug/L	97
16) Methyl-tert-butyl-ether	4.029	73	885758	97.01	ug/L	97
17) 1,1-Dichloroethane	4.516	63	388015	100.88	ug/L	99
18) Acrylonitrile	4.589	53	160664	103.26	ug/L	100
19) c-1,2-Dichloroethene	5.063	61	343281	99.78	ug/L	99
20) 2,2-Dichloropropane	5.167	77	299040	100.06	ug/L	88
21) Bromochloromethane	5.264	49	202481	98.66	ug/L	99
22) Chloroform	5.343	83	433579	98.42	ug/L	98
23) Carbon Tetrachloride	5.471	117	278862	115.10	ug/L	98
24) Tetrahydrofuran	5.526	42	156885	99.34	ug/L	93
25) 1,1,1-Trichloroethane	5.544	97	353917	100.92	ug/L	97
27) 1,1-Dichloropropene	5.672	75	339212	98.82	ug/L	99
28) 2-Butanone (MEK)	5.684	43	408448	194.52	ug/L	95
29) Benzene	5.927	78	1066556	94.74	ug/L	96
30) 1,2-Dichloroethane (EDC)	6.146	62	327724	97.13	ug/L	98
31) iso-Butyl Alcohol	6.280	43	664229	2570.97	ug/L	88
33) Trichloroethene (TCE)	6.548	130	306069	99.43	ug/L	98
34) Dibromomethane	6.992	93	161634	103.01	ug/L	92
35) 1,2-Dichloropropane	7.101	63	294477	99.11	ug/L	92
36) Bromodichloromethane	7.180	83	315200	117.20	ug/L	97
38) c-1,3-Dichloropropene	7.886	75	423217	107.96	ug/L	99
40) Toluene	8.154	91	1105825	93.58	ug/L	97
41) Tetrachloroethene (PCE)	8.598	166	260817	99.40	ug/L	98
42) 4-Methyl-2-Pentanone (...	8.616	43	707759	197.77	ug/L	98
43) t-1,3-Dichloropropene	8.640	75	389918	110.99	ug/L	97
44) 1,1,2-Trichloroethane	8.817	97	255240	99.76	ug/L	95
45) Dibromochloromethane	9.005	129	241274	129.83	ug/L	94
46) 1,3-Dichloropropane	9.103	76	456442	97.66	ug/L	99
47) 1,2-Dibromoethane (EDB)	9.243	107	266180	104.60	ug/L	100
48) 2-Hexanone	9.498	43	528430	204.79	ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052914.D
Acq On : 29 May 2019 8:15 pm
Operator : TB
Sample : 9E29058-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

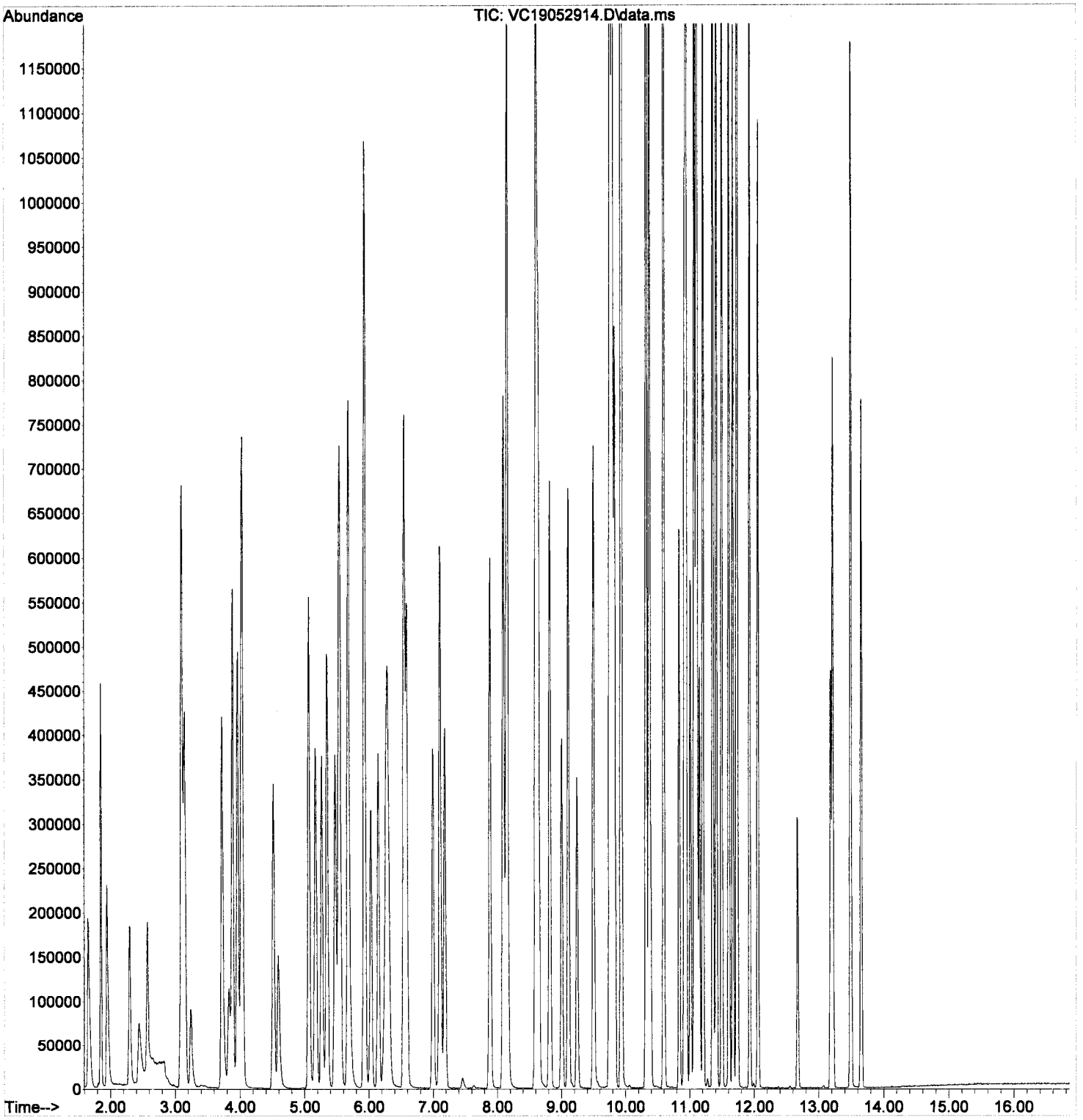
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	689400	96.44	ug/L		97
50) Ethylbenzene	9.790	91	1114972	91.71	ug/L		96
51) 1,1,1,2-Tetrachloroethane	9.827	131	242014	110.23	ug/L		98
52) m,p-Xylenes (2)	9.930	91	1592559	177.51	ug/L		95
53) o-Xylene	10.319	91	885817	95.01	ug/L		96
54) Styrene	10.368	104	713586	101.15	ug/L		97
55) Bromoform	10.386	173	146040	143.70	ug/L		99
56) Isopropylbenzene	10.593	105	1002570	93.22	ug/L		97
59) Bromobenzene	10.916	156	271067	101.96	ug/L		93
60) n-Propylbenzene	10.940	91	1090767	92.93	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	271157	100.53	ug/L		99
62) 2-Chlorotoluene	11.068	126	246373	101.07	ug/L		93
63) 1,3,5-Trimethylbenzene	11.104	105	773425	94.43	ug/L		95
64) 1,2,3-Trichloropropane	11.116	110	105916	97.60	ug/L		87
65) t-1,4-Dichloro-2-butene	11.153	88	40488	119.01	ug/L	#	74
66) 4-Chlorotoluene	11.208	91	677786	96.28	ug/L		97
67) tert-Butylbenzene	11.354	91	425964	97.12	ug/L		92
68) 1,2,4-Trimethylbenzene	11.414	105	777007	93.38	ug/L		97
69) sec-Butylbenzene	11.500	105	882609	92.92	ug/L		99
70) 4-Isopropyltoluene	11.609	119	751233	96.35	ug/L		98
71) 1,3-Dichlorobenzene	11.670	146	425300	96.98	ug/L		99
72) 1,4-Dichlorobenzene	11.737	146	418076	96.31	ug/L		97
73) n-Butylbenzene	11.932	91	597386	92.43	ug/L		99
74) 1,2-Dichlorobenzene	12.059	146	392931	96.04	ug/L		97
75) 1,2-Dibromo-3-Chloropr...	12.674	157	80792	130.60	ug/L		93
76) Hexachlorobutadiene	13.185	223	57553	90.62	ug/L		99
77) 1,2,4-Trichlorobenzene	13.215	180	244685	101.17	ug/L		99
78) Naphthalene	13.489	128	891724	100.97	ug/L		98
79) 1,2,3-Trichlorobenzene	13.653	180	241375	100.22	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052914.D
Acq On : 29 May 2019 8:15 pm
Operator : TB
Sample : 9E29058-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052915.D
Acq On : 29 May 2019 8:42 pm
Operator : TB
Sample : 9E29058-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:39 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	256547	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	452677	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	192224	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	140388	50.53	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.587	114	494571	50.12	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	609458	49.77	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	168721	50.83	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.654	85	676	0.29	ug/L	#	50
3) Chloromethane	1.861	50	943	0.25	ug/L		88
4) Vinyl Chloride	1.946	62	275	0.11	ug/L		68
5) Bromomethane	2.305	96	1722	1.17	ug/L		89
6) Chloroethane	2.445	64	129	0.13	ug/L	#	1
7) Trichlorofluoromethane	2.572	101	180	0.12	ug/L	#	65
8) 1,1-Dichloroethene	3.089	61	380	0.15	ug/L		79
9) Carbon Disulfide	3.108	76	2586	0.63	ug/L		89
10) Freon 113	3.156	101	673	0.31	ug/L	#	65
11) Iodomethane	3.254	142	849	1.52	ug/L	#	75
12) Methylene Chloride	3.728	84	3426	Below Cal			88
13) Acetone	3.850	43	871	0.75	ug/L		95
14) t-1,2-Dichloroethene	3.892	61	750	0.25	ug/L		84
15) n-Hexane	3.971	86	246	Below Cal		#	4
19) c-1,2-Dichloroethene	5.054	61	315	0.09	ug/L	#	17
24) Tetrahydrofuran	5.535	42	155	0.09	ug/L	#	46
27) 1,1-Dichloropropene	5.687	75	990	0.29	ug/L		91
28) 2-Butanone (MEK)	5.724	43	638	0.31	ug/L		54
33) Trichloroethene (TCE)	6.551	130	647	0.21	ug/L		84
40) Toluene	8.157	91	1952	0.16	ug/L		87
41) Tetrachloroethene (PCE)	8.601	166	1080	0.39	ug/L		85
49) Chlorobenzene	9.769	112	1460	0.20	ug/L		76
50) Ethylbenzene	9.793	91	2680	0.22	ug/L		78
52) m,p-Xylenes (2)	9.933	91	4420	0.50	ug/L		88
53) o-Xylene	10.323	91	1924	0.21	ug/L		92
54) Styrene	10.377	104	1021	0.16	ug/L		88
56) Isopropylbenzene	10.596	105	4775	0.45	ug/L		92
59) Bromobenzene	10.919	156	566	0.22	ug/L	#	66
60) n-Propylbenzene	10.943	91	8814	0.76	ug/L		95
62) 2-Chlorotoluene	11.071	126	976	0.41	ug/L		99
63) 1,3,5-Trimethylbenzene	11.107	105	5812	0.74	ug/L		87
66) 4-Chlorotoluene	11.211	91	2829	0.41	ug/L		94
67) tert-Butylbenzene	11.357	91	4500	1.03	ug/L		94
68) 1,2,4-Trimethylbenzene	11.412	105	5321	0.66	ug/L		98
69) sec-Butylbenzene	11.497	105	13359	1.44	ug/L		93
70) 4-Isopropyltoluene	11.606	119	11787	1.56	ug/L		92
71) 1,3-Dichlorobenzene	11.673	146	2471	0.55	ug/L		97
72) 1,4-Dichlorobenzene	11.740	146	2868	0.64	ug/L		80
73) n-Butylbenzene	11.929	91	12734	1.99	ug/L		98
74) 1,2-Dichlorobenzene	12.063	146	1697	0.41	ug/L		91
76) Hexachlorobutadiene	13.182	223	1410	2.38	ug/L		84
77) 1,2,4-Trichlorobenzene	13.212	180	3876	1.63	ug/L		98
78) Naphthalene	13.492	128	4286	0.53	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052915.D
Acq On : 29 May 2019 8:42 pm
Operator : TB
Sample : 9E29058-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:39 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

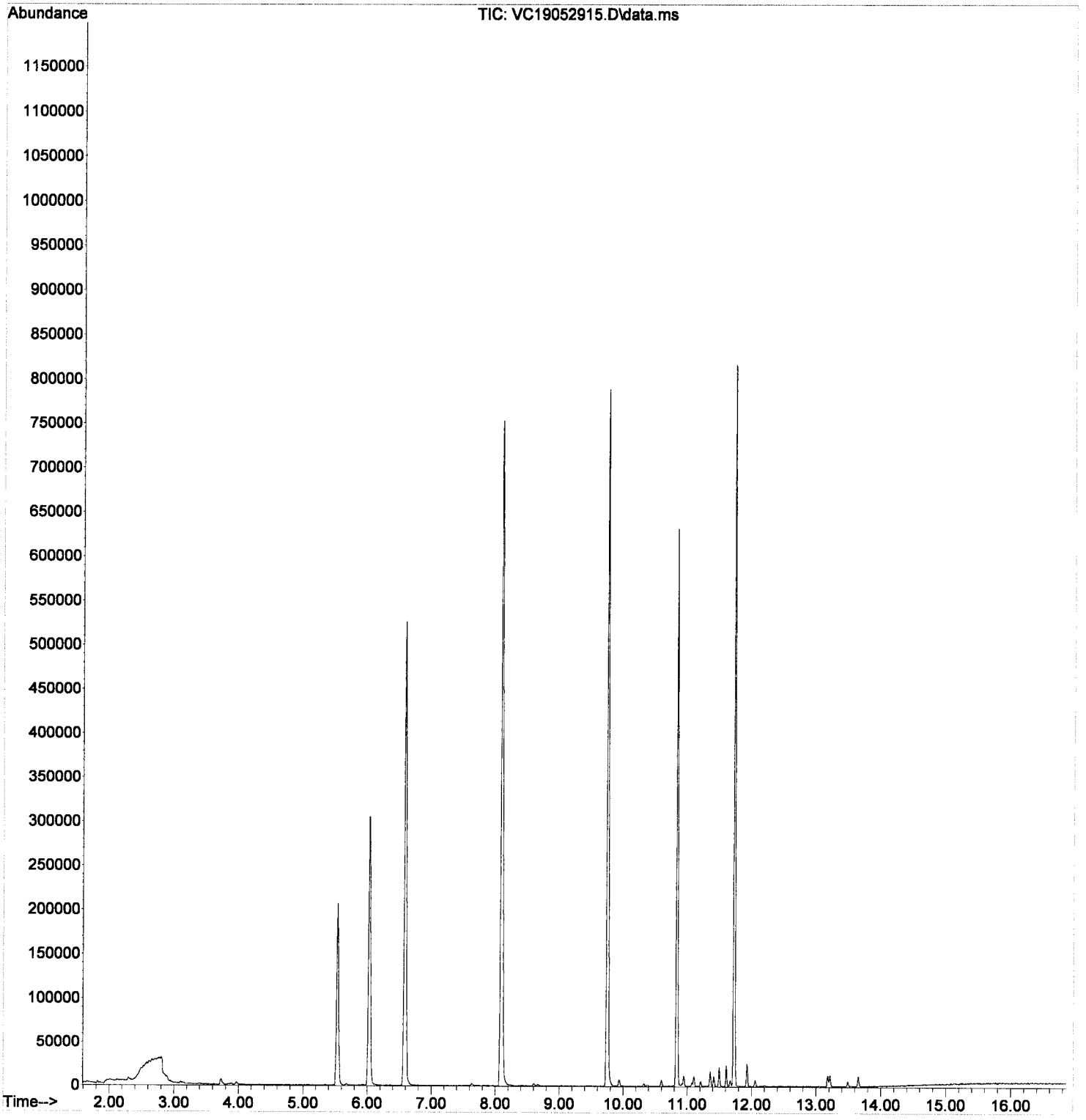
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 1,2,3-Trichlorobenzene	13.656	180	3676	1.63	ug/L	89

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052915.D
Acq On : 29 May 2019 8:42 pm
Operator : TB
Sample : 9E29058-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:39 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052916.D
Acq On : 29 May 2019 9:10 pm
Operator : TB
Sample : 9E29058-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 no change

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	266542	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.752	117	464260	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	201371	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	144453	49.03	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.582	114	515449	50.06	ug/L	0.00
39) Toluene-d8 (S)	8.091	98	635623	50.48	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	170853	48.85	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.655	85	453681	192.97	ug/L	98
3) Chloromethane	1.855	50	652609	172.49	ug/L	99
4) Vinyl Chloride	1.940	62	501566	183.50	ug/L	98
5) Bromomethane	2.293	96	269576	182.75	ug/L	96
6) Chloroethane	2.433	64	187116	187.66	ug/L	95
7) Trichlorofluoromethane	2.567	101	268497	172.86	ug/L	99
8) 1,1-Dichloroethene	3.090	61	525278	194.49	ug/L	90
9) Carbon Disulfide	3.102	76	1024014	243.34	ug/L	98
10) Freon 113	3.139	101	409831	188.90	ug/L	88
11) Iodomethane	3.236	142	307158	319.46	ug/L	98
12) Methylene Chloride	3.723	84	435629	143.76	ug/L	96
13) Acetone	3.826	43	420741	362.94	ug/L	93
14) t-1,2-Dichloroethene	3.881	61	595457	187.38	ug/L	94
15) n-Hexane	3.960	86	98461	188.02	ug/L	97
16) Methyl-tert-butyl-ether	4.027	73	1674237	179.31	ug/L	94
17) 1,1-Dichloroethane	4.514	63	718862	182.76	ug/L	99
18) Acrylonitrile	4.587	53	314097	197.40	ug/L	100
19) c-1,2-Dichloroethene	5.061	61	647004	183.91	ug/L	99
20) 2,2-Dichloropropane	5.165	77	584639	191.29	ug/L	88
21) Bromochloromethane	5.262	49	383923	182.94	ug/L	99
22) Chloroform	5.347	83	802076	178.04	ug/L	97
23) Carbon Tetrachloride	5.475	117	577566	233.12	ug/L	98
24) Tetrahydrofuran	5.524	42	306415	189.74	ug/L	94
25) 1,1,1-Trichloroethane	5.542	97	697341	194.44	ug/L	99
27) 1,1-Dichloropropene	5.670	75	664805	189.39	ug/L	97
28) 2-Butanone (MEK)	5.682	43	802082	373.55	ug/L	95
29) Benzene	5.925	78	1978560	171.86	ug/L	93
30) 1,2-Dichloroethane (EDC)	6.144	62	639082	185.22	ug/L	97
31) iso-Butyl Alcohol	6.278	43	1273429	4819.98	ug/L	89
33) Trichloroethene (TCE)	6.546	130	582863	185.16	ug/L	98
34) Dibromomethane	6.996	93	312313	194.63	ug/L	96
35) 1,2-Dichloropropane	7.105	63	569634	187.48	ug/L	94
36) Bromodichloromethane	7.178	83	637695	231.87	ug/L	96
38) c-1,3-Dichloropropene	7.884	75	831235	209.99	ug/L	98
40) Toluene	8.152	91	2033618	170.42	ug/L	94
41) Tetrachloroethene (PCE)	8.596	166	514549	194.20	ug/L	98
42) 4-Methyl-2-Pentanone (...	8.614	43	1330786	368.28	ug/L	97
43) t-1,3-Dichloropropene	8.644	75	772812	217.86	ug/L	95
44) 1,1,2-Trichloroethane	8.815	97	500164	193.60	ug/L	97
45) Dibromochloromethane	9.003	129	499033	265.93	ug/L	97
46) 1,3-Dichloropropane	9.107	76	863655	183.00	ug/L	99
47) 1,2-Dibromoethane (EDB)	9.241	107	519720	202.26	ug/L	100
48) 2-Hexanone	9.496	43	1007307	386.60	ug/L	95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052916.D
Acq On : 29 May 2019 9:10 pm
Operator : TB
Sample : 9E29058-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

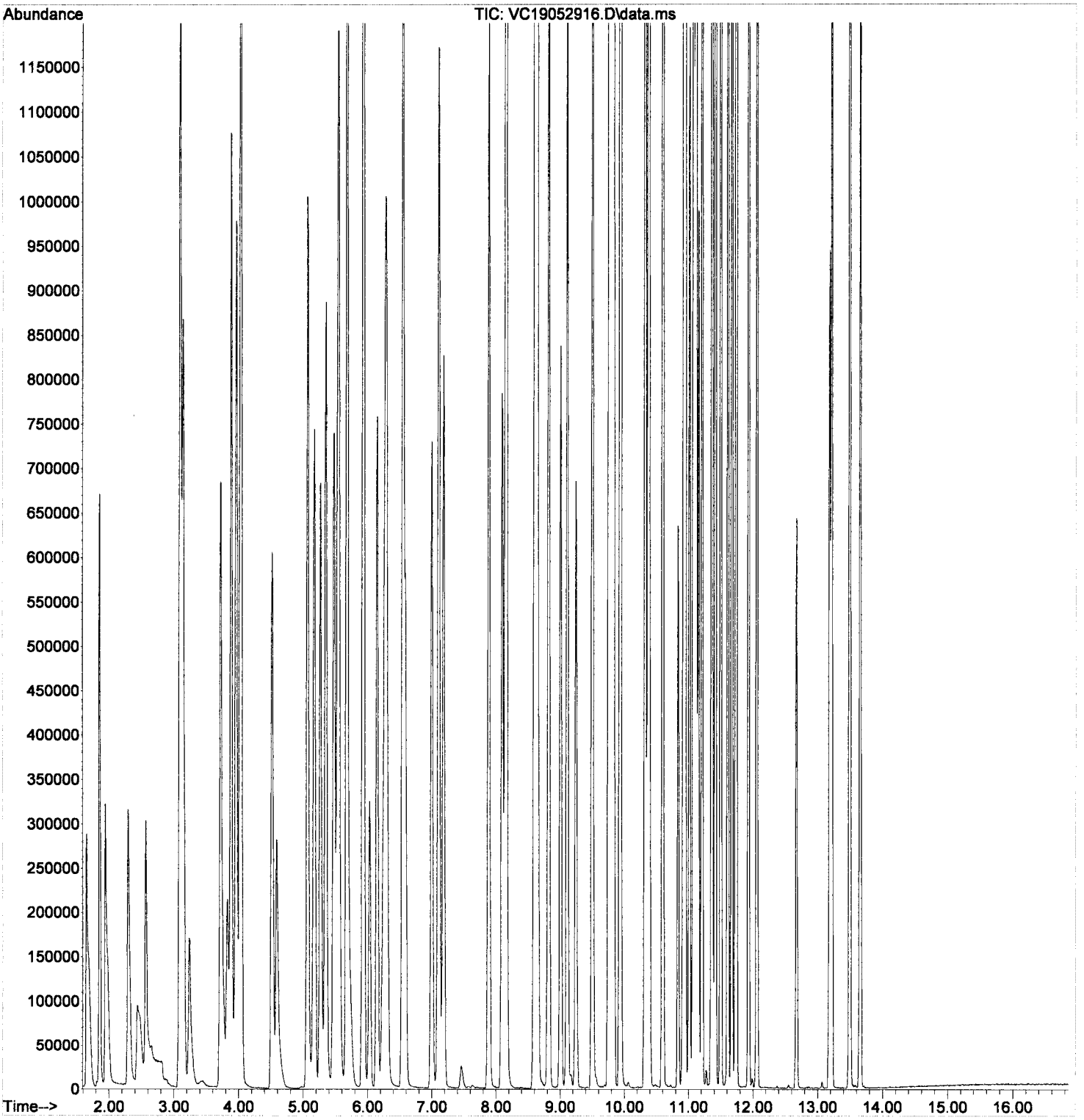
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	1272416	176.28	ug/L		94
50) Ethylbenzene	9.794	91	1992124	162.28	ug/L		91
51) 1,1,1,2-Tetrachloroethane	9.831	131	477013	215.17	ug/L		97
52) m,p-Xylenes (2)	9.934	91	2720941	300.35	ug/L		86
53) o-Xylene	10.317	91	1581408	167.98	ug/L		93
54) Styrene	10.366	104	1293977	181.65	ug/L		92
55) Bromoform	10.390	173	312567	304.58	ug/L		99
56) Isopropylbenzene	10.597	105	1774164	163.38	ug/L		93
59) Bromobenzene	10.920	156	503576	185.83	ug/L		98
60) n-Propylbenzene	10.944	91	1879841	157.12	ug/L		91
61) 1,1,2,2-Tetrachloroethane	11.011	83	542178	197.20	ug/L		99
62) 2-Chlorotoluene	11.072	126	452526	182.13	ug/L		97
63) 1,3,5-Trimethylbenzene	11.102	105	1378879	165.16	ug/L		94
64) 1,2,3-Trichloropropane	11.114	110	207925	187.97	ug/L		90
65) t-1,4-Dichloro-2-butene	11.151	88	84511	243.70	ug/L	#	74
66) 4-Chlorotoluene	11.206	91	1200687	167.33	ug/L		94
67) tert-Butylbenzene	11.358	91	765557	171.23	ug/L		94
68) 1,2,4-Trimethylbenzene	11.412	105	1351532	159.35	ug/L		92
69) sec-Butylbenzene	11.498	105	1543796	159.46	ug/L		95
70) 4-Isopropyltoluene	11.607	119	1333607	167.80	ug/L		95
71) 1,3-Dichlorobenzene	11.668	146	784949	175.60	ug/L		97
72) 1,4-Dichlorobenzene	11.741	146	784148	177.22	ug/L		97
73) n-Butylbenzene	11.929	91	1090372	165.52	ug/L		95
74) 1,2-Dichlorobenzene	12.057	146	746324	178.95	ug/L		95
75) 1,2-Dibromo-3-Chloropr...	12.672	157	172847	274.12	ug/L		92
76) Hexachlorobutadiene	13.183	223	115944	179.09	ug/L		98
77) 1,2,4-Trichlorobenzene	13.213	180	483143	195.98	ug/L		97
78) Naphthalene	13.493	128	1658112	184.18	ug/L		97
79) 1,2,3-Trichlorobenzene	13.651	180	476195	193.98	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052916.D
Acq On : 29 May 2019 9:10 pm
Operator : TB
Sample : 9E29058-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052917.D
Acq On : 29 May 2019 9:37 pm
Operator : TB
Sample : 9E29058-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:41 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.035	168	266471	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	468131	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	198041	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.536	111	145533	50.44 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	513391	50.09 ug/L		0.00
39) Toluene-d8 (S)	8.097	98	627007	49.51 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	174112	50.92 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.661	85	1425	0.60 ug/L		87
3) Chloromethane	1.861	50	1797	0.46 ug/L		93
4) Vinyl Chloride	1.946	62	700	0.26 ug/L		91
5) Bromomethane	2.311	96	2516	1.64 ug/L	#	68
6) Chloroethane	2.433	64	128	0.13 ug/L	#	1
7) Trichlorofluoromethane	2.585	101	522	0.34 ug/L	#	16
8) 1,1-Dichloroethene	3.096	61	781	0.29 ug/L		96
9) Carbon Disulfide	3.114	76	5429	1.27 ug/L		94
10) Freon 113	3.139	101	1424	0.62 ug/L	#	64
11) Iodomethane	3.254	142	1500	2.07 ug/L	#	89
12) Methylene Chloride	3.729	84	5380	Below Cal		98
13) Acetone	3.838	43	1747	1.45 ug/L		95
14) t-1,2-Dichloroethene	3.893	61	1472	0.47 ug/L		93
15) n-Hexane	3.972	86	243	Below Cal	#	83
19) c-1,2-Dichloroethene	5.085	61	580	0.17 ug/L		83
22) Chloroform	5.359	83	846	0.18 ug/L		85
23) Carbon Tetrachloride	5.487	117	459	0.19 ug/L		82
25) 1,1,1-Trichloroethane	5.542	97	318	0.09 ug/L	#	45
27) 1,1-Dichloropropene	5.682	75	1691	0.47 ug/L		90
28) 2-Butanone (MEK)	5.712	43	436	0.20 ug/L		54
29) Benzene	5.931	78	1907	0.16 ug/L		95
30) 1,2-Dichloroethane (EDC)	6.156	62	420	0.12 ug/L		71
31) iso-Butyl Alcohol	6.308	43	105	0.40 ug/L		92
33) Trichloroethene (TCE)	6.558	130	1357	0.42 ug/L		82
34) Dibromomethane	7.002	93	215	0.14 ug/L	#	25
38) c-1,3-Dichloropropene	7.896	75	390	0.11 ug/L		65
40) Toluene	8.158	91	3533	0.29 ug/L		98
41) Tetrachloroethene (PCE)	8.596	166	2047	0.71 ug/L		97
43) t-1,3-Dichloropropene	8.656	75	377	0.11 ug/L		57
46) 1,3-Dichloropropane	9.113	76	475	0.10 ug/L	#	73
47) 1,2-Dibromoethane (EDB)	9.247	107	201	0.08 ug/L		72
48) 2-Hexanone	9.520	43	358	0.14 ug/L	#	31
49) Chlorobenzene	9.764	112	2333	0.31 ug/L	#	58
50) Ethylbenzene	9.800	91	4828	0.38 ug/L		94
52) m,p-Xylenes (2)	9.940	91	8543	0.94 ug/L		95
53) o-Xylene	10.323	91	2908	0.30 ug/L		88
54) Styrene	10.378	104	1910	0.29 ug/L		88
56) Isopropylbenzene	10.597	105	9551	0.87 ug/L		98
59) Bromobenzene	10.920	156	911	0.35 ug/L		87
60) n-Propylbenzene	10.944	91	17507	1.47 ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.023	83	278	0.11 ug/L	#	25
62) 2-Chlorotoluene	11.072	126	1493	0.60 ug/L		93
63) 1,3,5-Trimethylbenzene	11.102	105	11474	1.42 ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052917.D
Acq On : 29 May 2019 9:37 pm
Operator : TB
Sample : 9E29058-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:41 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

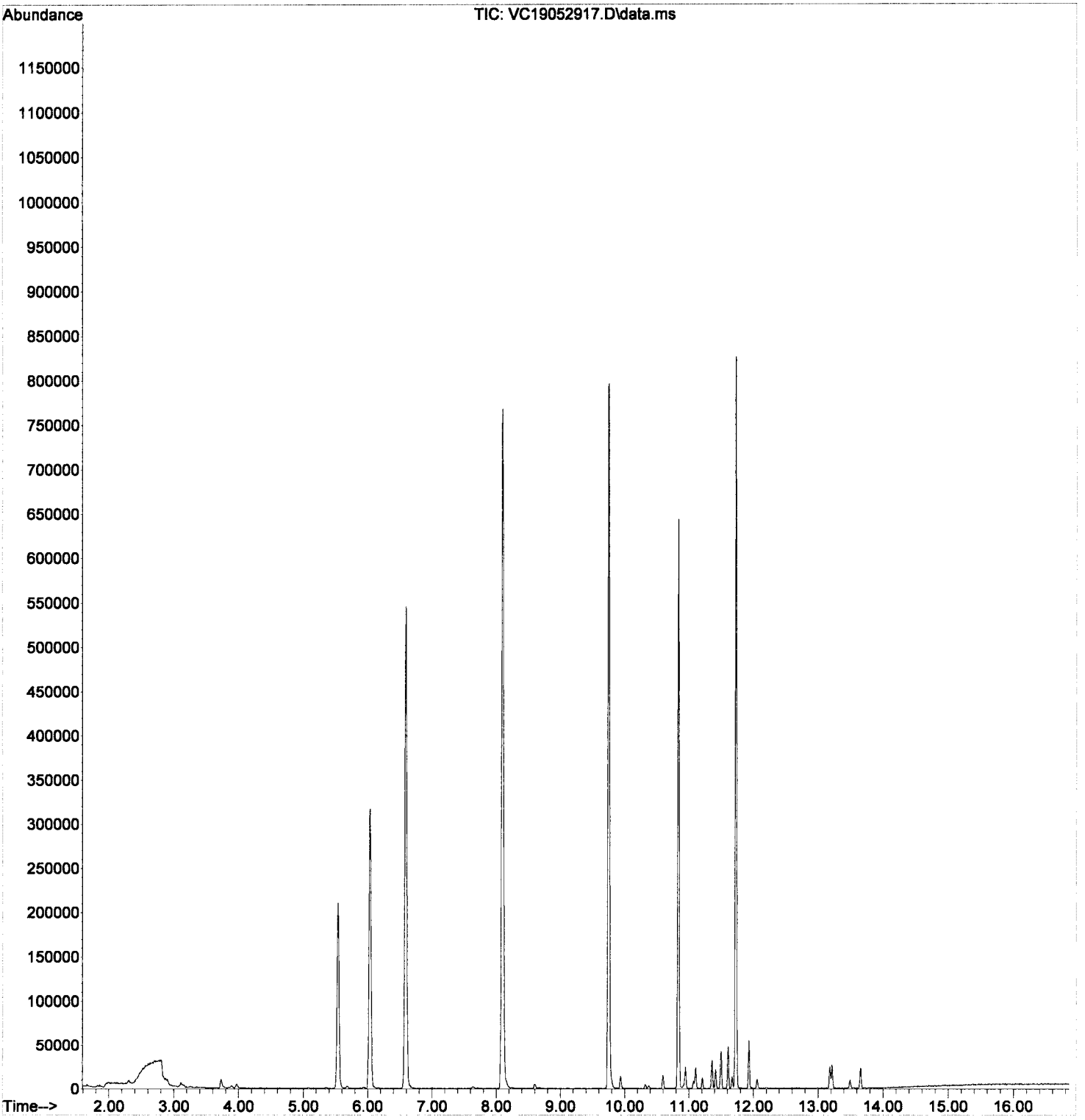
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) 4-Chlorotoluene	11.205	91	5419	0.76	ug/L	99
67) tert-Butylbenzene	11.358	91	8902	1.97	ug/L	98
68) 1,2,4-Trimethylbenzene	11.412	105	10380	1.26	ug/L	98
69) sec-Butylbenzene	11.497	105	27464	2.88	ug/L	98
70) 4-Isopropyltoluene	11.607	119	23355	3.01	ug/L	98
71) 1,3-Dichlorobenzene	11.674	146	4941	1.08	ug/L	94
72) 1,4-Dichlorobenzene	11.741	146	4659	1.02	ug/L	91
73) n-Butylbenzene	11.929	91	25413	3.85	ug/L	97
74) 1,2-Dichlorobenzene	12.057	146	3084	0.73	ug/L	97
76) Hexachlorobutadiene	13.183	223	2835	4.65	ug/L	96
77) 1,2,4-Trichlorobenzene	13.213	180	8316	3.39	ug/L	94
78) Naphthalene	13.493	128	8127	0.98	ug/L	100
79) 1,2,3-Trichlorobenzene	13.657	180	7607	3.27	ug/L	93

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052917.D
Acq On : 29 May 2019 9:37 pm
Operator : TB
Sample : 9E29058-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:41 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052918.D
Acq On : 29 May 2019 10:05 pm
Operator : TB
Sample : 9E29058-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

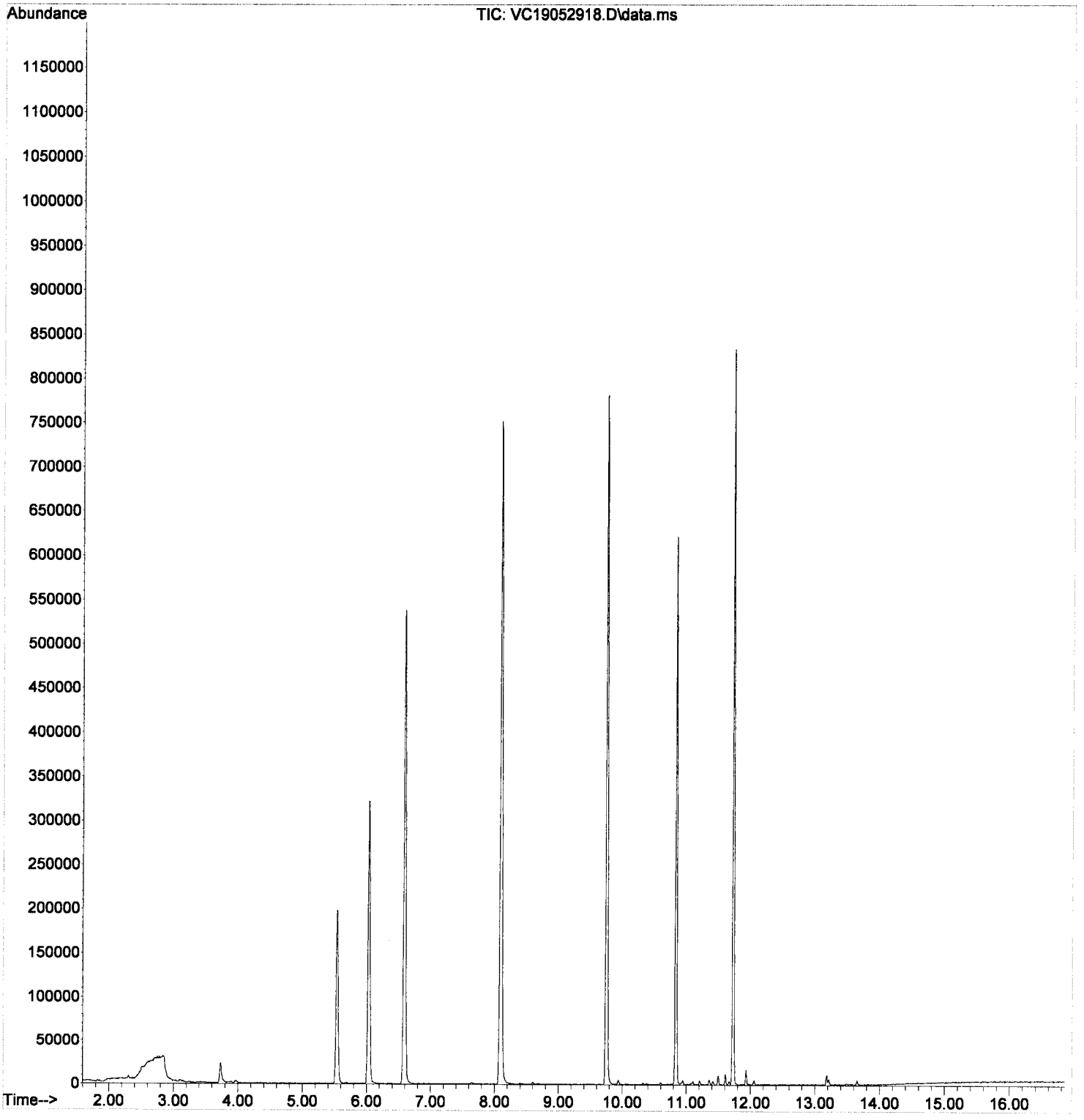
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.030	168	262431	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	460245	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	197727	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.538	111	139115	48.95	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	508408	50.37	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	623082	50.04	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	168233	49.27	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.668	85	297	0.13	ug/L	#	50
3) Chloromethane	1.863	50	964	0.25	ug/L		84
5) Bromomethane	2.301	96	1935	1.28	ug/L		71
6) Chloroethane	2.526	64	129	0.13	ug/L	#	1
8) 1,1-Dichloroethene	3.098	61	246	0.09	ug/L	#	72
9) Carbon Disulfide	3.104	76	1990	0.47	ug/L		88
10) Freon 113	3.153	101	635	0.28	ug/L		77
11) Iodomethane	3.262	142	695	1.37	ug/L	#	47
12) Methylene Chloride	3.731	84	13098	Below Cal			94
13) Acetone	3.859	43	2652	2.24	ug/L		78
14) t-1,2-Dichloroethene	3.889	61	496	0.16	ug/L	#	74
27) 1,1-Dichloropropene	5.690	75	683	0.19	ug/L		84
28) 2-Butanone (MEK)	5.732	43	375	0.18	ug/L		54
33) Trichloroethene (TCE)	6.553	130	416	0.13	ug/L		83
40) Toluene	8.166	91	1276	0.10	ug/L		90
41) Tetrachloroethene (PCE)	8.610	166	725	0.26	ug/L	#	60
49) Chlorobenzene	9.766	112	925	0.13	ug/L	#	1
50) Ethylbenzene	9.802	91	1878	0.15	ug/L		82
52) m,p-Xylenes (2)	9.936	91	2865	0.32	ug/L		95
53) o-Xylene	10.325	91	936	0.10	ug/L		75
54) Styrene	10.374	104	646	0.10	ug/L		93
56) Isopropylbenzene	10.599	105	1528	0.14	ug/L		89
59) Bromobenzene	10.915	156	389	0.15	ug/L		74
60) n-Propylbenzene	10.946	91	3694	0.31	ug/L		96
62) 2-Chlorotoluene	11.067	126	433	0.18	ug/L	#	58
63) 1,3,5-Trimethylbenzene	11.104	105	2122	0.26	ug/L		88
66) 4-Chlorotoluene	11.207	91	1647	0.23	ug/L		97
67) tert-Butylbenzene	11.359	91	1693	0.38	ug/L		92
68) 1,2,4-Trimethylbenzene	11.420	105	2188	0.27	ug/L		98
69) sec-Butylbenzene	11.499	105	6614	0.69	ug/L		95
70) 4-Isopropyltoluene	11.609	119	5729	0.74	ug/L		91
71) 1,3-Dichlorobenzene	11.670	146	1299	0.28	ug/L		92
72) 1,4-Dichlorobenzene	11.743	146	1341	0.29	ug/L		78
73) n-Butylbenzene	11.931	91	7709	1.17	ug/L		99
74) 1,2-Dichlorobenzene	12.053	146	631	0.15	ug/L		97
76) Hexachlorobutadiene	13.184	223	1476	2.42	ug/L		90
77) 1,2,4-Trichlorobenzene	13.215	180	2198	0.90	ug/L		98
78) Naphthalene	13.495	128	1302	0.16	ug/L		78
79) 1,2,3-Trichlorobenzene	13.659	180	1736	0.75	ug/L		78

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052918.D
Acq On : 29 May 2019 10:05 pm
Operator : TB
Sample : 9E29058-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

5/30/19

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.037	168	267090	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	469227	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	199143	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.538	111	150987	52.20	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	516911	50.32	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	628263	49.49	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172175	50.07	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	39805	16.60	ug/L		99
3) Chloromethane	1.863	50	73919	18.77	ug/L		100
4) Vinyl Chloride	1.955	62	52823	19.40	ug/L		93
5) Bromomethane	2.301	96	32111	20.91	ug/L		97
6) Chloroethane	2.447	64	21900	21.41	ug/L		83
7) Trichlorofluoromethane	2.575	101	27335	18.01	ug/L		97
8) 1,1-Dichloroethene	3.098	61	68501	25.35	ug/L		87
9) Carbon Disulfide	3.110	76	83938	19.57	ug/L		99
10) Freon 113	3.147	101	44798	19.53	ug/L		90
11) Iodomethane	3.250	142	17633	15.93	ug/L		97
12) Methylene Chloride	3.731	84	57801	18.27	ug/L		97
13) Acetone	3.834	43	48607	40.37	ug/L		94
14) t-1,2-Dichloroethene	3.889	61	76230	24.33	ug/L		94
15) n-Hexane	3.968	86	11789	21.52	ug/L	#	86
16) Methyl-tert-butyl-ether	4.035	73	188517	20.31	ug/L		98
17) 1,1-Dichloroethane	4.522	63	93082	24.10	ug/L		98
18) Acrylonitrile	4.595	53	32674	20.92	ug/L		98
19) c-1,2-Dichloroethene	5.069	61	75358	21.55	ug/L		96
20) 2,2-Dichloropropane	5.173	77	59131	19.54	ug/L		89
21) Bromochloromethane	5.270	49	44777	21.67	ug/L		97
22) Chloroform	5.349	83	94903	20.68	ug/L		99
23) Carbon Tetrachloride	5.477	117	53890	21.74	ug/L		98
24) Tetrahydrofuran	5.532	42	32013	18.31	ug/L		92
25) 1,1,1-Trichloroethane	5.550	97	78867	22.51	ug/L		99
27) 1,1-Dichloropropene	5.678	75	74489	20.65	ug/L		97
28) 2-Butanone (MEK)	5.690	43	86952	40.50	ug/L		96
29) Benzene	5.933	78	246265	21.21	ug/L		99
30) 1,2-Dichloroethane (EDC)	6.146	62	74000	21.38	ug/L		99
31) iso-Butyl Alcohol	6.274	43	134411	505.53	ug/L		93
33) Trichloroethene (TCE)	6.548	130	66523	20.43	ug/L		98
34) Dibromomethane	6.998	93	33103	21.33	ug/L		91
35) 1,2-Dichloropropane	7.107	63	62437	21.04	ug/L		93
36) Bromodichloromethane	7.180	83	57376	21.95	ug/L		96
38) c-1,3-Dichloropropene	7.886	75	81256	22.00	ug/L		99
40) Toluene	8.154	91	246595	19.87	ug/L		98
41) Tetrachloroethene (PCE)	8.604	166	55691	19.35	ug/L		100
42) 4-Methyl-2-Pentanone (...	8.616	43	148633	38.79	ug/L		100
43) t-1,3-Dichloropropene	8.646	75	74591	21.77	ug/L		98
44) 1,1,2-Trichloroethane	8.817	97	54388	21.45	ug/L		96
45) Dibromochloromethane	9.005	129	40277	18.92	ug/L		94
46) 1,3-Dichloropropane	9.109	76	97055	20.69	ug/L		99
47) 1,2-Dibromoethane (EDB)	9.243	107	54165	21.85	ug/L		100
48) 2-Hexanone	9.498	43	105747	40.70	ug/L		98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

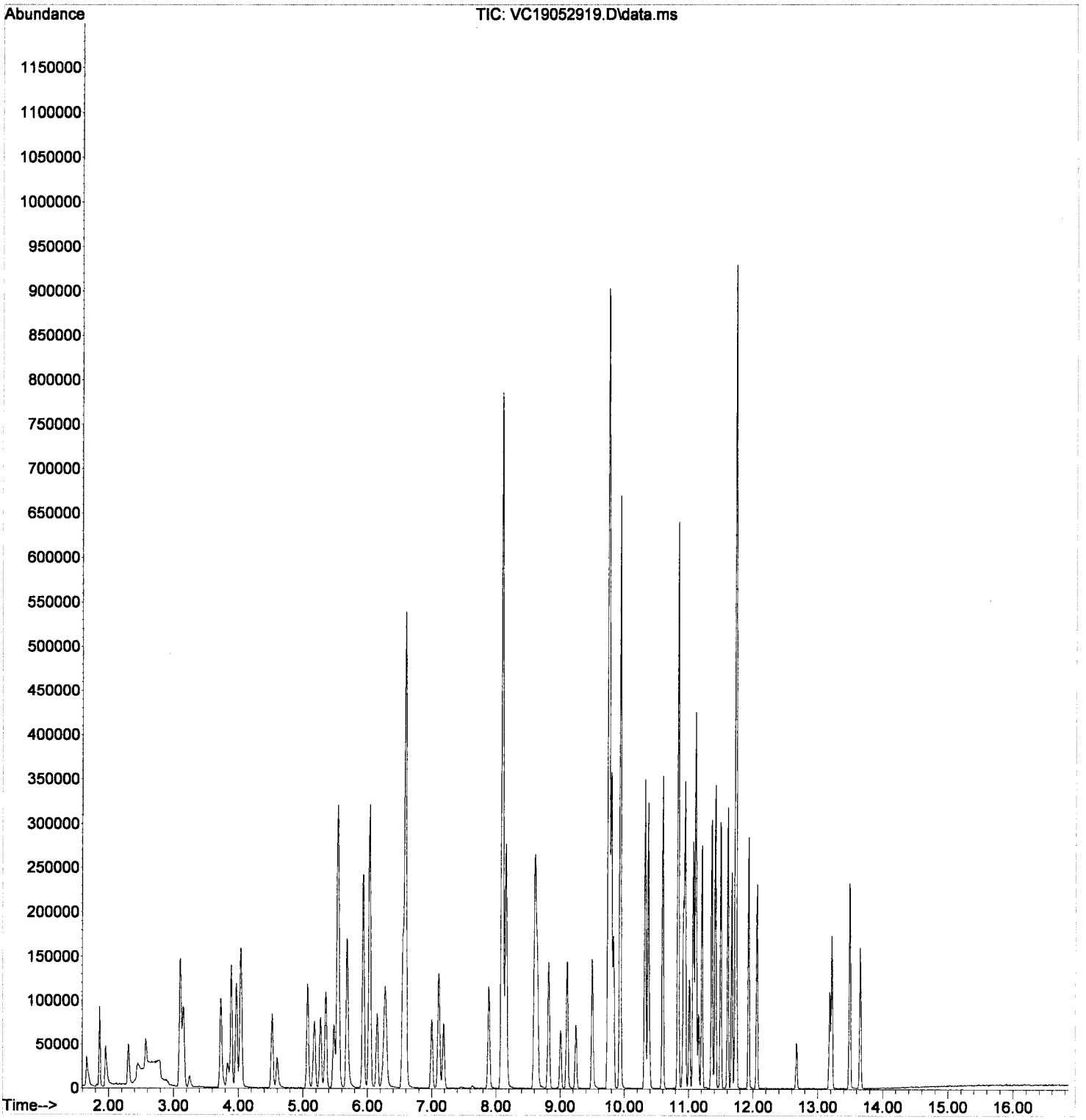
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	151633	20.14	ug/L		99
50) Ethylbenzene	9.796	91	250184	19.82	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.827	131	46738	22.01	ug/L		99
52) m,p-Xylenes (2)	9.930	91	369390	40.54	ug/L		100
53) o-Xylene	10.319	91	192124	20.06	ug/L		99
54) Styrene	10.368	104	143713	21.47	ug/L		98
55) Bromoform	10.386	173	22610	18.67	ug/L		95
56) Isopropylbenzene	10.593	105	216506	19.72	ug/L		99
59) Bromobenzene	10.922	156	56374	21.44	ug/L		99
60) n-Propylbenzene	10.940	91	236282	19.71	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	56206	21.54	ug/L		94
62) 2-Chlorotoluene	11.068	126	49936	20.12	ug/L	#	82
63) 1,3,5-Trimethylbenzene	11.104	105	168273	20.76	ug/L		98
64) 1,2,3-Trichloropropane	11.116	110	21880	20.34	ug/L	#	83
65) t-1,4-Dichloro-2-butene	11.153	88	6955	19.17	ug/L	#	86
66) 4-Chlorotoluene	11.208	91	145649	20.30	ug/L		98
67) tert-Butylbenzene	11.354	91	88273	19.43	ug/L		96
68) 1,2,4-Trimethylbenzene	11.414	105	167703	20.22	ug/L		97
69) sec-Butylbenzene	11.500	105	193906	20.19	ug/L		98
70) 4-Isopropyltoluene	11.609	119	164288	21.02	ug/L		97
71) 1,3-Dichlorobenzene	11.670	146	90545	19.62	ug/L		99
72) 1,4-Dichlorobenzene	11.737	146	90005	19.52	ug/L		96
73) n-Butylbenzene	11.931	91	134289	20.21	ug/L		99
74) 1,2-Dichlorobenzene	12.059	146	83574	19.72	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.674	157	12442	20.02	ug/L		98
76) Hexachlorobutadiene	13.179	223	13236	21.57	ug/L		98
77) 1,2,4-Trichlorobenzene	13.215	180	51658	20.93	ug/L		97
78) Naphthalene	13.489	128	180001	21.67	ug/L		99
79) 1,2,3-Trichlorobenzene	13.653	180	48911	20.92	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052920.D
Acq On : 29 May 2019 10:59 pm
Operator : TB
Sample : 9E29058-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

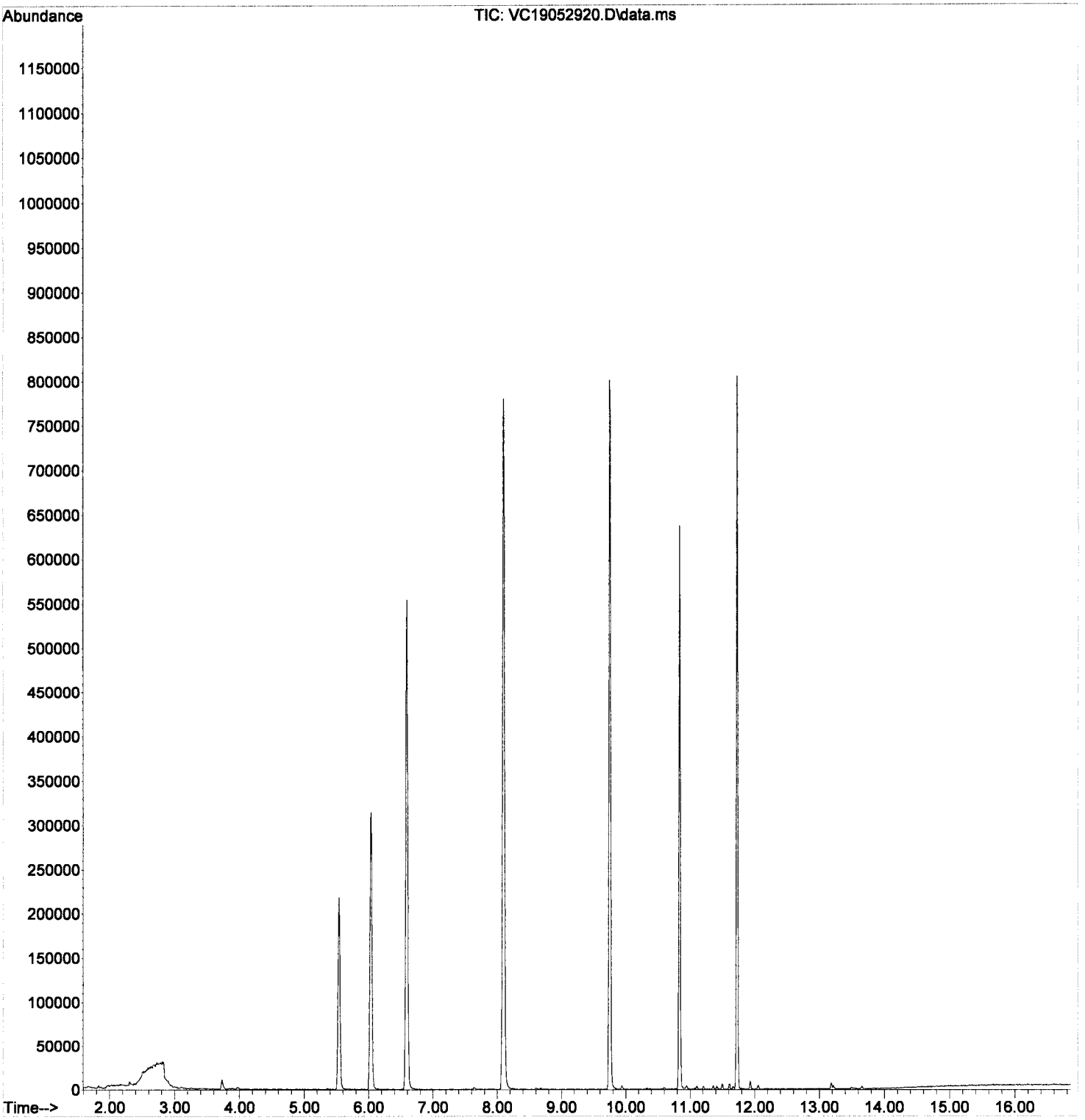
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	263418	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	469419	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	193137	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	149058	52.26	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	517972	51.12	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	636573	50.13	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	170886	51.24	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	391	0.17	ug/L	#	50
3) Chloromethane	1.861	50	1206	0.31	ug/L		94
5) Bromomethane	2.305	96	2643	1.75	ug/L		81
6) Chloroethane	2.531	64	502	0.50	ug/L	#	1
9) Carbon Disulfide	3.121	76	1128	0.27	ug/L		51
10) Freon 113	3.157	101	259	0.11	ug/L	#	79
11) Iodomethane	3.254	142	1123	1.75	ug/L	#	89
12) Methylene Chloride	3.735	84	5229	Below Cal			93
13) Acetone	3.851	43	2026	1.71	ug/L		85
14) t-1,2-Dichloroethene	3.893	61	342	0.11	ug/L		88
15) n-Hexane	3.960	86	175	Below Cal		#	1
22) Chloroform	5.353	83	416	0.09	ug/L		79
27) 1,1-Dichloropropene	5.688	75	499	0.14	ug/L	#	68
28) 2-Butanone (MEK)	5.737	43	239	0.11	ug/L		54
40) Toluene	8.158	91	1337	0.11	ug/L		72
41) Tetrachloroethene (PCE)	8.590	166	614	0.21	ug/L	#	67
49) Chlorobenzene	9.770	112	761	0.10	ug/L	#	41
50) Ethylbenzene	9.794	91	1537	0.12	ug/L		91
52) m,p-Xylenes (2)	9.934	91	2237	0.25	ug/L		92
53) o-Xylene	10.323	91	1026	0.11	ug/L		60
56) Isopropylbenzene	10.597	105	1697	0.15	ug/L		86
60) n-Propylbenzene	10.944	91	2962	0.25	ug/L		89
62) 2-Chlorotoluene	11.072	126	260	0.11	ug/L	#	86
63) 1,3,5-Trimethylbenzene	11.108	105	1782	0.23	ug/L		85
66) 4-Chlorotoluene	11.212	91	1495	0.21	ug/L		80
67) tert-Butylbenzene	11.358	91	1160	0.26	ug/L		82
68) 1,2,4-Trimethylbenzene	11.412	105	1662	0.21	ug/L		95
69) sec-Butylbenzene	11.498	105	3585	0.38	ug/L		96
70) 4-Isopropyltoluene	11.607	119	3334	0.44	ug/L		92
71) 1,3-Dichlorobenzene	11.674	146	1044	0.23	ug/L		87
72) 1,4-Dichlorobenzene	11.735	146	1219	0.27	ug/L	#	40
73) n-Butylbenzene	11.930	91	4399	0.68	ug/L		95
74) 1,2-Dichlorobenzene	12.063	146	605	0.15	ug/L		72
76) Hexachlorobutadiene	13.177	223	834	1.40	ug/L		89
77) 1,2,4-Trichlorobenzene	13.213	180	1499	0.63	ug/L		82
78) Naphthalene	13.499	128	1487	0.18	ug/L		89
79) 1,2,3-Trichlorobenzene	13.651	180	1110	0.49	ug/L	#	66

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052920.D
Acq On : 29 May 2019 10:59 pm
Operator : TB
Sample : 9E29058-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



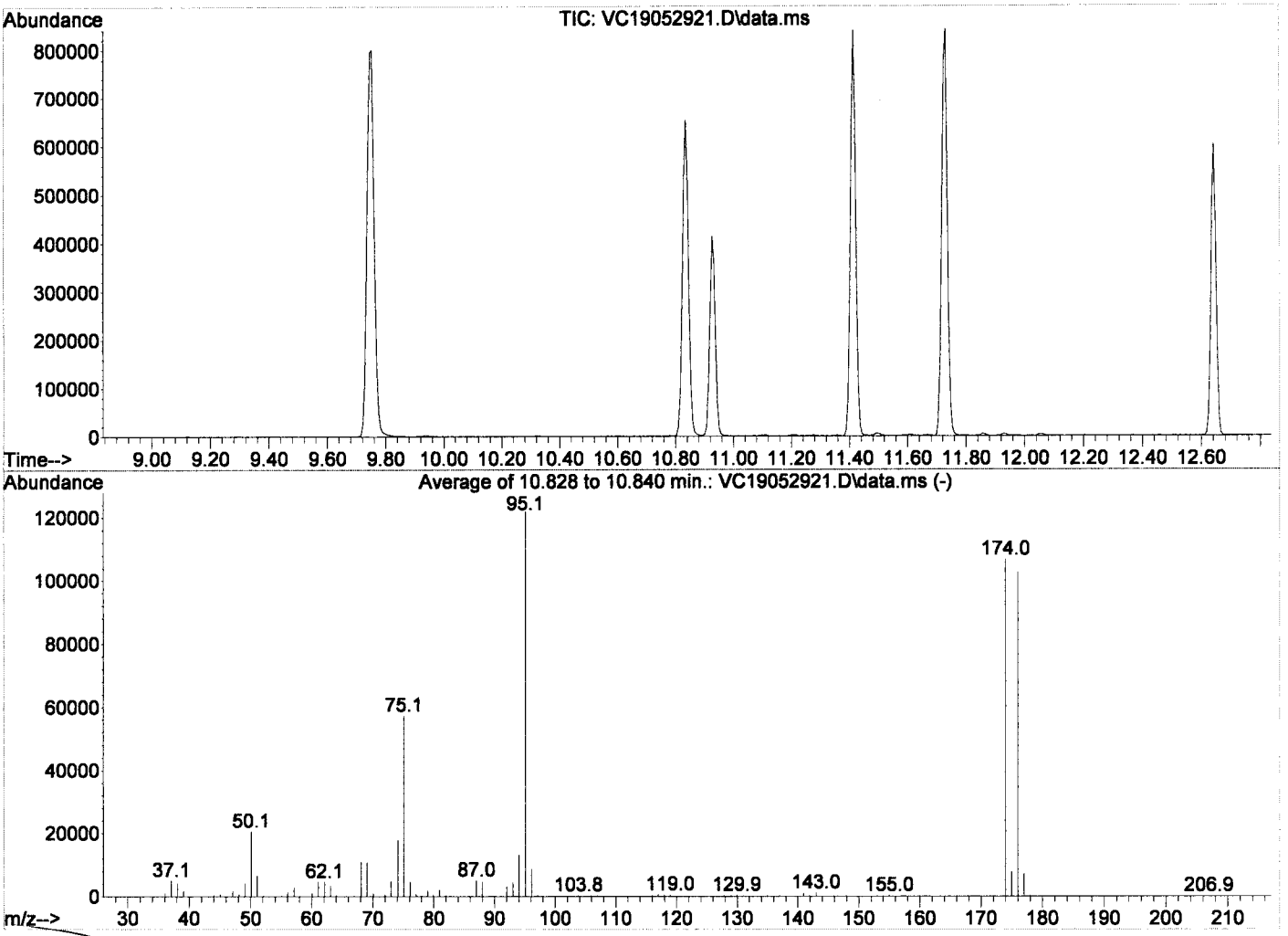
BFB

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019

5/30/19



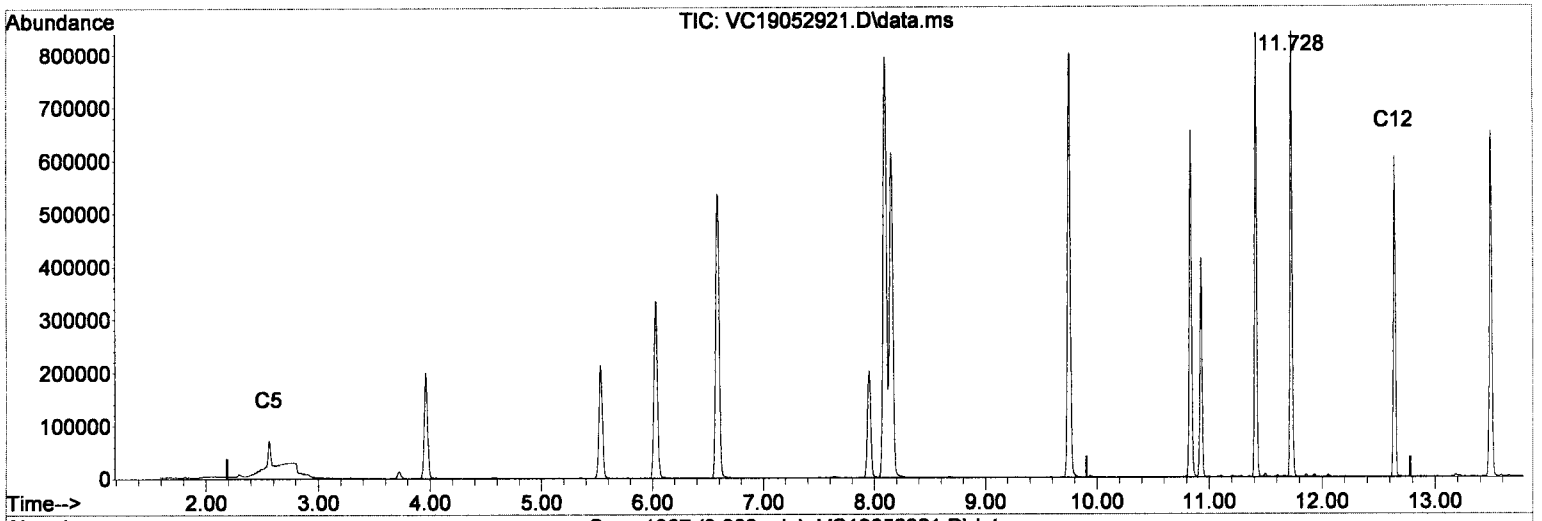
AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	16.8	20485	PASS
75	95	30	60	47.0	57338	PASS
95	95	100	100	100.0	121885	PASS
96	95	5	9	7.2	8794	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	87.5	106672	PASS
175	174	5	9	7.2	7710	PASS
176	174	95	101	96.1	102493	PASS
177	176	5	9	7.0	7180	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



TIC: VC19052921.D\data.ms

(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 392.07 ug/L m

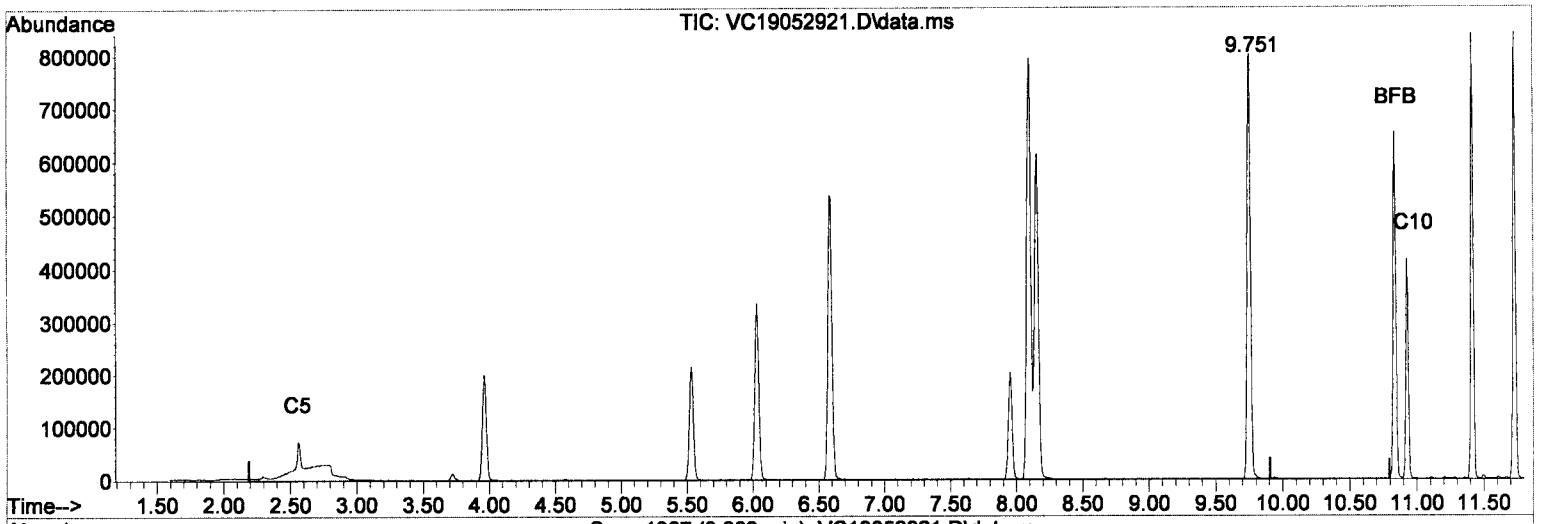
response 5195528

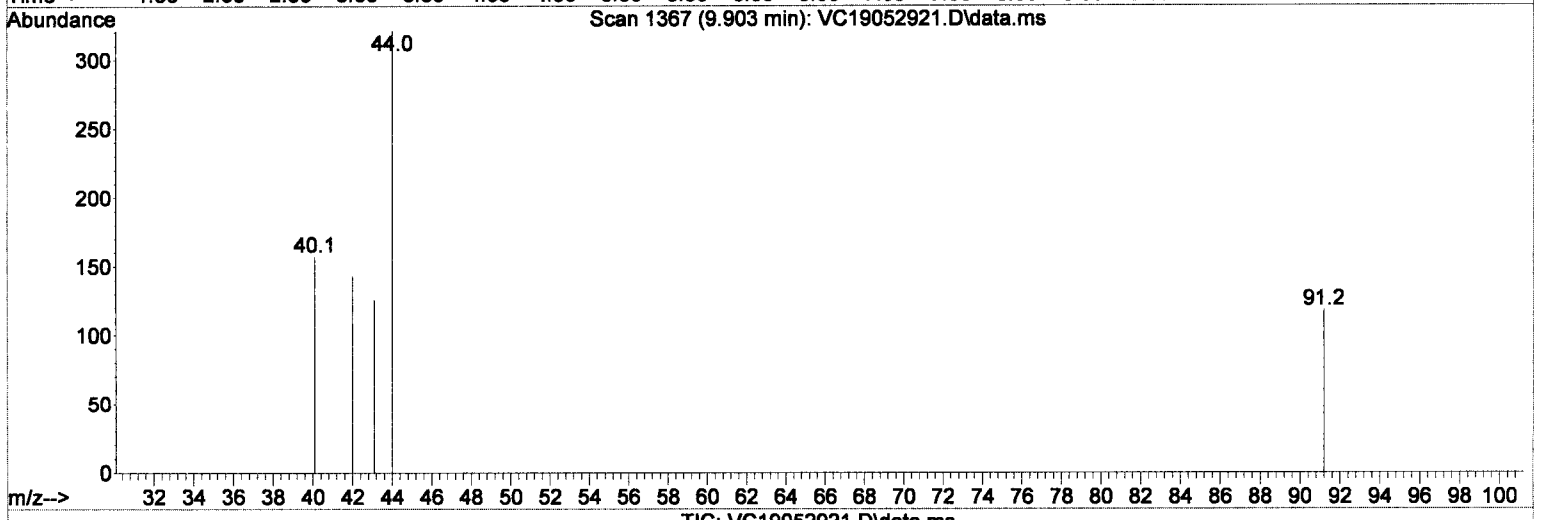
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.79#
0.00	0.00	0.62#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19052921.D\data.ms

(6) TPHg (C5-C9) (H)

9.906min (0.000) 229.20 ug/L m

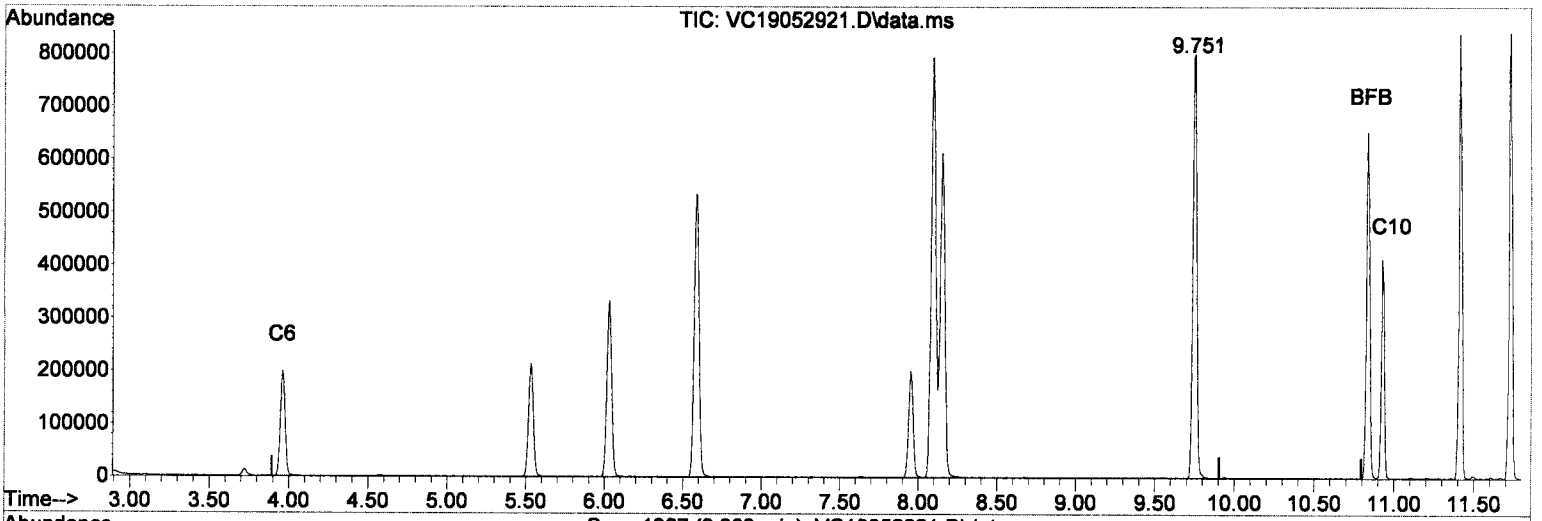
response 2819041

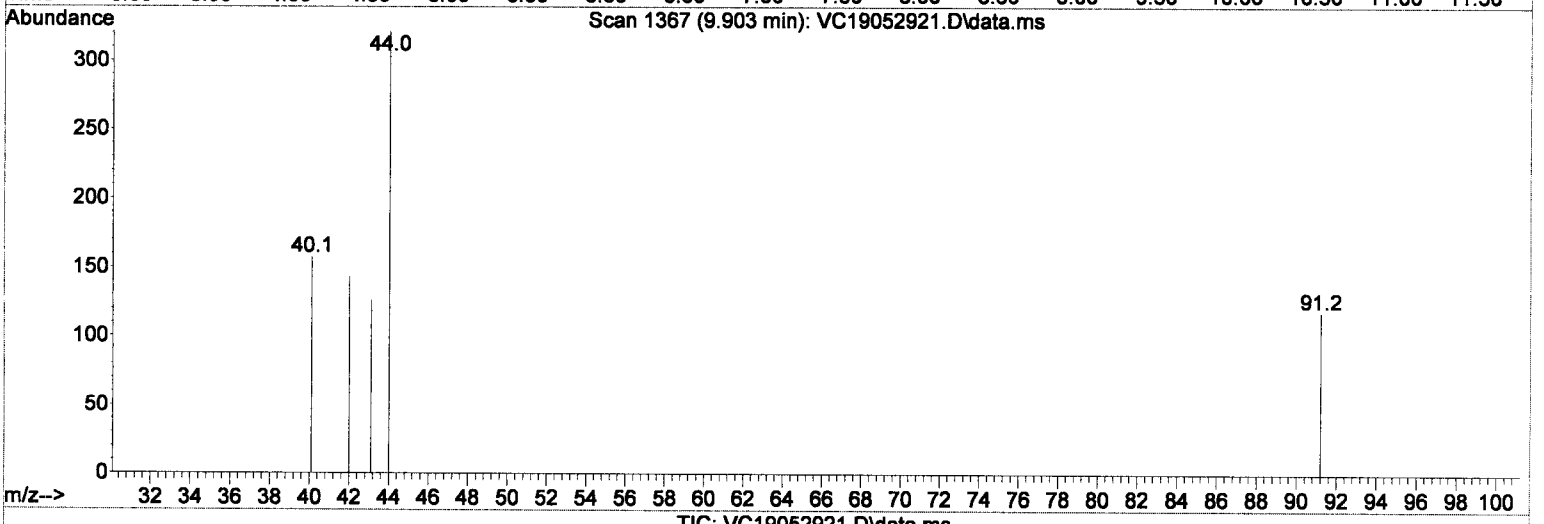
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.45#
0.00	0.00	1.14#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19052921.D\data.ms

(7) TPHg (C6-C10) (H)

9.906min (0.000) 281.64 ug/L m

response 2593656

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.58#
0.00	0.00	1.24#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

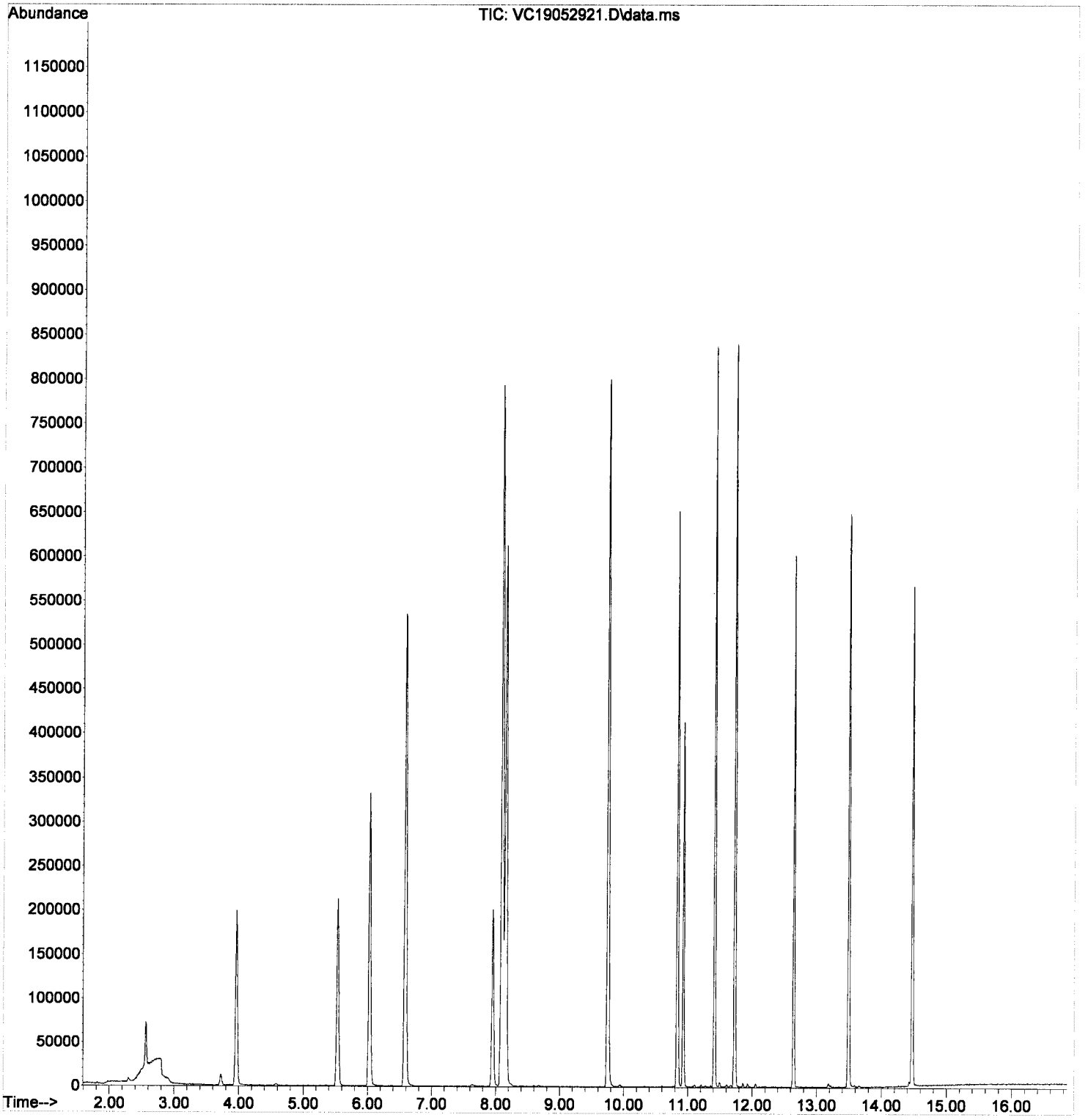
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	265731	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1164135	47.01	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	943243	50.99	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1393197	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1667197	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1147078	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	5195528m	392.07	ug/L	
6) TPHg (C5-C9)	9.906	TIC	2819041m	229.20	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2593656m	281.64	ug/L	
8) NWTPH-Gx	9.906	TIC	5082946m	669.68	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

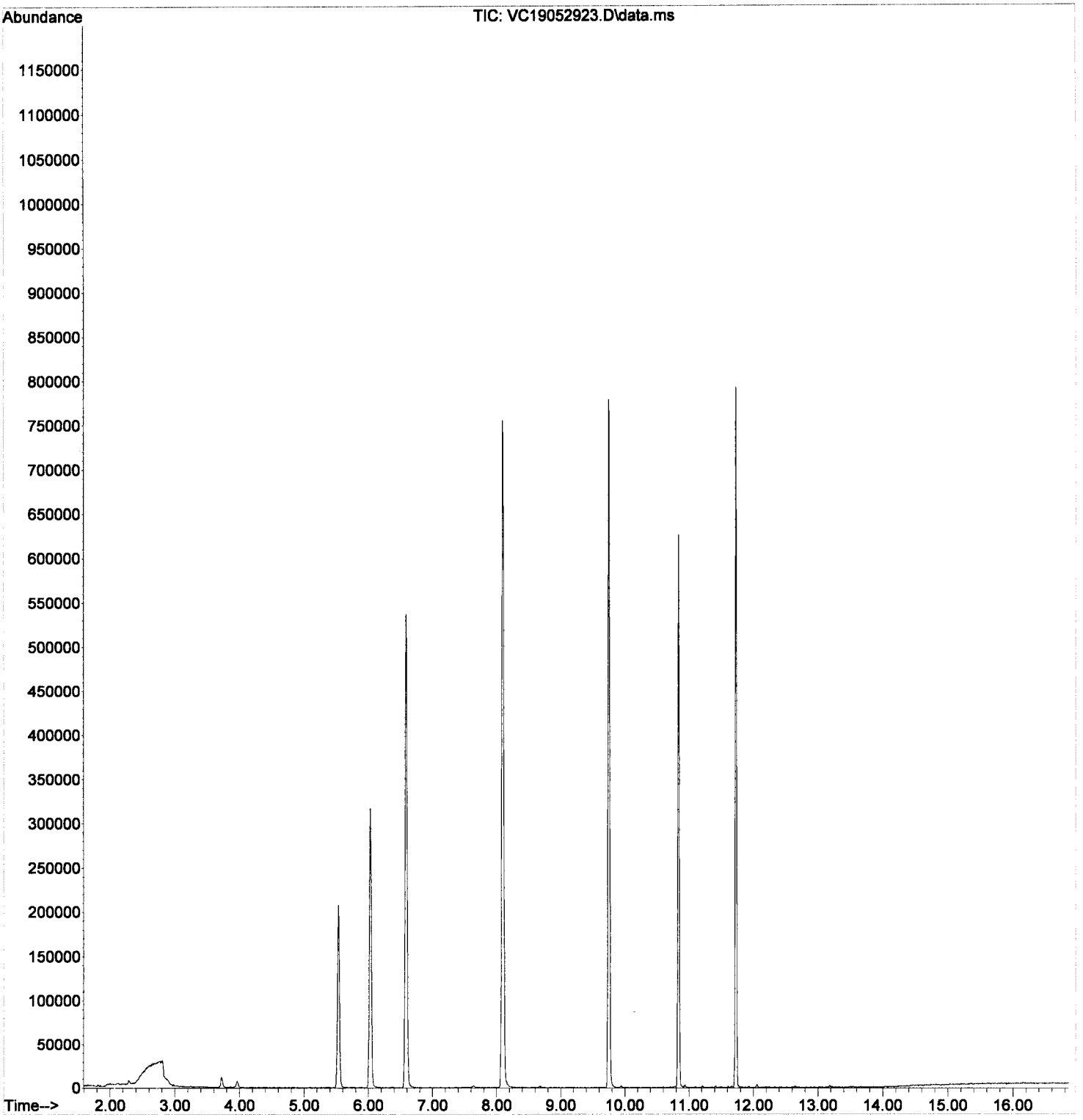
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	261900	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1130594	46.32	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	894652	49.07	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1326473	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1614341	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1093552	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	651712m	9.28	ug/L	LMQC
6) TPHg (C5-C9)	9.906	TIC	651712m	14.63	ug/L	
7) TPHg (C6-C10)	9.906	TIC	464649m	14.02	ug/L	
8) NWTPH-Gx	9.906	TIC	8855m	13.72	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052924.D
Acq On : 30 May 2019 12:49 am
Operator : TB
Sample : 9E29058-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

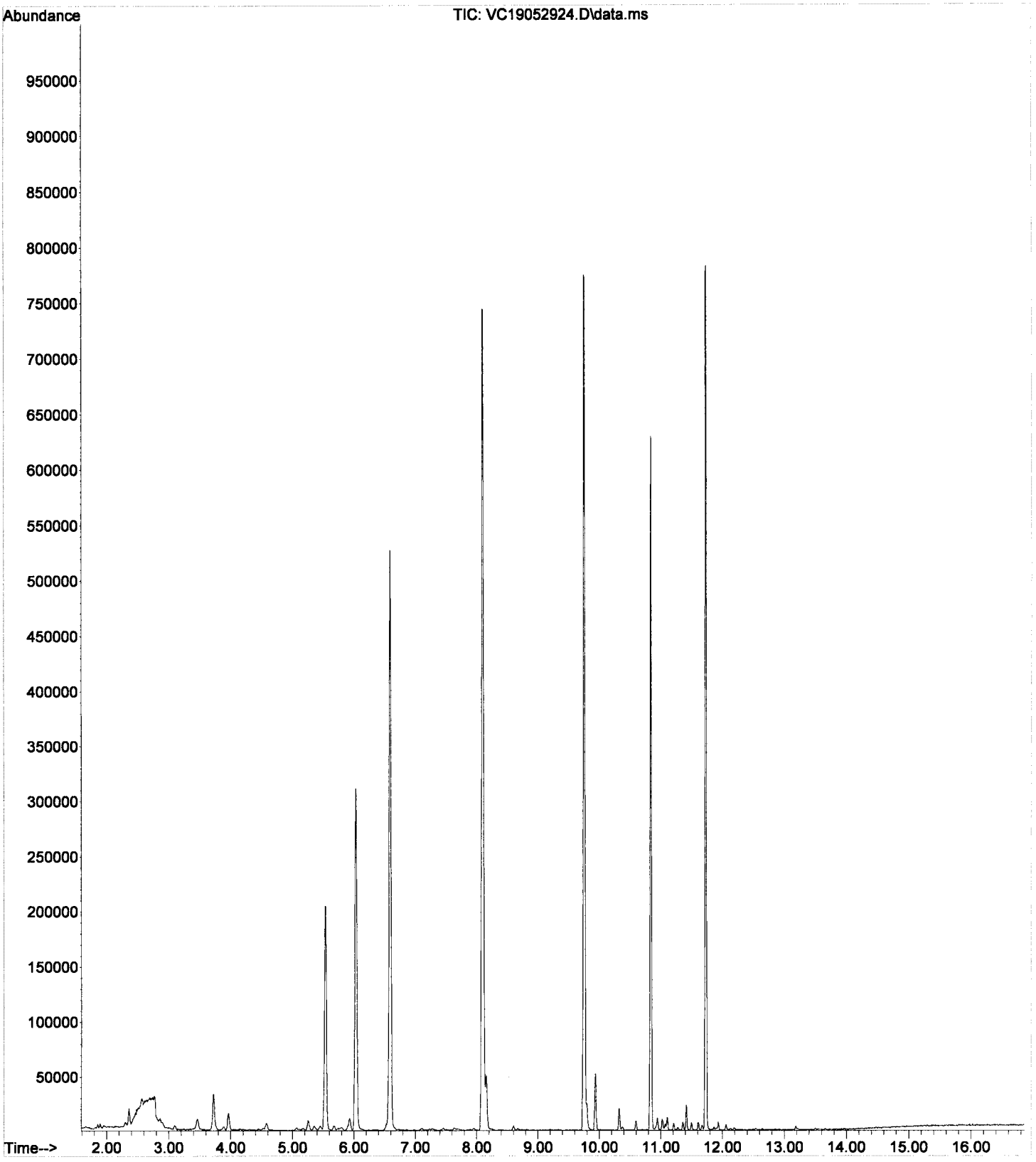
5/30/19

Quant Time: May 30 15:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	257140	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1139443	49.09	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	893711	50.46	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1364832	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1608804	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1090524	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1126234m	86.93	ug/L	
6) TPHg (C5-C9)	9.906	TIC	959474m	85.93	ug/L	
7) TPHg (C6-C10)	9.906	TIC	733539m	85.30	ug/L	
8) NWTPH-Gx	9.906	TIC	337341m	46.30	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052924.D
Operator : TB
Acquired : 30 May 2019 12:49 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALC
Misc Info : 1X 5mL 50ppb GX DI+MeOH
Vial Number: 24



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052925.D
Acq On : 30 May 2019 1:17 am
Operator : TB
Sample : 9E29058-CALD
Misc : 1X 5mL 100ppb GX DI+MeOH
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

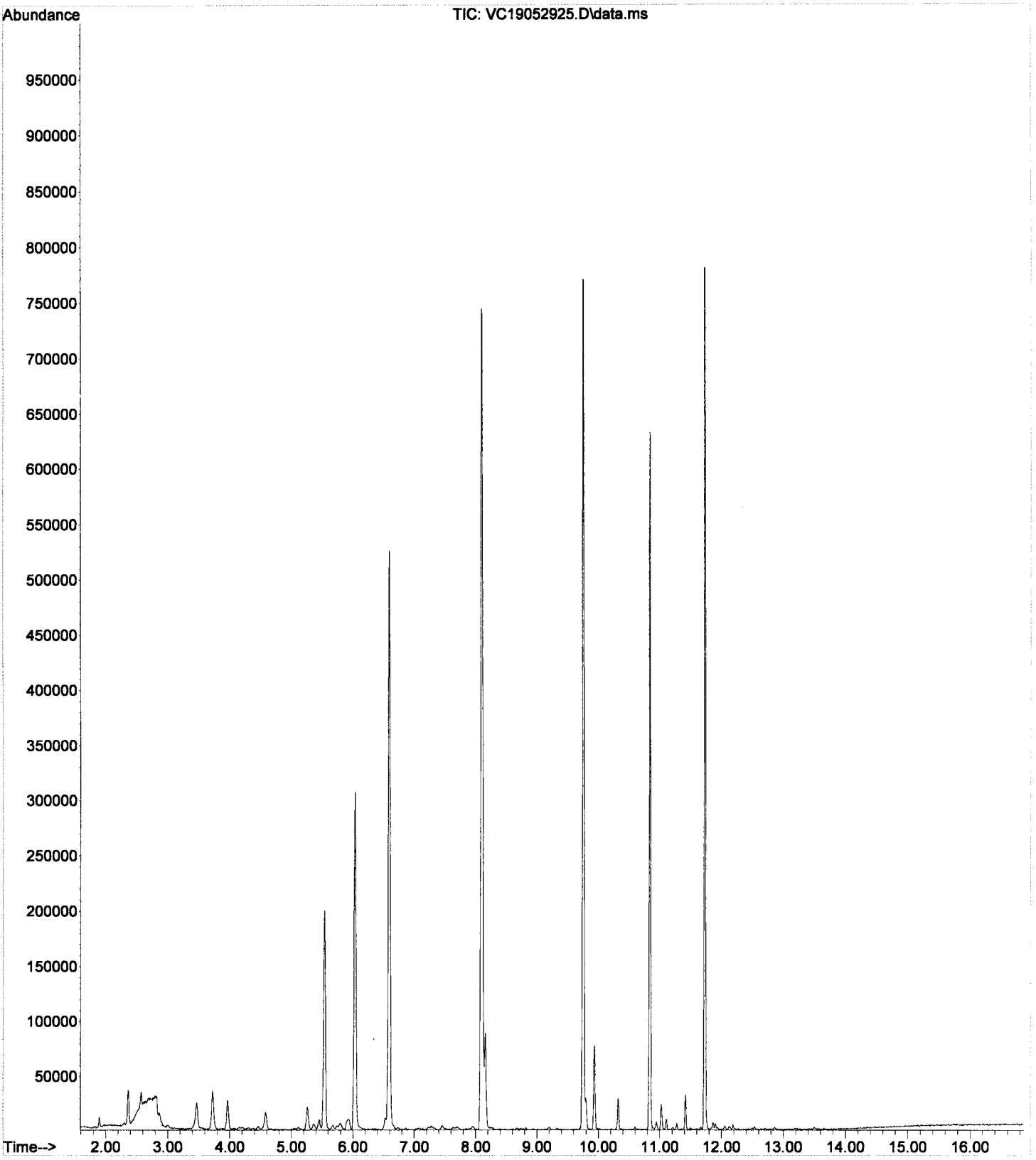
Quant Time: May 30 15:47:26 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	254092	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1130909	49.31	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	893010	51.02	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1356890	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.092	TIC	1598426	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.724	TIC	1104507	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1624353m	126.88	ug/L	
6) TPHg (C5-C9)	9.906	TIC	1478586m	134.01	ug/L	
7) TPHg (C6-C10)	9.906	TIC	1118241m	131.60	ug/L	
8) NWTPH-Gx	9.906	TIC	594153m	82.53	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052925.D
Operator : TB
Acquired : 30 May 2019 1:17 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALD
Misc Info : 1X 5mL 100ppb GX DI+MeOH
Vial Number: 25



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052926.D
Acq On : 30 May 2019 1:44 am
Operator : TB
Sample : 9E29058-CALE
Misc : 1X 5mL 250ppb GX DI+MeOH
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

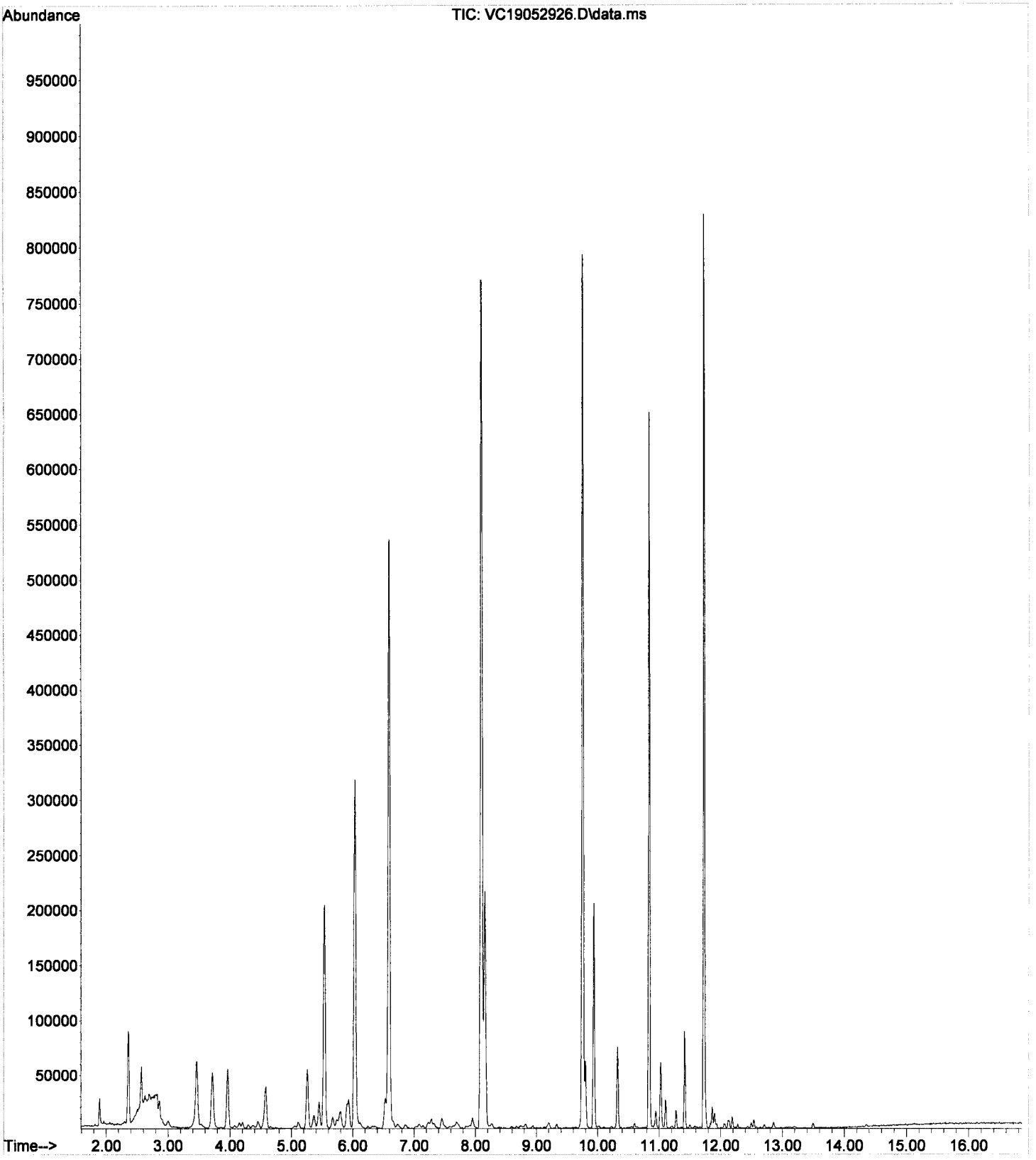
Quant Time: May 30 15:47:28 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	264662	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1181697	49.47	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	923159	50.64	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1373720	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1645193	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1147251	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	3450881m	258.79	ug/L	
6) TPHg (C5-C9)	9.906	TIC	3008909m	261.82	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2261282m	255.49	ug/L	
8) NWTPH-Gx	9.906	TIC	1724074m	229.91	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052926.D
Operator : TB
Acquired : 30 May 2019 1:44 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALE
Misc Info : 1X 5mL 250ppb GX DI+MeOH
Vial Number: 26



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052927.D
Acq On : 30 May 2019 2:12 am
Operator : TB
Sample : 9E29058-CALF
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

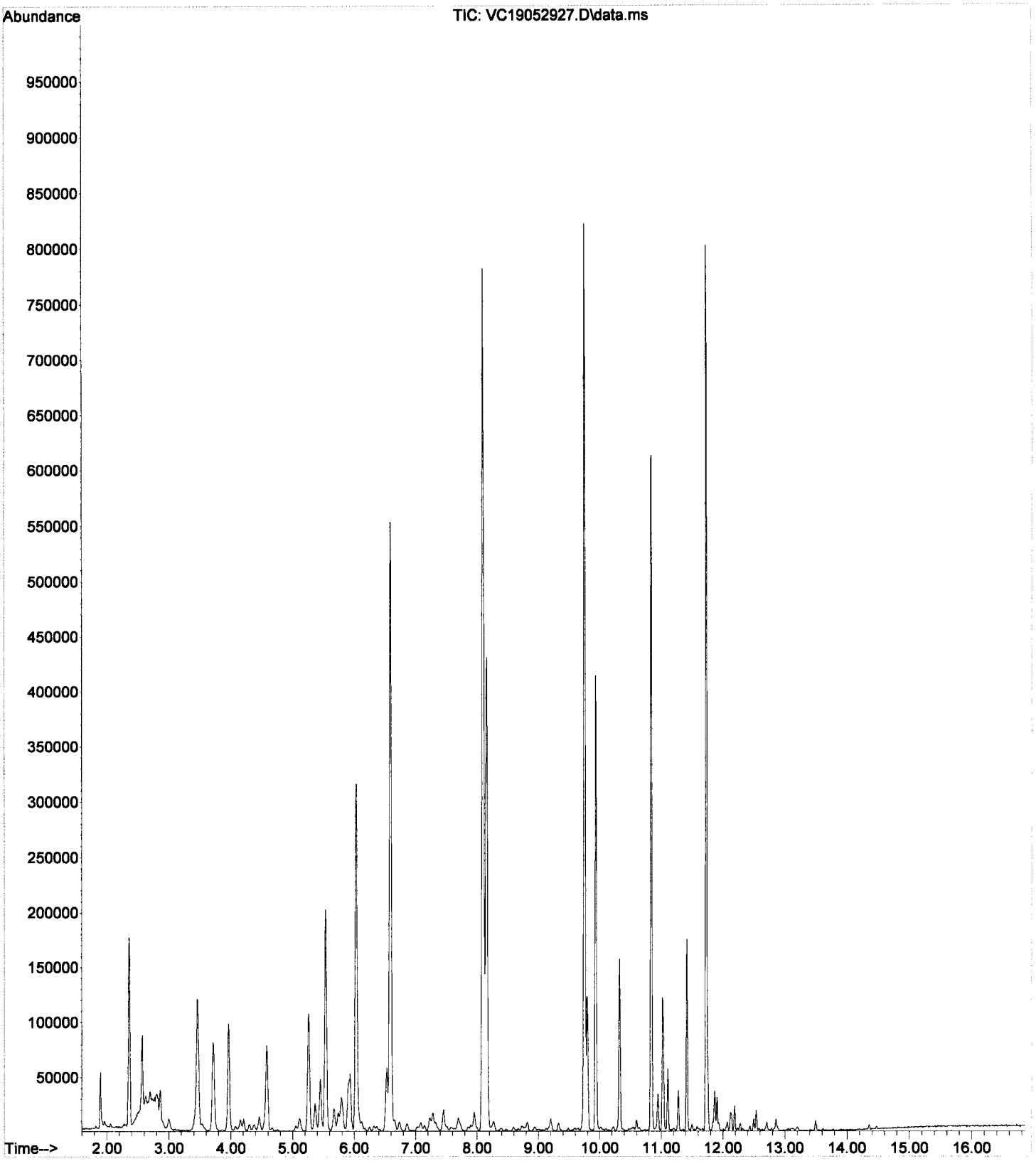
Quant Time: May 30 15:47:30 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	261529	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1178596	49.93	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.837	TIC	900724	50.00	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1373218	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.093	TIC	1631979	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1139134	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6589983m	500.13	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5679706m	500.15	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4374724m	500.19	ug/L	
8) NWTPH-Gx	9.906	TIC	3706703m	500.22	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052927.D
Operator : TB
Acquired : 30 May 2019 2:12 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALF
Misc Info : 1X 5mL 500ppb GX DI+MeOH
Vial Number: 27



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052928.D
Acq On : 30 May 2019 2:39 am
Operator : TB
Sample : 9E29058-CALG
Misc : 1X 5mL 1000ppb GX DI+MeOH
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

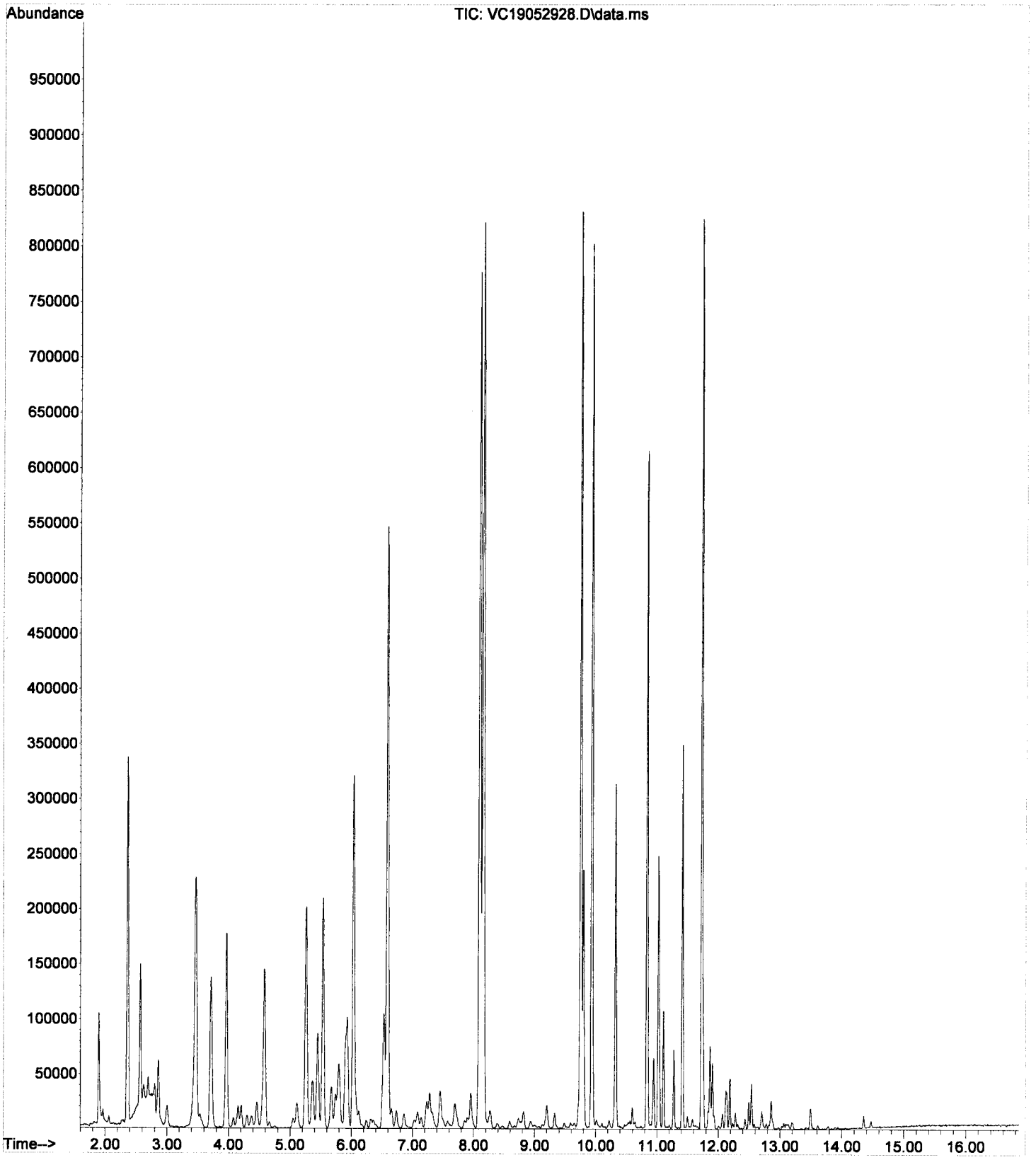
Quant Time: May 30 15:47:32 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	261111	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1170992	49.69	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.837	TIC	915240	50.89	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1421490	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1681294	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1206900	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	12264001m	932.23	ug/L	
6) TPHg (C5-C9)	9.906	TIC	10516295m	927.53	ug/L	
7) TPHg (C6-C10)	9.906	TIC	8234768m	943.04	ug/L	
8) NWTPH-Gx	9.906	TIC	7396048m	999.71	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052928.D
Operator : TB
Acquired : 30 May 2019 2:39 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALG
Misc Info : 1X 5mL 1000ppb GX DI+MeOH
Vial Number: 28



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052929.D
Acq On : 30 May 2019 3:07 am
Operator : TB
Sample : 9E29058-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

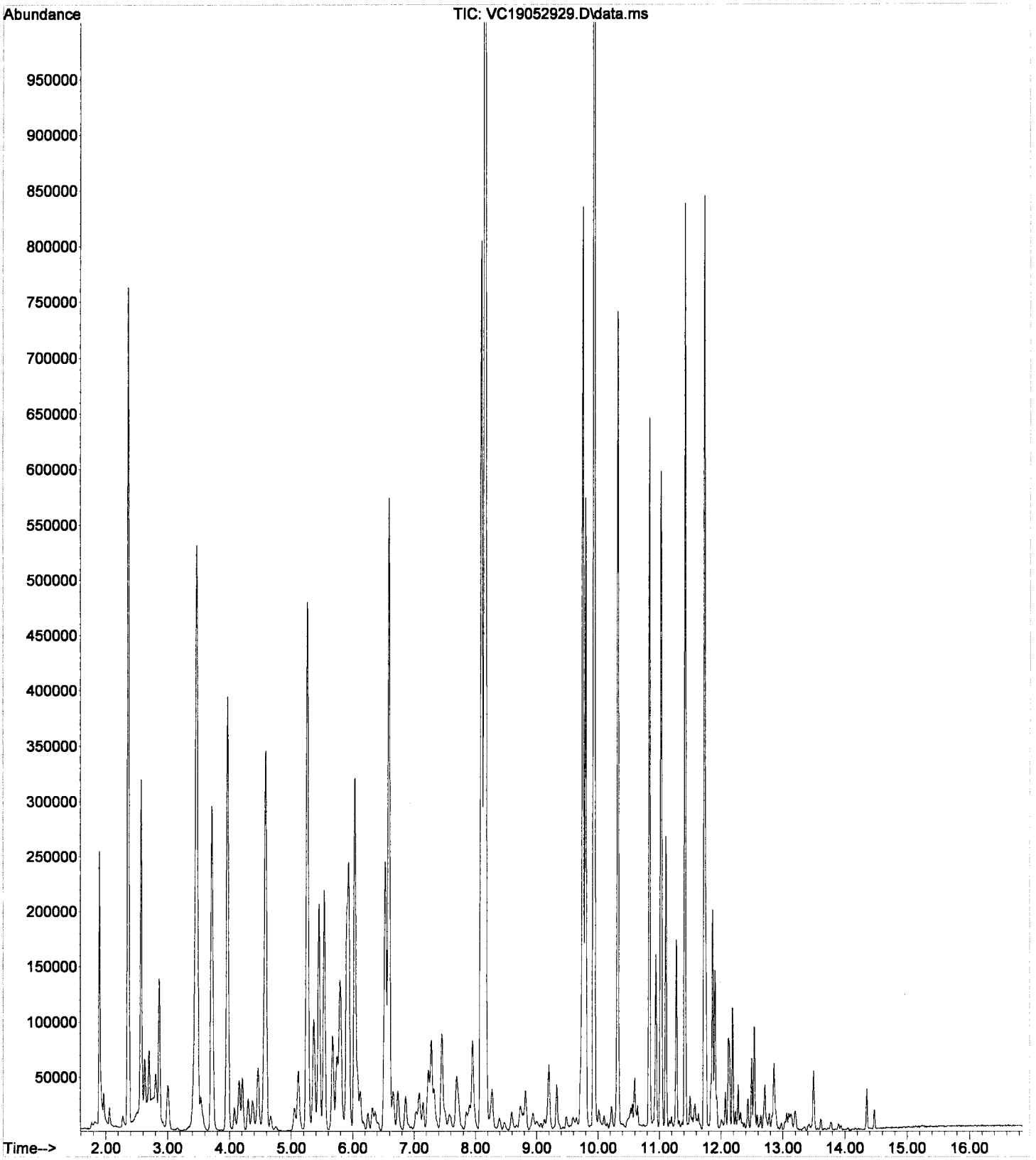
Quant Time: May 30 15:47:34 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529G~~.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.034	168	268653	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1212113	49.99	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	936867	50.63	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1507141	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.096	TIC	1729205	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1379986	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	28320107m	2092.27	ug/L	
6) TPHg (C5-C9)	9.906	TIC	23917340m	2050.28	ug/L	
7) TPHg (C6-C10)	9.906	TIC	18963080m	2110.68	ug/L	
8) NWTPH-Gx	9.906	TIC	18385276m	2415.33	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052929.D
Operator : TB
Acquired : 30 May 2019 3:07 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALH
Misc Info : 1X 5mL 2500ppb GX DI+MeOH
Vial Number: 29



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:50:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.035	168	266073	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1320230	54.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	922982	50.36	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.752	TIC	1171661m	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1683833	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1344258m	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	61543670m	4590.90	ug/L	
6) TPHg (C5-C9)	9.906	TIC	51205660m	4432.09	ug/L	
7) TPHg (C6-C10)	9.906	TIC	41070880m	4615.70	ug/L	
8) NWTPH-Gx	9.906	TIC	41069114m	5447.68	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.035	168	266073	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1320230	54.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	922982	50.36	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.752	TIC	1634465	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1683833	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1634619	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	60790505m	4534.72	ug/L	
6) TPHg (C5-C9)	9.906	TIC	50742856m	4392.03	ug/L	
7) TPHg (C6-C10)	9.906	TIC	40608076m	4563.69	ug/L	
8) NWTPH-Gx	9.906	TIC	40315949m	5347.78	ug/L	

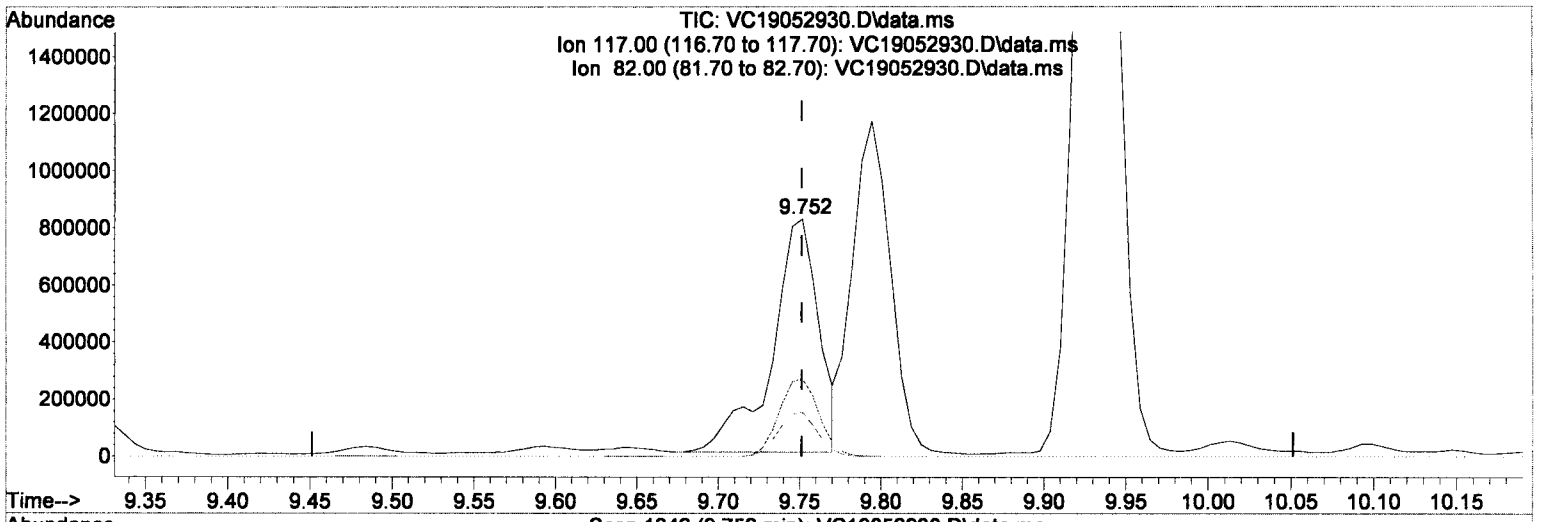
MT

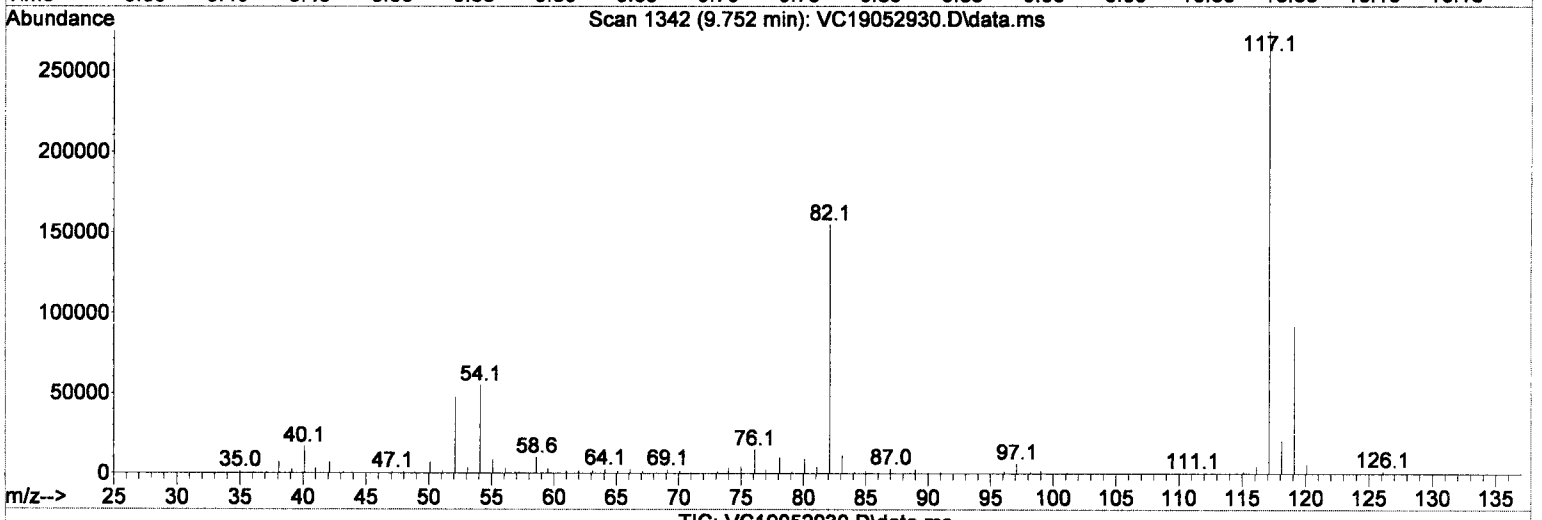
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.752min (+0.000) 0.00 ug/L

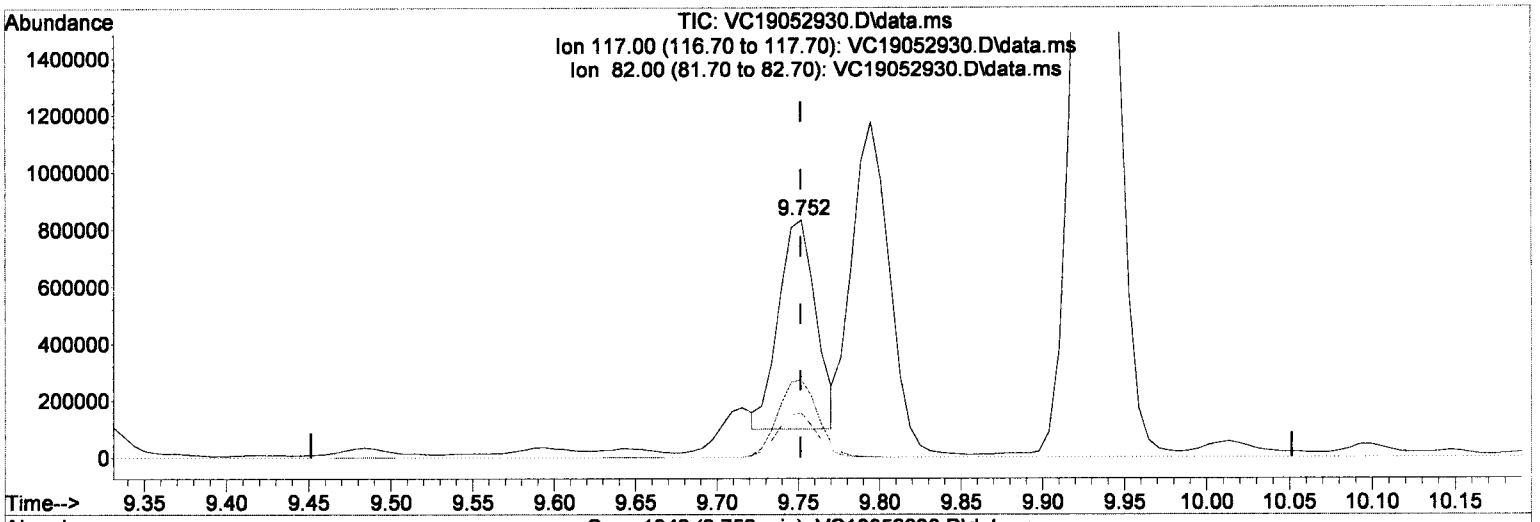
response 1634465

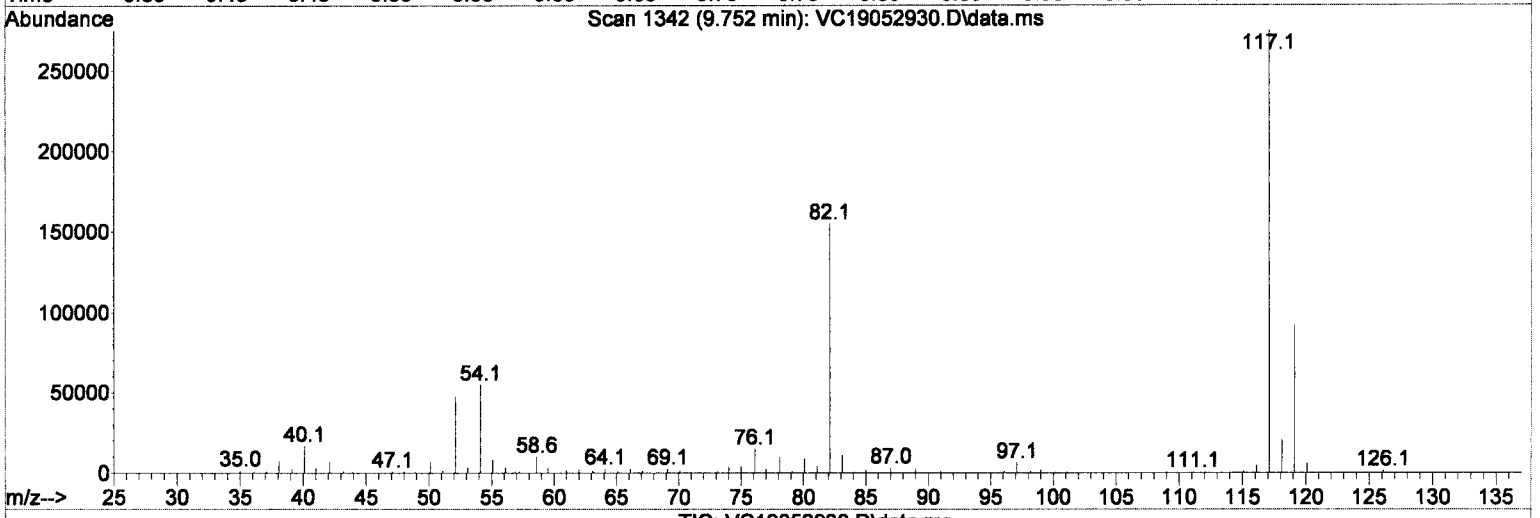
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	28.75
82.00	18.10	16.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.752min (+0.000) 0.00 ug/L (m)

5/30/19

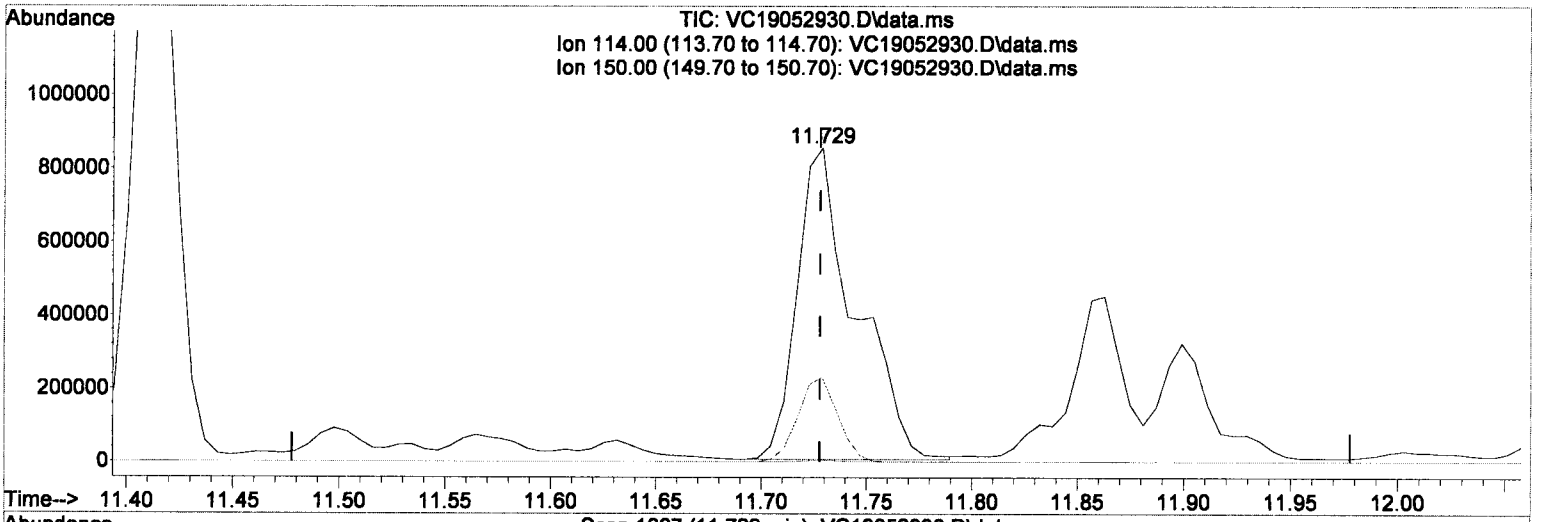
response 1171661

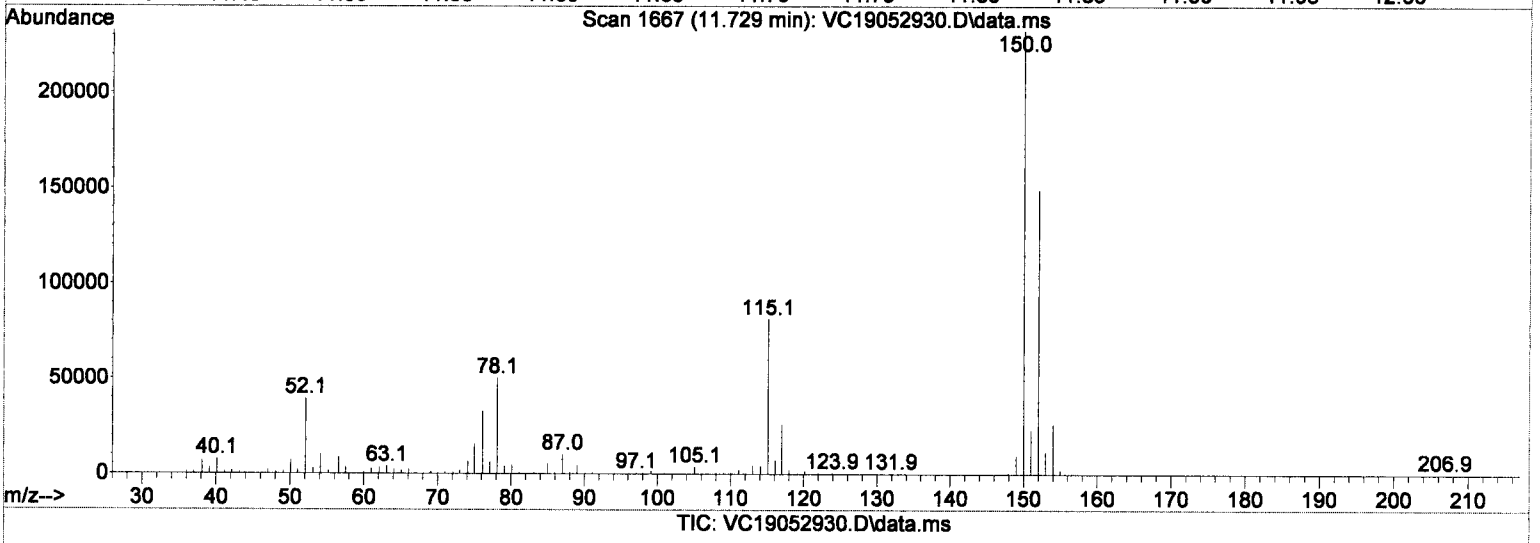
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	40.11
82.00	18.10	22.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.729min (+0.001) 0.00 ug/L

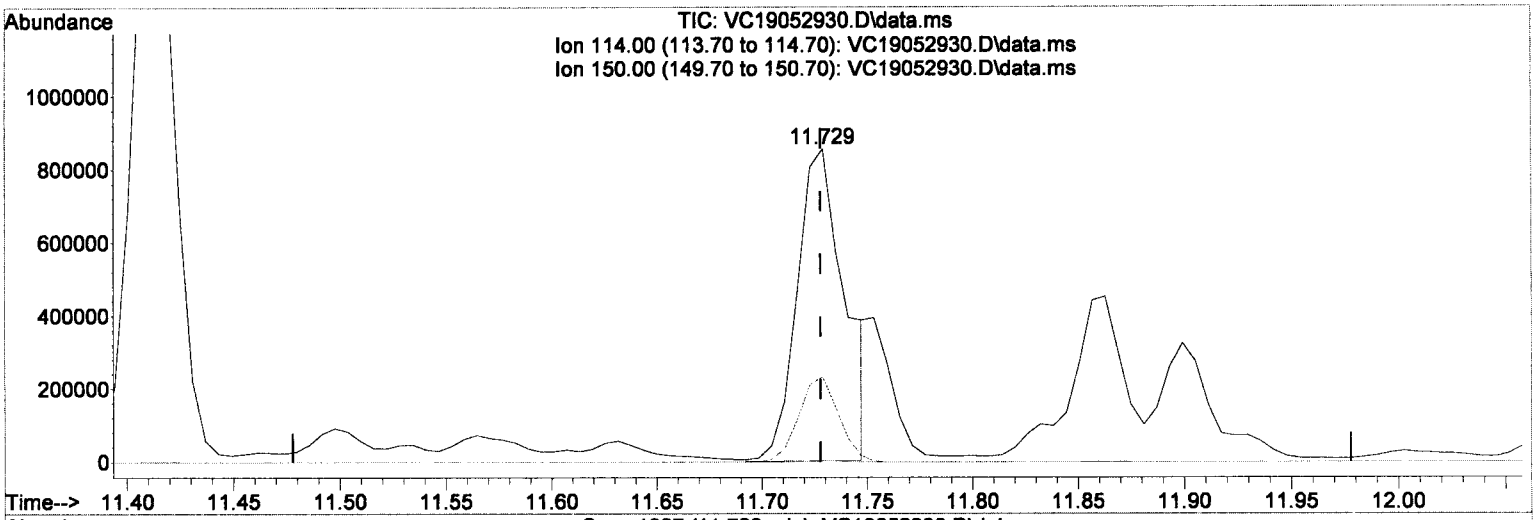
response 1634619

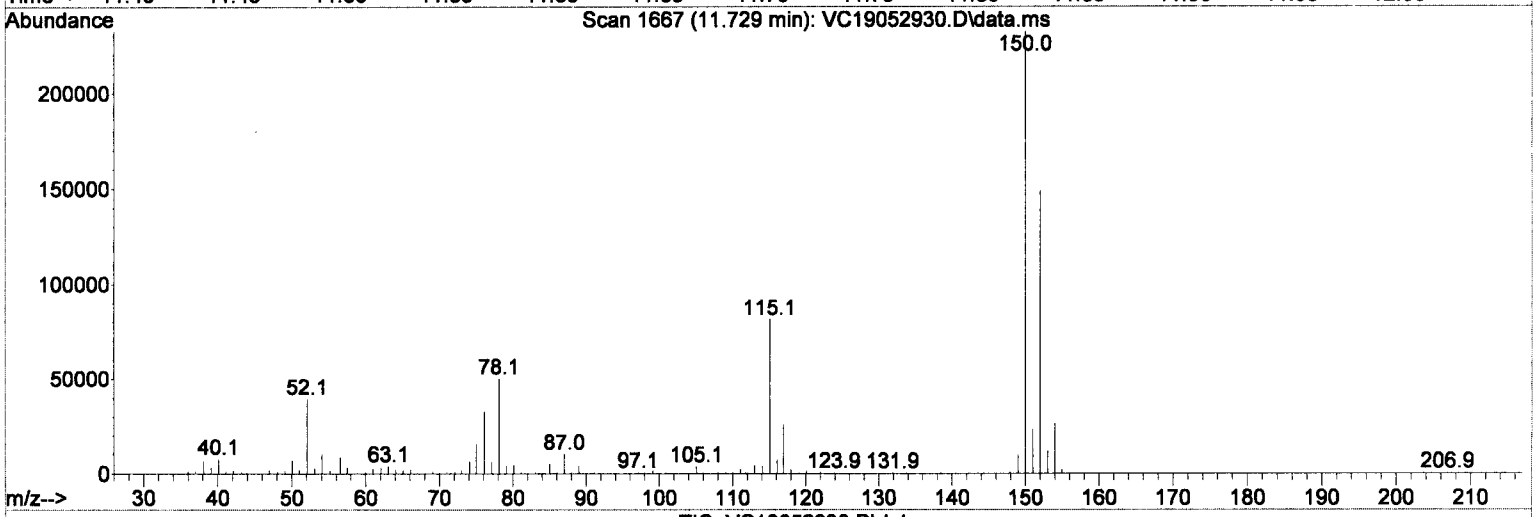
Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	18.78
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

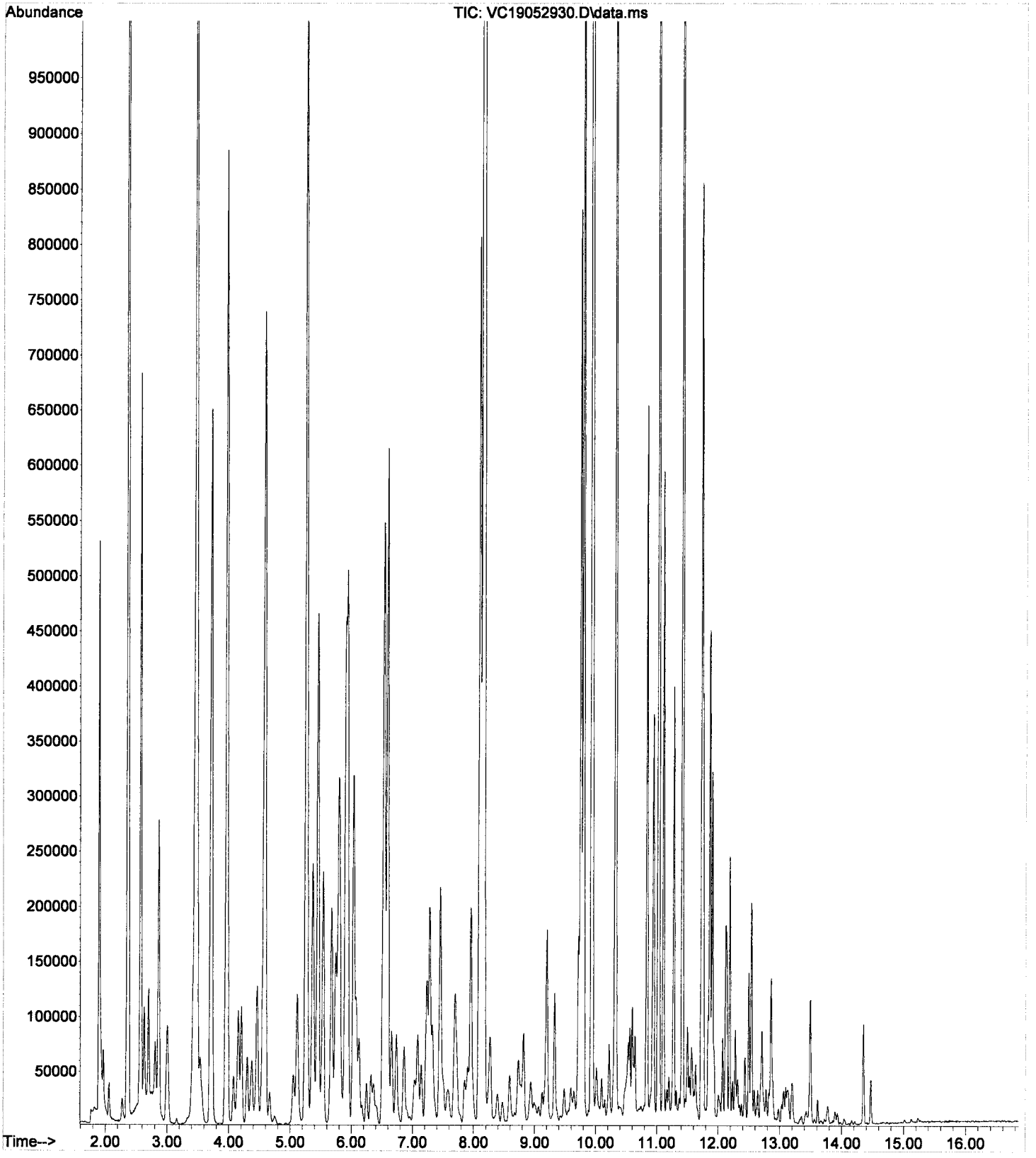
11.729min (+0.001) 0.00 ug/L m

response 1344258

Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	22.84
0.00	0.00	0.00

5/30/19

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052930.D
Operator : TB
Acquired : 30 May 2019 3:34 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALI
Misc Info : 1X 5mL 5000ppb GX DI+MeOH
Vial Number: 30



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052931.D
Acq On : 30 May 2019 4:02 am
Operator : TB
Sample : 9E29058-CALJ
Misc : 1X 5mL 10000ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

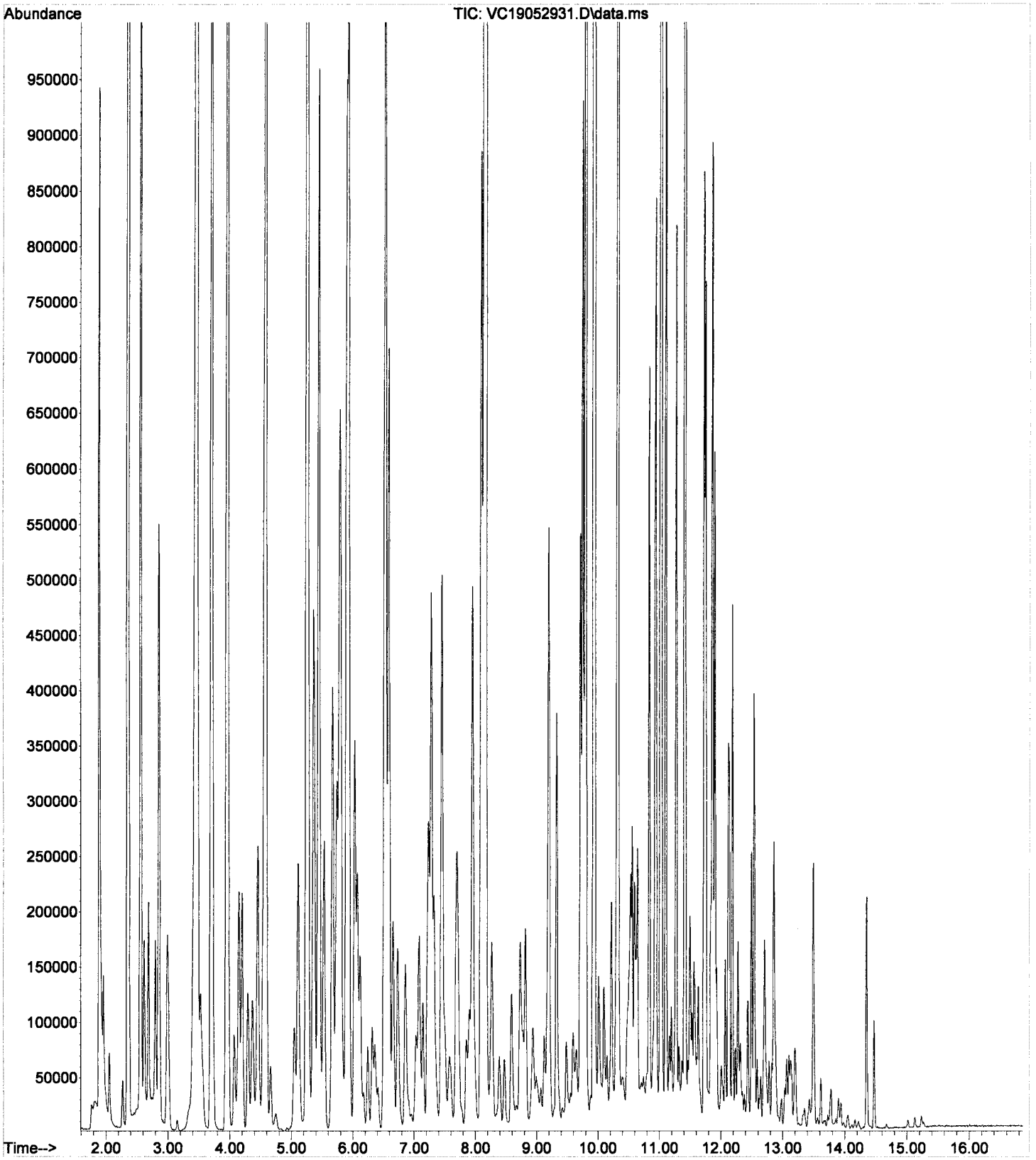
5/30/19

Quant Time: May 30 15:47:38 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	280943	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1535644	60.56	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	973205	50.29	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1469336	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1948912	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1323065	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	121522195m	8585.25	ug/L	
6) TPHg (C5-C9)	9.906	TIC	100273382m	8219.75	ug/L	
7) TPHg (C6-C10)	9.906	TIC	81063895m	8628.07	ug/L	
8) NWTPH-Gx	9.906	TIC	82431215m	10355.49	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052931.D
Operator : TB
Acquired : 30 May 2019 4:02 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALJ
Misc Info : 1X 5mL 10000ppb GX DI+MeOH
Vial Number: 31



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052932.D
Acq On : 30 May 2019 4:29 am
Operator : TB
Sample : 9E29058-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

NR

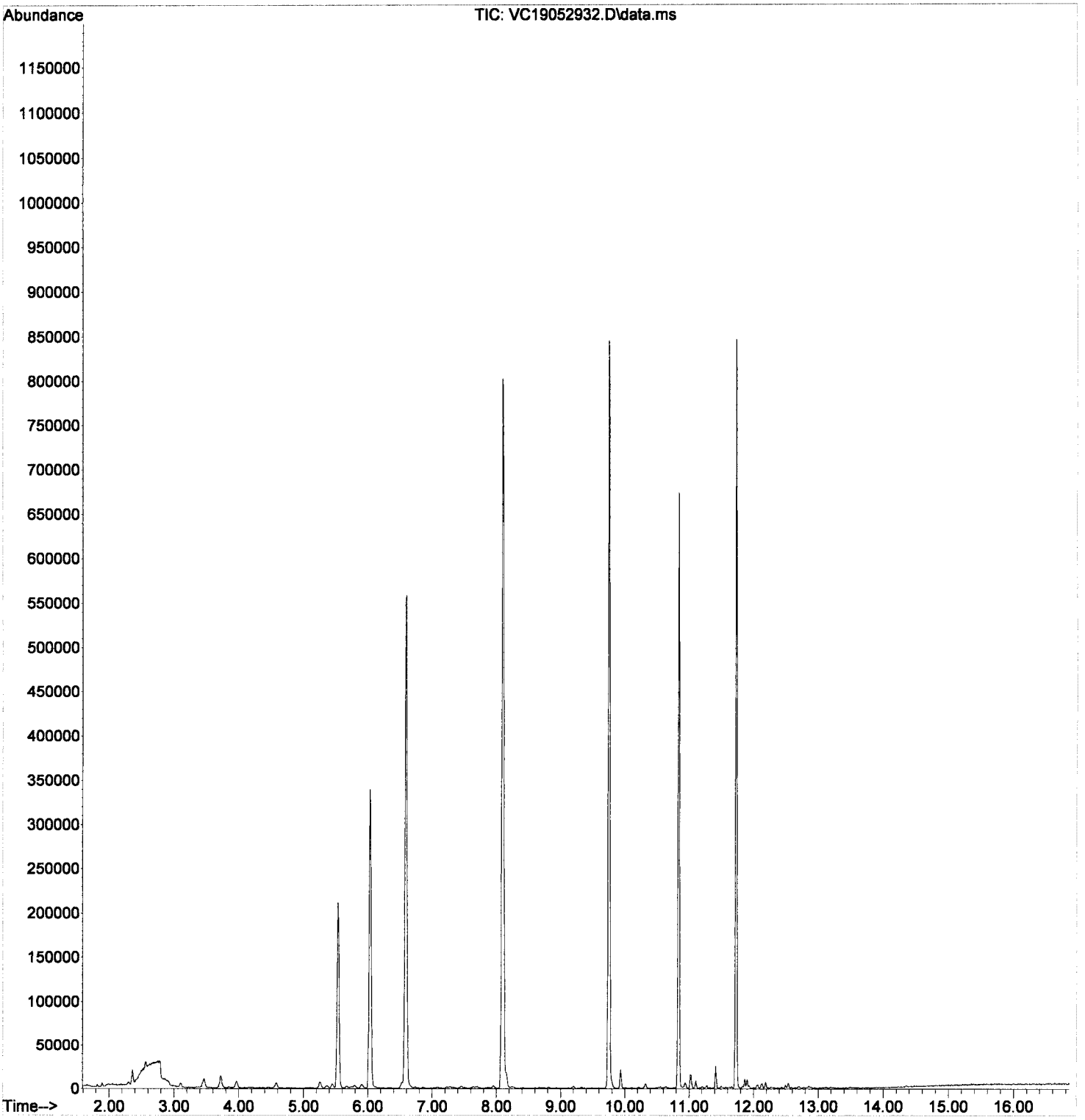
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	279728	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1222030	46.88	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	961897	49.39	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1419826	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1738033	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1151134	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1068894m	39.14	ug/L	
6) TPHg (C5-C9)	9.906	TIC	896529m	33.55	ug/L	
7) TPHg (C6-C10)	9.906	TIC	652995m	32.78	ug/L	
8) NWTPH-Gx	9.906	TIC	279571m	46.94	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052932.D
Acq On : 30 May 2019 4:29 am
Operator : TB
Sample : 9E29058-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052933.D
Acq On : 30 May 2019 4:57 am
Operator : TB
Sample : 9E29058-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

NR

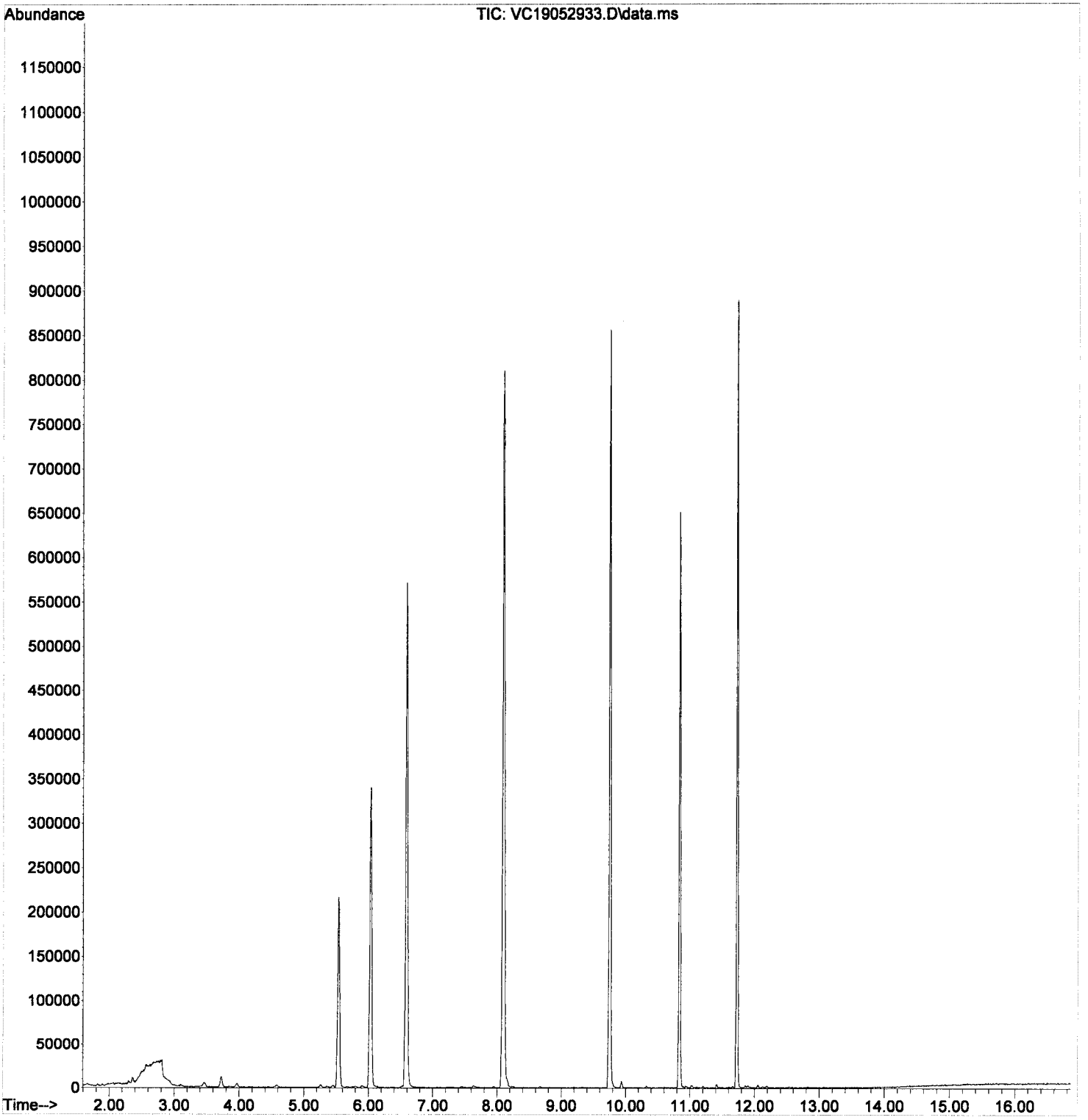
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	283591	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1202716	45.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	964432	48.85	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1423294	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1741215	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1168289	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	663119m	5.91	ug/L	
6) TPHg (C5-C9)	9.906	TIC	644102m	8.90	ug/L	
7) TPHg (C6-C10)	9.906	TIC	521725m	16.22	ug/L	
8) NWTPH-Gx	9.906	TIC	43772m	17.87	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052933.D
Acq On : 30 May 2019 4:57 am
Operator : TB
Sample : 9E29058-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052934.D
Acq On : 30 May 2019 5:25 am
Operator : TB
Sample : 9E29058-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

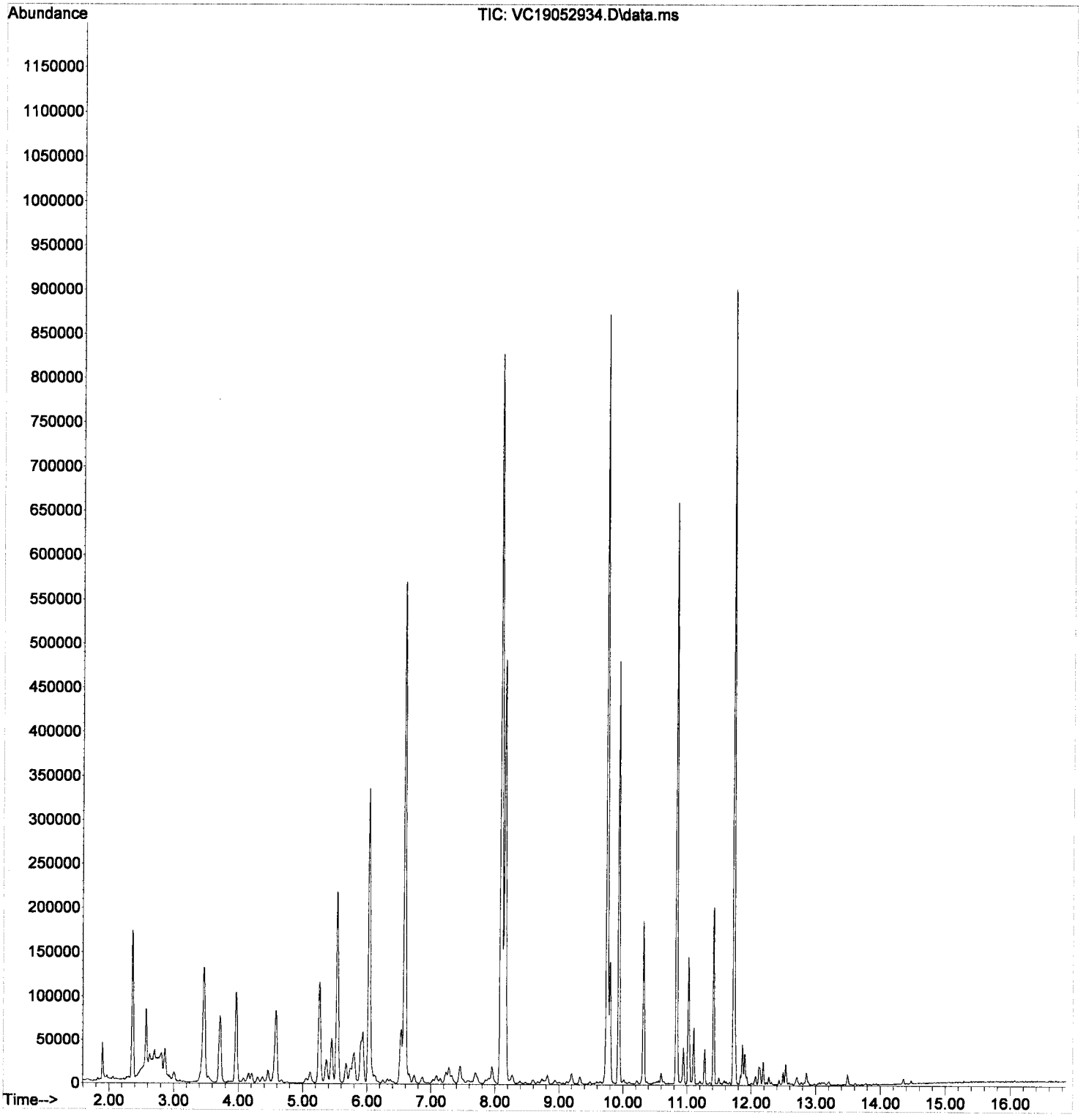
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.032	168	282127	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1225298	46.60	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	969339	49.35	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.749	TIC	1455006	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1726664	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.726	TIC	1226030	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	7243471m	529.63	ug/L	
6) TPHg (C5-C9)	9.906	TIC	6152737m	526.03	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4887342m	535.49	ug/L	
8) NWTPH-Gx	9.906	TIC	4278524m	533.68	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052934.D
Acq On : 30 May 2019 5:25 am
Operator : TB
Sample : 9E29058-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052935.D
Acq On : 30 May 2019 5:52 am
Operator : TB
Sample : 9E29058-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

NR

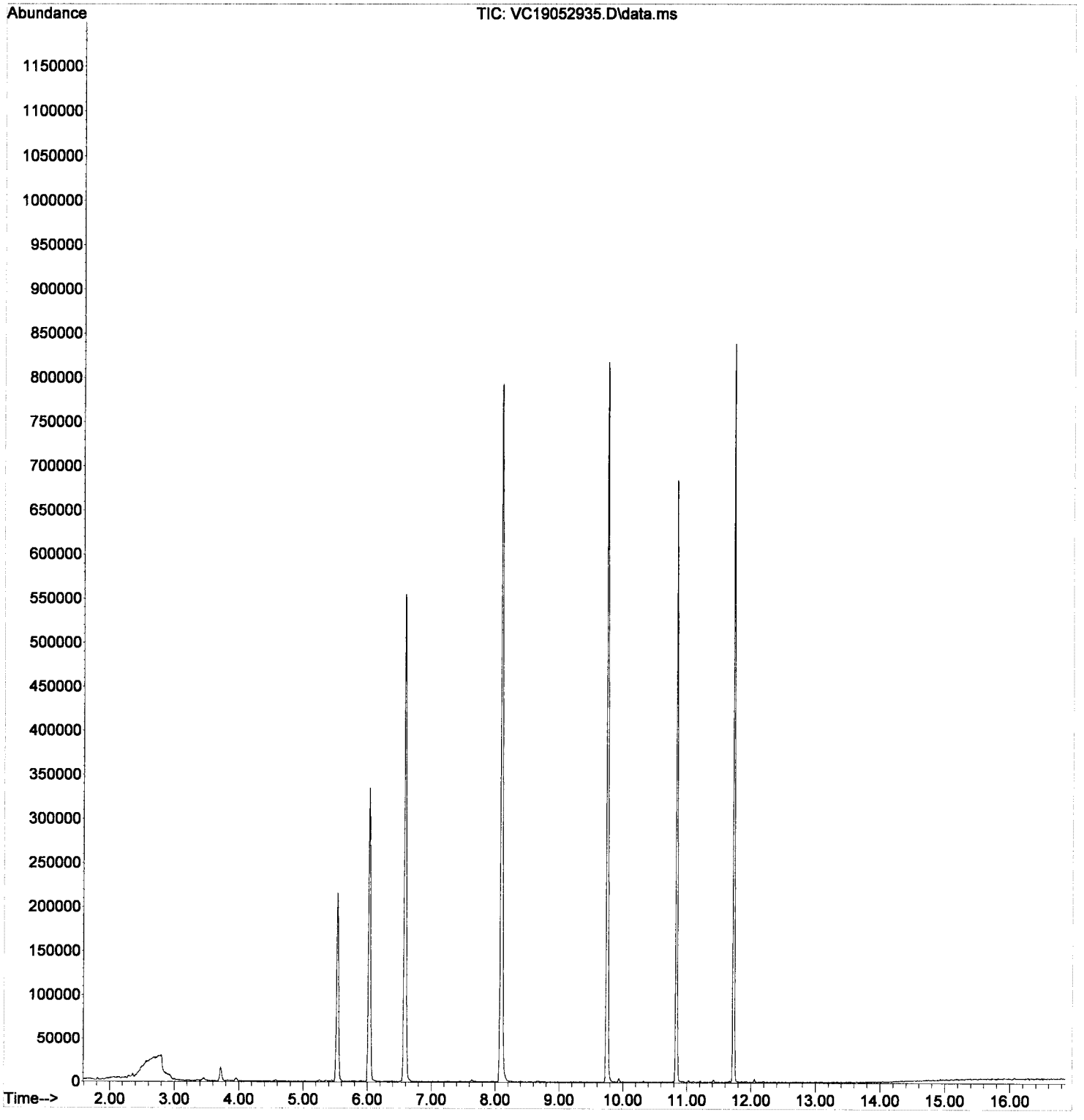
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	276844	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1199322	46.48	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	959696	49.79	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1402860	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.096	TIC	1704421	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1157049	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	652148m	6.30	ug/L	
6) TPHg (C5-C9)	9.906	TIC	651994m	11.11	ug/L	
7) TPHg (C6-C10)	9.906	TIC	497146m	14.74	ug/L	
8) NWTPH-Gx	9.906	TIC	16386m	14.59	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052935.D
Acq On : 30 May 2019 5:52 am
Operator : TB
Sample : 9E29058-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 8260C

Benchsheet & Analysis Sequence Data

Batch 9060533

Sequence 9F04032 (A9E0785-01)

PREPARATION BENCH SHEET

BATCH #: 9060533 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9060533-BLK1		QC	06/04/19 09:03	7.5	5							
9060533-BS1		QC	06/04/19 09:03	5	5	A19E314		250				
9060533-BS2		QC	06/04/19 09:03	5	5	A19E311		250				
A9E0723-03	E	8260C Full List	05/31/19 15:40	1.17	5					2708-190521-009	MOD FRIDGE OUT	
A9E0723-03	E	NWTPH-Gx	05/31/19 15:40	1.17	5					2708-190521-009	MOD FRIDGE OUT	
A9E0785-01	G	8260C Full List	05/31/19 15:46	1.43	5					2708-190522-011	MOD FRIDGE OUT	
A9E0785-01	G	NWTPH-Gx	05/31/19 15:46	1.43	5					2708-190522-011	MOD FRIDGE OUT	
A9E0832-02	D	8260C Full List	05/31/19 15:54	1.08	5					2708-190523-013	MOD FRIDGE OUT	
A9E0832-02	D	NWTPH-Gx	05/31/19 15:54	1.08	5					2708-190523-013	MOD FRIDGE OUT	
A9E0932-01	B	8260C Full List	(Date Sampled)	13.07	10					PW 10 Lb--R29632PL-052919	FP FRIDGE OUT	
A9E0932-01	B	8260C BTEX	(Date Sampled)	13.07	10					PW 10 Lb--R29632PL-052919	Added for BatchQC in: 9060533	
A9E0932-01	B	NWTPH-Gx	(Date Sampled)	13.07	10					PW 10 Lb--R29632PL-052919	Added for BatchQC in: 9060533	
9060533-MS1		QC	05/29/19 11:00	13.07	10	A19E314	A9E0932-01	607			DW=83.7% @50X	
A9E0992-01RE1	D	NWTPH-Gx	(Date Sampled)	6.11	5					Stockpile	FP FRIDGE OUT	
A9E0995-01	C	NWTPH-Gx	05/31/19 19:15	5.84	5					GAS-N	MOD FRIDGE OUT	
A9E0995-02	C	NWTPH-Gx	05/31/19 19:15	5.87	5					GAS-S	MOD FRIDGE OUT	
A9F0027-01	B	NWTPH-Gx	06/03/19 15:00	5.12	5					8519192-14	MOD	
A9F0027-02	B	NWTPH-Gx	06/03/19 15:00	5.88	5					8519192-15	MOD	
A9F0027-03	B	NWTPH-Gx	06/03/19 15:00	5.49	5					8519192-16	MOD	
A9F0045-01	B	8260C BTEX	(Date Sampled)	6.31	5					TP-N-6.5	FP	
A9F0045-02	B	8260C BTEX	(Date Sampled)	6.29	5					TP-S-6.5	FP	
A9F0057-01	B	NWTPH-Gx	(Date Sampled)	6.09	5					BH-MW3-5/29/19-19.5'	FP	

Prepared By: Date

Reviewed By: 6/5/19 Date

PREPARATION BENCH SHEET

BATCH #: 9060533 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0057-02	B	8260C Full List	(Date Sampled)	6.28 ✓	5					BH-MW3-5/29/19-22'	FP	
A9F0057-02	B	8260C BTEX	(Date Sampled)	6.28 ✓	5					BH-MW3-5/29/19-22'	Added for BatchQC in: 9060533	
A9F0057-02	B	NWTPH-Gx	(Date Sampled)	6.28 ✓	5					BH-MW3-5/29/19-22'	FP	
9060533-DUP2		QC	05/29/19 11:00	5.9 ✓	5		A9F0057-02					
A9F0057-03	B	8260C Full List	(Date Sampled)	5.52 ✓	5					BH-2-5/29/19-22'	FP	
A9F0057-03	B	8260C BTEX	(Date Sampled)	5.52 ✓	5					BH-2-5/29/19-22'	Added for BatchQC in: 9060533	
A9F0057-03	B	NWTPH-Gx	(Date Sampled)	5.52 ✓	5					BH-2-5/29/19-22'	FP	
9060533-DUP1		QC	05/29/19 11:20	~~6.62~~ 6.32 tml 6/5/19	5		A9F0057-03					

*pH <2 verified_____

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A16L123	11/30/23	Sample Prep Bal 3
A19C375	09/25/19	Methanol - Fisher (P/T) #185562

Analyte Spike(s)

Std ID	Exp. Date	Description
A19E311	11/09/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19E314	11/09/19	8260B Cal. Std. B VOC Spike Mix (20-40ug/ml

Surrogate(s)

Std ID	Exp. Date	Description

SOIL MS3

Prepared By: Date

Reviewed By: Date

Worksheet

5035 Field Prep Worksheet (Validated 7/11/16)

Sample ID	Container	Container Weight (g)	Tare Weight (g)	Net Sample Weight (g)	Formula Check
A9E0932-01	B	46.97	33.9	13.07	
A9E0992-01	D	37.33	31.22	6.11	
A9F0045-01	B	39.72	33.41	6.31	
-2	B	39.37	33.08	6.29	
A9F0057-01	B	39.47	33.38	6.09	
-2	B	39.84	33.56	6.28	
-2	C	39.64	33.74	5.9	
3	B	39.58	34.06	5.52	
3	C	39.92	33.3	~~6.62~~	6.32

33.6

10/15/19

A9E0723

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0723-01	2708-190521-007	Sampled: 05/21/19 10:55

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
C Solid	40 mL VOA - In House Prep - 5035 (MeOH)			5 10 15	____	@ ____	Y N	

1311/8260C TCLP/ZHE VOC R(Expires: 06/04/19 10:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold
1312/8260C SPLP/ZHE VOCs - Expires: 06/04/19 10:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold
8260C Full List Expires: 05/23/19 10:55 Due: 05/23/19 17:00

A9E0723-02	2708-190521-008	Sampled: 05/21/19 11:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
C Solid	40 mL VOA - In House Prep - 5035 (MeOH)			5 10 15	____	@ ____	Y N	

8260C Full List Expires: 05/23/19 11:00 Due: 05/23/19 17:00

A9E0723-03	2708-190521-009	Sampled: 05/21/19 11:55

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
E Solid	40 mL VOA - In House Prep - 5035 (MeOH)	A	1.17	5 10 15	[illegible]	@ 5/31 1540	Y N	MOD

8260C Full List Expires: 05/23/19 11:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of extraction hold time
NWTPH-Gx Expires: 05/23/19 11:55 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of extraction hold time

A9E0723-04	2708-190521-010	Sampled: 05/21/19 15:30

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
F Solid	40 mL VOA - In House Prep - 5035 (MeOH)			5 10 15	____	@ ____	Y N	

8260C Full List Expires: 05/23/19 15:30 Due: 05/23/19 17:00

out of temp

A9E0785

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0785-01	2708-190522-011	Sampled: 05/22/19 16:30

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
G Solid	40 mL VOA - In House Prep - 5035 (MeOH)	A	1.43	5 10 15	SL	@ 5/31/19 1546	Y N	MOD

1311/8260C TCLP/ZHE Full Lis Expires: 06/05/19 16:30 Due: 06/14/19 17:00

8260C Full List Expires: 05/24/19 16:30 Due: 06/06/19 17:00
Comments: ok to run out of extraction hold time added 5-31-19 lad

NWTPH-Gx Expires: 05/24/19 16:30 Due: 06/14/19 17:00
Comments: ok to run out of extraction hold time added 5-31-19 lad

out of temp

A9E0832

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0832-02	2708-190523-013	Sampled: 05/23/19 15:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
D Solid	40 mL VOA - In House Prep - 5035 (MeOH)	A	1.08 1.06	5 10 15	8 @ 5/31	19 1554	Y N	MOP

1312/8260C SPLP/ZHE VOCs - Expires: 06/06/19 15:00 Due: 06/14/19 17:00
Comments: added 5-31-19

8260C Full List Expires: 05/25/19 15:00 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold for extraction

NWTPH-Gx Expires: 05/25/19 15:00 Due: 06/14/19 17:00
Comments: added 5-31-19 lad ok to run out of hold for extraction

out of temp

A9E0995

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9E0995-01	GAS-N	Sampled: 05/31/19 09:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
E Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.84	5 10 15	AD	@ 5/31/19 0915	Y N	MeOH

NWTPH-Gx Expires: 06/02/19 09:00 Due: 06/06/19 17:00

Comments: Use E cont.

A9E0995-02	GAS-S	Sampled: 05/31/19 09:15

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
E Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.87	5 10 15	AD	@ 5/31/19 915	Y N	MeOH

NWTPH-Gx Expires: 06/02/19 09:15 Due: 06/06/19 17:00

Comments: Use E cont.

Out of temp

A9F0027

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9F0027-01 | **8519192-14** | Sampled: **06/03/19 09:20**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.12	5 10 15	[signature]	@ 6/3/19 1500	Y N	
C Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.35	5 10 15		@	Y N	Dup

NWTPH-Gx Expires: 06/05/19 09:20 Due: 06/05/19 17:00

A9F0027-02 | **8519192-15** | Sampled: **06/03/19 09:24**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.88	5 10 15		@	Y N	

NWTPH-Gx Expires: 06/05/19 09:24 Due: 06/05/19 17:00

A9F0027-03 | **8519192-16** | Sampled: **06/03/19 09:28**

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.49	5 10 15	[signature]	@	Y N	

NWTPH-Gx Expires: 06/05/19 09:28 Due: 06/05/19 17:00

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

A9E0932

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9E0932-01 | **PW 10 Lb--R29632PL-052919** | Sampled: **05/29/19 11:00**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 46.97	Tare Weight (g): 33.90	Volume MeOH (mL): ~~5~~ 10 15 Other	Notes: over weight
MS **C** Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 49.71	Tare Weight (g): 33.51	Volume MeOH (mL): 5 10 15 Other	Notes: ↓

8260 Due: TAT: 5mL added 6/4/19

DW=83.7%

out of temp

Weighed by: MS @ 5/30/19 14:53

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

A9E0992

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9E0992-01	Stockpile	Sampled: 05/31/19 14:00

D Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		37.33	31.22	(5) 10 15 Other	DW = 85.1

GX Due: TAT:

Out of Temp @ 6/4/19

FRIDGE Out

Weighed by: (8) @ 5/31/19 1815

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

Print Date: 5/31/2019 6:09:31PM

A9F0045

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0045-01 **TP-N-6.5** Sampled: **06/03/19 13:20**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		39.72	33.41	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		39.76	33.45	(5) 10 15 Other	

BTEX Due: TAT:

A9F0045-02 **TP-S-6.5** Sampled: **06/03/19 13:30**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		39.37	33.08	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		39.29	33.49	(5) 10 15 Other	

BTEX Due: TAT:

A9F0045-03 **TP-NW-7.5** Sampled: **06/03/19 15:35**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		39.49	33.47	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		39.57	33.55	(5) 10 15 Other	

Due: TAT:

A9F0045-04 **TP-EW-9** Sampled: **06/03/19 16:05**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
C Soil	40 mL VOA - 5035 (MeOH)		39.77	33.87	(5) 10 15 Other	
D Soil	40 mL VOA - 5035 (MeOH)		39.81	33.81	(5) 10 15 Other	

Due: TAT:

A9F0045-05 **TankPiping-1-2** Sampled: **06/03/19 10:05**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)		38.44	33.13	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)		38.06	33.13	(5) 10 15 Other	

Due: TAT:

Weighed by: AKK @ 1940 6/3/19

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

A9F0057

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0057-01 — **BH-MW3-5/29/19-19.5'** — Sampled: **05/29/19 10:50**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	39.47	33.38	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	38.39	33.23	(5) 10 15 Other	

Due: TAT:

A9F0057-02 — **BH-MW3-5/29/19-22'** — Sampled: **05/29/19 11:00**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	39.84	33.56	(5) 10 15 Other	
Dup C Soil	40 mL VOA - 5035 (MeOH)	39.64	33.74	(5) 10 15 Other	Dup

Due: TAT:

A9F0057-03 — **BH-2-5/29/19-22'** — Sampled: **05/29/19 11:20**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
(B) Soil	40 mL VOA - 5035 (MeOH)	39.58	34.06	(5) 10 15 Other	
Dup (C) Soil	40 mL VOA - 5035 (MeOH)	39.92	33.60	(5) 10 15 Other	Dup

Due: TAT:

A9F0057-04 — **BH-3-5/29/19-8'** — Sampled: **05/29/19 12:20**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	40.94	33.91	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	40.99	33.91	(5) 10 15 Other	

Due: TAT:

A9F0057-05 — **BH-3-5/29/19-22.5'** — Sampled: **05/29/19 12:30**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	40.28	33.98	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	39.41	33.52	(5) 10 15 Other	

Due: TAT:

Weighed by: [illegible] @ 6/4/19 1216

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

Volatile Soils Matrix Spike Volume Calculation (Validated 5/3/2013)

Enter the Spike Amount value into the Bench Sheet to ensure correct MS/MSD recoveries.

Batch: 9060533

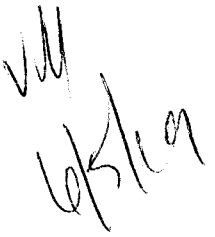
Matrix Spike

Sample Weight	Final Volume	Dilution	Dry Weight
g	mL		%
13.070	10	50	83.7
			0.837

Final Spike Level	**Spike Amount**
ug/kg	**ul**
1108.85	**607**

Assumptions:
Spiking Solution = 20ug/mL
Spike Amount into 50mL = 50ul
Dilution = 1mL of MeOH to 50mL of water
Initial Spike Concentration = 20ug/L

A9E0932-01



ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F04032	Instrument:	VOA-GCMS3
Date:	06/04/19 09:11	Calibration:	A9E3104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F04032-IBL1	Soil	QC	QC			A19C135	
2	9F04032-TUN1	Soil	QC	QC			A19C135	
3	9F04032-CCV1	Soil	QC	QC			A19C135	
4	9060533-BS1	Soil	QC	QC		9060533	A19C135	
5	9F04032-CCV2	Soil	QC	QC			A19C135	
6	9060533-BS2	Soil	QC	QC		9060533	A19C135	
7	9060533-BLK1	Soil	QC	QC		9060533	A19C135	
8	A9E0992-01RE1	Soil	NWTPH-Gx		06/03/19	9060533	A19C135	
9	A9F0045-01	Soil	8260C BTEX		06/04/19	9060533	A19C135	
10	A9F0045-02	Soil	8260C BTEX		06/04/19	9060533	A19C135	
11	9F04032-IBL2	Soil	QC	QC			A19C135	
12	9F04032-IBL3	Soil	QC	QC			A19C135	
13	A9E0932-01	Soil	8260C Full List		06/11/19	9060533	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060533	A19C135	
"	"	Soil	NWTPH-Gx	(QC Source)		9060533	A19C135	
14	9060533-MS1	Soil	QC	QC		9060533	A19C135	
15	9F04032-IBL4	Soil	QC	QC			A19C135	
16	A9E0995-01	Soil	NWTPH-Gx		06/06/19	9060533	A19C135	
17	A9E0995-02	Soil	NWTPH-Gx		06/06/19	9060533	A19C135	
18	A9F0027-01	Soil	NWTPH-Gx		06/05/19	9060533	A19C135	
19	A9F0027-02	Soil	NWTPH-Gx		06/05/19	9060533	A19C135	
20	A9F0027-03	Soil	NWTPH-Gx		06/05/19	9060533	A19C135	
21	A9E0832-02	Soil	8260C Full List	Hahn and Associates	06/14/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/14/19	9060533	A19C135	
22	A9E0785-01	Soil	8260C Full List	Hahn and Associates	06/06/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/14/19	9060533	A19C135	
23	A9E0723-03	Soil	8260C Full List	Hahn and Associates	06/14/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/14/19	9060533	A19C135	
24	9F04032-IBL5	Soil	QC	QC			A19C135	
25	A9F0057-01	Soil	NWTPH-Gx		06/07/19	9060533	A19C135	
26	A9F0057-03	Soil	8260C Full List		06/13/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060533	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060533	A19C135	
27	9060533-DUP1	Soil	QC	QC		9060533	A19C135	
28	A9F0057-02	Soil	8260C Full List		06/13/19	9060533	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060533	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060533	A19C135	
29	9060533-DUP2	Soil	QC	QC		9060533	A19C135	
30	9F04032-IBL6	Soil	QC	QC			A19C135	

Comments: Trip/mer DCM (@55)

Data Entered By: 10/5/19

Data Reviewed By: 10/5/19

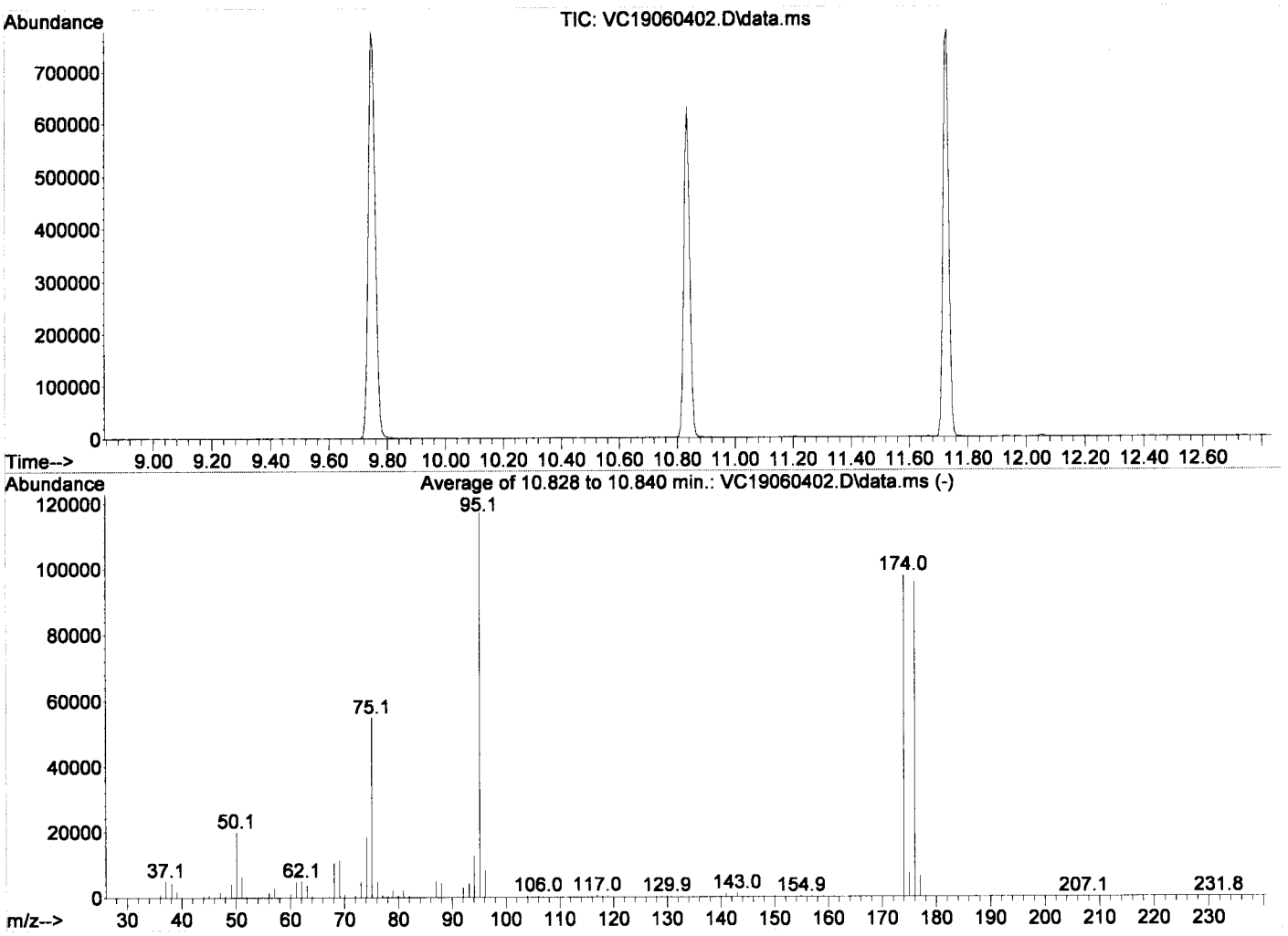
BFB

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060402.D
Acq On : 4 Jun 2019 10:00 am
Operator : TB
Sample : 9F04032-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019

6/4/19



AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.1	19974	PASS
75	95	30	60	46.9	54874	PASS
95	95	100	100	100.0	117112	PASS
96	95	5	9	7.2	8455	PASS
173	174	0.00	2	0.2	202	PASS
174	95	50	200	83.5	97805	PASS
175	174	5	9	7.5	7319	PASS
176	174	95	101	97.9	95752	PASS
177	176	5	9	6.6	6317	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060402.D
Acq On : 4 Jun 2019 10:00 am
Operator : TB
Sample : 9F04032-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

6/4/19

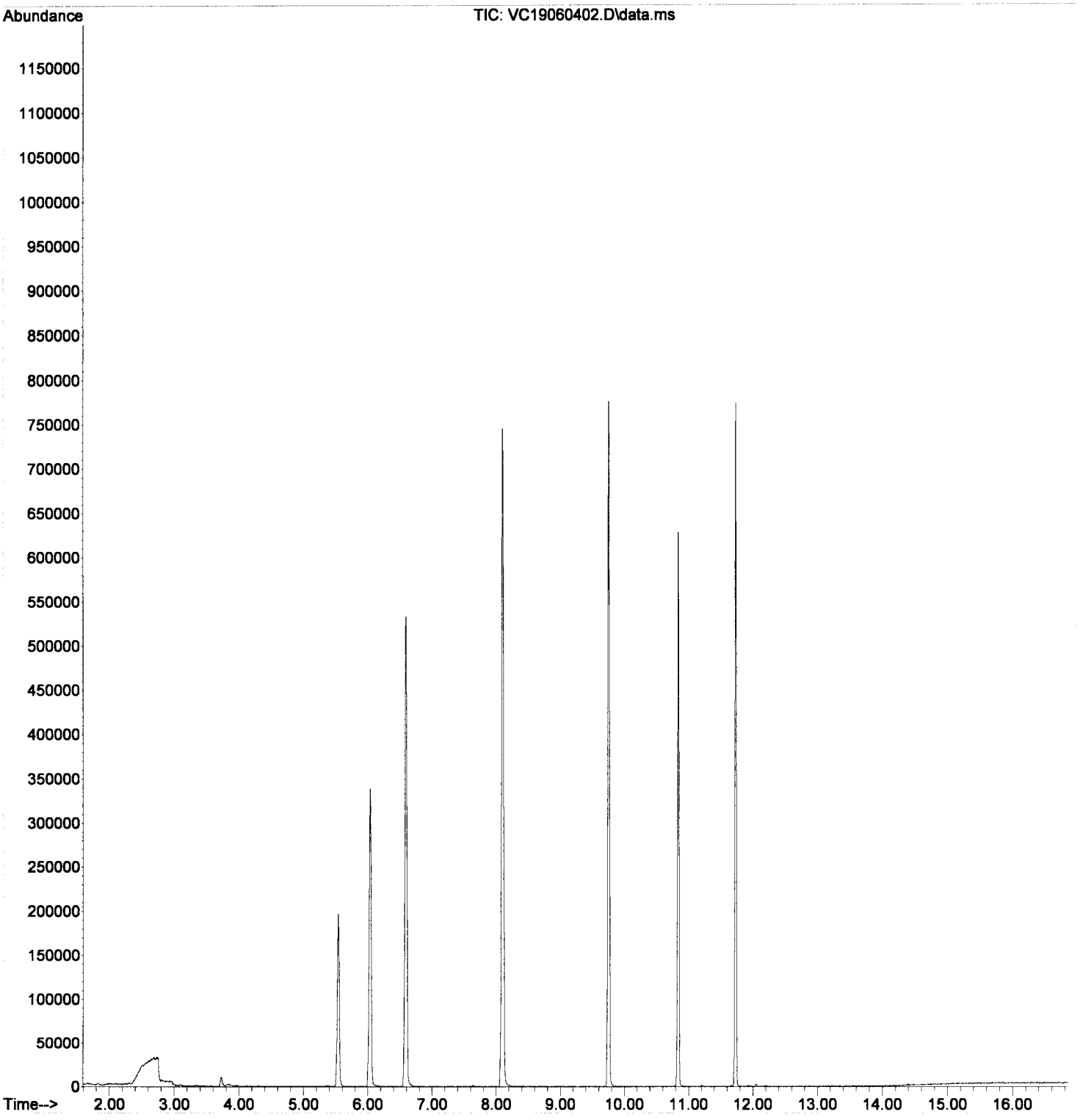
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	277639	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	443284	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	184981	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	132533	44.08	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	501397	46.95	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	596381	49.73	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	159371	49.89	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	535	0.13	ug/L		80
5) Bromomethane	2.305	96	922	0.58	ug/L		86
6) Chloroethane	2.500	64	238	0.22	ug/L	#	1
9) Carbon Disulfide	3.102	76	1110	0.25	ug/L		78
11) Iodomethane	3.236	142	136	0.86	ug/L	#	47
12) Methylene Chloride	3.729	84	5720	Below Cal			89
13) Acetone	3.845	43	3195	2.55	ug/L		90

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060402.D
Acq On : 4 Jun 2019 10:00 am
Operator : TB
Sample : 9F04032-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

6/14/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	107	0.00	
2		Dichlorodifluoromethane	20.000	19.667	1.7	107	0.00	
3	P	Chloromethane	20.000	18.029	9.9	101	0.00	
4	C	Vinyl Chloride	20.000	18.204	9.0	97	0.00	
5		Bromomethane	20.000	19.101	4.5	107	0.00	
6		Chloroethane	20.000	17.157	14.2	94	0.00	
7		Trichlorofluoromethane	20.000	19.630	1.9	103	0.00	
8	C	1,1-Dichloroethene	20.000	20.849	-4.2	112	0.00	
9		Carbon Disulfide	20.000	19.598	2.0	107	0.00	
10		Freon 113	20.000	19.496	2.5	110	0.00	
11		Iodomethane	20.000	15.616	21.9#	96	0.00	-NA
12		Methylene Chloride	20.000	14.246	28.8#	85	0.00	-Q55
13		Acetone	40.000	37.245	6.9	104	0.00	
14		t-1,2-Dichloroethene	20.000	20.403	-2.0	108	0.00	
15		n-Hexane	20.000	19.251	3.7	109	0.00	
16		Methyl-tert-butyl-ether	20.000	18.945	5.3	101	0.00	
17	P	1,1-Dichloroethane	20.000	20.543	-2.7	108	0.00	
18		Acrylonitrile	20.000	19.965	0.2	105	0.00	
19		c-1,2-Dichloroethene	20.000	19.756	1.2	105	0.00	
20		2,2-Dichloropropane	20.000	22.788	-13.9	121	0.00	
21		Bromochloromethane	20.000	20.785	-3.9	110	0.00	
22	C	Chloroform	20.000	19.323	3.4	105	0.00	
23		Carbon Tetrachloride	20.000	21.011	-5.1	113	0.00	
24		Tetrahydrofuran	20.000	18.213	8.9	106	0.00	
25		1,1,1-Trichloroethane	20.000	20.655	-3.3	108	0.00	
26	S	Dibromofluoromethane (S)	50.000	46.587	6.8	98	0.00	
27		1,1-Dichloropropene	20.000	19.392	3.0	107	0.00	
28		2-Butanone (MEK)	40.000	37.225	6.9	100	0.00	
29		Benzene	20.000	19.243	3.8	104	0.00	
30		1,2-Dichloroethane (EDC)	20.000	19.763	1.2	106	0.00	
31		iso-Butyl Alcohol	500.000	418.681	16.3	90	0.00	
32	S	1,4-Difluorobenzene (S)	50.000	47.452	5.1	101	0.00	
33		Trichloroethene (TCE)	20.000	18.600	7.0	103	0.00	
34		Dibromomethane	20.000	19.708	1.5	102	0.00	
35	C	1,2-Dichloropropane	20.000	19.825	0.9	104	0.00	
36		Bromodichloromethane	20.000	20.745	-3.7	105	0.00	
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	98	0.00	
38		c-1,3-Dichloropropene	20.000	22.438	-12.2	102	0.00	
39	S	Toluene-d8 (S)	50.000	49.747	0.5	98	0.00	
40	C	Toluene	20.000	20.446	-2.2	104	0.00	
41		Tetrachloroethene (PCE)	20.000	20.002	-0.0	106	0.00	
42		4-Methyl-2-Pentanone (MIBK)	40.000	37.907	5.2	98	0.00	
43		t-1,3-Dichloropropene	20.000	22.184	-10.9	104	0.00	
44		1,1,2-Trichloroethane	20.000	21.897	-9.5	105	0.00	
45		Dibromochloromethane	20.000	18.428	7.9	102	0.00	
46		1,3-Dichloropropane	20.000	21.215	-6.1	103	0.00	
47		1,2-Dibromoethane (EDB)	20.000	22.453	-12.3	106	0.00	
48		2-Hexanone	40.000	39.536	1.2	96	0.00	
49	P	Chlorobenzene	20.000	20.510	-2.6	104	0.00	
50	C	Ethylbenzene	20.000	20.973	-4.9	105	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		1,1,1,2-Tetrachloroethane	20.000	22.636	-13.2	106	0.00
52		m,p-Xylenes (2)	40.000	43.250	-8.1	106	0.00
53		o-Xylene	20.000	21.322	-6.6	106	0.00
54		Styrene	20.000	22.046	-10.2	101	0.00
55	P	Bromoform	20.000	18.037	9.8	104	0.00
56		Isopropylbenzene	20.000	21.335	-6.7	105	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	97	0.00
58	S	4-Bromofluorobenzene (S)	50.000	50.253	-0.5	97	0.00
59		Bromobenzene	20.000	22.430	-12.1	107	0.00
60		n-Propylbenzene	20.000	21.850	-9.3	108	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	21.061	-5.3	98	0.00
62		2-Chlorotoluene	20.000	21.807	-9.0	107	0.00
63		1,3,5-Trimethylbenzene	20.000	22.383	-11.9	107	0.00
64		1,2,3-Trichloropropane	20.000	21.038	-5.2	100	0.00
65		t-1,4-Dichloro-2-butene	20.000	19.806	1.0	102	0.00
66		4-Chlorotoluene	20.000	21.599	-8.0	106	0.00
67		tert-Butylbenzene	20.000	22.097	-10.5	110	0.00
68		1,2,4-Trimethylbenzene	20.000	22.137	-10.7	106	0.00
69		sec-Butylbenzene	20.000	22.316	-11.6	109	0.00
70		4-Isopropyltoluene	20.000	22.473	-12.4	108	0.00
71		1,3-Dichlorobenzene	20.000	20.527	-2.6	104	0.00
72		1,4-Dichlorobenzene	20.000	20.546	-2.7	105	0.00
73		n-Butylbenzene	20.000	22.232	-11.2	110	0.00
74		1,2-Dichlorobenzene	20.000	20.583	-2.9	103	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	19.497	2.5	94	0.00
76		Hexachlorobutadiene	20.000	24.086	-20.4#	112	0.00
77		1,2,4-Trichlorobenzene	20.000	21.628	-8.1	106	0.00
78		Naphthalene	20.000	21.341	-6.7	97	0.00
79		1,2,3-Trichlorobenzene	20.000	22.346	-11.7	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

-Q's OK @ 6/5/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

6/4/19

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	275376	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	443366	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	185288	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	138920	46.59	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	502610	47.45	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	596667	49.75	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	160781	50.25	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	48619	19.67	ug/L		99
3) Chloromethane	1.862	50	73211	18.03	ug/L		95
4) Vinyl Chloride	1.953	62	51098	18.20	ug/L		96
5) Bromomethane	2.306	96	30243	19.10	ug/L		89
6) Chloroethane	2.446	64	18094	17.16	ug/L		77
7) Trichlorofluoromethane	2.567	101	30714	19.63	ug/L		92
8) 1,1-Dichloroethene	3.090	61	58089	20.85	ug/L		86
9) Carbon Disulfide	3.103	76	86671	19.60	ug/L		98
10) Freon 113	3.145	101	46115	19.50	ug/L		90
11) Iodomethane	3.243	142	17800	15.62	ug/L		97
12) Methylene Chloride	3.729	84	49836	14.25	ug/L		97
13) Acetone	3.833	43	46231	37.25	ug/L		99
14) t-1,2-Dichloroethene	3.887	61	65915	20.40	ug/L		95
15) n-Hexane	3.966	86	10974	19.25	ug/L	#	93
16) Methyl-tert-butyl-ether	4.039	73	181293	18.94	ug/L		99
17) 1,1-Dichloroethane	4.520	63	81788	20.54	ug/L		96
18) Acrylonitrile	4.599	53	32151	19.96	ug/L		95
19) c-1,2-Dichloroethene	5.068	61	71228	19.76	ug/L		97
20) 2,2-Dichloropropane	5.171	77	71099	22.79	ug/L		90
21) Bromochloromethane	5.268	49	44273	20.79	ug/L		97
22) Chloroform	5.347	83	91417	19.32	ug/L		95
23) Carbon Tetrachloride	5.475	117	53694	21.01	ug/L		98
24) Tetrahydrofuran	5.536	42	32829	18.21	ug/L		88
25) 1,1,1-Trichloroethane	5.548	97	74624	20.66	ug/L		98
27) 1,1-Dichloropropene	5.676	75	72119	19.39	ug/L		98
28) 2-Butanone (MEK)	5.688	43	82403	37.23	ug/L		98
29) Benzene	5.931	78	230331	19.24	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.144	62	70521	19.76	ug/L		99
31) iso-Butyl Alcohol	6.272	43	114772	418.68	ug/L		88
33) Trichloroethene (TCE)	6.546	130	62446	18.60	ug/L		97
34) Dibromomethane	6.996	93	31531	19.71	ug/L		92
35) 1,2-Dichloropropane	7.106	63	60659	19.83	ug/L		95
36) Bromodichloromethane	7.185	83	55777	20.75	ug/L		97
38) c-1,3-Dichloropropene	7.890	75	78313	22.44	ug/L		98
40) Toluene	8.152	91	239800	20.45	ug/L		99
41) Tetrachloroethene (PCE)	8.602	166	54396	20.00	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.614	43	137258	37.91	ug/L		97
43) t-1,3-Dichloropropene	8.645	75	71834	22.18	ug/L		96
44) 1,1,2-Trichloroethane	8.821	97	52465	21.90	ug/L		96
45) Dibromochloromethane	9.004	129	37037	18.43	ug/L		96
46) 1,3-Dichloropropane	9.107	76	94029	21.21	ug/L		96
47) 1,2-Dibromoethane (EDB)	9.241	107	52593	22.45	ug/L		100
48) 2-Hexanone	9.496	43	97053	39.54	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

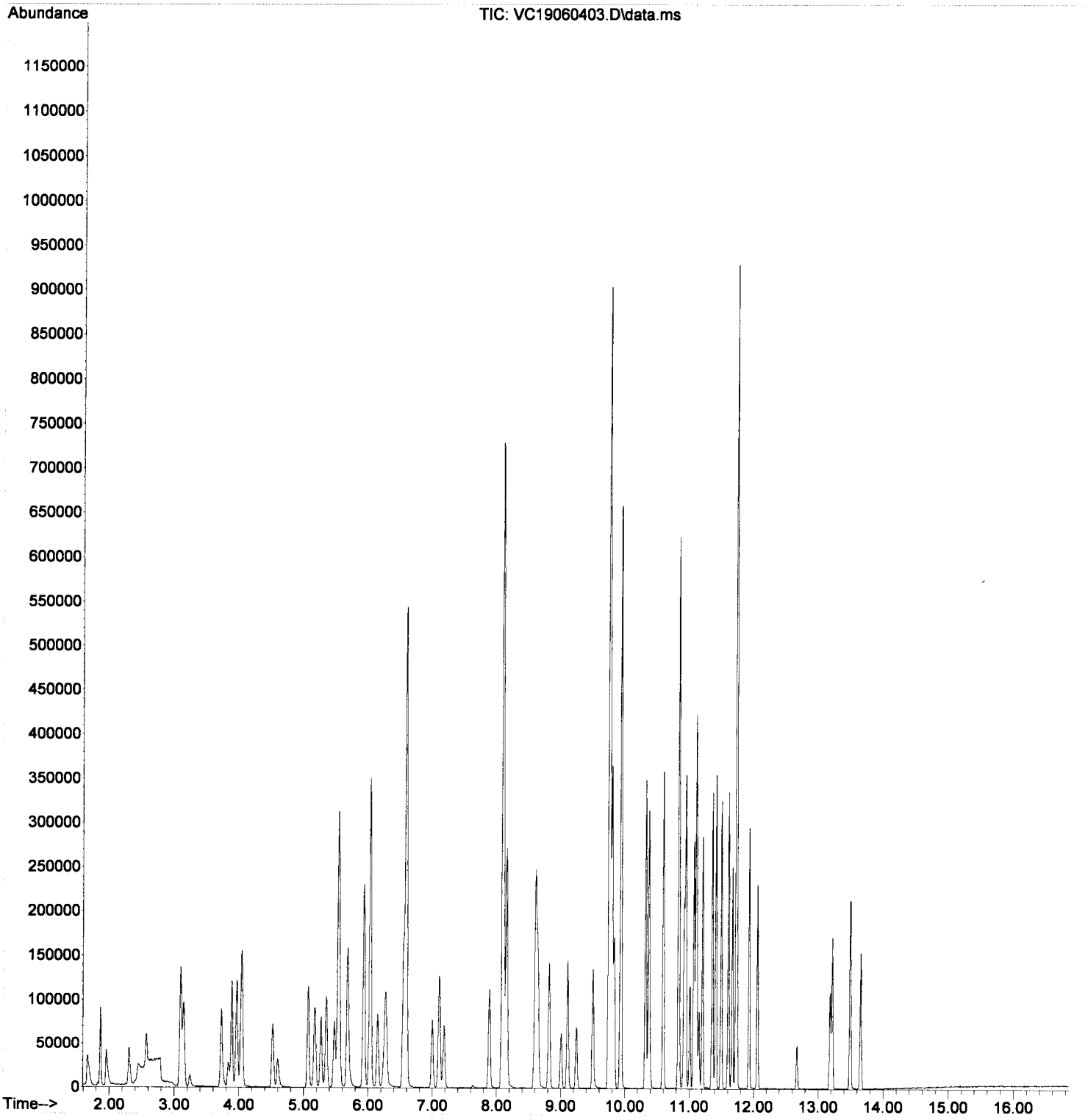
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	145909	20.51 ug/L	99
50) Ethylbenzene	9.794	91	250107	20.97 ug/L	97
51) 1,1,1,2-Tetrachloroethane	9.831	131	45426	22.64 ug/L	97
52) m,p-Xylenes (2)	9.934	91	372335	43.25 ug/L	99
53) o-Xylene	10.318	91	192939	21.32 ug/L	95
54) Styrene	10.366	104	139439	22.05 ug/L	96
55) Bromoform	10.391	173	20601	18.04 ug/L	94
56) Isopropylbenzene	10.591	105	221368	21.33 ug/L	98
59) Bromobenzene	10.920	156	54876	22.43 ug/L	97
60) n-Propylbenzene	10.944	91	243747	21.85 ug/L	99
61) 1,1,2,2-Tetrachloroethane	11.011	83	51128	21.06 ug/L	98
62) 2-Chlorotoluene	11.072	126	50359	21.81 ug/L	94
63) 1,3,5-Trimethylbenzene	11.102	105	168793	22.38 ug/L	99
64) 1,2,3-Trichloropropane	11.115	110	21060	21.04 ug/L	87
65) t-1,4-Dichloro-2-butene	11.151	88	6698	19.81 ug/L #	89
66) 4-Chlorotoluene	11.206	91	144159	21.60 ug/L	99
67) tert-Butylbenzene	11.358	91	93398	22.10 ug/L	94
68) 1,2,4-Trimethylbenzene	11.413	105	170839	22.14 ug/L	99
69) sec-Butylbenzene	11.498	105	199435	22.32 ug/L	97
70) 4-Isopropyltoluene	11.607	119	163389	22.47 ug/L	96
71) 1,3-Dichlorobenzene	11.668	146	88133	20.53 ug/L	98
72) 1,4-Dichlorobenzene	11.735	146	88130	20.55 ug/L	98
73) n-Butylbenzene	11.930	91	137473	22.23 ug/L	97
74) 1,2-Dichlorobenzene	12.057	146	81170	20.58 ug/L	99
75) 1,2-Dibromo-3-Chloropr...	12.672	157	11254	19.50 ug/L	92
76) Hexachlorobutadiene	13.183	223	13751	24.09 ug/L	98
77) 1,2,4-Trichlorobenzene	13.213	180	49657	21.63 ug/L	97
78) Naphthalene	13.493	128	164964	21.34 ug/L	97
79) 1,2,3-Trichlorobenzene	13.651	180	48606	22.35 ug/L	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060403.D
Acq On : 4 Jun 2019 10:28 am
Operator : TB
Sample : 9060533-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOV+MeOH A19E314
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 10:57:26 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060404.D
Acq On : 4 Jun 2019 10:56 am
Operator : TB
Sample : 9060533-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

6/14/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	105	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	46.745	6.5	101	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	47.468	5.1	101	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	99	0.00
5	H	CA-LUFT (C5-C12)	500.000	471.758	5.6	96	0.00
6	H	TPHg (C5-C9)	500.000	476.562	4.7	96	0.00
7	H	TPHg (C6-C10)	500.000	485.412	2.9	99	0.00
8	H	NWTPH-Gx	500.000	467.701	6.5	98	0.00
9		Benzene (NR)	-1.000	0.000	0.0	97	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	99	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	94	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	99	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	101	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060404.D
Acq On : 4 Jun 2019 10:56 am
Operator : TB
Sample : 9060533-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

6/4/19

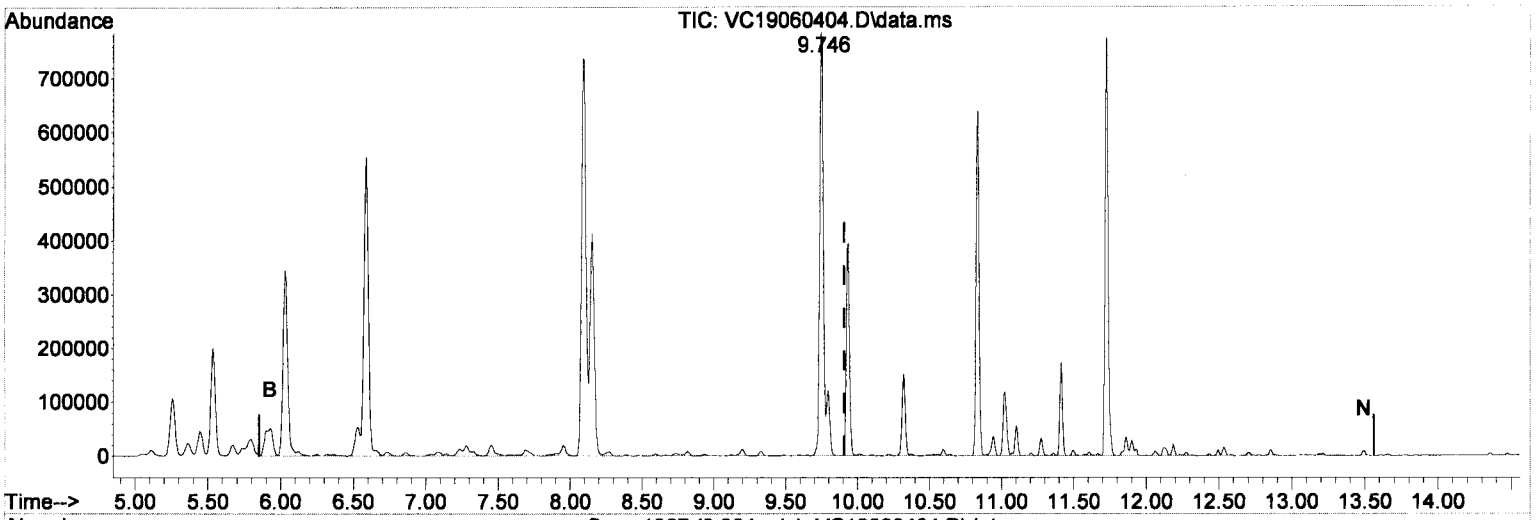
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	274188	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1194467	46.74	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	906108	47.47	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1356210	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1618399	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1130570	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6333600m	471.76	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5468579m	476.56	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4340999m	485.41	ug/L	
8) NWTPH-Gx	9.906	TIC	3631179m	467.70	ug/L	

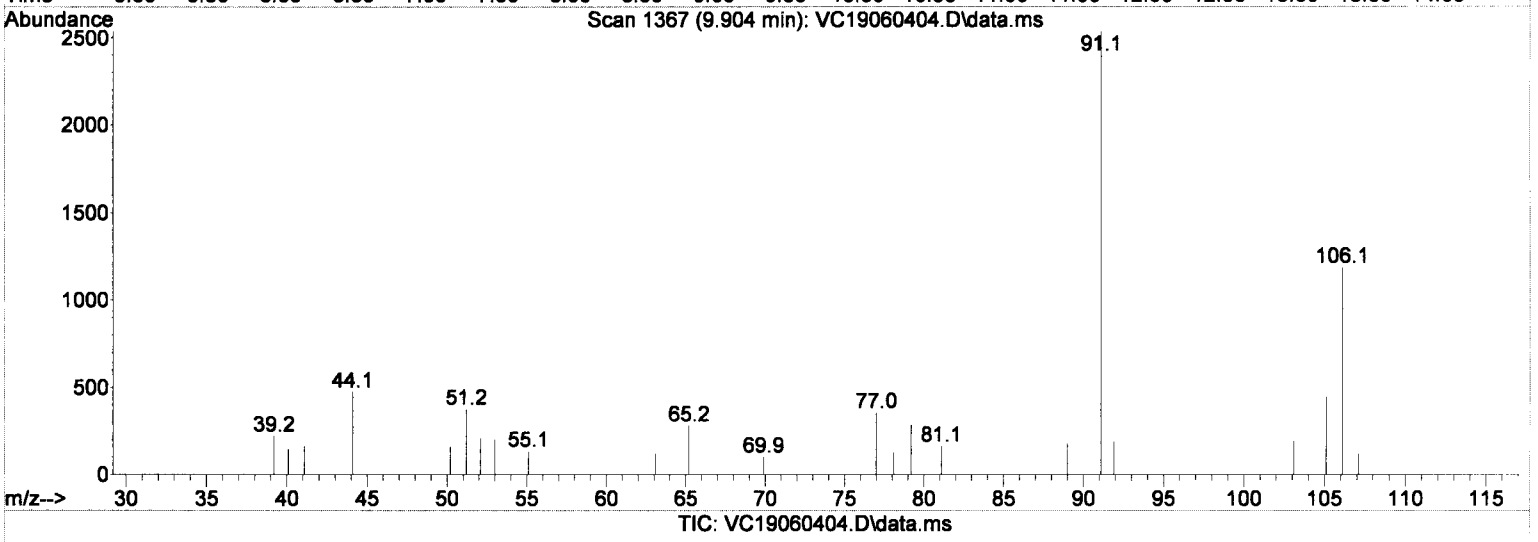
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060404.D
Acq On : 4 Jun 2019 10:56 am
Operator : TB
Sample : 9060533-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19060404.D\data.ms

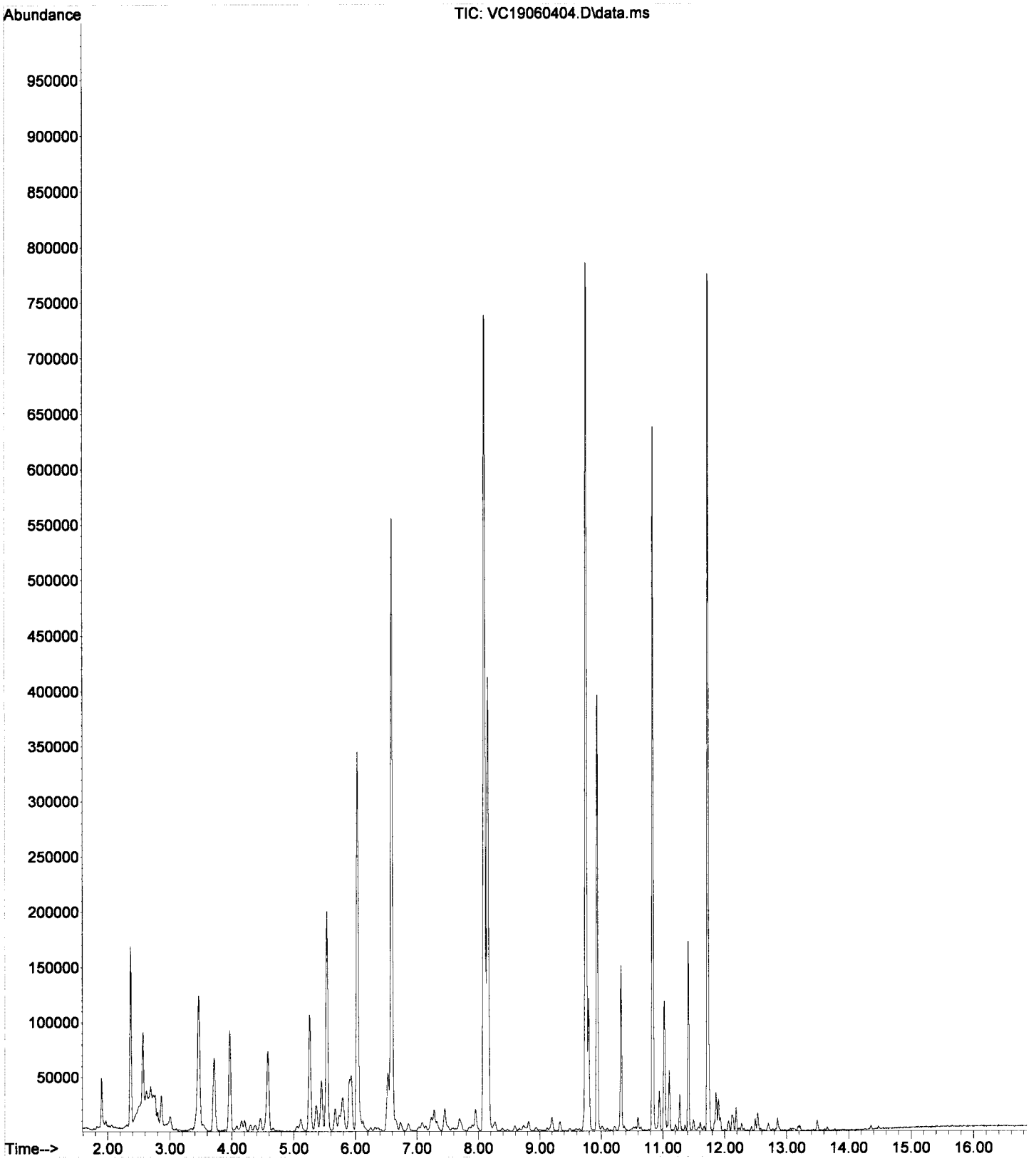
(8) NWTPH-Gx (H)

9.906min (0.000) 467.70 ug/L m

response 3631179

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.01#
0.00	0.00	0.02#
0.00	0.00	0.00

File :C:\msdchem\1\DATA\2019-06\9F04032\VC19060404.D
Operator : TB
Acquired : 4 Jun 2019 10:56 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9060533-BS2
Misc Info : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
Vial Number: 4



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060405.D
Acq On : 4 Jun 2019 11:23 am
Operator : TB
Sample : 9060533-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:04:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

6/14/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.029	168	269768	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1117243	44.44 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	893854	47.59 ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1297134	0.00 ug/L	0.00
10) Toluene-d8 (NR)	8.092	TIC	1554497	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.724	TIC	1079048	0.00 ug/L	0.00
Target Compounds					Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	522772m	Below Cal	
6) TPHg (C5-C9)	9.906	TIC	517295m	Below Cal	
7) TPHg (C6-C10)	9.906	TIC	425569m	7.44 ug/L	
8) NWTPH-Gx	9.906	TIC	22274m	15.40 ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060405.D
Acq On : 4 Jun 2019 11:23 am
Operator : TB
Sample : 9060533-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:05:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

6/14/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	269768	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	439790	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	185883	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.531	111	128975	44.15	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.583	114	488604	47.09	ug/L		0.00
39) Toluene-d8 (S)	8.092	98	587271	49.36	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	162016	50.48	ug/L		0.00
Target Compounds							Qvalue
5) Bromomethane	2.288	96	1090	0.70	ug/L	#	41
6) Chloroethane	2.471	64	489	0.47	ug/L	#	1
11) Iodomethane	3.243	142	141	0.87	ug/L	#	47
12) Methylene Chloride	3.718	84	5744	Below Cal			95
13) Acetone	3.833	43	378	0.31	ug/L	#	42
40) Toluene	8.153	91	1756	0.15	ug/L		72
52) m,p-Xylenes (2)	9.935	91	1366	0.16	ug/L		81
68) 1,2,4-Trimethylbenzene	11.413	105	753	0.10	ug/L		64
73) n-Butylbenzene	11.930	91	741	0.12	ug/L		87
77) 1,2,4-Trichlorobenzene	13.220	180	207	0.09	ug/L	#	54

CMML

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

Quantitation Report (Not Reviewed)

```
Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060405.D
Acq On    :  4 Jun 2019  11:23 am
Operator  : TB
Sample    : 9060533-BLK1
Misc      : 50X  7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial  : 5   Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 04 12:05:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title  : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration
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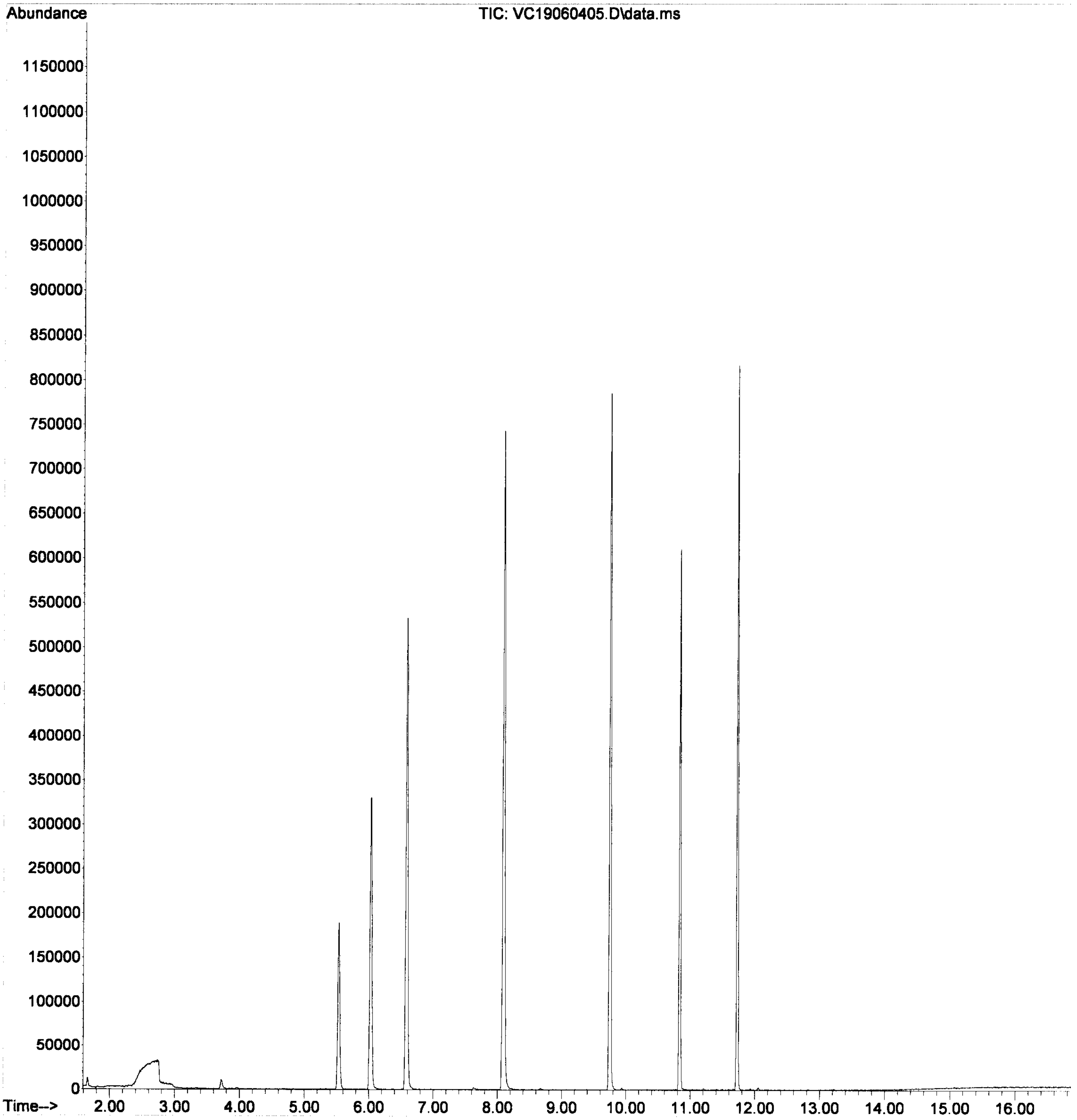


Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060412.D
Acq On : 4 Jun 2019 2:33 pm
Operator : TB
Sample : 9060533-MS1
Misc : 50X ~5g/5mLx1000uL/50mL 8260/QC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.034	168	335037	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.751	117	521185	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	225131	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.536	111	167295	46.11	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.588	114	593381	46.05	ug/L	0.00
39) Toluene-d8 (S)	8.097	98	699838	49.64	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	197389	50.78	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.666	85	54412	18.09	ug/L	95
3) Chloromethane	1.867	50	80771	16.35	ug/L	96
4) Vinyl Chloride	1.952	62	60283	17.65	ug/L	95
5) Bromomethane	2.305	96	34097	17.70	ug/L	95
6) Chloroethane	2.445	64	19113	14.90	ug/L	81
7) Trichlorofluoromethane	2.567	101	25785	13.54	ug/L	96
8) 1,1-Dichloroethene	3.096	61	63751	18.81	ug/L	92
9) Carbon Disulfide	3.114	76	95238	17.70	ug/L	98
10) Freon 113	3.151	101	53483	18.58	ug/L	87
11) Iodomethane	3.248	142	22626	16.26	ug/L	97
12) Methylene Chloride	3.729	84	58927	13.67	ug/L	97
13) Acetone	3.832	43	57146	37.84	ug/L	97
14) t-1,2-Dichloroethene	3.887	61	74324	18.91	ug/L	97
15) n-Hexane	3.966	86	13193	19.00	ug/L	95
16) Methyl-tert-butyl-ether	4.039	73	212492	18.25	ug/L	99
17) 1,1-Dichloroethane	4.520	63	92782	19.15	ug/L	98
18) Acrylonitrile	4.593	53	38779	19.79	ug/L	96
19) c-1,2-Dichloroethene	5.067	61	80351	18.32	ug/L	96
20) 2,2-Dichloropropane	5.177	77	74861	19.72	ug/L	87
21) Bromochloromethane	5.268	49	48517	18.72	ug/L	97
22) Chloroform	5.353	83	103322	17.95	ug/L	96
23) Carbon Tetrachloride	5.481	117	56765	18.26	ug/L	98
24) Tetrahydrofuran	5.529	42	39896	18.19	ug/L	92
25) 1,1,1-Trichloroethane	5.554	97	81460	18.53	ug/L	97
27) 1,1-Dichloropropene	5.675	75	82097	18.14	ug/L	97
28) 2-Butanone (MEK)	5.688	43	101152	37.56	ug/L	91
29) Benzene	5.931	78	267133	18.34	ug/L	99
30) 1,2-Dichloroethane (EDC)	6.150	62	76504	17.62	ug/L	97
31) iso-Butyl Alcohol	6.253	43	139679	418.80	ug/L	86
33) Trichloroethene (TCE)	6.545	130	78150	19.13	ug/L	93
34) Dibromomethane	6.996	93	37799	19.42	ug/L	94
35) 1,2-Dichloropropane	7.111	63	69259	18.61	ug/L	89
36) Bromodichloromethane	7.184	83	59995	18.42	ug/L	98
38) c-1,3-Dichloropropene	7.890	75	90153	21.97	ug/L	95
40) Toluene	8.151	91	278098	20.17	ug/L	99
41) Tetrachloroethene (PCE)	8.602	166	65424	20.47	ug/L	96
42) 4-Methyl-2-Pentanone (...	8.614	43	164304	38.60	ug/L	99
43) t-1,3-Dichloropropene	8.644	75	80756	21.22	ug/L	95
44) 1,1,2-Trichloroethane	8.821	97	62720	22.27	ug/L	96
45) Dibromochloromethane	9.003	129	44276	18.73	ug/L	94
46) 1,3-Dichloropropane	9.107	76	110888	21.28	ug/L	98
47) 1,2-Dibromoethane (EDB)	9.246	107	62139	22.57	ug/L	97
48) 2-Hexanone	9.496	43	114734	39.76	ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060412.D
Acq On : 4 Jun 2019 2:33 pm
Operator : TB
Sample : 9060533-MS1
Misc : 50X ~5g/5mLx1000uL/50mL 8260/QC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

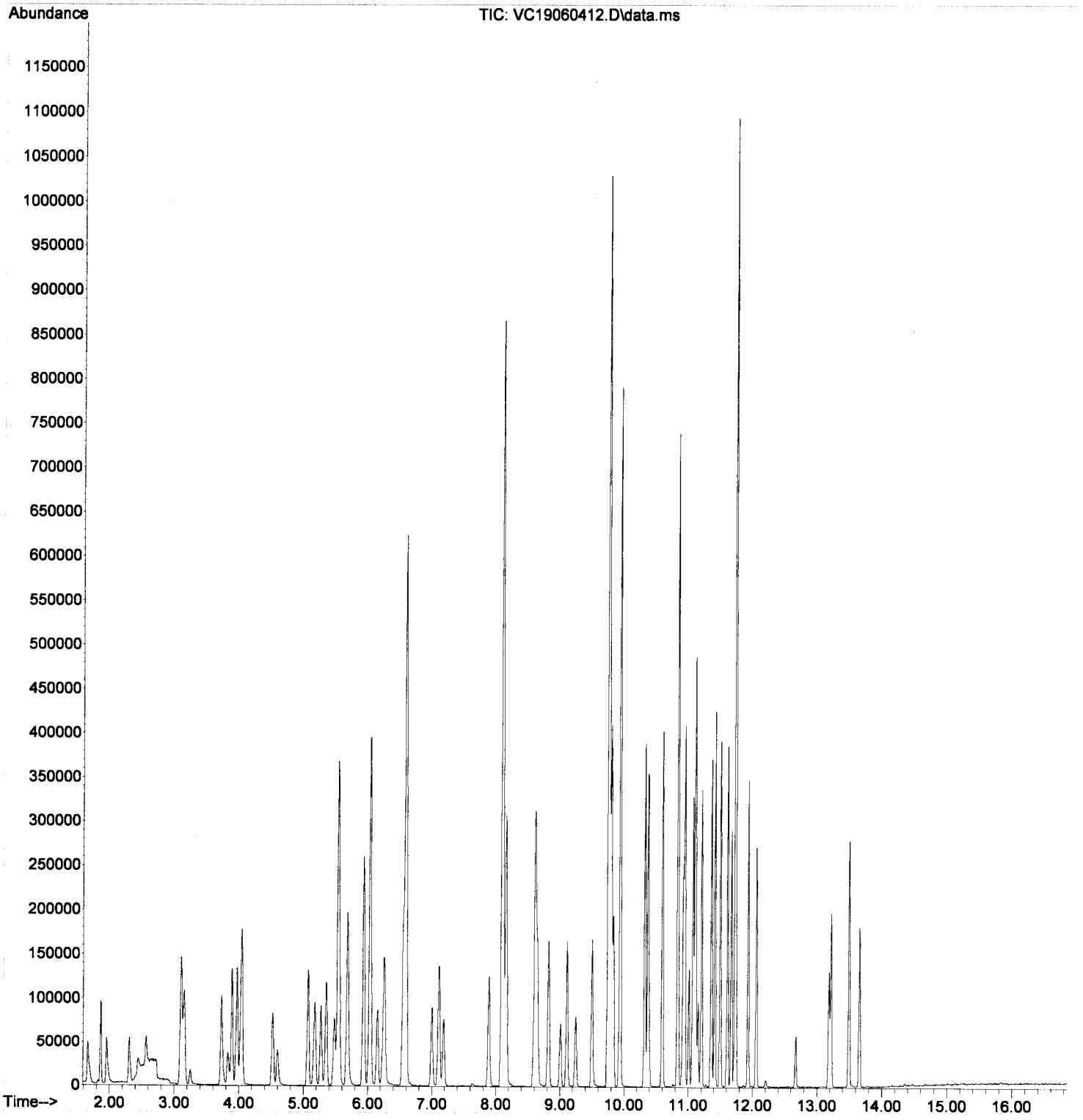
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	170639	20.41	ug/L		98
50) Ethylbenzene	9.794	91	290038	20.69	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.830	131	52515	22.26	ug/L		96
52) m,p-Xylenes (2)	9.934	91	423301	41.83	ug/L		99
53) o-Xylene	10.323	91	220096	20.69	ug/L		98
54) Styrene	10.372	104	167872	22.58	ug/L		98
55) Bromoform	10.390	173	24053	17.92	ug/L		99
56) Isopropylbenzene	10.597	105	258715	21.21	ug/L		98
59) Bromobenzene	10.919	156	66567	22.39	ug/L		97
60) n-Propylbenzene	10.944	91	282767	20.86	ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.011	83	58997	20.00	ug/L		97
62) 2-Chlorotoluene	11.072	126	59357	21.15	ug/L		88
63) 1,3,5-Trimethylbenzene	11.102	105	198759	21.69	ug/L		99
64) 1,2,3-Trichloropropane	11.114	110	25494	20.96	ug/L		82
65) t-1,4-Dichloro-2-butene	11.151	88	7194	17.63	ug/L	#	78
66) 4-Chlorotoluene	11.205	91	168548	20.78	ug/L		98
67) tert-Butylbenzene	11.357	91	104324	20.31	ug/L		98
68) 1,2,4-Trimethylbenzene	11.412	105	199719	21.30	ug/L		98
69) sec-Butylbenzene	11.497	105	231722	21.34	ug/L		99
70) 4-Isopropyltoluene	11.607	119	192645	21.81	ug/L		96
71) 1,3-Dichlorobenzene	11.668	146	106485	20.41	ug/L		99
72) 1,4-Dichlorobenzene	11.741	146	106092	20.36	ug/L		99
73) n-Butylbenzene	11.929	91	158122	21.05	ug/L		99
74) 1,2-Dichlorobenzene	12.057	146	97407	20.33	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.671	157	14143	20.12	ug/L		99
76) Hexachlorobutadiene	13.182	223	16697	24.07	ug/L		95
77) 1,2,4-Trichlorobenzene	13.213	180	61065	21.89	ug/L		98
78) Naphthalene	13.493	128	215473	22.94	ug/L		99
79) 1,2,3-Trichlorobenzene	13.651	180	59100	22.36	ug/L		95

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060412.D
Acq On : 4 Jun 2019 2:33 pm
Operator : TB
Sample : 9060533-MS1
Misc : 50X ~5g/5mLx1000uL/50mL 8260/QC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:17:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

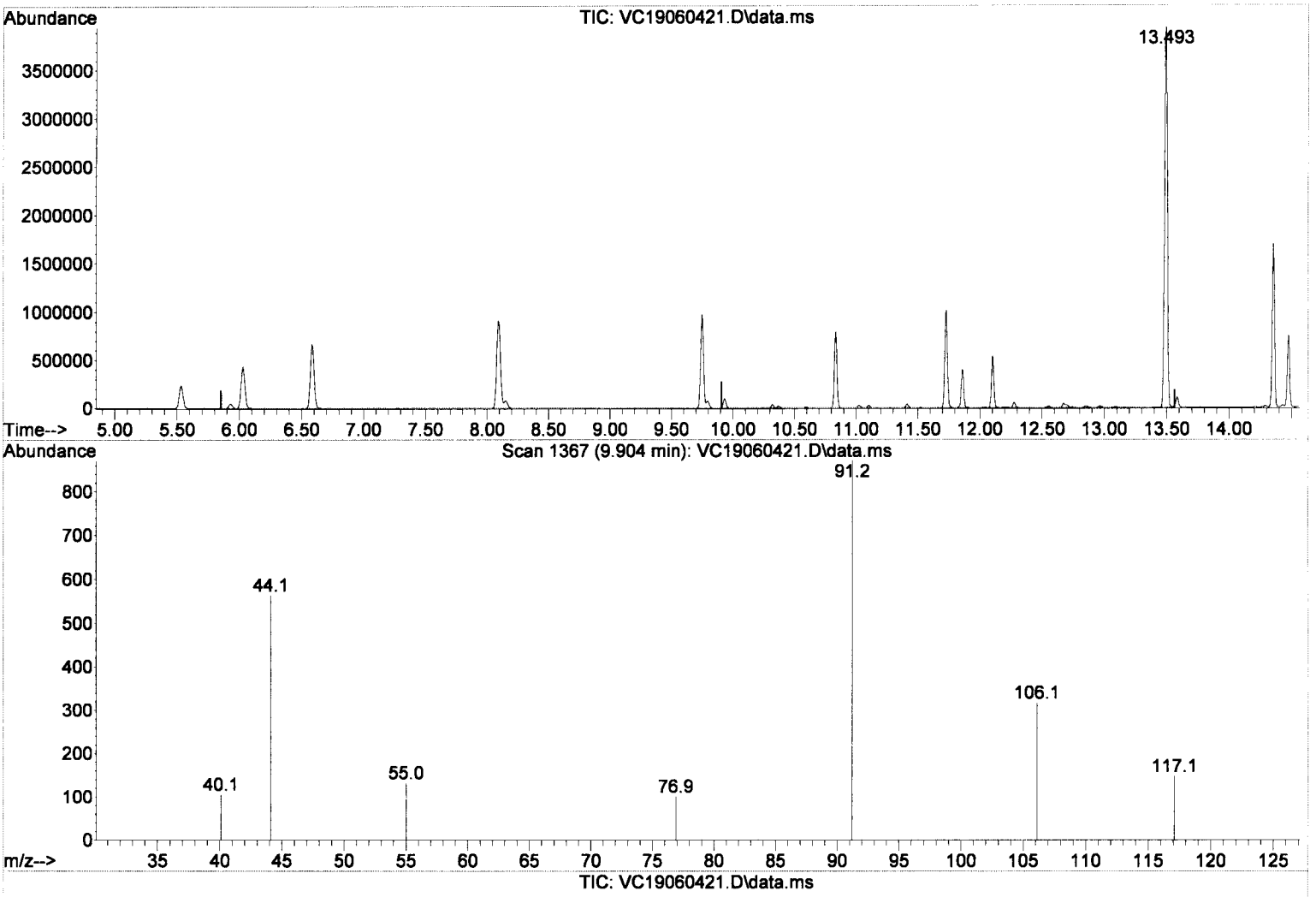
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.028	168	365546	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1416184	41.57 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	1142769	44.90 ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1644041	0.00 ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1960954	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1483713	0.00 ug/L	0.00
Target Compounds					Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	2951038m	134.46 ug/L	
6) TPHg (C5-C9)	9.906	TIC	1311865m	43.68 ug/L	
7) TPHg (C6-C10)	9.906	TIC	1115091m	56.76 ug/L	
8) NWTPH-Gx	9.906	TIC	8588713m	819.47 ug/L	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:17:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 819.47 ug/L m

response 8588713

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	3.42#
0.00	0.00	2.62#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

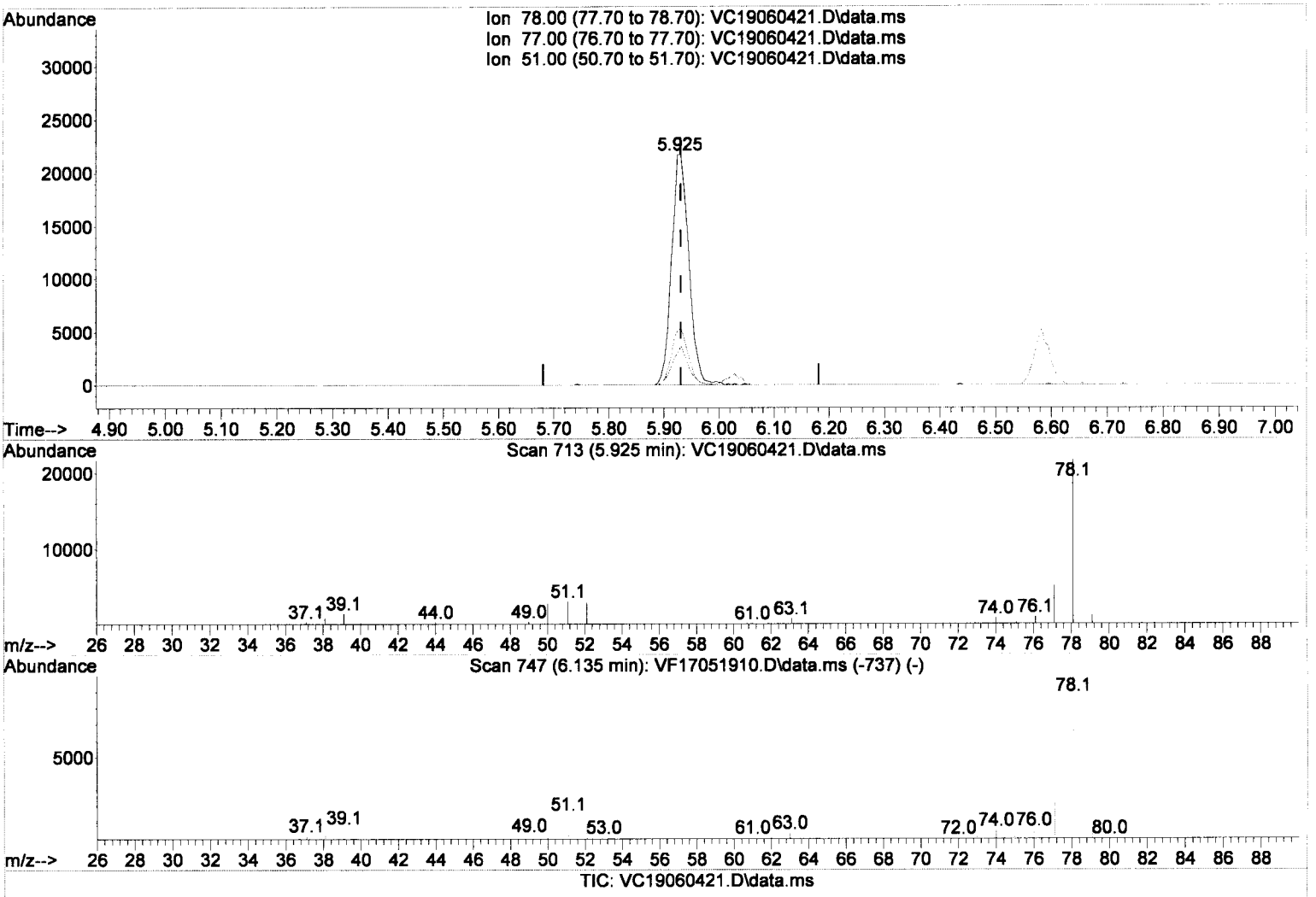
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	365546	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	569185	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	243543	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	163761	41.37	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	637886	45.37	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	754507	49.00	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	216965	51.59	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	561	0.10	ug/L		87
5) Bromomethane	2.299	96	1432	0.68	ug/L		81
6) Chloroethane	2.409	64	243	0.17	ug/L	#	1
11) Iodomethane	3.242	142	118	0.82	ug/L	#	47
12) Methylene Chloride	3.723	84	4600	Below Cal			87
13) Acetone	3.845	43	1220	0.74	ug/L		86
15) n-Hexane	3.966	86	357	Below Cal		#	72
28) 2-Butanone (MEK)	5.724	43	348	0.12	ug/L		54
29) Benzene	5.925	78	47566	2.99	ug/L		98
40) Toluene	8.152	91	65345	4.34	ug/L		98
50) Ethylbenzene	9.794	91	51630	3.37	ug/L		99
52) m,p-Xylenes (2)	9.928	91	56801	5.14	ug/L		98
53) o-Xylene	10.323	91	20291	1.75	ug/L		98
54) Styrene	10.366	104	10234	1.26	ug/L		93
56) Isopropylbenzene	10.597	105	6163	0.46	ug/L		95
60) n-Propylbenzene	10.944	91	1348	0.09	ug/L		91
63) 1,3,5-Trimethylbenzene	11.102	105	12736	1.28	ug/L		93
67) tert-Butylbenzene	11.418	91	2060	0.37	ug/L	#	52
68) 1,2,4-Trimethylbenzene	11.412	105	19176	1.89	ug/L		97
69) sec-Butylbenzene	11.498	105	1061	0.09	ug/L		75
70) 4-Isopropyltoluene	11.607	119	1111	0.12	ug/L		88
78) Naphthalene	13.493	128	2786646	274.27	ug/L		92

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(29) Benzene

5.925min (-0.006) 2.99 ug/L

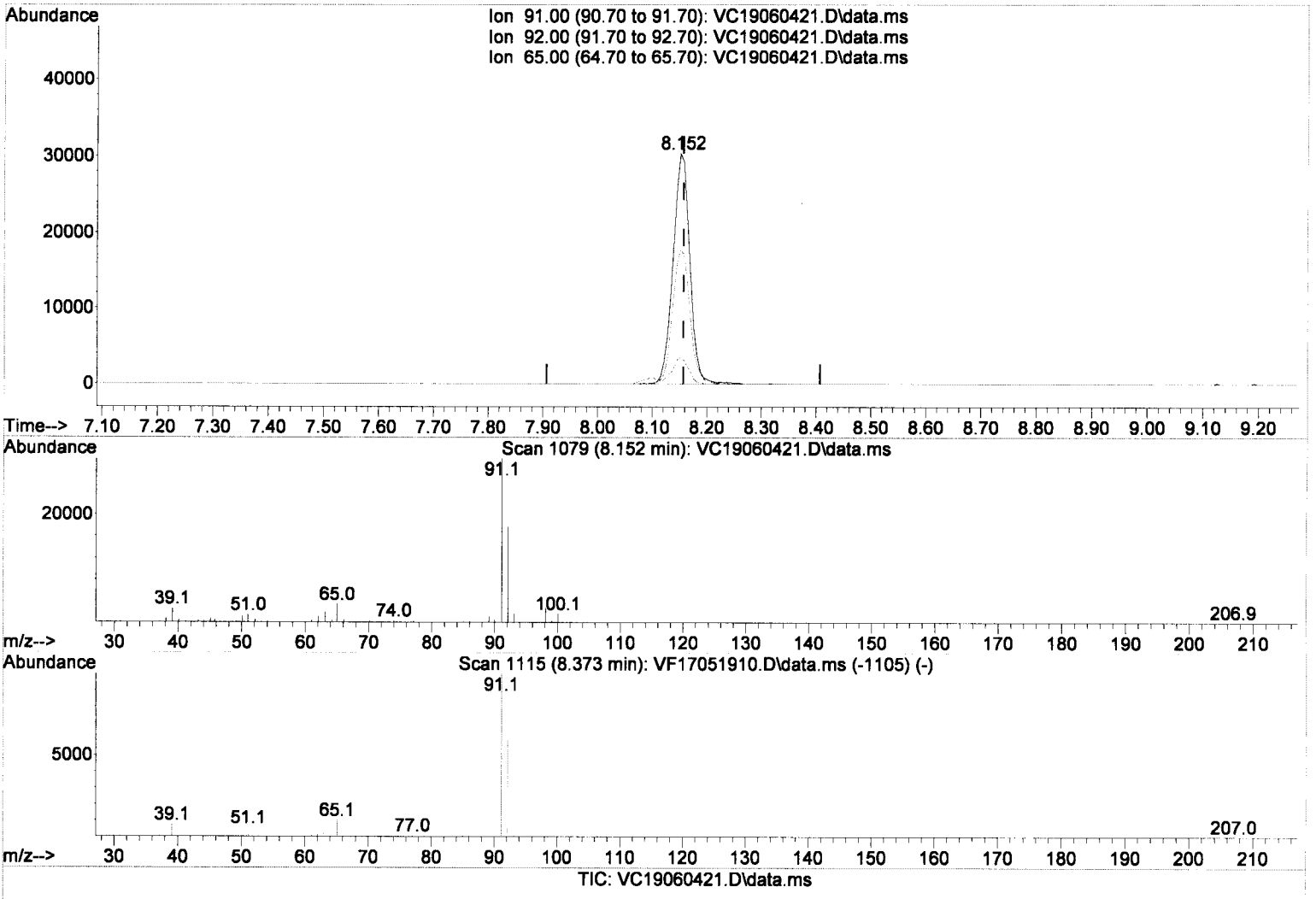
response 47566

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	23.74
51.00	15.50	14.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(40) Toluene (C)

8.152min (-0.006) 4.34 ug/L

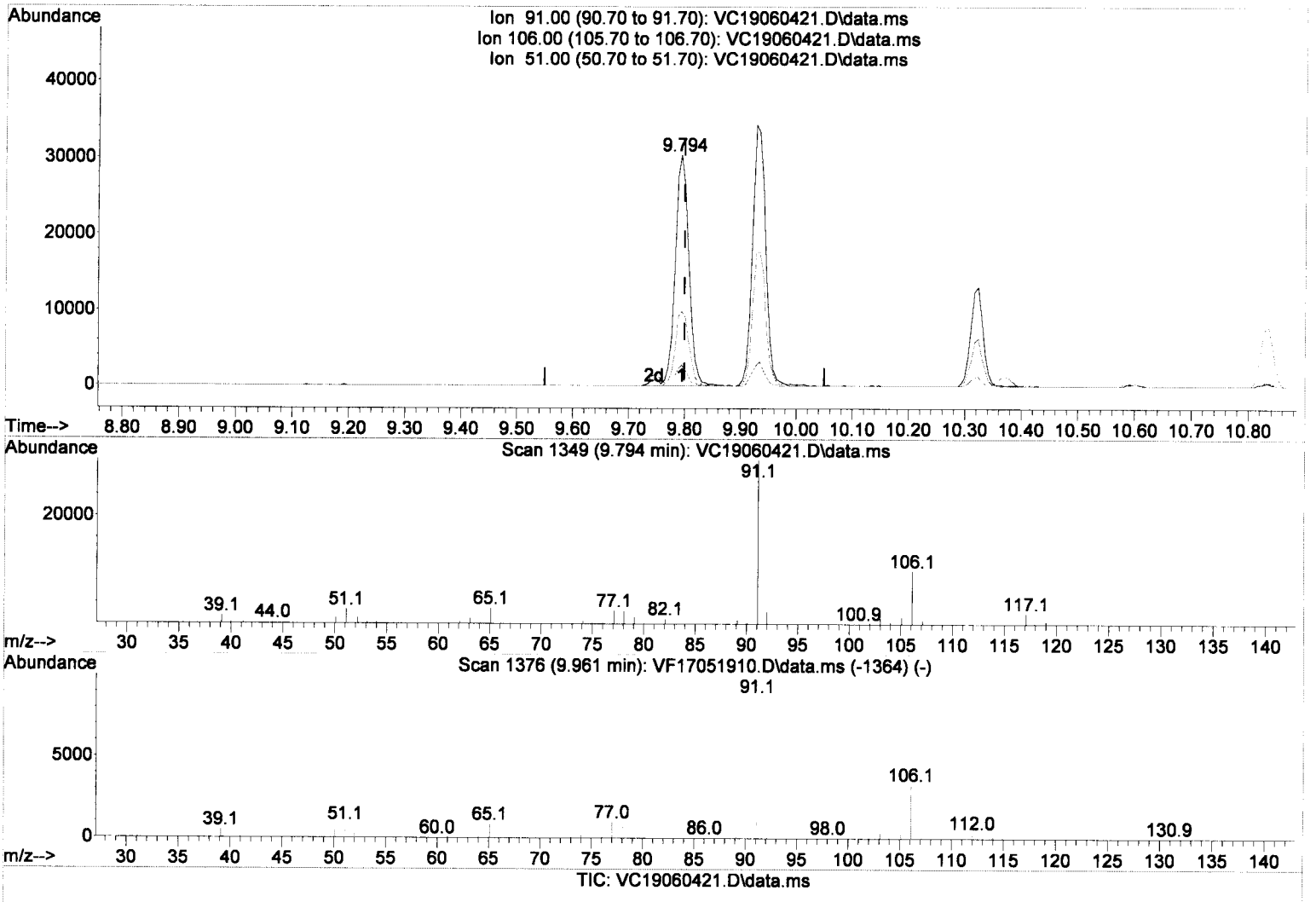
response 65345

Ion	Exp%	Act%
91.00	100	100
92.00	60.20	58.53
65.00	11.90	11.24
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(50) Ethylbenzene (C)

9.794min (-0.006) 3.37 ug/L

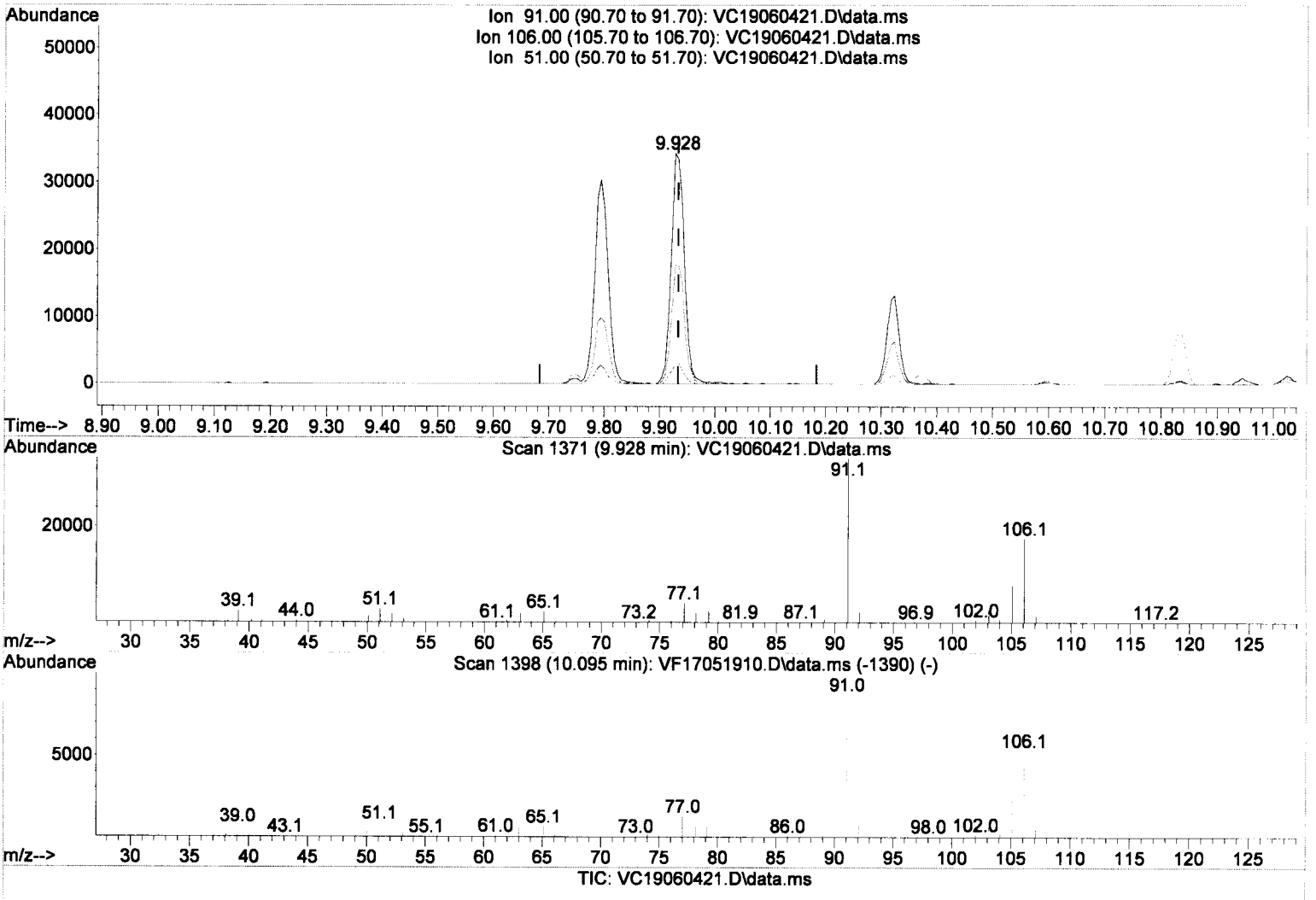
response 51630

Ion	Exp%	Act%
91.00	100	100
106.00	33.20	32.45
51.00	9.50	9.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



(52) m,p-Xylenes (2)

9.928min (-0.006) 5.14 ug/L

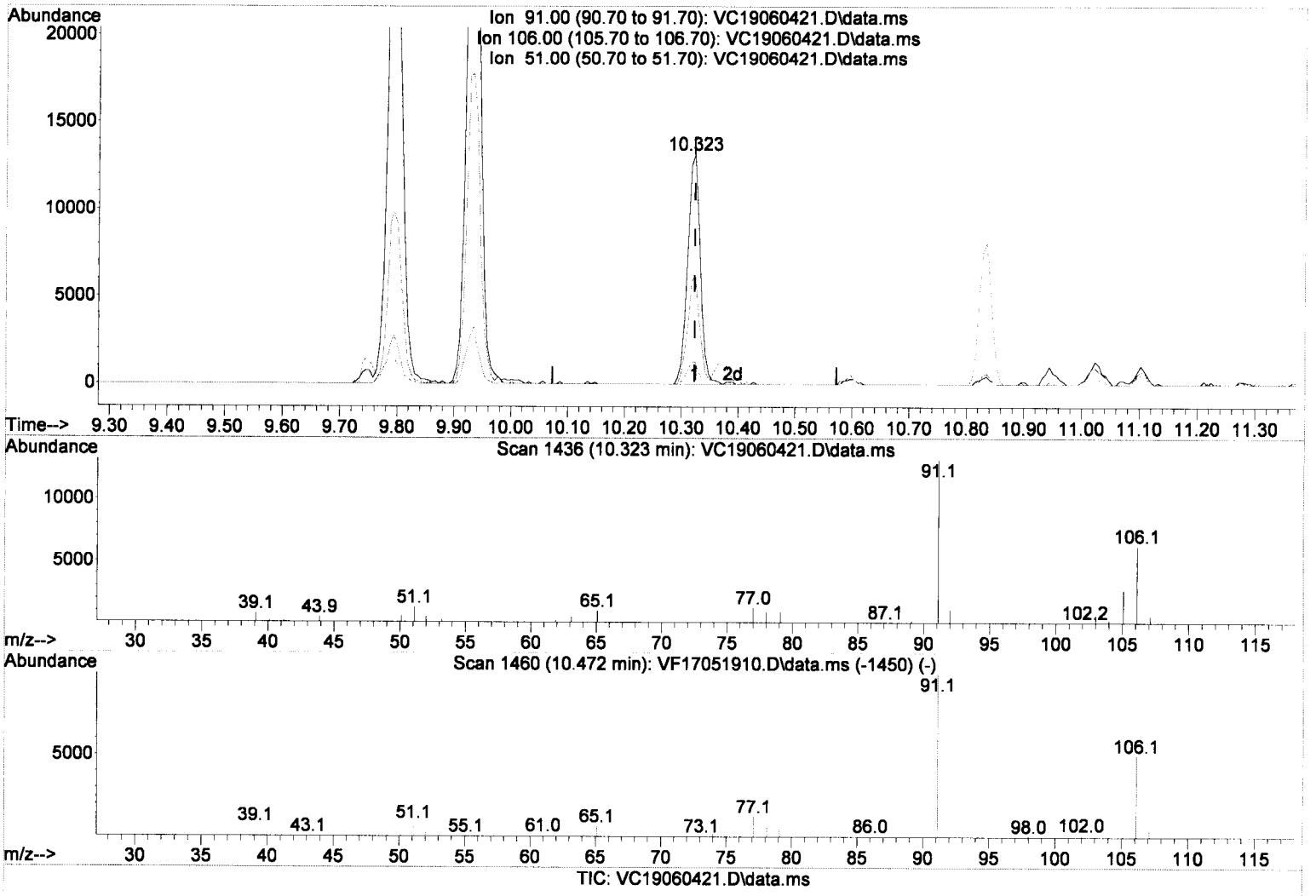
response 56801

Ion	Exp%	Act%
91.00	100	100
106.00	52.70	51.39
51.00	10.10	8.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(53) o-Xylene

10.323min (+0.000) 1.75 ug/L

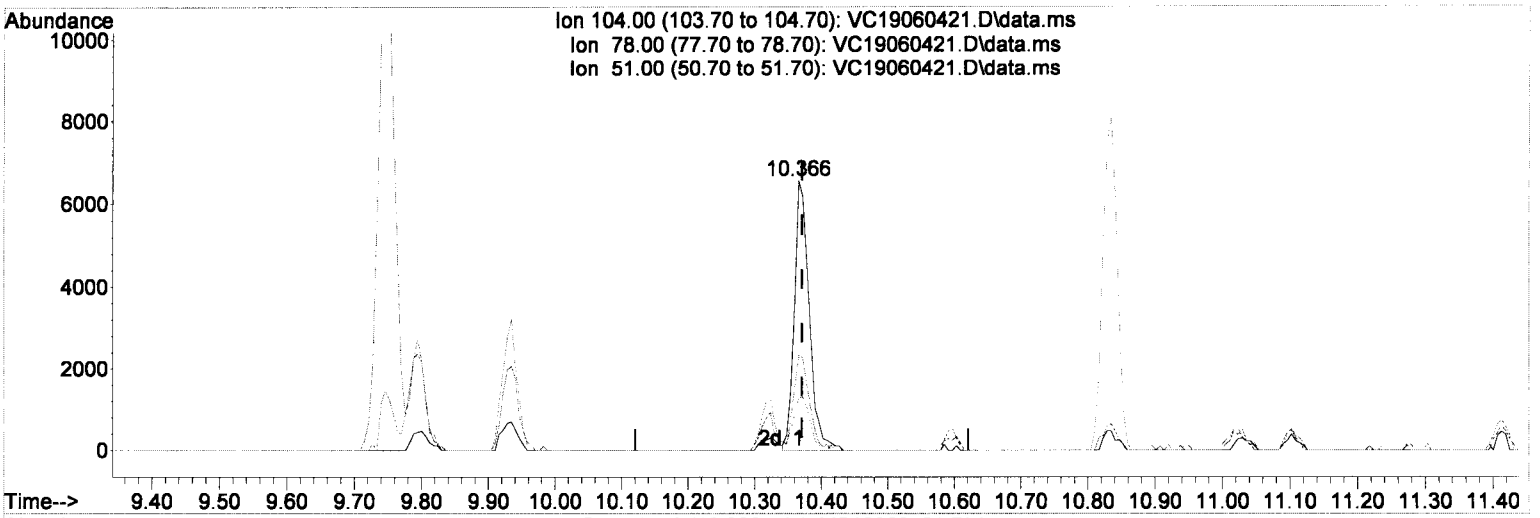
response 20291

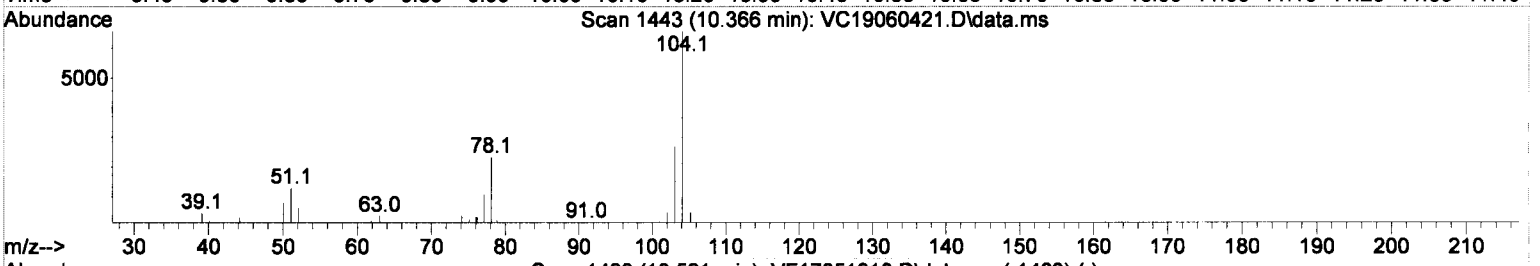
Ion	Exp%	Act%
91.00	100	100
106.00	49.40	47.74
51.00	10.00	9.78
0.00	0.00	0.00

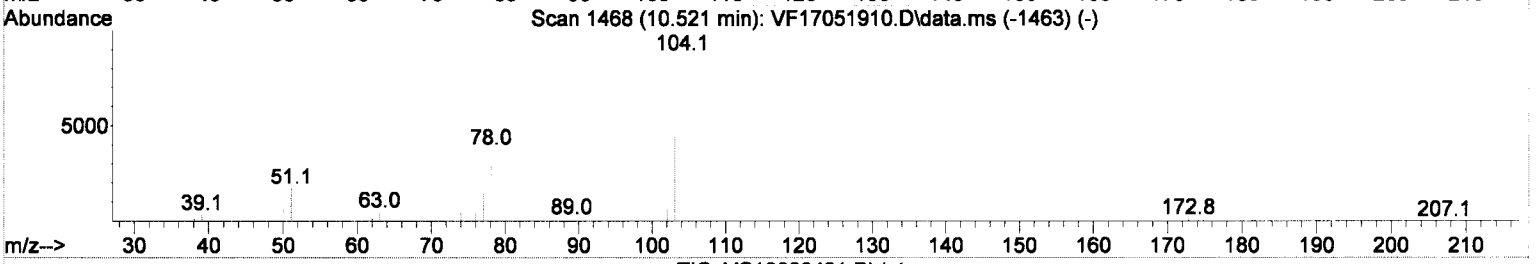
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







TIC: VC19060421.D\data.ms

(54) Styrene

10.366min (-0.005) 1.26 ug/L

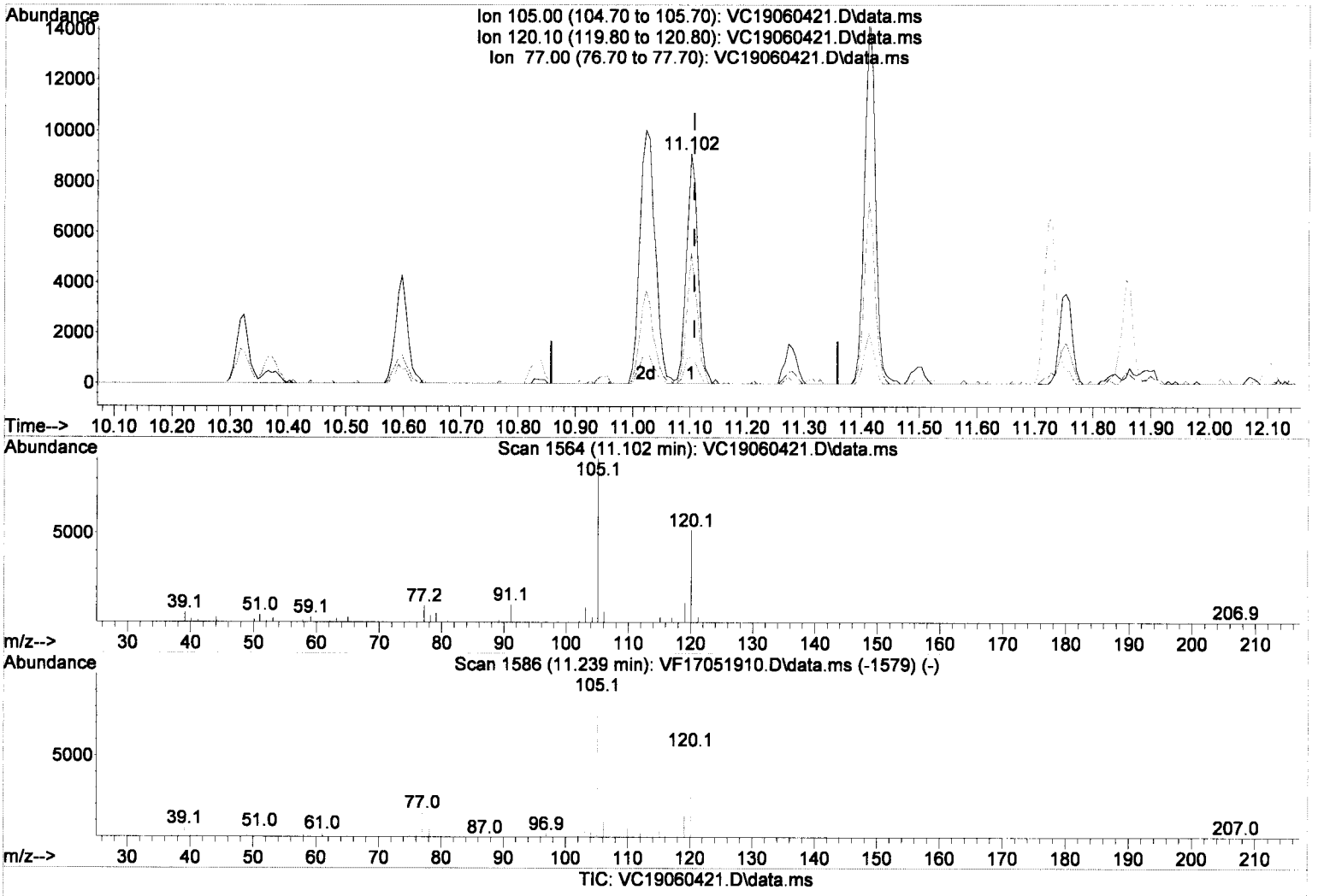
response 10234

Ion	Exp%	Act%
104.00	100	100
78.00	40.60	35.46
51.00	21.90	19.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060421.D\data.ms

(63) 1,3,5-Trimethylbenzene

11.102min (-0.006) 1.28 ug/L

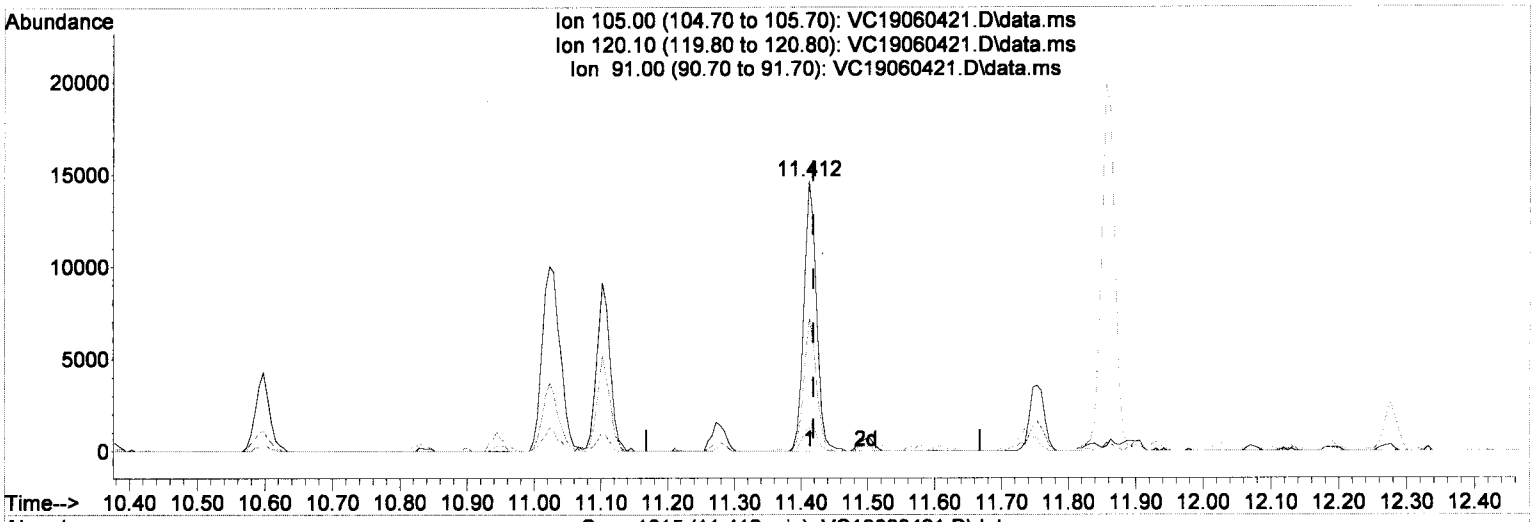
response 12736

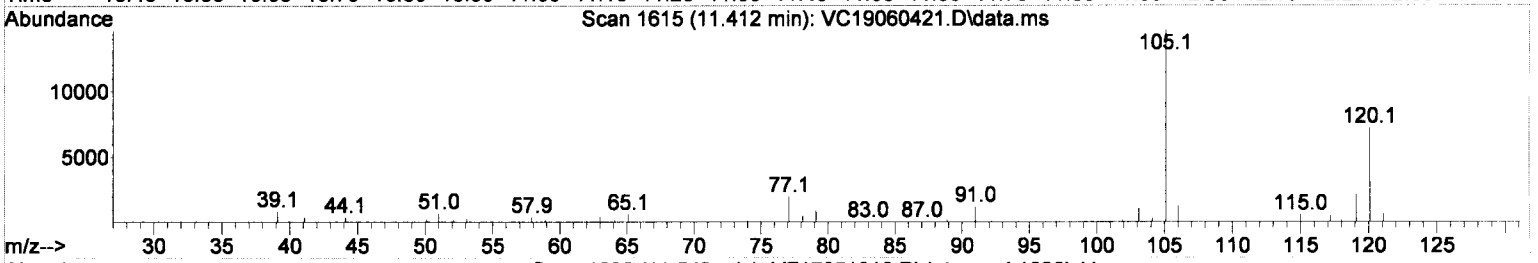
Ion	Exp%	Act%
105.00	100	100
120.10	52.70	56.92
77.00	15.40	11.24
0.00	0.00	0.00

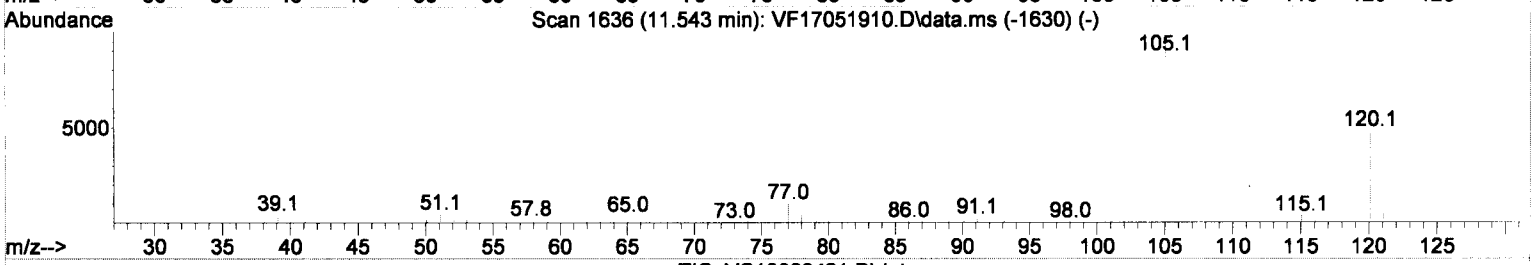
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







TIC: VC19060421.D\data.ms

(68) 1,2,4-Trimethylbenzene

11.412min (-0.006) 1.89 ug/L

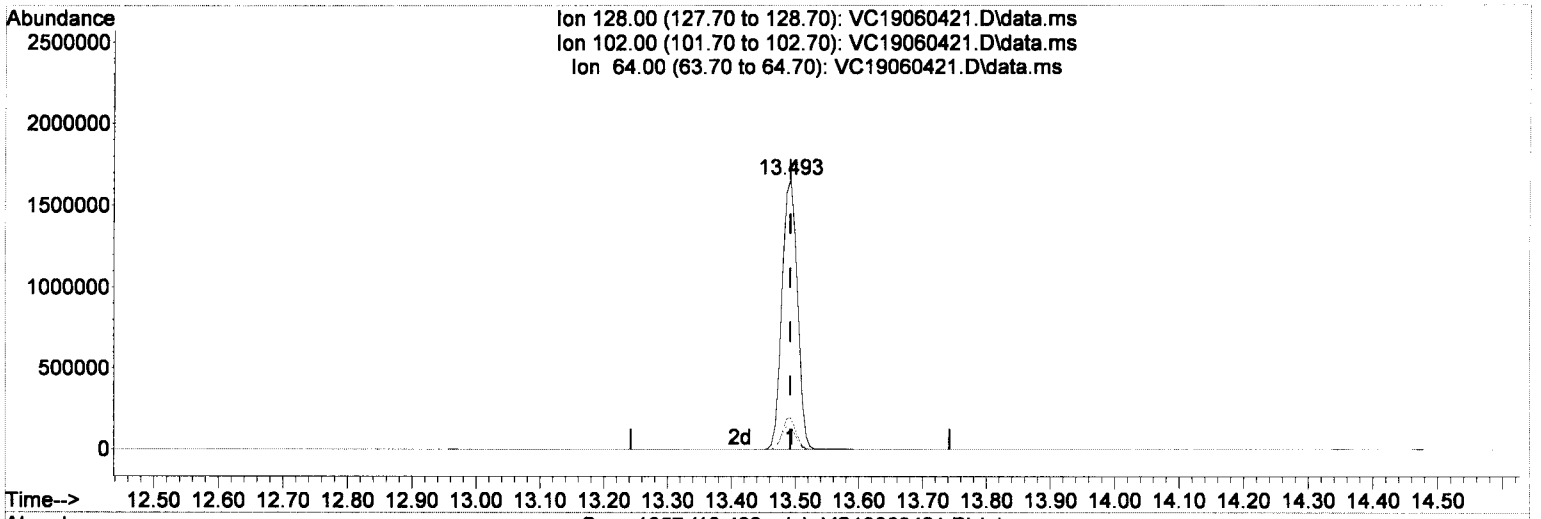
response 19176

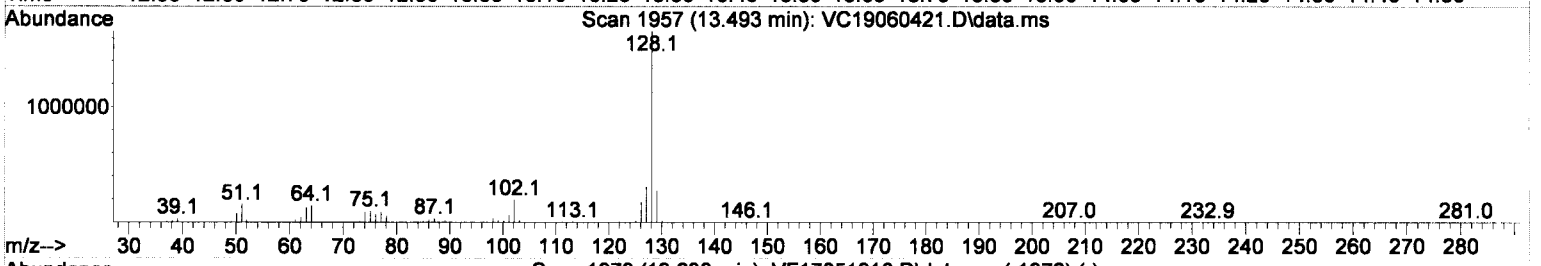
Ion	Exp%	Act%
105.00	100	100
120.10	48.00	49.30
91.00	10.60	8.57
0.00	0.00	0.00

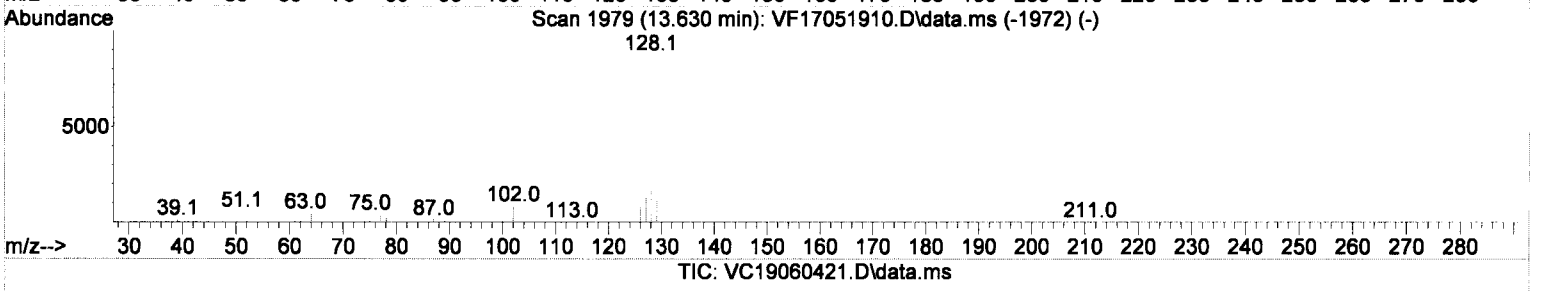
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







(78) Naphthalene

13.493min (+0.000) 274.27 ug/L

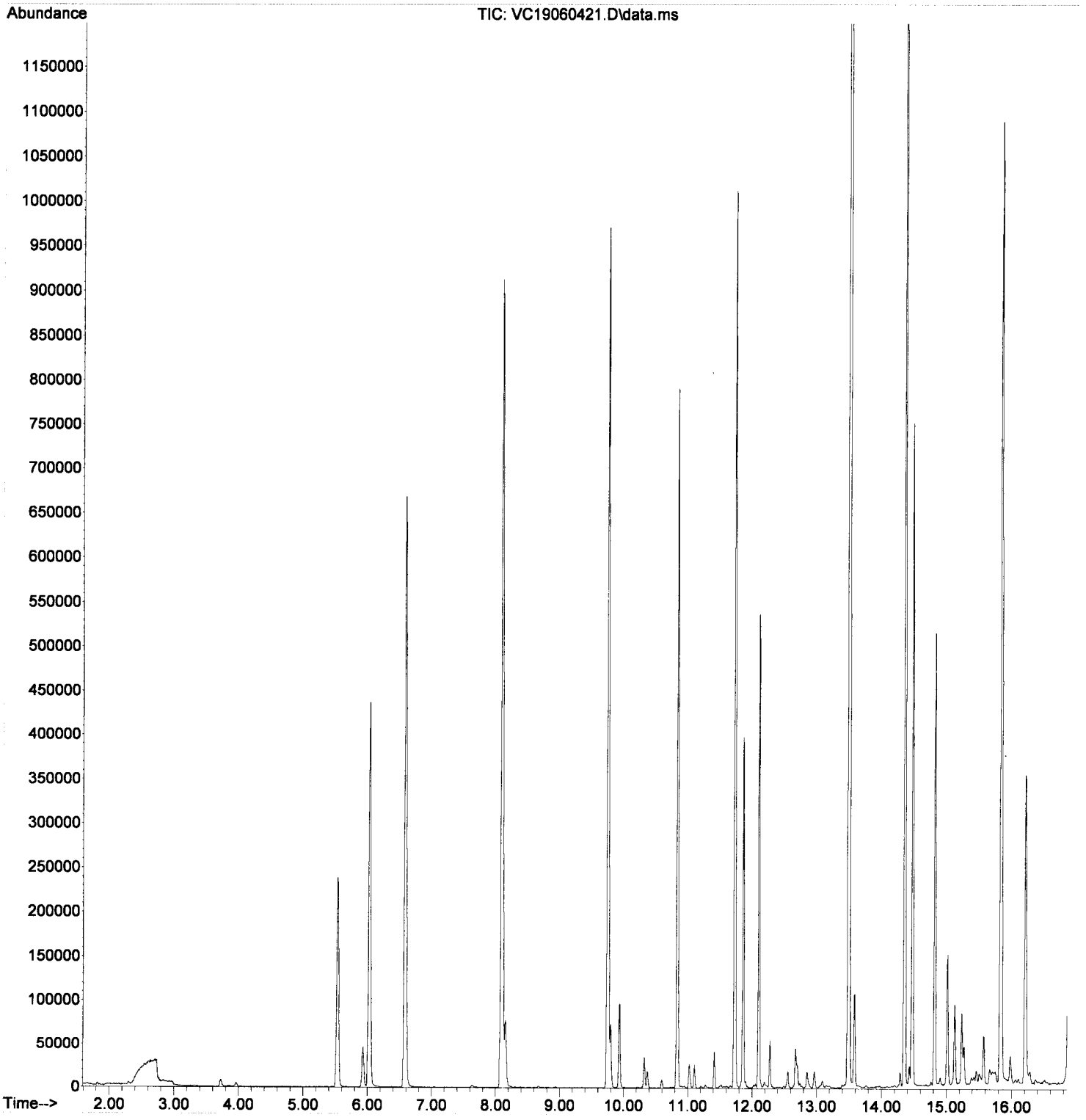
response 2786646

Ion	Exp%	Act%
128.00	100	100
102.00	8.50	11.77
64.00	6.40	8.76
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F04032\
Data File : VC19060421.D
Acq On : 4 Jun 2019 6:42 pm
Operator : TB
Sample : A9E0723-03@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260 FRIDGE OUT X
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 09:00:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 8260C

Benchsheet & Analysis Sequence Data

Batch 9060582

Sequence 9F05048 (A9E0785-01RE1)

PREPARATION BENCH SHEET

BATCH #: 9060582 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9060582-BLK1		QC	06/05/19 13:00	7.5	5							
9060582-BS1		QC	06/05/19 13:00	5	5	A19E314		250				
9060582-BS2		QC	06/05/19 13:00	5	5	A19E311		250				
A9E0723-03RE1	E	8260C Full List	05/31/19 15:40	1.17	5					2708-190521-009	100,000X NAP. (RR02) MOD FRI	X
A9E0785-01RE1	G	8260C Full List	05/31/19 15:46	1.43	5					2708-190522-011	100,000X NAP. (RR02) MOD FRI	X
A9E0911-01	B	8260C BTEX+N	(Date Sampled)	3.97 ✓	5					NTE@61" BGS	FP FRIDGE OUT X	
A9F0027-02RE1	B	NWTPH-Gx	06/03/19 15:00	5.88	5					8519192-15	1000X (RR02) MOD	
A9F0027-03RE1	B	NWTPH-Gx	06/03/19 15:00	5.49	5					8519192-16	500X (RR01/03) MOD	
A9F0057-03RE1	C	8260C Full List	(Date Sampled)	5.52	5					BH-2-5/29/19-22'	200X (RR01) USE C FP	
A9F0057-03RE1	C	NWTPH-Gx	(Date Sampled)	5.52	5					BH-2-5/29/19-22'	200X (RR01) USE C FP	
A9F0057-04	B	NWTPH-Gx	(Date Sampled)	7.03 ✓	5					BH-3-5/29/19-8'	FP	
A9F0057-05	B	8260C Full List	(Date Sampled)	6.3 ✓	5					BH-3-5/29/19-22.5'	FP	
A9F0057-05	B	NWTPH-Gx	(Date Sampled)	6.3	5					BH-3-5/29/19-22.5'	FP	
A9F0057-06	B	8260C Full List	(Date Sampled)	7.16 ✓	5					BH-4-5/29/19-20'	FP	
A9F0057-06	B	NWTPH-Gx	(Date Sampled)	7.16	5					BH-4-5/29/19-20'	FP	
A9F0057-07	B	8260C Full List	(Date Sampled)	7.04 ✓	5					BH-5-5/29/19-14.5'	FP	
A9F0057-07	B	NWTPH-Gx	(Date Sampled)	7.04	5					BH-5-5/29/19-14.5'	FP	
A9F0057-08	B	8260C Full List	(Date Sampled)	6.67 ✓	5					BH-6-5/29/19-23'	FP	
A9F0057-08	B	NWTPH-Gx	(Date Sampled)	6.67	5					BH-6-5/29/19-23'	FP	
A9F0057-09	B	8260C Full List	(Date Sampled)	6.27 ✓	5					BH-6-5/29/19-25'	Added for BatchQC in: 9060582	
A9F0057-09	B	8260C BTEX	(Date Sampled)	6.27	5					BH-6-5/29/19-25'	Added for BatchQC in: 9060582	
A9F0057-09	B	8260C BTEX+N	(Date Sampled)	6.27	5					BH-6-5/29/19-25'	Added for BatchQC in: 9060582	

Prepared By: Date 6/6/19

Reviewed By: 6/6/19 Date

PREPARATION BENCH SHEET

BATCH #: 9060582 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0057-09	B	NWTPH-Gx	(Date Sampled)	6.27	5					BH-6-5/29/19-25'	FP	
9060582-DUP1		QC	05/29/19 16:30	6.73	5		A9F0057-09					
A9F0057-10	B	8260C Full List	(Date Sampled)	5.31	5					BH-7-5/29/19-25'	FP	
A9F0057-10	B	8260C BTEX	(Date Sampled)	5.31	5					BH-7-5/29/19-25'	Added for BatchQC in: 9060582	
A9F0057-10	B	8260C BTEX+N	(Date Sampled)	5.31	5					BH-7-5/29/19-25'	Added for BatchQC in: 9060582	
A9F0057-10	B	NWTPH-Gx	(Date Sampled)	5.31	5					BH-7-5/29/19-25'	FP	
9060582-MS1		QC	05/29/19 17:30	5.31	5	A19E314	A9F0057-10	279			DW = 89.1% @50X	
A9F0090-01	B	8260C BTEX	(Date Sampled)	6.13	5					14164 131-P2@7.5'	FP	
A9F0090-02	B	8260C BTEX	(Date Sampled)	5.23	5					14164 131-P3@6.5'	FP	
A9F0090-03	B	8260C BTEX	(Date Sampled)	6.03	5					14164 131-P4@6.5'	FP	
A9F0090-04	B	8260C BTEX	(Date Sampled)	6.49	5					14164 131-P5@6.5'	FP	

*pH <2 verified

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A16L123	11/30/23	Sample Prep Bal 3
A19C375	09/25/19	Methanol - Fisher (P/T) #185562

Analyte Spike(s)

Std ID	Exp. Date	Description
A19E311	11/09/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19E314	11/09/19	8260B Cal. Std. B VOC Spike Mix (20-40ug/ml

Surrogate(s)

Std ID	Exp. Date	Description

SOIL MS3

Prepared By: Date

Reviewed By: Date

Volatile Soils Matrix Spike Volume Calculation (Validated 5/3/2013)

Enter the Spike Amount value into the Bench Sheet to ensure correct MS/MSD recoveries.

Batch: 9060582

Matrix Spike

Sample Weight	Final Volume	Dilution	Dry Weight
g	mL		%
5.310	5	50	89.1
			0.891

Final Spike Level	**Spike Amount**
ug/kg	**ul**
1179.15	**279**

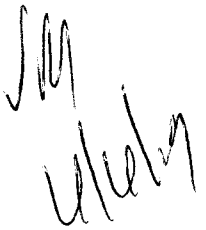
Assumptions:
Spiking Solution = 20ug/mL
Spike Amount into 50mL = 50ul
Dilution = 1mL of MeOH to 50mL of water
Initial Spike Concentration = 20ug/L

A9F0057-10

Worksheet

5035 Field Prep Worksheet (Validated 7/11/16)

Sample ID	Container	Container Weight (g)	Tare Weight (g)	Net Sample Weight (g)	Formula Check
A9E0911-01	B	37.6	33.63	3.97	
A9F0057-04	B	40.94	33.91	7.03	
-5	B	40.28	33.98	6.3	
-6	B	41.15	33.99	7.16	
-7	B	41.01	33.97	7.04	
-8	B	40.64	33.97	6.67	
-9	B	39.74	33.47	6.27	
9	C	40.25	33.52	6.73	
-10	B	39.04	33.73	5.31	
A9F0090-01	B	38.96	32.83	6.13	
-2	B	35.09	29.86	5.23	
-3	B	35.85	29.82	6.03	
-4	B	36.52	30.03	6.49	



A9E0911

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9E0911-01	NTE@61" BGS				Sampled: 05/29/19 00:00
B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 37.60	Tare Weight (g): 33.63	Volume MeOH (mL): (5) 10 15 Other	Notes:
		Due:	TAT: DC 11,500		

A9E0911-02	STE@61" BGS				Sampled: 05/29/19 00:00
B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.23	Tare Weight (g): 33.64	Volume MeOH (mL): (5) 10 15 Other	Notes:
		Due:	TAT:		

Weighed by: OD @ 5/29/19 945

A9F0057

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0057-01 — **BH-MW3-5/29/19-19.5'** — Sampled: **05/29/19 10:50**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	39.47	33.38	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	38.39	33.23	(5) 10 15 Other	

Due: TAT:

A9F0057-02 — **BH-MW3-5/29/19-22'** — Sampled: **05/29/19 11:00**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	39.84	33.56	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.64	33.74	(5) 10 15 Other	

Due: TAT:

A9F0057-03 — **BH-2-5/29/19-22'** — Sampled: **05/29/19 11:20**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	39.58	34.06	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.92	33.60	(5) 10 15 Other	

Due: TAT:

A9F0057-04 — **BH-3-5/29/19-8'** — Sampled: **05/29/19 12:20**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	40.94	33.91	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	40.99	33.91	(5) 10 15 Other	

Due: TAT:

A9F0057-05 — **BH-3-5/29/19-22.5'** — Sampled: **05/29/19 12:30**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	40.28	33.98	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.41	33.52	(5) 10 15 Other	

Due: TAT:

Weighed by: @ 6/4/19 1216

Methanol Reagent ID: A19C375 Balance ID: A18J827

A9F0057

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0057-06 — **BH-4-5/29/19-20'** — Sampled: **05/29/19 13:30**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	41.15	33.99	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	40.67	33.38	(5) 10 15 Other	

Due: TAT: ND

A9F0057-07 — **BH-5-5/29/19-14.5'** — Sampled: **05/29/19 15:00**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	41.01	33.97	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	40.55	33.49	(5) 10 15 Other	

Due: TAT: ND

A9F0057-08 — **BH-6-5/29/19-23'** — Sampled: **05/29/19 16:05**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	40.64	33.97	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	40.14	33.85	(5) 10 15 Other	

Due: TAT: DUP 43

A9F0057-09 — **BH-6-5/29/19-25'** — Sampled: **05/29/19 16:30**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	39.74	33.47	(5) 10 15 Other	
C Soil	40 mL VOA - 5035 (MeOH)	40.25	33.52	(5) 10 15 Other	DUP Smell

Due: TAT:

A9F0057-10 — **BH-7-5/29/19-25'** — Sampled: **05/29/19 17:30**

		Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B Soil	40 mL VOA - 5035 (MeOH)	39.04	33.73	(5) 10 15 Other	MS
C Soil	40 mL VOA - 5035 (MeOH)	39.07	33.70	(5) 10 15 Other	DUP= 39.10

Due: TAT: ND

Weighed by: @ 6/4/19 1216

Methanol Reagent ID: A19G375 Balance ID: A18J327

A9F0090

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0090-01 — **14164 131-P2@7.5'** — Sampled: **06/04/19 10:40**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	38.96	32.83	5 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.57	33.02	5 10 15 Other	

Due: TAT:

BLW

A9F0090-02 — **14164 131-P3@6.5'** — Sampled: **06/04/19 11:40**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	35.09	29.86	5 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	35.87	29.31	5 10 15 Other	

Due: TAT:

A9F0090-03 — **14164 131-P4@6.5'** — Sampled: **06/04/19 11:20**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	35.85	29.82	5 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	36.33	29.75	5 10 15 Other	

Due: TAT:

A9F0090-04 — **14164 131-P5@6.5'** — Sampled: **06/04/19 15:30**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	36.52	30.03	5 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	35.24	29.42	5 10 15 Other	

Due: TAT:

Weighed by: MS @ 6/5/19 10:11

Methanol Reagent ID: A19C375~ Balance ID: A18J327~

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F05048	Instrument:	VOA-GCMS3
Date:	06/05/19 13:00	Calibration:	A9E3104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F05048-TUN1	Soil	QC	QC			A19C135	
2	9F05048-CCV1	Soil	QC	QC			A19C135	
3	9060582-BS1	Soil	QC	QC		9060582	A19C135	
4	9F05048-CCV2	Soil	QC	QC			A19C135	
5	9060582-BS2	Soil	QC	QC		9060582	A19C135	
6	9060582-BLK1	Soil	QC	QC		9060582	A19C135	
7	9F05048-CRL1	Soil	QC	QC			A19C135	
8	A9F0027-02RE1	Soil	NWTPH-Gx		06/05/19	9060582	A19C135	
9	A9F0027-03RE1	Soil	NWTPH-Gx		06/05/19	9060582	A19C135	
10	9F05048-IBL1	Soil	QC	QC			A19C135	
11	A9F0057-03RE1	Soil	8260C Full List		06/13/19	9060582	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060582	A19C135	
"	"	Soil	~~8260C BTEX~~	~~(QC Source)~~		~~9060533~~	~~A19C135~~	
12	A9E0785-01RE1	Soil	8260C Full List	Hahn and Associates	06/06/19	9060582	A19C135	
"	"	Soil	~~NWTPH-Gx~~	"	~~06/14/19~~	~~9060533~~	~~A19C135~~	
"	"	~~Water~~	~~8260C BTEX~~	~~(QC Source)~~		~~9060589~~	~~A19C135~~	
13	A9E0723-03RE1	Soil	8260C Full List	Hahn and Associates	06/14/19	9060582	A19C135	
"	"	~~Soil~~	~~NWTPH-Gx~~	"	~~06/14/19~~	~~9060533~~	~~A19C135~~	
14	A9F0057-04	Soil	NWTPH-Gx		06/07/19	9060582	A19C135	
15	A9F0057-05	Soil	8260C Full List		06/13/19	9060582	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060582	A19C135	
16	A9F0057-06	Soil	8260C Full List		06/13/19	9060582	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060582	A19C135	
17	A9F0057-07	Soil	8260C Full List		06/13/19	9060582	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060582	A19C135	
18	A9F0057-08	Soil	8260C Full List		06/13/19	9060582	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060582	A19C135	
19	A9F0057-09	Soil	NWTPH-Gx		06/07/19	9060582	A19C135	
"	"	Soil	8260C Full List	(QC Source)		9060582	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060582	A19C135	
"	"	Soil	8260C BTEX+N	(QC Source)		9060582	A19C135	
20	9060582-DUP1	Soil	QC	QC		9060582	A19C135	
21	A9F0057-10	Soil	8260C Full List		06/13/19	9060582	A19C135	
"	"	Soil	NWTPH-Gx	"	06/07/19	9060582	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9060582	A19C135	
"	"	Soil	8260C BTEX+N	(QC Source)		9060582	A19C135	
22	9060582-MS1	Soil	QC	QC		9060582	A19C135	
23	9F05048-IBL2	Soil	QC	QC			A19C135	
24	A9F0090-01	Soil	8260C BTEX		06/07/19	9060582	A19C135	
25	A9F0090-02	Soil	8260C BTEX		06/07/19	9060582	A19C135	
26	A9F0090-03	Soil	8260C BTEX		06/07/19	9060582	A19C135	
27	A9F0090-04	Soil	8260C BTEX		06/07/19	9060582	A19C135	
28	A9E0911-01	Soil	8260C BTEX+N		06/07/19	9060582	A19C135	
29	9F05048-IBL3	Soil	QC	QC			A19C135	
30	9F05048-IBL4	Soil	QC	QC			A19C135	
31	9F05048-IBL5	Soil	QC	QC			A19C135	
32	A9E0671-03	Soil	8260C Full List		06/04/19	9060633	A19C135	
33	A9E0671-04	Soil	8260C Full List		06/04/19	9060633	A19C135	
34	A9E0671-05	Soil	8260C Full List		06/04/19	9060633	A19C135	
35	A9E0671-06	Soil	8260C Full List		06/04/19	9060633	A19C135	
36	A9E0671-08	Soil	8260C Full List		06/04/19	9060633	A19C135	

Sequence:	9F05048	Instrument:	VOA-GCMS3
Date:	06/05/19 13:00	Calibration:	A9E3104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID

1,1,2 - Chloroethane
- Chloroethane (055)
- Trichloro
- DCM

Data Entered By: 6/19/19

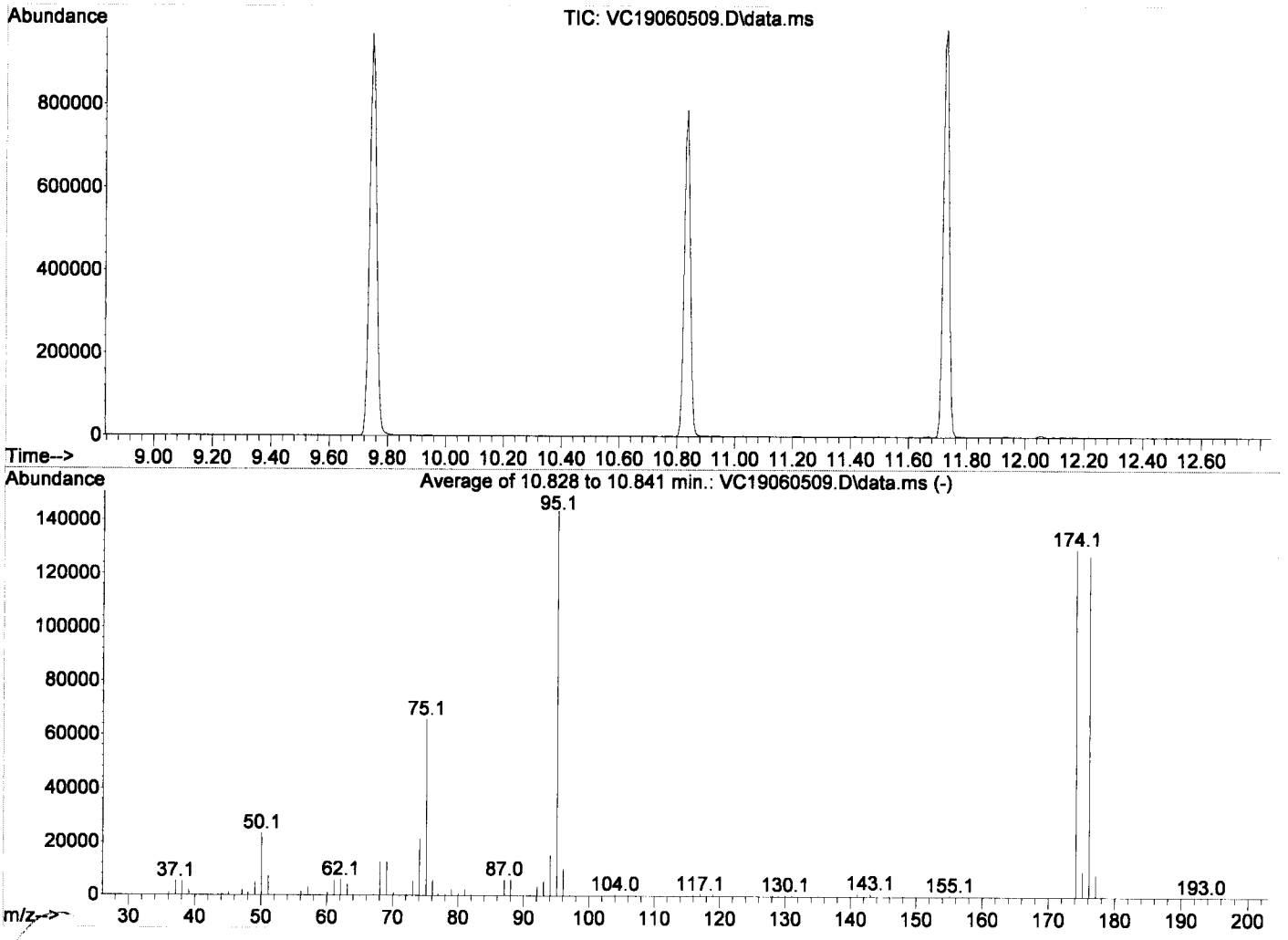
Data Reviewed By: 6/21/19

Comments:

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060509.D
Acq On : 5 Jun 2019 1:25 pm
Operator : MM
Sample : 9F05048-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019



AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	16.3	23442	PASS
75	95	30	60	45.9	65922	PASS
95	95	100	100	100.0	143578	PASS
96	95	5	9	7.1	10208	PASS
173	174	0.00	2	0.1	173	PASS
174	95	50	200	90.3	129600	PASS
175	174	5	9	7.5	9662	PASS
176	174	95	101	98.2	127213	PASS
177	176	5	9	6.5	8290	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060509.D
Acq On : 5 Jun 2019 1:25 pm
Operator : MM
Sample : 9F05048-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

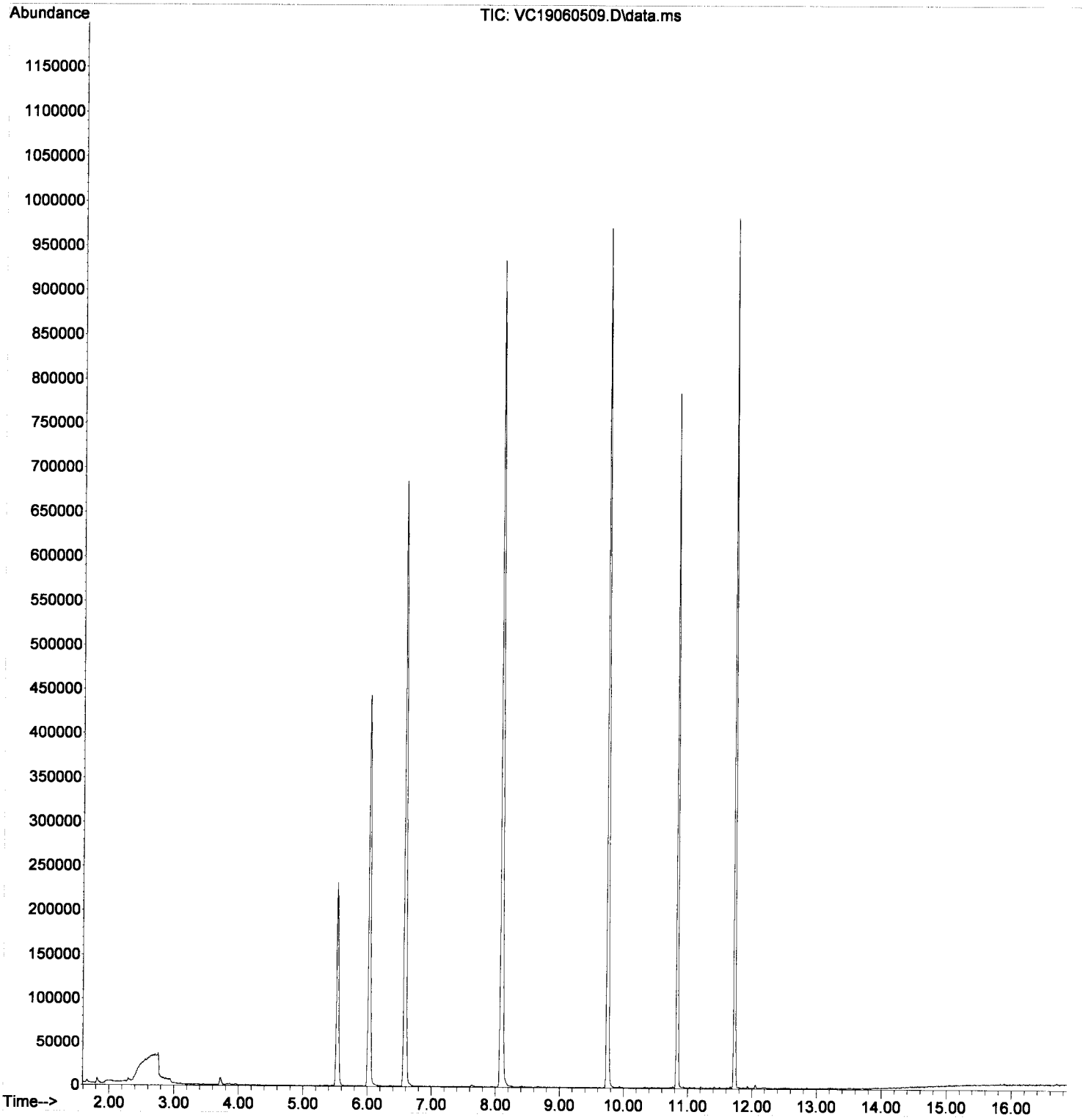
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	374206	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	559627	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	236360	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	162889	40.20	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	643016	44.67	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	765585	50.57	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	209823	51.41	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	973	0.18	ug/L		88
5) Bromomethane	2.293	96	2060	0.96	ug/L		89
6) Chloroethane	2.452	64	716	0.50	ug/L	#	1
11) Iodomethane	3.230	142	561	1.10	ug/L	#	47
12) Methylene Chloride	3.723	84	4829	Below Cal			93
13) Acetone	3.845	43	2264	1.34	ug/L		89
40) Toluene	8.158	91	1281	0.09	ug/L		79
52) m,p-Xylenes (2)	9.940	91	1064	0.10	ug/L		93
68) 1,2,4-Trimethylbenzene	11.412	105	891	0.09	ug/L		87
73) n-Butylbenzene	11.930	91	811	0.10	ug/L		83
77) 1,2,4-Trichlorobenzene	13.213	180	240	0.08	ug/L		77

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060509.D
Acq On : 5 Jun 2019 1:25 pm
Operator : MM
Sample : 9F05048-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060510.D
Acq On : 5 Jun 2019 1:52 pm
Operator : MM
Sample : 9060582-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOC+MeOH A19E314
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	139	0.00	
2		Dichlorodifluoromethane	20.000	16.857	15.7	120	0.00	
3	P	Chloromethane	20.000	15.647	21.8#	113	0.00	Q55
4	C	Vinyl Chloride	20.000	16.423	17.9	114	0.00	
5		Bromomethane	20.000	17.666	11.7	128	0.00	
6		Chloroethane	20.000	13.146	34.3#	94	0.00	Q55
7		Trichlorofluoromethane	20.000	14.278	28.6#	97	0.00	
8	C	1,1-Dichloroethene	20.000	18.488	7.6	129	0.00	
9		Carbon Disulfide	20.000	17.431	12.8	124	0.00	
10		Freon 113	20.000	18.081	9.6	133	0.00	
11		Iodomethane	20.000	15.121	24.4#	121	0.00	
12		Methylene Chloride	20.000	11.207	44.0#	94	0.00	Q55
13		Acetone	40.000	33.517	16.2	121	0.00	
14		t-1,2-Dichloroethene	20.000	18.256	8.7	125	0.00	
15		n-Hexane	20.000	21.462	-7.3	156	0.00	
16		Methyl-tert-butyl-ether	20.000	17.263	13.7	119	0.00	
17	P	1,1-Dichloroethane	20.000	17.661	11.7	121	0.00	
18		Acrylonitrile	20.000	17.865	10.7	122	0.00	
19		c-1,2-Dichloroethene	20.000	17.725	11.4	123	0.00	
20		2,2-Dichloropropane	20.000	20.081	-0.4	138	0.00	
21		Bromochloromethane	20.000	17.867	10.7	122	0.00	
22	C	Chloroform	20.000	16.599	17.0	118	0.00	
23		Carbon Tetrachloride	20.000	18.500	7.5	129	0.00	
24		Tetrahydrofuran	20.000	16.147	19.3	122	0.00	
25		1,1,1-Trichloroethane	20.000	18.068	9.7	123	0.00	
26	S	Dibromofluoromethane (S)	50.000	40.970	18.1	112	0.00	
27		1,1-Dichloropropene	20.000	17.714	11.4	127	0.00	
28		2-Butanone (MEK)	40.000	33.936	15.2	118	0.00	
29		Benzene	20.000	17.340	13.3	122	0.00	
30		1,2-Dichloroethane (EDC)	20.000	17.254	13.7	120	0.00	
31		iso-Butyl Alcohol	500.000	398.995	20.2#	112	0.00	
32	S	1,4-Difluorobenzene (S)	50.000	45.115	9.8	125	0.00	
33		Trichloroethene (TCE)	20.000	17.553	12.2	126	0.00	
34		Dibromomethane	20.000	17.492	12.5	118	0.00	
35	C	1,2-Dichloropropane	20.000	17.729	11.4	120	0.00	
36		Bromodichloromethane	20.000	17.983	10.1	118	0.00	
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	119	0.00	
38		c-1,3-Dichloropropene	20.000	22.004	-10.0	121	0.00	
39	S	Toluene-d8 (S)	50.000	50.606	-1.2	120	0.00	
40	C	Toluene	20.000	19.619	1.9	120	0.00	
41		Tetrachloroethene (PCE)	20.000	20.571	-2.9	131	0.00	
42		4-Methyl-2-Pentanone (MIBK)	40.000	36.531	8.7	114	0.00	
43		t-1,3-Dichloropropene	20.000	21.292	-6.5	121	0.00	
44		1,1,2-Trichloroethane	20.000	21.093	-5.5	122	0.00	
45		Dibromochloromethane	20.000	18.128	9.4	121	0.00	
46		1,3-Dichloropropane	20.000	20.791	-4.0	122	0.00	
47		1,2-Dibromoethane (EDB)	20.000	21.140	-5.7	120	0.00	
48		2-Hexanone	40.000	38.046	4.9	112	0.00	
49	P	Chlorobenzene	20.000	20.205	-1.0	124	0.00	
50	C	Ethylbenzene	20.000	20.061	-0.3	121	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060510.D
Acq On : 5 Jun 2019 1:52 pm
Operator : MM
Sample : 9060582-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOC+MeOH A19E314
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		1,1,1,2-Tetrachloroethane	20.000	21.693	-8.5	122	0.00
52		m,p-Xylenes (2)	40.000	40.693	-1.7	120	0.00
53		o-Xylene	20.000	20.211	-1.1	121	0.00
54		Styrene	20.000	21.147	-5.7	117	0.00
55	P	Bromoform	20.000	17.267	13.7	119	0.00
56		Isopropylbenzene	20.000	20.713	-3.6	123	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	119	0.00
58	S	4-Bromofluorobenzene (S)	50.000	50.999	-2.0	120	0.00
59		Bromobenzene	20.000	21.187	-5.9	123	0.00
60		n-Propylbenzene	20.000	20.808	-4.0	125	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	20.050	-0.3	114	0.00
62		2-Chlorotoluene	20.000	20.834	-4.2	125	0.00
63		1,3,5-Trimethylbenzene	20.000	21.594	-8.0	126	0.00
64		1,2,3-Trichloropropane	20.000	19.670	1.6	115	0.00
65		t-1,4-Dichloro-2-butene	20.000	18.852	5.7	118	0.00
66		4-Chlorotoluene	20.000	19.992	0.0	120	0.00
67		tert-Butylbenzene	20.000	20.311	-1.6	124	0.00
68		1,2,4-Trimethylbenzene	20.000	20.621	-3.1	121	0.00
69		sec-Butylbenzene	20.000	21.227	-6.1	126	0.00
70		4-Isopropyltoluene	20.000	22.181	-10.9	131	0.00
71		1,3-Dichlorobenzene	20.000	19.927	0.4	123	0.00
72		1,4-Dichlorobenzene	20.000	19.758	1.2	123	0.00
73		n-Butylbenzene	20.000	21.299	-6.5	129	0.00
74		1,2-Dichlorobenzene	20.000	19.598	2.0	119	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	18.830	5.9	111	0.00
76		Hexachlorobutadiene	20.000	22.374	-11.9	127	0.00
77		1,2,4-Trichlorobenzene	20.000	21.653	-8.3	130	0.00
78		Naphthalene	20.000	21.030	-5.2	116	0.00
79		1,2,3-Trichlorobenzene	20.000	21.979	-9.9	125	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060510.D
Acq On : 5 Jun 2019 1:52 pm
Operator : MM
Sample : 9060582-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOC+MeOH A19E314
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.026	168	357641	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	535132	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	226085	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.533	111	158665	40.97	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.585	114	620606	45.11	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	732600	50.61	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.838	174	199095	51.00	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.658	85	54120	16.86	ug/L		97
3) Chloromethane	1.858	50	82520	15.65	ug/L		99
4) Vinyl Chloride	1.950	62	59869	16.42	ug/L		96
5) Bromomethane	2.302	96	36327	17.67	ug/L		94
6) Chloroethane	2.442	64	18006	13.15	ug/L	#	68
7) Trichlorofluoromethane	2.564	101	29015	14.28	ug/L		99
8) 1,1-Dichloroethene	3.087	61	66897	18.49	ug/L		88
9) Carbon Disulfide	3.099	76	100116	17.43	ug/L		98
10) Freon 113	3.136	101	55546	18.08	ug/L		85
11) Iodomethane	3.239	142	22326	15.12	ug/L		97
12) Methylene Chloride	3.720	84	55106	11.21	ug/L		96
13) Acetone	3.829	43	54031	33.52	ug/L		97
14) t-1,2-Dichloroethene	3.884	61	76595	18.26	ug/L		96
15) n-Hexane	3.957	86	15745	21.46	ug/L		96
16) Methyl-tert-butyl-ether	4.036	73	214552	17.26	ug/L		97
17) 1,1-Dichloroethane	4.517	63	91322	17.66	ug/L		100
18) Acrylonitrile	4.596	53	37364	17.86	ug/L		94
19) c-1,2-Dichloroethene	5.064	61	82998	17.72	ug/L		98
20) 2,2-Dichloropropane	5.168	77	81369	20.08	ug/L		90
21) Bromochloromethane	5.265	49	49426	17.87	ug/L		97
22) Chloroform	5.350	83	101989	16.60	ug/L		98
23) Carbon Tetrachloride	5.472	117	61400	18.50	ug/L		97
24) Tetrahydrofuran	5.533	42	37801	16.15	ug/L		94
25) 1,1,1-Trichloroethane	5.545	97	84776	18.07	ug/L		97
27) 1,1-Dichloropropene	5.673	75	85558	17.71	ug/L		100
28) 2-Butanone (MEK)	5.691	43	97563	33.94	ug/L		98
29) Benzene	5.928	78	269551	17.34	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.147	62	79962	17.25	ug/L		96
31) iso-Butyl Alcohol	6.263	43	142050	398.99	ug/L		87
33) Trichloroethene (TCE)	6.549	130	76535	17.55	ug/L		93
34) Dibromomethane	6.999	93	36346	17.49	ug/L		92
35) 1,2-Dichloropropane	7.102	63	70451	17.73	ug/L		95
36) Bromodichloromethane	7.181	83	62474	17.98	ug/L		99
38) c-1,3-Dichloropropene	7.887	75	92694	22.00	ug/L		98
40) Toluene	8.155	91	277720	19.62	ug/L		99
41) Tetrachloroethene (PCE)	8.599	166	67522	20.57	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.611	43	159653	36.53	ug/L		97
43) t-1,3-Dichloropropene	8.641	75	83217	21.29	ug/L		96
44) 1,1,2-Trichloroethane	8.818	97	60999	21.09	ug/L		96
45) Dibromochloromethane	9.006	129	43953	18.13	ug/L		94
46) 1,3-Dichloropropane	9.110	76	111226	20.79	ug/L		99
47) 1,2-Dibromoethane (EDB)	9.244	107	59768	21.14	ug/L		98
48) 2-Hexanone	9.499	43	112726	38.05	ug/L		100

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060510.D
Acq On : 5 Jun 2019 1:52 pm
Operator : MM
Sample : 9060582-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOC+MeOH A19E314
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

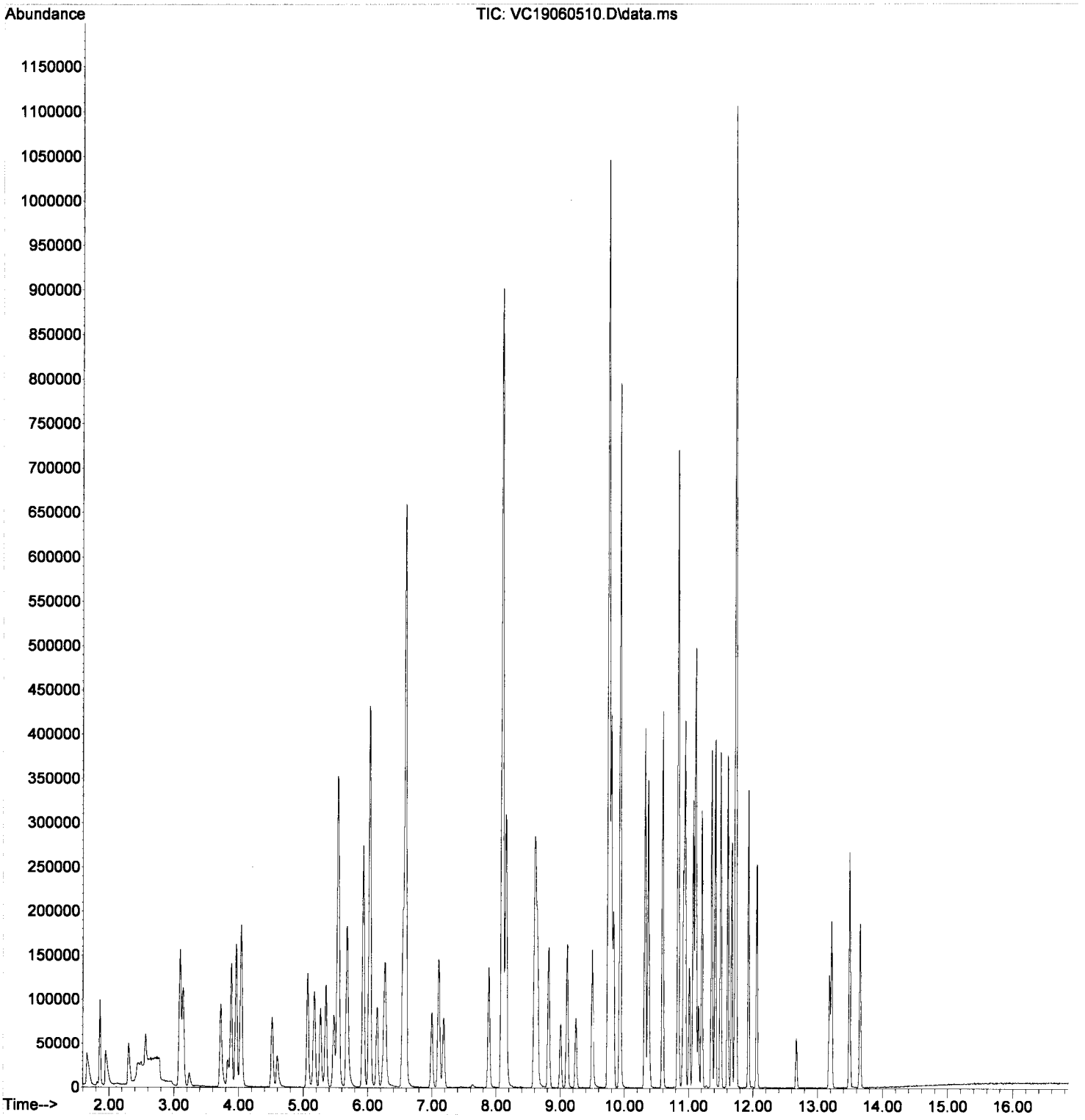
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Chlorobenzene	9.767	112	173486	20.21	ug/L	99
50) Ethylbenzene	9.791	91	288742	20.06	ug/L	98
51) 1,1,1,2-Tetrachloroethane	9.828	131	52545	21.69	ug/L	98
52) m,p-Xylenes (2)	9.931	91	422830	40.69	ug/L	99
53) o-Xylene	10.320	91	220740	20.21	ug/L	99
54) Styrene	10.369	104	161437	21.15	ug/L	97
55) Bromoform	10.387	173	23745	17.27	ug/L	98
56) Isopropylbenzene	10.594	105	259403	20.71	ug/L	99
59) Bromobenzene	10.917	156	63248	21.19	ug/L	94
60) n-Propylbenzene	10.941	91	283231	20.81	ug/L	99
61) 1,1,2,2-Tetrachloroethane	11.008	83	59389	20.05	ug/L	99
62) 2-Chlorotoluene	11.069	126	58707	20.83	ug/L	87
63) 1,3,5-Trimethylbenzene	11.105	105	198697	21.59	ug/L	98
64) 1,2,3-Trichloropropane	11.117	110	24026	19.67	ug/L	88
65) t-1,4-Dichloro-2-butene	11.148	88	7757	18.85	ug/L	93
66) 4-Chlorotoluene	11.203	91	162807	19.99	ug/L	98
67) tert-Butylbenzene	11.355	91	104747	20.31	ug/L	94
68) 1,2,4-Trimethylbenzene	11.416	105	194172	20.62	ug/L	98
69) sec-Butylbenzene	11.495	105	231477	21.23	ug/L	97
70) 4-Isopropyltoluene	11.604	119	196773	22.18	ug/L	95
71) 1,3-Dichlorobenzene	11.671	146	104395	19.93	ug/L	98
72) 1,4-Dichlorobenzene	11.738	146	103410	19.76	ug/L	96
73) n-Butylbenzene	11.927	91	160706	21.30	ug/L	98
74) 1,2-Dichlorobenzene	12.060	146	94302	19.60	ug/L	99
75) 1,2-Dibromo-3-Chloropr...	12.669	157	13231	18.83	ug/L	94
76) Hexachlorobutadiene	13.180	223	15586	22.37	ug/L	95
77) 1,2,4-Trichlorobenzene	13.216	180	60660	21.65	ug/L	98
78) Naphthalene	13.490	128	198357	21.03	ug/L	98
79) 1,2,3-Trichlorobenzene	13.654	180	58335	21.98	ug/L	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060510.D
Acq On : 5 Jun 2019 1:52 pm
Operator : MM
Sample : 9060582-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOC+MeOH A19E314
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060511.D
Acq On : 5 Jun 2019 2:20 pm
Operator : MM
Sample : 9060582-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:20 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	133	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	42.359	15.3	117	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	43.445	13.1	117	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	113	0.00
5	H	CA-LUFT (C5-C12)	500.000	435.790	12.8	114	0.00
6	H	TPHg (C5-C9)	500.000	440.051	12.0	114	0.00
7	H	TPHg (C6-C10)	500.000	446.207	10.8	117	0.00
8	H	NWTPH-Gx	500.000	438.749	12.3	116	0.00
9		Benzene (NR)	-1.000	0.000	0.0	110	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	113	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	108	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	117	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	123	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060511.D
Acq On : 5 Jun 2019 2:20 pm
Operator : MM
Sample : 9060582-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:20 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

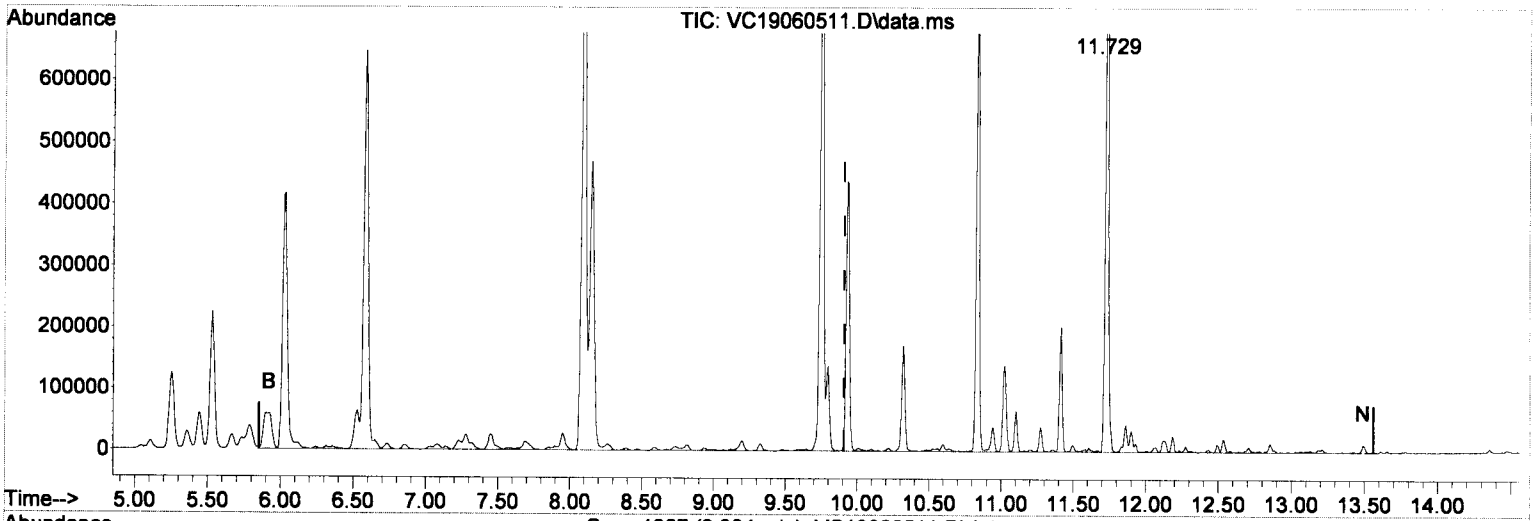
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.029	168	347929	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1373505	42.36 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	1052342	43.44 ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1546540	0.00 ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1844246	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1329853	0.00 ug/L	0.00
Target Compounds					Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	7479951m	435.79 ug/L	
6) TPHg (C5-C9)	9.906	TIC	6460468m	440.05 ug/L	
7) TPHg (C6-C10)	9.906	TIC	5102248m	446.21 ug/L	
8) NWTPH-Gx	9.906	TIC	4314398m	438.75 ug/L	

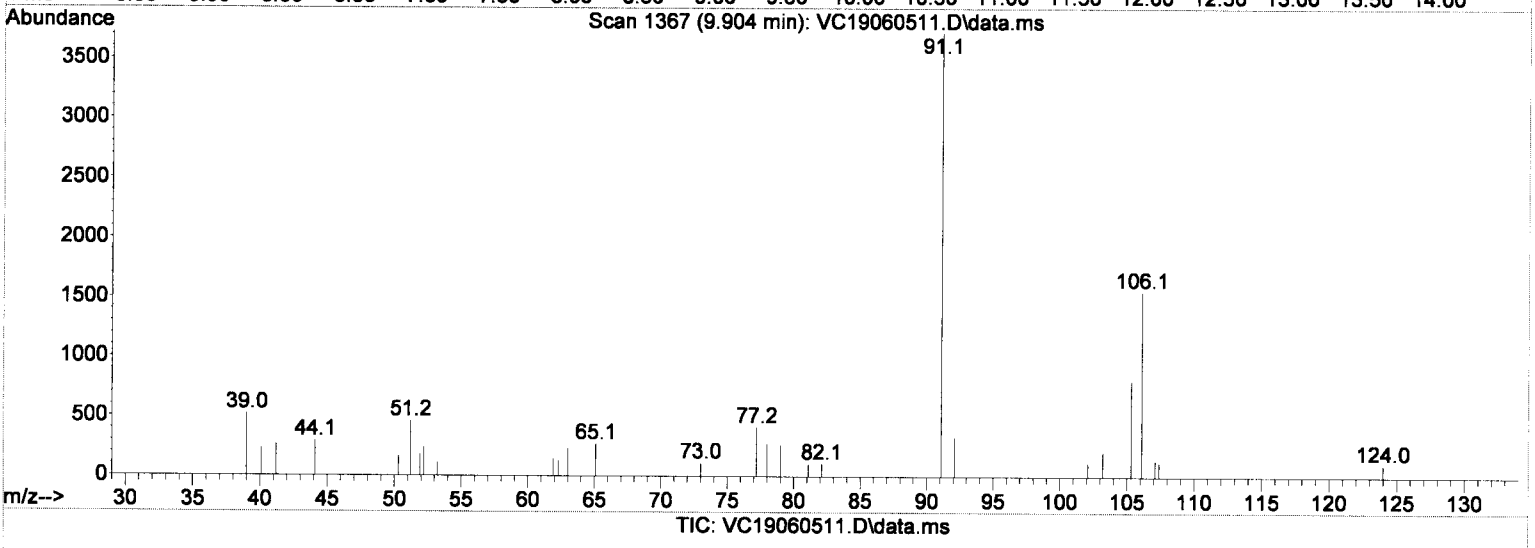
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060511.D
Acq On : 5 Jun 2019 2:20 pm
Operator : MM
Sample : 9060582-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:20 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





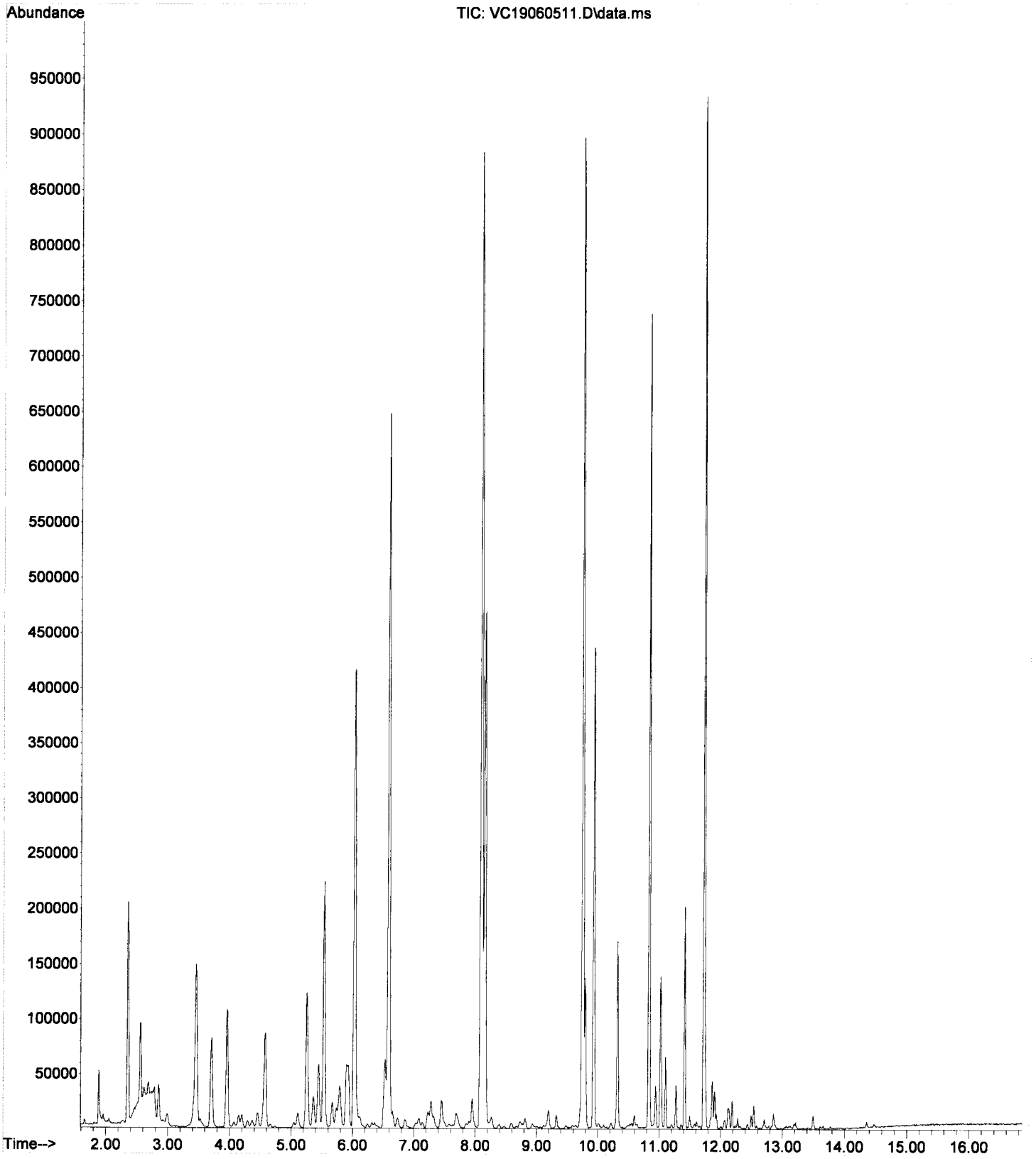
(8) NWTPH-Gx (H)

9.906min (0.000) 438.75 ug/L m

response 4314398

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

File :C:\msdchem\1\DATA\2019-06\9F05048\VC19060511.D
Operator : MM
Acquired : 5 Jun 2019 2:20 pm using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9060582-BS2
Misc Info : 50X 5g/5mLx1000uL/50mL GX+MeOH A19E311
Vial Number: 3



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060512.D
Acq On : 5 Jun 2019 2:47 pm
Operator : MM
Sample : 9060582-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:42:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.035	168	352824	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1370408	41.68	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	1050059	42.75	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.752	TIC	1522676	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1878590	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1275076	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	655393m	Below Cal		
6) TPHg (C5-C9)	9.906	TIC	649448m	Below Cal		
7) TPHg (C6-C10)	9.906	TIC	520837m	4.04	ug/L	
8) NWTPH-Gx	9.906	TIC	22901m	14.79	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060512.D
Acq On : 5 Jun 2019 2:47 pm
Operator : MM
Sample : 9060582-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

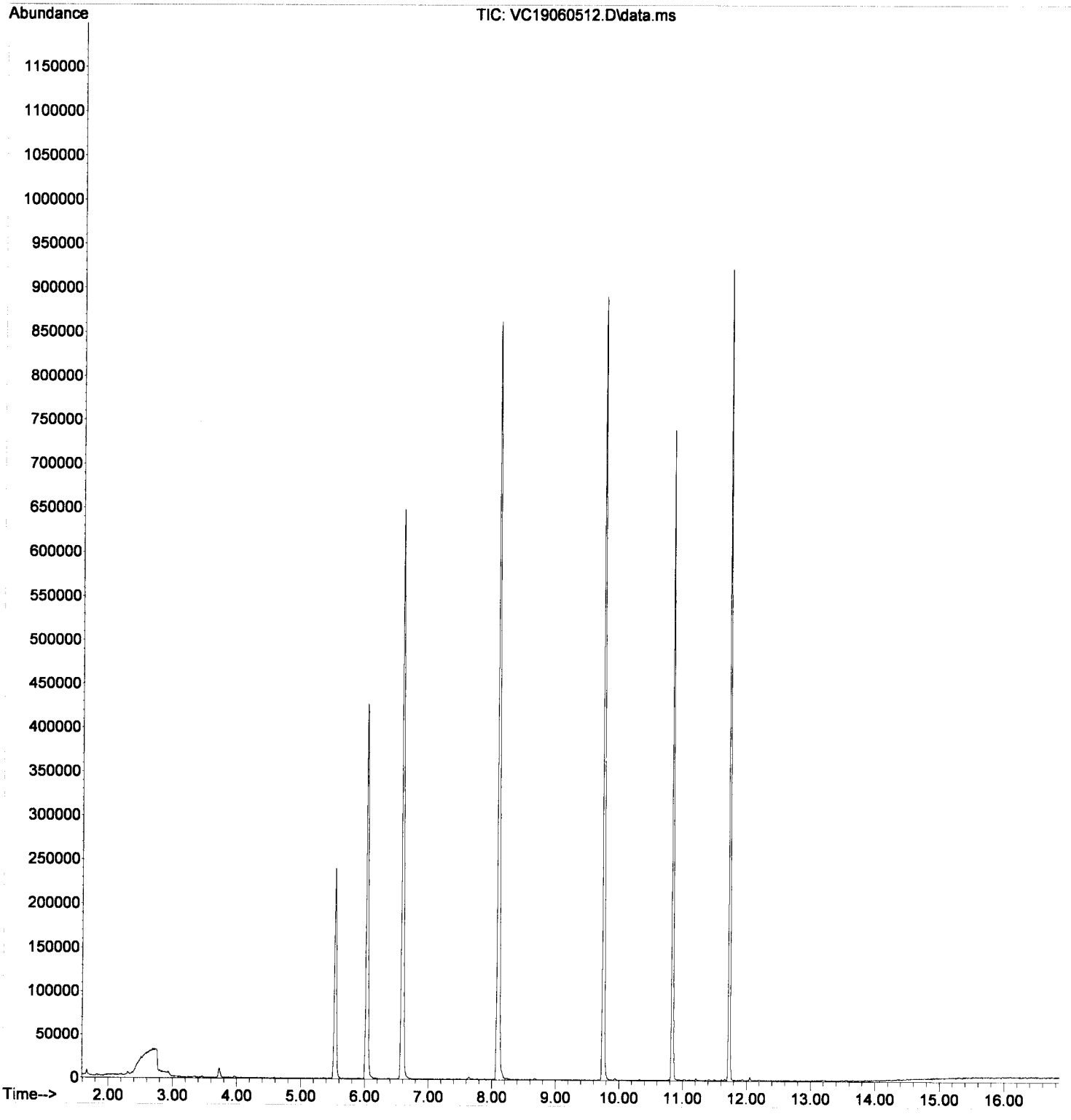
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	352824	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	522808	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	222610	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	157934	41.34	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	611497	45.06	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	721565	51.02	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	197062	51.27	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.862	50	877	0.17	ug/L		90
5) Bromomethane	2.300	96	2125	1.05	ug/L	#	70
6) Chloroethane	2.421	64	122	0.09	ug/L	#	1
11) Iodomethane	3.249	142	462	1.05	ug/L	#	47
12) Methylene Chloride	3.735	84	5729	Below Cal			92
13) Acetone	3.845	43	1331	0.84	ug/L		95
40) Toluene	8.152	91	1941	0.14	ug/L		82
52) m,p-Xylenes (2)	9.940	91	1373	0.14	ug/L		91
68) 1,2,4-Trimethylbenzene	11.413	105	1132	0.12	ug/L		87
70) 4-Isopropyltoluene	11.607	119	730	0.08	ug/L		83
73) n-Butylbenzene	11.930	91	1076	0.14	ug/L		80
76) Hexachlorobutadiene	13.177	223	156	0.23	ug/L	#	55
77) 1,2,4-Trichlorobenzene	13.219	180	342	0.12	ug/L		78

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060512.D
Acq On : 5 Jun 2019 2:47 pm
Operator : MM
Sample : 9060582-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:41:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060513.D
Acq On : 5 Jun 2019 3:15 pm
Operator : MM
Sample : 9F05048-CRL1
Misc : 1X 5/10PPB VOC A19E314
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:42:11 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.031	168	350602	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	518297	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	215945	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.538	111	153422	40.41 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	603086	44.72 ug/L		0.00
39) Toluene-d8 (S)	8.093	98	704988	50.28 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	189428	50.80 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.669	85	12191	3.87 ug/L		97
3) Chloromethane	1.870	50	19751	3.82 ug/L		96
4) Vinyl Chloride	1.961	62	13478	3.77 ug/L		93
5) Bromomethane	2.308	96	10147	5.03 ug/L		90
6) Chloroethane	2.454	64	3968	2.96 ug/L	#	1
7) Trichlorofluoromethane	2.570	101	6711	3.37 ug/L		99
8) 1,1-Dichloroethene	3.099	61	15252	4.30 ug/L		87
9) Carbon Disulfide	3.105	76	19834	3.52 ug/L		98
10) Freon 113	3.148	101	12159	4.04 ug/L		89
11) Iodomethane	3.245	142	4763	3.94 ug/L		97
12) Methylene Chloride	3.732	84	15277	Below Cal		90
13) Acetone	3.841	43	12988	8.22 ug/L		97
14) t-1,2-Dichloroethene	3.890	61	17320	4.21 ug/L		96
15) n-Hexane	3.969	86	4284	4.67 ug/L		96
16) Methyl-tert-butyl-ether	4.042	73	50686	4.16 ug/L		99
17) 1,1-Dichloroethane	4.522	63	21244	4.19 ug/L		98
18) Acrylonitrile	4.608	53	8618	4.20 ug/L		86
19) c-1,2-Dichloroethene	5.070	61	18949	4.13 ug/L		91
20) 2,2-Dichloropropane	5.179	77	16630	4.19 ug/L		89
21) Bromochloromethane	5.271	49	11165	4.12 ug/L		94
22) Chloroform	5.356	83	22219	3.69 ug/L		98
23) Carbon Tetrachloride	5.478	117	11578	3.56 ug/L		95
24) Tetrahydrofuran	5.538	42	9286	4.05 ug/L		90
25) 1,1,1-Trichloroethane	5.551	97	18380	4.00 ug/L		94
27) 1,1-Dichloropropene	5.678	75	19459	4.11 ug/L		97
28) 2-Butanone (MEK)	5.703	43	22210	7.88 ug/L		98
29) Benzene	5.934	78	63850	4.19 ug/L		99
30) 1,2-Dichloroethane (EDC)	6.147	62	18541	4.08 ug/L		91
31) iso-Butyl Alcohol	6.274	43	30036	86.06 ug/L		91
33) Trichloroethene (TCE)	6.548	130	16617	3.89 ug/L		94
34) Dibromomethane	6.998	93	8067	3.96 ug/L		91
35) 1,2-Dichloropropane	7.108	63	16309	4.19 ug/L		83
36) Bromodichloromethane	7.187	83	11884	3.60 ug/L		100
38) c-1,3-Dichloropropene	7.887	75	17660	4.33 ug/L		97
40) Toluene	8.154	91	65923	4.81 ug/L		96
41) Tetrachloroethene (PCE)	8.598	166	15478	4.87 ug/L		97
42) 4-Methyl-2-Pentanone (...	8.617	43	34980	8.26 ug/L		96
43) t-1,3-Dichloropropene	8.641	75	15517	4.10 ug/L		94
44) 1,1,2-Trichloroethane	8.823	97	13654	4.87 ug/L		94
45) Dibromochloromethane	9.006	129	7658	3.48 ug/L		83
46) 1,3-Dichloropropane	9.109	76	25214	4.87 ug/L		97
47) 1,2-Dibromoethane (EDB)	9.243	107	12612	4.61 ug/L		98
48) 2-Hexanone	9.499	43	23914	8.33 ug/L		95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060513.D
Acq On : 5 Jun 2019 3:15 pm
Operator : MM
Sample : 9F05048-CRL1
Misc : 1X 5/10PPB VOC A19E314
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:42:11 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

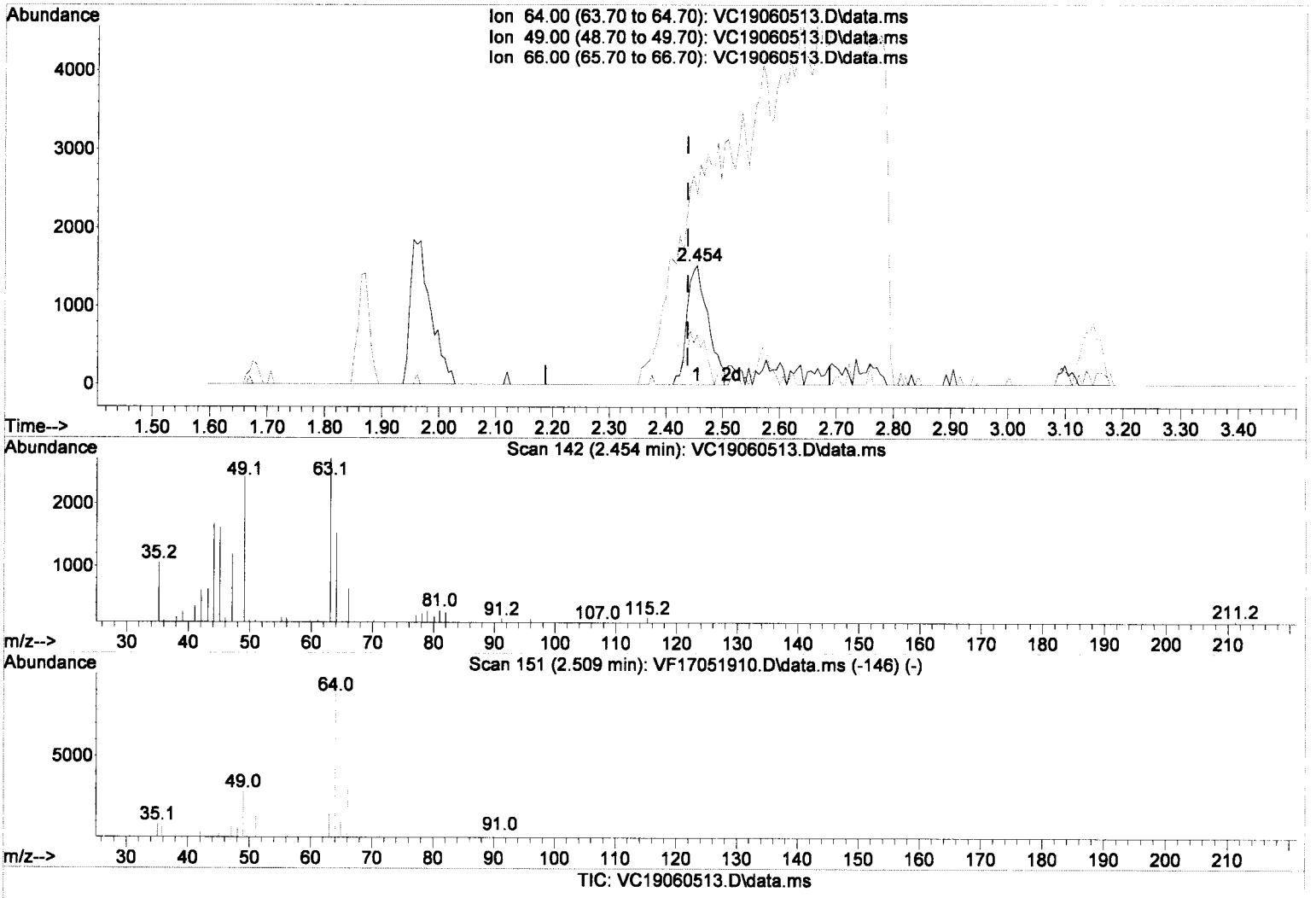
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.766	112	40789	4.90 ug/L	98
50) Ethylbenzene	9.797	91	67178	4.82 ug/L	98
51) 1,1,1,2-Tetrachloroethane	9.833	131	10573	4.51 ug/L	97
52) m,p-Xylenes (2)	9.931	91	99685	9.91 ug/L	98
53) o-Xylene	10.320	91	49916	4.72 ug/L	98
54) Styrene	10.369	104	33764	4.57 ug/L	98
55) Bromoform	10.387	173	4026	3.48 ug/L	99
56) Isopropylbenzene	10.594	105	58016	4.78 ug/L	98
59) Bromobenzene	10.916	156	14944	5.24 ug/L	90
60) n-Propylbenzene	10.941	91	65120	5.01 ug/L	96
61) 1,1,2,2-Tetrachloroethane	11.007	83	12795	4.52 ug/L	93
62) 2-Chlorotoluene	11.068	126	13332	4.95 ug/L	91
63) 1,3,5-Trimethylbenzene	11.105	105	43136	4.91 ug/L	98
64) 1,2,3-Trichloropropane	11.111	110	5464	4.68 ug/L	88
65) t-1,4-Dichloro-2-butene	11.153	88	1314	4.07 ug/L	93
66) 4-Chlorotoluene	11.208	91	38145	4.90 ug/L	98
67) tert-Butylbenzene	11.354	91	23164	4.70 ug/L	95
68) 1,2,4-Trimethylbenzene	11.415	105	45472	5.06 ug/L	97
69) sec-Butylbenzene	11.494	105	51262	4.92 ug/L	96
70) 4-Isopropyltoluene	11.610	119	43028	5.08 ug/L	96
71) 1,3-Dichlorobenzene	11.671	146	24126	4.82 ug/L	94
72) 1,4-Dichlorobenzene	11.737	146	23796	4.76 ug/L	96
73) n-Butylbenzene	11.932	91	37269	5.17 ug/L	96
74) 1,2-Dichlorobenzene	12.060	146	21660	4.71 ug/L	97
75) 1,2-Dibromo-3-Chloropr...	12.674	157	2320	3.91 ug/L	79
76) Hexachlorobutadiene	13.185	223	3556	5.34 ug/L	94
77) 1,2,4-Trichlorobenzene	13.216	180	12689	4.74 ug/L	97
78) Naphthalene	13.489	128	38054	4.22 ug/L	98
79) 1,2,3-Trichlorobenzene	13.654	180	11707	4.62 ug/L	98

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060513.D
Acq On : 5 Jun 2019 3:15 pm
Operator : MM
Sample : 9F05048-CRL1
Misc : 1X 5/10PPB VOC A19E314
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:42:11 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060513.D\data.ms

(6) Chloroethane

2.454min (+0.016) 2.96 ug/L

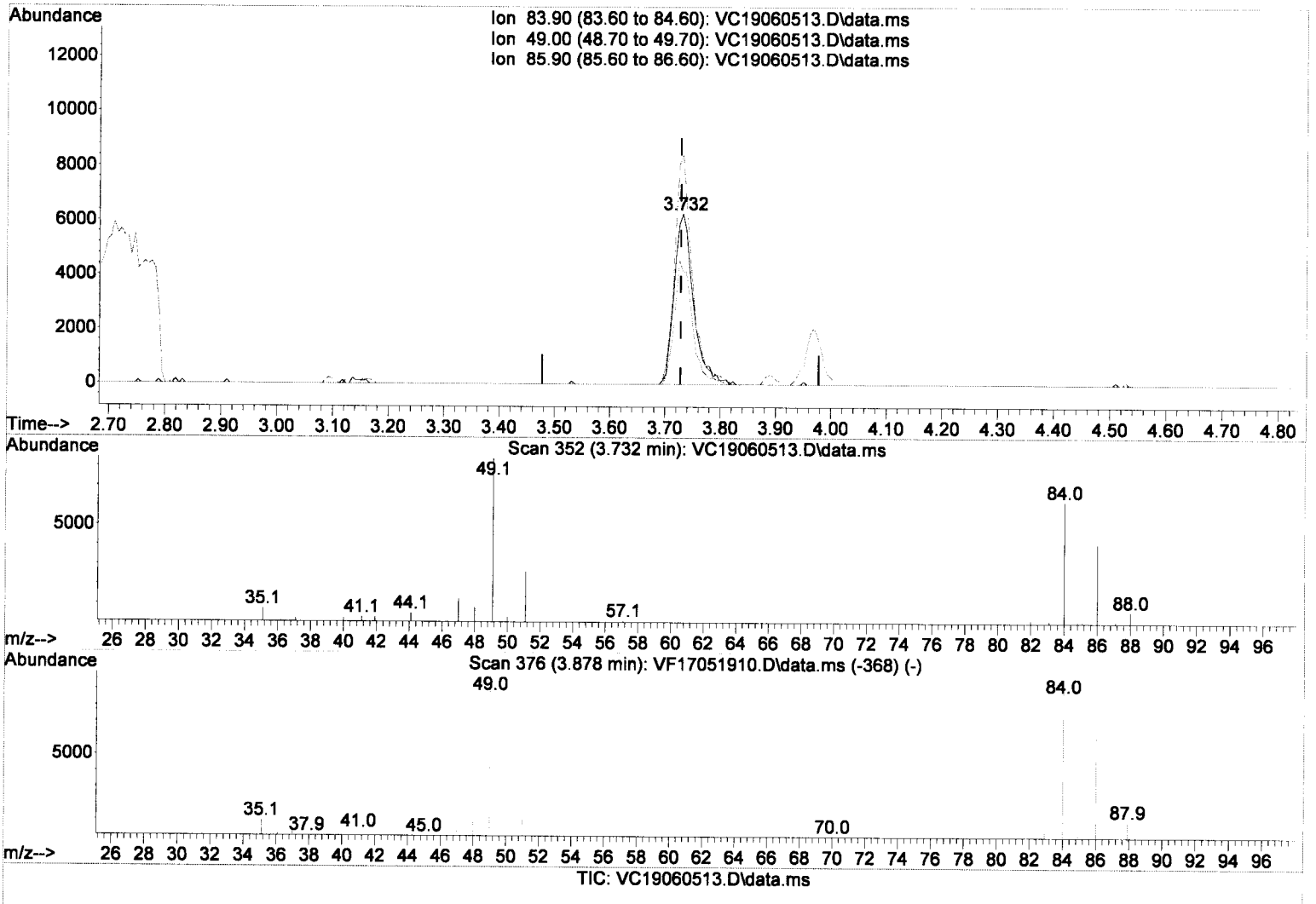
response 3968

Ion	Exp%	Act%
64.00	100	100
49.00	25.70	158.80#
66.00	34.50	41.92
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060513.D
Acq On : 5 Jun 2019 3:15 pm
Operator : MM
Sample : 9F05048-CRL1
Misc : 1X 5/10PPB VOC A19E314
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:42:11 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



TIC: VC19060513.D\data.ms

(12) Methylene Chloride

3.732min (+0.004) -1.00 ug/L

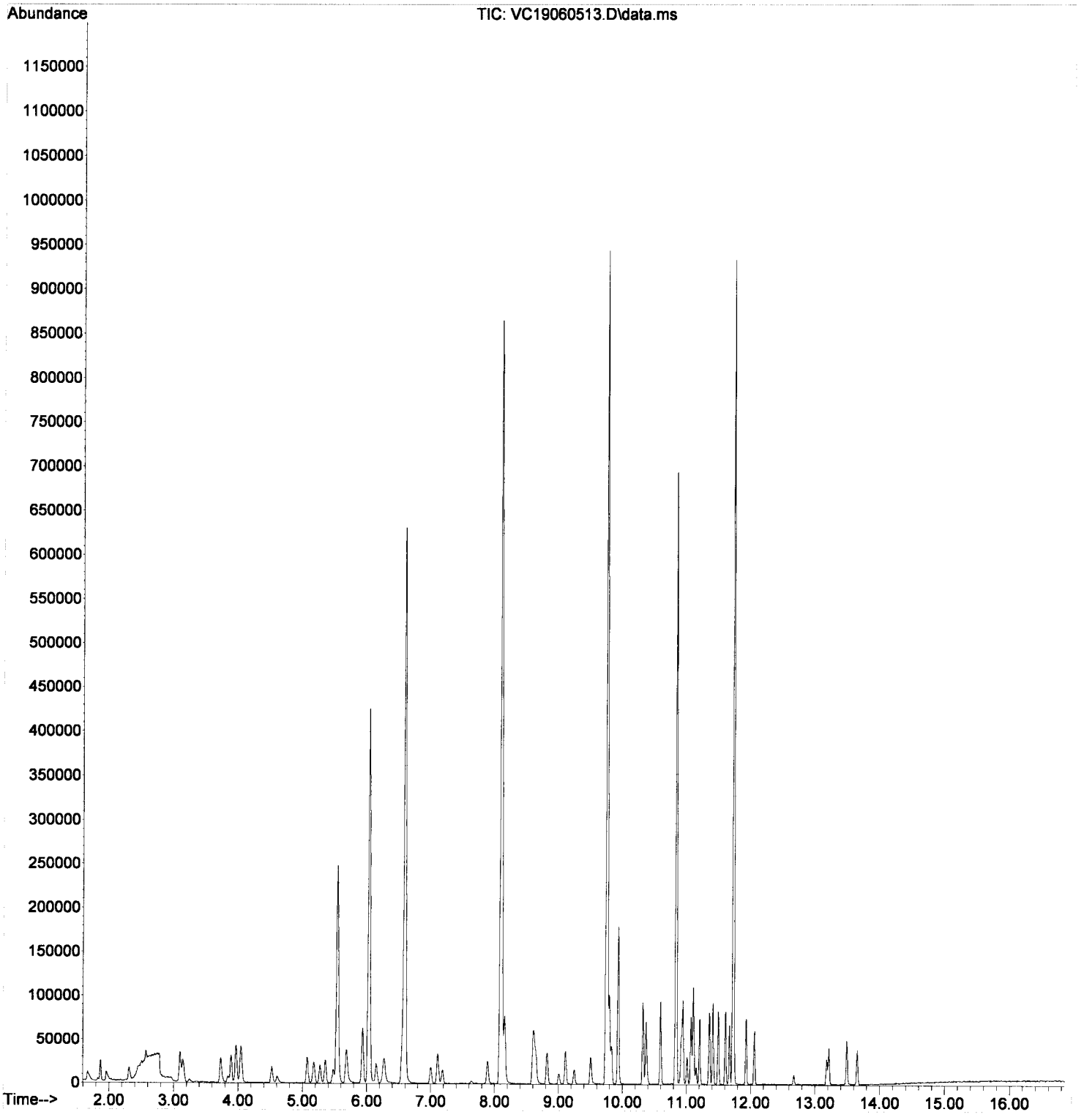
response 15277

Ion	Exp%	Act%
83.90	100	100
49.00	121.90	134.31
85.90	60.10	65.88
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060513.D
Acq On : 5 Jun 2019 3:15 pm
Operator : MM
Sample : 9F05048-CRL1
Misc : 1X 5/10PPB VOC A19E314
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 15:42:11 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060518.D
Acq On : 5 Jun 2019 5:33 pm
Operator : MM
Sample : A9E0785-01RE1@100000
Misc : 100000X 1g/5mLx0.1uL/50mL NAP FRIDGE OUT X
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 19:38:33 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

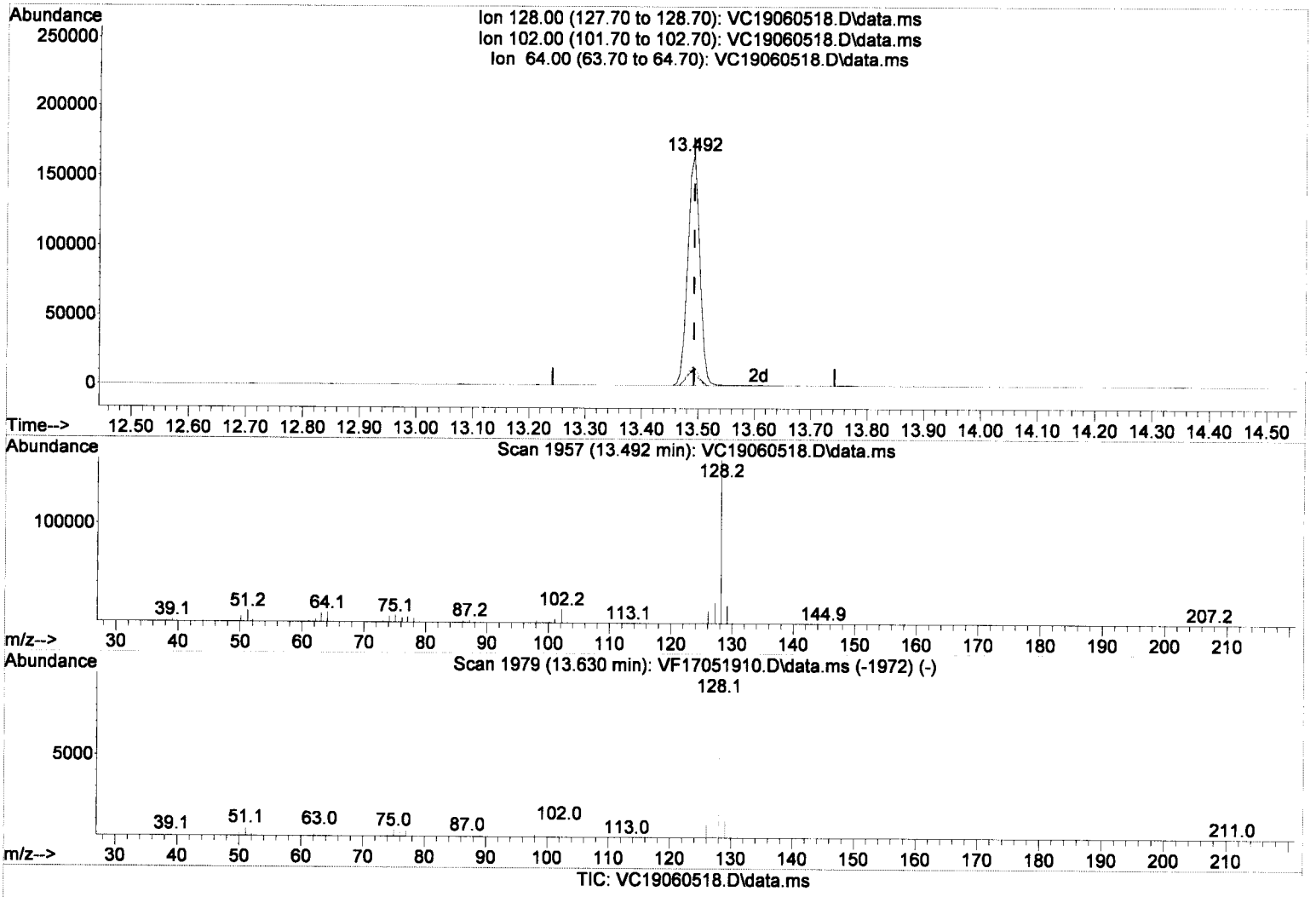
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	358151	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	538353	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	229780	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.529	111	157332	40.57	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	618387	44.89	ug/L		0.00
39) Toluene-d8 (S)	8.090	98	731285	50.21	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	202397	51.01	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	501	0.09	ug/L		87
5) Bromomethane	2.293	96	1614	0.78	ug/L		96
6) Chloroethane	2.457	64	316	0.23	ug/L	#	1
11) Iodomethane	3.236	142	168	0.85	ug/L	#	47
12) Methylene Chloride	3.716	84	2672	Below Cal			88
13) Acetone	3.838	43	369	0.23	ug/L		81
15) n-Hexane	3.960	86	1769	0.84	ug/L	#	88
28) 2-Butanone (MEK)	5.681	43	265	0.09	ug/L		54
29) Benzene	5.931	78	6212	0.40	ug/L		93
40) Toluene	8.157	91	8699	0.61	ug/L		92
50) Ethylbenzene	9.794	91	6752	0.47	ug/L		97
52) m,p-Xylenes (2)	9.940	91	6887	0.66	ug/L		95
53) o-Xylene	10.323	91	2191	0.20	ug/L		94
54) Styrene	10.378	104	961	0.13	ug/L		92
60) n-Propylbenzene	10.943	91	2598	0.19	ug/L		89
63) 1,3,5-Trimethylbenzene	11.102	105	3940	0.42	ug/L		96
67) tert-Butylbenzene	11.418	91	703	0.13	ug/L	#	59
68) 1,2,4-Trimethylbenzene	11.412	105	6106	0.64	ug/L		95
73) n-Butylbenzene	11.935	91	1225	0.16	ug/L		91
78) Naphthalene	13.492	128	247235	25.79	ug/L		99

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060518.D
Acq On : 5 Jun 2019 5:33 pm
Operator : MM
Sample : A9E0785-01RE1@100000
Misc : 100000X 1g/5mLx0.1uL/50mL NAP FRIDGE OUT X
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 19:38:33 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



(78) Naphthalene

13.492min (-0.000) 25.79 ug/L

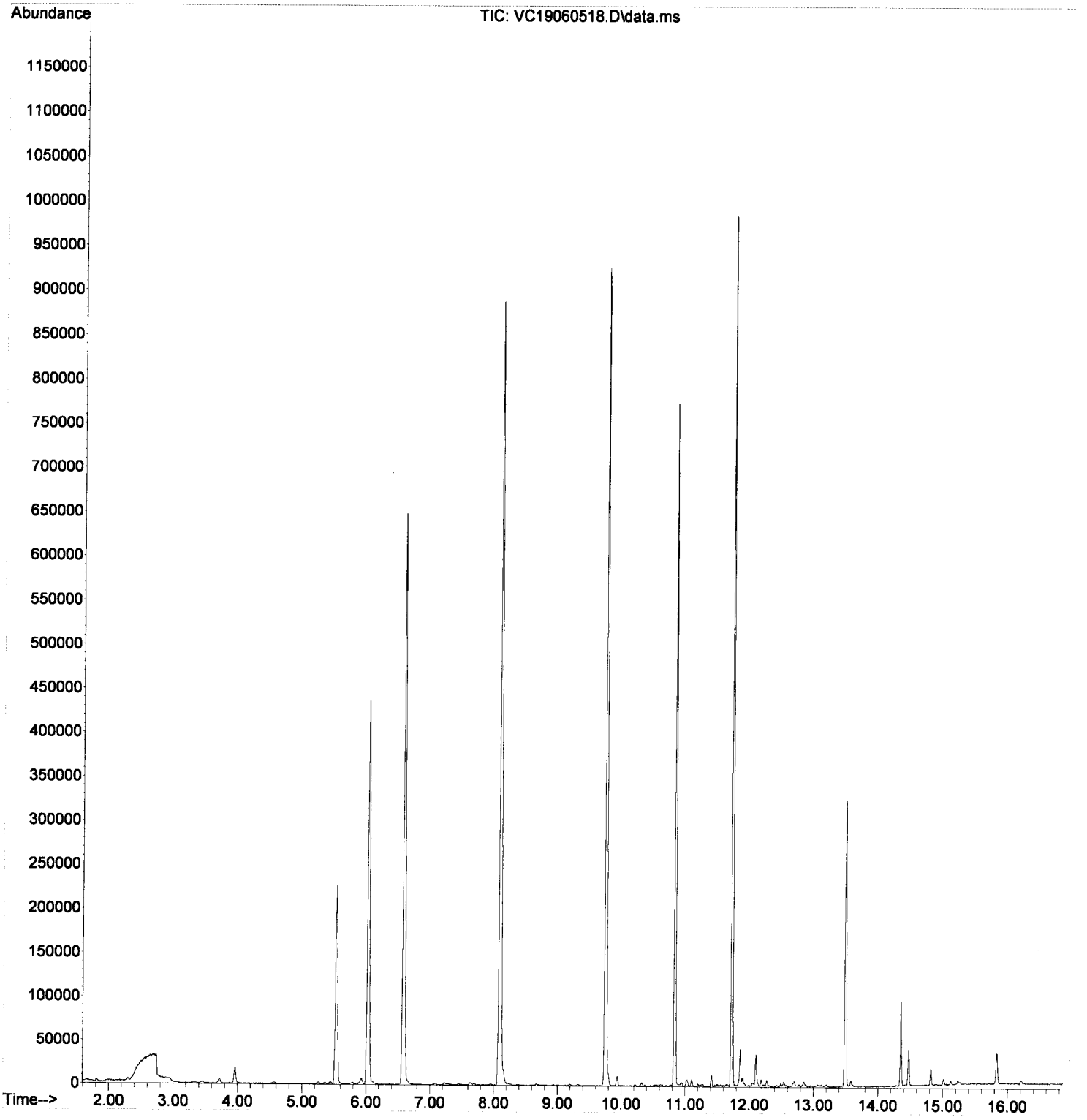
response 247235

Ion	Exp%	Act%
128.00	100	100
102.00	8.50	8.43
64.00	6.40	5.89
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060518.D
Acq On : 5 Jun 2019 5:33 pm
Operator : MM
Sample : A9E0785-01RE1@100000
Misc : 100000X 1g/5mLx0.1uL/50mL NAP FRIDGE OUT X
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 05 19:38:33 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060528.D
Acq On : 5 Jun 2019 10:09 pm
Operator : MM
Sample : 9060582-MS1
Misc : 50X 5g/5mLx1000uL/50mL (F0057-10)
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 06 08:59:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	331137	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	500960	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	211489	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	159709	44.54 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	571558	44.87 ug/L		0.00
39) Toluene-d8 (S)	8.097	98	683134	50.41 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	188563	51.63 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.667	85	54697	18.40 ug/L		99
3) Chloromethane	1.862	50	78852	16.15 ug/L		97
4) Vinyl Chloride	1.953	62	59033	17.49 ug/L		97
5) Bromomethane	2.306	96	33313	17.50 ug/L		96
6) Chloroethane	2.440	64	19865	15.66 ug/L		75
7) Trichlorofluoromethane	2.562	101	28902	15.36 ug/L		92
8) 1,1-Dichloroethene	3.097	61	65298	19.49 ug/L		91
9) Carbon Disulfide	3.109	76	91762	17.26 ug/L		98
10) Freon 113	3.146	101	53237	18.72 ug/L		86
11) Iodomethane	3.243	142	22096	16.08 ug/L	#	97
12) Methylene Chloride	3.730	84	54375	12.35 ug/L		98
13) Acetone	3.827	43	56304	37.72 ug/L		99
14) t-1,2-Dichloroethene	3.888	61	75226	19.36 ug/L		98
15) n-Hexane	3.967	86	12714	18.48 ug/L	#	87
16) Methyl-tert-butyl-ether	4.040	73	202284	17.58 ug/L		99
17) 1,1-Dichloroethane	4.520	63	94203	19.68 ug/L		98
18) Acrylonitrile	4.593	53	36898	19.05 ug/L		95
19) c-1,2-Dichloroethene	5.068	61	81605	18.82 ug/L		98
20) 2,2-Dichloropropane	5.171	77	68166	18.17 ug/L		91
21) Bromochloromethane	5.269	49	48216	18.82 ug/L		99
22) Chloroform	5.348	83	101956	17.92 ug/L		98
23) Carbon Tetrachloride	5.476	117	56641	18.43 ug/L		95
24) Tetrahydrofuran	5.530	42	36518	16.85 ug/L		95
25) 1,1,1-Trichloroethane	5.549	97	81398	18.74 ug/L		98
27) 1,1-Dichloropropene	5.676	75	81979	18.33 ug/L		97
28) 2-Butanone (MEK)	5.688	43	96250	36.16 ug/L		98
29) Benzene	5.932	78	256880	17.85 ug/L		98
30) 1,2-Dichloroethane (EDC)	6.145	62	79561	18.54 ug/L		99
31) iso-Butyl Alcohol	6.260	43	127058	385.45 ug/L		91
33) Trichloroethene (TCE)	6.552	130	75982	18.82 ug/L		96
34) Dibromomethane	6.996	93	34945	18.16 ug/L		92
35) 1,2-Dichloropropane	7.106	63	67161	18.25 ug/L		96
36) Bromodichloromethane	7.185	83	57838	17.98 ug/L		98
38) c-1,3-Dichloropropene	7.885	75	85664	21.72 ug/L		96
40) Toluene	8.152	91	268713	20.28 ug/L		99
41) Tetrachloroethene (PCE)	8.596	166	63751	20.75 ug/L		99
42) 4-Methyl-2-Pentanone (...	8.615	43	153260	37.46 ug/L		98
43) t-1,3-Dichloropropene	8.645	75	76925	21.02 ug/L		97
44) 1,1,2-Trichloroethane	8.821	97	57610	21.28 ug/L		98
45) Dibromochloromethane	9.004	129	41042	18.08 ug/L		93
46) 1,3-Dichloropropane	9.107	76	105201	21.01 ug/L		99
47) 1,2-Dibromoethane (EDB)	9.241	107	56570	21.37 ug/L		96
48) 2-Hexanone	9.497	43	106246	38.30 ug/L		99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060528.D
Acq On : 5 Jun 2019 10:09 pm
Operator : MM
Sample : 9060582-MS1
Misc : 50X 5g/5mLx1000uL/50mL (F0057-10)
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 06 08:59:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

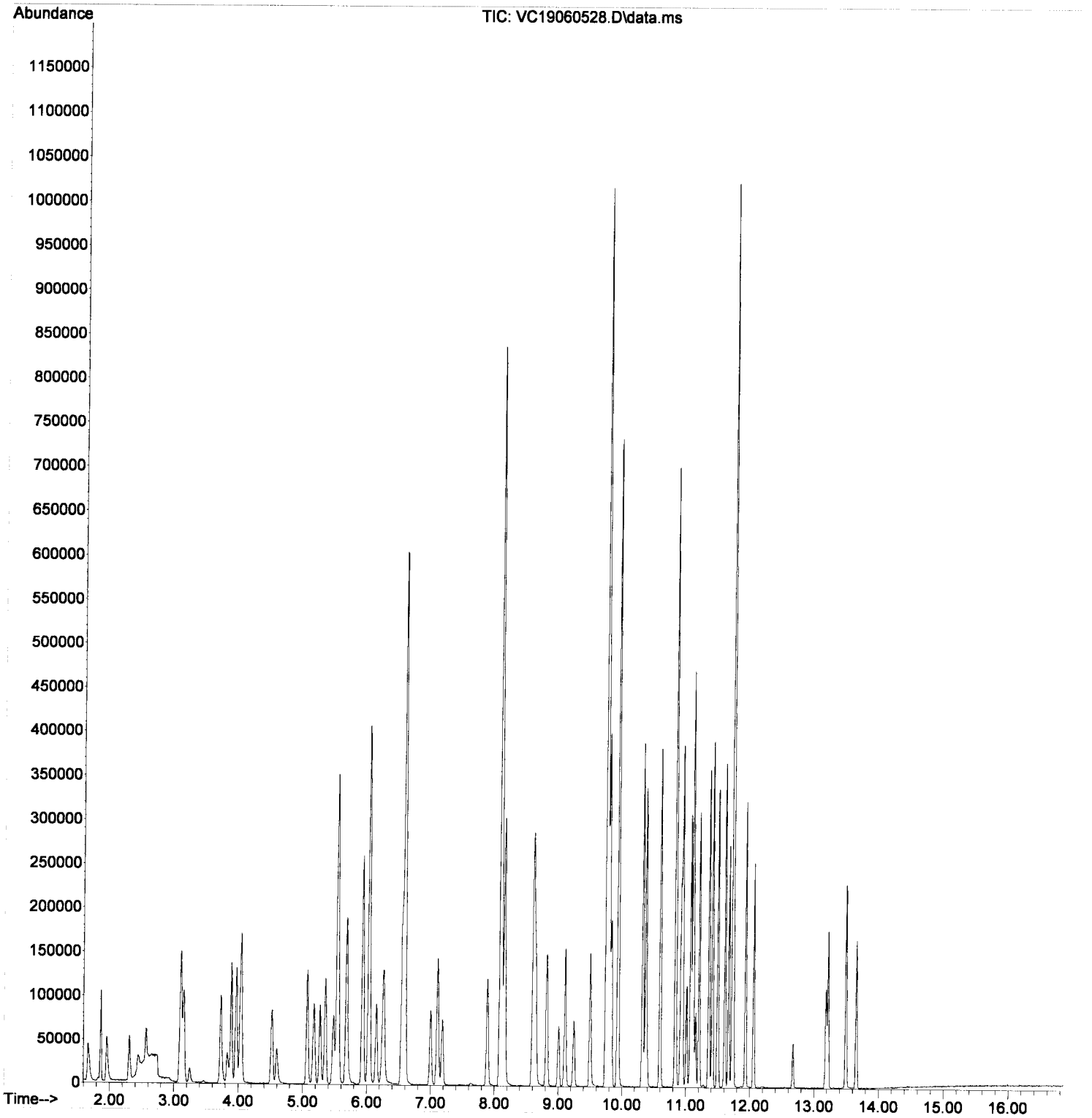
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	167119	20.79	ug/L		98
50) Ethylbenzene	9.795	91	275420	20.44	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.831	131	48831	21.54	ug/L		96
52) m,p-Xylenes (2)	9.935	91	403720	41.50	ug/L		100
53) o-Xylene	10.318	91	210338	20.57	ug/L		100
54) Styrene	10.367	104	152735	21.37	ug/L		98
55) Bromoform	10.391	173	21297	16.58	ug/L		98
56) Isopropylbenzene	10.592	105	246693	21.04	ug/L		98
59) Bromobenzene	10.920	156	61498	22.02	ug/L		100
60) n-Propylbenzene	10.945	91	269411	21.16	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.011	83	50831	18.34	ug/L		100
62) 2-Chlorotoluene	11.072	126	55374	21.01	ug/L		89
63) 1,3,5-Trimethylbenzene	11.103	105	188199	21.86	ug/L		99
64) 1,2,3-Trichloropropane	11.115	110	22531	19.72	ug/L	#	74
65) t-1,4-Dichloro-2-butene	11.151	88	6422	16.80	ug/L	#	78
66) 4-Chlorotoluene	11.206	91	158483	20.80	ug/L		98
67) tert-Butylbenzene	11.358	91	101520	21.04	ug/L		99
68) 1,2,4-Trimethylbenzene	11.413	105	187146	21.25	ug/L		99
69) sec-Butylbenzene	11.498	105	216826	21.26	ug/L		99
70) 4-Isopropyltoluene	11.608	119	181779	21.90	ug/L		97
71) 1,3-Dichlorobenzene	11.668	146	98725	20.14	ug/L		96
72) 1,4-Dichlorobenzene	11.735	146	97005	19.81	ug/L		97
73) n-Butylbenzene	11.930	91	148635	21.06	ug/L		100
74) 1,2-Dichlorobenzene	12.058	146	89833	19.96	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.672	157	11657	17.80	ug/L		94
76) Hexachlorobutadiene	13.177	223	13989	21.47	ug/L		98
77) 1,2,4-Trichlorobenzene	13.214	180	55119	21.03	ug/L		100
78) Naphthalene	13.494	128	179046	20.29	ug/L		98
79) 1,2,3-Trichlorobenzene	13.652	180	52489	21.14	ug/L		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F05048\
Data File : VC19060528.D
Acq On : 5 Jun 2019 10:09 pm
Operator : MM
Sample : 9060582-MS1
Misc : 50X 5g/5mLx1000uL/50mL (F0057-10)
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 06 08:59:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 8260C

Calibration Data

Sequence 9E29058 (Cal ID A9E3104) VOA-GCMS3

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9E29058	Instrument:	VOA-GCMS3
Date:	05/29/19 13:56	Calibration:	A9E3104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E29058-IBL1	Soil	QC	QC			A19C135	
2	9E29058-TUN1	Soil	QC	QC			A19C135	
3	9E29058-ICB1	Soil	QC	QC			A19C135	
4	9E29058-CAL1	Soil	QC	QC			A19C135	A19E361
5	9E29058-CAL2	Soil	QC	QC			A19C135	A19E362
6	9E29058-CAL3	Soil	QC	QC			A19C135	A19E363
7	9E29058-CAL4	Soil	QC	QC			A19C135	A19E364
8	9E29058-CAL5	Soil	QC	QC			A19C135	A19E365
9	9E29058-CAL6	Soil	QC	QC			A19C135	A19E366
10	9E29058-CAL7	Soil	QC	QC			A19C135	A19E367
11	9E29058-CAL8	Soil	QC	QC			A19C135	A19E368
12	9E29058-CAL9	Soil	QC	QC			A19C135	A19E369
13	9E29058-IBL2	Soil	QC	QC			A19C135	
14	9E29058-CALA	Soil	QC	QC			A19C135	A19E370
15	9E29058-IBL3	Soil	QC	QC			A19C135	
16	9E29058-CALB	Soil	QC	QC			A19C135	A19E371
17	9E29058-IBL4	Soil	QC	QC			A19C135	
18	9E29058-IBL5	Soil	QC	QC			A19C135	
19	9E29058-ICV1	Soil	QC	QC			A19C135	A19D180
20	9E29058-IBL6	Soil	QC	QC			A19C135	
21	9E29058-TUN2	Soil	QC	QC			A19C135	
22	9E29058-IBL7	Soil	QC	QC			A19C135	
23	9E29058-ICB2	Soil	QC	QC			A19C135	
24	9E29058-CALC	Soil	QC	QC			A19C135	A19E372
25	9E29058-CALD	Soil	QC	QC			A19C135	A19E373
26	9E29058-CALE	Soil	QC	QC			A19C135	A19E374
27	9E29058-CALF	Soil	QC	QC			A19C135	A19E375
28	9E29058-CALG	Soil	QC	QC			A19C135	A19E183
29	9E29058-CALH	Soil	QC	QC			A19C135	A19E184
30	9E29058-CALI	Soil	QC	QC			A19C135	A19E185
31	9E29058-CALJ	Soil	QC	QC			A19C135	A19E186
32	9E29058-IBL8	Soil	QC	QC			A19C135	
33	9E29058-IBL9	Soil	QC	QC			A19C135	
34	9E29058-ICV2	Soil	QC	QC			A19C135	A19B262
35	9E29058-IBLA	Soil	QC	QC			A19C135	

Data Entered By: 5/31/19

Data Reviewed By: 5/31/19

Comments:

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	-1	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052904.D
2	2	0	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052905.D
3	3	0	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052906.D
4	4	1	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052907.D
5	5	2	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052908.D
6	6	5	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052909.D
7	7	10	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052910.D
8	8	20	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052911.D
9	9	50	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052912.D
10	10	100	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052914.D
11	11	200	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052916.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	May 30 12:12 2019	May 30 11:57 2019	29 May 2019 3:40 pm
2	2	May 30 12:12 2019	May 30 12:04 2019	29 May 2019 4:07 pm
3	3	May 30 12:12 2019	May 30 12:05 2019	29 May 2019 4:35 pm
4	4	May 30 12:12 2019	May 30 12:06 2019	29 May 2019 5:02 pm
5	5	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 5:30 pm
6	6	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 5:57 pm
7	7	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 6:25 pm
8	8	May 30 12:12 2019	May 30 11:45 2019	29 May 2019 6:52 pm
9	9	May 30 12:12 2019	May 30 11:46 2019	29 May 2019 7:20 pm
10	10	May 30 12:12 2019	May 30 11:46 2019	29 May 2019 8:15 pm
11	11	May 30 12:12 2019	May 30 11:46 2019	29 May 2019 9:10 pm

VC190529S.M Thu May 30 15:32:22 2019

Response Factor Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019
Response Via : Initial Calibration

Calibration Files
1 =VC19052904.D 2 =VC19052905.D 3 =VC19052906.D 4 =VC19052907.D 5 =VC19052908.D 6 =VC19052909.D
7 =VC19052910.D 8 =VC19052911.D 9 =VC19052912.D 10 =VC19052914.D 11 =VC19052916.D

		Compound	1	2	3	4	5	6	7	8	9	10	11	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD												
2)		Dichlorodifluo...	0.462	0.413	0.416	0.448	0.479	0.453	0.441	0.488	0.463	0.426	0.449		5.63
3)	P	Chloromethane		0.919	0.788	0.748	0.751	0.710	0.710	0.715	0.683	0.612	0.737		11.42
4)	C	Vinyl Chloride	0.501	0.520	0.508	0.516	0.529	0.502	0.513	0.527	0.510	0.470	0.510		3.26
5)		Bromomethane					0.356	0.322	0.277	0.267	0.250	0.253	0.287		14.87
6)		Chloroethane				0.197	0.206	0.182	0.187	0.191	0.203	0.176	0.191		5.76
7)		Trichlorofluor...		0.276	0.289	0.290	0.302	0.272	0.291	0.291	0.293	0.252	0.284		5.30
8)	C	1,1-Dichloroet...	0.444	0.556	0.503	0.480	0.511	0.513	0.507	0.538	0.515	0.493	0.506		6.03
9)		Carbon Disulfide	0.813	0.771	0.678	0.672	0.703	0.726	0.789	0.946	0.971	0.960	0.803		14.57
10)		Freon 113	0.587	0.460	0.437	0.383	0.410	0.409	0.407	0.419	0.399	0.384	0.429		13.96
11)		Iodomethane			0.143	0.148	0.133	0.155	0.180	0.235	0.267	0.288	0.194		31.41
12)		Methylene Chlo...				1.812	0.991	0.710	0.568	0.490	0.454	0.409	0.776		64.14
13)		Acetone				0.284	0.233	0.206	0.217	0.223	0.217	0.197	0.225		12.62
14)		t-1,2-Dichloro...	0.471	0.715	0.571	0.532	0.565	0.614	0.605	0.596	0.626	0.598	0.559	0.587	10.38
15)		n-Hexane				0.173	0.137	0.111	0.098	0.102	0.093	0.092	0.115		25.96
16)		Methyl-tert-bu...	1.793	1.755	1.807	1.734	1.721	1.760	1.742	1.752	1.781	1.699	1.570	1.738	3.66
17)	P	1,1-Dichloroet...		0.716	0.697	0.709	0.734	0.744	0.724	0.738	0.749	0.744	0.674	0.723	3.33
18)		Acrylonitrile				0.267	0.250	0.301	0.301	0.298	0.318	0.308	0.295	0.292	7.65
19)		c-1,2-Dichloro...	0.702	0.595	0.694	0.629	0.630	0.672	0.675	0.660	0.679	0.659	0.607	0.655	5.35
20)		2,2-Dichloropr...			0.574	0.545	0.539	0.566	0.585	0.573	0.593	0.574	0.548	0.566	3.26
21)		Bromochloromet...		0.441	0.324	0.379	0.376	0.400	0.402	0.394	0.402	0.388	0.360	0.387	7.92
22)	C	Chloroform			1.008	0.895	0.860	0.832	0.839	0.845	0.868	0.832	0.752	0.859	7.93
23)		Carbon Tetrach...				0.393	0.370	0.429	0.451	0.465	0.528	0.535	0.542	0.464	14.21
24)		Tetrahydrofuran			0.413	0.387	0.323	0.309	0.308	0.303	0.313	0.301	0.287	0.327	13.16
25)		1,1,1-Trichlor...		0.640	0.679	0.595	0.632	0.655	0.654	0.673	0.699	0.679	0.654	0.656	4.49
26)	S	Dibromofluorom...	0.537	0.532	0.521	0.521	0.550	0.536	0.538	0.553	0.574	0.553	0.542	0.541	2.83
27)		1,1-Dichloropr...		0.800	0.644	0.744	0.635	0.652	0.656	0.658	0.688	0.651	0.624	0.675	8.20
28)		2-Butanone (MEK)				0.453	0.361	0.413	0.402	0.403	0.416	0.392	0.376	0.402	6.86
29)		Benzene	2.357	2.260	2.235	2.284	2.147	2.202	2.176	2.160	2.184	2.046	1.856	2.173	6.11
30)		1,2-Dichloroet...		0.667	0.686	0.639	0.648	0.653	0.648	0.647	0.663	0.629	0.599	0.648	3.59
31)		iso-Butyl Alcohol						0.049	0.049	0.050	0.052	0.051	0.048	0.050	2.91
32)	S	1,4-Difluorobe...	1.899	1.916	1.909	1.926	1.948	1.932	1.903	1.931	1.951	1.905	1.934	1.923	0.93
33)		Trichloroethen...	0.689	0.758	0.518	0.610	0.611	0.597	0.585	0.590	0.613	0.587	0.547	0.610	10.65
34)		Dibromomethane			0.281	0.259	0.272	0.281	0.297	0.301	0.321	0.310	0.293	0.290	6.62
35)	C	1,2-Dichloropr...		0.580	0.525	0.530	0.550	0.566	0.554	0.570	0.581	0.565	0.534	0.556	3.68
36)		Bromodichlorom...		0.420	0.429	0.423	0.395	0.464	0.473	0.516	0.591	0.605	0.598	0.491	16.46
37)		Chlorobenzene-d5 (I)	ISTD												
38)		c-1,3-Dichloro...		0.337	0.319	0.357	0.343	0.385	0.402	0.426	0.458	0.460	0.448	0.394	13.50
39)	S	Toluene-d8 (S)	1.354	1.351	1.350	1.355	1.346	1.359	1.353	1.356	1.338	1.348	1.369	1.353	0.58
40)	C	Toluene			1.620	1.480	1.319	1.334	1.306	1.285	1.262	1.203	1.095	1.323	11.49

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529S.M
Title : EPA 8260: Volatile Organic Compounds

41)		Tetrachloroeth...		0.391	0.374	0.304	0.268	0.297	0.294	0.285	0.293	0.284	0.277	0.307	13.47
42)		4-Methyl-2-Pen...	0.483	0.474	0.444	0.408	0.366	0.382	0.399	0.389	0.403	0.385	0.358	0.408	10.15
43)		t-1,3-Dichloro...				0.310	0.285	0.325	0.360	0.382	0.419	0.424	0.416	0.365	14.76
44)		1,1,2-Trichlor...	0.255	0.283	0.258	0.261	0.251	0.278	0.275	0.278	0.285	0.278	0.269	0.270	4.39
45)		Dibromochlorom...		0.096	0.155	0.161	0.159	0.167	0.184	0.202	0.247	0.262	0.269	0.190	28.85
46)		1,3-Dichloropr...	0.488	0.553	0.528	0.476	0.473	0.501	0.501	0.508	0.508	0.496	0.465	0.500	5.06
47)		1,2-Dibromoeth...			0.225	0.248	0.231	0.259	0.274	0.277	0.295	0.289	0.280	0.264	9.51
48)		2-Hexanone				0.286	0.236	0.279	0.281	0.281	0.294	0.287	0.271	0.277	6.49
49)	P	Chlorobenzene		0.905	0.888	0.847	0.807	0.796	0.785	0.777	0.782	0.750	0.685	0.802	8.07
50)	C	Ethylbenzene		1.620	1.527	1.400	1.310	1.368	1.323	1.322	1.292	1.213	1.073	1.345	11.33
51)		1,1,1,2-Tetrac...			0.170	0.210	0.196	0.216	0.226	0.239	0.260	0.263	0.257	0.226	13.96
52)		m,p-Xylenes (2)		1.188	1.079	1.009	0.952	0.987	0.976	0.976	0.942	0.866	0.733	0.971	12.37
53)		o-Xylene		1.249	1.064	1.050	0.966	1.027	1.002	1.014	1.017	0.963	0.852	1.020	9.82
54)		Styrene				0.640	0.657	0.644	0.715	0.737	0.767	0.786	0.776	0.697	0.713	8.05
55)	P	Bromoform				0.053	0.072	0.075	0.091	0.099	0.111	0.144	0.159	0.168	0.108	37.80
56)		Isopropylbenzene	1.476	1.245	1.162	1.148	1.125	1.192	1.163	1.170	1.145	1.090	0.955	1.170	10.65
57)	I	1,4-Dichlorobenzen...	----------			ISTD	----------								
58)	S	4-Bromofluorob...	0.863	0.866	0.866	0.863	0.857	0.868	0.866	0.868	0.859	0.873	0.848	0.863	0.78
59)		Bromobenzene	0.455	0.670	0.691	0.705	0.677	0.700	0.693	0.673	0.687	0.686	0.625	0.660	10.81
60)		n-Propylbenzene	4.019	3.245	3.148	2.876	2.838	3.062	2.971	2.971	2.888	2.761	2.334	3.010	13.61
61)	P	1,1,2,2-Tetrac...	0.684	0.574	0.663	0.618	0.596	0.654	0.680	0.683	0.696	0.686	0.673	0.655	6.23
62)		2-Chlorotoluene	0.668	0.699	0.604	0.621	0.567	0.638	0.637	0.617	0.618	0.624	0.562	0.623	6.33
63)		1,3,5-Trimethy...		2.321	2.080	2.113	1.864	2.110	2.087	2.073	2.032	1.958	1.712	2.035	8.02
64)		1,2,3-Trichlor...		0.188	0.331	0.267	0.282	0.274	0.277	0.275	0.281	0.268	0.258	0.270	12.92
65)		t-1,4-Dichloro...				0.049	0.041	0.068	0.076	0.086	0.098	0.102	0.105	0.078	30.92
66)		4-Chlorotoluene		2.196	1.930	1.869	1.722	1.793	1.744	1.782	1.769	1.715	1.491	1.801	10.00
67)		tert-Butylbenzene	1.233	1.579	1.114	1.137	1.032	1.101	1.106	1.110	1.105	1.078	0.950	1.141	14.09
68)		1,2,4-Trimethy...	2.480	2.104	2.243	2.133	1.972	2.077	2.098	2.106	2.049	1.967	1.678	2.082	9.34
69)		sec-Butylbenzene	3.073	2.707	2.500	2.410	2.140	2.408	2.374	2.404	2.360	2.234	1.917	2.412	12.35
70)		4-Isopropyltol...		2.286	2.096	1.876	1.881	1.984	1.985	1.973	1.981	1.901	1.656	1.962	8.25
71)		1,3-Dichlorobe...	1.567	1.212	1.229	1.101	1.124	1.119	1.116	1.110	1.116	1.076	0.975	1.159	13.03
72)		1,4-Dichlorobe...		1.506	1.268	1.188	1.118	1.147	1.122	1.099	1.096	1.058	0.974	1.157	12.50
73)		n-Butylbenzene		2.179	1.783	1.756	1.570	1.646	1.648	1.636	1.604	1.512	1.354	1.669	12.96
74)		1,2-Dichlorobe...	1.370	1.089	1.162	1.034	0.981	1.055	1.026	1.036	1.033	0.994	0.927	1.064	11.05
75)		1,2-Dibromo-3-...				0.100	0.106	0.127	0.147	0.157	0.185	0.204	0.215	0.155	27.97
76)		Hexachlorobuta...				0.177	0.160	0.148	0.143	0.161	0.154	0.146	0.144	0.154	7.55
77)		1,2,4-Trichlor...		0.757	0.538	0.621	0.574	0.604	0.621	0.612	0.649	0.619	0.600	0.620	9.18
78)		Naphthalene				1.870	1.797	2.024	2.133	2.235	2.312	2.257	2.059	2.086	8.86
79)		1,2,3-Trichlor...			0.563	0.568	0.553	0.570	0.602	0.610	0.615	0.611	0.591	0.587	4.01

(#) = Out of Range

Compound List Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019
Response Via : Initial Calibration

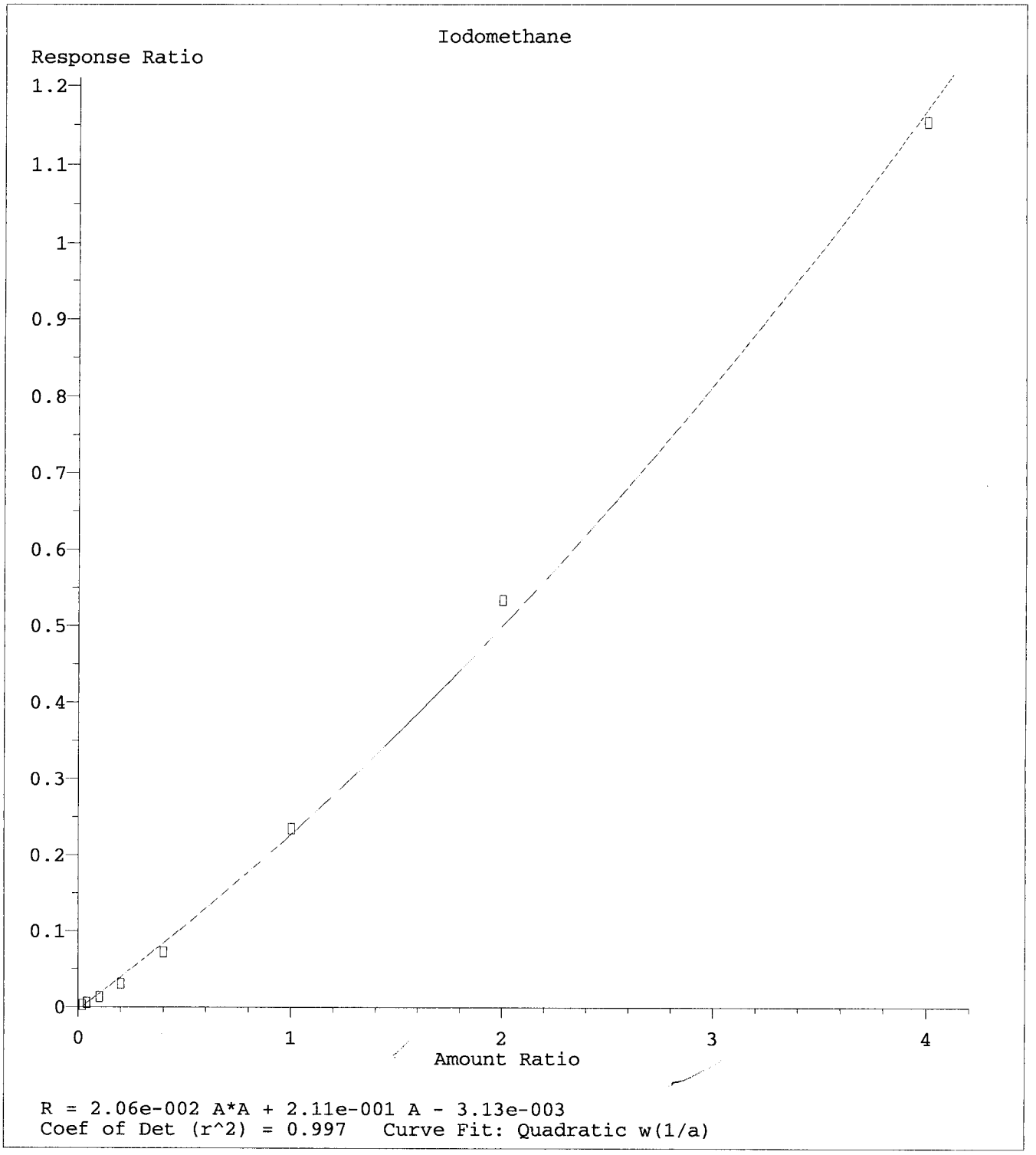
Total Cpnds : 79

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	168	6.034	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.660	0.275	A	2	A	R
3	P	Chloromethane	50	1.861	0.308	A	2	A	R
4	C	Vinyl Chloride	62	1.952	0.324	A	2	A	R
5		Bromomethane	96	2.305	0.382	A	2	A	R
6		Chloroethane	64	2.438	0.404	A	2	A	R
7		Trichlorofluoromethane	101	2.567	0.425	A	2	A	R
8	C	1,1-Dichloroethene	61	3.096	0.513	A	2	A	R
9		Carbon Disulfide	76	3.107	0.515	A	2	A	R
10		Freon 113	101	3.144	0.521	A	2	A	R
11		Iodomethane	142	3.247	0.538	Q 1/a	2	A	R
12		Methylene Chloride	84	3.728	0.618	Q 1/a	2	A	R
13		Acetone	43	3.831	0.635	A	1	A	R
14		t-1,2-Dichloroethene	61	3.893	0.645	A	2	A	R
15		n-Hexane	86	3.965	0.657	Q 1/a	3	A	R
16		Methyl-tert-butyl-ether	73	4.038	0.669	A	3	A	R
17	P	1,1-Dichloroethane	63	4.519	0.749	A	2	A	R
18		Acrylonitrile	53	4.598	0.762	A	2	A	R
19		c-1,2-Dichloroethene	61	5.067	0.840	A	2	A	R
20		2,2-Dichloropropane	77	5.170	0.857	A	2	A	R
21		Bromochloromethane	49	5.268	0.873	A	2	A	R
22	C	Chloroform	83	5.353	0.887	A	2	A	R
23		Carbon Tetrachloride	117	5.480	0.908	A	2	A	R
24		Tetrahydrofuran	42	5.535	0.917	A	2	A	R
25		1,1,1-Trichloroethane	97	5.554	0.920	A	2	A	R
26	S	Dibromofluoromethane (S)	111	5.535	0.917	A	2	A	R
27		1,1-Dichloropropene	75	5.681	0.942	A	2	A	R
28		2-Butanone (MEK)	43	5.687	0.943	A	2	A	R
29		Benzene	78	5.931	0.983	A	2	A	R
30		1,2-Dichloroethane (EDC)	62	6.150	1.019	A	2	A	R
31		iso-Butyl Alcohol	43	6.265	1.038	A	2	A	R
32	S	1,4-Difluorobenzene (S)	114	6.588	1.092	A	2	A	R
33		Trichloroethene (TCE)	130	6.551	1.086	A	2	A	R
34		Dibromomethane	93	7.001	1.160	A	2	A	R
35	C	1,2-Dichloropropane	63	7.111	1.178	A	2	A	R
36		Bromodichloromethane	83	7.183	1.190	Q 1/a²	2	A	R
37	I	Chlorobenzene-d5 (I)	117	9.751	1.000	A	2	A	R
38		c-1,3-Dichloropropene	75	7.889	0.809	A	2	A	R
39	S	Toluene-d8 (S)	98	8.096	0.830	A	2	A	R
40	C	Toluene	91	8.157	0.837	A	2	A	R
41		Tetrachloroethene (PCE)	166	8.601	0.882	A	2	A	R
42		4-Methyl-2-Pentanone (MIBK)	43	8.620	0.884	A	2	A	R
43		t-1,3-Dichloropropene	75	8.643	0.886	A	2	A	R
44		1,1,2-Trichloroethane	97	8.820	0.905	A	2	A	R
45		Dibromochloromethane	129	9.008	0.924	Q 1/a	2	A	R
46		1,3-Dichloropropane	76	9.106	0.934	A	2	A	R
47		1,2-Dibromoethane (EDB)	107	9.246	0.948	A	2	A	R
48		2-Hexanone	43	9.502	0.974	A	2	A	R
49	P	Chlorobenzene	112	9.769	1.002	A	2	A	R
50	C	Ethylbenzene	91	9.800	1.005	A	2	A	R
51		1,1,1,2-Tetrachloroethane	131	9.830	1.008	A	2	A	R
52		m,p-Xylenes (2)	91	9.934	1.019	A	2	A	R
53		o-Xylene	91	10.323	1.059	A	2	A	R
54		Styrene	104	10.371	1.064	A	2	A	R
55	P	Bromoform	173	10.389	1.065	Q 1/a	2	A	R

56		Isopropylbenzene	105	10.597	1.087	A	2	A	R
57	I	1,4-Dichlorobenzene-d4 (I)	152	11.728	1.000	A	2	A	R
58	S	4-Bromofluorobenzene (S)	174	10.840	0.924	A	2	A	R
59		Bromobenzene	156	10.919	0.931	A	2	A	R
60		n-Propylbenzene	91	10.943	0.933	A	2	A	R
61	P	1,1,2,2-Tetrachloroethane	83	11.010	0.939	A	2	A	R
62		2-Chlorotoluene	126	11.071	0.944	A	2	A	R
63		1,3,5-Trimethylbenzene	105	11.108	0.947	A	2	A	R
64		1,2,3-Trichloropropane	110	11.120	0.948	A	2	A	R
65		t-1,4-Dichloro-2-butene	88	11.150	0.951	Q	3	A	R
66		4-Chlorotoluene	91	11.205	0.955	A	2	A	R
67		tert-Butylbenzene	91	11.357	0.968	A	2	A	R
68		1,2,4-Trimethylbenzene	105	11.418	0.974	A	2	A	R
69		sec-Butylbenzene	105	11.497	0.980	A	2	A	R
70		4-Isopropyltoluene	119	11.613	0.990	A	2	A	R
71		1,3-Dichlorobenzene	146	11.673	0.995	A	2	A	R
72		1,4-Dichlorobenzene	146	11.740	1.001	A	2	A	R
73		n-Butylbenzene	91	11.929	1.017	A	2	A	R
74		1,2-Dichlorobenzene	146	12.063	1.029	A	2	A	R
75		1,2-Dibromo-3-Chloropropane	157	12.677	1.081	Q	2	A	R
76		Hexachlorobutadiene	223	13.182	1.124	A	3	A	R
77		1,2,4-Trichlorobenzene	180	13.219	1.127	A	2	A	R
78		Naphthalene	128	13.492	1.150	A	2	A	R
79		1,2,3-Trichlorobenzene	180	13.656	1.164	A	2	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VC190529S.M Thu May 30 15:32:16 2019



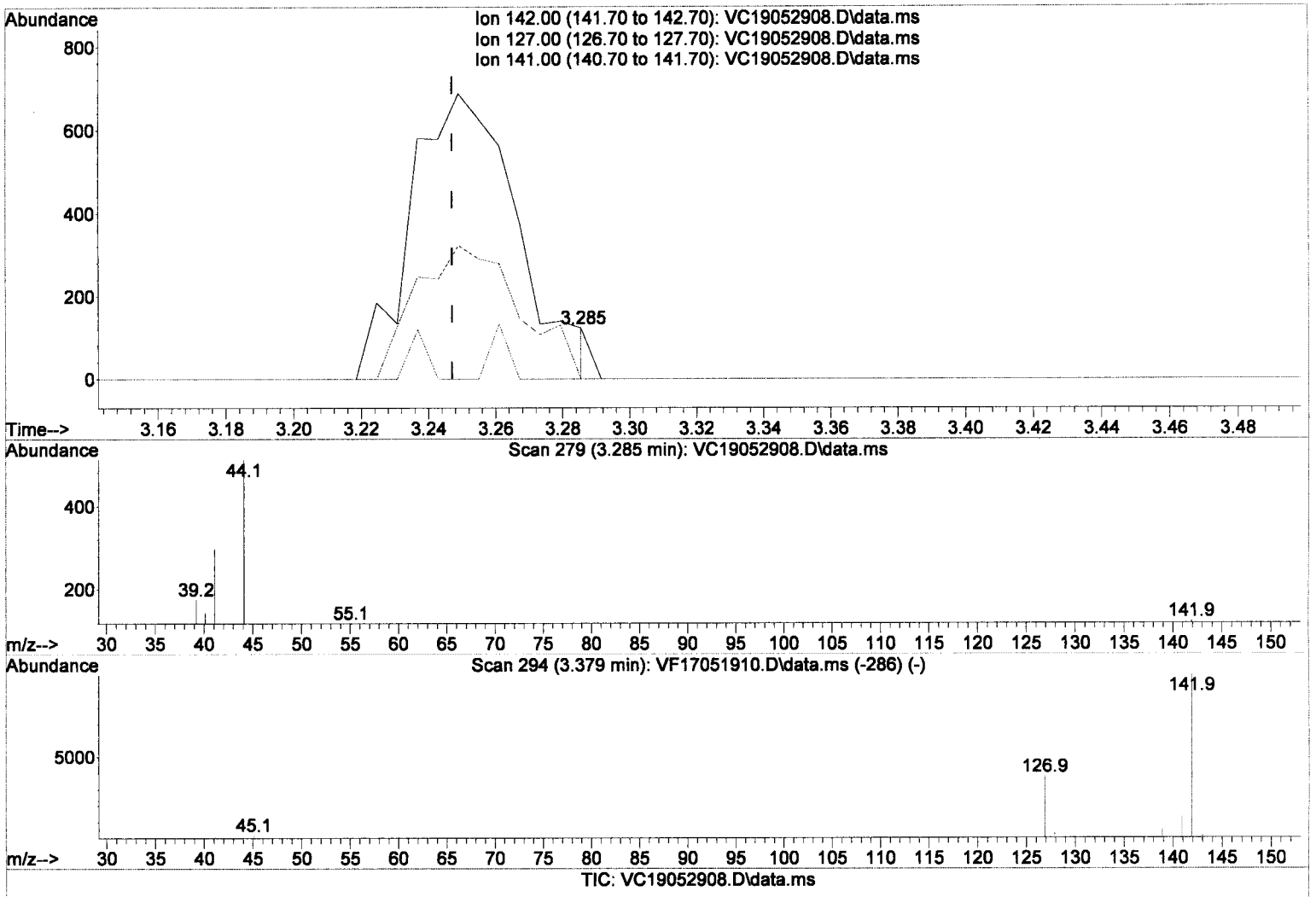
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

Int = 0.74 ✓

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

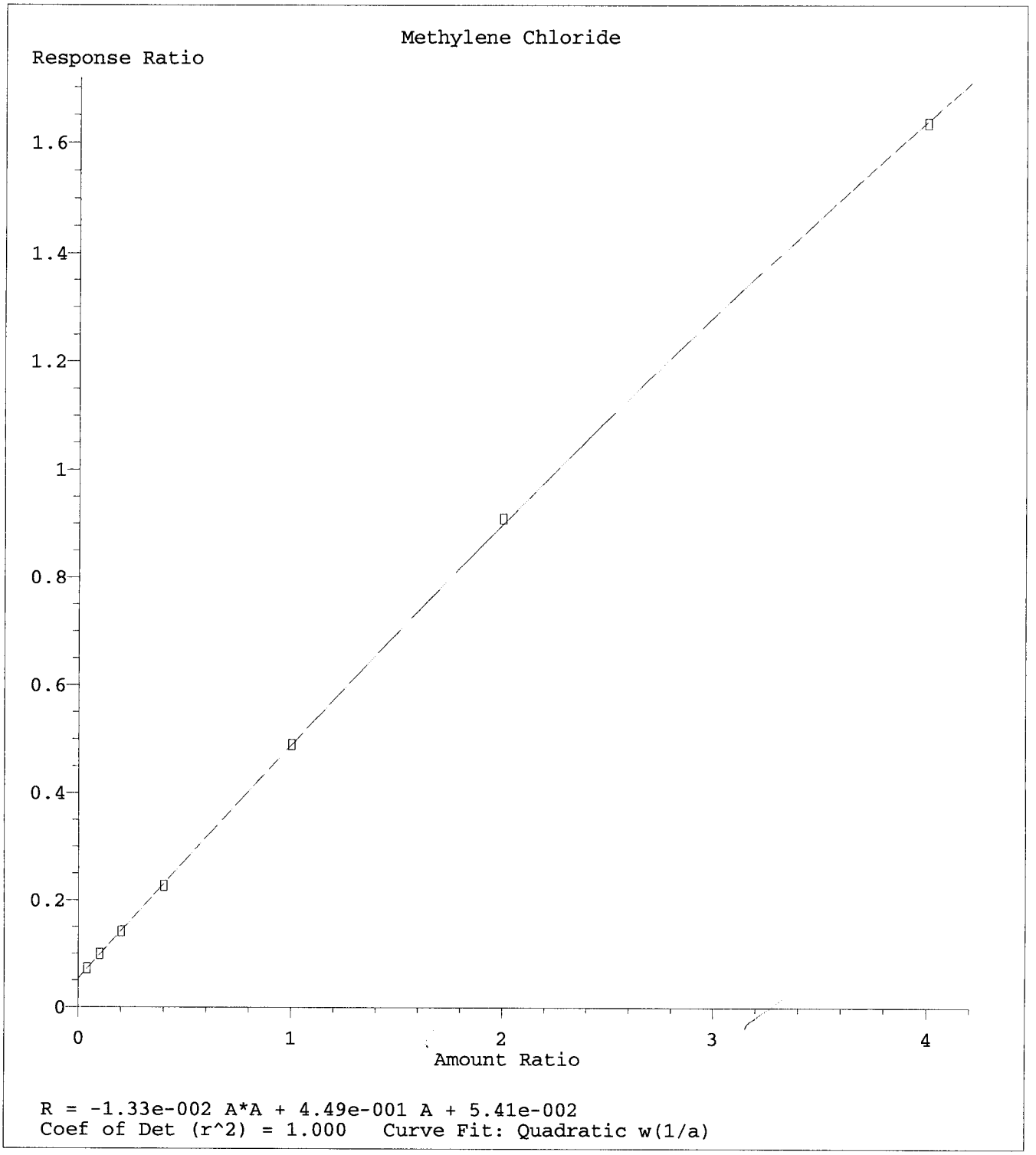


(11) Iodomethane

3.285min (+0.038) 0.74 ug/L m

response 0

Ion	Exp%	Act%
142.00	100	0.00
127.00	35.00	0.00#
141.00	15.00	0.00#
0.00	0.00	0.00



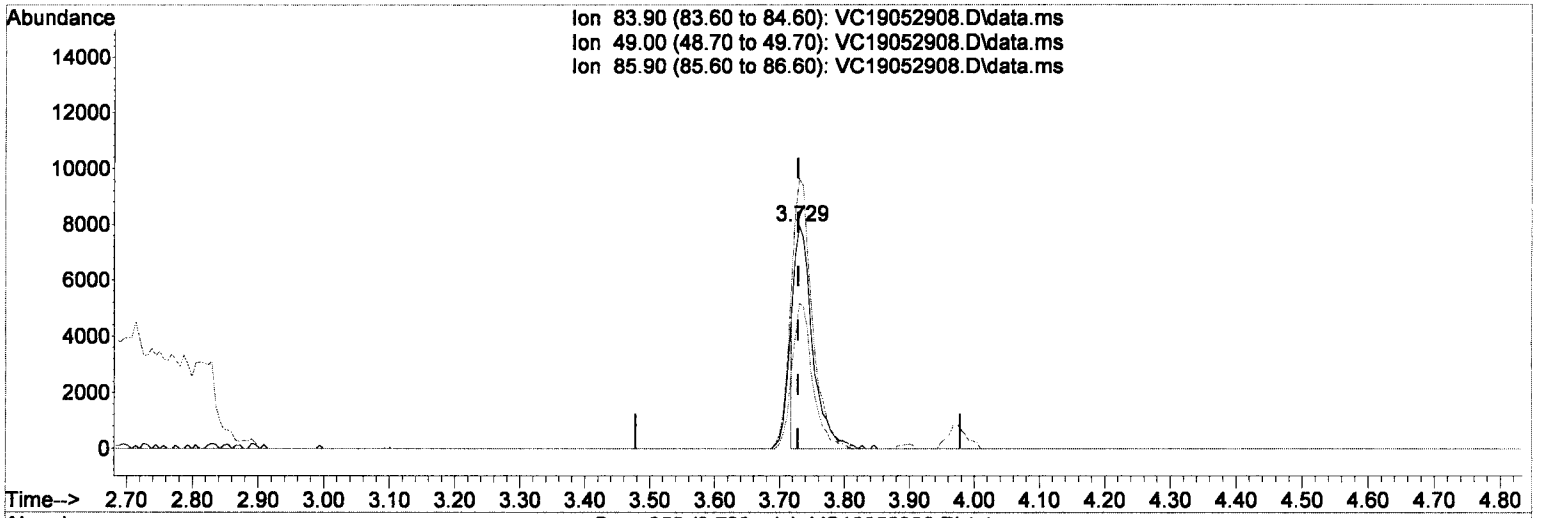
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

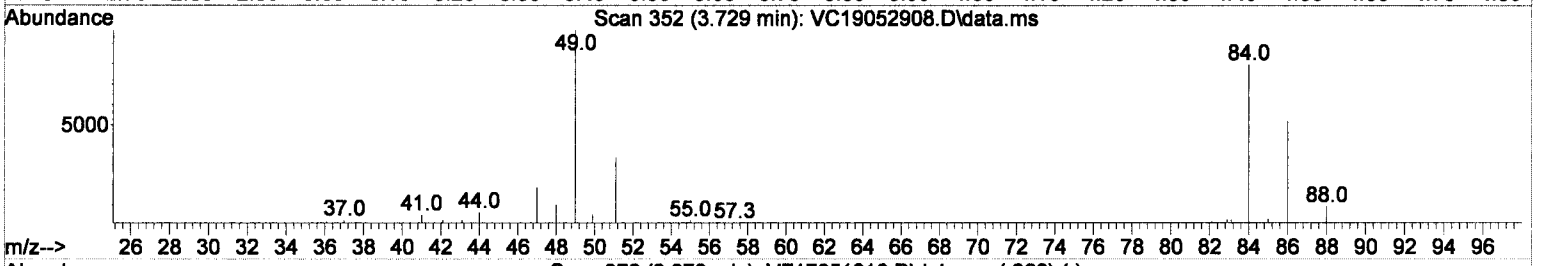
Int = (-)

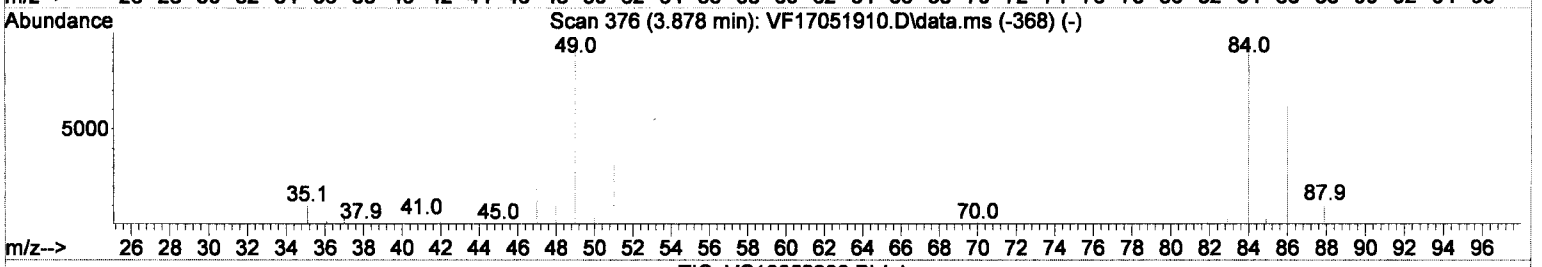
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







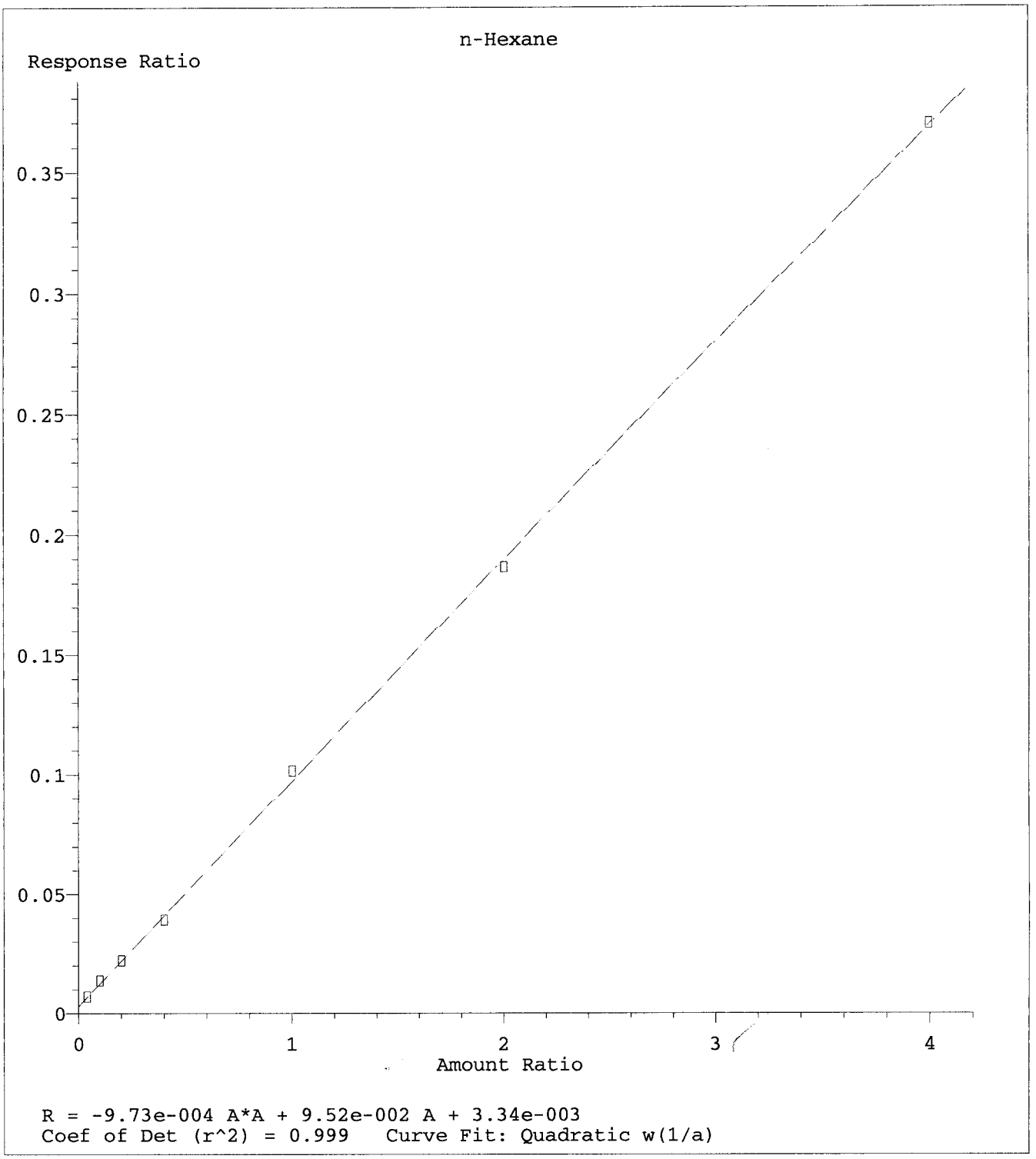
TIC: VC19052908.D\data.ms

(12) Methylene Chloride

3.729min (+0.001) 0.63 ug/L m

response 15220

Ion	Exp%	Act%
83.90	100	100
49.00	121.90	121.44
85.90	60.10	65.11
0.00	0.00	0.00



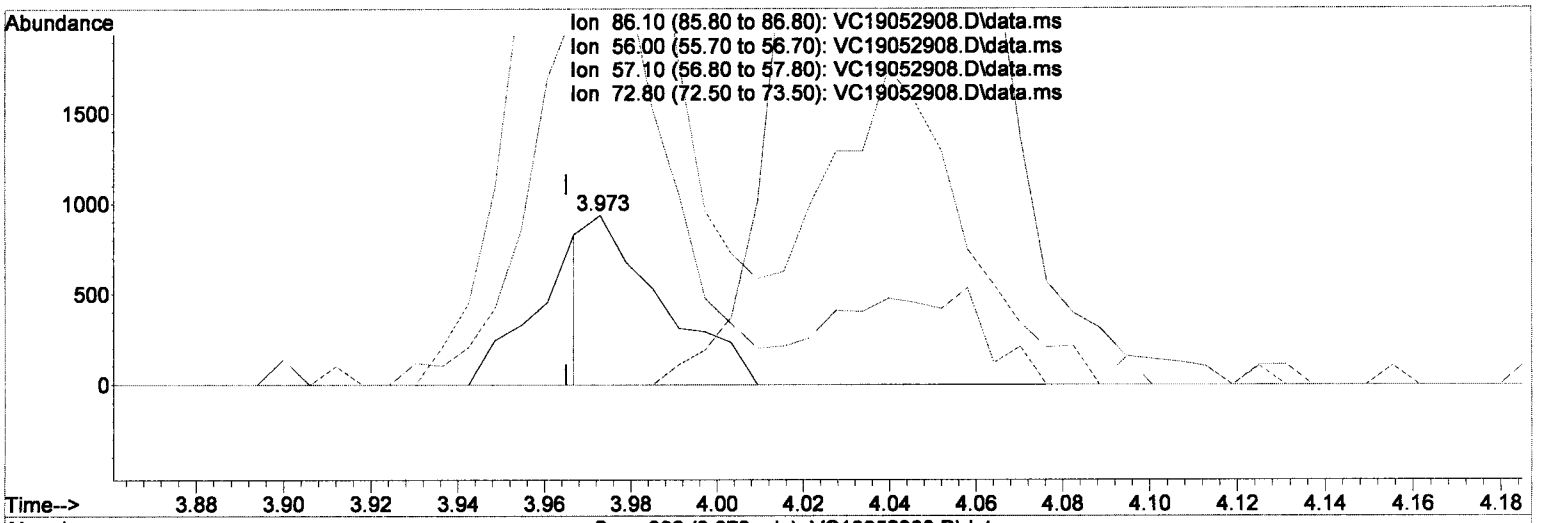
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

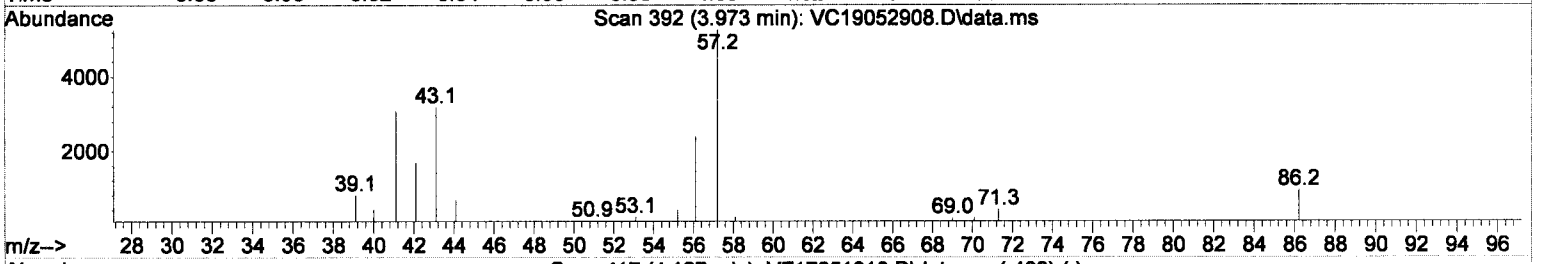
Int = (-)

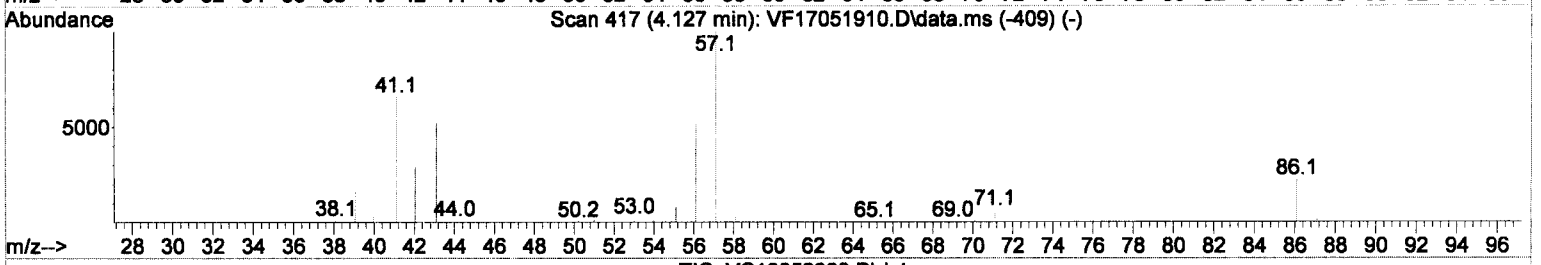
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







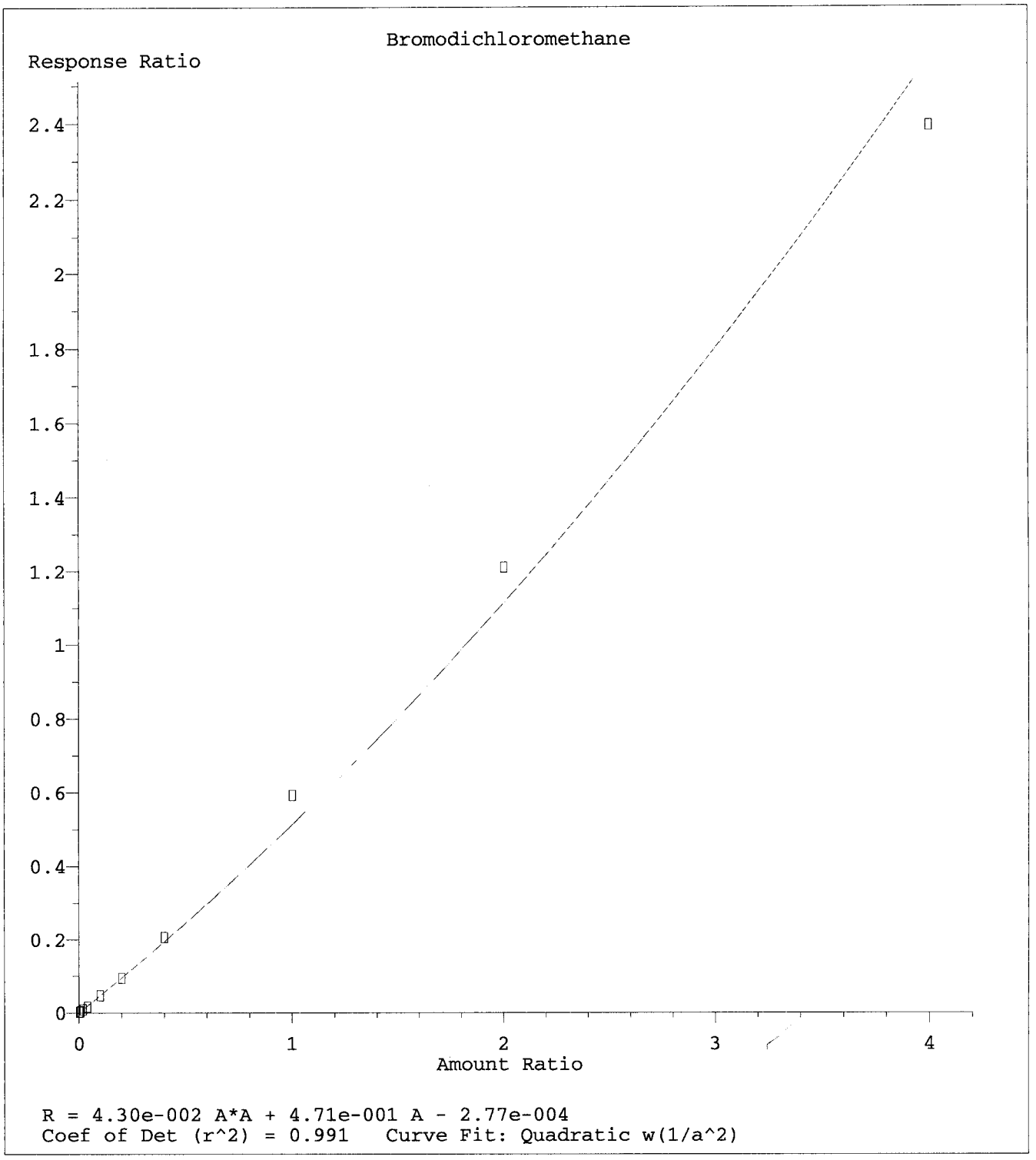
TIC: VC19052908.D\data.ms

(15) n-Hexane

3.973min (+0.008) 0.49 ug/L m

response 1088

Ion	Exp%	Act%
86.10	100	100
56.00	275.70	255.13#
57.10	523.30	562.18#
72.80	1.70	0.00



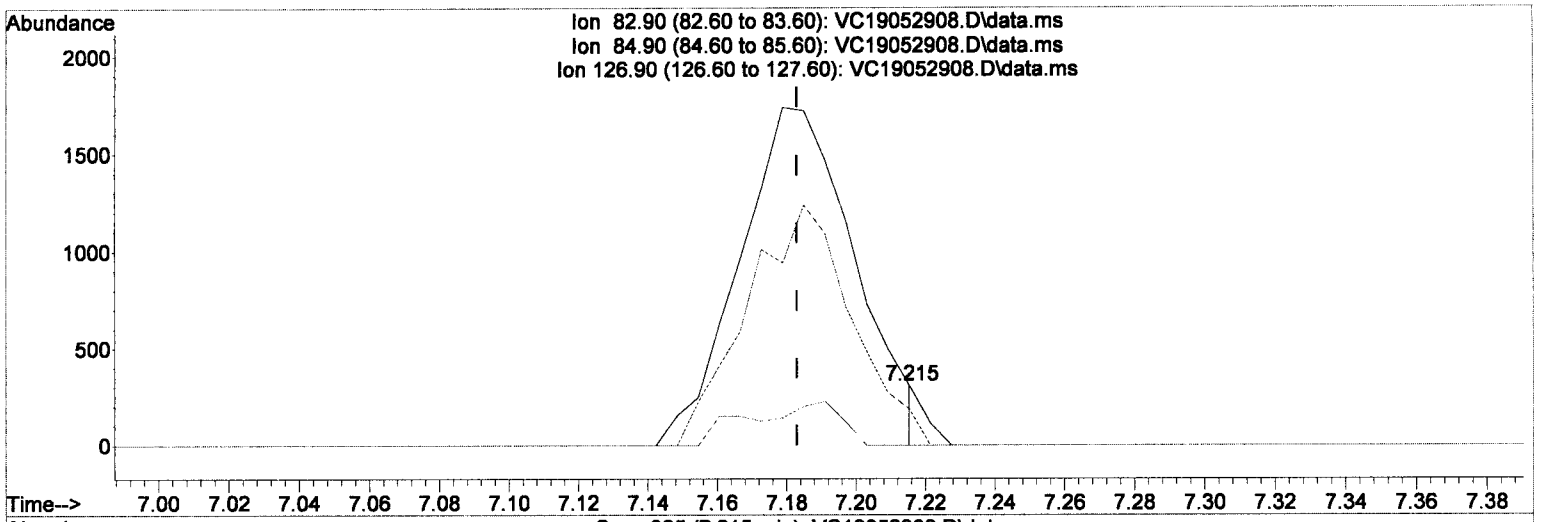
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

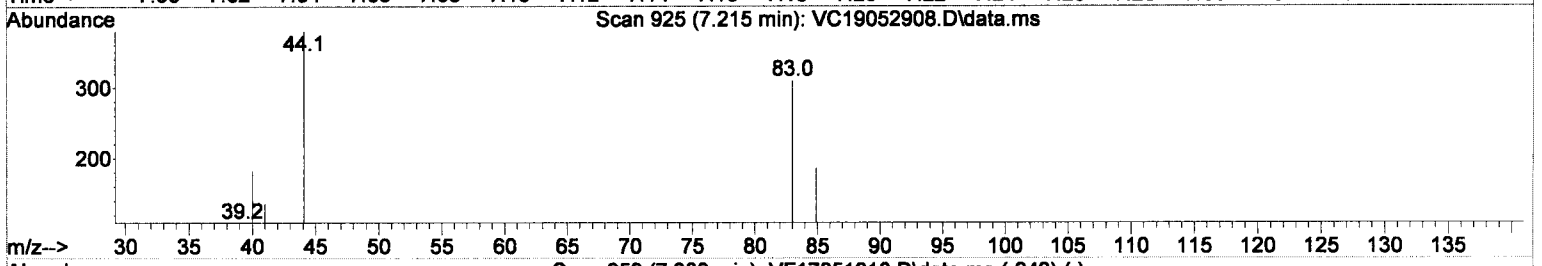
INT= 0.05

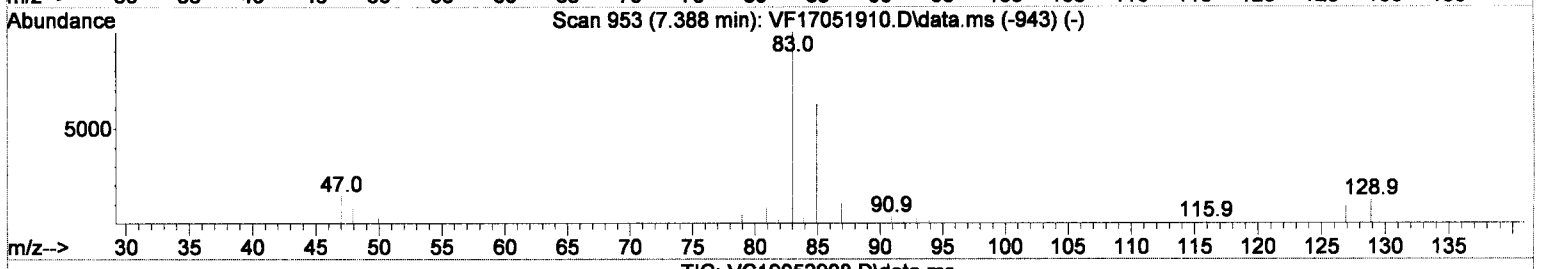
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







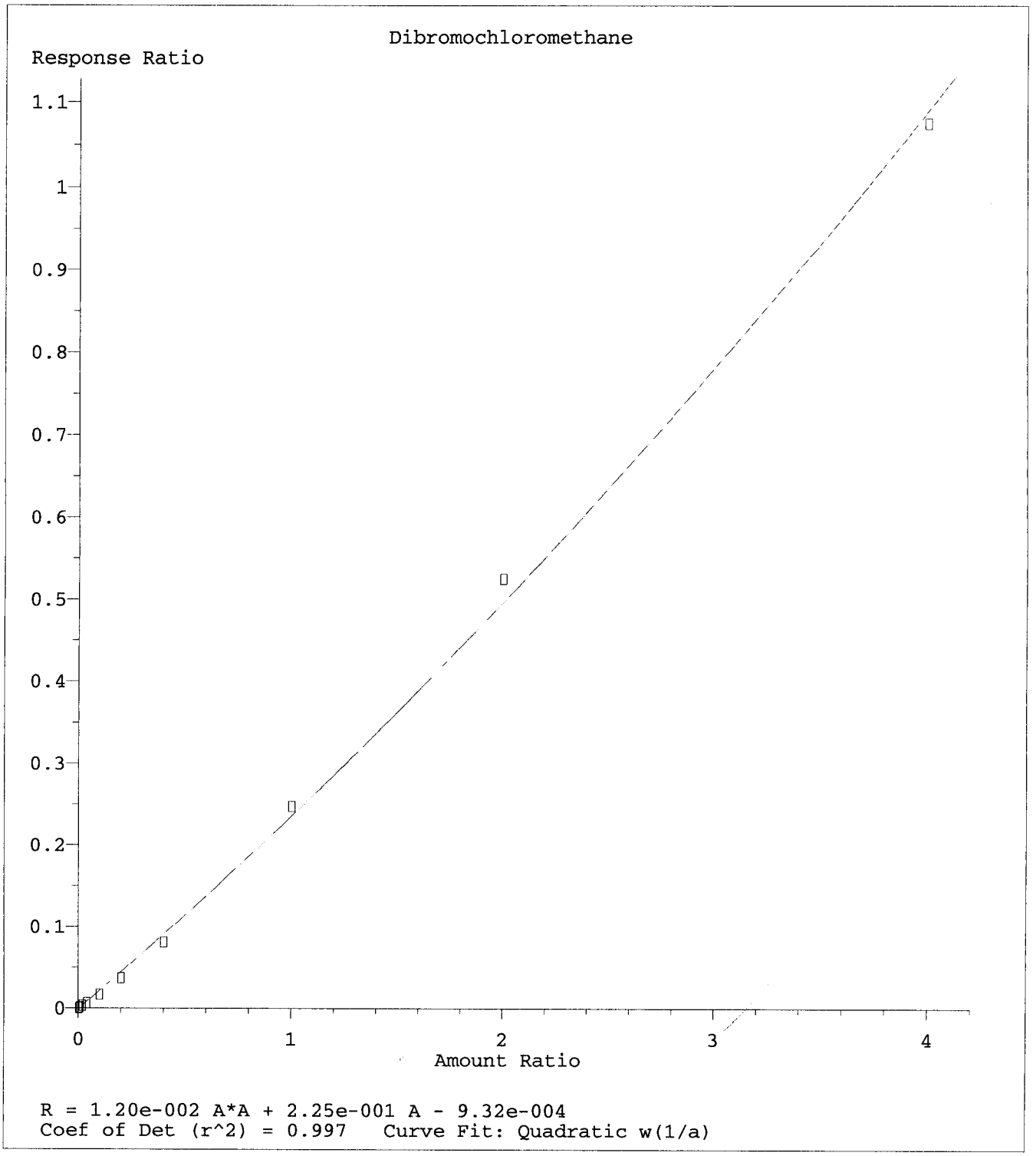
TIC: VC19052908.D\data.ms

(36) Bromodichloromethane

7.215min (+0.032) 0.05 ug/L m

response 41

Ion	Exp%	Act%
82.90	100	100
84.90	63.00	60.00
126.90	9.30	0.00
0.00	0.00	0.00



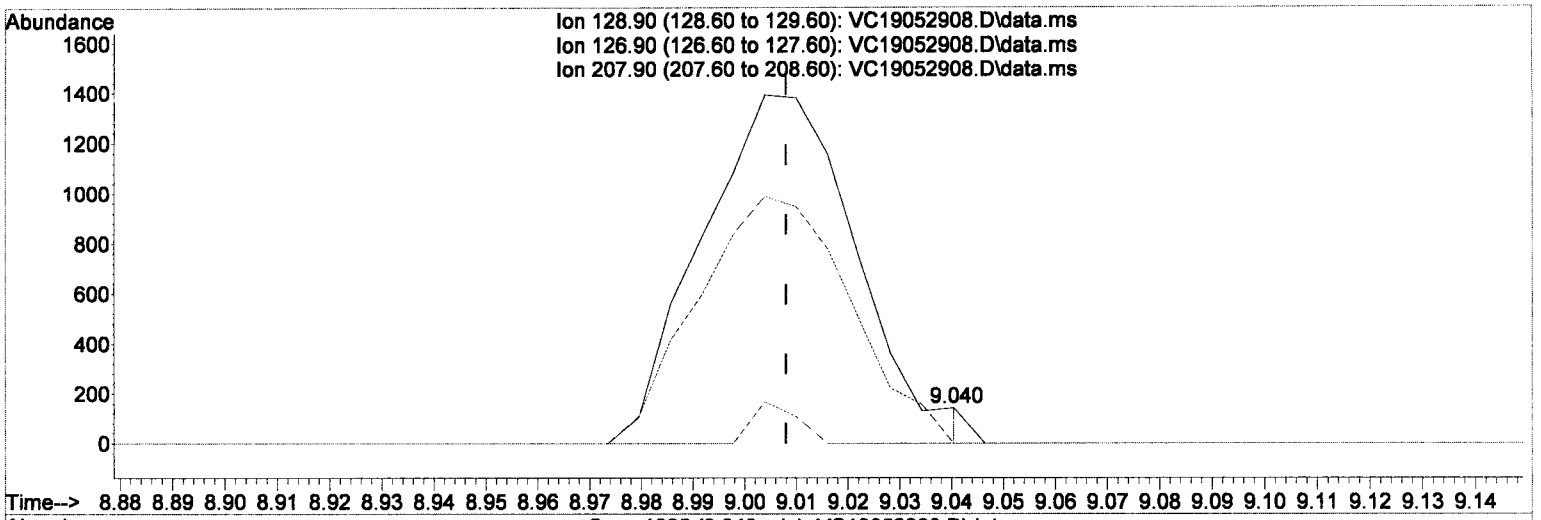
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

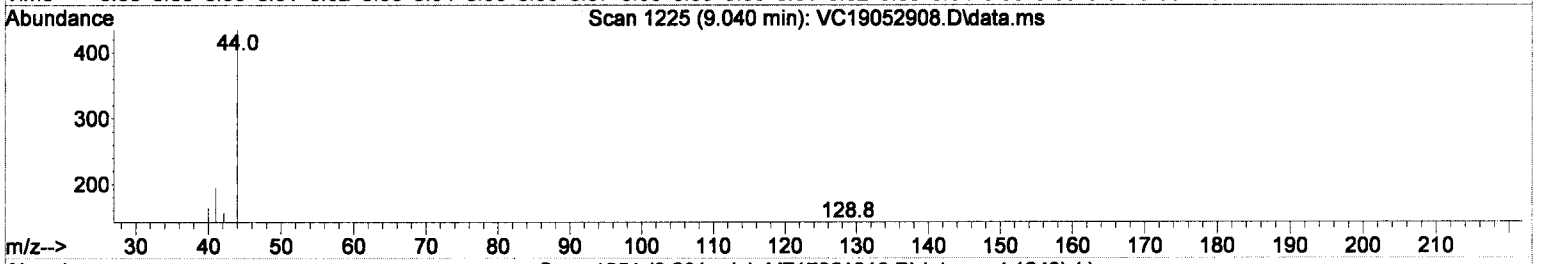
Int = 0.21

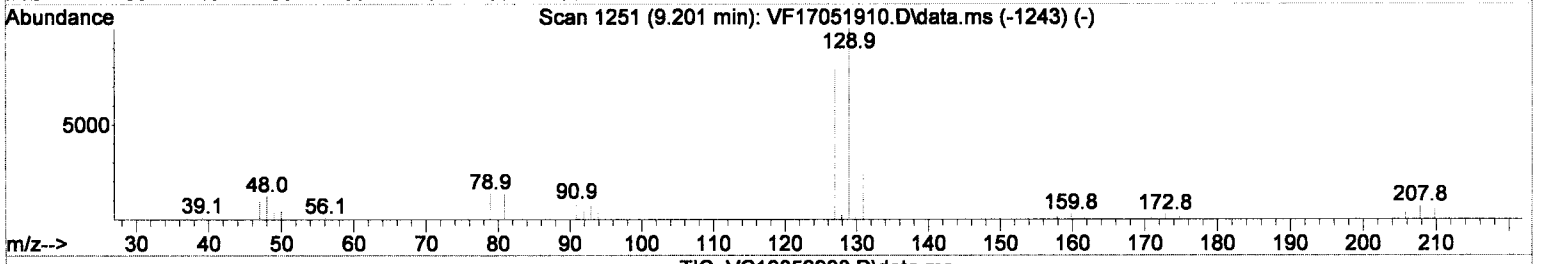
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







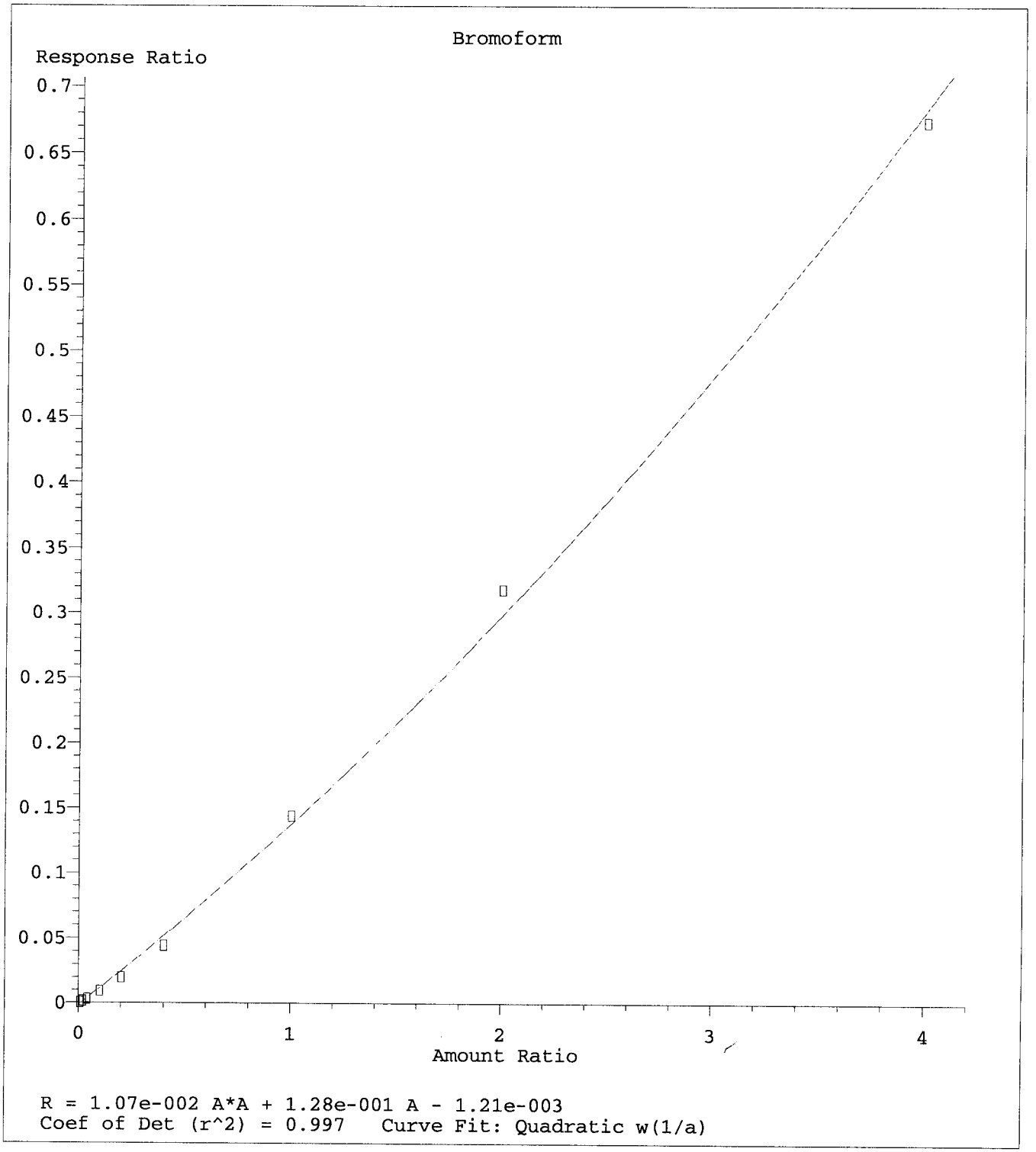
TIC: VC19052908.D\data.ms

(45) Dibromochloromethane

9.040min (+0.032) 0.21 ug/L m

response 0

Ion	Exp%	Act%
128.90	100	0.00
126.90	81.20	0.00#
207.90	7.40	0.00
0.00	0.00	0.00



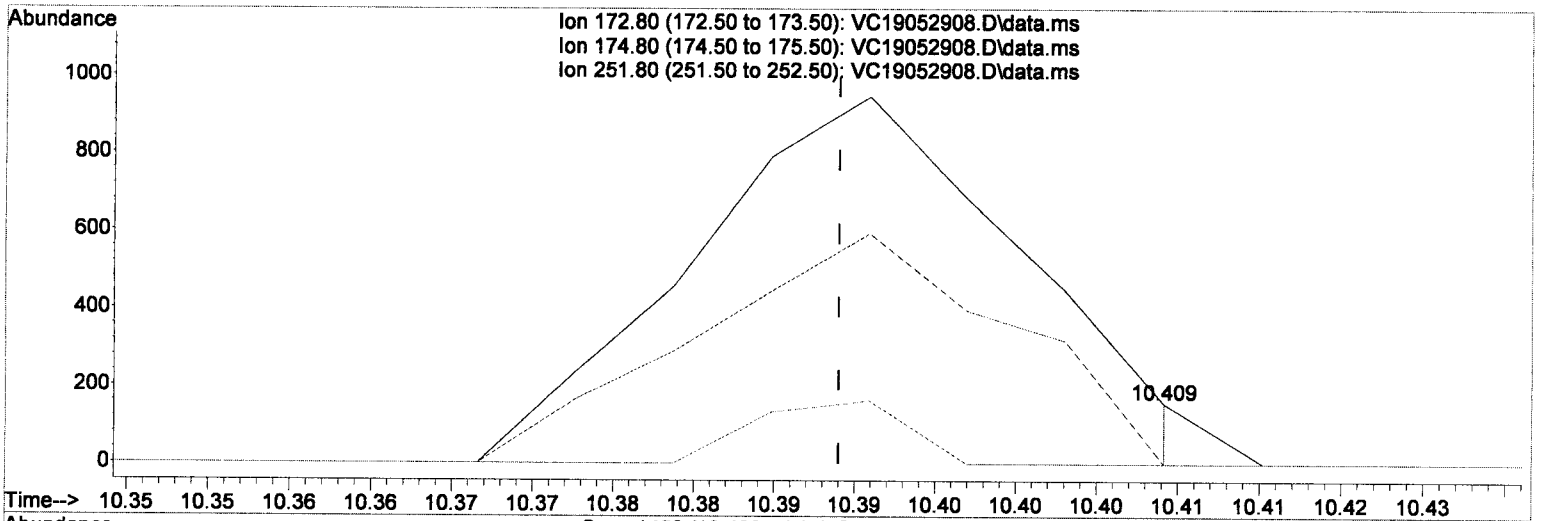
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

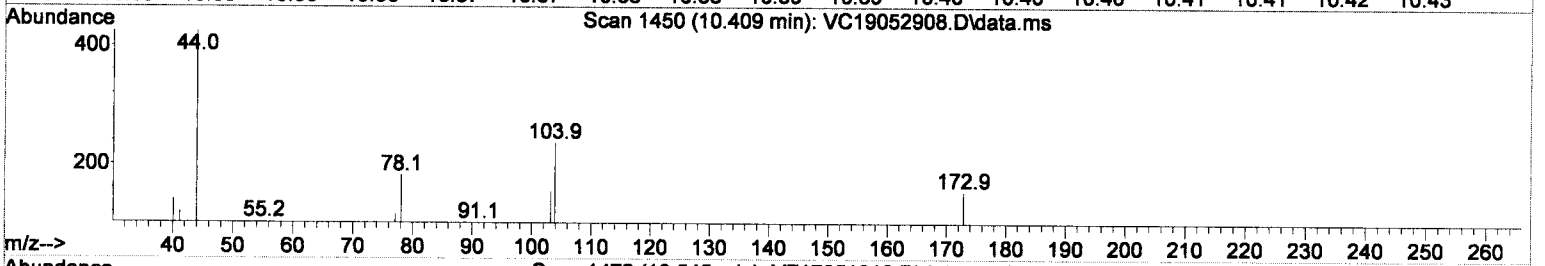
Int = 0.47

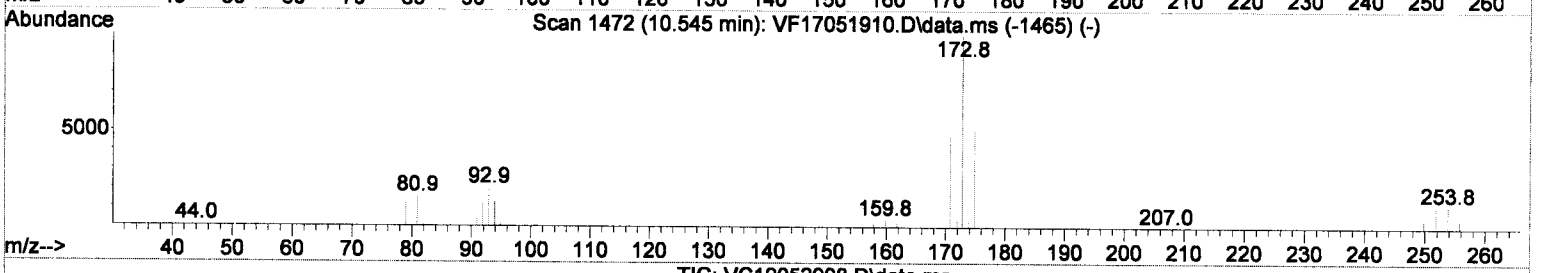
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







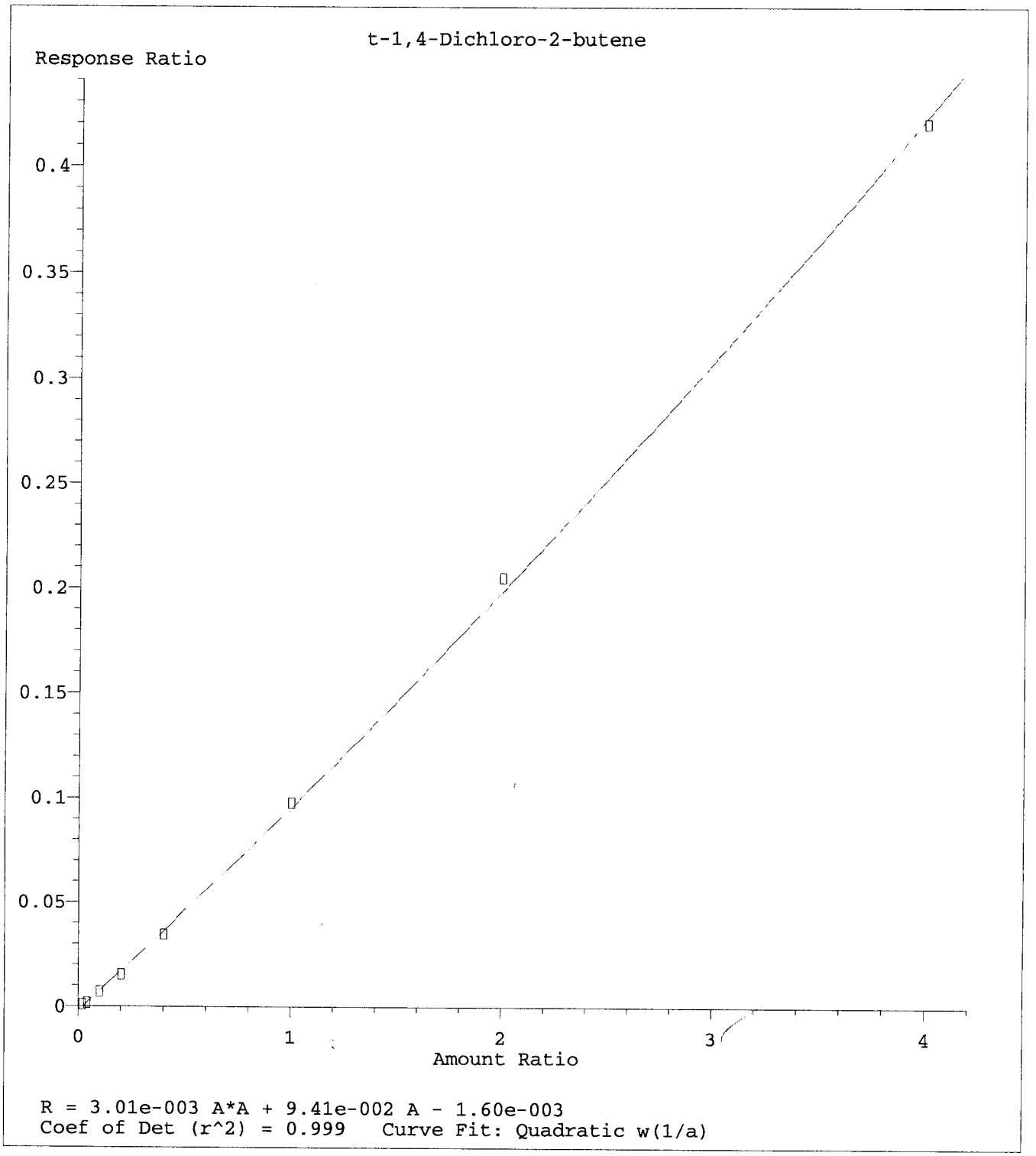
TIC: VC19052908.D\data.ms

(55) Bromoform (P)

10.409min (+0.020) 0.47 ug/L m

response 0

Ion	Exp%	Act%
172.80	100	0.00
174.80	49.10	0.00#
251.80	12.50	0.00
0.00	0.00	0.00



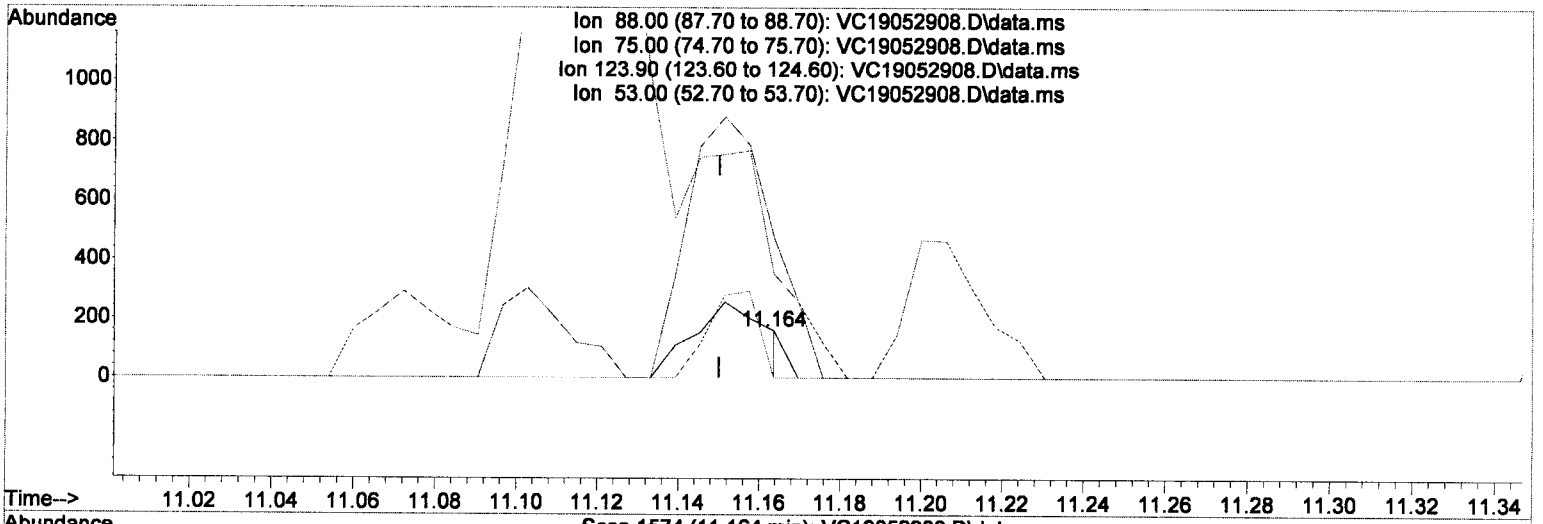
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

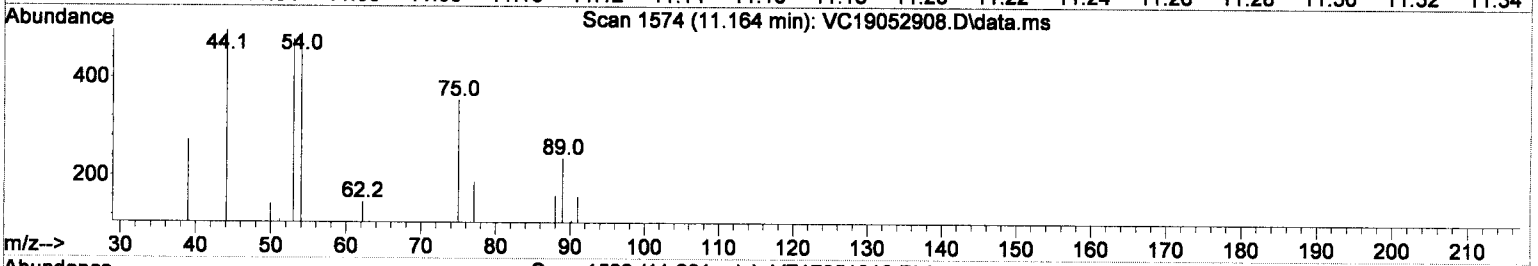
Int=0.85

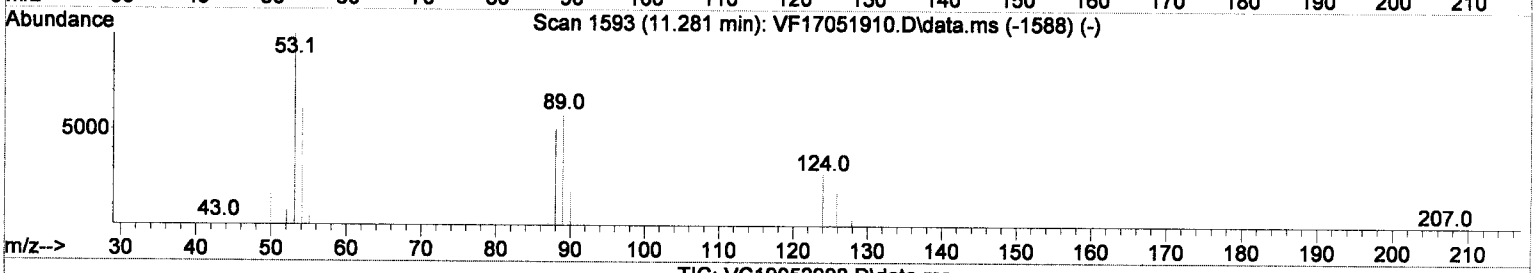
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







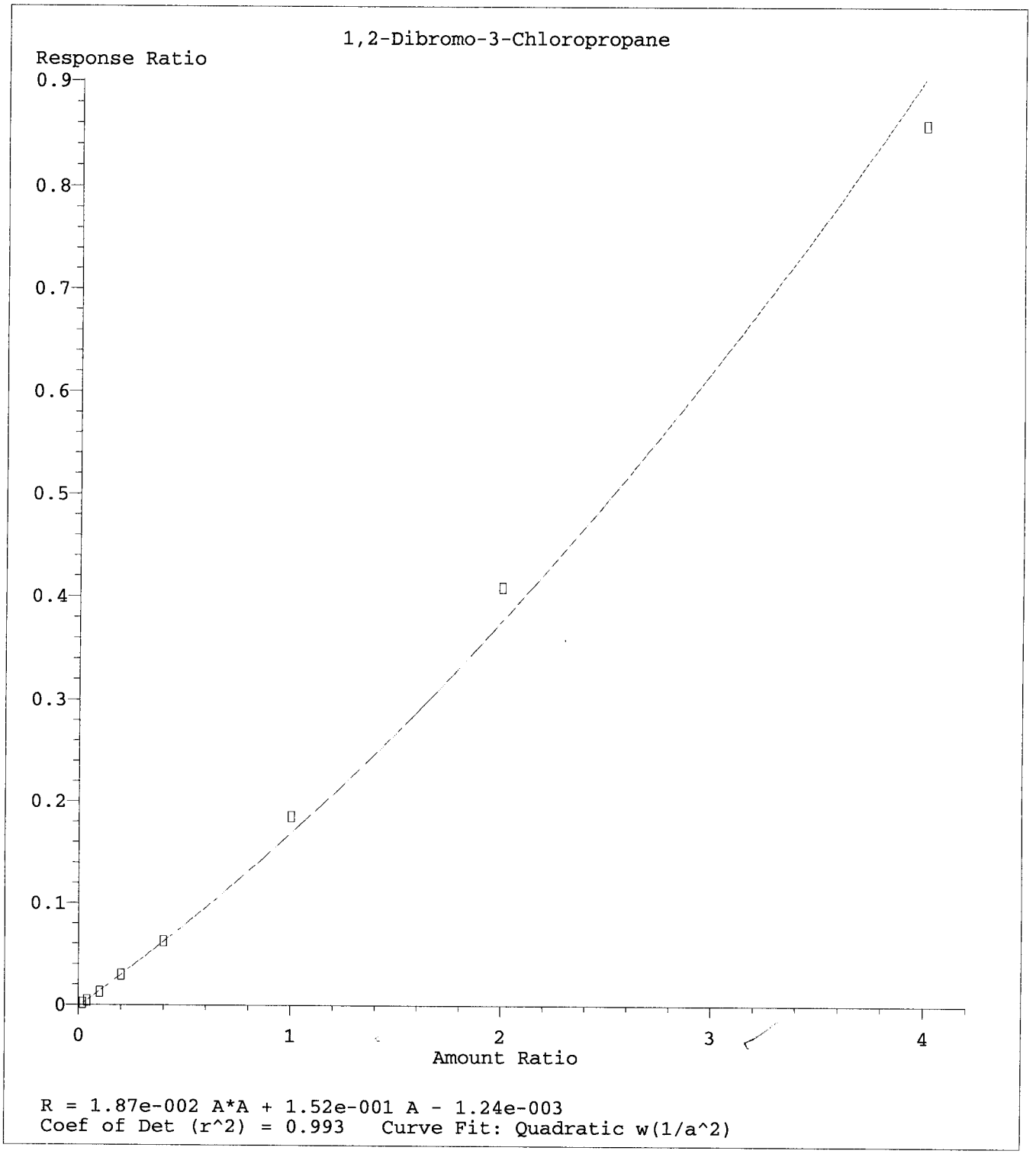
TIC: VC19052908.D\data.ms

(65) t-1,4-Dichloro-2-butene

11.164min (+0.014) 0.85 ug/L m

response 0

Ion	Exp%	Act%
88.00	100	0.00
75.00	240.20	0.00#
123.90	48.30	0.00#
53.00	249.20	0.00#



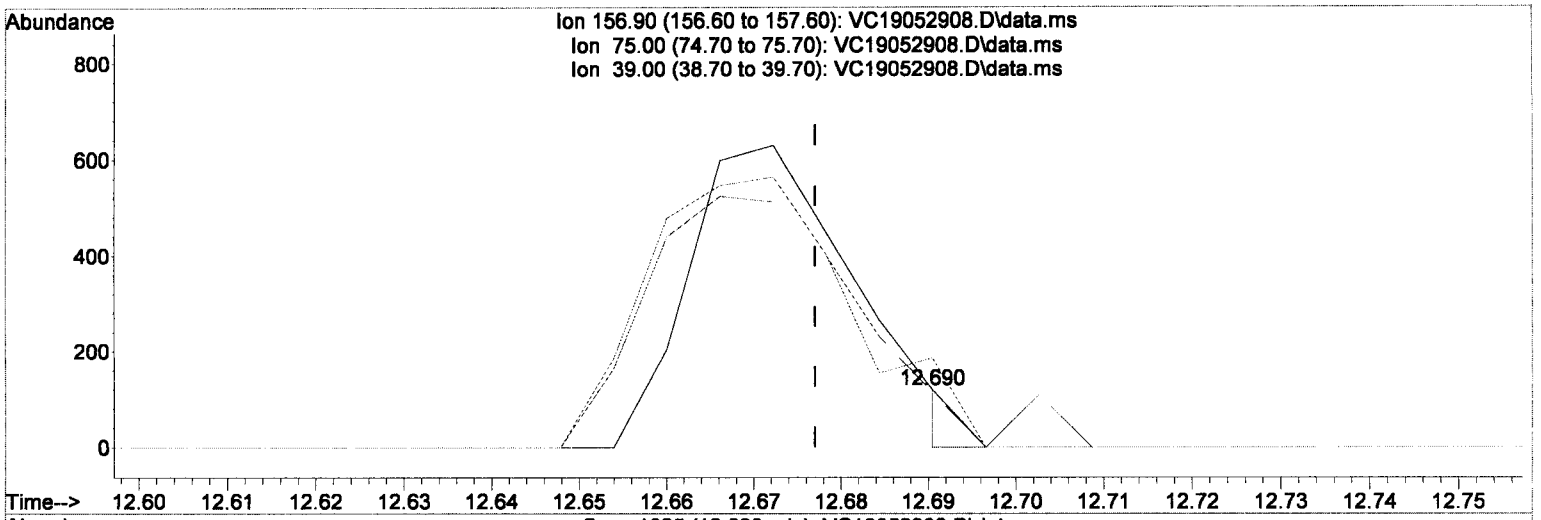
Method Name: C:\msdchem\1\METHODS\VC190529S.M
Calibration Table Last Updated: Thu May 30 14:50:00 2019

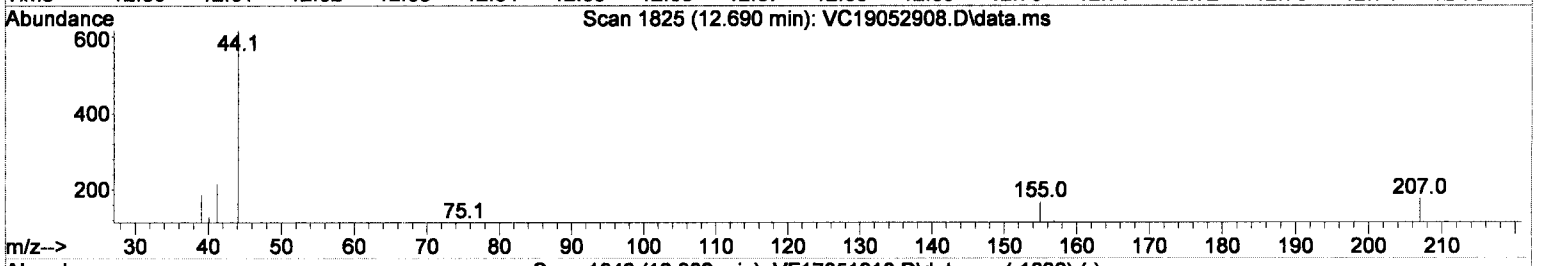
Int- 0.41

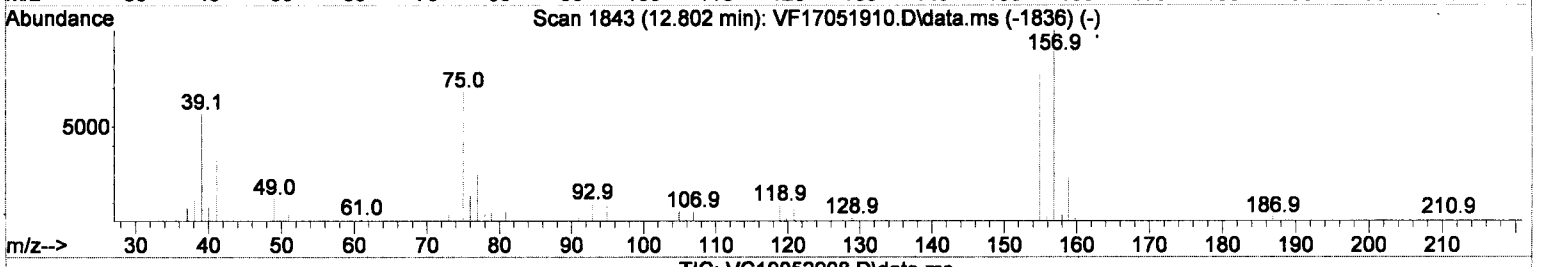
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\requant\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 14:51:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration







TIC: VC19052908.D\data.ms

(75) 1,2-Dibromo-3-Chloropropane

12.690min (+0.013) 0.41 ug/L m

response 0

Ion	Exp%	Act%
156.90	100	0.00
75.00	79.00	0.00#
39.00	63.10	0.00#
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Analysis Included
8260C Full List
8260C Iodomethane Add On

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed	
9E29058-TUN1	MS Tune	Soil		A19C135	5/29/2019	2:45:00PM
9E29058-ICB1	Initial Cal Blank	Soil		A19C135	5/29/2019	3:12:00PM
9E29058-CAL1	Cal Standard	Soil	A19E361	"	5/29/2019	3:40:00PM
9E29058-CAL2	Cal Standard	Soil	A19E362	"	5/29/2019	4:07:00PM
9E29058-CAL3	Cal Standard	Soil	A19E363	"	5/29/2019	4:35:00PM
9E29058-CAL4	Cal Standard	Soil	A19E364	"	5/29/2019	5:02:00PM
9E29058-CAL5	Cal Standard	Soil	A19E365	"	5/29/2019	5:30:00PM
9E29058-CAL6	Cal Standard	Soil	A19E366	"	5/29/2019	5:57:00PM
9E29058-CAL7	Cal Standard	Soil	A19E367	"	5/29/2019	6:25:00PM
9E29058-CAL8	Cal Standard	Soil	A19E368	"	5/29/2019	6:52:00PM
9E29058-CAL9	Cal Standard	Soil	A19E369	"	5/29/2019	7:20:00PM
9E29058-CALA	Cal Standard	Soil	A19E370	"	5/29/2019	8:15:00PM
9E29058-CALB	Cal Standard	Soil	A19E371	"	5/29/2019	9:10:00PM
9E29058-ICV1	Initial Cal Check	Soil	A19D180	"	5/29/2019	10:32:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9E29058** Matrix: **Soil**

9E29058-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E29058-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9E29058** Matrix: **Soil**

9E29058-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

5/30/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	104	0.00
2		Dichlorodifluoromethane	20.000	16.601	17.0	88	0.00
3	P	Chloromethane	20.000	18.769	6.2	102	0.00
4	C	Vinyl Chloride	20.000	19.402	3.0	100	0.00
5		Bromomethane	20.000	20.910	-4.6	113	0.00
6		Chloroethane	20.000	21.410	-7.1	114	0.00
7		Trichlorofluoromethane	20.000	18.012	9.9	91	0.00
8	C	1,1-Dichloroethene	20.000	25.349	-26.7#	132	0.00
9		Carbon Disulfide	20.000	19.569	2.2	104	0.00
10		Freon 113	20.000	19.526	2.4	107	0.00
11		Iodomethane	20.000	15.925	20.4	95	0.00
12		Methylene Chloride	20.000	18.268	8.7	99	0.00
13		Acetone	40.000	40.374	-0.9	109	0.00
14		t-1,2-Dichloroethene	20.000	24.328	-21.6	125	0.00
15		n-Hexane	20.000	21.522	-7.6	117	0.00
16		Methyl-tert-butyl-ether	20.000	20.311	-1.6	105	0.00
17	P	1,1-Dichloroethane	20.000	24.105	-20.5	123	0.00
18		Acrylonitrile	20.000	20.919	-4.6	107	0.00
19		c-1,2-Dichloroethene	20.000	21.549	-7.7	111	0.00
20		2,2-Dichloropropane	20.000	19.541	2.3	101	0.00
21		Bromochloromethane	20.000	21.674	-8.4	111	0.00
22	C	Chloroform	20.000	20.682	-3.4	109	0.00
23		Carbon Tetrachloride	20.000	21.742	-8.7	113	0.00
24		Tetrahydrofuran	20.000	18.311	8.4	103	0.00
25		1,1,1-Trichloroethane	20.000	22.507	-12.5	114	0.00
26	S	Dibromofluoromethane (S)	50.000	52.205	-4.4	107	0.00
27		1,1-Dichloropropene	20.000	20.651	-3.3	110	0.00
28		2-Butanone (MEK)	40.000	40.499	-1.2	105	0.00
29		Benzene	20.000	21.213	-6.1	111	0.00
30		1,2-Dichloroethane (EDC)	20.000	21.381	-6.9	111	0.00
31		iso-Butyl Alcohol	500.000	505.534	-1.1	106	0.00
32	S	1,4-Difluorobenzene (S)	50.000	50.316	-0.6	104	0.00
33		Trichloroethene (TCE)	20.000	20.429	-2.1	110	0.00
34		Dibromomethane	20.000	21.333	-6.7	107	0.00
35	C	1,2-Dichloropropane	20.000	21.040	-5.2	107	0.00
36		Bromodichloromethane	20.000	21.954	-9.8	108	0.00
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	104	0.00
38		c-1,3-Dichloropropene	20.000	21.998	-10.0	106	0.00
39	S	Toluene-d8 (S)	50.000	49.494	1.0	103	0.00
40	C	Toluene	20.000	19.867	0.7	107	0.00
41		Tetrachloroethene (PCE)	20.000	19.350	3.2	108	0.00
42		4-Methyl-2-Pentanone (MIBK)	40.000	38.786	3.0	106	0.00
43		t-1,3-Dichloropropene	20.000	21.766	-8.8	108	0.00
44		1,1,2-Trichloroethane	20.000	21.448	-7.2	109	0.00
45		Dibromochloromethane	20.000	18.920	5.4	111	0.00
46		1,3-Dichloropropane	20.000	20.691	-3.5	106	0.00
47		1,2-Dibromoethane (EDB)	20.000	21.849	-9.2	109	0.00
48		2-Hexanone	40.000	40.703	-1.8	105	0.00
49	P	Chlorobenzene	20.000	20.140	-0.7	108	0.00
50	C	Ethylbenzene	20.000	19.824	0.9	105	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		1,1,1,2-Tetrachloroethane	20.000	22.006	-10.0	109	0.00
52		m,p-Xylenes (2)	40.000	40.543	-1.4	105	0.00
53		o-Xylene	20.000	20.062	-0.3	105	0.00
54		Styrene	20.000	21.470	-7.3	104	0.00
55	P	Bromoform	20.000	18.669	6.7	114	0.00
56		Isopropylbenzene	20.000	19.716	1.4	103	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	104	0.00
58	S	4-Bromofluorobenzene (S)	50.000	50.070	-0.1	104	0.00
59		Bromobenzene	20.000	21.439	-7.2	110	0.00
60		n-Propylbenzene	20.000	19.707	1.5	104	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	21.542	-7.7	108	0.00
62		2-Chlorotoluene	20.000	20.119	-0.6	106	0.00
63		1,3,5-Trimethylbenzene	20.000	20.761	-3.8	106	0.00
64		1,2,3-Trichloropropane	20.000	20.337	-1.7	104	0.00
65		t-1,4-Dichloro-2-butene	20.000	19.171	4.1	106	0.00
66		4-Chlorotoluene	20.000	20.304	-1.5	107	0.00
67		tert-Butylbenzene	20.000	19.432	2.8	104	0.00
68		1,2,4-Trimethylbenzene	20.000	20.219	-1.1	104	0.00
69		sec-Butylbenzene	20.000	20.188	-0.9	106	0.00
70		4-Isopropyltoluene	20.000	21.024	-5.1	109	0.00
71		1,3-Dichlorobenzene	20.000	19.621	1.9	107	0.00
72		1,4-Dichlorobenzene	20.000	19.523	2.4	107	0.00
73		n-Butylbenzene	20.000	20.206	-1.0	108	0.00
74		1,2-Dichlorobenzene	20.000	19.718	1.4	106	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	20.020	-0.1	104	0.00
76		Hexachlorobutadiene	20.000	21.571	-7.9	108	0.00
77		1,2,4-Trichlorobenzene	20.000	20.935	-4.7	111	0.00
78		Naphthalene	20.000	21.666	-8.3	106	0.00
79		1,2,3-Trichlorobenzene	20.000	20.922	-4.6	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

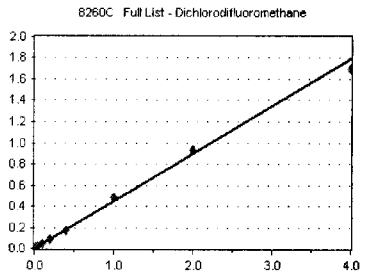
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

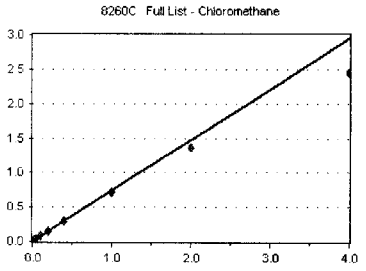


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	475	0.462	1.67
9E29058-CAL3	0.4	840	0.413	1.66
9E29058-CAL4	1	2045	0.416	1.66
9E29058-CAL5	2	4563	0.448	1.67
9E29058-CAL6	5	12196	0.479	1.67
9E29058-CAL7	10	22760	0.453	1.66
9E29058-CAL8	20	45253	0.441	1.66
9E29058-CAL9	50	122313	0.488	1.66
9E29058-CALA	100	241195	0.463	1.65
9E29058-CALB	200	453681	0.426	1.66

AVE RF **0.449** RF RSD **5.63** AVE RT **1.66**

Chloromethane

Curve Fit: **AVERAGE RF**

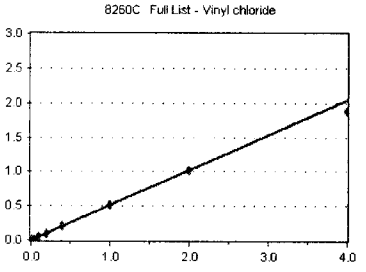


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~835~~	~~1.607~~	~~1.86~~
~~9E29058-CAL2~~	~~0.2~~	~~1572~~	~~1.531~~	~~1.87~~
9E29058-CAL3	0.4	1870	0.919	1.86
9E29058-CAL4	1	3872	0.788	1.86
9E29058-CAL5	2	7629	0.748	1.86
9E29058-CAL6	5	19122	0.751	1.86
9E29058-CAL7	10	35625	0.710	1.86
9E29058-CAL8	20	72826	0.710	1.86
9E29058-CAL9	50	179217	0.715	1.86
9E29058-CALA	100	355923	0.683	1.85
9E29058-CALB	200	652609	0.612	1.86

AVE RF **0.737** RF RSD **11.42** AVE RT **1.86**

Vinyl chloride

Curve Fit: **AVERAGE RF**

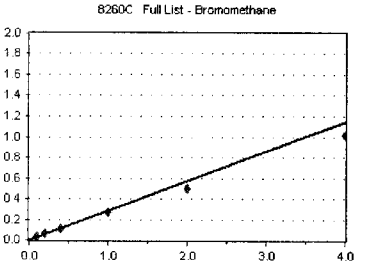


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	515	0.501	1.95
9E29058-CAL3	0.4	1058	0.520	1.96
9E29058-CAL4	1	2495	0.508	1.95
9E29058-CAL5	2	5260	0.516	1.95
9E29058-CAL6	5	13474	0.529	1.95
9E29058-CAL7	10	25219	0.502	1.94
9E29058-CAL8	20	52612	0.513	1.95
9E29058-CAL9	50	132089	0.527	1.95
9E29058-CALA	100	265790	0.510	1.94
9E29058-CALB	200	501566	0.470	1.94

AVE RF **0.510** RF RSD **3.26** AVE RT **1.95**

Bromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1488~~	~~2.863~~	~~2.31~~
~~9E29058-CAL2~~	~~0.2~~	~~1803~~	~~1.756~~	~~2.31~~
~~9E29058-CAL3~~	~~0.4~~	~~2178~~	~~1.071~~	~~2.31~~
~~9E29058-CAL4~~	~~1~~	~~2456~~	~~0.500~~	~~2.30~~
~~9E29058-CAL5~~	~~2~~	~~4475~~	~~0.439~~	~~2.31~~
9E29058-CAL6	5	9080	0.356	2.31
9E29058-CAL7	10	16179	0.322	2.30
9E29058-CAL8	20	28393	0.277	2.30
9E29058-CAL9	50	66982	0.267	2.30
9E29058-CALA	100	130087	0.250	2.30
9E29058-CALB	200	269576	0.253	2.29

AVE RF **0.287** RF RSD **14.87** AVE RT **2.30**

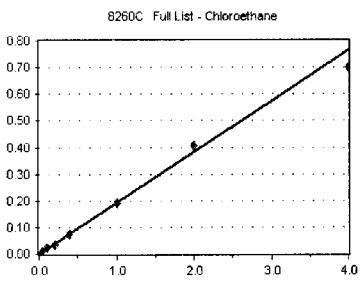
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Chloroethane

Curve Fit: **AVERAGE RF**

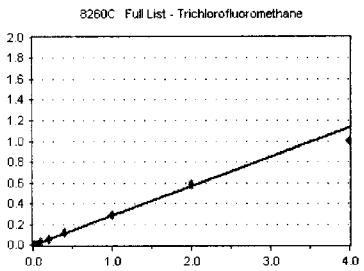


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL5	2	2003	0.197	2.44
9E29058-CAL6	5	5245	0.206	2.45
9E29058-CAL7	10	9117	0.182	2.44
9E29058-CAL8	20	19192	0.187	2.45
9E29058-CAL9	50	47938	0.191	2.45
9E29058-CALA	100	105670	0.203	2.44
9E29058-CALB	200	187116	0.176	2.43

AVE RF **0.191** RF RSD **5.76** AVE RT **2.44**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

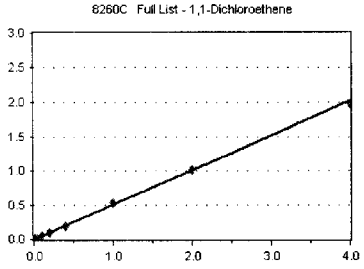


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL3	0.4	561	0.276	2.58
9E29058-CAL4	1	1421	0.289	2.57
9E29058-CAL5	2	2958	0.290	2.58
9E29058-CAL6	5	7697	0.302	2.58
9E29058-CAL7	10	13672	0.272	2.57
9E29058-CAL8	20	29898	0.291	2.58
9E29058-CAL9	50	73023	0.291	2.58
9E29058-CALA	100	152590	0.293	2.57
9E29058-CALB	200	268497	0.252	2.57

AVE RF **0.284** RF RSD **5.30** AVE RT **2.57**

1,1-Dichloroethene

Curve Fit: **AVERAGE RF**

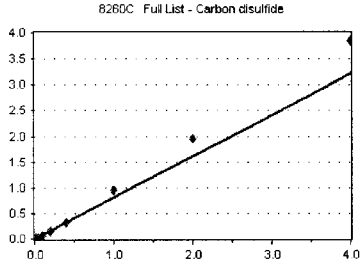


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	456	0.444	3.10
9E29058-CAL3	0.4	1130	0.556	3.11
9E29058-CAL4	1	2472	0.503	3.10
9E29058-CAL5	2	4891	0.480	3.10
9E29058-CAL6	5	13008	0.511	3.10
9E29058-CAL7	10	25751	0.513	3.09
9E29058-CAL8	20	51985	0.507	3.09
9E29058-CAL9	50	135031	0.538	3.10
9E29058-CALA	100	268375	0.515	3.09
9E29058-CALB	200	525278	0.493	3.09

AVE RF **0.506** RF RSD **6.03** AVE RT **3.10**

Carbon disulfide

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	835	0.813	3.12
9E29058-CAL3	0.4	1568	0.771	3.12
9E29058-CAL4	1	3330	0.678	3.11
9E29058-CAL5	2	6854	0.672	3.12
9E29058-CAL6	5	17910	0.703	3.11
9E29058-CAL7	10	36451	0.726	3.11
9E29058-CAL8	20	80999	0.789	3.11
9E29058-CAL9	50	237187	0.946	3.11
9E29058-CALA	100	506056	0.971	3.10
9E29058-CALB	200	1024014	0.960	3.10

AVE RF **0.803** RF RSD **14.57** AVE RT **3.11**

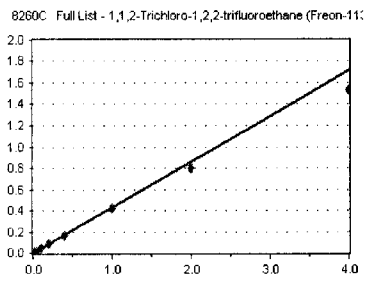
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,1,2-Trichloro-1,2,2-trifluoroetha

Curve Fit: **AVERAGE RF**

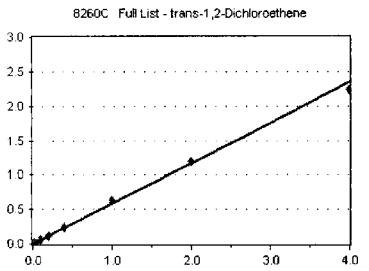


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	603	0.587	3.16
9E29058-CAL3	0.4	935	0.460	3.17
9E29058-CAL4	1	2147	0.437	3.14
9E29058-CAL5	2	3908	0.383	3.15
9E29058-CAL6	5	10435	0.410	3.15
9E29058-CAL7	10	20551	0.409	3.15
9E29058-CAL8	20	41761	0.407	3.15
9E29058-CAL9	50	104970	0.419	3.15
9E29058-CALA	100	207803	0.399	3.14
9E29058-CALB	200	409831	0.384	3.14

AVE RF **0.429** RF RSD **13.96** AVE RT **3.15**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

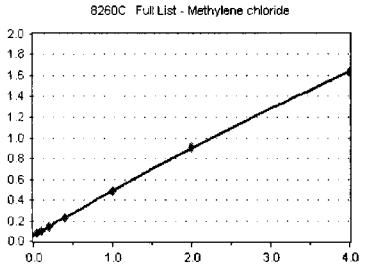


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	245	0.471	0.00
9E29058-CAL2	0.2	734	0.715	3.89
9E29058-CAL3	0.4	1162	0.571	3.90
9E29058-CAL4	1	2611	0.532	3.89
9E29058-CAL5	2	5764	0.565	3.89
9E29058-CAL6	5	15650	0.614	3.89
9E29058-CAL7	10	30362	0.605	3.88
9E29058-CAL8	20	61167	0.596	3.88
9E29058-CAL9	50	157053	0.626	3.89
9E29058-CALA	100	311743	0.598	3.88
9E29058-CALB	200	595457	0.559	3.88

AVE RF **0.587** RF RSD **10.38** AVE RT **3.54**

Methylene chloride

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

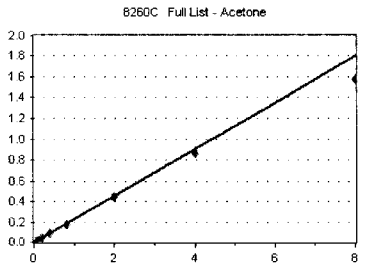


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~5028~~	~~9.674~~	~~3.72~~
~~9E29058-CAL2~~	~~0.2~~	~~14589~~	~~14.205~~	~~3.73~~
~~9E29058-CAL3~~	~~0.4~~	~~15095~~	~~7.421~~	~~3.73~~
~~9E29058-CAL4~~	~~1~~	~~15763~~	~~3.210~~	~~3.73~~
9E29058-CAL5	2	18469	1.812	3.73
9E29058-CAL6	5	25250	0.991	3.74
9E29058-CAL7	10	35620	0.710	3.72
9E29058-CAL8	20	58329	0.568	3.73
9E29058-CAL9	50	122804	0.490	3.73
9E29058-CALA	100	236890	0.454	3.72
9E29058-CALB	200	435629	0.409	3.72

AVE RF **0.776** RF RSD **64.14** AVE RT **3.73**

Acetone

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL4~~	~~2~~	~~3386~~	~~0.345~~	~~3.86~~
9E29058-CAL5	4	5795	0.284	3.85
9E29058-CAL6	10	11897	0.233	3.85
9E29058-CAL7	20	20645	0.206	3.84
9E29058-CAL8	40	44627	0.217	3.84
9E29058-CAL9	100	111792	0.223	3.84
9E29058-CALA	200	225817	0.217	3.83
9E29058-CALB	400	420741	0.197	3.83

AVE RF **0.225** RF RSD **12.62** AVE RT **3.84**

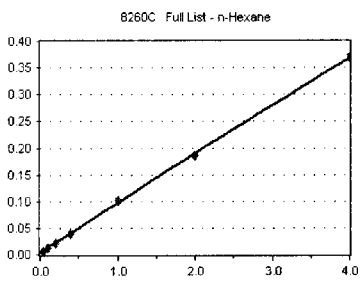
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

n-Hexane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

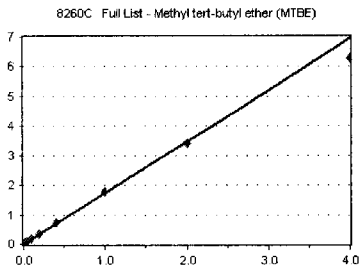


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~856~~	~~1.647~~	~~3.97~~
~~9E29058-CAL2~~	~~0.2~~	~~874~~	~~0.851~~	~~3.97~~
~~9E29058-CAL3~~	~~0.4~~	~~1123~~	~~0.552~~	~~3.98~~
~~9E29058-CAL4~~	~~1~~	~~1382~~	~~0.281~~	~~3.97~~
9E29058-CAL5	2	1767	0.173	3.97
9E29058-CAL6	5	3499	0.137	3.97
9E29058-CAL7	10	5559	0.111	3.96
9E29058-CAL8	20	10080	9.824	3.96
9E29058-CAL9	50	25466	0.102	3.97
9E29058-CALA	100	48610	9.325	3.96
9E29058-CALB	200	98461	9.235	3.96

AVE RF **0.115** RF RSD **25.96** AVE RT **3.97**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

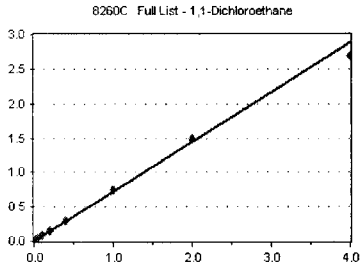


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	932	1.793	4.03
9E29058-CAL2	0.2	1802	1.755	4.03
9E29058-CAL3	0.4	3675	1.807	4.04
9E29058-CAL4	1	8517	1.734	4.03
9E29058-CAL5	2	17541	1.721	4.03
9E29058-CAL6	5	44834	1.760	4.04
9E29058-CAL7	10	87421	1.742	4.04
9E29058-CAL8	20	179725	1.752	4.04
9E29058-CAL9	50	446710	1.781	4.04
9E29058-CALA	100	885758	1.699	4.03
9E29058-CALB	200	1674237	1.570	4.03

AVE RF **1.738** RF RSD **3.66** AVE RT **4.03**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

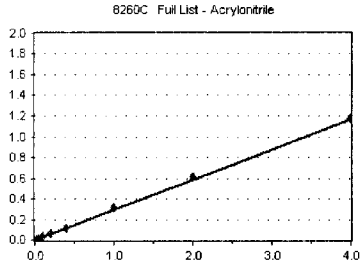


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	735	0.716	4.53
9E29058-CAL3	0.4	1418	0.697	4.53
9E29058-CAL4	1	3481	0.709	4.52
9E29058-CAL5	2	7479	0.734	4.52
9E29058-CAL6	5	18960	0.744	4.53
9E29058-CAL7	10	36342	0.724	4.52
9E29058-CAL8	20	75709	0.738	4.52
9E29058-CAL9	50	187888	0.749	4.52
9E29058-CALA	100	388015	0.744	4.52
9E29058-CALB	200	718862	0.674	4.51

AVE RF **0.723** RF RSD **3.33** AVE RT **4.52**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~342~~	~~0.168~~	~~4.62~~
9E29058-CAL4	1	1313	0.267	4.61
9E29058-CAL5	2	2550	0.250	4.61
9E29058-CAL6	5	7679	0.301	4.61
9E29058-CAL7	10	15131	0.301	4.60
9E29058-CAL8	20	30627	0.298	4.60
9E29058-CAL9	50	79642	0.318	4.60
9E29058-CALA	100	160664	0.308	4.59
9E29058-CALB	200	314097	0.295	4.59

AVE RF **0.292** RF RSD **7.65** AVE RT **4.60**

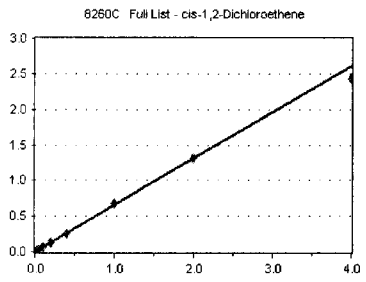
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

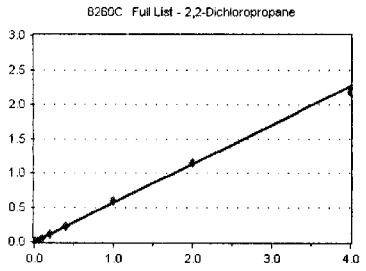


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	365	0.702	5.07
9E29058-CAL2	0.2	611	0.595	5.07
9E29058-CAL3	0.4	1412	0.694	5.08
9E29058-CAL4	1	3087	0.629	5.07
9E29058-CAL5	2	6425	0.630	5.07
9E29058-CAL6	5	17123	0.672	5.07
9E29058-CAL7	10	33881	0.675	5.07
9E29058-CAL8	20	67717	0.660	5.07
9E29058-CAL9	50	170168	0.679	5.07
9E29058-CALA	100	343281	0.659	5.06
9E29058-CALB	200	647004	0.607	5.06

AVE RF **0.655** RF RSD **5.35** AVE RT **5.07**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

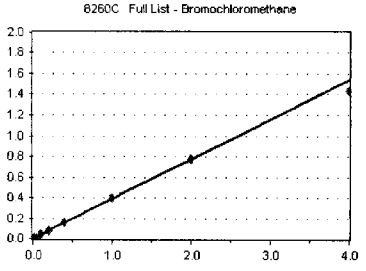


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL3	0.4	1168	0.574	5.18
9E29058-CAL4	1	2678	0.545	5.18
9E29058-CAL5	2	5498	0.539	5.18
9E29058-CAL6	5	14424	0.566	5.18
9E29058-CAL7	10	29348	0.585	5.17
9E29058-CAL8	20	58827	0.573	5.17
9E29058-CAL9	50	148829	0.593	5.17
9E29058-CALA	100	299040	0.574	5.17
9E29058-CALB	200	584639	0.548	5.17

AVE RF **0.566** RF RSD **3.26** AVE RT **5.17**

Bromochloromethane

Curve Fit: **AVERAGE RF**

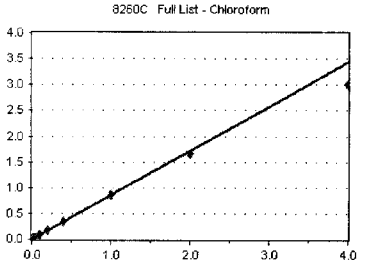


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	453	0.441	5.27
9E29058-CAL3	0.4	660	0.324	5.27
9E29058-CAL4	1	1861	0.379	5.27
9E29058-CAL5	2	3833	0.376	5.27
9E29058-CAL6	5	10200	0.400	5.27
9E29058-CAL7	10	20180	0.402	5.26
9E29058-CAL8	20	40396	0.394	5.26
9E29058-CAL9	50	100930	0.402	5.27
9E29058-CALA	100	202481	0.388	5.26
9E29058-CALB	200	383923	0.360	5.26

AVE RF **0.387** RF RSD **7.92** AVE RT **5.27**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~862~~	~~1.659~~	~~5.35~~
~~9E29058-CAL2~~	~~0.2~~	~~1314~~	~~1.279~~	~~5.35~~
9E29058-CAL3	0.4	2051	1.008	5.36
9E29058-CAL4	1	4395	0.895	5.35
9E29058-CAL5	2	8763	0.860	5.35
9E29058-CAL6	5	21196	0.832	5.35
9E29058-CAL7	10	42125	0.839	5.34
9E29058-CAL8	20	86712	0.845	5.35
9E29058-CAL9	50	217722	0.868	5.35
9E29058-CALA	100	433579	0.832	5.34
9E29058-CALB	200	802076	0.752	5.35

AVE RF **0.859** RF RSD **7.93** AVE RT **5.35**

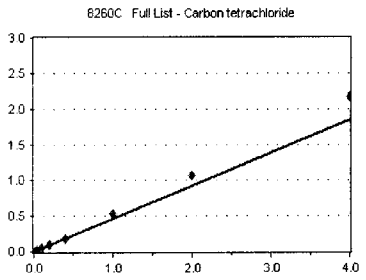
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

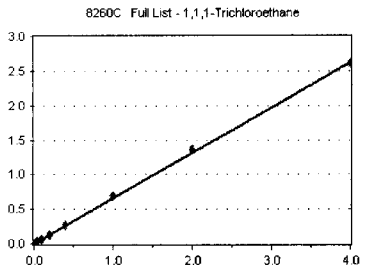


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~416~~	~~0.405~~	~~5.49~~
~~9E29058-CAL3~~	~~0.4~~	~~700~~	~~0.344~~	~~5.47~~
9E29058-CAL4	1	1931	0.393	5.47
9E29058-CAL5	2	3774	0.370	5.48
9E29058-CAL6	5	10919	0.429	5.48
9E29058-CAL7	10	22616	0.451	5.48
9E29058-CAL8	20	47689	0.465	5.48
9E29058-CAL9	50	132426	0.528	5.48
9E29058-CALA	100	278862	0.535	5.47
9E29058-CALB	200	577566	0.542	5.48

AVE RF **0.464** RF RSD **14.21** AVE RT **5.48**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**

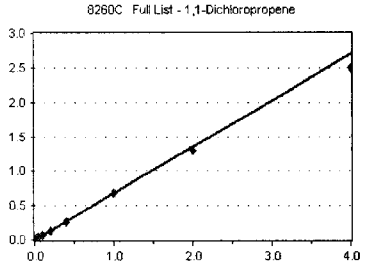


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~303~~	~~0.583~~	~~5.54~~
9E29058-CAL2	0.2	657	0.640	5.54
9E29058-CAL3	0.4	1382	0.679	5.55
9E29058-CAL4	1	2923	0.595	5.55
9E29058-CAL5	2	6438	0.632	5.55
9E29058-CAL6	5	16696	0.655	5.56
9E29058-CAL7	10	32805	0.654	5.54
9E29058-CAL8	20	69031	0.673	5.55
9E29058-CAL9	50	175402	0.699	5.55
9E29058-CALA	100	353917	0.679	5.54
9E29058-CALB	200	697341	0.654	5.54

AVE RF **0.656** RF RSD **4.49** AVE RT **5.55**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

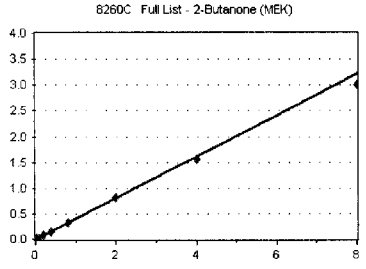


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	822	0.800	5.69
9E29058-CAL3	0.4	1310	0.644	5.69
9E29058-CAL4	1	3655	0.744	5.68
9E29058-CAL5	2	6475	0.635	5.68
9E29058-CAL6	5	16613	0.652	5.68
9E29058-CAL7	10	32947	0.656	5.67
9E29058-CAL8	20	67566	0.658	5.68
9E29058-CAL9	50	172418	0.688	5.68
9E29058-CALA	100	339212	0.651	5.67
9E29058-CALB	200	664805	0.624	5.67

AVE RF **0.675** RF RSD **8.20** AVE RT **5.68**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL4	2	4450	0.453	5.71
9E29058-CAL5	4	7369	0.361	5.70
9E29058-CAL6	10	21043	0.413	5.70
9E29058-CAL7	20	40332	0.402	5.69
9E29058-CAL8	40	82660	0.403	5.69
9E29058-CAL9	100	208404	0.416	5.68
9E29058-CALA	200	408448	0.392	5.68
9E29058-CALB	400	802082	0.376	5.68

AVE RF **0.402** RF RSD **6.86** AVE RT **5.69**

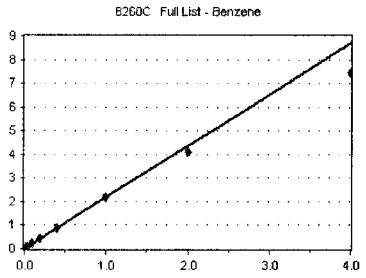
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Benzene

Curve Fit: **AVERAGE RF**

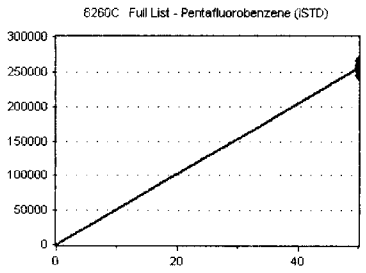


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1225	2.357	5.94
9E29058-CAL2	0.2	2321	2.260	5.93
9E29058-CAL3	0.4	4546	2.235	5.93
9E29058-CAL4	1	11217	2.284	5.94
9E29058-CAL5	2	21880	2.147	5.94
9E29058-CAL6	5	56100	2.202	5.93
9E29058-CAL7	10	109245	2.176	5.93
9E29058-CAL8	20	221601	2.160	5.93
9E29058-CAL9	50	547822	2.184	5.93
9E29058-CALA	100	1066556	2.046	5.93
9E29058-CALB	200	1978560	1.856	5.93

AVE RF **2.173** RF RSD **6.11** AVE RT **5.93**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

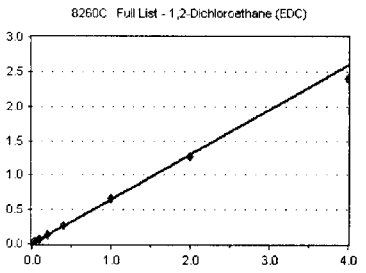


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	259869	5197.380	6.03
9E29058-CAL2	50	256759	5135.180	6.04
9E29058-CAL3	50	254275	5085.500	6.03
9E29058-CAL4	50	245560	4911.200	6.03
9E29058-CAL5	50	254825	5096.500	6.04
9E29058-CAL6	50	254773	5095.460	6.04
9E29058-CAL7	50	250992	5019.840	6.03
9E29058-CAL8	50	256524	5130.480	6.03
9E29058-CAL9	50	250786	5015.720	6.03
9E29058-CALA	50	260650	5213.000	6.03
9E29058-CALB	50	266542	5330.840	6.03

AVE RF **5111.918** RF RSD **2.19** AVE RT **6.03**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**

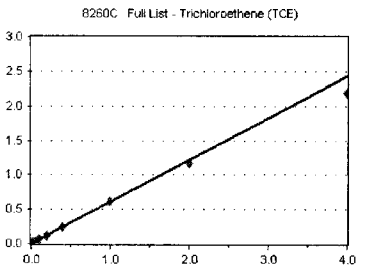


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	685	0.667	6.15
9E29058-CAL3	0.4	1395	0.686	6.15
9E29058-CAL4	1	3138	0.639	6.16
9E29058-CAL5	2	6601	0.648	6.15
9E29058-CAL6	5	16641	0.653	6.15
9E29058-CAL7	10	32514	0.648	6.15
9E29058-CAL8	20	66416	0.647	6.15
9E29058-CAL9	50	166385	0.663	6.15
9E29058-CALA	100	327724	0.629	6.15
9E29058-CALB	200	639082	0.599	6.14

AVE RF **0.648** RF RSD **3.59** AVE RT **6.15**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	358	0.689	6.56
9E29058-CAL2	0.2	778	0.758	6.55
9E29058-CAL3	0.4	1054	0.518	6.56
9E29058-CAL4	1	2995	0.610	6.55
9E29058-CAL5	2	6232	0.611	6.55
9E29058-CAL6	5	15220	0.597	6.55
9E29058-CAL7	10	29345	0.585	6.55
9E29058-CAL8	20	60590	0.590	6.55
9E29058-CAL9	50	153840	0.613	6.55
9E29058-CALA	100	306069	0.587	6.55
9E29058-CALB	200	582863	0.547	6.55

AVE RF **0.610** RF RSD **10.65** AVE RT **6.55**

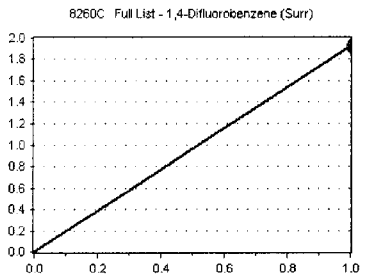
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

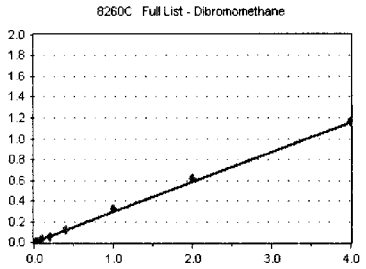


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	493490	1.899	6.59
9E29058-CAL2	50	491851	1.916	6.59
9E29058-CAL3	50	485518	1.909	6.59
9E29058-CAL4	50	472967	1.926	6.59
9E29058-CAL5	50	496387	1.948	6.59
9E29058-CAL6	50	492217	1.932	6.59
9E29058-CAL7	50	477661	1.903	6.58
9E29058-CAL8	50	495460	1.931	6.58
9E29058-CAL9	50	489311	1.951	6.59
9E29058-CALA	50	496661	1.905	6.58
9E29058-CALB	50	515449	1.934	6.58

AVE RF **1.923** RF RSD **0.93** AVE RT **6.59**

Dibromomethane

Curve Fit: **AVERAGE RF**

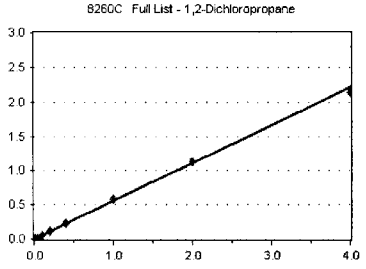


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~150~~	~~0.146~~	~~7.00~~
9E29058-CAL3	0.4	572	0.281	7.00
9E29058-CAL4	1	1272	0.259	7.00
9E29058-CAL5	2	2771	0.272	7.00
9E29058-CAL6	5	7159	0.281	7.00
9E29058-CAL7	10	14902	0.297	7.00
9E29058-CAL8	20	30886	0.301	7.00
9E29058-CAL9	50	80383	0.321	7.00
9E29058-CALA	100	161634	0.310	6.99
9E29058-CALB	200	312313	0.293	7.00

AVE RF **0.290** RF RSD **6.62** AVE RT **7.00**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

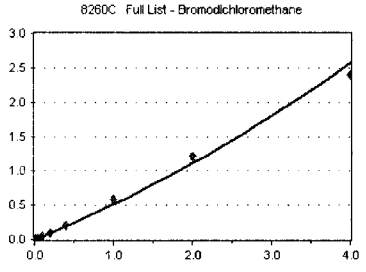


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	596	0.580	7.11
9E29058-CAL3	0.4	1068	0.525	7.11
9E29058-CAL4	1	2601	0.530	7.11
9E29058-CAL5	2	5608	0.550	7.11
9E29058-CAL6	5	14430	0.566	7.11
9E29058-CAL7	10	27791	0.554	7.11
9E29058-CAL8	20	58485	0.570	7.11
9E29058-CAL9	50	145741	0.581	7.11
9E29058-CALA	100	294477	0.565	7.10
9E29058-CALB	200	569634	0.534	7.11

AVE RF **0.556** RF RSD **3.68** AVE RT **7.11**

Bromodichloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	431	0.420	7.19
9E29058-CAL3	0.4	872	0.429	7.18
9E29058-CAL4	1	2077	0.423	7.18
9E29058-CAL5	2	4030	0.395	7.18
9E29058-CAL6	5	11827	0.464	7.19
9E29058-CAL7	10	23755	0.473	7.17
9E29058-CAL8	20	52937	0.516	7.18
9E29058-CAL9	50	148293	0.591	7.18
9E29058-CALA	100	315200	0.605	7.18
9E29058-CALB	200	637695	0.598	7.18

AVE RF **0.491** RF RSD **16.46** AVE RT **7.18**

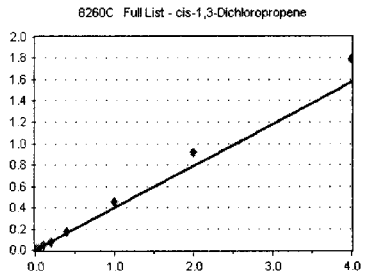
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

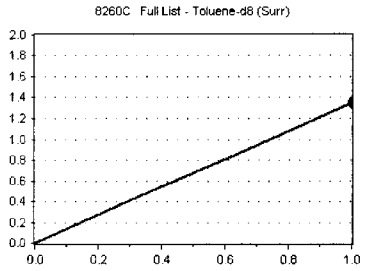


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	602	0.337	7.89
9E29058-CAL3	0.4	1128	0.319	7.90
9E29058-CAL4	1	3081	0.357	7.89
9E29058-CAL5	2	6187	0.343	7.89
9E29058-CAL6	5	17156	0.385	7.89
9E29058-CAL7	10	35060	0.402	7.89
9E29058-CAL8	20	76771	0.426	7.89
9E29058-CAL9	50	206054	0.458	7.89
9E29058-CALA	100	423217	0.460	7.89
9E29058-CALB	200	831235	0.448	7.88

AVE RF **0.394** RF RSD **13.50** AVE RT **7.89**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**

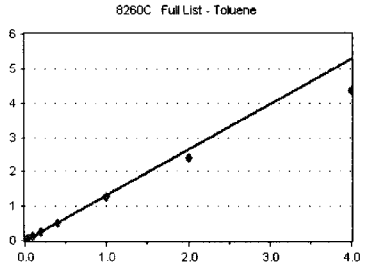


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	607580	1.354	8.10
9E29058-CAL2	50	603494	1.351	8.10
9E29058-CAL3	50	596173	1.350	8.09
9E29058-CAL4	50	583864	1.355	8.10
9E29058-CAL5	50	607810	1.346	8.10
9E29058-CAL6	50	604964	1.359	8.10
9E29058-CAL7	50	590419	1.353	8.09
9E29058-CAL8	50	610484	1.356	8.09
9E29058-CAL9	50	601358	1.338	8.09
9E29058-CALA	50	619571	1.348	8.09
9E29058-CALB	50	635623	1.369	8.09

AVE RF **1.353** RF RSD **0.58** AVE RT **8.09**

Toluene

Curve Fit: **AVERAGE RF**

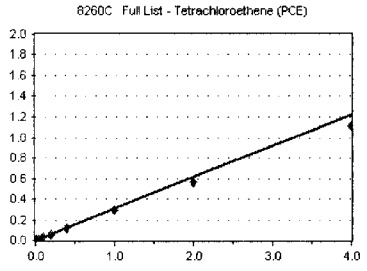


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~2496~~	~~2.781~~	~~8.15~~
~~9E29058-CAL2~~	~~0.2~~	~~3425~~	~~1.917~~	~~8.15~~
9E29058-CAL3	0.4	5721	1.620	8.16
9E29058-CAL4	1	12756	1.480	8.16
9E29058-CAL5	2	23832	1.319	8.15
9E29058-CAL6	5	59374	1.334	8.15
9E29058-CAL7	10	113987	1.306	8.15
9E29058-CAL8	20	231426	1.285	8.15
9E29058-CAL9	50	567186	1.262	8.15
9E29058-CALA	100	1105825	1.203	8.15
9E29058-CALB	200	2033618	1.095	8.15

AVE RF **1.323** RF RSD **11.49** AVE RT **8.15**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~338~~	~~0.377~~	~~8.60~~
9E29058-CAL2	0.2	698	0.391	8.60
9E29058-CAL3	0.4	1321	0.374	8.61
9E29058-CAL4	1	2616	0.304	8.60
9E29058-CAL5	2	4849	0.268	8.60
9E29058-CAL6	5	13201	0.297	8.60
9E29058-CAL7	10	25684	0.294	8.60
9E29058-CAL8	20	51386	0.285	8.60
9E29058-CAL9	50	131806	0.293	8.60
9E29058-CALA	100	260817	0.284	8.60
9E29058-CALB	200	514549	0.277	8.60

AVE RF **0.307** RF RSD **13.47** AVE RT **8.60**

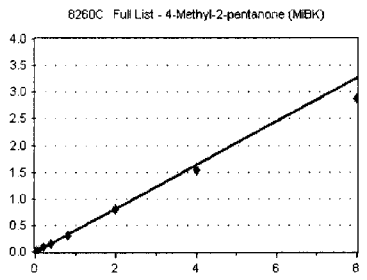
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

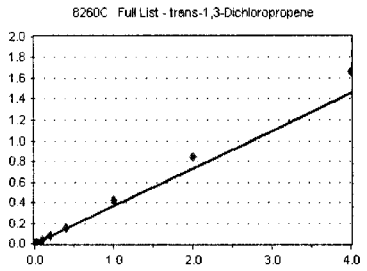


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.2	867	0.483	8.62
9E29058-CAL2	0.4	1694	0.474	8.62
9E29058-CAL3	0.8	3139	0.444	8.62
9E29058-CAL4	2	7035	0.408	8.63
9E29058-CAL5	4	13222	0.366	8.62
9E29058-CAL6	10	34042	0.382	8.62
9E29058-CAL7	20	69619	0.399	8.62
9E29058-CAL8	40	140164	0.389	8.62
9E29058-CAL9	100	362001	0.403	8.62
9E29058-CALA	200	707759	0.385	8.62
9E29058-CALB	400	1330786	0.358	8.61

AVE RF **0.408** RF RSD **10.15** AVE RT **8.62**

trans-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

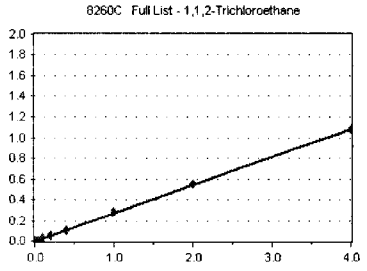


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~268~~	~~0.299~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~575~~	~~0.322~~	~~8.66~~
~~9E29058-CAL3~~	~~0.4~~	~~908~~	~~0.257~~	~~8.65~~
9E29058-CAL4	1	2671	0.310	8.64
9E29058-CAL5	2	5147	0.285	8.65
9E29058-CAL6	5	14478	0.325	8.65
9E29058-CAL7	10	31437	0.360	8.65
9E29058-CAL8	20	68797	0.382	8.64
9E29058-CAL9	50	188244	0.419	8.64
9E29058-CALA	100	389918	0.424	8.64
9E29058-CALB	200	772812	0.416	8.64

AVE RF **0.365** RF RSD **14.76** AVE RT **8.64**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

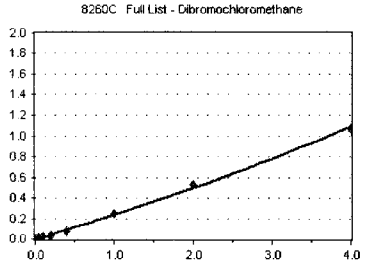


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	229	0.255	8.82
9E29058-CAL2	0.2	506	0.283	8.83
9E29058-CAL3	0.4	911	0.258	8.82
9E29058-CAL4	1	2251	0.261	8.83
9E29058-CAL5	2	4541	0.251	8.82
9E29058-CAL6	5	12374	0.278	8.82
9E29058-CAL7	10	24039	0.275	8.82
9E29058-CAL8	20	50104	0.278	8.82
9E29058-CAL9	50	128045	0.285	8.82
9E29058-CALA	100	255240	0.278	8.82
9E29058-CALB	200	500164	0.269	8.82

AVE RF **0.270** RF RSD **4.39** AVE RT **8.82**

Dibromochloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	172	9.626	9.03
9E29058-CAL3	0.4	549	0.155	9.01
9E29058-CAL4	1	1390	0.161	9.01
9E29058-CAL5	2	2873	0.159	9.00
9E29058-CAL6	5	7443	0.167	9.00
9E29058-CAL7	10	16078	0.184	9.01
9E29058-CAL8	20	36395	0.202	9.01
9E29058-CAL9	50	110966	0.247	9.01
9E29058-CALA	100	241274	0.262	9.01
9E29058-CALB	200	499033	0.269	9.00

AVE RF **0.190** RF RSD **28.85** AVE RT **9.01**

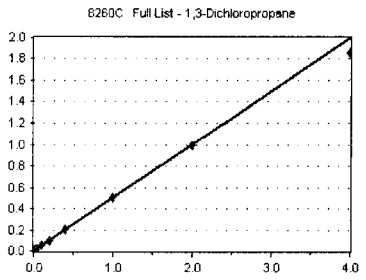
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

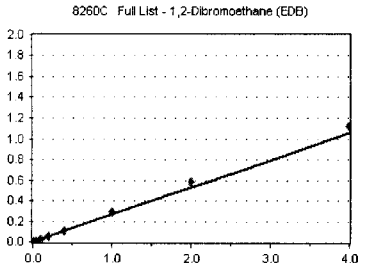


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	438	0.488	9.11
9E29058-CAL2	0.2	988	0.553	9.12
9E29058-CAL3	0.4	1866	0.528	9.12
9E29058-CAL4	1	4104	0.476	9.11
9E29058-CAL5	2	8546	0.473	9.11
9E29058-CAL6	5	22298	0.501	9.11
9E29058-CAL7	10	43756	0.501	9.10
9E29058-CAL8	20	91532	0.508	9.11
9E29058-CAL9	50	228171	0.508	9.11
9E29058-CALA	100	456442	0.496	9.10
9E29058-CALB	200	863655	0.465	9.11

AVE RF **0.500** RF RSD **5.06** AVE RT **9.11**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**

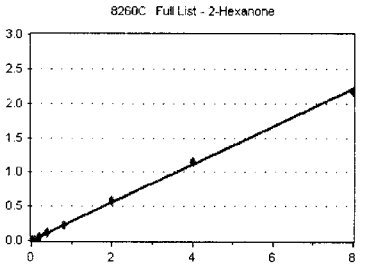


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~186~~	~~0.207~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~298~~	~~0.167~~	~~9.25~~
9E29058-CAL3	0.4	794	0.225	9.26
9E29058-CAL4	1	2135	0.248	9.24
9E29058-CAL5	2	4166	0.231	9.24
9E29058-CAL6	5	11552	0.259	9.25
9E29058-CAL7	10	23883	0.274	9.24
9E29058-CAL8	20	49836	0.277	9.24
9E29058-CAL9	50	132585	0.295	9.24
9E29058-CALA	100	266180	0.289	9.24
9E29058-CALB	200	519720	0.280	9.24

AVE RF **0.264** RF RSD **9.51** AVE RT **9.24**

2-Hexanone

Curve Fit: **AVERAGE RF**

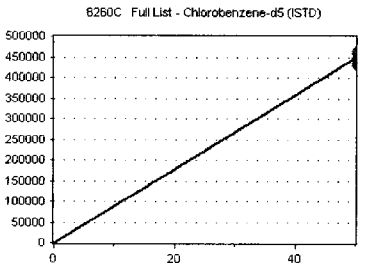


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~443~~	~~0.247~~	~~9.51~~
~~9E29058-CAL2~~	~~0.4~~	~~765~~	~~0.214~~	~~9.51~~
~~9E29058-CAL3~~	~~0.8~~	~~1839~~	~~0.260~~	~~9.51~~
9E29058-CAL4	2	4936	0.286	9.51
9E29058-CAL5	4	8511	0.236	9.51
9E29058-CAL6	10	24821	0.279	9.50
9E29058-CAL7	20	49008	0.281	9.50
9E29058-CAL8	40	101065	0.281	9.50
9E29058-CAL9	100	264271	0.294	9.50
9E29058-CALA	200	528430	0.287	9.50
9E29058-CALB	400	1007307	0.271	9.50

AVE RF **0.277** RF RSD **6.49** AVE RT **9.50**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	448840	8976.800	9.75
9E29058-CAL2	50	446684	8933.680	9.75
9E29058-CAL3	50	441530	8830.600	9.75
9E29058-CAL4	50	430913	8618.260	9.75
9E29058-CAL5	50	451536	9030.720	9.75
9E29058-CAL6	50	445170	8903.400	9.75
9E29058-CAL7	50	436340	8726.800	9.75
9E29058-CAL8	50	450201	9004.020	9.75
9E29058-CAL9	50	449432	8988.640	9.75
9E29058-CALA	50	459775	9195.500	9.75
9E29058-CALB	50	464260	9285.200	9.75

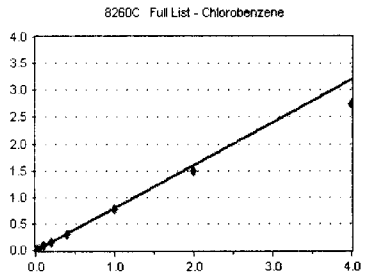
AVE RF **8953.965** RF RSD **2.12** AVE RT **9.75**

Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Chlorobenzene

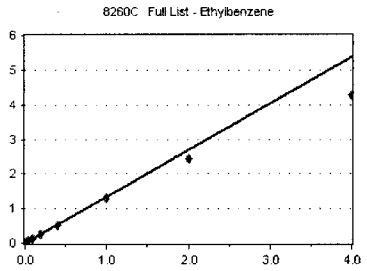


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1131~~	~~1.260~~	~~9.76~~
9E29058-CAL2	0.2	1617	0.905	9.77
9E29058-CAL3	0.4	3136	0.888	9.77
9E29058-CAL4	1	7300	0.847	9.77
9E29058-CAL5	2	14584	0.807	9.76
9E29058-CAL6	5	35456	0.796	9.77
9E29058-CAL7	10	68508	0.785	9.77
9E29058-CAL8	20	139988	0.777	9.77
9E29058-CAL9	50	351235	0.782	9.77
9E29058-CALA	100	689400	0.750	9.77
9E29058-CALB	200	1272416	0.685	9.76

AVE RF **0.802** RF RSD **8.07** AVE RT **9.77**

Ethylbenzene

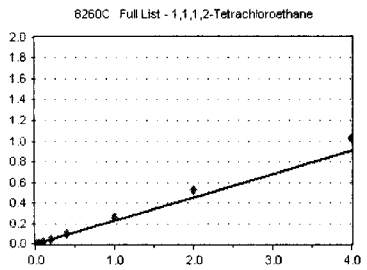


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1694~~	~~1.887~~	~~9.80~~
9E29058-CAL2	0.2	2895	1.620	9.80
9E29058-CAL3	0.4	5392	1.527	9.80
9E29058-CAL4	1	12069	1.400	9.80
9E29058-CAL5	2	23660	1.310	9.80
9E29058-CAL6	5	60912	1.368	9.80
9E29058-CAL7	10	115497	1.323	9.80
9E29058-CAL8	20	238085	1.322	9.80
9E29058-CAL9	50	580649	1.292	9.80
9E29058-CALA	100	1114972	1.213	9.79
9E29058-CALB	200	1992124	1.073	9.79

AVE RF **1.345** RF RSD **11.33** AVE RT **9.80**

1,1,1,2-Tetrachloroethane

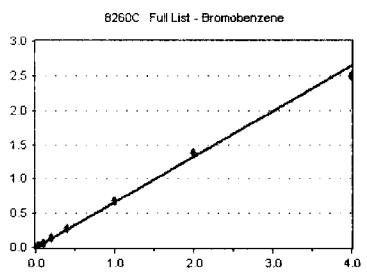


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~318~~	~~0.178~~	~~9.84~~
9E29058-CAL3	0.4	602	0.170	9.83
9E29058-CAL4	1	1810	0.210	9.82
9E29058-CAL5	2	3542	0.196	9.83
9E29058-CAL6	5	9596	0.216	9.83
9E29058-CAL7	10	19728	0.226	9.83
9E29058-CAL8	20	42996	0.239	9.83
9E29058-CAL9	50	116780	0.260	9.83
9E29058-CALA	100	242014	0.263	9.83
9E29058-CALB	200	477013	0.257	9.83

AVE RF **0.226** RF RSD **13.96** AVE RT **9.83**

Bromobenzene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	177	0.455	0.00
9E29058-CAL2	0.2	513	0.670	10.92
9E29058-CAL3	0.4	1043	0.691	10.92
9E29058-CAL4	1	2592	0.705	10.92
9E29058-CAL5	2	5277	0.677	10.92
9E29058-CAL6	5	13190	0.700	10.92
9E29058-CAL7	10	25871	0.693	10.92
9E29058-CAL8	20	51348	0.673	10.92
9E29058-CAL9	50	134239	0.687	10.92
9E29058-CALA	100	271067	0.686	10.92
9E29058-CALB	200	503576	0.625	10.92

AVE RF **0.660** RF RSD **10.81** AVE RT **9.93**

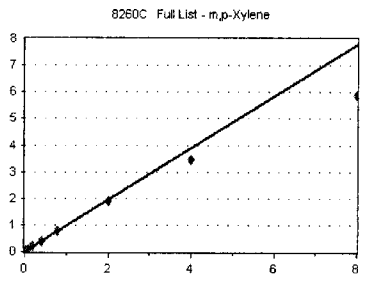
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

m,p-Xylene

Curve Fit: **AVERAGE RF**

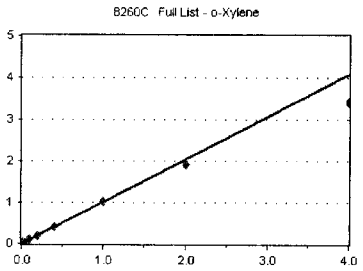


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.2~~	~~2487~~	~~1.385~~	~~9.94~~
9E29058-CAL2	0.4	4246	1.188	9.94
9E29058-CAL3	0.8	7624	1.079	9.94
9E29058-CAL4	2	17400	1.009	9.93
9E29058-CAL5	4	34407	0.952	9.94
9E29058-CAL6	10	87900	0.987	9.94
9E29058-CAL7	20	170308	0.976	9.93
9E29058-CAL8	40	351394	0.976	9.93
9E29058-CAL9	100	846663	0.942	9.93
9E29058-CALA	200	1592559	0.866	9.93
9E29058-CALB	400	2720941	0.733	9.93

AVE RF **0.971** RF RSD **12.37** AVE RT **9.93**

o-Xylene

Curve Fit: **AVERAGE RF**

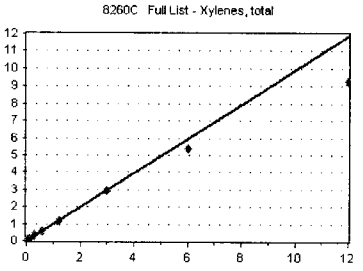


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1273~~	~~1.418~~	~~10.32~~
9E29058-CAL2	0.2	2232	1.249	10.33
9E29058-CAL3	0.4	3760	1.064	10.33
9E29058-CAL4	1	9051	1.050	10.32
9E29058-CAL5	2	17445	0.966	10.32
9E29058-CAL6	5	45708	1.027	10.32
9E29058-CAL7	10	87450	1.002	10.32
9E29058-CAL8	20	182582	1.014	10.32
9E29058-CAL9	50	457250	1.017	10.32
9E29058-CALA	100	885817	0.963	10.32
9E29058-CALB	200	1581408	0.852	10.32

AVE RF **1.020** RF RSD **9.82** AVE RT **10.32**

Xylenes, total

Curve Fit: **AVERAGE RF**

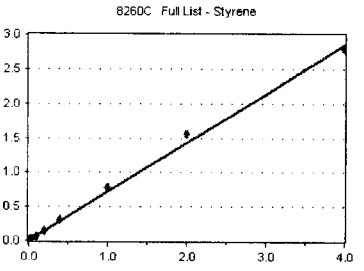


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.3~~	~~3760~~	~~1.396~~	~~10.32~~
9E29058-CAL2	0.6	6478	1.209	10.33
9E29058-CAL3	1.2	11384	1.074	10.33
9E29058-CAL4	3	26451	1.023	10.32
9E29058-CAL5	6	51852	0.957	10.32
9E29058-CAL6	15	133608	1.000	10.32
9E29058-CAL7	30	257758	0.985	10.32
9E29058-CAL8	60	533976	0.988	10.32
9E29058-CAL9	150	1303913	0.967	10.32
9E29058-CALA	300	2478376	0.898	10.32
9E29058-CALB	600	4302349	0.772	10.32

AVE RF **0.987** RF RSD **11.37** AVE RT **10.32**

Styrene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~585~~	~~0.652~~	~~10.38~~
~~9E29058-CAL2~~	~~0.2~~	~~1051~~	~~0.588~~	~~10.37~~
9E29058-CAL3	0.4	2262	0.640	10.38
9E29058-CAL4	1	5658	0.657	10.38
9E29058-CAL5	2	11631	0.644	10.37
9E29058-CAL6	5	31844	0.715	10.37
9E29058-CAL7	10	64308	0.737	10.37
9E29058-CAL8	20	138152	0.767	10.37
9E29058-CAL9	50	353430	0.786	10.37
9E29058-CALA	100	713586	0.776	10.37
9E29058-CALB	200	1293977	0.697	10.37

AVE RF **0.713** RF RSD **8.05** AVE RT **10.37**

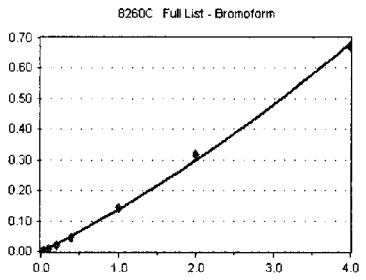
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Bromoform

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

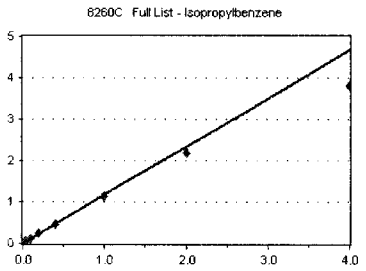


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL3	0.4	186	0.053	10.39
9E29058-CAL4	1	619	7.182	10.38
9E29058-CAL5	2	1354	7.497	10.39
9E29058-CAL6	5	4070	9.143	10.39
9E29058-CAL7	10	8679	9.945	10.39
9E29058-CAL8	20	19903	0.111	10.39
9E29058-CAL9	50	64724	0.144	10.39
9E29058-CALA	100	146040	0.159	10.39
9E29058-CALB	200	312567	0.168	10.39

AVE RF **0.108** RF RSD **37.80** AVE RT **10.39**

Isopropylbenzene

Curve Fit: **AVERAGE RF**

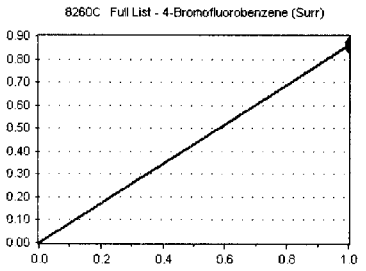


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1325	1.476	10.60
9E29058-CAL2	0.2	2225	1.245	10.59
9E29058-CAL3	0.4	4105	1.162	10.59
9E29058-CAL4	1	9890	1.148	10.60
9E29058-CAL5	2	20325	1.125	10.60
9E29058-CAL6	5	53051	1.192	10.60
9E29058-CAL7	10	101485	1.163	10.59
9E29058-CAL8	20	210609	1.170	10.59
9E29058-CAL9	50	514735	1.145	10.59
9E29058-CALA	100	1002570	1.090	10.59
9E29058-CALB	200	1774164	0.955	10.60

AVE RF **1.170** RF RSD **10.65** AVE RT **10.60**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

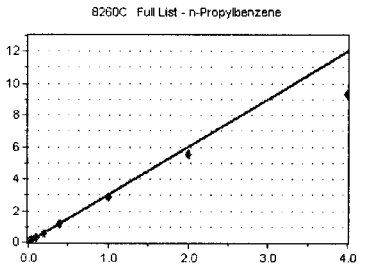


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	167905	0.863	10.84
9E29058-CAL2	50	165726	0.866	10.84
9E29058-CAL3	50	163321	0.866	10.84
9E29058-CAL4	50	158686	0.863	10.83
9E29058-CAL5	50	166852	0.857	10.84
9E29058-CAL6	50	163573	0.868	10.84
9E29058-CAL7	50	161677	0.866	10.84
9E29058-CAL8	50	165674	0.868	10.84
9E29058-CAL9	50	167723	0.859	10.84
9E29058-CALA	50	172526	0.873	10.84
9E29058-CALB	50	170853	0.848	10.83

AVE RF **0.863** RF RSD **0.78** AVE RT **10.84**

n-Propylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1564	4.019	10.94
9E29058-CAL2	0.2	2483	3.245	10.95
9E29058-CAL3	0.4	4750	3.148	10.95
9E29058-CAL4	1	10579	2.876	10.94
9E29058-CAL5	2	22107	2.838	10.95
9E29058-CAL6	5	57721	3.062	10.95
9E29058-CAL7	10	110989	2.971	10.94
9E29058-CAL8	20	226710	2.971	10.94
9E29058-CAL9	50	564190	2.888	10.94
9E29058-CALA	100	1090767	2.761	10.94
9E29058-CALB	200	1879841	2.334	10.94

AVE RF **3.010** RF RSD **13.61** AVE RT **10.94**

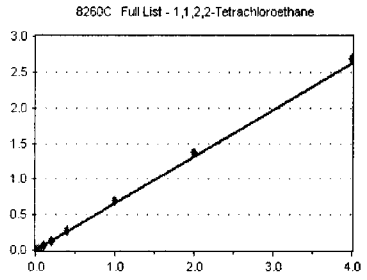
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

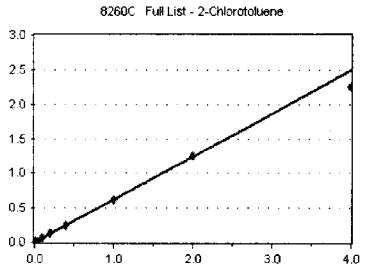


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	266	0.684	11.01
9E29058-CAL2	0.2	439	0.574	11.01
9E29058-CAL3	0.4	1001	0.663	11.01
9E29058-CAL4	1	2272	0.618	11.01
9E29058-CAL5	2	4646	0.596	11.01
9E29058-CAL6	5	12322	0.654	11.01
9E29058-CAL7	10	25383	0.680	11.01
9E29058-CAL8	20	52097	0.683	11.01
9E29058-CAL9	50	135917	0.696	11.01
9E29058-CALA	100	271157	0.686	11.01
9E29058-CALB	200	542178	0.673	11.01

AVE RF **0.655** RF RSD **6.23** AVE RT **11.01**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**

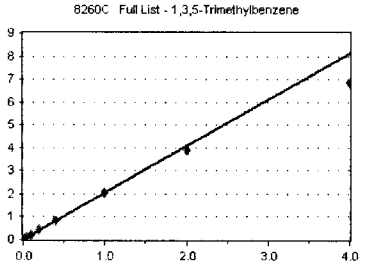


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	260	0.668	11.07
9E29058-CAL2	0.2	535	0.699	11.09
9E29058-CAL3	0.4	911	0.604	11.07
9E29058-CAL4	1	2285	0.621	11.07
9E29058-CAL5	2	4419	0.567	11.07
9E29058-CAL6	5	12024	0.638	11.07
9E29058-CAL7	10	23789	0.637	11.07
9E29058-CAL8	20	47080	0.617	11.07
9E29058-CAL9	50	120765	0.618	11.07
9E29058-CALA	100	246373	0.624	11.07
9E29058-CALB	200	452526	0.562	11.07

AVE RF **0.623** RF RSD **6.33** AVE RT **11.07**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

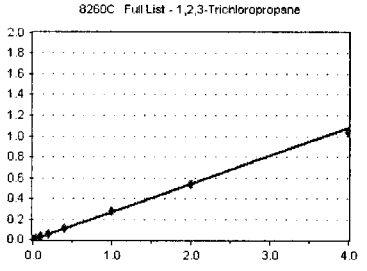


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1305~~	~~3.353~~	~~11.11~~
9E29058-CAL2	0.2	1776	2.321	11.10
9E29058-CAL3	0.4	3139	2.080	11.11
9E29058-CAL4	1	7772	2.113	11.11
9E29058-CAL5	2	14521	1.864	11.10
9E29058-CAL6	5	39774	2.110	11.10
9E29058-CAL7	10	77961	2.087	11.10
9E29058-CAL8	20	158194	2.073	11.10
9E29058-CAL9	50	396913	2.032	11.11
9E29058-CALA	100	773425	1.958	11.10
9E29058-CALB	200	1378879	1.712	11.10

AVE RF **2.035** RF RSD **8.02** AVE RT **11.10**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL2	0.2	144	0.188	11.12
9E29058-CAL3	0.4	500	0.331	11.12
9E29058-CAL4	1	983	0.267	11.11
9E29058-CAL5	2	2200	0.282	11.12
9E29058-CAL6	5	5164	0.274	11.12
9E29058-CAL7	10	10336	0.277	11.12
9E29058-CAL8	20	20960	0.275	11.12
9E29058-CAL9	50	54793	0.281	11.12
9E29058-CALA	100	105916	0.268	11.12
9E29058-CALB	200	207925	0.258	11.11

AVE RF **0.270** RF RSD **12.92** AVE RT **11.12**

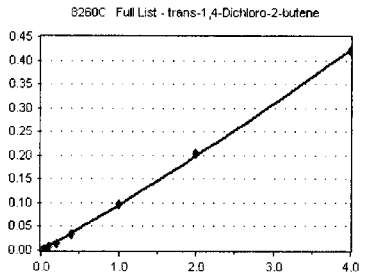
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

trans-1,4-Dichloro-2-butene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

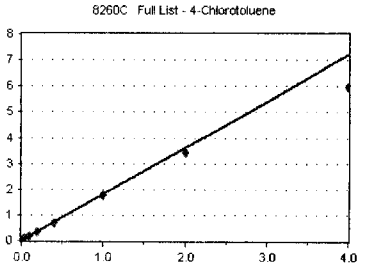


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL4	1	180	4.894	11.15
9E29058-CAL5	2	320	4.108	11.15
9E29058-CAL6	5	1285	6.817	11.15
9E29058-CAL7	10	2829	7.573	11.15
9E29058-CAL8	20	6571	8.611	11.15
9E29058-CAL9	50	19084	9.770	11.15
9E29058-CALA	100	40488	0.102	11.15
9E29058-CALB	200	84511	0.105	11.15

AVE RF **7.814** RF RSD **30.92** AVE RT **11.15**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**

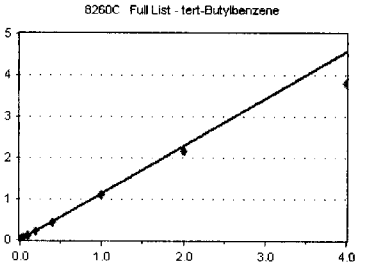


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1133~~	~~2.911~~	~~11.21~~
9E29058-CAL2	0.2	1680	2.196	11.21
9E29058-CAL3	0.4	2912	1.930	11.21
9E29058-CAL4	1	6874	1.869	11.21
9E29058-CAL5	2	13410	1.722	11.21
9E29058-CAL6	5	33806	1.793	11.21
9E29058-CAL7	10	65138	1.744	11.21
9E29058-CAL8	20	135968	1.782	11.20
9E29058-CAL9	50	345630	1.769	11.20
9E29058-CALA	100	677786	1.715	11.21
9E29058-CALB	200	1200687	1.491	11.21

AVE RF **1.801** RF RSD **10.00** AVE RT **11.21**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

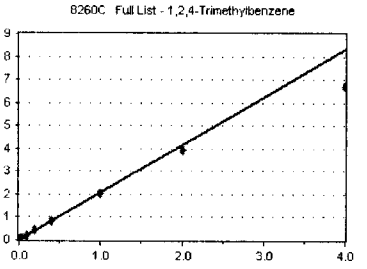


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	480	1.233	11.36
9E29058-CAL2	0.2	1208	1.579	11.36
9E29058-CAL3	0.4	1681	1.114	11.36
9E29058-CAL4	1	4182	1.137	11.36
9E29058-CAL5	2	8037	1.032	11.36
9E29058-CAL6	5	20763	1.101	11.36
9E29058-CAL7	10	41310	1.106	11.35
9E29058-CAL8	20	84715	1.110	11.35
9E29058-CAL9	50	215868	1.105	11.36
9E29058-CALA	100	425964	1.078	11.35
9E29058-CALB	200	765557	0.950	11.36

AVE RF **1.141** RF RSD **14.09** AVE RT **11.36**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	965	2.480	11.41
9E29058-CAL2	0.2	1610	2.104	11.41
9E29058-CAL3	0.4	3385	2.243	11.42
9E29058-CAL4	1	7847	2.133	11.41
9E29058-CAL5	2	15360	1.972	11.41
9E29058-CAL6	5	39159	2.077	11.41
9E29058-CAL7	10	78362	2.098	11.42
9E29058-CAL8	20	160708	2.106	11.42
9E29058-CAL9	50	400305	2.049	11.42
9E29058-CALA	100	777007	1.967	11.41
9E29058-CALB	200	1351532	1.678	11.41

AVE RF **2.082** RF RSD **9.34** AVE RT **11.41**

Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

sec-Butylbenzene

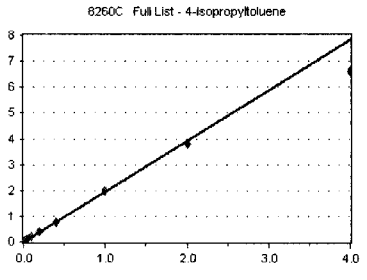
Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	1196	3.073	11.50
9E29058-CAL2	0.2	2071	2.707	11.50
9E29058-CAL3	0.4	3773	2.500	11.50
9E29058-CAL4	1	8865	2.410	11.50
9E29058-CAL5	2	16671	2.140	11.50
9E29058-CAL6	5	45399	2.408	11.50
9E29058-CAL7	10	88679	2.374	11.50
9E29058-CAL8	20	183450	2.404	11.49
9E29058-CAL9	50	461029	2.360	11.49
9E29058-CALA	100	882609	2.234	11.50
9E29058-CALB	200	1543796	1.917	11.50

AVE RF **2.412** RF RSD **12.35** AVE RT **11.50**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**

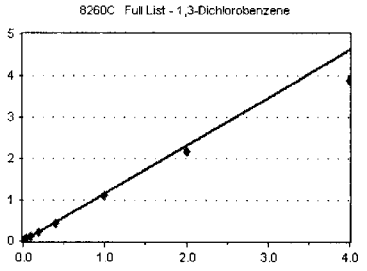


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1072~~	~~2.755~~	~~11.61~~
9E29058-CAL2	0.2	1749	2.286	11.61
9E29058-CAL3	0.4	3163	2.096	11.61
9E29058-CAL4	1	6901	1.876	11.61
9E29058-CAL5	2	14651	1.881	11.61
9E29058-CAL6	5	37395	1.984	11.61
9E29058-CAL7	10	74162	1.985	11.61
9E29058-CAL8	20	150593	1.973	11.61
9E29058-CAL9	50	386921	1.981	11.61
9E29058-CALA	100	751233	1.901	11.61
9E29058-CALB	200	1333607	1.656	11.61

AVE RF **1.962** RF RSD **8.25** AVE RT **11.61**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

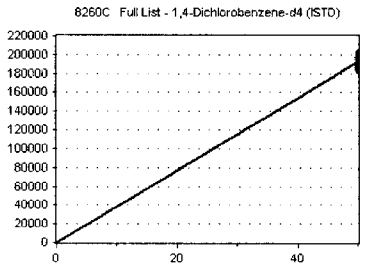


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	610	1.567	11.67
9E29058-CAL2	0.2	927	1.212	11.68
9E29058-CAL3	0.4	1855	1.229	11.68
9E29058-CAL4	1	4049	1.101	11.67
9E29058-CAL5	2	8756	1.124	11.68
9E29058-CAL6	5	21090	1.119	11.67
9E29058-CAL7	10	41681	1.116	11.67
9E29058-CAL8	20	84703	1.110	11.67
9E29058-CAL9	50	218010	1.116	11.67
9E29058-CALA	100	425300	1.076	11.67
9E29058-CALB	200	784949	0.975	11.67

AVE RF **1.159** RF RSD **13.03** AVE RT **11.67**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	50	194580	3891.600	11.73
9E29058-CAL2	50	191276	3825.520	11.73
9E29058-CAL3	50	188614	3772.280	11.73
9E29058-CAL4	50	183911	3678.220	11.73
9E29058-CAL5	50	194740	3894.800	11.73
9E29058-CAL6	50	188506	3770.120	11.73
9E29058-CAL7	50	186773	3735.460	11.73
9E29058-CAL8	50	190782	3815.640	11.73
9E29058-CAL9	50	195329	3906.580	11.73
9E29058-CALA	50	197554	3951.080	11.73
9E29058-CALB	50	201371	4027.420	11.73

AVE RF **3842.611** RF RSD **2.66** AVE RT **11.73**

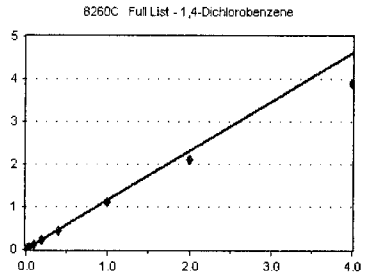
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

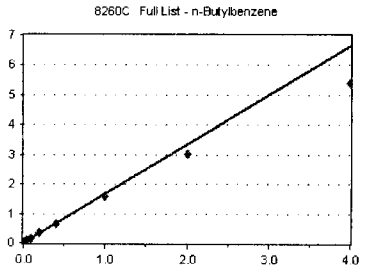


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~690~~	~~1.773~~	~~11.74~~
9E29058-CAL2	0.2	1152	1.506	11.74
9E29058-CAL3	0.4	1914	1.268	11.74
9E29058-CAL4	1	4368	1.188	11.74
9E29058-CAL5	2	8705	1.118	11.74
9E29058-CAL6	5	21623	1.147	11.74
9E29058-CAL7	10	41926	1.122	11.74
9E29058-CAL8	20	83842	1.099	11.74
9E29058-CAL9	50	214078	1.096	11.74
9E29058-CALA	100	418076	1.058	11.74
9E29058-CALB	200	784148	0.974	11.74

AVE RF **1.157** RF RSD **12.50** AVE RT **11.74**

n-Butylbenzene

Curve Fit: **AVERAGE RF**

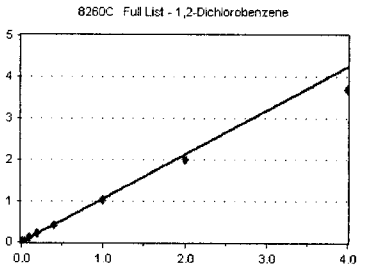


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~1118~~	~~2.873~~	~~11.93~~
9E29058-CAL2	0.2	1667	2.179	11.94
9E29058-CAL3	0.4	2690	1.783	11.93
9E29058-CAL4	1	6459	1.756	11.93
9E29058-CAL5	2	12230	1.570	11.93
9E29058-CAL6	5	31024	1.646	11.93
9E29058-CAL7	10	61550	1.648	11.93
9E29058-CAL8	20	124826	1.636	11.93
9E29058-CAL9	50	313322	1.604	11.93
9E29058-CALA	100	597386	1.512	11.93
9E29058-CALB	200	1090372	1.354	11.93

AVE RF **1.669** RF RSD **12.96** AVE RT **11.93**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

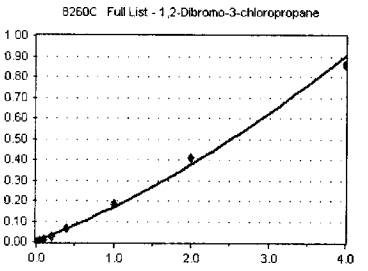


Standard	Concentration	Response	Response Factor	RT
9E29058-CAL1	0.1	533	1.370	12.06
9E29058-CAL2	0.2	833	1.089	12.06
9E29058-CAL3	0.4	1753	1.162	12.06
9E29058-CAL4	1	3804	1.034	12.06
9E29058-CAL5	2	7643	0.981	12.06
9E29058-CAL6	5	19883	1.055	12.06
9E29058-CAL7	10	38321	1.026	12.06
9E29058-CAL8	20	79024	1.036	12.06
9E29058-CAL9	50	201831	1.033	12.06
9E29058-CALA	100	392931	0.994	12.06
9E29058-CALB	200	746324	0.927	12.06

AVE RF **1.064** RF RSD **11.05** AVE RT **12.06**

1,2-Dibromo-3-chloropropane

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E29058-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E29058-CAL4	1	368	0.100	12.67
9E29058-CAL5	2	826	0.106	12.67
9E29058-CAL6	5	2389	0.127	12.67
9E29058-CAL7	10	5509	0.147	12.67
9E29058-CAL8	20	11948	0.157	12.67
9E29058-CAL9	50	36171	0.185	12.67
9E29058-CALA	100	80792	0.204	12.67
9E29058-CALB	200	172847	0.215	12.67

AVE RF **0.155** RF RSD **27.97** AVE RT **12.67**

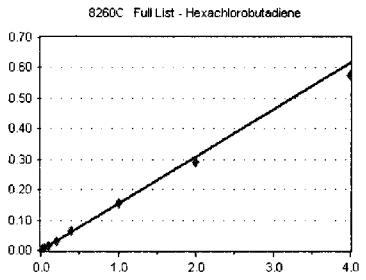
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190529S.M VC190529G.**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

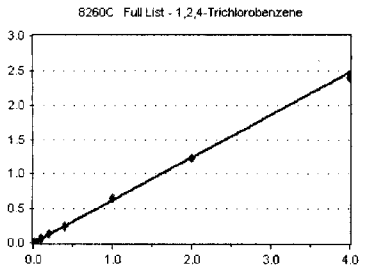


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~235~~	~~0.604~~	~~13.18~~
~~9E29058-CAL2~~	~~0.2~~	~~296~~	~~0.387~~	~~13.18~~
~~9E29058-CAL3~~	~~0.4~~	~~375~~	~~0.249~~	~~13.19~~
9E29058-CAL4	1	652	0.177	13.18
9E29058-CAL5	2	1244	0.160	13.18
9E29058-CAL6	5	2782	0.148	13.18
9E29058-CAL7	10	5351	0.143	13.18
9E29058-CAL8	20	12267	0.161	13.19
9E29058-CAL9	50	30150	0.154	13.18
9E29058-CALA	100	57553	0.146	13.19
9E29058-CALB	200	115944	0.144	13.18

AVE RF **0.154** RF RSD **7.55** AVE RT **13.18**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**

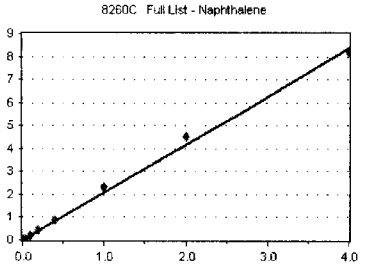


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~358~~	~~0.920~~	~~13.21~~
9E29058-CAL2	0.2	579	0.757	13.22
9E29058-CAL3	0.4	812	0.538	13.22
9E29058-CAL4	1	2286	0.621	13.22
9E29058-CAL5	2	4471	0.574	13.21
9E29058-CAL6	5	11381	0.604	13.21
9E29058-CAL7	10	23206	0.621	13.22
9E29058-CAL8	20	46713	0.612	13.22
9E29058-CAL9	50	126759	0.649	13.22
9E29058-CALA	100	244685	0.619	13.22
9E29058-CALB	200	483143	0.600	13.21

AVE RF **0.620** RF RSD **9.18** AVE RT **13.22**

Naphthalene

Curve Fit: **AVERAGE RF**

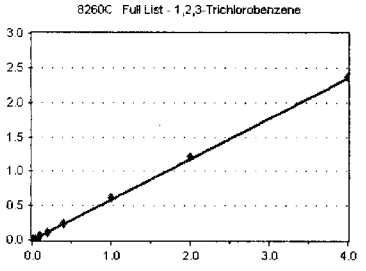


Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~706~~	~~1.814~~	~~13.49~~
~~9E29058-CAL2~~	~~0.2~~	~~1368~~	~~1.788~~	~~13.50~~
~~9E29058-CAL3~~	~~0.4~~	~~2785~~	~~1.846~~	~~13.50~~
9E29058-CAL4	1	6879	1.870	13.49
9E29058-CAL5	2	14001	1.797	13.49
9E29058-CAL6	5	38161	2.024	13.49
9E29058-CAL7	10	79664	2.133	13.50
9E29058-CAL8	20	170582	2.235	13.49
9E29058-CAL9	50	451629	2.312	13.49
9E29058-CALA	100	891724	2.257	13.49
9E29058-CALB	200	1658112	2.059	13.49

AVE RF **2.086** RF RSD **8.86** AVE RT **13.49**

1,2,3-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E29058-CAL1~~	~~0.1~~	~~105~~	~~0.270~~	~~0.00~~
~~9E29058-CAL2~~	~~0.2~~	~~532~~	~~0.695~~	~~13.66~~
9E29058-CAL3	0.4	850	0.563	13.66
9E29058-CAL4	1	2090	0.568	13.66
9E29058-CAL5	2	4310	0.553	13.65
9E29058-CAL6	5	10740	0.570	13.65
9E29058-CAL7	10	22472	0.602	13.65
9E29058-CAL8	20	46516	0.610	13.65
9E29058-CAL9	50	120109	0.615	13.65
9E29058-CALA	100	241375	0.611	13.65
9E29058-CALB	200	476195	0.591	13.65

AVE RF **0.587** RF RSD **4.01** AVE RT **13.65**

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	50	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052924.D
2	2	100	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052925.D
3	3	250	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052926.D
4	4	500	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052927.D
5	5	1000	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052928.D
6	6	2500	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052929.D
7	7	5000	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052930.D
8	8	10000	50	C:\msdchem\1\DATA\2019-05\9E29058\VC19052931.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 12:49 am
2	2	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 1:17 am
3	3	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 1:44 am
4	4	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 2:12 am
5	5	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 2:39 am
6	6	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 3:07 am
7	7	May 30 15:51 2019	May 30 15:50 2019	30 May 2019 3:34 am
8	8	May 30 15:51 2019	May 30 15:47 2019	30 May 2019 4:02 am

VC190529G.M Thu May 30 16:04:30 2019

Method Path : C:\msdchem\1\METHODS\
Method File : VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019
Response Via : Initial Calibration

Calibration Files
1 =VC19052924.D 2 =VC19052925.D 3 =VC19052926.D 4 =VC19052927.D 5 =VC19052928.D 6 =VC19052929.D
7 =VC19052930.D 8 =VC19052931.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	Pentafluorobenzene...	----------	----------	ISTD	----------	----------	----------	----------	----------		
2)	S	1,4-Difluorobe...	4.431	4.451	4.465	4.507	4.485	4.512	4.962	5.466	4.660	7.91
3)	S	4-Bromofluorob...	3.476	3.515	3.488	3.444	3.505	3.487	3.469	3.464	3.481	0.65
4)	S	Chlorobenzene-...									0.000	-1.00
5)	H	CA-LUFT (C5-C12)	4.380	3.196	2.608	2.520	2.348	2.108	2.313	2.163	2.705	28.02
6)	H	TPHg (C5-C9)	3.731	2.910	2.274	2.172	2.014	1.781	1.924	1.785	2.324	29.06
7)	H	TPHg (C6-C10)	2.853	2.200	1.709	1.673	1.577	1.412	1.544	1.443	1.801	27.25
8)	H	NWTPH-Gx	1.312	1.169	1.303	1.417	1.416	1.369	1.544	1.467	1.375	8.34
9)		Benzene (NR)									0.000	-1.00
10)	S	Toluene-d8 (NR)									0.000	-1.00
11)	C	Toluene (NR)									0.000	-1.00
12)	S	1,4-Dichlorobe...									0.000	-1.00
13)		Naphthalene (NR)									0.000	-1.00

(#) = Out of Range

Compound List Report VOA-GCMS3

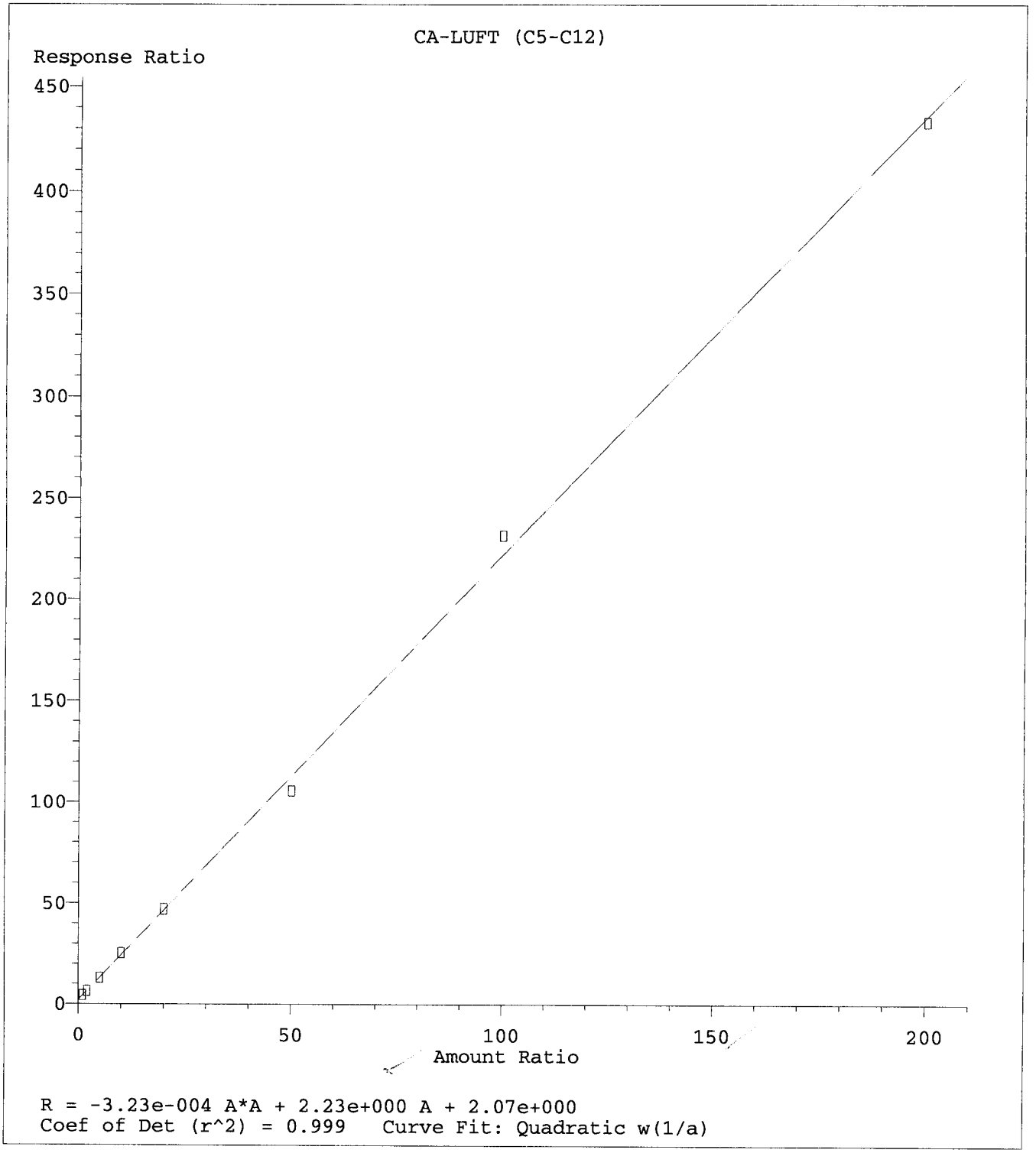
Method Path : C:\msdchem\1\METHODS\
Method File : VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.030	1.000	A	2	A	A
2	S	1,4-Difluorobenzene (Sur)	TIC	6.583	1.092	A	2	A	A
3	S	4-Bromofluorobenzene (Sur)	TIC	10.834	1.797	A	2	A	A
4	S	Chlorobenzene-d5 (NR)	TIC	9.751	1.617	A	2	A	A
5	H	CA-LUFT (C5-C12)	TIC	9.906	1.643	Q1/a	0	A	A
6	H	TPHg (C5-C9)	TIC	9.906	1.643	Q1/a	0	A	A
7	H	TPHg (C6-C10)	TIC	9.906	1.643	Q1/a	0	A	A
8	H	NWTPH-Gx	TIC	9.906	1.643	Q1/a	0	A	A
9		Benzene (NR)	78	5.932	0.984	A	2	A	A
10	S	Toluene-d8 (NR)	TIC	8.091	1.342	A	2	A	A
11	C	Toluene (NR)	91	8.152	1.352	A	2	A	A
12	S	1,4-Dichlorobenzene-d4 (NR)	TIC	11.728	1.945	A	2	A	A
13		Naphthalene (NR)	128	13.491	2.238	A	2	A	A

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VC190529G.M Thu May 30 16:04:34 2019



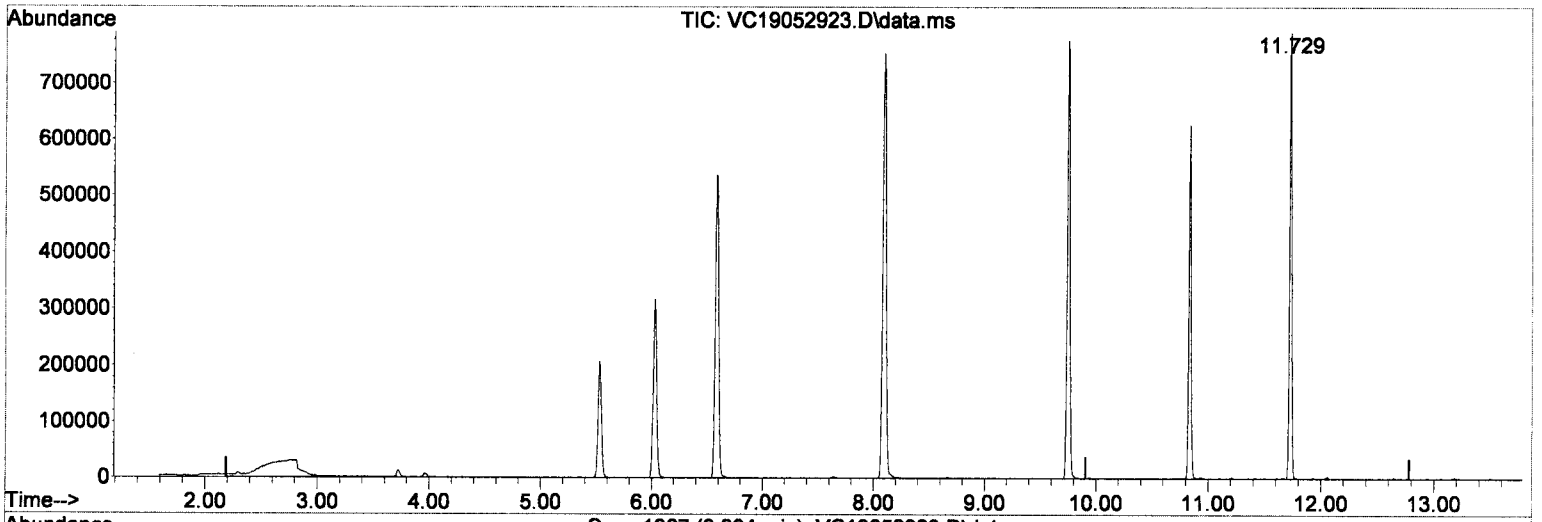
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

IWT= 9.28

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



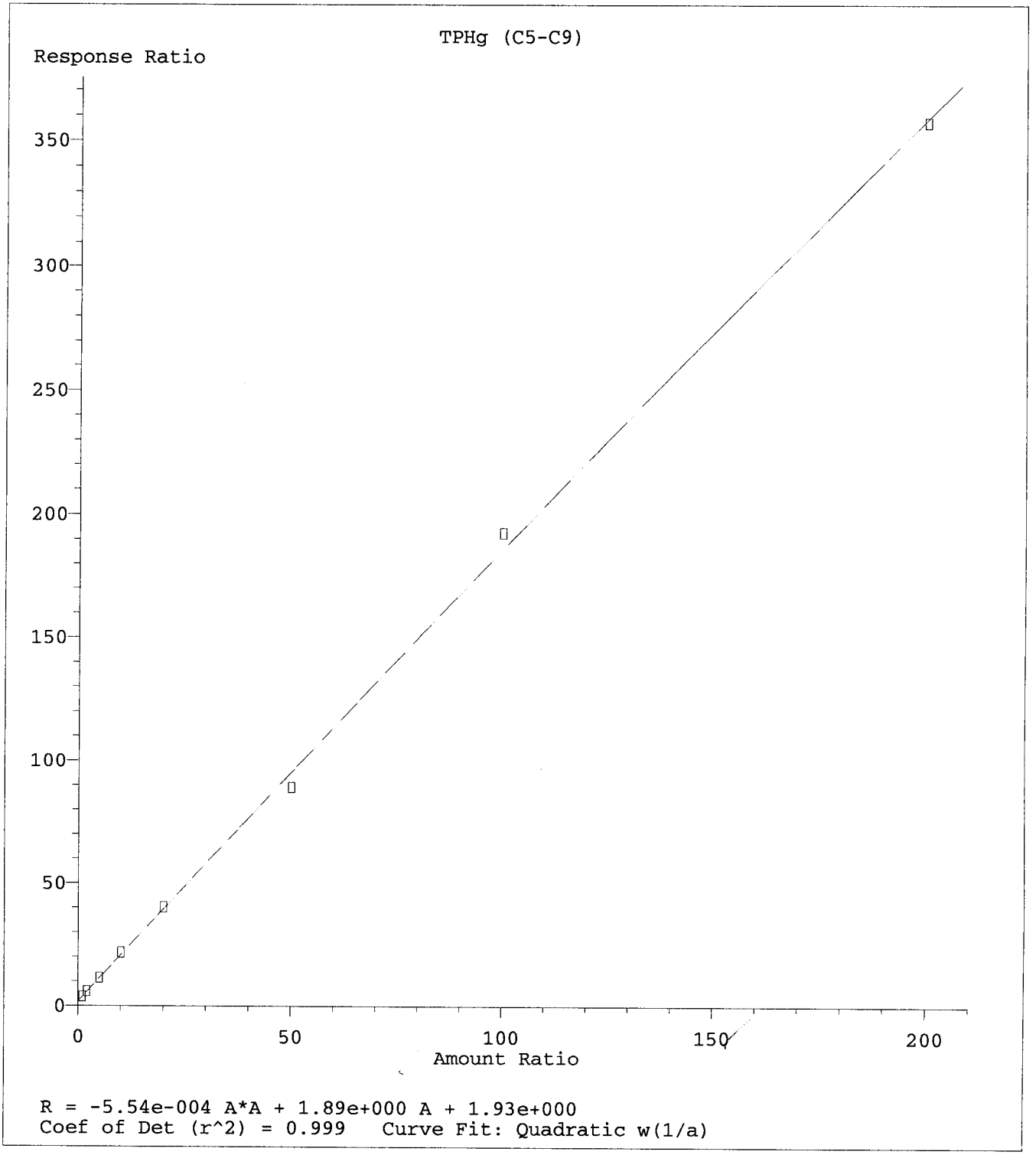
TIC: VC19052923.D\data.ms

(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 9.28 ug/L m

response 651712

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



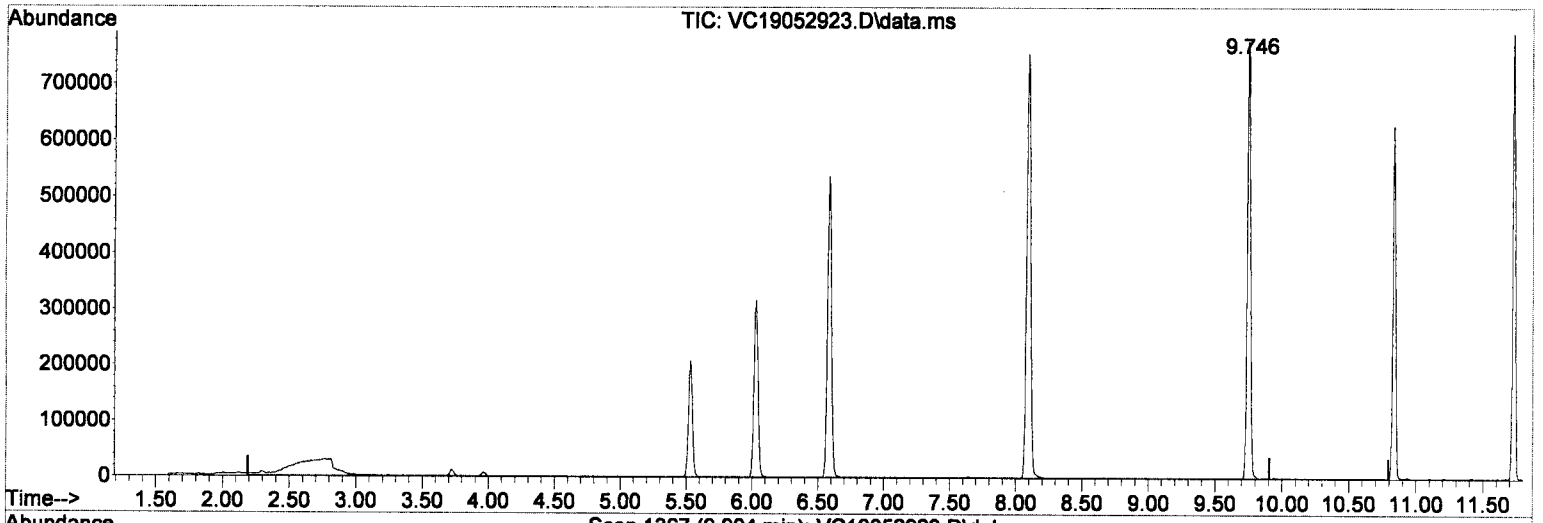
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

INT = 14.63

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



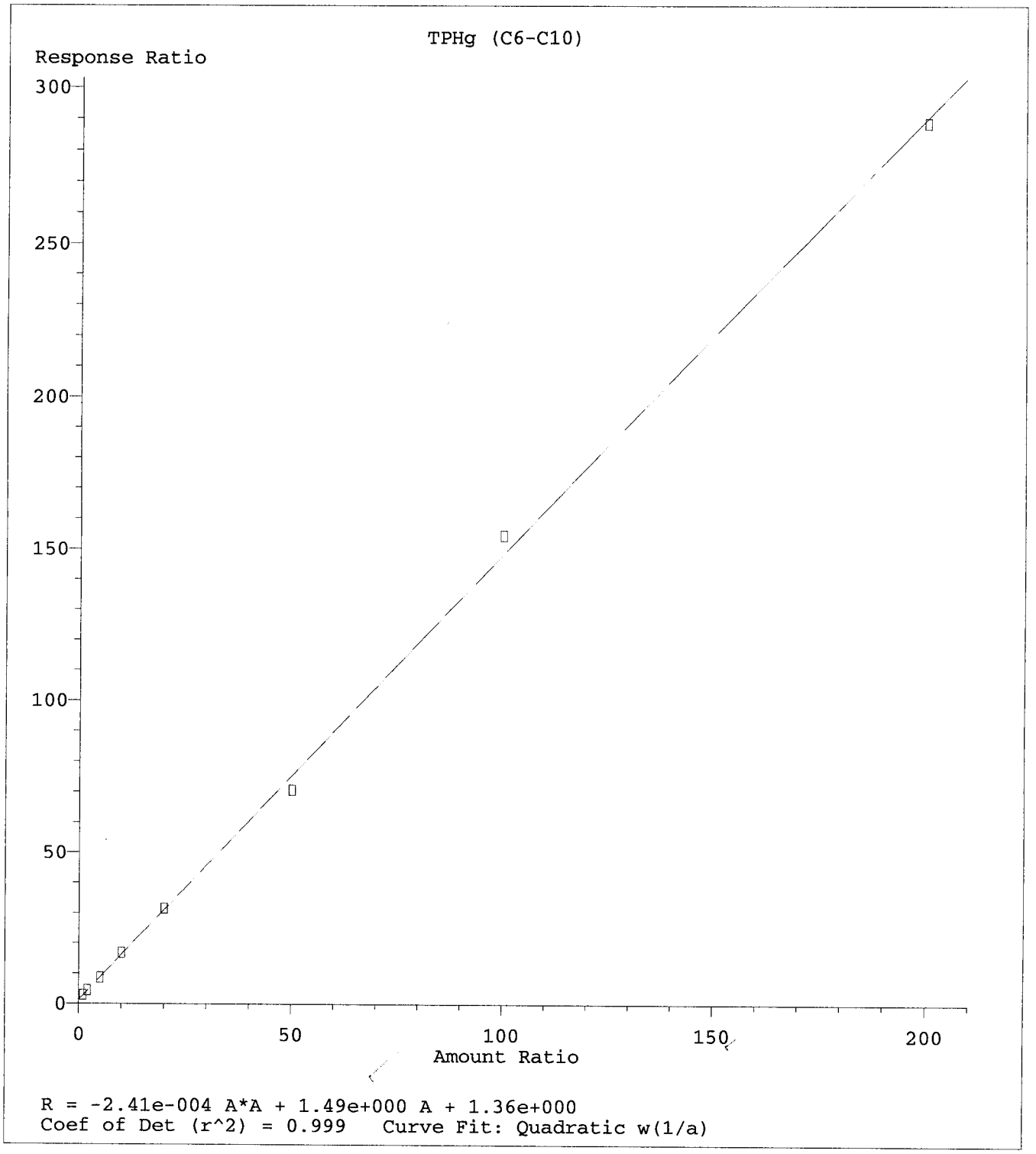
TIC: VC19052923.D\data.ms

(6) TPHg (C5-C9) (H)

9.906min (0.000) 14.63 ug/L m

response 651712

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



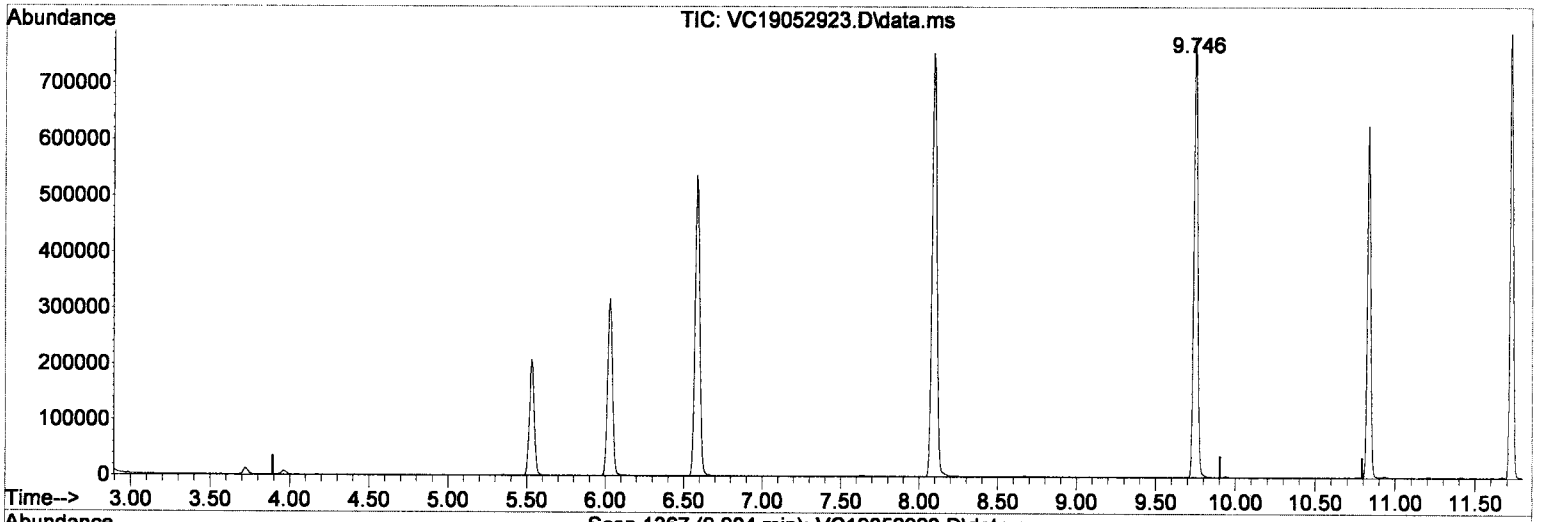
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

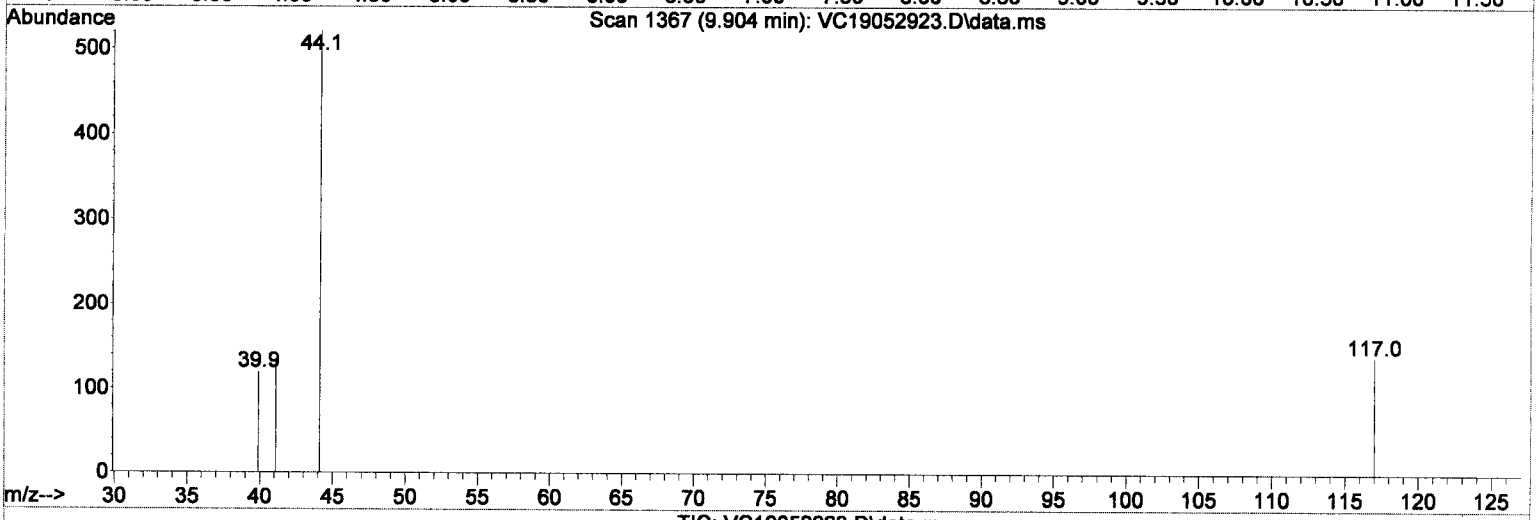
Fut = 14.02

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





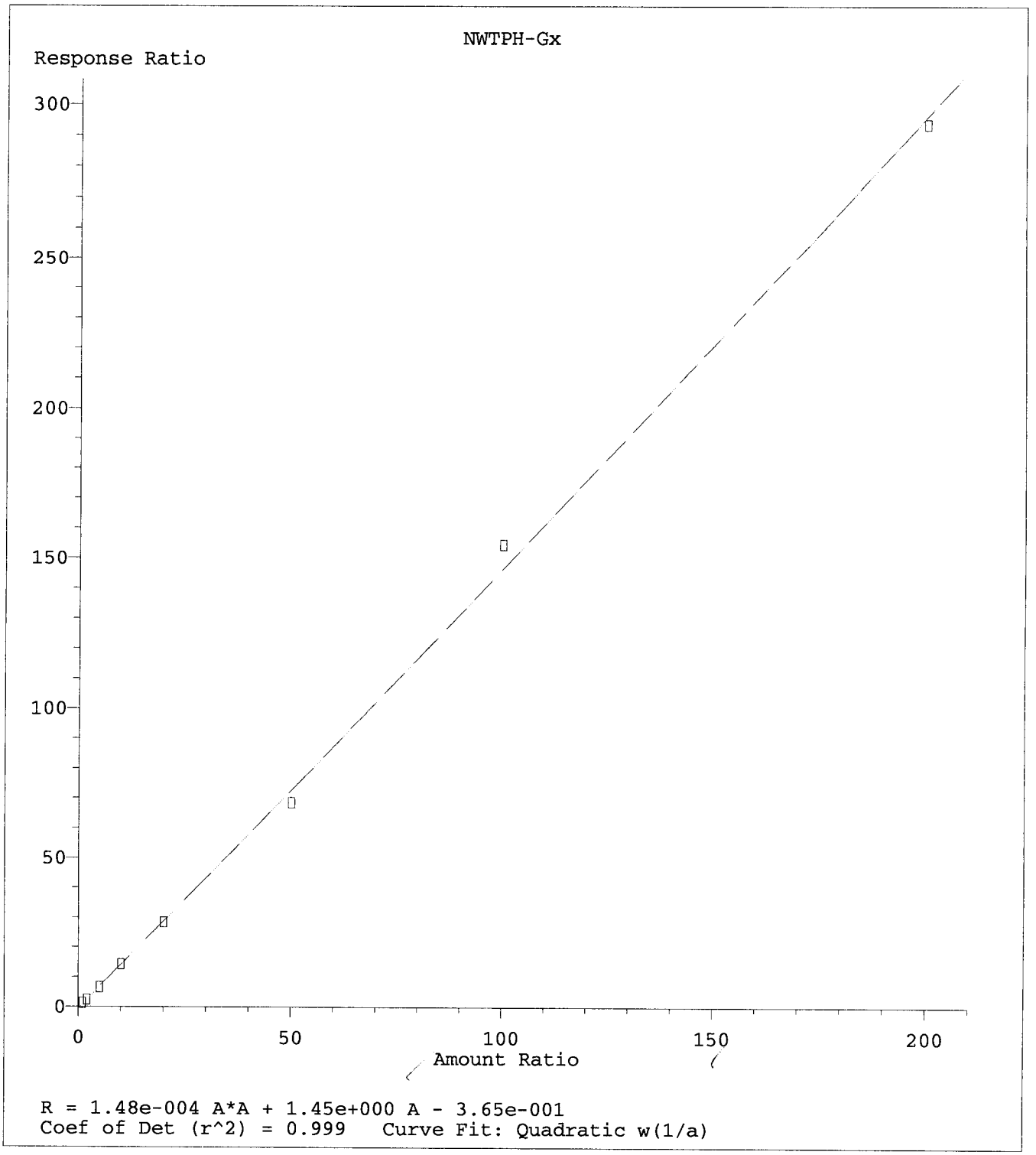
TIC: VC19052923.D\data.ms

(7) TPHg (C6-C10) (H)

9.906min (0.000) 14.02 ug/L m

response 464649

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



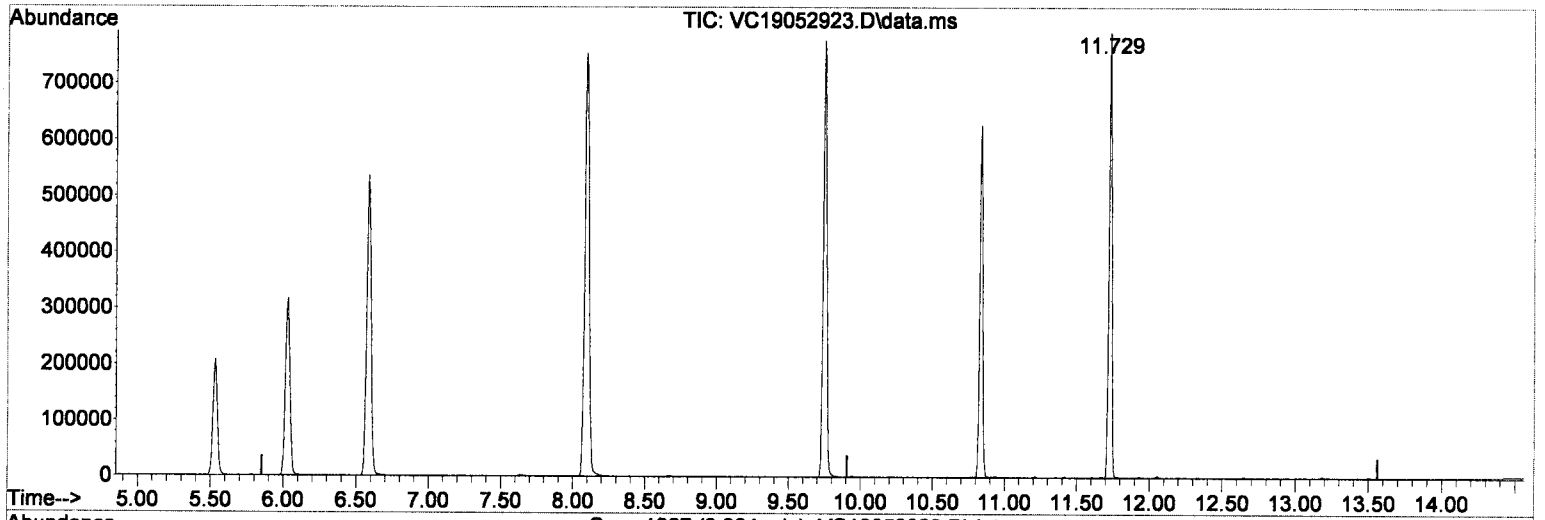
Method Name: C:\msdchem\1\METHODS\VC190529G.M
Calibration Table Last Updated: Thu May 30 15:52:54 2019

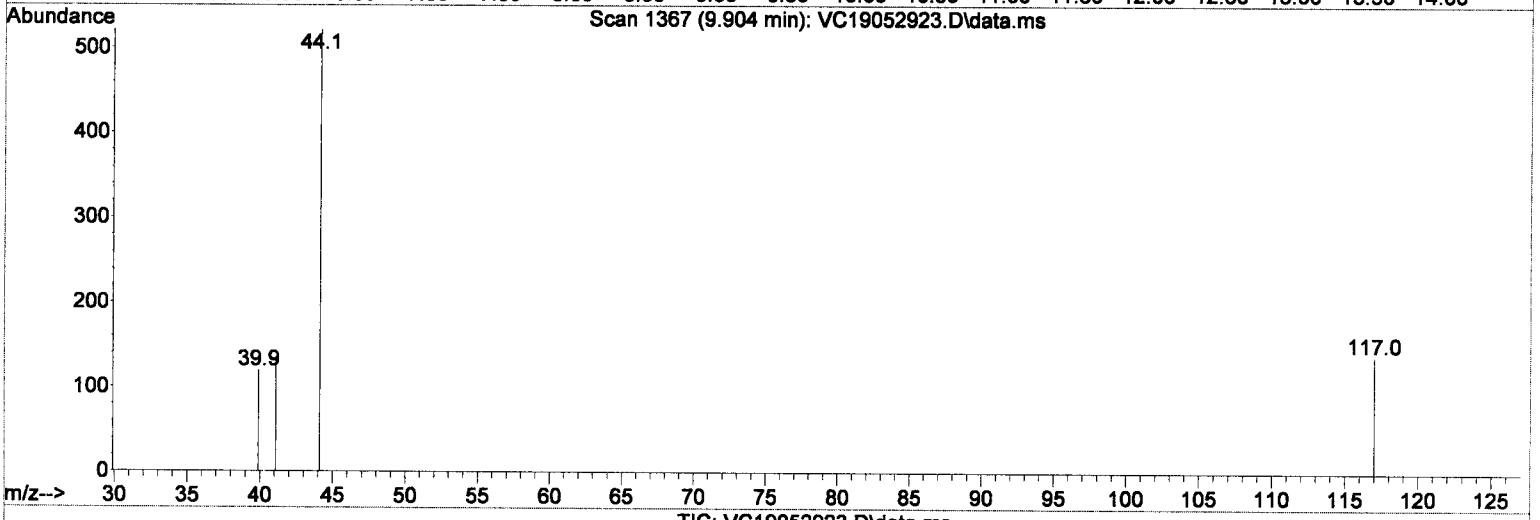
Int = 13.72

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19052923.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 13.72 ug/L m

response 8855

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Analysis Included
8015D-Mod Gasoline (C6-C10) by GC/MS
CA LUFT GRO
NWTPH-Gx

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed
9E29058-TUN2	MS Tune	Soil		A19C135	5/29/2019 11:27:00PM
9E29058-ICB2	Initial Cal Blank	Soil		A19C135	5/30/2019 12:22:00AM
9E29058-CALC	Cal Standard	Soil	A19E372	"	5/30/2019 12:49:00AM
9E29058-CALD	Cal Standard	Soil	A19E373	"	5/30/2019 1:17:00AM
9E29058-CALE	Cal Standard	Soil	A19E374	"	5/30/2019 1:44:00AM
9E29058-CALF	Cal Standard	Soil	A19E375	"	5/30/2019 2:12:00AM
9E29058-CALG	Cal Standard	Soil	A19E183	"	5/30/2019 2:39:00AM
9E29058-CALH	Cal Standard	Soil	A19E184	"	5/30/2019 3:07:00AM
9E29058-CALI	Cal Standard	Soil	A19E185	"	5/30/2019 3:34:00AM
9E29058-CALJ	Cal Standard	Soil	A19E186	"	5/30/2019 4:02:00AM
9E29058-ICV2	Initial Cal Check	Soil	A19B262	"	5/30/2019 5:25:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

8015D-Mod Gasoline (C6-C10 Sequence: **9E29058** Matrix: **Soil**

9E29058-CALC	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALD	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E29058-CALJ	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E29058

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E3104** Instrument: **VOA-GCMS3**

CA LUFT GRO Sequence: **9E29058** Matrix: **Soil**

9E29058-ICV2	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052934.D
Acq On : 30 May 2019 5:25 am
Operator : TB
Sample : 9E29058-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	108	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	46.602	6.8	104	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	49.352	1.3	108	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	106	0.00
5	H	CA-LUFT (C5-C12)	500.000	529.625	-5.9	110	0.00
6	H	TPHg (C5-C9)	500.000	526.029	-5.2	108	0.00
7	H	TPHg (C6-C10)	500.000	535.493	-7.1	112	0.00
8	H	NWTPH-Gx	500.000	533.680	-6.7	115	0.00
9		Benzene (NR)	-1.000	0.000	0.0	113	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	106	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	114	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	108	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	119	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

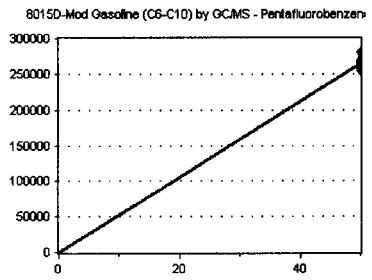
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **8015D-Mod Gasoline (C6-C1** Instrument Cal ID: **A9E3104**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

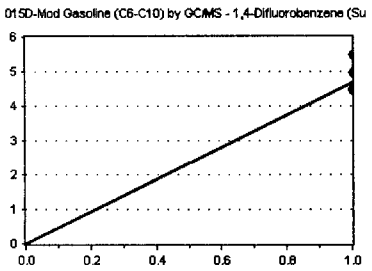


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	257140	5142.800	6.03
9E29058-CALD	50	254092	5081.840	6.03
9E29058-CALE	50	264662	5293.240	6.03
9E29058-CALF	50	261529	5230.580	6.03
9E29058-CALG	50	261111	5222.220	6.03
9E29058-CALH	50	268653	5373.060	6.03
9E29058-CALI	50	266073	5321.460	6.04
9E29058-CALJ	50	280943	5618.860	6.03

AVE RF **5285.508** RF RSD **3.11** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

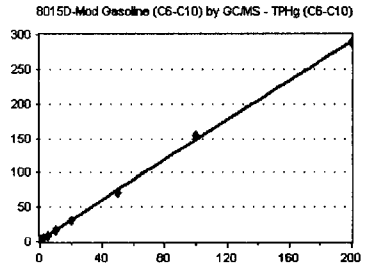


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1139443	4.431	6.59
9E29058-CALD	50	1130909	4.451	6.59
9E29058-CALE	50	1181697	4.465	6.59
9E29058-CALF	50	1178596	4.507	6.59
9E29058-CALG	50	1170992	4.485	6.59
9E29058-CALH	50	1212113	4.512	6.59
9E29058-CALI	50	1320230	4.962	6.59
9E29058-CALJ	50	1535644	5.466	6.58

AVE RF **4.660** RF RSD **7.91** AVE RT **6.59**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

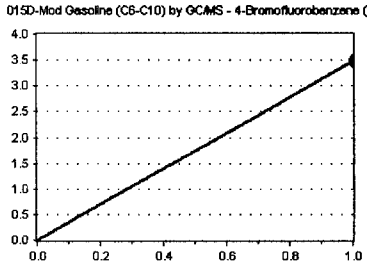


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	733539	2.853	9.91
9E29058-CALD	100	1118241	2.200	9.91
9E29058-CALE	250	2261282	1.709	9.91
9E29058-CALF	500	4374724	1.673	9.91
9E29058-CALG	1000	8234768	1.577	9.91
9E29058-CALH	2500	1.896308E+07	1.412	9.91
9E29058-CALI	5000	4.107088E+07	1.544	9.91
9E29058-CALJ	10000	8.10639E+07	1.443	9.91

AVE RF **1.801** RF RSD **27.25** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	893711	3.476	10.84
9E29058-CALD	50	893010	3.515	10.84
9E29058-CALE	50	923159	3.488	10.83
9E29058-CALF	50	900724	3.444	10.84
9E29058-CALG	50	915240	3.505	10.84
9E29058-CALH	50	936867	3.487	10.83
9E29058-CALI	50	922982	3.469	10.84
9E29058-CALJ	50	973205	3.464	10.84

AVE RF **3.481** RF RSD **0.65** AVE RT **10.84**

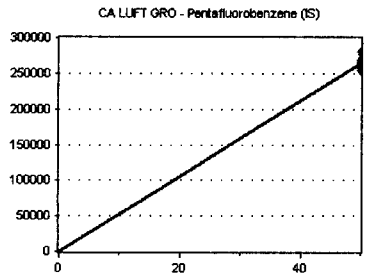
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **A9E3104**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

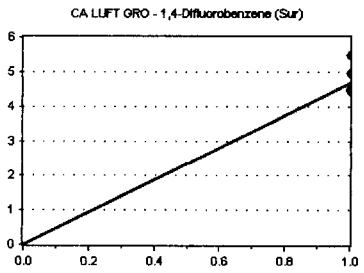


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	257140	5142.800	6.03
9E29058-CALD	50	254092	5081.840	6.03
9E29058-CALE	50	264662	5293.240	6.03
9E29058-CALF	50	261529	5230.580	6.03
9E29058-CALG	50	261111	5222.220	6.03
9E29058-CALH	50	268653	5373.060	6.03
9E29058-CALI	50	266073	5321.460	6.04
9E29058-CALJ	50	280943	5618.860	6.03

AVE RF **5285.508** RF RSD **3.11** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

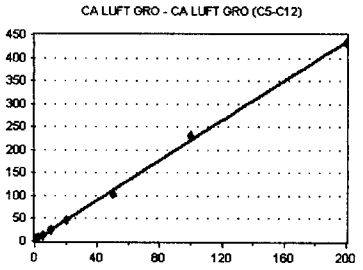


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1139443	4.431	6.59
9E29058-CALD	50	1130909	4.451	6.59
9E29058-CALE	50	1181697	4.465	6.59
9E29058-CALF	50	1178596	4.507	6.59
9E29058-CALG	50	1170992	4.485	6.59
9E29058-CALH	50	1212113	4.512	6.59
9E29058-CALI	50	1320230	4.962	6.59
9E29058-CALJ	50	1535644	5.466	6.58

AVE RF **4.660** RF RSD **7.91** AVE RT **6.59**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

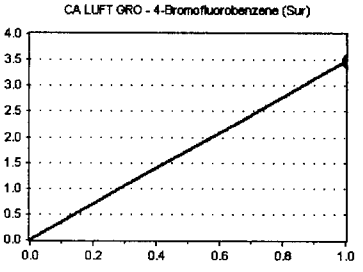


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1126234	4.380	9.91
9E29058-CALD	100	1624353	3.196	9.91
9E29058-CALE	250	3450881	2.608	9.91
9E29058-CALF	500	6589983	2.520	9.91
9E29058-CALG	1000	1.2264E+07	2.348	9.91
9E29058-CALH	2500	2.832011E+07	2.108	9.91
9E29058-CALI	5000	6.154367E+07	2.313	9.91
9E29058-CALJ	10000	1.215222E+08	2.163	9.91

AVE RF **2.705** RF RSD **28.02** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	893711	3.476	10.84
9E29058-CALD	50	893010	3.515	10.84
9E29058-CALE	50	923159	3.488	10.83
9E29058-CALF	50	900724	3.444	10.84
9E29058-CALG	50	915240	3.505	10.84
9E29058-CALH	50	936867	3.487	10.83
9E29058-CALI	50	922982	3.469	10.84
9E29058-CALJ	50	973205	3.464	10.84

AVE RF **3.481** RF RSD **0.65** AVE RT **10.84**

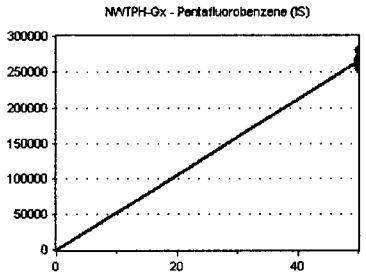
Element Calibration Review Sheet

Calibration ID: **A9E3104** Instrument: **VOA-GCMS3** Calibration Date: **05/31/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **A9E3104**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

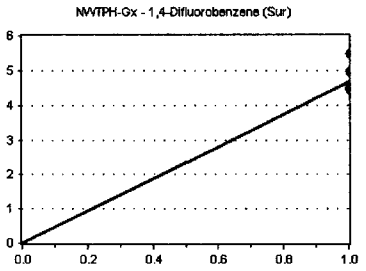


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	257140	5142.800	6.03
9E29058-CALD	50	254092	5081.840	6.03
9E29058-CALE	50	264662	5293.240	6.03
9E29058-CALF	50	261529	5230.580	6.03
9E29058-CALG	50	261111	5222.220	6.03
9E29058-CALH	50	268653	5373.060	6.03
9E29058-CALI	50	266073	5321.460	6.04
9E29058-CALJ	50	280943	5618.860	6.03

AVE RF **5285.508** RF RSD **3.11** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

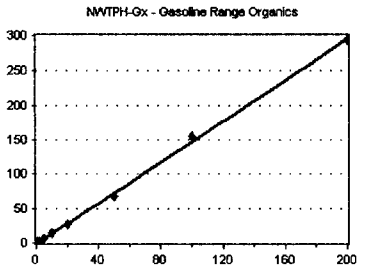


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	1139443	4.431	6.59
9E29058-CALD	50	1130909	4.451	6.59
9E29058-CALE	50	1181697	4.465	6.59
9E29058-CALF	50	1178596	4.507	6.59
9E29058-CALG	50	1170992	4.485	6.59
9E29058-CALH	50	1212113	4.512	6.59
9E29058-CALI	50	1320230	4.962	6.59
9E29058-CALJ	50	1535644	5.466	6.58

AVE RF **4.660** RF RSD **7.91** AVE RT **6.59**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

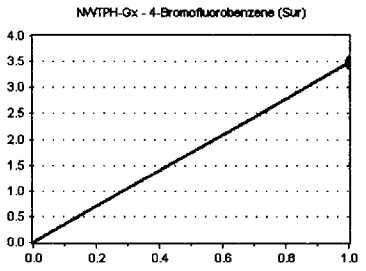


Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	337341	1.312	9.91
9E29058-CALD	100	594153	1.169	9.91
9E29058-CALE	250	1724074	1.303	9.91
9E29058-CALF	500	3706703	1.417	9.91
9E29058-CALG	1000	7396048	1.416	9.91
9E29058-CALH	2500	1.838528E+07	1.369	9.91
9E29058-CALI	5000	4.106911E+07	1.544	9.91
9E29058-CALJ	10000	8.243122E+07	1.467	9.91

AVE RF **1.375** RF RSD **8.34** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E29058-CALC	50	893711	3.476	10.84
9E29058-CALD	50	893010	3.515	10.84
9E29058-CALE	50	923159	3.488	10.83
9E29058-CALF	50	900724	3.444	10.84
9E29058-CALG	50	915240	3.505	10.84
9E29058-CALH	50	936867	3.487	10.83
9E29058-CALI	50	922982	3.469	10.84
9E29058-CALJ	50	973205	3.464	10.84

AVE RF **3.481** RF RSD **0.65** AVE RT **10.84**

Injection Log

Directory: j:\DATA\2019-05\9E29058

Line	Vial	FileName	Multiplier	SampleName		Misc Info	Injected
1	1	Vc19052901.d	1.	9E29058-IBL1		1X 5mL DI+MeOH	29 May 2019 14:17
2	2	Vc19052902.d	1.	9E29058-TUN1		A19C135 BFB (IS/...	29 May 2019 14:45
3	3	Vc19052903.d	1.	9E29058-ICB1		1X 5mL DI+MeOH	29 May 2019 15:12
4	4	Vc19052904.d	1.	9E29058-CAL1		1X 5mL 0.1ppb VO...	29 May 2019 15:40
5	5	Vc19052905.d	1.	9E29058-CAL2		1X 5mL 0.2ppb VO...	29 May 2019 16:07
6	6	Vc19052906.d	1.	9E29058-CAL3		1X 5mL 0.4ppb VO...	29 May 2019 16:35
7	7	Vc19052907.d	1.	9E29058-CAL4		1X 5mL 1ppb VOC ...	29 May 2019 17:02
8	8	Vc19052908.d	1.	9E29058-CAL5		1X 5mL 2ppb VOC ...	29 May 2019 17:30
9	9	Vc19052909.d	1.	9E29058-CAL6		1X 5mL 5ppb VOC ...	29 May 2019 17:57
10	10	Vc19052910.d	1.	9E29058-CAL7		1X 5mL 10ppb VOC...	29 May 2019 18:25
11	11	Vc19052911.d	1.	9E29058-CAL8		1X 5mL 20ppb VOC...	29 May 2019 18:52
12	12	Vc19052912.d	1.	9E29058-CAL9		1X 5mL 50ppb VOC...	29 May 2019 19:20
13	13	Vc19052913.d	1.	9E29058-IBL2		1X 5mL DI+MeOH	29 May 2019 19:47
14	14	Vc19052914.d	1.	9E29058-CALA		1X 5mL 100ppb VO...	29 May 2019 20:15
15	15	Vc19052915.d	1.	9E29058-IBL3		1X 5mL DI+MeOH	29 May 2019 20:42
16	16	Vc19052916.d	1.	9E29058-CALB		1X 5mL 200ppb VO...	29 May 2019 21:10
17	17	Vc19052917.d	1.	9E29058-IBL4		1X 5mL DI+MeOH	29 May 2019 21:37
18	18	Vc19052918.d	1.	9E29058-IBL5		1X 5mL DI+MeOH	29 May 2019 22:05
19	19	Vc19052919.d	1.	9E29058-ICV1		1X 5mL 20ppb VOC...	29 May 2019 22:32
20	20	Vc19052920.d	1.	9E29058-IBL6		1X 5mL DI+MeOH	29 May 2019 22:59
21	21	Vc19052921.d	1.	9E29058-TUN2	RT	A19C135 BFB (IS/...	29 May 2019 23:27
22	22	Vc19052922.d	1.	9E29058-IBL7		1X 5mL DI+MeOH	29 May 2019 23:54
23	23	Vc19052923.d	1.	9E29058-ICB2		1X 5mL DI+MeOH	30 May 2019 00:22
24	24	Vc19052924.d	1.	9E29058-CALC		1X 5mL 50ppb GX ...	30 May 2019 00:49
25	25	Vc19052925.d	1.	9E29058-CALD		1X 5mL 100ppb GX...	30 May 2019 01:17
26	26	Vc19052926.d	1.	9E29058-CALE		1X 5mL 250ppb GX...	30 May 2019 01:44
27	27	Vc19052927.d	1.	9E29058-CALF		1X 5mL 500ppb GX...	30 May 2019 02:12
28	28	Vc19052928.d	1.	9E29058-CALG		1X 5mL 1000ppb G...	30 May 2019 02:39
29	29	Vc19052929.d	1.	9E29058-CALH		1X 5mL 2500ppb G...	30 May 2019 03:07
30	30	Vc19052930.d	1.	9E29058-CALI		1X 5mL 5000ppb G...	30 May 2019 03:34
31	31	Vc19052931.d	1.	9E29058-CALJ		1X 5mL 10000ppb ...	30 May 2019 04:02
32	32	Vc19052932.d	1.	9E29058-IBL8		1X 5mL DI+MeOH	30 May 2019 04:29
33	33	Vc19052933.d	1.	9E29058-IBL9		1X 5mL DI+MeOH	30 May 2019 04:57
34	34	Vc19052934.d	1.	9E29058-ICV2		1X 5mL 500ppb GX...	30 May 2019 05:25
35	35	Vc19052935.d	1.	9E29058-IBLA		1X 5mL DI+MeOH	30 May 2019 05:52

5/30/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052901.D
Acq On : 29 May 2019 2:17 pm
Operator : TB
Sample : 9E29058-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

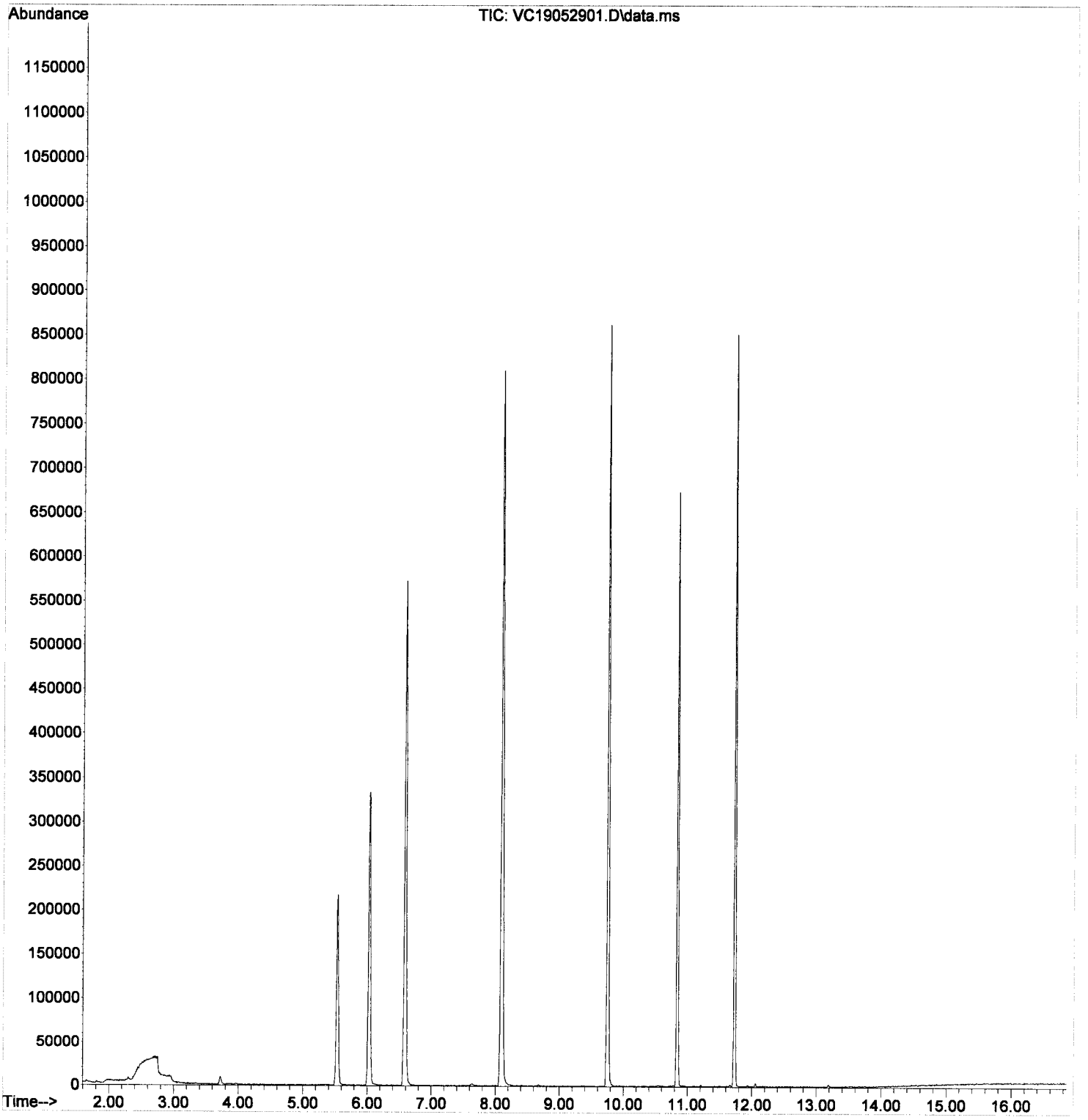
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	279040	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	484013	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	202813	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	149073	49.34	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	533928	49.75	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	650638	49.69	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	177320	50.63	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.851	50	998	0.24	ug/L		88
5) Bromomethane	2.302	96	2128	1.33	ug/L		96
6) Chloroethane	2.435	64	170	0.16	ug/L	#	1
9) Carbon Disulfide	3.111	76	570	0.13	ug/L		77
11) Iodomethane	3.226	142	606	1.26	ug/L	#	33
12) Methylene Chloride	3.719	84	4593	Below Cal			90
13) Acetone	3.847	43	1940	1.54	ug/L		95
73) n-Butylbenzene	11.938	91	860	0.13	ug/L	#	71
76) Hexachlorobutadiene	13.191	223	353	0.56	ug/L	#	74

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052901.D
Acq On : 29 May 2019 2:17 pm
Operator : TB
Sample : 9E29058-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:31 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

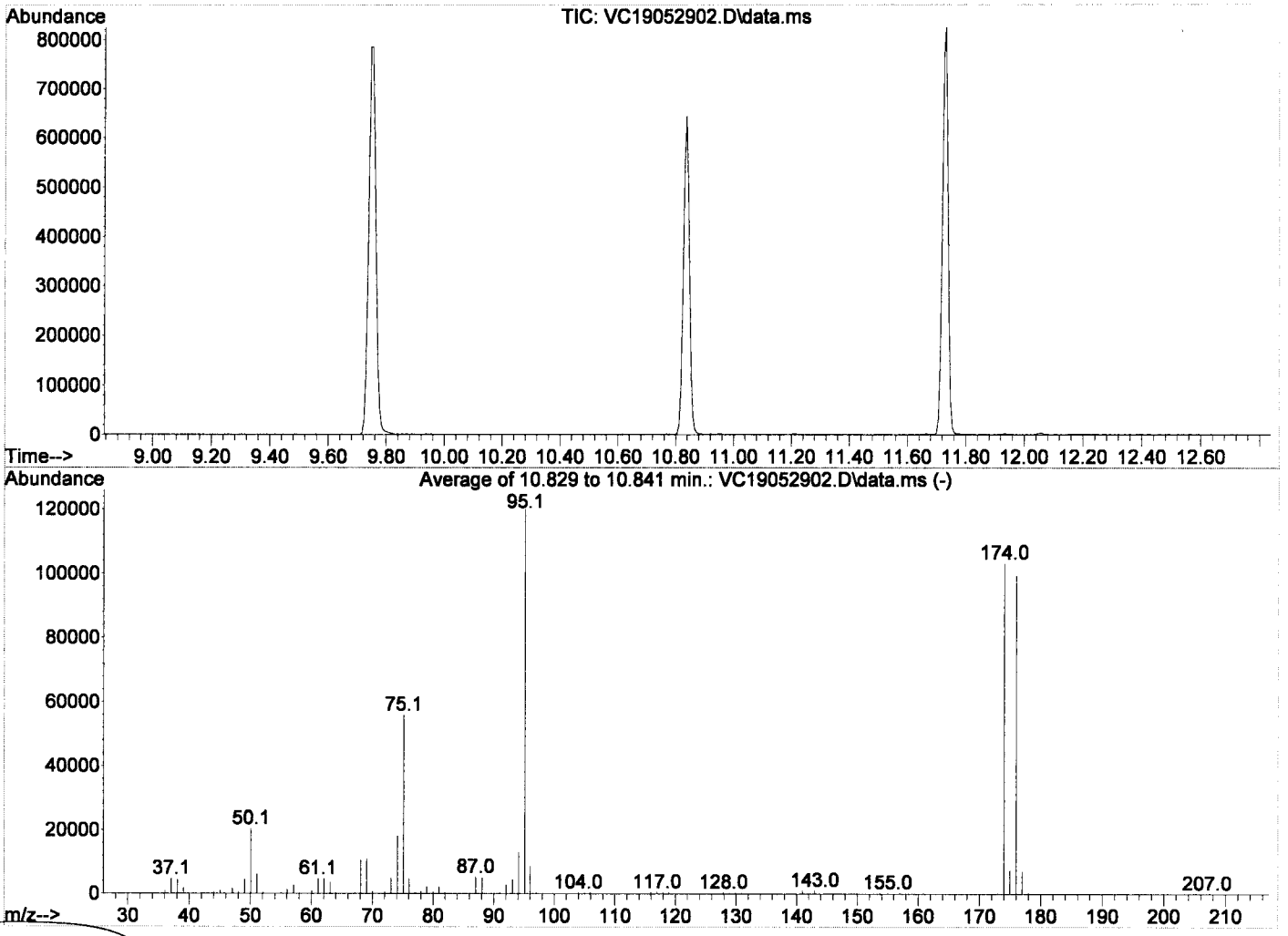


Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052902.D
Acq On : 29 May 2019 2:45 pm
Operator : TB
Sample : 9E29058-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190529S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Thu May 30 14:50:00 2019

5/30/19



AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1511

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.0	20413	PASS
75	95	30	60	46.6	55912	PASS
95	95	100	100	100.0	119877	PASS
96	95	5	9	7.3	8724	PASS
173	174	0.00	2	0.2	243	PASS
174	95	50	200	86.1	103224	PASS
175	174	5	9	7.3	7533	PASS
176	174	95	101	96.3	99416	PASS
177	176	5	9	7.2	7119	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052902.D
Acq On : 29 May 2019 2:45 pm
Operator : TB
Sample : 9E29058-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:33 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

5/30/19

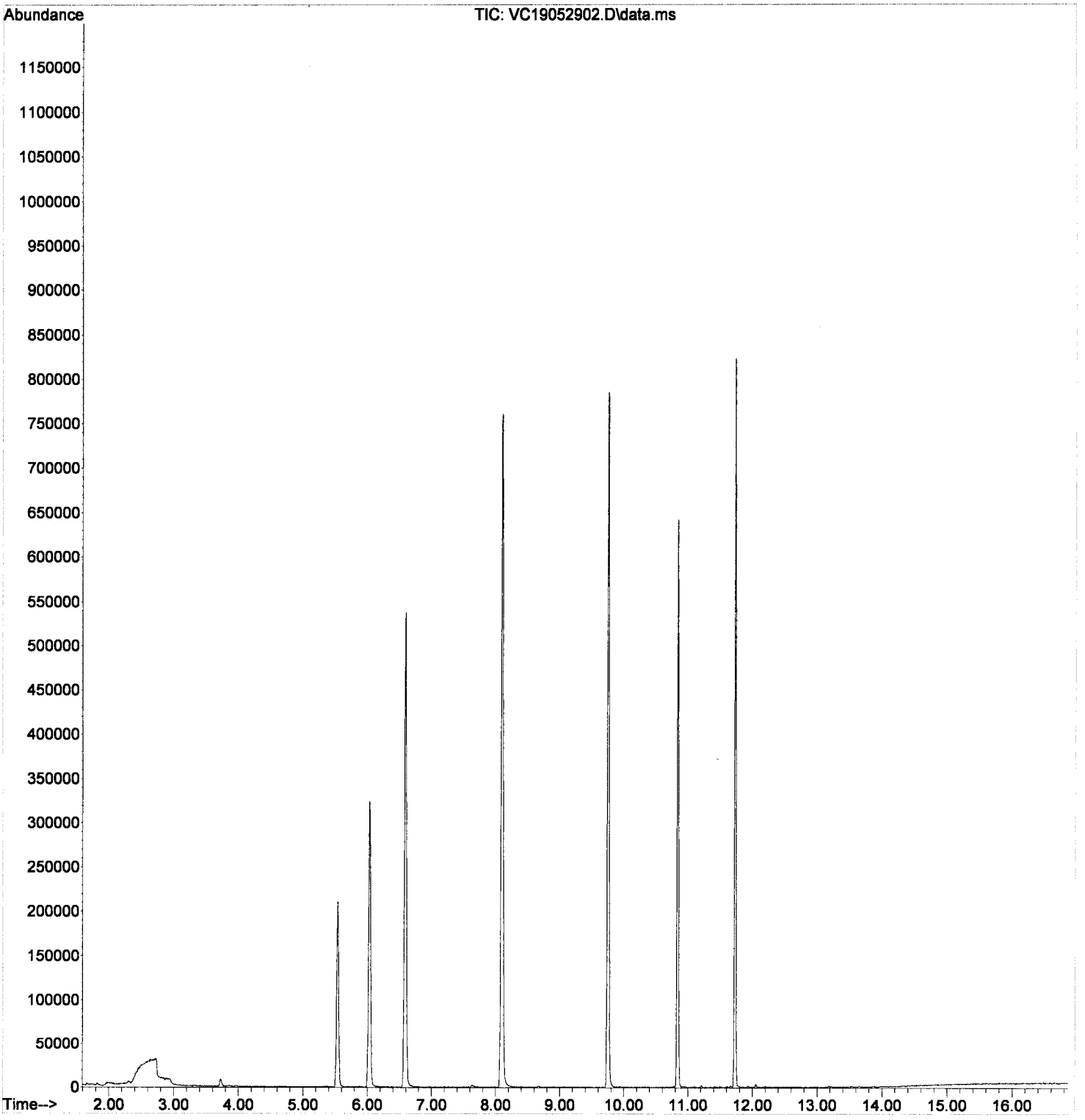
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	268009	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	467811	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.730	152	195372	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	142792	49.20	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	506916	49.17	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	624549	49.35	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	171404	50.81	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.856	50	829	0.21	ug/L		90
5) Bromomethane	2.306	96	1688	1.10	ug/L		84
6) Chloroethane	2.428	64	226	0.22	ug/L	#	1
9) Carbon Disulfide	3.115	76	490	0.11	ug/L		77
11) Iodomethane	3.255	142	488	1.17	ug/L	#	47
12) Methylene Chloride	3.730	84	4955	Below Cal			82
13) Acetone	3.851	43	2013	1.67	ug/L		81
31) iso-Butyl Alcohol	6.267	43	180	0.67	ug/L	#	17
40) Toluene	8.146	91	1018	0.08	ug/L		93
52) m,p-Xylenes (2)	9.935	91	847	0.09	ug/L		94
70) 4-Isopropyltoluene	11.608	119	747	0.10	ug/L		80
73) n-Butylbenzene	11.936	91	1010	0.15	ug/L		84
76) Hexachlorobutadiene	13.183	223	275	0.46	ug/L	#	69
77) 1,2,4-Trichlorobenzene	13.226	180	236	0.10	ug/L		79

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052902.D
Acq On : 29 May 2019 2:45 pm
Operator : TB
Sample : 9E29058-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:33 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052903.D
Acq On : 29 May 2019 3:12 pm
Operator : TB
Sample : 9E29058-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:35 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	264985	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	454941	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.730	152	191224	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	144484	50.35	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	505611	49.61	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	616289	50.08	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	168509	51.03	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.862	50	752	0.19	ug/L		85
5) Bromomethane	2.318	96	1622	1.06	ug/L	#	70
6) Chloroethane	2.446	64	201	0.20	ug/L	#	1
9) Carbon Disulfide	3.109	76	430	0.10	ug/L		77
11) Iodomethane	3.261	142	356	1.06	ug/L	#	70
12) Methylene Chloride	3.730	84	14774	0.19	ug/L		93
13) Acetone	3.839	43	519	0.43	ug/L		94
15) n-Hexane	3.973	86	571	Below Cal		#	70
40) Toluene	8.159	91	1411	0.12	ug/L		93
52) m,p-Xylenes (2)	9.935	91	769	0.09	ug/L		77
73) n-Butylbenzene	11.930	91	689	0.11	ug/L		82

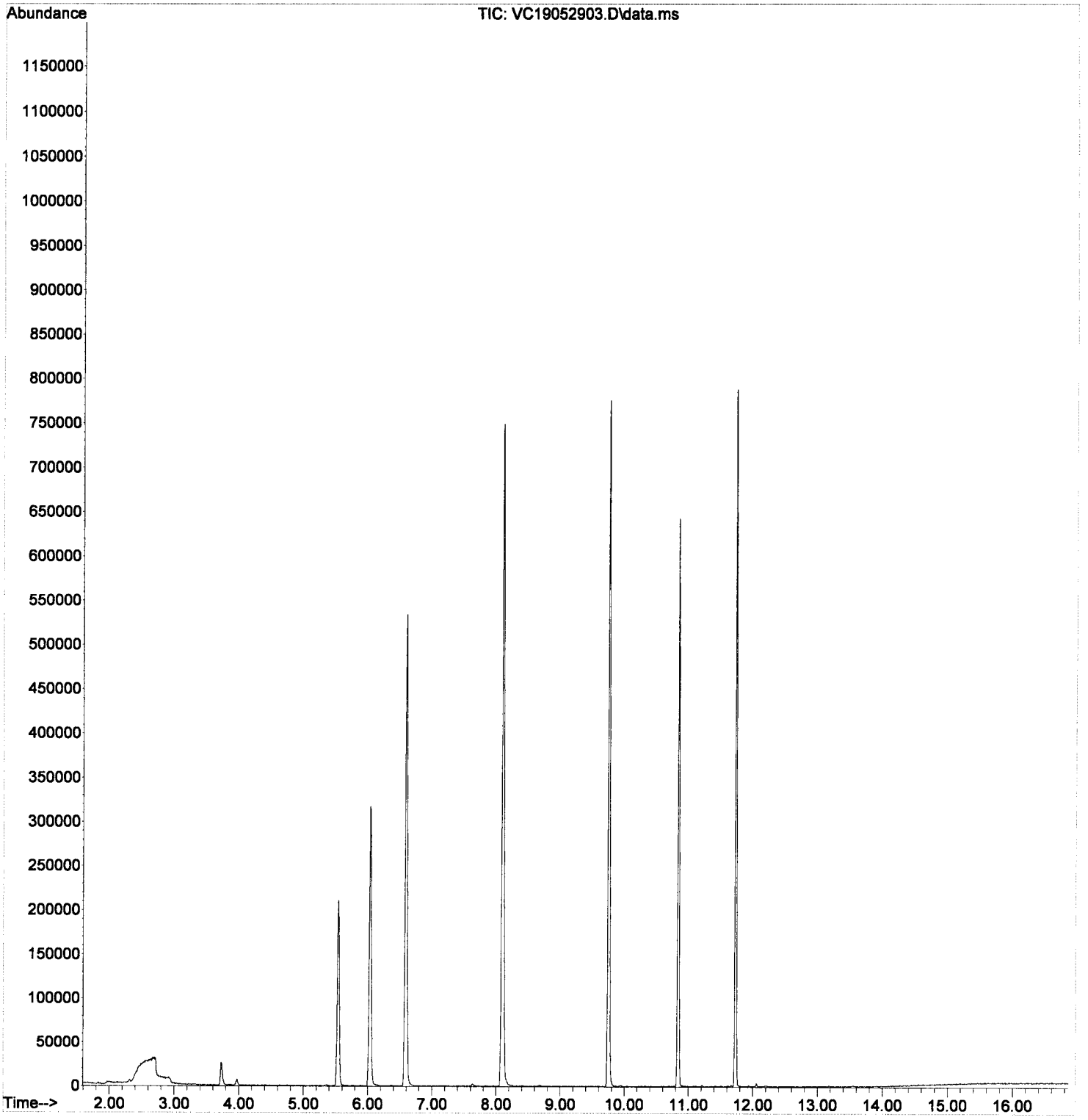
< mdl

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052903.D
Acq On : 29 May 2019 3:12 pm
Operator : TB
Sample : 9E29058-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:35 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:57:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

post 5/30/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	259869	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	448840	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194580	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	139535	48.58	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	493490	49.16	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607580	49.91	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	167905	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d		
3) Chloromethane	1.855	50	835	0.23	ug/L		87
4) Vinyl Chloride	0.000		0	N.D.	d		
5) Bromomethane	2.306	96	1488	1.03	ug/L		89
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	0.000		0	N.D.			
8) 1,1-Dichloroethene	0.000		0	N.D.	d		
9) Carbon Disulfide	0.000		0	N.D.	d		
10) Freon 113	0.000		0	N.D.	d		
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.723	84	5028	1.70	ug/L		93
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.887	61	245	0.08	ug/L	#	37
15) n-Hexane	3.972	86	856	1.68	ug/L	#	89
16) Methyl-tert-butyl-ether	4.033	73	932	0.10	ug/L		75
17) 1,1-Dichloroethane	0.000		0	N.D.	d		
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.067	61	365	0.11	ug/L	#	56
20) 2,2-Dichloropropane	0.000		0	N.D.	d		
21) Bromochloromethane	0.000		0	N.D.	d		
22) Chloroform	5.347	83	862	0.20	ug/L		67
23) Carbon Tetrachloride	0.000		0	N.D.	d		
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.542	97	303	0.09	ug/L	#	65
27) 1,1-Dichloropropene	0.000		0	N.D.	d		
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.937	78	1225	0.11	ug/L		76
30) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	d		
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.558	130	358	0.12	ug/L	#	57
34) Dibromomethane	0.000		0	N.D.			
35) 1,2-Dichloropropane	0.000		0	N.D.	d		
36) Bromodichloromethane	0.000		0	N.D.	d		
38) c-1,3-Dichloropropene	0.000		0	N.D.			
40) Toluene	8.152	91	2496	0.22	ug/L		77
41) Tetrachloroethene (PCE)	8.602	166	338	0.13	ug/L	#	56
42) 4-Methyl-2-Pentanone (...	8.620	43	867	0.25	ug/L	#	41
43) t-1,3-Dichloropropene	8.657	75	268	0.08	ug/L		47
44) 1,1,2-Trichloroethane	8.821	97	229	0.09	ug/L	#	13
45) Dibromochloromethane	0.000		0	N.D.			
46) 1,3-Dichloropropane	9.113	76	438	0.10	ug/L	#	40
47) 1,2-Dibromoethane (EDB)	9.253	107	186	0.07	ug/L		78
48) 2-Hexanone	9.508	43	443	0.18	ug/L		71

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:57:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

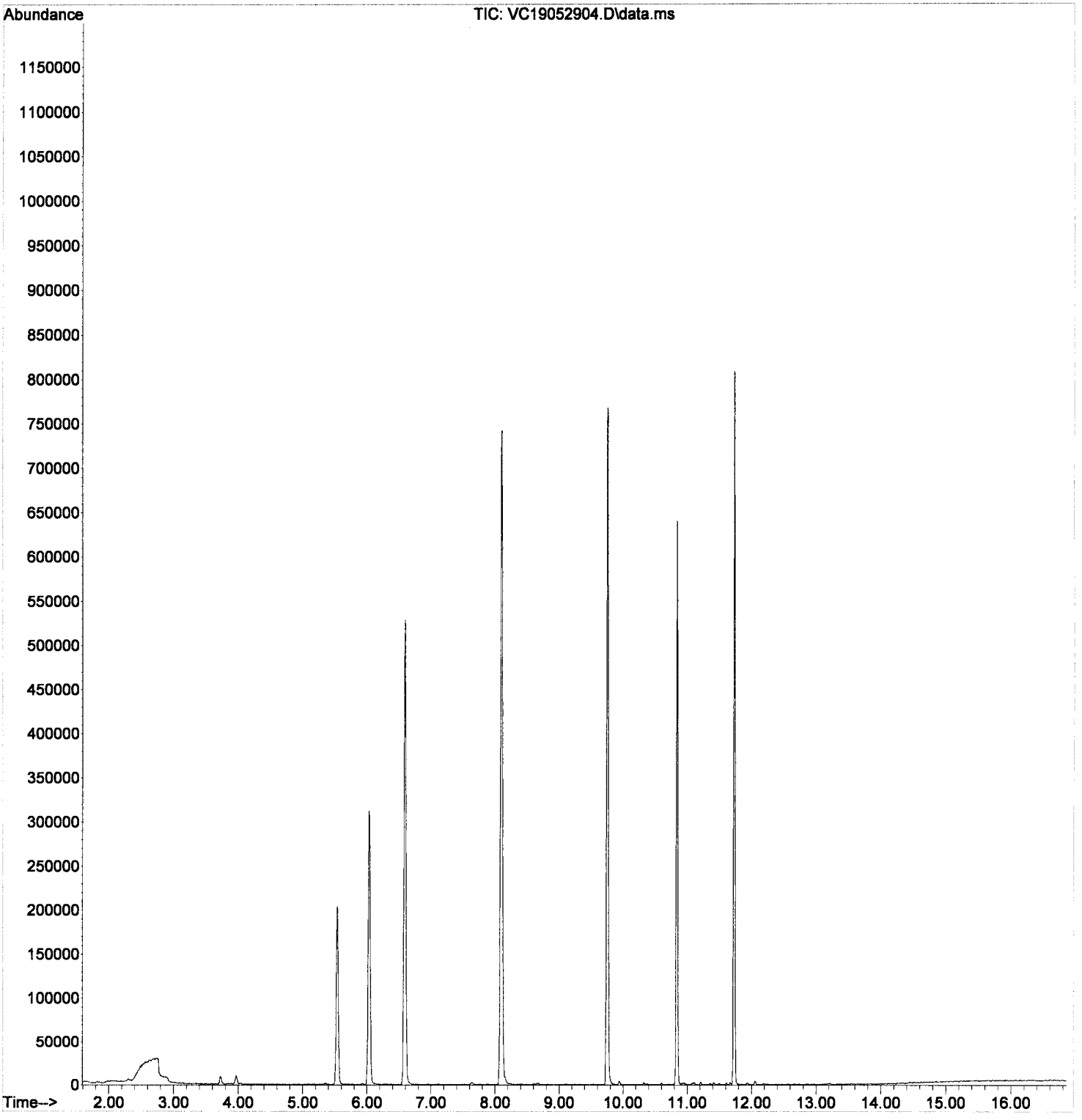
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	1131	0.16	ug/L	#	1
50) Ethylbenzene	9.800	91	1694	0.14	ug/L		86
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.940	91	2487	0.28	ug/L		90
53) o-Xylene	10.324	91	1273	0.14	ug/L		92
54) Styrene	10.378	104	585	0.08	ug/L		78
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.597	105	1325	0.13	ug/L		83
59) Bromobenzene	10.926	156	177	0.07	ug/L		87
60) n-Propylbenzene	10.944	91	1564	0.14	ug/L		86
61) 1,1,2,2-Tetrachloroethane	11.005	83	266	0.10	ug/L	#	25
62) 2-Chlorotoluene	11.072	126	260	0.11	ug/L	#	75
63) 1,3,5-Trimethylbenzene	11.108	105	1305	0.16	ug/L		84
64) 1,2,3-Trichloropropane	0.000		0	N.D.			
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.206	91	1133	0.16	ug/L		76
67) tert-Butylbenzene	11.358	91	480	0.11	ug/L	#	75
68) 1,2,4-Trimethylbenzene	11.412	105	965	0.12	ug/L		80
69) sec-Butylbenzene	11.504	105	1196	0.13	ug/L		89
70) 4-Isopropyltoluene	11.607	119	1072	0.14	ug/L		93
71) 1,3-Dichlorobenzene	11.674	146	610	0.14	ug/L		85
72) 1,4-Dichlorobenzene	11.741	146	690	0.16	ug/L	#	25
73) n-Butylbenzene	11.930	91	1118	0.18	ug/L		93
74) 1,2-Dichlorobenzene	12.063	146	533	0.13	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	13.183	223	235	0.38	ug/L	#	72
77) 1,2,4-Trichlorobenzene	13.213	180	358	0.15	ug/L		72
78) Naphthalene	13.493	128	706	0.08	ug/L		78
79) 1,2,3-Trichlorobenzene	13.663	180	105	0.04	ug/L		66

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:57:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

pre 5/30/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	259869	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	448840	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194580	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	139535	48.58	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	493490	49.16	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607580	49.91	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	167905	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.673	85	220	0.10	ug/L	#	50
3) Chloromethane	1.855	50	835	0.23	ug/L		87
4) Vinyl Chloride	1.953	62	263	0.10	ug/L	#	48
5) Bromomethane	2.306	96	1488	1.03	ug/L		89
6) Chloroethane	2.439	64	459	0.47	ug/L	#	1
7) Trichlorofluoromethane	0.000		0	N.D.			
8) 1,1-Dichloroethene	3.084	61	199	0.08	ug/L	#	63
9) Carbon Disulfide	3.109	76	586	0.14	ug/L		46
10) Freon 113	3.145	101	290	0.14	ug/L	#	18
11) Iodomethane	3.242	142	333	0.36	ug/L	#	47
12) Methylene Chloride	3.723	84	5028	1.70	ug/L		93
13) Acetone	3.808	43	123	0.11	ug/L	#	42
14) t-1,2-Dichloroethene	3.887	61	245	0.08	ug/L	#	37
15) n-Hexane	3.972	86	856	1.68	ug/L	#	89
16) Methyl-tert-butyl-ether	4.033	73	932	0.10	ug/L		75
17) 1,1-Dichloroethane	4.520	63	373	0.10	ug/L	#	49
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.067	61	365	0.11	ug/L	#	56
20) 2,2-Dichloropropane	5.177	77	202	0.07	ug/L		71
21) Bromochloromethane	5.262	49	156	0.08	ug/L	#	15
22) Chloroform	5.347	83	862	0.20	ug/L		67
23) Carbon Tetrachloride	5.481	117	134	0.06	ug/L		76
24) Tetrahydrofuran	5.530	42	135	0.09	ug/L	#	45
25) 1,1,1-Trichloroethane	5.542	97	303	0.09	ug/L	#	65
27) 1,1-Dichloropropene	5.670	75	369	0.11	ug/L	#	41
28) 2-Butanone (MEK)	5.718	43	696	0.33	ug/L		54
29) Benzene	5.937	78	1225	0.11	ug/L		76
30) 1,2-Dichloroethane (EDC)	6.156	62	233	0.07	ug/L	#	50
31) iso-Butyl Alcohol	6.260	43	192	0.75	ug/L		96
33) Trichloroethene (TCE)	6.558	130	358	0.12	ug/L	#	57
34) Dibromomethane	0.000		0	N.D.			
35) 1,2-Dichloropropane	7.111	63	306	0.10	ug/L	#	37
36) Bromodichloromethane	7.184	83	158	0.06	ug/L	#	26
38) c-1,3-Dichloropropene	0.000		0	N.D.			
40) Toluene	8.152	91	2496	0.22	ug/L		77
41) Tetrachloroethene (PCE)	8.602	166	338	0.13	ug/L	#	56
42) 4-Methyl-2-Pentanone (...	8.620	43	867	0.25	ug/L	#	41
43) t-1,3-Dichloropropene	8.657	75	268	0.08	ug/L		47
44) 1,1,2-Trichloroethane	8.821	97	229	0.09	ug/L	#	13
45) Dibromochloromethane	0.000		0	N.D.			
46) 1,3-Dichloropropane	9.113	76	438	0.10	ug/L	#	40
47) 1,2-Dibromoethane (EDB)	9.253	107	186	0.07	ug/L		78
48) 2-Hexanone	9.508	43	443	0.18	ug/L		71

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

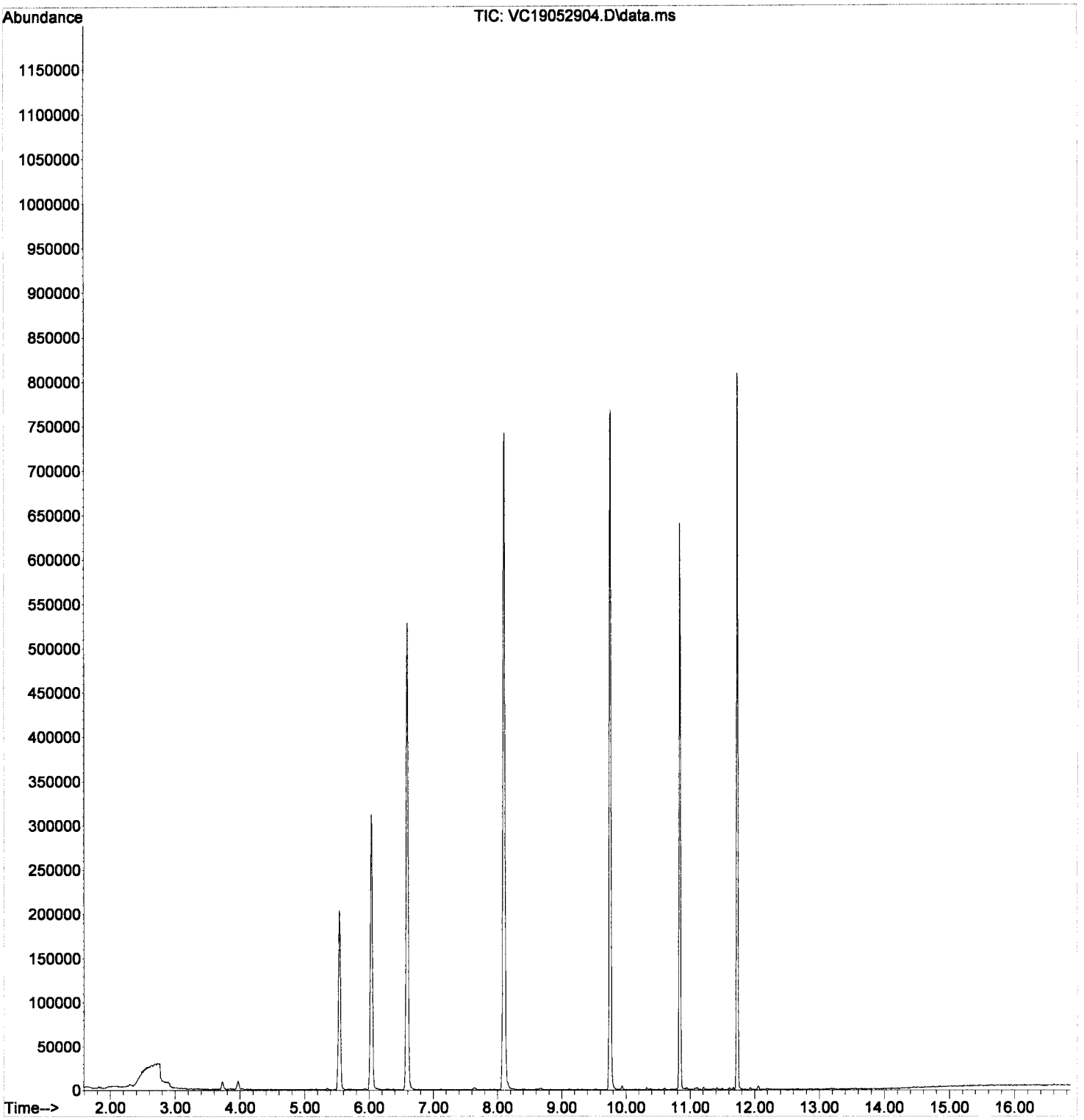
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Chlorobenzene	9.764	112	1131	0.16	ug/L #	1
50) Ethylbenzene	9.800	91	1694	0.14	ug/L	86
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.		
52) m,p-Xylenes (2)	9.940	91	2487	0.28	ug/L	90
53) o-Xylene	10.324	91	1273	0.14	ug/L	92
54) Styrene	10.378	104	585	0.08	ug/L	78
55) Bromoform	0.000		0	N.D.		
56) Isopropylbenzene	10.597	105	1325	0.13	ug/L	83
59) Bromobenzene	10.926	156	177	0.07	ug/L	87
60) n-Propylbenzene	10.944	91	1564	0.14	ug/L	86
61) 1,1,2,2-Tetrachloroethane	11.005	83	266	0.10	ug/L #	25
62) 2-Chlorotoluene	11.072	126	260	0.11	ug/L #	75
63) 1,3,5-Trimethylbenzene	11.108	105	1305	0.16	ug/L	84
64) 1,2,3-Trichloropropane	0.000		0	N.D.		
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.		
66) 4-Chlorotoluene	11.206	91	1133	0.16	ug/L	76
67) tert-Butylbenzene	11.358	91	480	0.11	ug/L #	75
68) 1,2,4-Trimethylbenzene	11.412	105	965	0.12	ug/L	80
69) sec-Butylbenzene	11.504	105	1196	0.13	ug/L	89
70) 4-Isopropyltoluene	11.607	119	1072	0.14	ug/L	93
71) 1,3-Dichlorobenzene	11.674	146	610	0.14	ug/L	85
72) 1,4-Dichlorobenzene	11.741	146	690	0.16	ug/L #	25
73) n-Butylbenzene	11.930	91	1118	0.18	ug/L	93
74) 1,2-Dichlorobenzene	12.063	146	533	0.13	ug/L	93
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.		
76) Hexachlorobutadiene	13.183	223	235	0.38	ug/L #	72
77) 1,2,4-Trichlorobenzene	13.213	180	358	0.15	ug/L	72
78) Naphthalene	13.493	128	706	0.08	ug/L	78
79) 1,2,3-Trichlorobenzene	13.663	180	105	0.04	ug/L	66

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052904.D
Acq On : 29 May 2019 3:40 pm
Operator : TB
Sample : 9E29058-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

5/30/19 post

Quant Time: May 30 12:04:06 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	256759	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	446684	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	191276	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	136690	48.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	491851	49.59	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	603494	49.82	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	165726	49.89	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.673	85	475	0.21	ug/L		62
3) Chloromethane	1.868	50	1572	0.43	ug/L		78
4) Vinyl Chloride	1.953	62	515	0.20	ug/L		92
5) Bromomethane	2.306	96	1803	1.27	ug/L		94
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	0.000		0	N.D.	d		
8) 1,1-Dichloroethene	3.103	61	456	0.18	ug/L		93
9) Carbon Disulfide	3.115	76	835	0.21	ug/L		77
10) Freon 113	3.158	101	603	0.29	ug/L	#	9
11) Iodomethane	3.249	142	437	0.47	ug/L	#	21
12) Methylene Chloride	3.730	84	14589	5.00	ug/L		86
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.894	61	734	0.24	ug/L		80
15) n-Hexane	3.973	86	874	1.73	ug/L	#	86
16) Methyl-tert-butyl-ether	4.034	73	1802	0.20	ug/L		86
17) 1,1-Dichloroethane	4.533	63	735	0.19	ug/L		68
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.068	61	611	0.18	ug/L		78
20) 2,2-Dichloropropane	0.000		0	N.D.	d		
21) Bromochloromethane	5.269	49	453	0.22	ug/L		87
22) Chloroform	5.348	83	1314	0.30	ug/L		90
23) Carbon Tetrachloride	5.488	117	416	0.17	ug/L	#	52
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.536	97	657m	0.19	ug/L		
27) 1,1-Dichloropropene	5.688	75	822	0.24	ug/L	#	65
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.932	78	2321	0.21	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.151	62	685	0.21	ug/L	#	50
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.552	130	778	0.26	ug/L	#	69
34) Dibromomethane	7.003	93	150	0.10	ug/L		83
35) 1,2-Dichloropropane	7.106	63	596	0.20	ug/L		91
36) Bromodichloromethane	7.185	83	431	0.16	ug/L	#	26
38) c-1,3-Dichloropropene	7.891	75	602	0.16	ug/L	#	74
40) Toluene	8.152	91	3425	0.30	ug/L		91
41) Tetrachloroethene (PCE)	8.602	166	698	0.27	ug/L		88
42) 4-Methyl-2-Pentanone (...	8.621	43	1694	0.49	ug/L		92
43) t-1,3-Dichloropropene	8.657	75	575	0.17	ug/L		47
44) 1,1,2-Trichloroethane	8.828	97	506	0.20	ug/L	#	46
45) Dibromochloromethane	9.028	129	172	0.10	ug/L	#	15
46) 1,3-Dichloropropane	9.120	76	988	0.22	ug/L		83
47) 1,2-Dibromoethane (EDB)	9.247	107	298	0.12	ug/L		82
48) 2-Hexanone	9.509	43	765	0.31	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:04:06 2019
Quant Method : C:\msdchem\1\METHODS\VC~~190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.770	112	1617	0.23	ug/L	#	58
50) Ethylbenzene	9.801	91	2895	0.25	ug/L		70
51) 1,1,1,2-Tetrachloroethane	9.837	131	318	0.15	ug/L	#	81
52) m,p-Xylenes (2)	9.941	91	4246	0.49	ug/L		88
53) o-Xylene	10.330	91	2232	0.25	ug/L		99
54) Styrene	10.373	104	1051	0.15	ug/L		100
55) Bromoform	0.000		0	N.D.	d		
56) Isopropylbenzene	10.592	105	2225	0.21	ug/L		92
59) Bromobenzene	10.920	156	513	0.20	ug/L	#	70
60) n-Propylbenzene	10.945	91	2483	0.22	ug/L		88
61) 1,1,2,2-Tetrachloroethane	11.012	83	439	0.17	ug/L		70
62) 2-Chlorotoluene	11.085	126	535	0.23	ug/L	#	51
63) 1,3,5-Trimethylbenzene	11.103	105	1776	0.22	ug/L		91
64) 1,2,3-Trichloropropane	11.121	110	144	0.14	ug/L	#	84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.212	91	1680	0.25	ug/L		95
67) tert-Butylbenzene	11.358	91	1208	0.28	ug/L		82
68) 1,2,4-Trimethylbenzene	11.413	105	1610	0.20	ug/L		86
69) sec-Butylbenzene	11.498	105	2071	0.23	ug/L		92
70) 4-Isopropyltoluene	11.608	119	1749	0.23	ug/L		94
71) 1,3-Dichlorobenzene	11.675	146	927	0.22	ug/L		86
72) 1,4-Dichlorobenzene	11.735	146	1152	0.27	ug/L	#	32
73) n-Butylbenzene	11.936	91	1667	0.27	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	833	0.21	ug/L		80
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	13.177	223	296	0.48	ug/L	#	65
77) 1,2,4-Trichlorobenzene	13.220	180	579	0.25	ug/L		74
78) Naphthalene	13.500	128	1368	0.16	ug/L		76
79) 1,2,3-Trichlorobenzene	13.658	180	532	0.23	ug/L		86

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	256759	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	446684	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	191276	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	136690	48.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	491851	49.59	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	603494	49.82	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	165726	49.89	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.673	85	475	0.21	ug/L		62
3) Chloromethane	1.868	50	1572	0.43	ug/L		78
4) Vinyl Chloride	1.953	62	515	0.20	ug/L		92
5) Bromomethane	2.306	96	1803	1.27	ug/L		94
6) Chloroethane	2.501	64	307	0.32	ug/L	#	1
7) Trichlorofluoromethane	2.568	101	138	0.09	ug/L	#	1
8) 1,1-Dichloroethene	3.103	61	456	0.18	ug/L		93
9) Carbon Disulfide	3.115	76	835	0.21	ug/L		77
10) Freon 113	3.158	101	603	0.29	ug/L	#	9
11) Iodomethane	3.249	142	437	0.47	ug/L	#	21
12) Methylene Chloride	3.730	84	14589	5.00	ug/L		86
13) Acetone	3.845	43	1953	1.75	ug/L		90
14) t-1,2-Dichloroethene	3.894	61	734	0.24	ug/L		80
15) n-Hexane	3.973	86	874	1.73	ug/L	#	86
16) Methyl-tert-butyl-ether	4.034	73	1802	0.20	ug/L		86
17) 1,1-Dichloroethane	4.533	63	735	0.19	ug/L		68
18) Acrylonitrile	0.000		0	N.D.			
19) c-1,2-Dichloroethene	5.068	61	611	0.18	ug/L		78
20) 2,2-Dichloropropane	5.165	77	653	0.22	ug/L		83
21) Bromochloromethane	5.269	49	453	0.22	ug/L		87
22) Chloroform	5.348	83	1314	0.30	ug/L		90
23) Carbon Tetrachloride	5.488	117	416	0.17	ug/L	#	52
24) Tetrahydrofuran	5.542	42	330	0.21	ug/L	#	67
25) 1,1,1-Trichloroethane	~~5.549~~	~~97~~	~~430~~	~~0.13~~	~~ug/L~~		~~79~~ MI
27) 1,1-Dichloropropene	5.688	75	822	0.24	ug/L	#	65
28) 2-Butanone (MEK)	5.731	43	1214	0.59	ug/L		54
29) Benzene	5.932	78	2321	0.21	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.151	62	685	0.21	ug/L	#	50
31) iso-Butyl Alcohol	6.285	43	738	2.90	ug/L		74
33) Trichloroethene (TCE)	6.552	130	778	0.26	ug/L	#	69
34) Dibromomethane	7.003	93	150	0.10	ug/L		83
35) 1,2-Dichloropropane	7.106	63	596	0.20	ug/L		91
36) Bromodichloromethane	7.185	83	431	0.16	ug/L	#	26
38) c-1,3-Dichloropropene	7.891	75	602	0.16	ug/L	#	74
40) Toluene	8.152	91	3425	0.30	ug/L		91
41) Tetrachloroethene (PCE)	8.602	166	698	0.27	ug/L		88
42) 4-Methyl-2-Pentanone (...	8.621	43	1694	0.49	ug/L		92
43) t-1,3-Dichloropropene	8.657	75	575	0.17	ug/L		47
44) 1,1,2-Trichloroethane	8.828	97	506	0.20	ug/L	#	46
45) Dibromochloromethane	9.028	129	172	0.10	ug/L	#	15
46) 1,3-Dichloropropane	9.120	76	988	0.22	ug/L		83
47) 1,2-Dibromoethane (EDB)	9.247	107	298	0.12	ug/L		82
48) 2-Hexanone	9.509	43	765	0.31	ug/L		89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

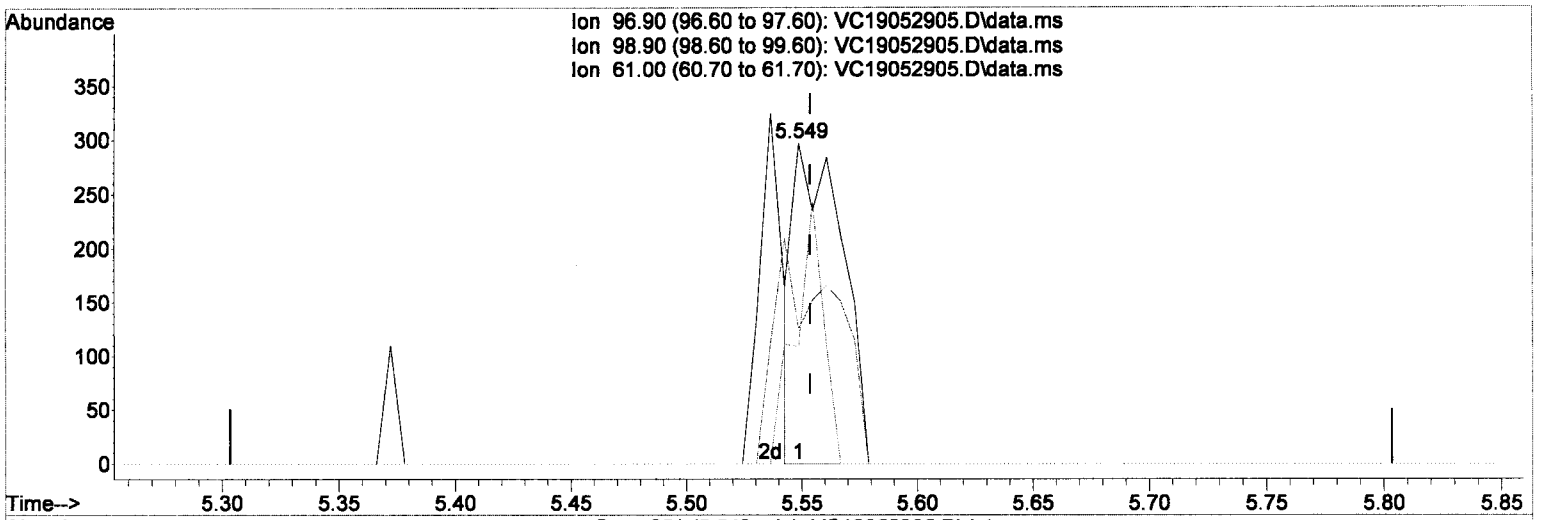
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.770	112	1617	0.23	ug/L	#	58
50) Ethylbenzene	9.801	91	2895	0.25	ug/L		70
51) 1,1,1,2-Tetrachloroethane	9.837	131	318	0.15	ug/L	#	81
52) m,p-Xylenes (2)	9.941	91	4246	0.49	ug/L		88
53) o-Xylene	10.330	91	2232	0.25	ug/L		99
54) Styrene	10.373	104	1051	0.15	ug/L		100
55) Bromoform	10.391	173	127	0.13	ug/L	#	36
56) Isopropylbenzene	10.592	105	2225	0.21	ug/L		92
59) Bromobenzene	10.920	156	513	0.20	ug/L	#	70
60) n-Propylbenzene	10.945	91	2483	0.22	ug/L		88
61) 1,1,2,2-Tetrachloroethane	11.012	83	439	0.17	ug/L		70
62) 2-Chlorotoluene	11.085	126	535	0.23	ug/L	#	51
63) 1,3,5-Trimethylbenzene	11.103	105	1776	0.22	ug/L		91
64) 1,2,3-Trichloropropane	11.121	110	144	0.14	ug/L	#	84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.212	91	1680	0.25	ug/L		95
67) tert-Butylbenzene	11.358	91	1208	0.28	ug/L		82
68) 1,2,4-Trimethylbenzene	11.413	105	1610	0.20	ug/L		86
69) sec-Butylbenzene	11.498	105	2071	0.23	ug/L		92
70) 4-Isopropyltoluene	11.608	119	1749	0.23	ug/L		94
71) 1,3-Dichlorobenzene	11.675	146	927	0.22	ug/L		86
72) 1,4-Dichlorobenzene	11.735	146	1152	0.27	ug/L	#	32
73) n-Butylbenzene	11.936	91	1667	0.27	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	833	0.21	ug/L		80
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	13.177	223	296	0.48	ug/L	#	65
77) 1,2,4-Trichlorobenzene	13.220	180	579	0.25	ug/L		74
78) Naphthalene	13.500	128	1368	0.16	ug/L		76
79) 1,2,3-Trichlorobenzene	13.658	180	532	0.23	ug/L		86

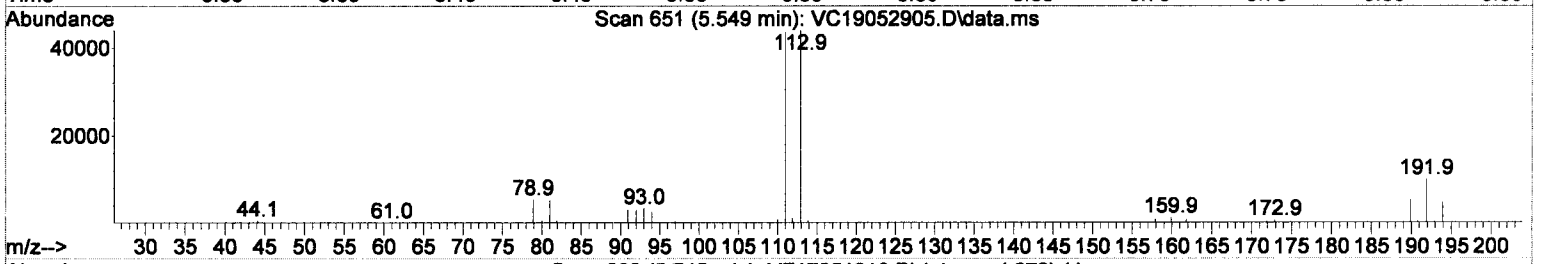
(#) = qualifier out of range (m) = manual integration (+) = signals summed

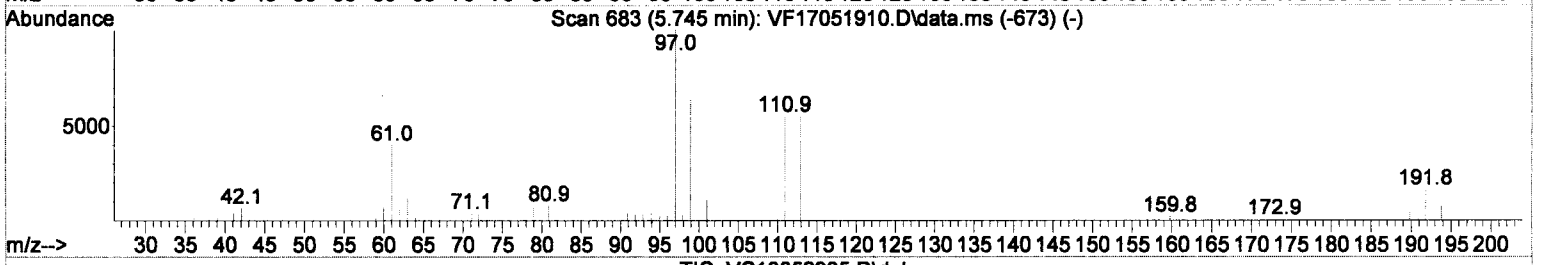
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052905.D\data.ms

(25) 1,1,1-Trichloroethane

5.549min (-0.005) 0.12 ug/L

response 430

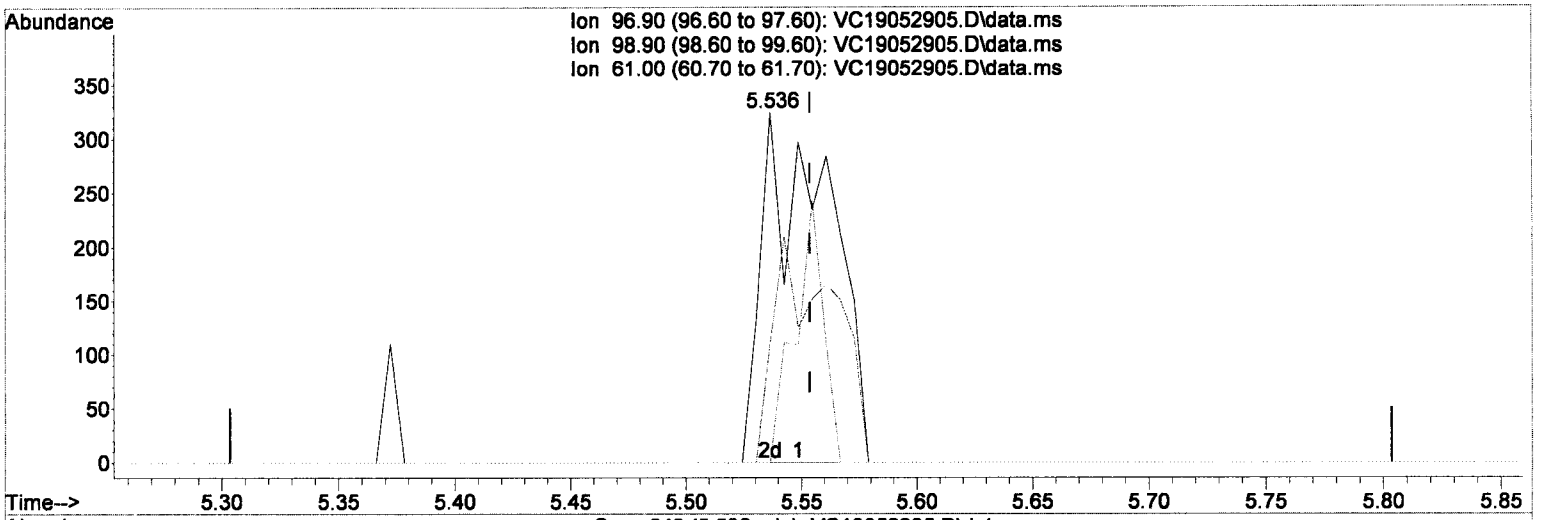
Ion	Exp%	Act%
96.90	100	100
98.90	65.60	42.09
61.00	42.20	36.70
0.00	0.00	0.00

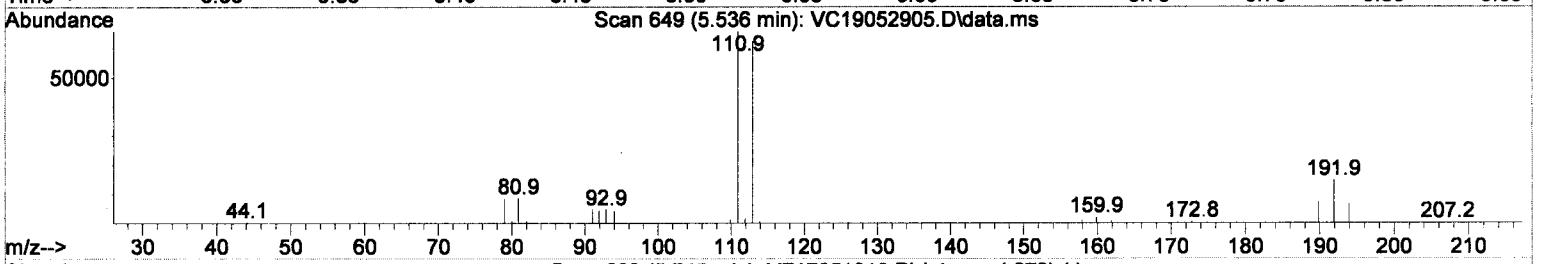
MT

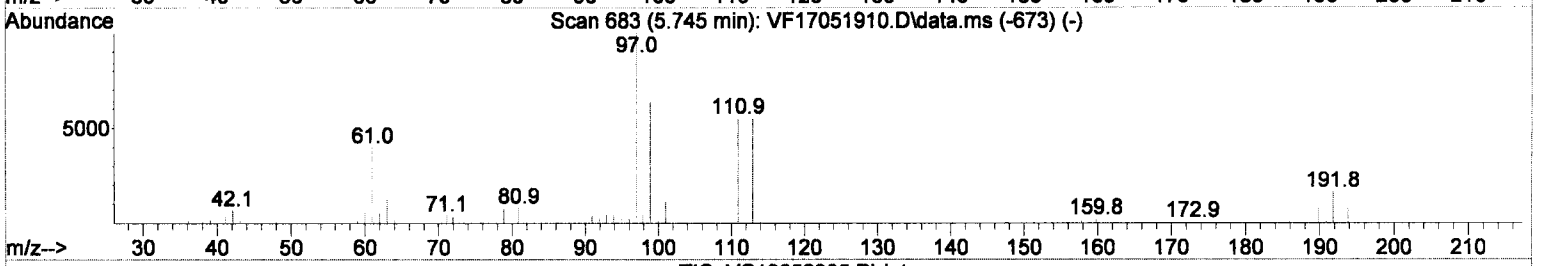
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052905.D\data.ms

(25) 1,1,1-Trichloroethane

5.536min (-0.017) 0.19 ug/L m

response 657

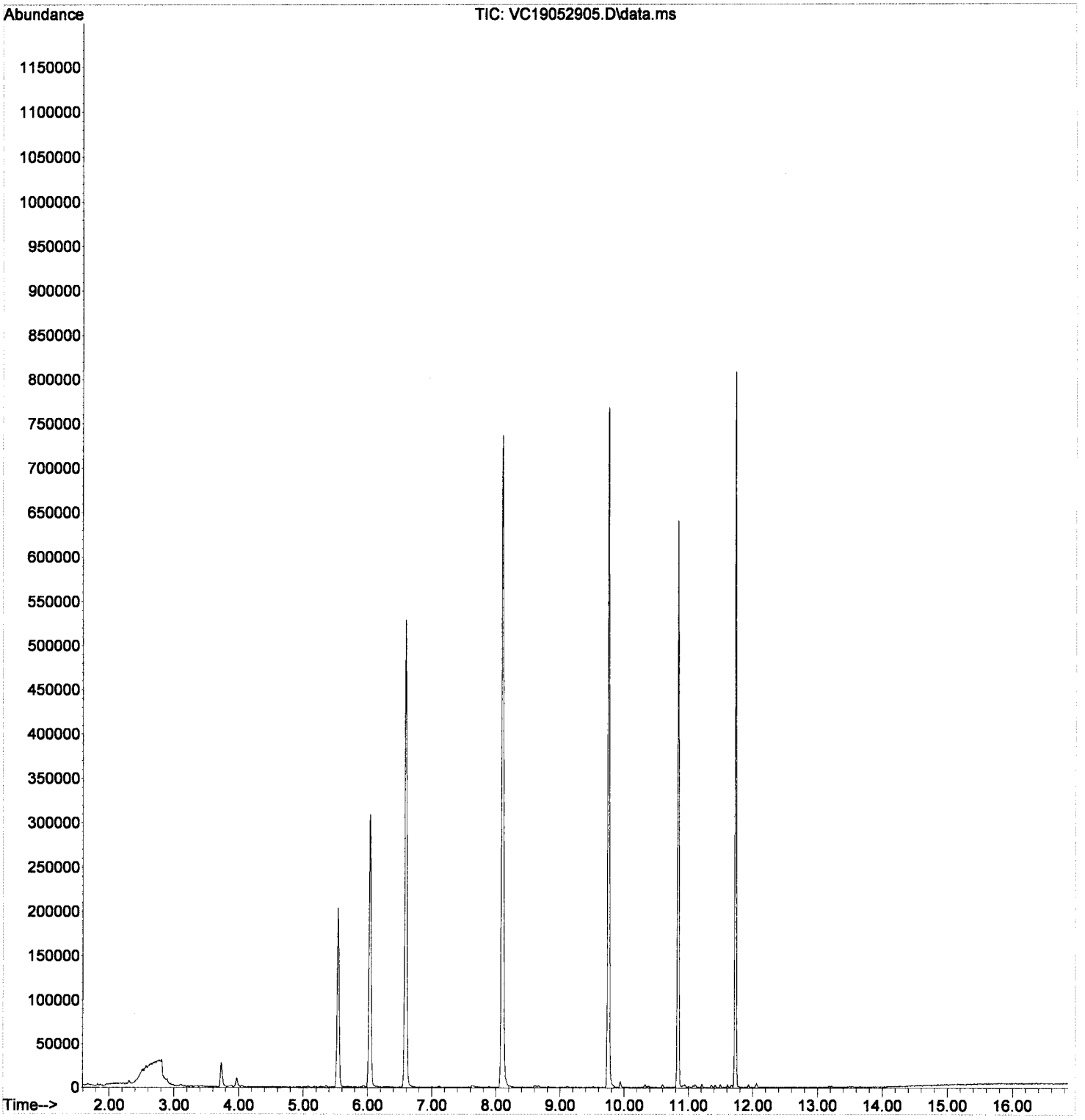
Ion	Exp%	Act%
96.90	100	100
98.90	65.60	64.37
61.00	42.20	0.00# - present
0.00	0.00	0.00

5/30/19

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052905.D
Acq On : 29 May 2019 4:07 pm
Operator : TB
Sample : 9E29058-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:04:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

post
5/30/19

Quant Time: May 30 12:05:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.032	168	254275	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	441530	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	188614	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.539	111	132413	47.12	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	485518	49.43	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	596173	49.79	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	163321	49.86	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.664	85	840	0.37	ug/L		88
3) Chloromethane	1.864	50	1870	0.52	ug/L		99
4) Vinyl Chloride	1.956	62	1058	0.41	ug/L		74
5) Bromomethane	2.308	96	2178	1.55	ug/L		97
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	2.582	101	561	0.38	ug/L		76
8) 1,1-Dichloroethene	3.105	61	1130	0.44	ug/L		91
9) Carbon Disulfide	3.118	76	1568	0.39	ug/L		74
10) Freon 113	3.166	101	935	0.45	ug/L	#	48
11) Iodomethane	3.245	142	415	0.45	ug/L	#	76
12) Methylene Chloride	3.732	84	15095	5.22	ug/L		96
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.902	61	1162	0.38	ug/L		85
15) n-Hexane	3.975	86	1123	2.25	ug/L	#	74
16) Methyl-tert-butyl-ether	4.042	73	3675	0.41	ug/L		88
17) 1,1-Dichloroethane	4.529	63	1418	0.38	ug/L		82
18) Acrylonitrile	4.620	53	342	0.23	ug/L		97
19) c-1,2-Dichloroethene	5.076	61	1412	0.42	ug/L		85
20) 2,2-Dichloropropane	5.180	77	1168	0.40	ug/L		77
21) Bromochloromethane	5.271	49	660	0.33	ug/L		82
22) Chloroform	5.356	83	2051	0.48	ug/L		94
23) Carbon Tetrachloride	5.472	117	700	0.30	ug/L		87
24) Tetrahydrofuran	5.539	42	841	0.55	ug/L	#	66
25) 1,1,1-Trichloroethane	5.545	97	1382	0.40	ug/L		83
27) 1,1-Dichloropropene	5.691	75	1310	0.39	ug/L		90
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.934	78	4546	0.41	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.147	62	1395	0.42	ug/L		80
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.561	130	1054	0.35	ug/L	#	72
34) Dibromomethane	6.999	93	572	0.37	ug/L	#	68
35) 1,2-Dichloropropane	7.114	63	1068	0.37	ug/L		95
36) Bromodichloromethane	7.181	83	872	0.33	ug/L		86
38) c-1,3-Dichloropropene	7.899	75	1128	0.30	ug/L		93
40) Toluene	8.161	91	5721	0.50	ug/L		99
41) Tetrachloroethene (PCE)	8.605	166	1321	0.52	ug/L		77
42) 4-Methyl-2-Pentanone (...	8.623	43	3139	0.91	ug/L		80
43) t-1,3-Dichloropropene	8.654	75	908	0.27	ug/L		95
44) 1,1,2-Trichloroethane	8.818	97	911	0.37	ug/L		82
45) Dibromochloromethane	9.006	129	549	0.31	ug/L		81
46) 1,3-Dichloropropane	9.116	76	1866	0.42	ug/L		96
47) 1,2-Dibromoethane (EDB)	9.256	107	794	0.32	ug/L		70
48) 2-Hexanone	9.511	43	1839	0.74	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:05:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

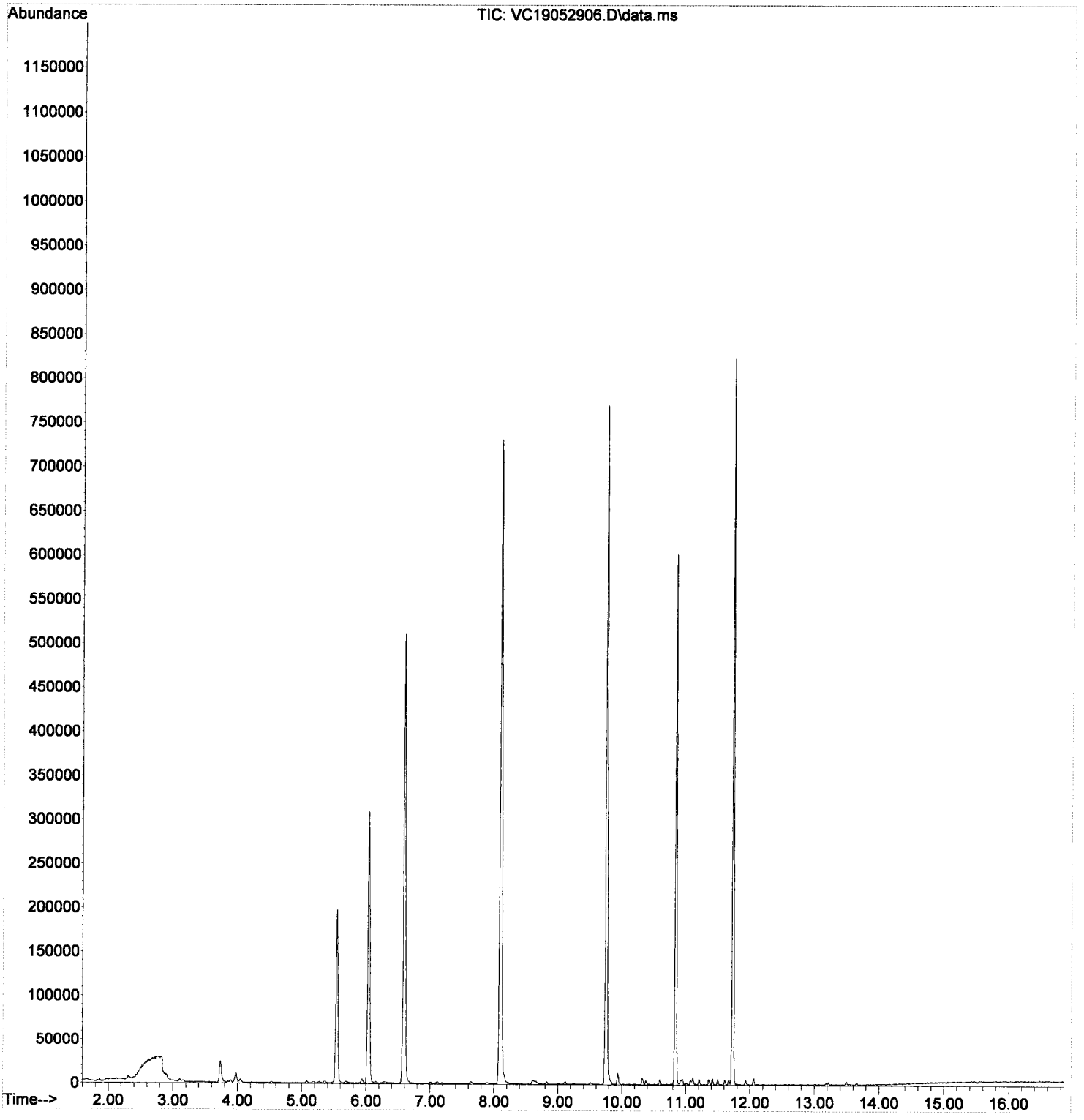
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.767	112	3136	0.46	ug/L	#	64
50) Ethylbenzene	9.797	91	5392	0.46	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.834	131	602	0.29	ug/L		90
52) m,p-Xylenes (2)	9.937	91	7624	0.88	ug/L		90
53) o-Xylene	10.326	91	3760	0.42	ug/L		92
54) Styrene	10.375	104	2262	0.33	ug/L		95
55) Bromoform	10.393	173	186	0.19	ug/L		93
56) Isopropylbenzene	10.594	105	4105	0.40	ug/L		94
59) Bromobenzene	10.917	156	1043	0.41	ug/L		83
60) n-Propylbenzene	10.947	91	4750	0.42	ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.008	83	1001	0.39	ug/L		71
62) 2-Chlorotoluene	11.069	126	911	0.39	ug/L	#	77
63) 1,3,5-Trimethylbenzene	11.105	105	3139	0.40	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	500	0.48	ug/L		84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.209	91	2912	0.43	ug/L		97
67) tert-Butylbenzene	11.361	91	1681	0.40	ug/L		93
68) 1,2,4-Trimethylbenzene	11.415	105	3385	0.43	ug/L		90
69) sec-Butylbenzene	11.501	105	3773	0.42	ug/L		92
70) 4-Isopropyltoluene	11.610	119	3163	0.42	ug/L		98
71) 1,3-Dichlorobenzene	11.677	146	1855	0.44	ug/L		90
72) 1,4-Dichlorobenzene	11.744	146	1914	0.46	ug/L		95
73) n-Butylbenzene	11.932	91	2690	0.44	ug/L		91
74) 1,2-Dichlorobenzene	12.060	146	1753	0.45	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	d		
76) Hexachlorobutadiene	13.192	223	375	0.62	ug/L	#	37
77) 1,2,4-Trichlorobenzene	13.216	180	812	0.35	ug/L		90
78) Naphthalene	13.496	128	2785	0.33	ug/L		94
79) 1,2,3-Trichlorobenzene	13.660	180	850	0.37	ug/L		92

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:05:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:48 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.032	168	254275	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	441530	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	188614	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.539	111	132413	47.12	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	485518	49.43	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	596173	49.79	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	163321	49.86	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.664	85	840	0.37	ug/L		88
3) Chloromethane	1.864	50	1870	0.52	ug/L		99
4) Vinyl Chloride	1.956	62	1058	0.41	ug/L		74
5) Bromomethane	2.308	96	2178	1.55	ug/L		97
6) Chloroethane	2.442	64	407	0.43	ug/L	#	1
7) Trichlorofluoromethane	2.582	101	561	0.38	ug/L		76
8) 1,1-Dichloroethene	3.105	61	1130	0.44	ug/L		91
9) Carbon Disulfide	3.118	76	1568	0.39	ug/L		74
10) Freon 113	3.166	101	935	0.45	ug/L	#	48
11) Iodomethane	3.245	142	415	0.45	ug/L	#	76
12) Methylene Chloride	3.732	84	15095	5.22	ug/L		96
13) Acetone	3.854	43	2175	1.97	ug/L		93
14) t-1,2-Dichloroethene	3.902	61	1162	0.38	ug/L		85
15) n-Hexane	3.975	86	1123	2.25	ug/L	#	74
16) Methyl-tert-butyl-ether	4.042	73	3675	0.41	ug/L		88
17) 1,1-Dichloroethane	4.529	63	1418	0.38	ug/L		82
18) Acrylonitrile	4.620	53	342	0.23	ug/L		97
19) c-1,2-Dichloroethene	5.076	61	1412	0.42	ug/L		85
20) 2,2-Dichloropropane	5.180	77	1168	0.40	ug/L		77
21) Bromochloromethane	5.271	49	660	0.33	ug/L		82
22) Chloroform	5.356	83	2051	0.48	ug/L		94
23) Carbon Tetrachloride	5.472	117	700	0.30	ug/L		87
24) Tetrahydrofuran	5.539	42	841	0.55	ug/L	#	66
25) 1,1,1-Trichloroethane	5.545	97	1382	0.40	ug/L		83
27) 1,1-Dichloropropene	5.691	75	1310	0.39	ug/L		90
28) 2-Butanone (MEK)	5.721	43	1770	0.86	ug/L		91
29) Benzene	5.934	78	4546	0.41	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.147	62	1395	0.42	ug/L		80
31) iso-Butyl Alcohol	6.287	43	1484	5.89	ug/L		90
33) Trichloroethene (TCE)	6.561	130	1054	0.35	ug/L	#	72
34) Dibromomethane	6.999	93	572	0.37	ug/L	#	68
35) 1,2-Dichloropropane	7.114	63	1068	0.37	ug/L		95
36) Bromodichloromethane	7.181	83	872	0.33	ug/L		86
38) c-1,3-Dichloropropene	7.899	75	1128	0.30	ug/L		93
40) Toluene	8.161	91	5721	0.50	ug/L		99
41) Tetrachloroethene (PCE)	8.605	166	1321	0.52	ug/L		77
42) 4-Methyl-2-Pentanone (...	8.623	43	3139	0.91	ug/L		80
43) t-1,3-Dichloropropene	8.654	75	908	0.27	ug/L		95
44) 1,1,2-Trichloroethane	8.818	97	911	0.37	ug/L		82
45) Dibromochloromethane	9.006	129	549	0.31	ug/L		81
46) 1,3-Dichloropropane	9.116	76	1866	0.42	ug/L		96
47) 1,2-Dibromoethane (EDB)	9.256	107	794	0.32	ug/L		70
48) 2-Hexanone	9.511	43	1839	0.74	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

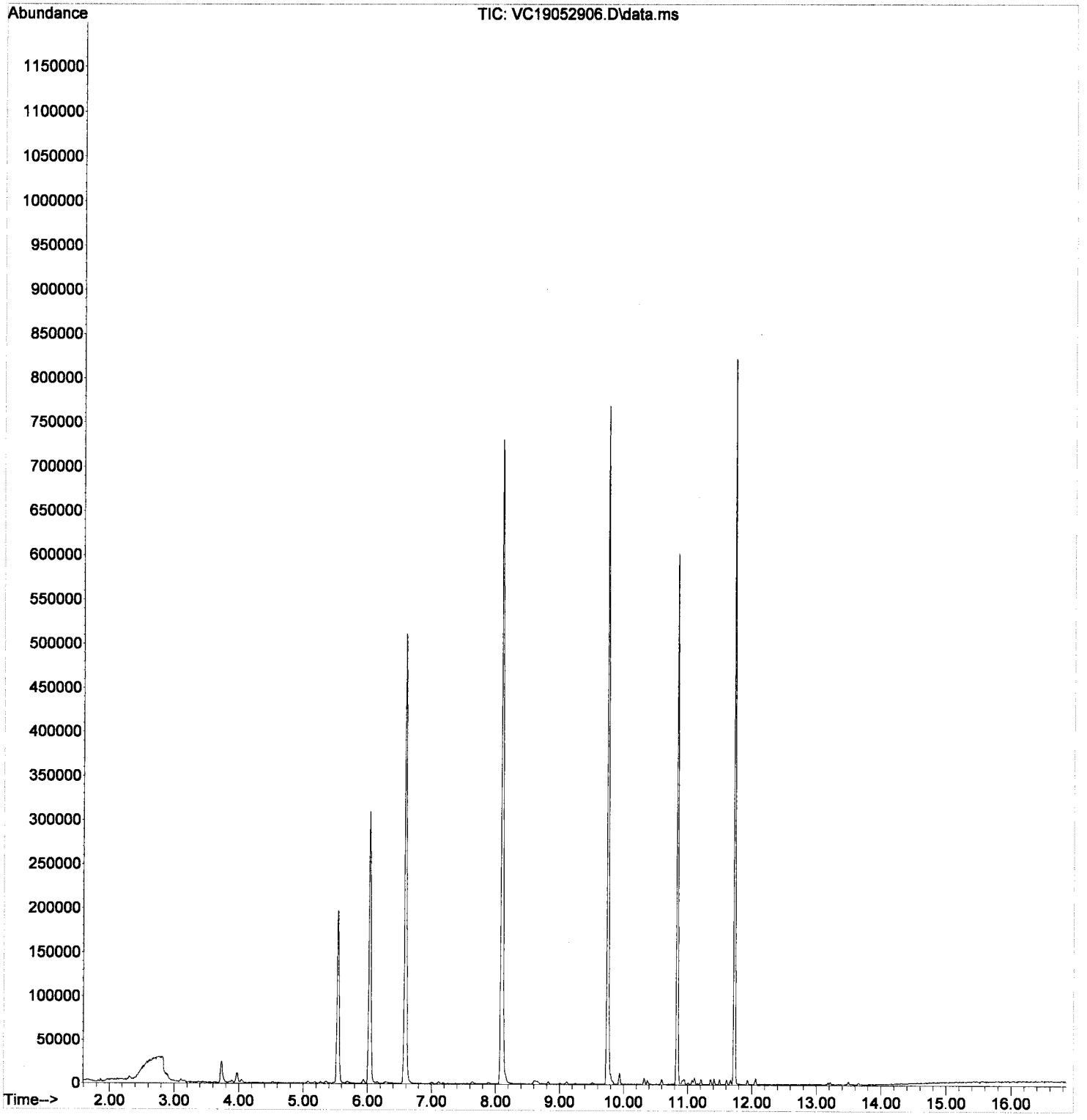
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.767	112	3136	0.46	ug/L	#	64
50) Ethylbenzene	9.797	91	5392	0.46	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.834	131	602	0.29	ug/L		90
52) m,p-Xylenes (2)	9.937	91	7624	0.88	ug/L		90
53) o-Xylene	10.326	91	3760	0.42	ug/L		92
54) Styrene	10.375	104	2262	0.33	ug/L		95
55) Bromoform	10.393	173	186	0.19	ug/L		93
56) Isopropylbenzene	10.594	105	4105	0.40	ug/L		94
59) Bromobenzene	10.917	156	1043	0.41	ug/L		83
60) n-Propylbenzene	10.947	91	4750	0.42	ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.008	83	1001	0.39	ug/L		71
62) 2-Chlorotoluene	11.069	126	911	0.39	ug/L	#	77
63) 1,3,5-Trimethylbenzene	11.105	105	3139	0.40	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	500	0.48	ug/L		84
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.209	91	2912	0.43	ug/L		97
67) tert-Butylbenzene	11.361	91	1681	0.40	ug/L		93
68) 1,2,4-Trimethylbenzene	11.415	105	3385	0.43	ug/L		90
69) sec-Butylbenzene	11.501	105	3773	0.42	ug/L		92
70) 4-Isopropyltoluene	11.610	119	3163	0.42	ug/L		98
71) 1,3-Dichlorobenzene	11.677	146	1855	0.44	ug/L		90
72) 1,4-Dichlorobenzene	11.744	146	1914	0.46	ug/L		95
73) n-Butylbenzene	11.932	91	2690	0.44	ug/L		91
74) 1,2-Dichlorobenzene	12.060	146	1753	0.45	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	12.681	157	107	0.18	ug/L	#	30
76) Hexachlorobutadiene	13.192	223	375	0.62	ug/L	#	37
77) 1,2,4-Trichlorobenzene	13.216	180	812	0.35	ug/L		90
78) Naphthalene	13.496	128	2785	0.33	ug/L		94
79) 1,2,3-Trichlorobenzene	13.660	180	850	0.37	ug/L		92

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052906.D
Acq On : 29 May 2019 4:35 pm
Operator : TB
Sample : 9E29058-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:06:59 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

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5/30/19
5/30/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	245560	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	430913	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	183911	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	127981	47.16	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	472967	49.86	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	583864	49.96	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	158686	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.660	85	2045	0.94	ug/L		78
3) Chloromethane	1.861	50	3872	1.11	ug/L		98
4) Vinyl Chloride	1.952	62	2495	0.99	ug/L		83
5) Bromomethane	2.299	96	2456	1.81	ug/L		96
7) Trichlorofluoromethane	2.572	101	1421	0.99	ug/L		82
8) 1,1-Dichloroethene	3.102	61	2472	0.99	ug/L		91
9) Carbon Disulfide	3.108	76	3330	0.86	ug/L		96
10) Freon 113	3.144	101	2147	1.07	ug/L		80
11) Iodomethane	3.242	142	702	0.79	ug/L	#	79
12) Methylene Chloride	3.728	84	15763	5.65	ug/L		93
13) Acetone	3.856	43	3386m	3.17	ug/L		
14) t-1,2-Dichloroethene	3.886	61	2611	0.89	ug/L		93
15) n-Hexane	3.972	86	1382	2.86	ug/L	#	79
16) Methyl-tert-butyl-ether	4.032	73	8517	0.99	ug/L		93
17) 1,1-Dichloroethane	4.519	63	3481	0.96	ug/L		99
18) Acrylonitrile	4.610	53	1313	0.90	ug/L		73
19) c-1,2-Dichloroethene	5.067	61	3087	0.95	ug/L		97
20) 2,2-Dichloropropane	5.176	77	2678	0.95	ug/L		90
21) Bromochloromethane	5.267	49	1861	0.96	ug/L		85
22) Chloroform	5.353	83	4395	1.06	ug/L		96
23) Carbon Tetrachloride	5.474	117	1931	0.85	ug/L		90
24) Tetrahydrofuran	5.547	42	1903	1.28	ug/L		93
25) 1,1,1-Trichloroethane	5.547	97	2923	0.88	ug/L		88
27) 1,1-Dichloropropene	5.675	75	3655	1.13	ug/L		88
28) 2-Butanone (MEK)	5.705	43	4450	2.25	ug/L		97
29) Benzene	5.937	78	11217	1.06	ug/L		93
30) 1,2-Dichloroethane (EDC)	6.156	62	3138	0.99	ug/L		92
31) iso-Butyl Alcohol	6.296	43	6030m	24.77	ug/L		
33) Trichloroethene (TCE)	6.551	130	2995	1.03	ug/L		92
34) Dibromomethane	6.995	93	1272	0.86	ug/L		86
35) 1,2-Dichloropropane	7.111	63	2601	0.93	ug/L		79
36) Bromodichloromethane	7.178	83	2077	0.82	ug/L		94
38) c-1,3-Dichloropropene	7.889	75	3081	0.84	ug/L		77
40) Toluene	8.157	91	12756	1.15	ug/L		99
41) Tetrachloroethene (PCE)	8.595	166	2616	1.06	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.626	43	7035	2.10	ug/L		93
43) t-1,3-Dichloropropene	8.644	75	2671	0.81	ug/L		78
44) 1,1,2-Trichloroethane	8.826	97	2251	0.94	ug/L		92
45) Dibromochloromethane	9.009	129	1390	0.80	ug/L		87
46) 1,3-Dichloropropane	9.106	76	4104	0.94	ug/L		88
47) 1,2-Dibromoethane (EDB)	9.240	107	2135	0.90	ug/L		79
48) 2-Hexanone	9.508	43	4936	2.04	ug/L		93
49) Chlorobenzene	9.769	112	7300	1.09	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:06:59 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

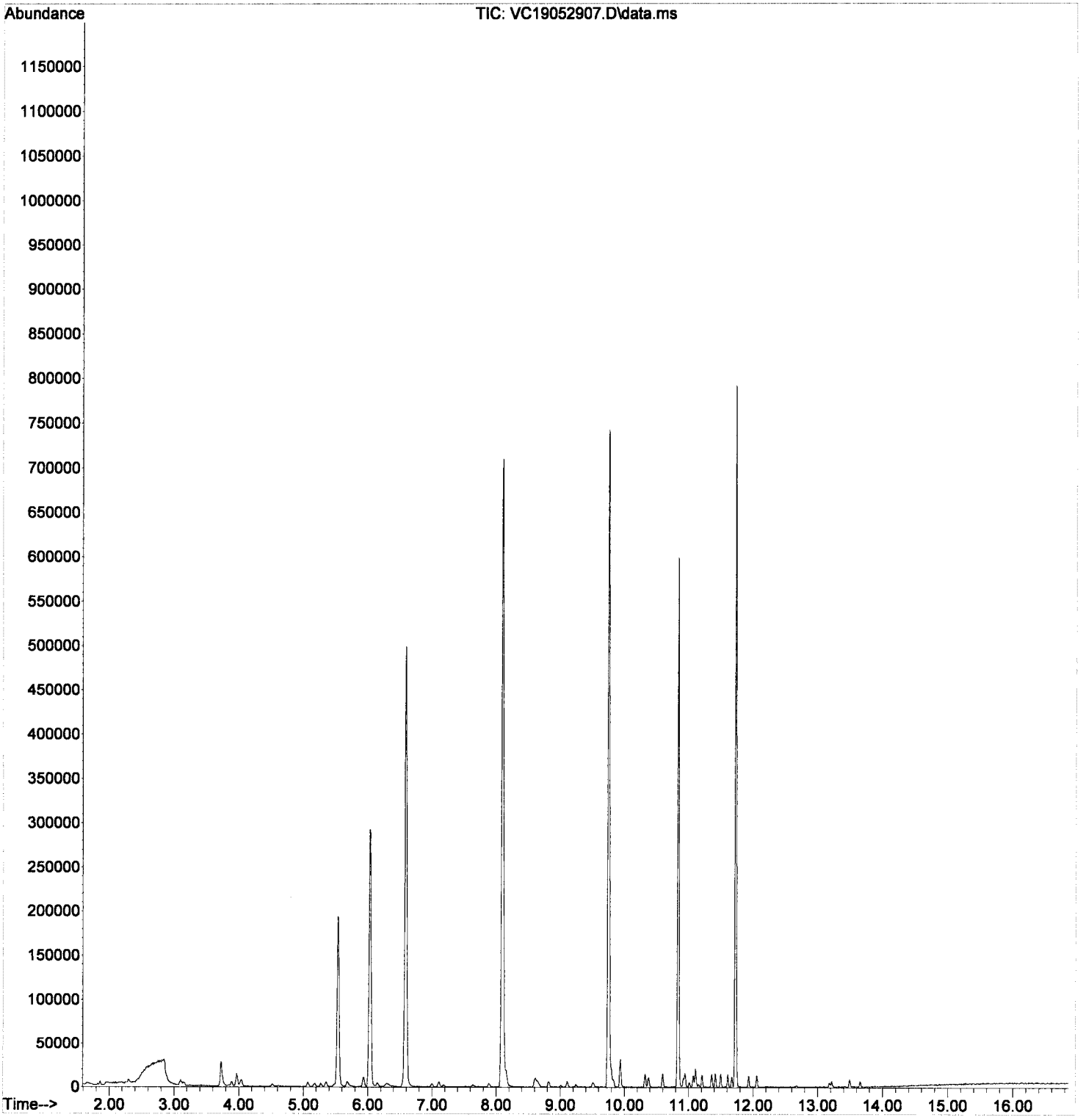
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
50) Ethylbenzene	9.800	91	12069	1.06	ug/L		95
51) 1,1,1,2-Tetrachloroethane	9.824	131	1810	0.88	ug/L	#	73
52) m,p-Xylenes (2)	9.933	91	17400	2.07	ug/L		97
53) o-Xylene	10.323	91	9051	1.04	ug/L		99
54) Styrene	10.378	104	5658	0.86	ug/L		93
55) Bromoform	10.384	173	619	0.65	ug/L		91
56) Isopropylbenzene	10.597	105	9890	0.98	ug/L		93
59) Bromobenzene	10.919	156	2592	1.05	ug/L	#	82
60) n-Propylbenzene	10.943	91	10579	0.97	ug/L		95
61) 1,1,2,2-Tetrachloroethane	11.010	83	2272	0.90	ug/L		86
62) 2-Chlorotoluene	11.071	126	2285	1.01	ug/L		86
63) 1,3,5-Trimethylbenzene	11.108	105	7772	1.02	ug/L		97
64) 1,2,3-Trichloropropane	11.114	110	983	0.97	ug/L		90
65) t-1,4-Dichloro-2-butene	11.150	88	180	0.57	ug/L	#	63
66) 4-Chlorotoluene	11.211	91	6874	1.05	ug/L		98
67) tert-Butylbenzene	11.357	91	4182	1.02	ug/L		88
68) 1,2,4-Trimethylbenzene	11.412	105	7847	1.01	ug/L		93
69) sec-Butylbenzene	11.497	105	8865	1.00	ug/L		96
70) 4-Isopropyltoluene	11.606	119	6901	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.667	146	4049	0.99	ug/L		96
72) 1,4-Dichlorobenzene	11.740	146	4368	1.08	ug/L		75
73) n-Butylbenzene	11.929	91	6459	1.07	ug/L		87
74) 1,2-Dichlorobenzene	12.063	146	3804	1.00	ug/L		86
75) 1,2-Dibromo-3-Chloropr...	12.671	157	368	0.64	ug/L	#	45
76) Hexachlorobutadiene	13.182	223	652	1.10	ug/L	#	70
77) 1,2,4-Trichlorobenzene	13.219	180	2286	1.02	ug/L		91
78) Naphthalene	13.492	128	6879	0.84	ug/L		97
79) 1,2,3-Trichlorobenzene	13.657	180	2090	0.93	ug/L		95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 12:06:59 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	245560	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	430913	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	183911	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	127981	47.16	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	472967	49.86	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	583864	49.96	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	158686	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.660	85	2045	0.94	ug/L		78
3) Chloromethane	1.861	50	3872	1.11	ug/L		98
4) Vinyl Chloride	1.952	62	2495	0.99	ug/L		83
5) Bromomethane	2.299	96	2456	1.81	ug/L		96
6) Chloroethane	2.445	64	782	0.85	ug/L	#	1
7) Trichlorofluoromethane	2.572	101	1421	0.99	ug/L		82
8) 1,1-Dichloroethene	3.102	61	2472	0.99	ug/L		91
9) Carbon Disulfide	3.108	76	3330	0.86	ug/L		96
10) Freon 113	3.144	101	2147	1.07	ug/L		80
11) Iodomethane	3.242	142	702	0.79	ug/L	#	79
12) Methylene Chloride	3.728	84	15763	5.65	ug/L		93
13) Acetone	~~3.838~~	~~43~~	~~1378~~	~~1.29~~	~~ug/L~~		~~82~~ MI
14) t-1,2-Dichloroethene	3.886	61	2611	0.89	ug/L		93
15) n-Hexane	3.972	86	1382	2.86	ug/L	#	79
16) Methyl-tert-butyl-ether	4.032	73	8517	0.99	ug/L		93
17) 1,1-Dichloroethane	4.519	63	3481	0.96	ug/L		99
18) Acrylonitrile	4.610	53	1313	0.90	ug/L		73
19) c-1,2-Dichloroethene	5.067	61	3087	0.95	ug/L		97
20) 2,2-Dichloropropane	5.176	77	2678	0.95	ug/L		90
21) Bromochloromethane	5.267	49	1861	0.96	ug/L		85
22) Chloroform	5.353	83	4395	1.06	ug/L		96
23) Carbon Tetrachloride	5.474	117	1931	0.85	ug/L		90
24) Tetrahydrofuran	5.547	42	1903	1.28	ug/L		93
25) 1,1,1-Trichloroethane	5.547	97	2923	0.88	ug/L		88
27) 1,1-Dichloropropene	5.675	75	3655	1.13	ug/L		88
28) 2-Butanone (MEK)	5.705	43	4450	2.25	ug/L		97
29) Benzene	5.937	78	11217	1.06	ug/L		93
30) 1,2-Dichloroethane (EDC)	6.156	62	3138	0.99	ug/L		92
31) iso-Butyl Alcohol	~~6.296~~	~~43~~	~~3491~~	~~14.34~~	~~ug/L~~		~~90~~ MI
33) Trichloroethene (TCE)	6.551	130	2995	1.03	ug/L		92
34) Dibromomethane	6.995	93	1272	0.86	ug/L		86
35) 1,2-Dichloropropane	7.111	63	2601	0.93	ug/L		79
36) Bromodichloromethane	7.178	83	2077	0.82	ug/L		94
38) c-1,3-Dichloropropene	7.889	75	3081	0.84	ug/L		77
40) Toluene	8.157	91	12756	1.15	ug/L		99
41) Tetrachloroethene (PCE)	8.595	166	2616	1.06	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.626	43	7035	2.10	ug/L		93
43) t-1,3-Dichloropropene	8.644	75	2671	0.81	ug/L		78
44) 1,1,2-Trichloroethane	8.826	97	2251	0.94	ug/L		92
45) Dibromochloromethane	9.009	129	1390	0.80	ug/L		87
46) 1,3-Dichloropropane	9.106	76	4104	0.94	ug/L		88
47) 1,2-Dibromoethane (EDB)	9.240	107	2135	0.90	ug/L		79
48) 2-Hexanone	9.508	43	4936	2.04	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

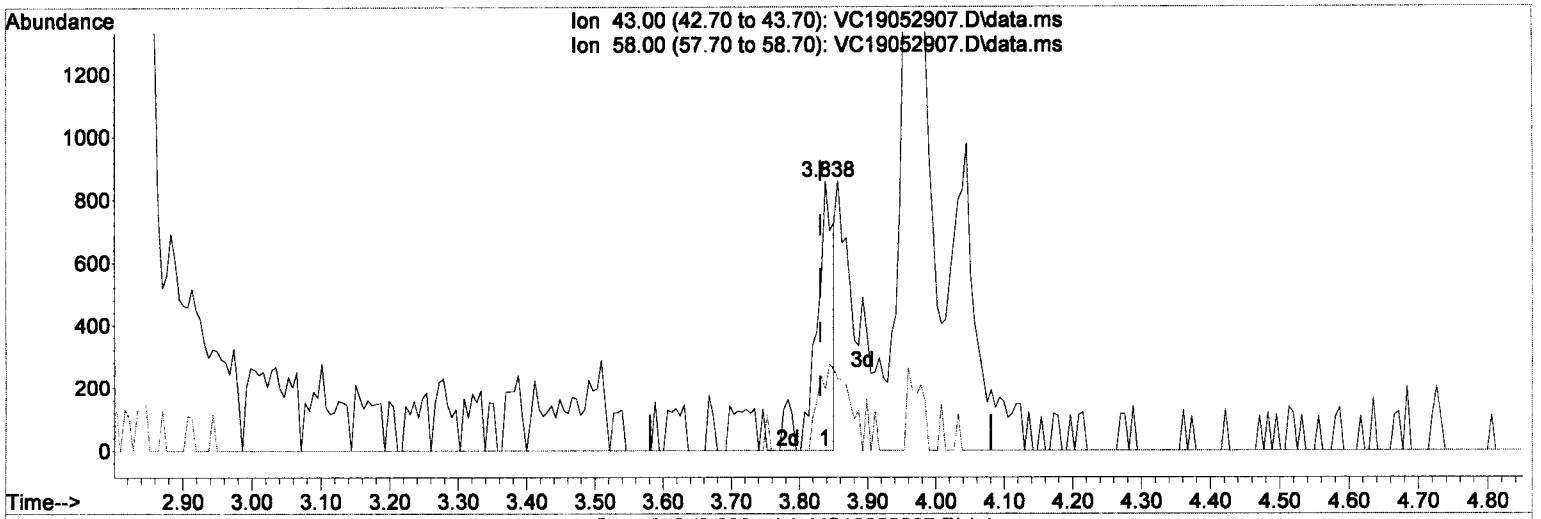
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.769	112	7300	1.09	ug/L		98
50) Ethylbenzene	9.800	91	12069	1.06	ug/L		95
51) 1,1,1,2-Tetrachloroethane	9.824	131	1810	0.88	ug/L	#	73
52) m,p-Xylenes (2)	9.933	91	17400	2.07	ug/L		97
53) o-Xylene	10.323	91	9051	1.04	ug/L		99
54) Styrene	10.378	104	5658	0.86	ug/L		93
55) Bromoform	10.384	173	619	0.65	ug/L		91
56) Isopropylbenzene	10.597	105	9890	0.98	ug/L		93
59) Bromobenzene	10.919	156	2592	1.05	ug/L	#	82
60) n-Propylbenzene	10.943	91	10579	0.97	ug/L		95
61) 1,1,2,2-Tetrachloroethane	11.010	83	2272	0.90	ug/L		86
62) 2-Chlorotoluene	11.071	126	2285	1.01	ug/L		86
63) 1,3,5-Trimethylbenzene	11.108	105	7772	1.02	ug/L		97
64) 1,2,3-Trichloropropane	11.114	110	983	0.97	ug/L		90
65) t-1,4-Dichloro-2-butene	11.150	88	180	0.57	ug/L	#	63
66) 4-Chlorotoluene	11.211	91	6874	1.05	ug/L		98
67) tert-Butylbenzene	11.357	91	4182	1.02	ug/L		88
68) 1,2,4-Trimethylbenzene	11.412	105	7847	1.01	ug/L		93
69) sec-Butylbenzene	11.497	105	8865	1.00	ug/L		96
70) 4-Isopropyltoluene	11.606	119	6901	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.667	146	4049	0.99	ug/L		96
72) 1,4-Dichlorobenzene	11.740	146	4368	1.08	ug/L		75
73) n-Butylbenzene	11.929	91	6459	1.07	ug/L		87
74) 1,2-Dichlorobenzene	12.063	146	3804	1.00	ug/L		86
75) 1,2-Dibromo-3-Chloropr...	12.671	157	368	0.64	ug/L	#	45
76) Hexachlorobutadiene	13.182	223	652	1.10	ug/L	#	70
77) 1,2,4-Trichlorobenzene	13.219	180	2286	1.02	ug/L		91
78) Naphthalene	13.492	128	6879	0.84	ug/L		97
79) 1,2,3-Trichlorobenzene	13.657	180	2090	0.93	ug/L		95

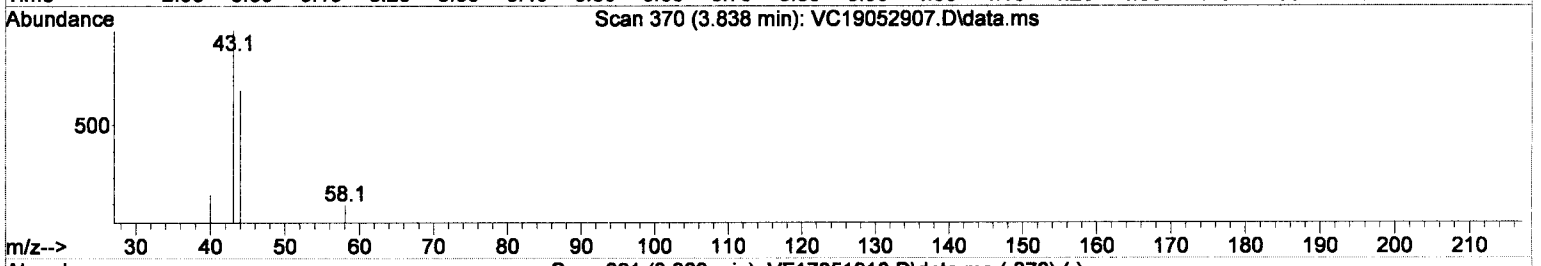
(#) = qualifier out of range (m) = manual integration (+) = signals summed

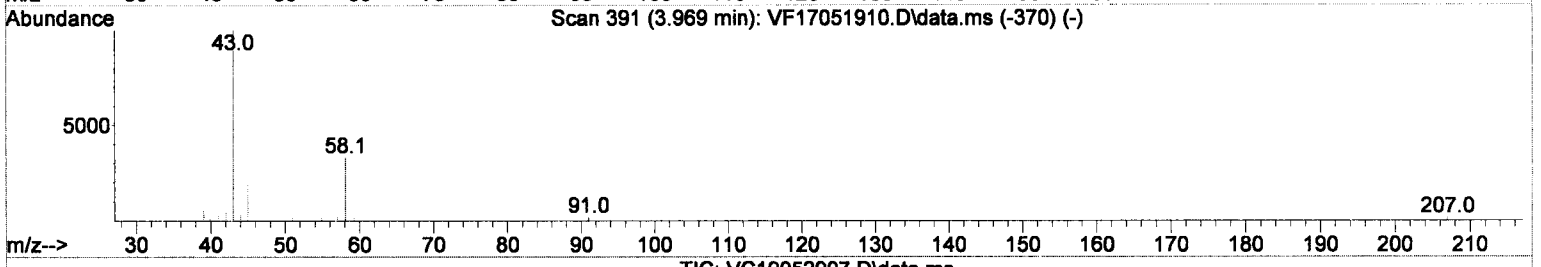
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052907.D\data.ms

(13) Acetone

3.838min (+0.007) 1.29 ug/L

response 1378

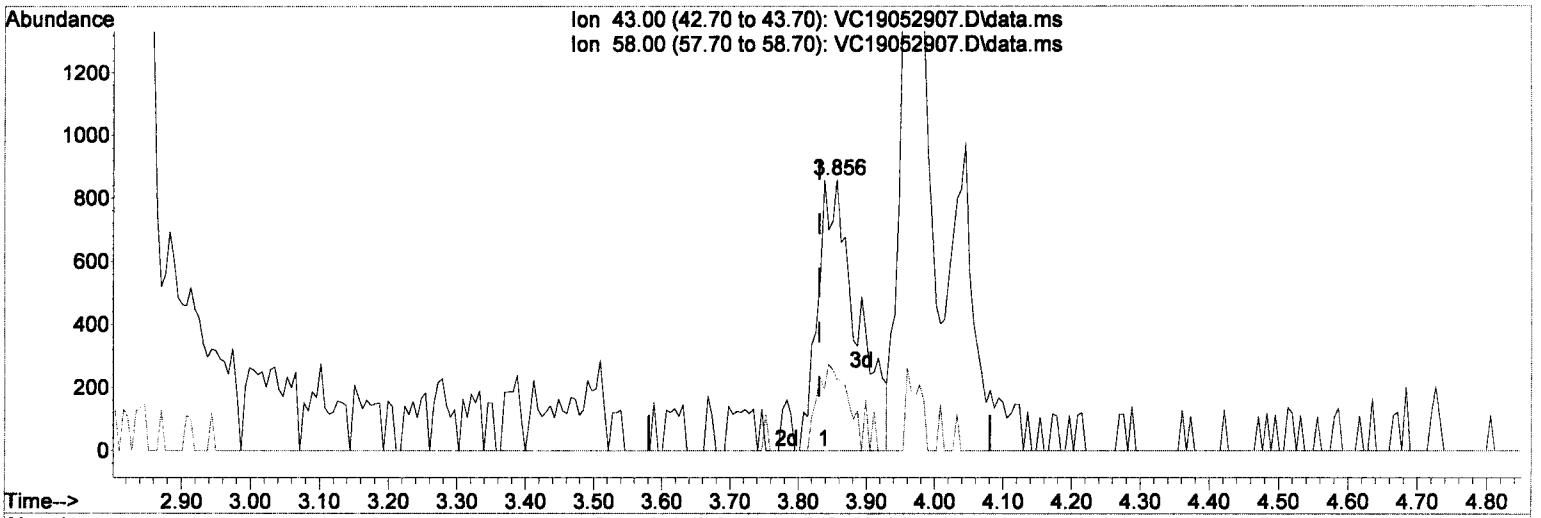
Ion	Exp%	Act%
43.00	100	100
58.00	33.10	22.75
0.00	0.00	0.00
0.00	0.00	0.00

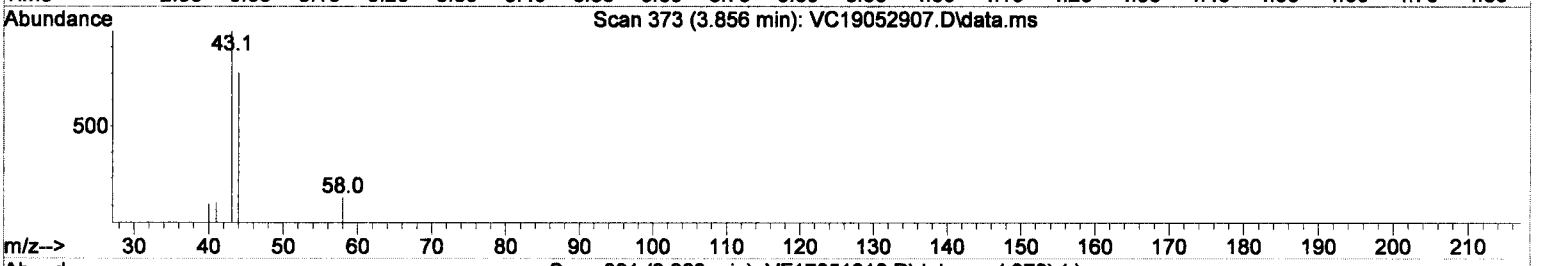
MF

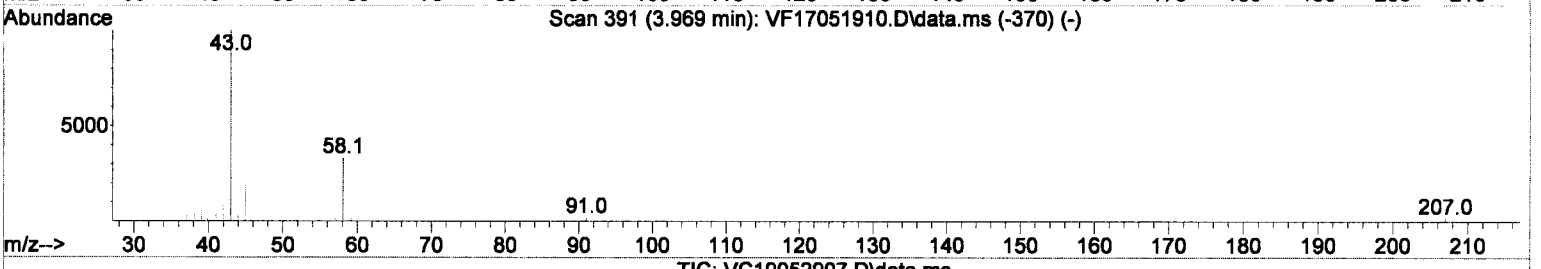
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052907.D\data.ms

(13) Acetone

3.856min (+0.025) 3.17 ug/L m

response 3386

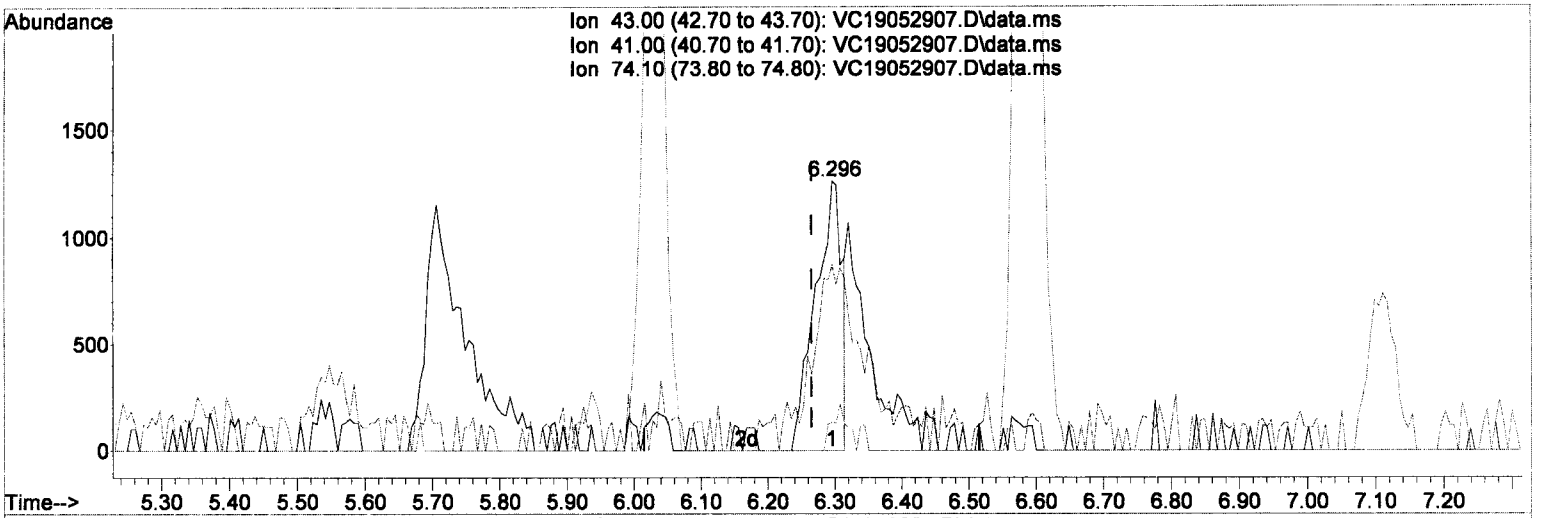
Ion	Exp%	Act%
43.00	100	100
58.00	33.10	26.51
0.00	0.00	0.00
0.00	0.00	0.00

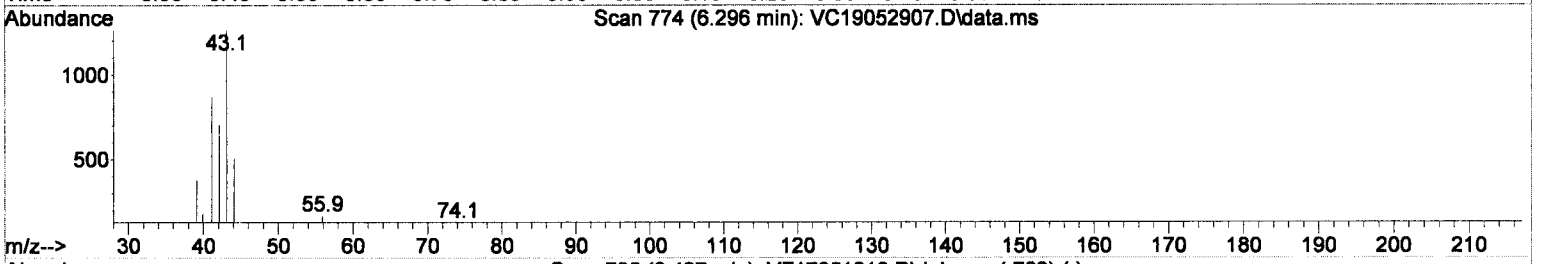
5/30/19

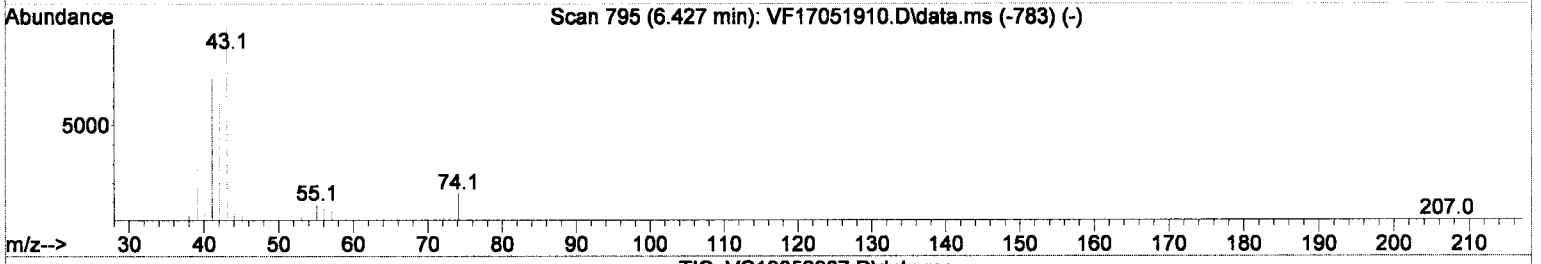
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration







TIC: VC19052907.D\data.ms

(31) iso-Butyl Alcohol

6.296min (+0.030) 14.34 ug/L

response 3491

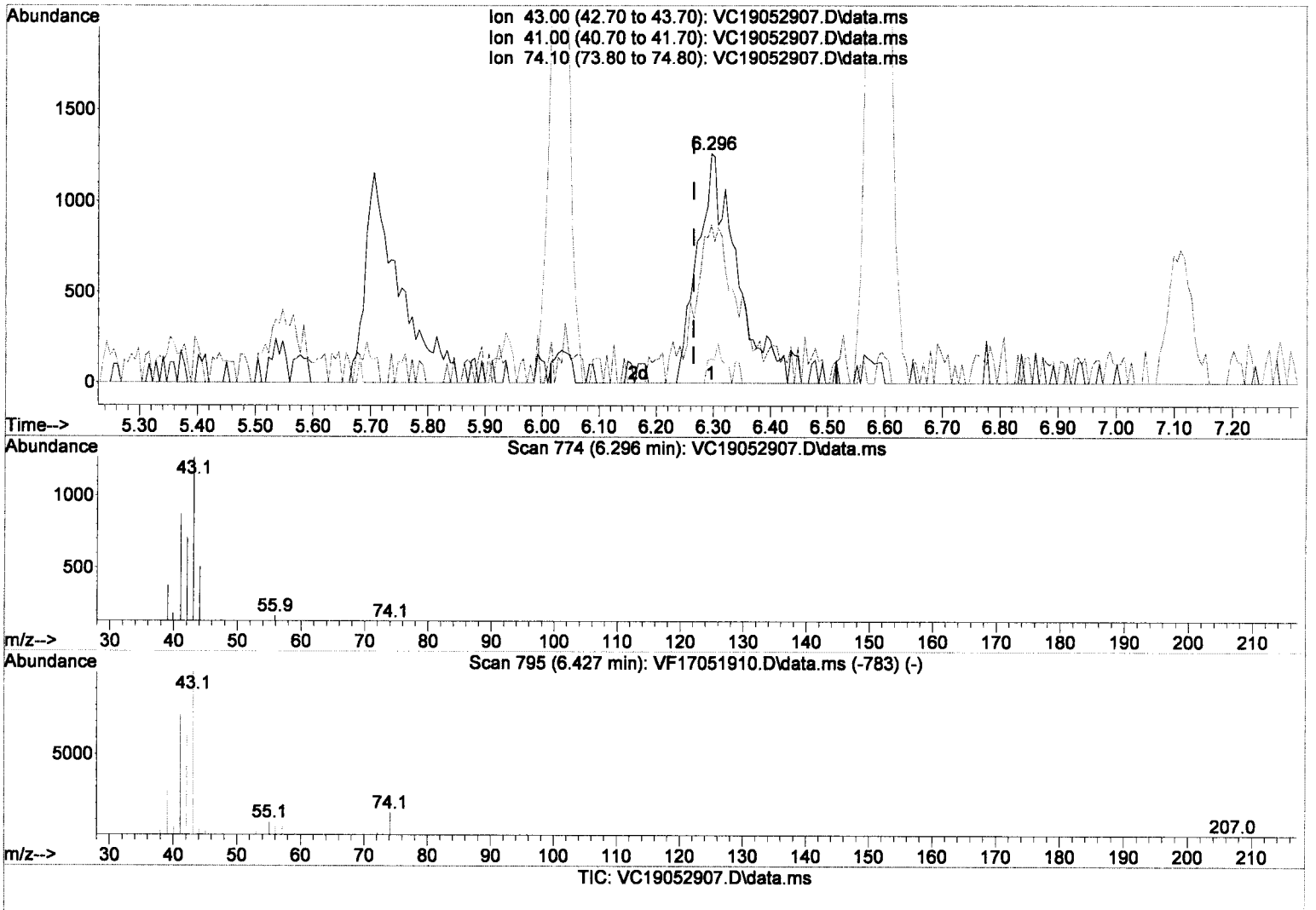
Ion	Exp%	Act%
43.00	100	100
41.00	78.40	68.99
74.10	9.40	10.55
0.00	0.00	0.00

MF

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



TIC: VC19052907.D\data.ms

(31) iso-Butyl Alcohol

6.296min (+0.030) 24.77 ug/L m

response 6030

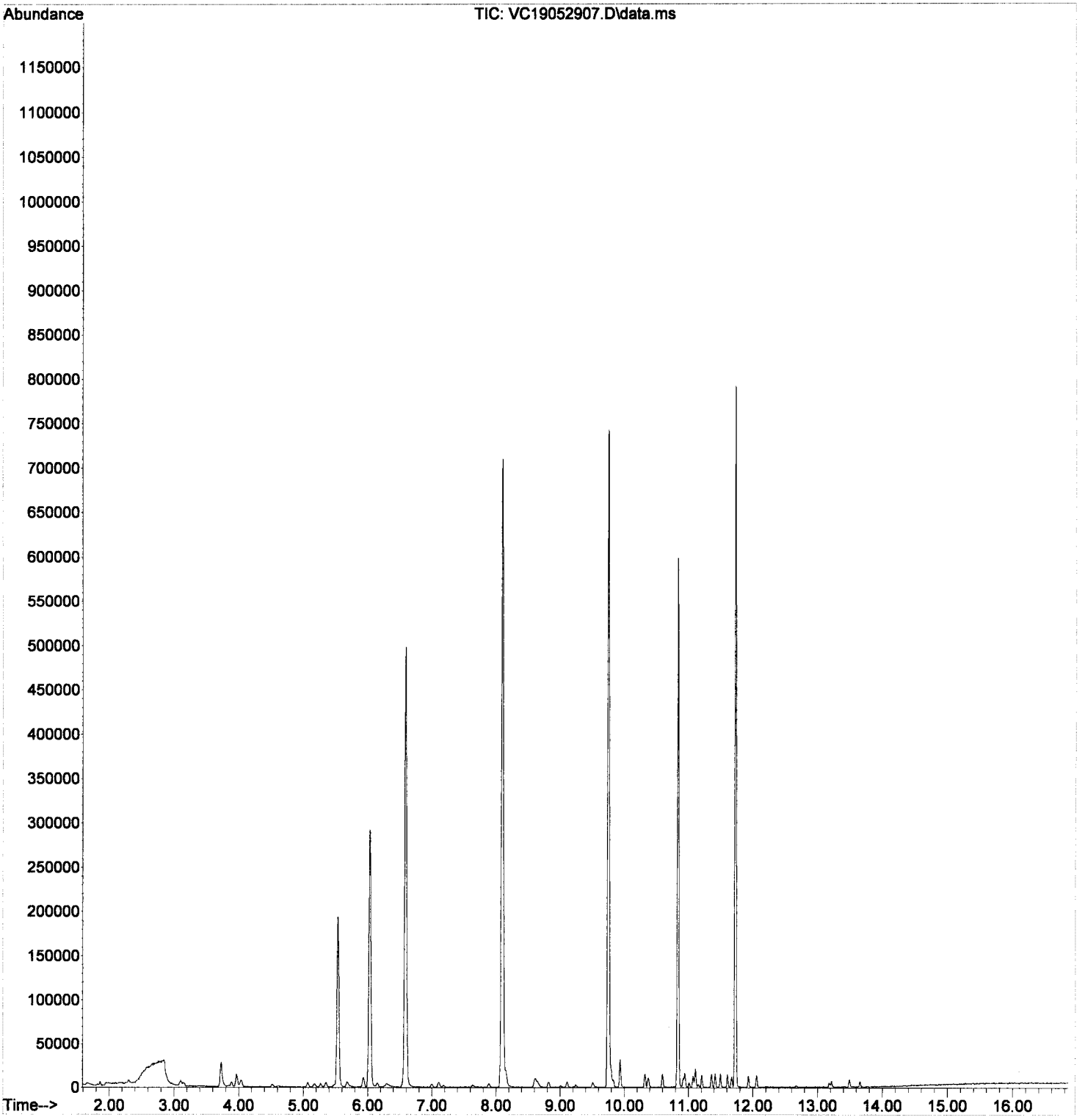
Ion	Exp%	Act%
43.00	100	100
41.00	78.40	68.99
74.10	9.40	10.55
0.00	0.00	0.00

5/30/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052907.D
Acq On : 29 May 2019 5:02 pm
Operator : TB
Sample : 9E29058-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

5/30/19 post

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	254825	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	451536	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194740	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	140136	49.76	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	496387	50.43	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607810	49.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	166852	49.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	4563	2.03	ug/L		94
3) Chloromethane	1.862	50	7629	2.11	ug/L		94
4) Vinyl Chloride	1.953	62	5260	2.01	ug/L		91
5) Bromomethane	2.306	96	4475	3.17	ug/L		92
6) Chloroethane	2.440	64	2003	2.10	ug/L	#	1
7) Trichlorofluoromethane	2.580	101	2958	1.99	ug/L		94
8) 1,1-Dichloroethene	3.103	61	4891	1.89	ug/L		88
9) Carbon Disulfide	3.115	76	6854	1.70	ug/L		98
10) Freon 113	3.152	101	3908	1.88	ug/L		85
11) Iodomethane	3.249	142	1507	1.64	ug/L	#	75
12) Methylene Chloride	3.729	84	18469	6.37	ug/L		98
13) Acetone	3.845	43	5795	5.23	ug/L		94
14) t-1,2-Dichloroethene	3.894	61	5764	1.90	ug/L		99
15) n-Hexane	3.973	86	1767	3.53	ug/L	#	87
16) Methyl-tert-butyl-ether	4.034	73	17541	1.96	ug/L		91
17) 1,1-Dichloroethane	4.520	63	7479	1.99	ug/L		93
18) Acrylonitrile	4.606	53	2550	1.68	ug/L		86
19) c-1,2-Dichloroethene	5.068	61	6425	1.91	ug/L		99
20) 2,2-Dichloropropane	5.177	77	5498	1.88	ug/L		96
21) Bromochloromethane	5.269	49	3833	1.91	ug/L		98
22) Chloroform	5.354	83	8763	2.03	ug/L		98
23) Carbon Tetrachloride	5.475	117	3774	1.59	ug/L		92
24) Tetrahydrofuran	5.542	42	3294	2.13	ug/L		88
25) 1,1,1-Trichloroethane	5.548	97	6438	1.88	ug/L		98
27) 1,1-Dichloropropene	5.682	75	6475	1.93	ug/L		95
28) 2-Butanone (MEK)	5.701	43	7369	3.59	ug/L		94
29) Benzene	5.938	78	21880	1.99	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.151	62	6601	2.00	ug/L		99
31) iso-Butyl Alcohol	6.291	43	11367	45.00	ug/L		84
33) Trichloroethene (TCE)	6.546	130	6232	2.07	ug/L		87
34) Dibromomethane	6.996	93	2771	1.81	ug/L		87
35) 1,2-Dichloropropane	7.112	63	5608	1.93	ug/L		92
36) Bromodichloromethane	7.179	83	4030	1.53	ug/L		90
38) c-1,3-Dichloropropene	7.891	75	6187	1.61	ug/L		95
40) Toluene	8.152	91	23832	2.05	ug/L		88
41) Tetrachloroethene (PCE)	8.602	166	4849	1.88	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.615	43	13222	3.76	ug/L		91
43) t-1,3-Dichloropropene	8.645	75	5147	1.49	ug/L		98
44) 1,1,2-Trichloroethane	8.821	97	4541	1.81	ug/L		88
45) Dibromochloromethane	9.004	129	2873	1.57	ug/L		88
46) 1,3-Dichloropropane	9.107	76	8546	1.86	ug/L		93
47) 1,2-Dibromoethane (EDB)	9.241	107	4166	1.67	ug/L		100
48) 2-Hexanone	9.509	43	8511	3.36	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

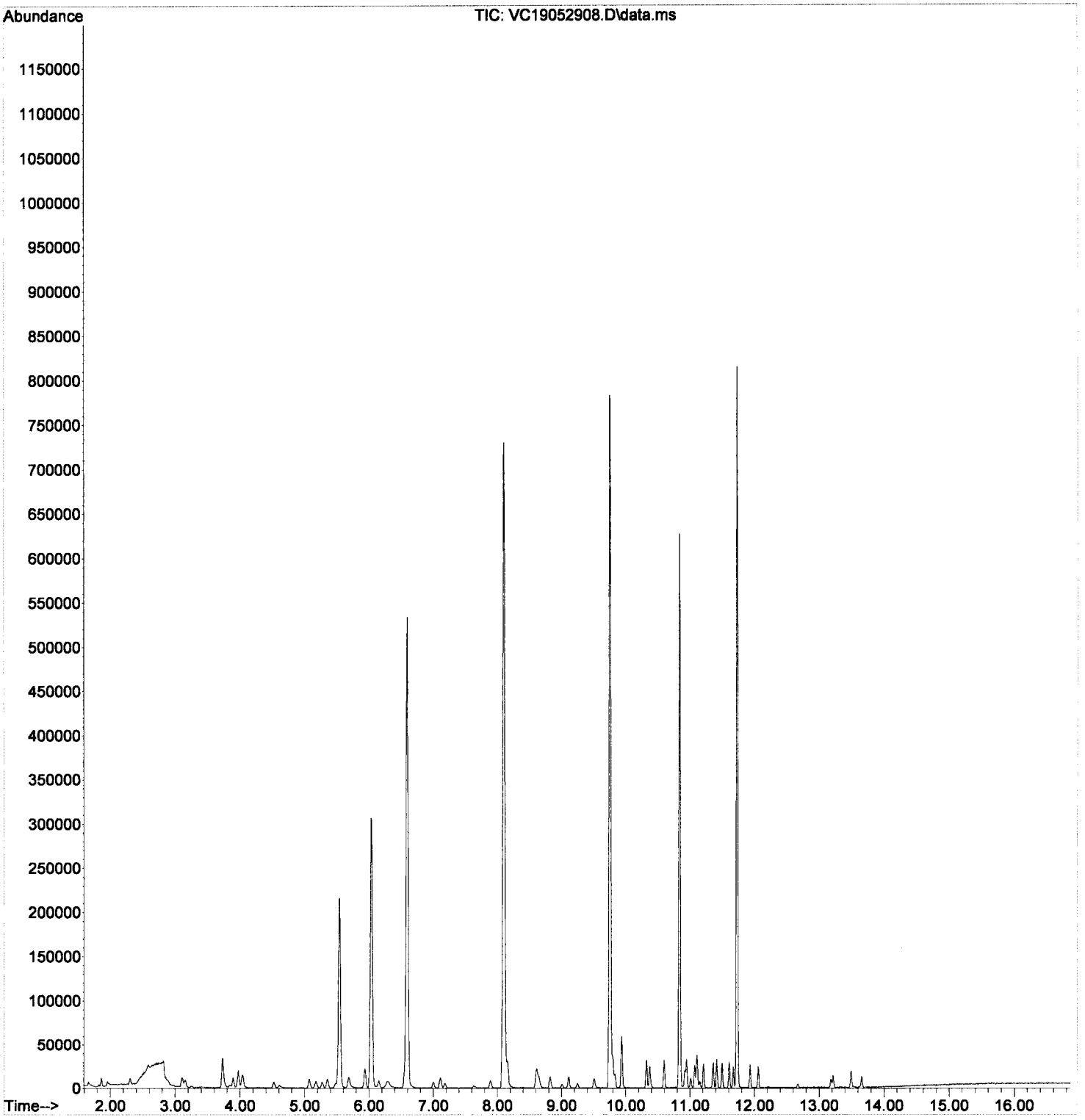
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	14584	2.08	ug/L		98
50) Ethylbenzene	9.795	91	23660	1.98	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.831	131	3542	1.64	ug/L		95
52) m,p-Xylenes (2)	9.935	91	34407	3.91	ug/L		98
53) o-Xylene	10.324	91	17445	1.91	ug/L		99
54) Styrene	10.373	104	11631	1.68	ug/L		95
55) Bromoform	10.391	173	1354	1.36	ug/L		82
56) Isopropylbenzene	10.598	105	20325	1.92	ug/L		96
59) Bromobenzene	10.920	156	5277	2.01	ug/L		89
60) n-Propylbenzene	10.945	91	22107	1.91	ug/L		92
61) 1,1,2,2-Tetrachloroethane	11.011	83	4646	1.75	ug/L		96
62) 2-Chlorotoluene	11.066	126	4419	1.84	ug/L		97
63) 1,3,5-Trimethylbenzene	11.103	105	14521	1.80	ug/L		94
64) 1,2,3-Trichloropropane	11.115	110	2200	2.06	ug/L		91
65) t-1,4-Dichloro-2-butene	11.151	88	320	0.95	ug/L	#	52
66) 4-Chlorotoluene	11.206	91	13410	1.93	ug/L		98
67) tert-Butylbenzene	11.358	91	8037	1.86	ug/L		97
68) 1,2,4-Trimethylbenzene	11.413	105	15360	1.87	ug/L		99
69) sec-Butylbenzene	11.498	105	16671	1.78	ug/L		99
70) 4-Isopropyltoluene	11.608	119	14651	1.91	ug/L		99
71) 1,3-Dichlorobenzene	11.675	146	8756	2.03	ug/L		92
72) 1,4-Dichlorobenzene	11.741	146	8705	2.03	ug/L		92
73) n-Butylbenzene	11.930	91	12230	1.92	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	7643	1.90	ug/L		89
75) 1,2-Dibromo-3-Chloropr...	12.672	157	826	1.35	ug/L		83
76) Hexachlorobutadiene	13.183	223	1244	1.99	ug/L	#	83
77) 1,2,4-Trichlorobenzene	13.214	180	4471	1.88	ug/L		92
78) Naphthalene	13.493	128	14001	1.61	ug/L		96
79) 1,2,3-Trichlorobenzene	13.652	180	4310	1.82	ug/L		94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 pre

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	254825	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	451536	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	194740	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	140136	49.76	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	496387	50.43	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	607810	49.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	166852	49.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	4563	2.03	ug/L		94
3) Chloromethane	1.862	50	7629	2.11	ug/L		94
4) Vinyl Chloride	1.953	62	5260	2.01	ug/L		91
5) Bromomethane	2.306	96	4475	3.17	ug/L		92
6) Chloroethane	2.440	64	2003	2.10	ug/L	#	1
7) Trichlorofluoromethane	2.580	101	2958	1.99	ug/L		94
8) 1,1-Dichloroethene	3.103	61	4891	1.89	ug/L		88
9) Carbon Disulfide	3.115	76	6854	1.70	ug/L		98
10) Freon 113	3.152	101	3908	1.88	ug/L		85
11) Iodomethane	3.249	142	1507	1.64	ug/L	#	75
12) Methylene Chloride	3.729	84	18469	6.37	ug/L		98
13) Acetone	3.845	43	5795	5.23	ug/L		94
14) t-1,2-Dichloroethene	3.894	61	5764	1.90	ug/L		99
15) n-Hexane	3.973	86	1767	3.53	ug/L	#	87
16) Methyl-tert-butyl-ether	4.034	73	17541	1.96	ug/L		91
17) 1,1-Dichloroethane	4.520	63	7479	1.99	ug/L		93
18) Acrylonitrile	4.606	53	2550	1.68	ug/L		86
19) c-1,2-Dichloroethene	5.068	61	6425	1.91	ug/L		99
20) 2,2-Dichloropropane	5.177	77	5498	1.88	ug/L		96
21) Bromochloromethane	5.269	49	3833	1.91	ug/L		98
22) Chloroform	5.354	83	8763	2.03	ug/L		98
23) Carbon Tetrachloride	5.475	117	3774	1.59	ug/L		92
24) Tetrahydrofuran	5.542	42	3294	2.13	ug/L		88
25) 1,1,1-Trichloroethane	5.548	97	6438	1.88	ug/L		98
27) 1,1-Dichloropropene	5.682	75	6475	1.93	ug/L		95
28) 2-Butanone (MEK)	5.701	43	7369	3.59	ug/L		94
29) Benzene	5.938	78	21880	1.99	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.151	62	6601	2.00	ug/L		99
31) iso-Butyl Alcohol	6.291	43	11367	45.00	ug/L		84
33) Trichloroethene (TCE)	6.546	130	6232	2.07	ug/L		87
34) Dibromomethane	6.996	93	2771	1.81	ug/L		87
35) 1,2-Dichloropropane	7.112	63	5608	1.93	ug/L		92
36) Bromodichloromethane	7.179	83	4030	1.53	ug/L		90
38) c-1,3-Dichloropropene	7.891	75	6187	1.61	ug/L		95
40) Toluene	8.152	91	23832	2.05	ug/L		88
41) Tetrachloroethene (PCE)	8.602	166	4849	1.88	ug/L		96
42) 4-Methyl-2-Pentanone (...	8.615	43	13222	3.76	ug/L		91
43) t-1,3-Dichloropropene	8.645	75	5147	1.49	ug/L		98
44) 1,1,2-Trichloroethane	8.821	97	4541	1.81	ug/L		88
45) Dibromochloromethane	9.004	129	2873	1.57	ug/L		88
46) 1,3-Dichloropropane	9.107	76	8546	1.86	ug/L		93
47) 1,2-Dibromoethane (EDB)	9.241	107	4166	1.67	ug/L		100
48) 2-Hexanone	9.509	43	8511	3.36	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

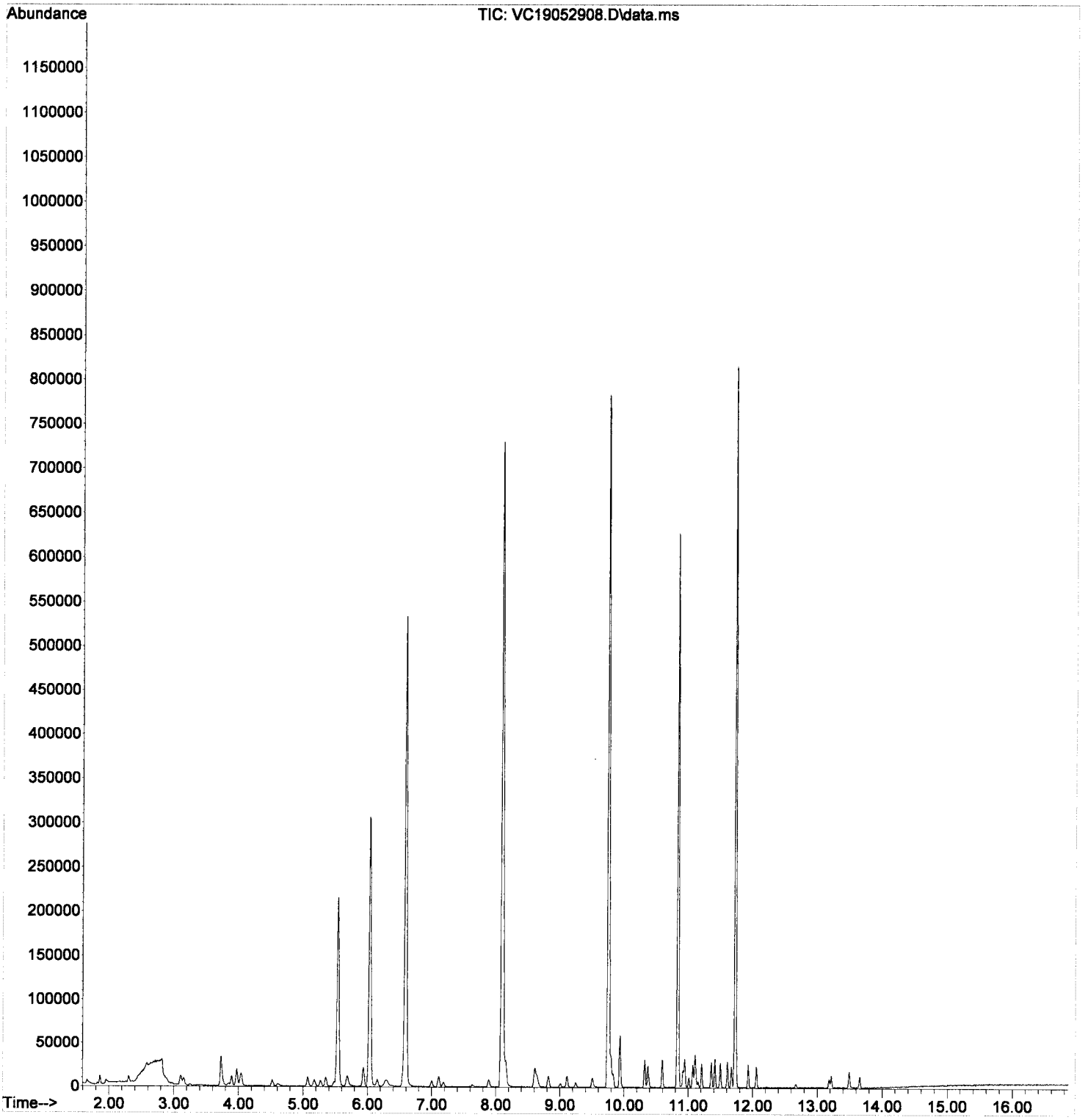
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	14584	2.08	ug/L		98
50) Ethylbenzene	9.795	91	23660	1.98	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.831	131	3542	1.64	ug/L		95
52) m,p-Xylenes (2)	9.935	91	34407	3.91	ug/L		98
53) o-Xylene	10.324	91	17445	1.91	ug/L		99
54) Styrene	10.373	104	11631	1.68	ug/L		95
55) Bromoform	10.391	173	1354	1.36	ug/L		82
56) Isopropylbenzene	10.598	105	20325	1.92	ug/L		96
59) Bromobenzene	10.920	156	5277	2.01	ug/L		89
60) n-Propylbenzene	10.945	91	22107	1.91	ug/L		92
61) 1,1,2,2-Tetrachloroethane	11.011	83	4646	1.75	ug/L		96
62) 2-Chlorotoluene	11.066	126	4419	1.84	ug/L		97
63) 1,3,5-Trimethylbenzene	11.103	105	14521	1.80	ug/L		94
64) 1,2,3-Trichloropropane	11.115	110	2200	2.06	ug/L		91
65) t-1,4-Dichloro-2-butene	11.151	88	320	0.95	ug/L	#	52
66) 4-Chlorotoluene	11.206	91	13410	1.93	ug/L		98
67) tert-Butylbenzene	11.358	91	8037	1.86	ug/L		97
68) 1,2,4-Trimethylbenzene	11.413	105	15360	1.87	ug/L		99
69) sec-Butylbenzene	11.498	105	16671	1.78	ug/L		99
70) 4-Isopropyltoluene	11.608	119	14651	1.91	ug/L		99
71) 1,3-Dichlorobenzene	11.675	146	8756	2.03	ug/L		92
72) 1,4-Dichlorobenzene	11.741	146	8705	2.03	ug/L		92
73) n-Butylbenzene	11.930	91	12230	1.92	ug/L		98
74) 1,2-Dichlorobenzene	12.058	146	7643	1.90	ug/L		89
75) 1,2-Dibromo-3-Chloropr...	12.672	157	826	1.35	ug/L		83
76) Hexachlorobutadiene	13.183	223	1244	1.99	ug/L	#	83
77) 1,2,4-Trichlorobenzene	13.214	180	4471	1.88	ug/L		92
78) Naphthalene	13.493	128	14001	1.61	ug/L		96
79) 1,2,3-Trichlorobenzene	13.652	180	4310	1.82	ug/L		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052908.D
Acq On : 29 May 2019 5:30 pm
Operator : TB
Sample : 9E29058-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052909.D
Acq On : 29 May 2019 5:57 pm
Operator : TB
Sample : 9E29058-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:54 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19
no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.036	168	254773	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.753	117	445170	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.730	152	188506	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	136458	48.46	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	492217	50.01	ug/L		0.00
39) Toluene-d8 (S)	8.098	98	604964	50.11	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	163573	49.96	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.668	85	12196	5.43	ug/L		96
3) Chloromethane	1.862	50	19122	5.29	ug/L		98
4) Vinyl Chloride	1.954	62	13474	5.16	ug/L		99
5) Bromomethane	2.306	96	9080	6.44	ug/L		91
6) Chloroethane	2.452	64	5245	5.50	ug/L	#	43
7) Trichlorofluoromethane	2.580	101	7697	5.18	ug/L		99
8) 1,1-Dichloroethene	3.097	61	13008	5.04	ug/L		85
9) Carbon Disulfide	3.109	76	17910	4.45	ug/L		99
10) Freon 113	3.152	101	10435	5.03	ug/L		94
11) Iodomethane	3.249	142	3398	3.70	ug/L		98
12) Methylene Chloride	3.736	84	25250	8.72	ug/L		97
13) Acetone	3.846	43	11897	10.74	ug/L		94
14) t-1,2-Dichloroethene	3.894	61	15650	5.15	ug/L		94
15) n-Hexane	3.973	86	3499	6.99	ug/L	#	90
16) Methyl-tert-butyl-ether	4.040	73	44834	5.02	ug/L		98
17) 1,1-Dichloroethane	4.527	63	18960	5.04	ug/L		98
18) Acrylonitrile	4.606	53	7679	5.05	ug/L		94
19) c-1,2-Dichloroethene	5.068	61	17123	5.09	ug/L		95
20) 2,2-Dichloropropane	5.178	77	14424	4.94	ug/L		93
21) Bromochloromethane	5.269	49	10200	5.08	ug/L		90
22) Chloroform	5.354	83	21196	4.92	ug/L		97
23) Carbon Tetrachloride	5.482	117	10919	4.61	ug/L		95
24) Tetrahydrofuran	5.537	42	7878	5.10	ug/L		94
25) 1,1,1-Trichloroethane	5.555	97	16696	4.87	ug/L		96
27) 1,1-Dichloropropene	5.677	75	16613	4.95	ug/L		98
28) 2-Butanone (MEK)	5.701	43	21043	10.25	ug/L		96
29) Benzene	5.932	78	56100	5.10	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.151	62	16641	5.05	ug/L		97
31) iso-Butyl Alcohol	6.297	43	31527	124.84	ug/L		83
33) Trichloroethene (TCE)	6.547	130	15220	5.06	ug/L		92
34) Dibromomethane	7.003	93	7159	4.67	ug/L		99
35) 1,2-Dichloropropane	7.112	63	14430	4.97	ug/L		91
36) Bromodichloromethane	7.185	83	11827	4.50	ug/L		99
38) c-1,3-Dichloropropene	7.885	75	17156	4.52	ug/L		98
40) Toluene	8.153	91	59374	5.19	ug/L		98
41) Tetrachloroethene (PCE)	8.603	166	13201	5.20	ug/L		97
42) 4-Methyl-2-Pentanone (...	8.615	43	34042	9.82	ug/L		97
43) t-1,3-Dichloropropene	8.645	75	14478	4.26	ug/L		94
44) 1,1,2-Trichloroethane	8.816	97	12374	5.00	ug/L		96
45) Dibromochloromethane	9.004	129	7443	4.14	ug/L		86
46) 1,3-Dichloropropane	9.108	76	22298	4.93	ug/L		97
47) 1,2-Dibromoethane (EDB)	9.248	107	11552	4.69	ug/L		95
48) 2-Hexanone	9.503	43	24821	9.93	ug/L		95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052909.D
Acq On : 29 May 2019 5:57 pm
Operator : TB
Sample : 9E29058-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

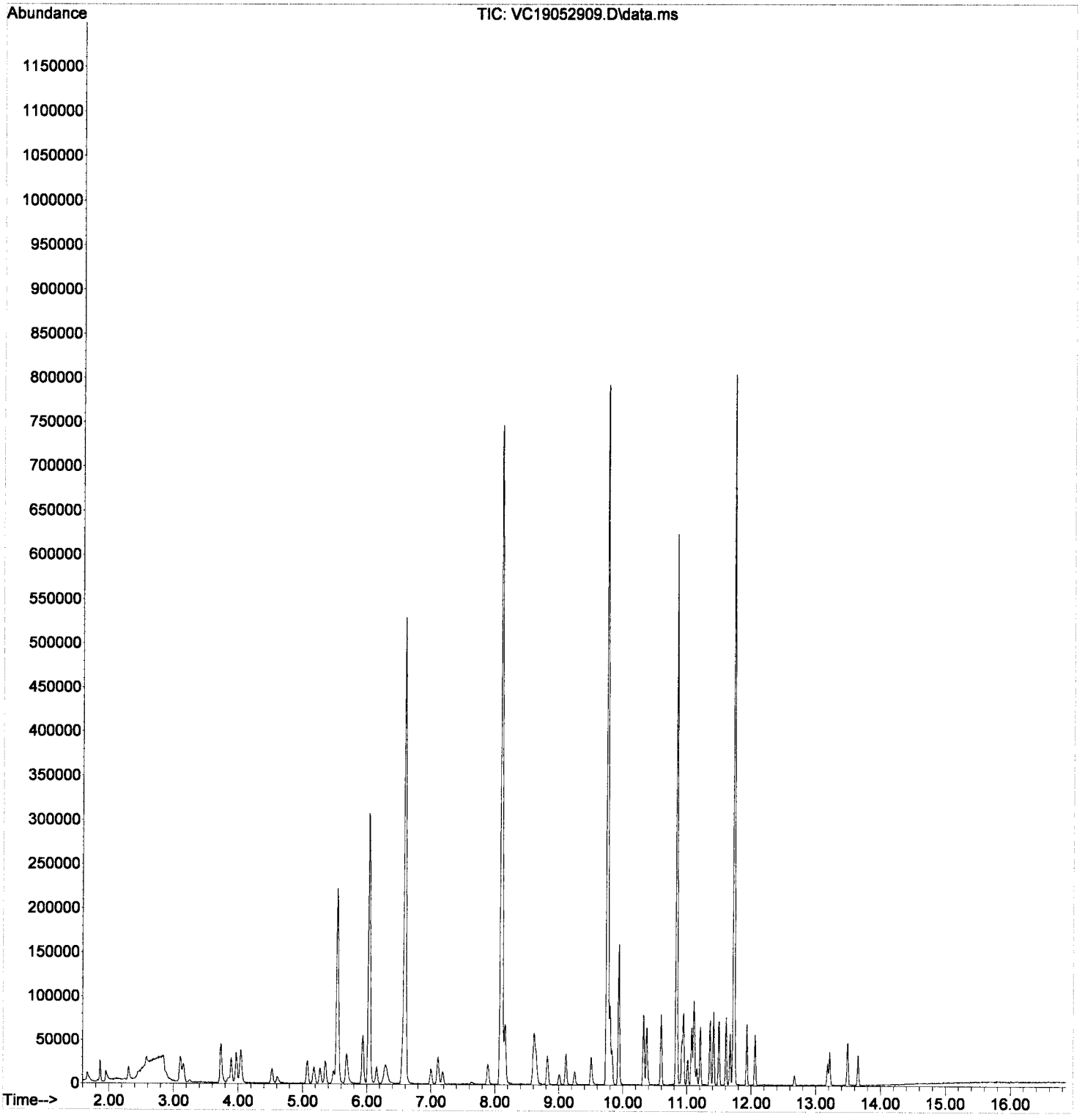
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.765	112	35456	5.12	ug/L		94
50) Ethylbenzene	9.795	91	60912	5.17	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.832	131	9596	4.51	ug/L		94
52) m,p-Xylenes (2)	9.935	91	87900	10.12	ug/L		97
53) o-Xylene	10.324	91	45708	5.06	ug/L		98
54) Styrene	10.373	104	31844	4.66	ug/L		97
55) Bromoform	10.385	173	4070	4.14	ug/L		92
56) Isopropylbenzene	10.598	105	53051	5.09	ug/L		94
59) Bromobenzene	10.921	156	13190	5.20	ug/L		96
60) n-Propylbenzene	10.945	91	57721	5.15	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.006	83	12322	4.79	ug/L		96
62) 2-Chlorotoluene	11.073	126	12024	5.17	ug/L	#	84
63) 1,3,5-Trimethylbenzene	11.103	105	39774	5.09	ug/L		98
64) 1,2,3-Trichloropropane	11.115	110	5164	4.99	ug/L		86
65) t-1,4-Dichloro-2-butene	11.152	88	1285	3.96	ug/L	#	83
66) 4-Chlorotoluene	11.207	91	33806	5.03	ug/L		94
67) tert-Butylbenzene	11.359	91	20763	4.96	ug/L		95
68) 1,2,4-Trimethylbenzene	11.413	105	39159	4.93	ug/L		99
69) sec-Butylbenzene	11.499	105	45399	5.01	ug/L		97
70) 4-Isopropyltoluene	11.608	119	37395	5.03	ug/L		97
71) 1,3-Dichlorobenzene	11.669	146	21090	5.04	ug/L		96
72) 1,4-Dichlorobenzene	11.736	146	21623	5.22	ug/L		95
73) n-Butylbenzene	11.930	91	31024	5.03	ug/L		96
74) 1,2-Dichlorobenzene	12.058	146	19883	5.09	ug/L		93
75) 1,2-Dibromo-3-Chloropr...	12.673	157	2389	4.05	ug/L		96
76) Hexachlorobutadiene	13.184	223	2782	4.59	ug/L	#	75
77) 1,2,4-Trichlorobenzene	13.214	180	11381	4.93	ug/L		97
78) Naphthalene	13.494	128	38161	4.53	ug/L		98
79) 1,2,3-Trichlorobenzene	13.652	180	10740	4.67	ug/L		90

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052909.D
Acq On : 29 May 2019 5:57 pm
Operator : TB
Sample : 9E29058-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:54 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052910.D
Acq On : 29 May 2019 6:25 pm
Operator : TB
Sample : 9E29058-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:56 2019
Quant Method : C:\msdchem\1\METHODS\VC~~190529S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19
no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	250992	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	436340	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	186773	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	135028	48.67	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	477661	49.27	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	590419	49.89	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	161677	49.84	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.657	85	22760	10.28	ug/L		97
3) Chloromethane	1.857	50	35625	10.00	ug/L		98
4) Vinyl Chloride	1.943	62	25219	9.80	ug/L		95
5) Bromomethane	2.296	96	16179	11.65	ug/L		94
6) Chloroethane	2.435	64	9117	9.71	ug/L	#	67
7) Trichlorofluoromethane	2.569	101	13672	9.35	ug/L		94
8) 1,1-Dichloroethene	3.092	61	25751	10.13	ug/L		85
9) Carbon Disulfide	3.105	76	36451	9.20	ug/L		97
10) Freon 113	3.147	101	20551	10.06	ug/L		84
11) Iodomethane	3.238	142	7794	8.61	ug/L		93
12) Methylene Chloride	3.719	84	35620	12.48	ug/L		97
13) Acetone	3.835	43	20645	18.91	ug/L		96
14) t-1,2-Dichloroethene	3.883	61	30362	10.15	ug/L		98
15) n-Hexane	3.962	86	5559	11.27	ug/L	#	92
16) Methyl-tert-butyl-ether	4.035	73	87421	9.94	ug/L		98
17) 1,1-Dichloroethane	4.516	63	36342	9.81	ug/L		95
18) Acrylonitrile	4.595	53	15131	10.10	ug/L		98
19) c-1,2-Dichloroethene	5.070	61	33881	10.23	ug/L		96
20) 2,2-Dichloropropane	5.173	77	29348	10.20	ug/L		85
21) Bromochloromethane	5.264	49	20180	10.21	ug/L		92
22) Chloroform	5.343	83	42125	9.93	ug/L		98
23) Carbon Tetrachloride	5.477	117	22616	9.69	ug/L		95
24) Tetrahydrofuran	5.538	42	15478	10.18	ug/L		96
25) 1,1,1-Trichloroethane	5.544	97	32805	9.71	ug/L		98
27) 1,1-Dichloropropene	5.672	75	32947	9.97	ug/L		97
28) 2-Butanone (MEK)	5.690	43	40332	19.95	ug/L		95
29) Benzene	5.927	78	109245	10.08	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.146	62	32514	10.01	ug/L		95
31) iso-Butyl Alcohol	6.286	43	61468	247.07	ug/L		89
33) Trichloroethene (TCE)	6.548	130	29345	9.90	ug/L		95
34) Dibromomethane	6.998	93	14902	9.86	ug/L		94
35) 1,2-Dichloropropane	7.108	63	27791	9.71	ug/L		93
36) Bromodichloromethane	7.174	83	23755	9.17	ug/L		94
38) c-1,3-Dichloropropene	7.886	75	35060	9.42	ug/L		97
40) Toluene	8.154	91	113987	10.16	ug/L		99
41) Tetrachloroethene (PCE)	8.598	166	25684	10.31	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.616	43	69619	20.50	ug/L		98
43) t-1,3-Dichloropropene	8.647	75	31437	9.43	ug/L		99
44) 1,1,2-Trichloroethane	8.817	97	24039	9.90	ug/L		88
45) Dibromochloromethane	9.006	129	16078	9.12	ug/L		92
46) 1,3-Dichloropropane	9.103	76	43756	9.86	ug/L		98
47) 1,2-Dibromoethane (EDB)	9.243	107	23883	9.89	ug/L		91
48) 2-Hexanone	9.498	43	49008	20.01	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052910.D
Acq On : 29 May 2019 6:25 pm
Operator : TB
Sample : 9E29058-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

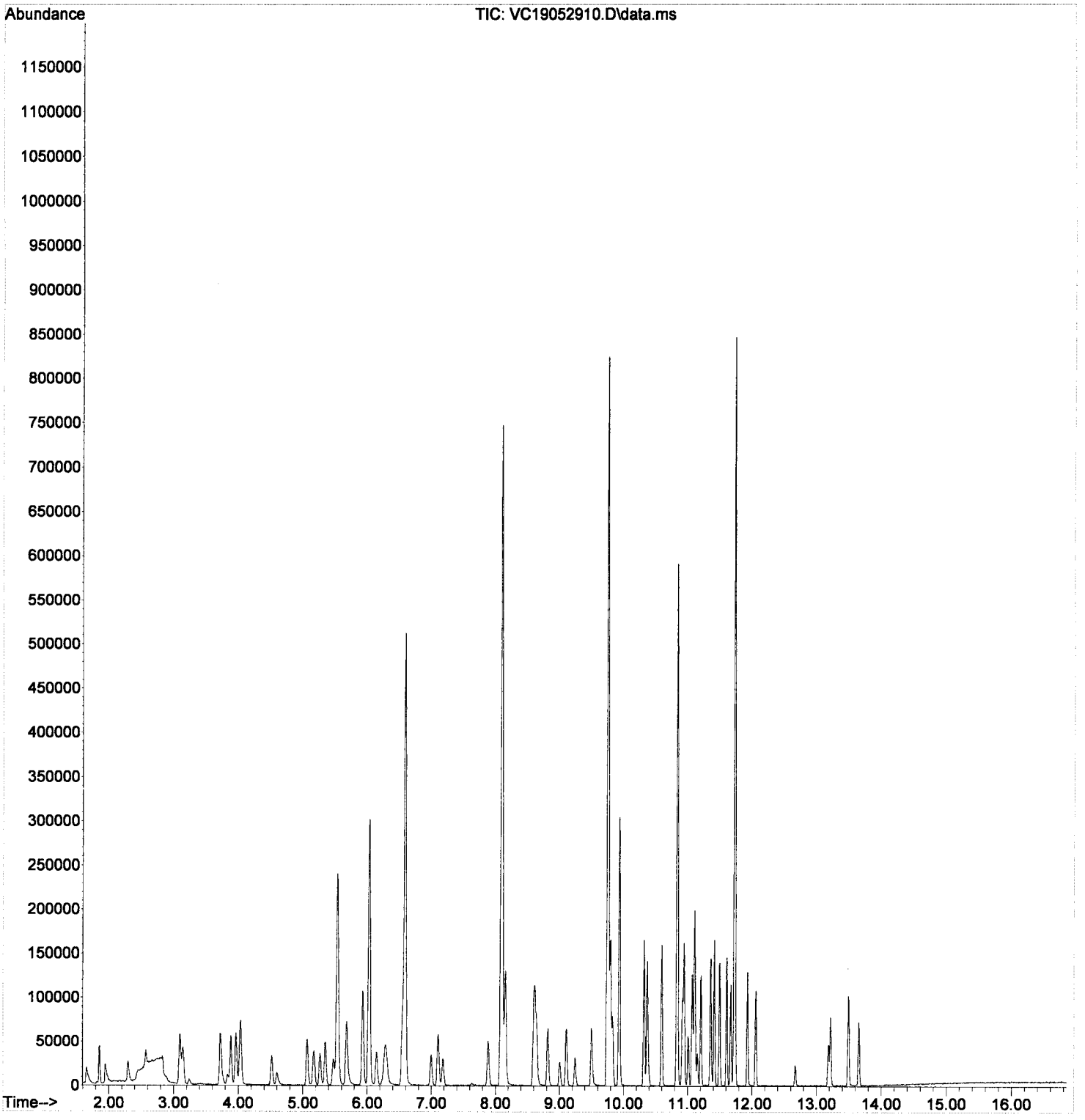
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	68508	10.10	ug/L		96
50) Ethylbenzene	9.796	91	115497	10.01	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.827	131	19728	9.47	ug/L		96
52) m,p-Xylenes (2)	9.930	91	170308	20.00	ug/L		99
53) o-Xylene	10.320	91	87450	9.88	ug/L		99
54) Styrene	10.368	104	64308	9.61	ug/L		99
55) Bromoform	10.387	173	8679	9.00	ug/L		95
56) Isopropylbenzene	10.593	105	101485	9.94	ug/L		97
59) Bromobenzene	10.916	156	25871	10.29	ug/L		87
60) n-Propylbenzene	10.940	91	110989	10.00	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	25383	9.95	ug/L		99
62) 2-Chlorotoluene	11.068	126	23789	10.32	ug/L	#	79
63) 1,3,5-Trimethylbenzene	11.104	105	77961	10.07	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	10336	10.07	ug/L	#	81
65) t-1,4-Dichloro-2-butene	11.153	88	2829	8.80	ug/L		94
66) 4-Chlorotoluene	11.208	91	65138	9.79	ug/L		98
67) tert-Butylbenzene	11.354	91	41310	9.96	ug/L		96
68) 1,2,4-Trimethylbenzene	11.415	105	78362	9.96	ug/L		99
69) sec-Butylbenzene	11.500	105	88679	9.88	ug/L		98
70) 4-Isopropyltoluene	11.609	119	74162	10.06	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	41681	10.05	ug/L		97
72) 1,4-Dichlorobenzene	11.737	146	41926	10.22	ug/L		96
73) n-Butylbenzene	11.932	91	61550	10.07	ug/L		98
74) 1,2-Dichlorobenzene	12.059	146	38321	9.91	ug/L		98
75) 1,2-Dibromo-3-Chloropr...	12.674	157	5509	9.42	ug/L		96
76) Hexachlorobutadiene	13.179	223	5351	8.91	ug/L		94
77) 1,2,4-Trichlorobenzene	13.215	180	23206	10.15	ug/L		93
78) Naphthalene	13.495	128	79664	9.54	ug/L		98
79) 1,2,3-Trichlorobenzene	13.653	180	22472	9.87	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052910.D
Acq On : 29 May 2019 6:25 pm
Operator : TB
Sample : 9E29058-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052911.D
Acq On : 29 May 2019 6:52 pm
Operator : TB
Sample : 9E29058-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19
no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	256524	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	450201	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	190782	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	141761	50.00	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	495460	50.00	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	610484	50.00	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	165674	50.00	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.657	85	45253	20.00	ug/L		97
3) Chloromethane	1.858	50	72826	20.00	ug/L		100
4) Vinyl Chloride	1.949	62	52612	20.00	ug/L		95
5) Bromomethane	2.296	96	28393	20.00	ug/L		98
6) Chloroethane	2.448	64	19192	20.00	ug/L		88
7) Trichlorofluoromethane	2.575	101	29898	20.00	ug/L		99
8) 1,1-Dichloroethene	3.093	61	51985	20.00	ug/L		90
9) Carbon Disulfide	3.105	76	80999	20.00	ug/L		99
10) Freon 113	3.147	101	41761	20.00	ug/L		87
11) Iodomethane	3.245	142	18507	20.00	ug/L		97
12) Methylene Chloride	3.725	84	58329	20.00	ug/L		96
13) Acetone	3.835	43	44627	40.00	ug/L		100
14) t-1,2-Dichloroethene	3.883	61	61167	20.00	ug/L		98
15) n-Hexane	3.962	86	10080	20.00	ug/L	#	90
16) Methyl-tert-butyl-ether	4.035	73	179725	20.00	ug/L		99
17) 1,1-Dichloroethane	4.516	63	75709	20.00	ug/L		95
18) Acrylonitrile	4.595	53	30627	20.00	ug/L		96
19) c-1,2-Dichloroethene	5.070	61	67717	20.00	ug/L		96
20) 2,2-Dichloropropane	5.173	77	58827	20.00	ug/L		89
21) Bromochloromethane	5.264	49	40396	20.00	ug/L		94
22) Chloroform	5.349	83	86712	20.00	ug/L		98
23) Carbon Tetrachloride	5.477	117	47689	20.00	ug/L		93
24) Tetrahydrofuran	5.532	42	31084	20.00	ug/L		92
25) 1,1,1-Trichloroethane	5.550	97	69031	20.00	ug/L		99
27) 1,1-Dichloropropene	5.678	75	67566	20.00	ug/L		98
28) 2-Butanone (MEK)	5.690	43	82660	40.00	ug/L		99
29) Benzene	5.934	78	221601	20.00	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.146	62	66416	20.00	ug/L		99
31) iso-Butyl Alcohol	6.286	43	127134	500.00	ug/L		91
33) Trichloroethene (TCE)	6.548	130	60590	20.00	ug/L		97
34) Dibromomethane	6.998	93	30886	20.00	ug/L		91
35) 1,2-Dichloropropane	7.108	63	58485	20.00	ug/L		89
36) Bromodichloromethane	7.181	83	52937	20.00	ug/L		97
38) c-1,3-Dichloropropene	7.886	75	76771	20.00	ug/L		99
40) Toluene	8.154	91	231426	20.00	ug/L		97
41) Tetrachloroethene (PCE)	8.598	166	51386	20.00	ug/L		97
42) 4-Methyl-2-Pentanone (...	8.616	43	140164	40.00	ug/L		99
43) t-1,3-Dichloropropene	8.641	75	68797	20.00	ug/L		97
44) 1,1,2-Trichloroethane	8.817	97	50104	20.00	ug/L		96
45) Dibromochloromethane	9.006	129	36395	20.00	ug/L		97
46) 1,3-Dichloropropane	9.109	76	91532	20.00	ug/L		99
47) 1,2-Dibromoethane (EDB)	9.243	107	49836	20.00	ug/L		94
48) 2-Hexanone	9.498	43	101065	40.00	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052911.D
Acq On : 29 May 2019 6:52 pm
Operator : TB
Sample : 9E29058-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

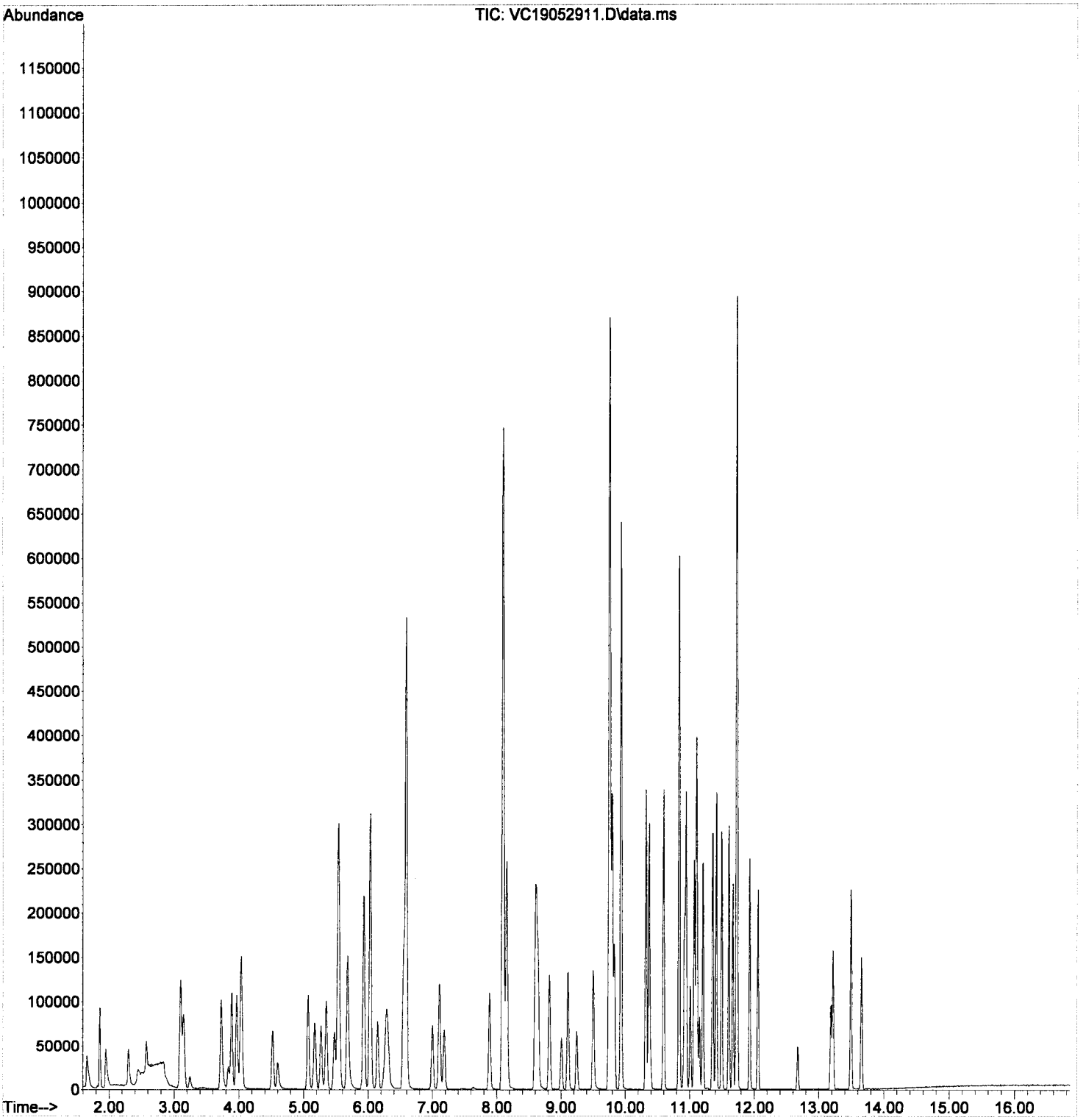
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	139988	20.00	ug/L		95
50) Ethylbenzene	9.797	91	238085	20.00	ug/L		100
51) 1,1,1,2-Tetrachloroethane	9.827	131	42996	20.00	ug/L		99
52) m,p-Xylenes (2)	9.930	91	351394	40.00	ug/L		100
53) o-Xylene	10.320	91	182582	20.00	ug/L		98
54) Styrene	10.368	104	138152	20.00	ug/L		99
55) Bromoform	10.387	173	19903	20.00	ug/L		100
56) Isopropylbenzene	10.593	105	210609	20.00	ug/L		98
59) Bromobenzene	10.916	156	51348	20.00	ug/L		91
60) n-Propylbenzene	10.940	91	226710	20.00	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	52097	20.00	ug/L		99
62) 2-Chlorotoluene	11.068	126	47080	20.00	ug/L	#	83
63) 1,3,5-Trimethylbenzene	11.104	105	158194	20.00	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	20960	20.00	ug/L		88
65) t-1,4-Dichloro-2-butene	11.153	88	6571	20.00	ug/L	#	78
66) 4-Chlorotoluene	11.202	91	135968	20.00	ug/L		98
67) tert-Butylbenzene	11.354	91	84715	20.00	ug/L		95
68) 1,2,4-Trimethylbenzene	11.415	105	160708	20.00	ug/L		98
69) sec-Butylbenzene	11.494	105	183450	20.00	ug/L		97
70) 4-Isopropyltoluene	11.609	119	150593	20.00	ug/L		99
71) 1,3-Dichlorobenzene	11.670	146	84703	20.00	ug/L		97
72) 1,4-Dichlorobenzene	11.737	146	83842	20.00	ug/L		98
73) n-Butylbenzene	11.932	91	124826	20.00	ug/L		99
74) 1,2-Dichlorobenzene	12.060	146	79024	20.00	ug/L		97
75) 1,2-Dibromo-3-Chloropr...	12.674	157	11948	20.00	ug/L		92
76) Hexachlorobutadiene	13.185	223	12267	20.00	ug/L		97
77) 1,2,4-Trichlorobenzene	13.215	180	46713	20.00	ug/L		98
78) Naphthalene	13.489	128	170582	20.00	ug/L		98
79) 1,2,3-Trichlorobenzene	13.653	180	46516	20.00	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052911.D
Acq On : 29 May 2019 6:52 pm
Operator : TB
Sample : 9E29058-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:45:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052912.D
Acq On : 29 May 2019 7:20 pm
Operator : TB
Sample : 9E29058-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19

no change

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	250786	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	449432	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	195329	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	143870	51.90	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	489311	50.51	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	601358	49.34	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	167723	49.44	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	122313	55.29	ug/L		99
3) Chloromethane	1.864	50	179217	50.34	ug/L		99
4) Vinyl Chloride	1.949	62	132089	51.36	ug/L		97
5) Bromomethane	2.302	96	66982	48.26	ug/L		99
6) Chloroethane	2.448	64	47938	51.10	ug/L		86
7) Trichlorofluoromethane	2.576	101	73023	49.97	ug/L		98
8) 1,1-Dichloroethene	3.099	61	135031	53.14	ug/L		87
9) Carbon Disulfide	3.111	76	237187	59.91	ug/L		99
10) Freon 113	3.148	101	104970	51.42	ug/L		89
11) Iodomethane	3.245	142	58902	65.11	ug/L		98
12) Methylene Chloride	3.726	84	122804	43.07	ug/L		98
13) Acetone	3.835	43	111792	102.49	ug/L		94
14) t-1,2-Dichloroethene	3.890	61	157053	52.53	ug/L		99
15) n-Hexane	3.969	86	25466	51.68	ug/L	#	84
16) Methyl-tert-butyl-ether	4.036	73	446710	50.85	ug/L		97
17) 1,1-Dichloroethane	4.523	63	187888	50.77	ug/L		99
18) Acrylonitrile	4.596	53	79642	53.20	ug/L		96
19) c-1,2-Dichloroethene	5.070	61	170168	51.41	ug/L		99
20) 2,2-Dichloropropane	5.173	77	148829	51.76	ug/L		88
21) Bromochloromethane	5.265	49	100930	51.11	ug/L		97
22) Chloroform	5.350	83	217722	51.37	ug/L		98
23) Carbon Tetrachloride	5.478	117	132426	56.81	ug/L		93
24) Tetrahydrofuran	5.532	42	78409	51.60	ug/L		93
25) 1,1,1-Trichloroethane	5.551	97	175402	51.98	ug/L		98
27) 1,1-Dichloropropene	5.678	75	172418	52.20	ug/L		98
28) 2-Butanone (MEK)	5.684	43	208404	103.16	ug/L		95
29) Benzene	5.934	78	547822	50.57	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.147	62	166385	51.25	ug/L		97
31) iso-Butyl Alcohol	6.281	43	325134	1307.96	ug/L		87
33) Trichloroethene (TCE)	6.548	130	153840	51.94	ug/L		99
34) Dibromomethane	6.998	93	80383	53.24	ug/L		93
35) 1,2-Dichloropropane	7.108	63	145741	50.98	ug/L		92
36) Bromodichloromethane	7.181	83	148293	57.31	ug/L		99
38) c-1,3-Dichloropropene	7.887	75	206054	53.77	ug/L		97
40) Toluene	8.154	91	567186	49.10	ug/L		100
41) Tetrachloroethene (PCE)	8.598	166	131806	51.39	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.617	43	362001	103.48	ug/L		99
43) t-1,3-Dichloropropene	8.641	75	188244	54.82	ug/L		96
44) 1,1,2-Trichloroethane	8.817	97	128045	51.20	ug/L		96
45) Dibromochloromethane	9.006	129	110966	61.08	ug/L		98
46) 1,3-Dichloropropane	9.109	76	228171	49.94	ug/L		100
47) 1,2-Dibromoethane (EDB)	9.243	107	132585	53.30	ug/L		98
48) 2-Hexanone	9.499	43	264271	104.77	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052912.D
Acq On : 29 May 2019 7:20 pm
Operator : TB
Sample : 9E29058-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:00 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

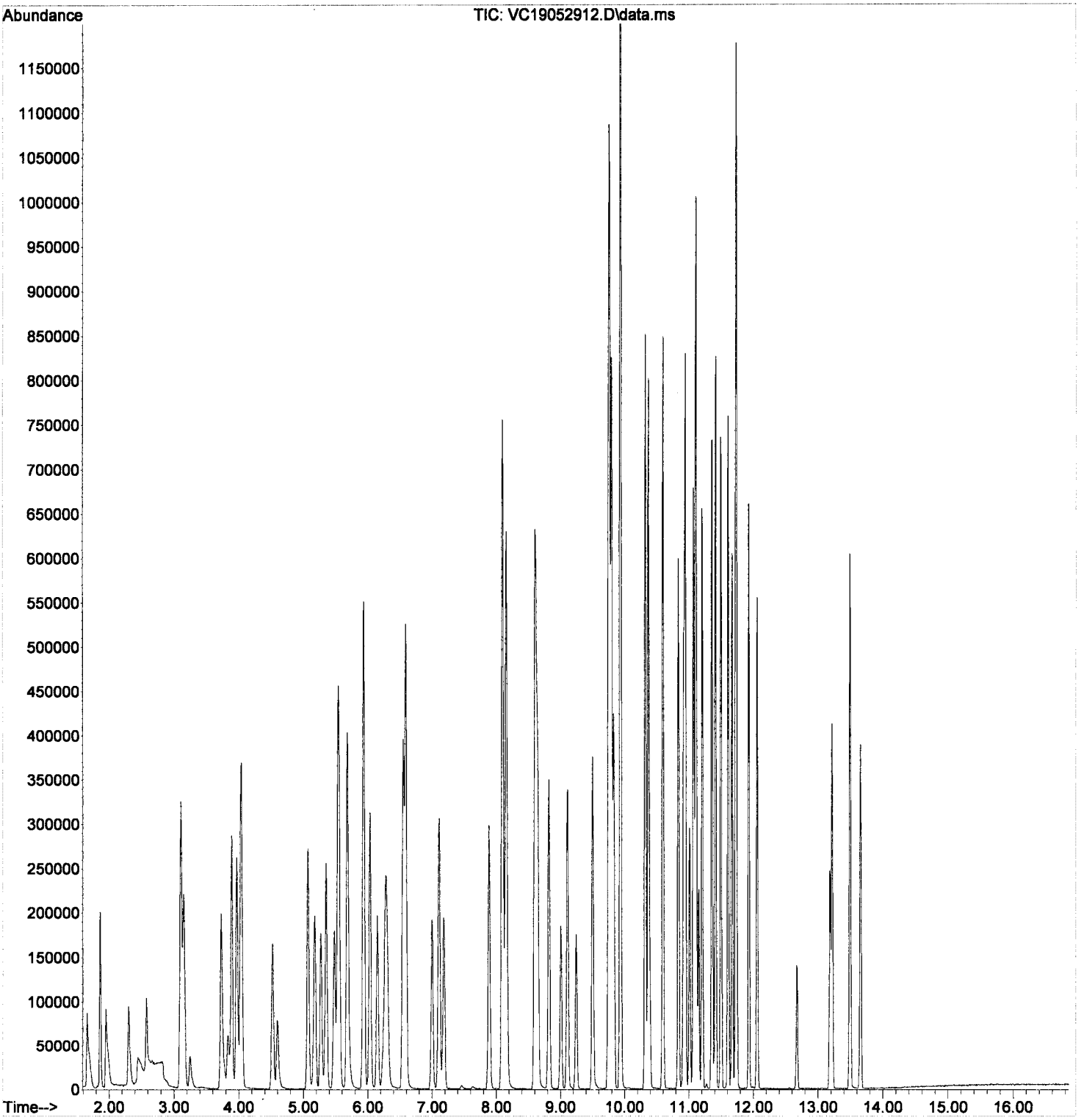
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	351235	50.27	ug/L		97
50) Ethylbenzene	9.797	91	580649	48.86	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.827	131	116780	54.41	ug/L		96
52) m,p-Xylenes (2)	9.931	91	846663	96.54	ug/L		98
53) o-Xylene	10.320	91	457250	50.17	ug/L		99
54) Styrene	10.369	104	353430	51.25	ug/L		98
55) Bromoform	10.387	173	64724	65.15	ug/L		97
56) Isopropylbenzene	10.594	105	514735	48.96	ug/L		100
59) Bromobenzene	10.916	156	134239	51.07	ug/L		92
60) n-Propylbenzene	10.941	91	564190	48.61	ug/L		100
61) 1,1,2,2-Tetrachloroethane	11.008	83	135917	50.96	ug/L		98
62) 2-Chlorotoluene	11.068	126	120765	50.11	ug/L		86
63) 1,3,5-Trimethylbenzene	11.105	105	396913	49.01	ug/L		97
64) 1,2,3-Trichloropropane	11.117	110	54793	51.07	ug/L		92
65) t-1,4-Dichloro-2-butene	11.154	88	19084	56.73	ug/L	#	77
66) 4-Chlorotoluene	11.202	91	345630	49.66	ug/L		98
67) tert-Butylbenzene	11.360	91	215868	49.78	ug/L		96
68) 1,2,4-Trimethylbenzene	11.415	105	400305	48.66	ug/L		98
69) sec-Butylbenzene	11.494	105	461029	49.09	ug/L		97
70) 4-Isopropyltoluene	11.610	119	386921	50.19	ug/L		97
71) 1,3-Dichlorobenzene	11.671	146	218010	50.28	ug/L		98
72) 1,4-Dichlorobenzene	11.738	146	214078	49.88	ug/L		100
73) n-Butylbenzene	11.926	91	313322	49.03	ug/L		98
74) 1,2-Dichlorobenzene	12.060	146	201831	49.89	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.674	157	36171	59.14	ug/L		93
76) Hexachlorobutadiene	13.179	223	30150	48.01	ug/L		97
77) 1,2,4-Trichlorobenzene	13.216	180	126759	53.01	ug/L		97
78) Naphthalene	13.490	128	451629	51.72	ug/L		99
79) 1,2,3-Trichlorobenzene	13.654	180	120109	50.44	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052912.D
Acq On : 29 May 2019 7:20 pm
Operator : TB
Sample : 9E29058-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052913.D
Acq On : 29 May 2019 7:47 pm
Operator : TB
Sample : 9E29058-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

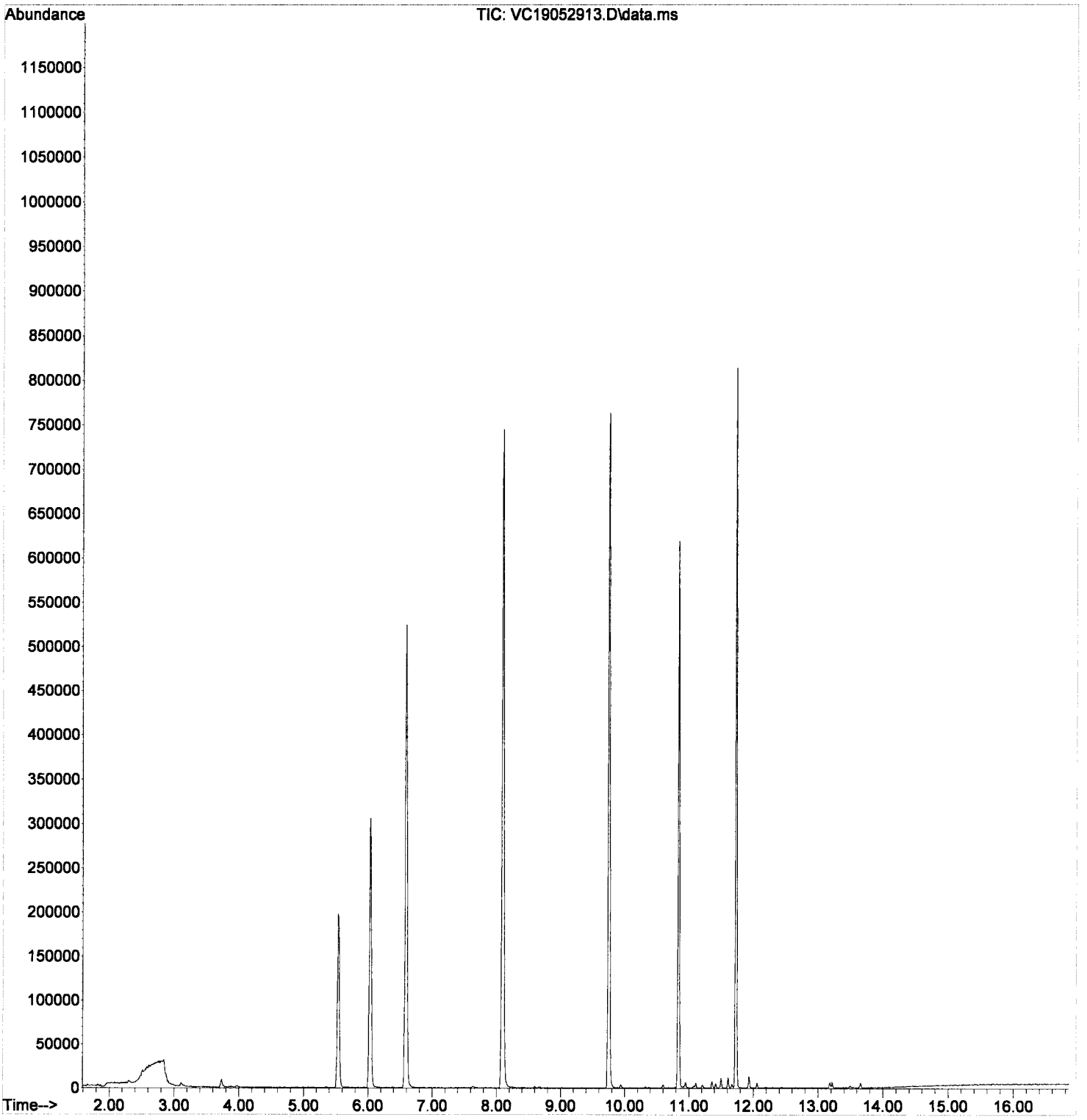
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.034	168	251569	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	444742	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	190416	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.535	111	134463	49.36 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	487332	50.36 ug/L		0.00
39) Toluene-d8 (S)	8.096	98	596282	49.56 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	163307	49.67 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.666	85	357	0.16 ug/L	#	50
3) Chloromethane	1.867	50	976	0.26 ug/L		84
5) Bromomethane	2.311	96	1740	1.20 ug/L		77
6) Chloroethane	2.524	64	106	0.11 ug/L	#	1
9) Carbon Disulfide	3.114	76	5278	1.31 ug/L		93
10) Freon 113	3.144	101	240	0.11 ug/L	#	73
11) Iodomethane	3.260	142	820	1.51 ug/L	#	78
12) Methylene Chloride	3.734	84	4772	Below Cal		93
13) Acetone	3.807	43	145	0.13 ug/L	#	42
14) t-1,2-Dichloroethene	3.886	61	405	0.14 ug/L	#	69
27) 1,1-Dichloropropene	5.681	75	506	0.15 ug/L		65
33) Trichloroethene (TCE)	6.551	130	349	0.11 ug/L	#	74
40) Toluene	8.157	91	1535	0.13 ug/L		81
41) Tetrachloroethene (PCE)	8.595	166	515	0.19 ug/L	#	55
49) Chlorobenzene	9.763	112	913	0.13 ug/L	#	1
50) Ethylbenzene	9.794	91	1643	0.14 ug/L		90
52) m,p-Xylenes (2)	9.940	91	2720	0.31 ug/L		91
53) o-Xylene	10.323	91	959	0.11 ug/L		80
54) Styrene	10.378	104	575	0.09 ug/L		80
56) Isopropylbenzene	10.597	105	2561	0.25 ug/L		82
59) Bromobenzene	10.919	156	356	0.14 ug/L		91
60) n-Propylbenzene	10.949	91	4592	0.40 ug/L		96
62) 2-Chlorotoluene	11.077	126	404	0.17 ug/L	#	82
63) 1,3,5-Trimethylbenzene	11.108	105	2985	0.39 ug/L		86
66) 4-Chlorotoluene	11.205	91	1724	0.25 ug/L		92
67) tert-Butylbenzene	11.357	91	2078	0.48 ug/L	#	78
68) 1,2,4-Trimethylbenzene	11.418	105	2595	0.33 ug/L		98
69) sec-Butylbenzene	11.497	105	7228	0.79 ug/L		94
70) 4-Isopropyltoluene	11.606	119	6170	0.83 ug/L		92
71) 1,3-Dichlorobenzene	11.673	146	1236	0.28 ug/L		91
72) 1,4-Dichlorobenzene	11.740	146	1354	0.31 ug/L	#	35
73) n-Butylbenzene	11.929	91	6549	1.03 ug/L		96
74) 1,2-Dichlorobenzene	12.063	146	829	0.20 ug/L		92
76) Hexachlorobutadiene	13.176	223	818	1.39 ug/L	#	74
77) 1,2,4-Trichlorobenzene	13.219	180	2228	0.94 ug/L		77
78) Naphthalene	13.492	128	2214	0.28 ug/L		84
79) 1,2,3-Trichlorobenzene	13.657	180	1953	0.87 ug/L		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052913.D
Acq On : 29 May 2019 7:47 pm
Operator : TB
Sample : 9E29058-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052914.D
Acq On : 29 May 2019 8:15 pm
Operator : TB
Sample : 9E29058-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19

no change

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.031	168	260650	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.748	117	459775	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	197554	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.532	111	144066	50.01	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.584	114	496661	49.33	ug/L	0.00
39) Toluene-d8 (S)	8.093	98	619571	49.69	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172526	50.28	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.650	85	241195	104.91	ug/L	98
3) Chloromethane	1.851	50	355923	96.20	ug/L	99
4) Vinyl Chloride	1.942	62	265790	99.44	ug/L	98
5) Bromomethane	2.295	96	130087	90.18	ug/L	93
6) Chloroethane	2.441	64	105670	108.38	ug/L	98
7) Trichlorofluoromethane	2.569	101	152590	100.46	ug/L	99
8) 1,1-Dichloroethene	3.086	61	268375	101.62	ug/L	88
9) Carbon Disulfide	3.098	76	506056	122.98	ug/L	99
10) Freon 113	3.141	101	207803	97.94	ug/L	88
11) Iodomethane	3.238	142	139044	147.88	ug/L	99
12) Methylene Chloride	3.719	84	236890	79.94	ug/L	94
13) Acetone	3.828	43	225817	199.20	ug/L	94
14) t-1,2-Dichloroethene	3.883	61	311743	100.32	ug/L	96
15) n-Hexane	3.962	86	48610	94.92	ug/L	97
16) Methyl-tert-butyl-ether	4.029	73	885758	97.01	ug/L	97
17) 1,1-Dichloroethane	4.516	63	388015	100.88	ug/L	99
18) Acrylonitrile	4.589	53	160664	103.26	ug/L	100
19) c-1,2-Dichloroethene	5.063	61	343281	99.78	ug/L	99
20) 2,2-Dichloropropane	5.167	77	299040	100.06	ug/L	88
21) Bromochloromethane	5.264	49	202481	98.66	ug/L	99
22) Chloroform	5.343	83	433579	98.42	ug/L	98
23) Carbon Tetrachloride	5.471	117	278862	115.10	ug/L	98
24) Tetrahydrofuran	5.526	42	156885	99.34	ug/L	93
25) 1,1,1-Trichloroethane	5.544	97	353917	100.92	ug/L	97
27) 1,1-Dichloropropene	5.672	75	339212	98.82	ug/L	99
28) 2-Butanone (MEK)	5.684	43	408448	194.52	ug/L	95
29) Benzene	5.927	78	1066556	94.74	ug/L	96
30) 1,2-Dichloroethane (EDC)	6.146	62	327724	97.13	ug/L	98
31) iso-Butyl Alcohol	6.280	43	664229	2570.97	ug/L	88
33) Trichloroethene (TCE)	6.548	130	306069	99.43	ug/L	98
34) Dibromomethane	6.992	93	161634	103.01	ug/L	92
35) 1,2-Dichloropropane	7.101	63	294477	99.11	ug/L	92
36) Bromodichloromethane	7.180	83	315200	117.20	ug/L	97
38) c-1,3-Dichloropropene	7.886	75	423217	107.96	ug/L	99
40) Toluene	8.154	91	1105825	93.58	ug/L	97
41) Tetrachloroethene (PCE)	8.598	166	260817	99.40	ug/L	98
42) 4-Methyl-2-Pentanone (...	8.616	43	707759	197.77	ug/L	98
43) t-1,3-Dichloropropene	8.640	75	389918	110.99	ug/L	97
44) 1,1,2-Trichloroethane	8.817	97	255240	99.76	ug/L	95
45) Dibromochloromethane	9.005	129	241274	129.83	ug/L	94
46) 1,3-Dichloropropane	9.103	76	456442	97.66	ug/L	99
47) 1,2-Dibromoethane (EDB)	9.243	107	266180	104.60	ug/L	100
48) 2-Hexanone	9.498	43	528430	204.79	ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052914.D
Acq On : 29 May 2019 8:15 pm
Operator : TB
Sample : 9E29058-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

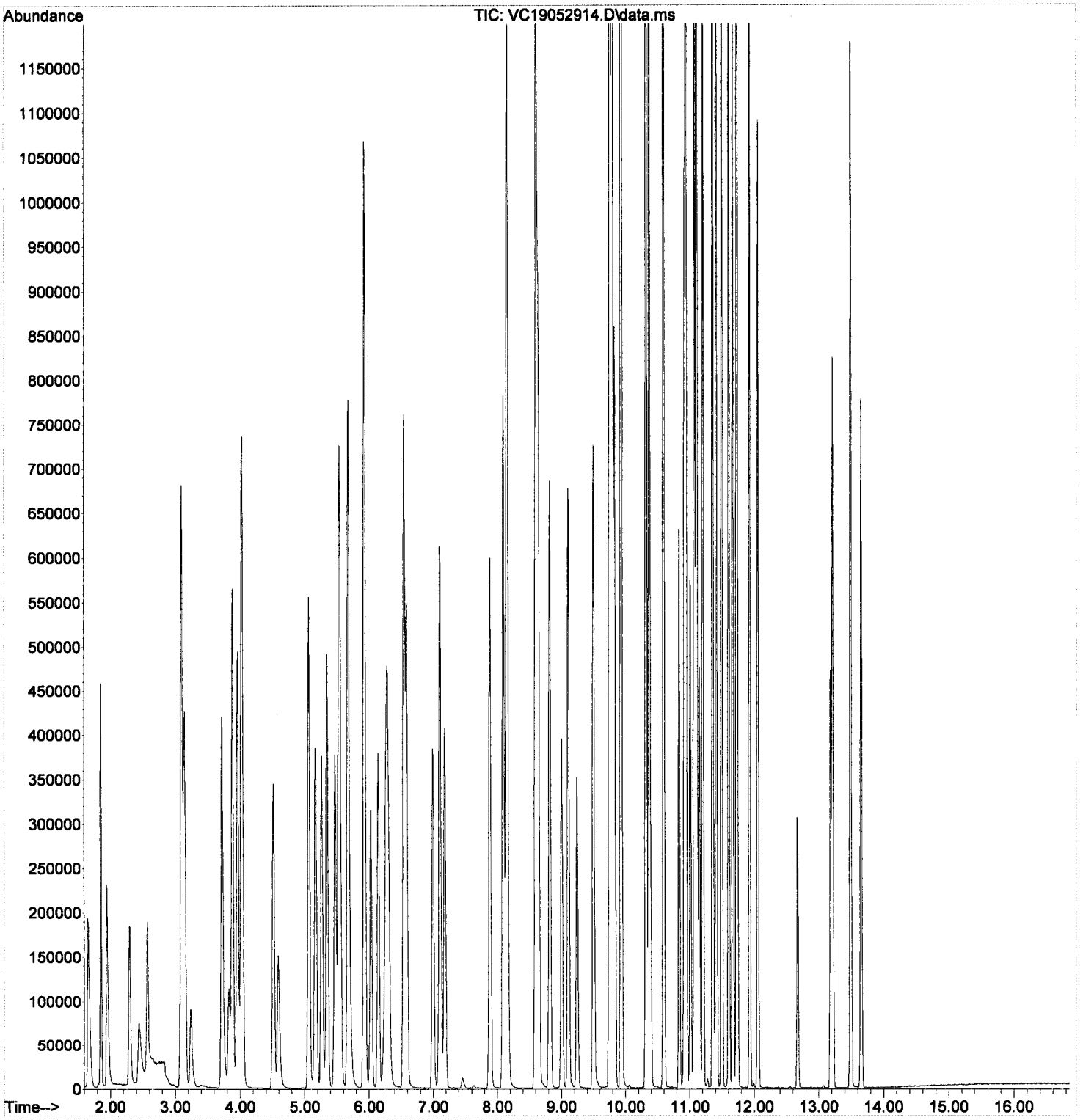
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	689400	96.44	ug/L		97
50) Ethylbenzene	9.790	91	1114972	91.71	ug/L		96
51) 1,1,1,2-Tetrachloroethane	9.827	131	242014	110.23	ug/L		98
52) m,p-Xylenes (2)	9.930	91	1592559	177.51	ug/L		95
53) o-Xylene	10.319	91	885817	95.01	ug/L		96
54) Styrene	10.368	104	713586	101.15	ug/L		97
55) Bromoform	10.386	173	146040	143.70	ug/L		99
56) Isopropylbenzene	10.593	105	1002570	93.22	ug/L		97
59) Bromobenzene	10.916	156	271067	101.96	ug/L		93
60) n-Propylbenzene	10.940	91	1090767	92.93	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	271157	100.53	ug/L		99
62) 2-Chlorotoluene	11.068	126	246373	101.07	ug/L		93
63) 1,3,5-Trimethylbenzene	11.104	105	773425	94.43	ug/L		95
64) 1,2,3-Trichloropropane	11.116	110	105916	97.60	ug/L		87
65) t-1,4-Dichloro-2-butene	11.153	88	40488	119.01	ug/L	#	74
66) 4-Chlorotoluene	11.208	91	677786	96.28	ug/L		97
67) tert-Butylbenzene	11.354	91	425964	97.12	ug/L		92
68) 1,2,4-Trimethylbenzene	11.414	105	777007	93.38	ug/L		97
69) sec-Butylbenzene	11.500	105	882609	92.92	ug/L		99
70) 4-Isopropyltoluene	11.609	119	751233	96.35	ug/L		98
71) 1,3-Dichlorobenzene	11.670	146	425300	96.98	ug/L		99
72) 1,4-Dichlorobenzene	11.737	146	418076	96.31	ug/L		97
73) n-Butylbenzene	11.932	91	597386	92.43	ug/L		99
74) 1,2-Dichlorobenzene	12.059	146	392931	96.04	ug/L		97
75) 1,2-Dibromo-3-Chloropr...	12.674	157	80792	130.60	ug/L		93
76) Hexachlorobutadiene	13.185	223	57553	90.62	ug/L		99
77) 1,2,4-Trichlorobenzene	13.215	180	244685	101.17	ug/L		99
78) Naphthalene	13.489	128	891724	100.97	ug/L		98
79) 1,2,3-Trichlorobenzene	13.653	180	241375	100.22	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052914.D
Acq On : 29 May 2019 8:15 pm
Operator : TB
Sample : 9E29058-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052915.D
Acq On : 29 May 2019 8:42 pm
Operator : TB
Sample : 9E29058-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:39 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	256547	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	452677	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	192224	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	140388	50.53	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.587	114	494571	50.12	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	609458	49.77	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	168721	50.83	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.654	85	676	0.29	ug/L	#	50
3) Chloromethane	1.861	50	943	0.25	ug/L		88
4) Vinyl Chloride	1.946	62	275	0.11	ug/L		68
5) Bromomethane	2.305	96	1722	1.17	ug/L		89
6) Chloroethane	2.445	64	129	0.13	ug/L	#	1
7) Trichlorofluoromethane	2.572	101	180	0.12	ug/L	#	65
8) 1,1-Dichloroethene	3.089	61	380	0.15	ug/L		79
9) Carbon Disulfide	3.108	76	2586	0.63	ug/L		89
10) Freon 113	3.156	101	673	0.31	ug/L	#	65
11) Iodomethane	3.254	142	849	1.52	ug/L	#	75
12) Methylene Chloride	3.728	84	3426	Below Cal			88
13) Acetone	3.850	43	871	0.75	ug/L		95
14) t-1,2-Dichloroethene	3.892	61	750	0.25	ug/L		84
15) n-Hexane	3.971	86	246	Below Cal		#	4
19) c-1,2-Dichloroethene	5.054	61	315	0.09	ug/L	#	17
24) Tetrahydrofuran	5.535	42	155	0.09	ug/L	#	46
27) 1,1-Dichloropropene	5.687	75	990	0.29	ug/L		91
28) 2-Butanone (MEK)	5.724	43	638	0.31	ug/L		54
33) Trichloroethene (TCE)	6.551	130	647	0.21	ug/L		84
40) Toluene	8.157	91	1952	0.16	ug/L		87
41) Tetrachloroethene (PCE)	8.601	166	1080	0.39	ug/L		85
49) Chlorobenzene	9.769	112	1460	0.20	ug/L		76
50) Ethylbenzene	9.793	91	2680	0.22	ug/L		78
52) m,p-Xylenes (2)	9.933	91	4420	0.50	ug/L		88
53) o-Xylene	10.323	91	1924	0.21	ug/L		92
54) Styrene	10.377	104	1021	0.16	ug/L		88
56) Isopropylbenzene	10.596	105	4775	0.45	ug/L		92
59) Bromobenzene	10.919	156	566	0.22	ug/L	#	66
60) n-Propylbenzene	10.943	91	8814	0.76	ug/L		95
62) 2-Chlorotoluene	11.071	126	976	0.41	ug/L		99
63) 1,3,5-Trimethylbenzene	11.107	105	5812	0.74	ug/L		87
66) 4-Chlorotoluene	11.211	91	2829	0.41	ug/L		94
67) tert-Butylbenzene	11.357	91	4500	1.03	ug/L		94
68) 1,2,4-Trimethylbenzene	11.412	105	5321	0.66	ug/L		98
69) sec-Butylbenzene	11.497	105	13359	1.44	ug/L		93
70) 4-Isopropyltoluene	11.606	119	11787	1.56	ug/L		92
71) 1,3-Dichlorobenzene	11.673	146	2471	0.55	ug/L		97
72) 1,4-Dichlorobenzene	11.740	146	2868	0.64	ug/L		80
73) n-Butylbenzene	11.929	91	12734	1.99	ug/L		98
74) 1,2-Dichlorobenzene	12.063	146	1697	0.41	ug/L		91
76) Hexachlorobutadiene	13.182	223	1410	2.38	ug/L		84
77) 1,2,4-Trichlorobenzene	13.212	180	3876	1.63	ug/L		98
78) Naphthalene	13.492	128	4286	0.53	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052915.D
Acq On : 29 May 2019 8:42 pm
Operator : TB
Sample : 9E29058-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:39 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

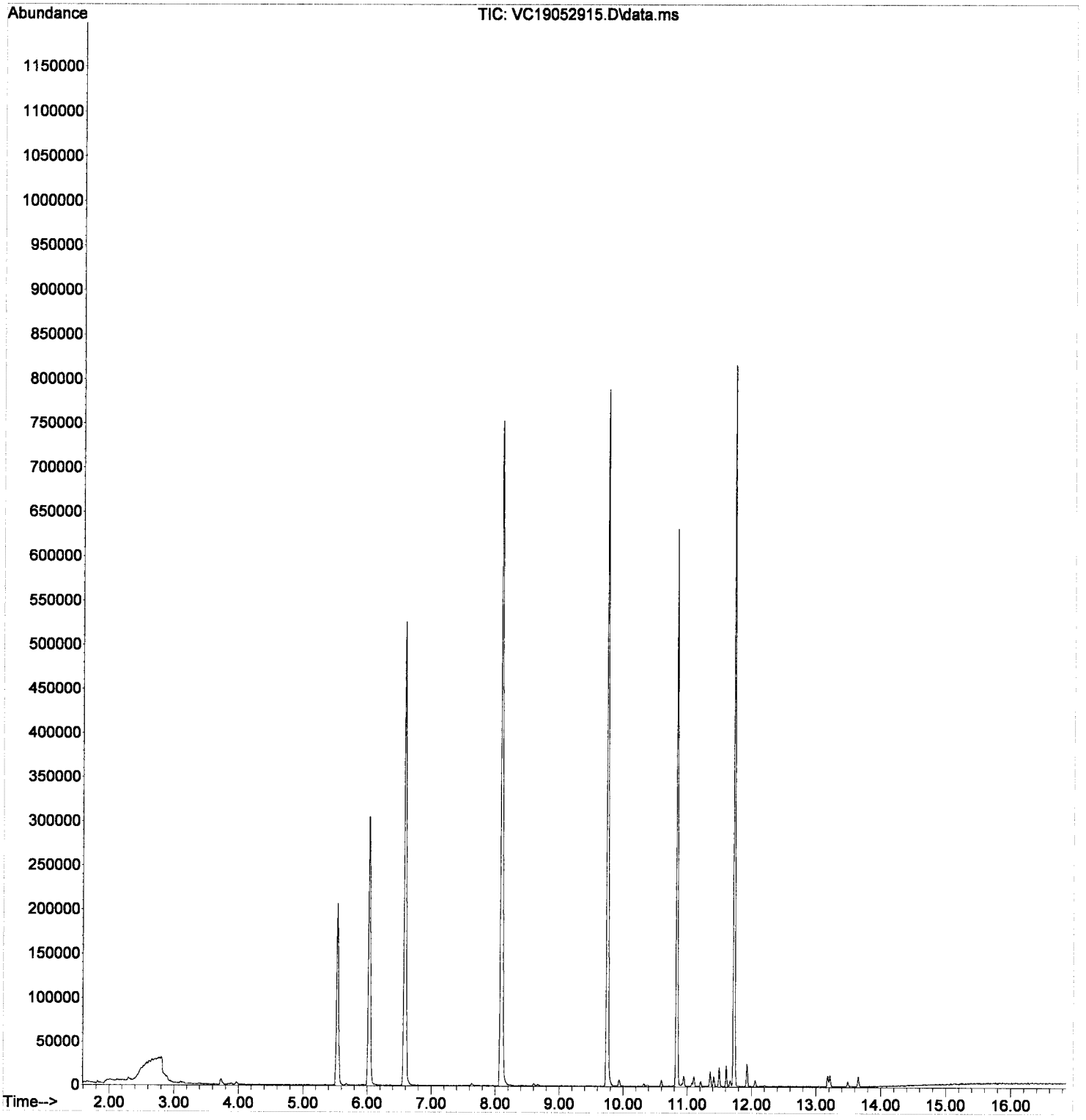
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 1,2,3-Trichlorobenzene	13.656	180	3676	1.63	ug/L	89

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052915.D
Acq On : 29 May 2019 8:42 pm
Operator : TB
Sample : 9E29058-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:39 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052916.D
Acq On : 29 May 2019 9:10 pm
Operator : TB
Sample : 9E29058-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

5/30/19 no change

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	266542	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.752	117	464260	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	201371	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	144453	49.03	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.582	114	515449	50.06	ug/L	0.00
39) Toluene-d8 (S)	8.091	98	635623	50.48	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	170853	48.85	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.655	85	453681	192.97	ug/L	98
3) Chloromethane	1.855	50	652609	172.49	ug/L	99
4) Vinyl Chloride	1.940	62	501566	183.50	ug/L	98
5) Bromomethane	2.293	96	269576	182.75	ug/L	96
6) Chloroethane	2.433	64	187116	187.66	ug/L	95
7) Trichlorofluoromethane	2.567	101	268497	172.86	ug/L	99
8) 1,1-Dichloroethene	3.090	61	525278	194.49	ug/L	90
9) Carbon Disulfide	3.102	76	1024014	243.34	ug/L	98
10) Freon 113	3.139	101	409831	188.90	ug/L	88
11) Iodomethane	3.236	142	307158	319.46	ug/L	98
12) Methylene Chloride	3.723	84	435629	143.76	ug/L	96
13) Acetone	3.826	43	420741	362.94	ug/L	93
14) t-1,2-Dichloroethene	3.881	61	595457	187.38	ug/L	94
15) n-Hexane	3.960	86	98461	188.02	ug/L	97
16) Methyl-tert-butyl-ether	4.027	73	1674237	179.31	ug/L	94
17) 1,1-Dichloroethane	4.514	63	718862	182.76	ug/L	99
18) Acrylonitrile	4.587	53	314097	197.40	ug/L	100
19) c-1,2-Dichloroethene	5.061	61	647004	183.91	ug/L	99
20) 2,2-Dichloropropane	5.165	77	584639	191.29	ug/L	88
21) Bromochloromethane	5.262	49	383923	182.94	ug/L	99
22) Chloroform	5.347	83	802076	178.04	ug/L	97
23) Carbon Tetrachloride	5.475	117	577566	233.12	ug/L	98
24) Tetrahydrofuran	5.524	42	306415	189.74	ug/L	94
25) 1,1,1-Trichloroethane	5.542	97	697341	194.44	ug/L	99
27) 1,1-Dichloropropene	5.670	75	664805	189.39	ug/L	97
28) 2-Butanone (MEK)	5.682	43	802082	373.55	ug/L	95
29) Benzene	5.925	78	1978560	171.86	ug/L	93
30) 1,2-Dichloroethane (EDC)	6.144	62	639082	185.22	ug/L	97
31) iso-Butyl Alcohol	6.278	43	1273429	4819.98	ug/L	89
33) Trichloroethene (TCE)	6.546	130	582863	185.16	ug/L	98
34) Dibromomethane	6.996	93	312313	194.63	ug/L	96
35) 1,2-Dichloropropane	7.105	63	569634	187.48	ug/L	94
36) Bromodichloromethane	7.178	83	637695	231.87	ug/L	96
38) c-1,3-Dichloropropene	7.884	75	831235	209.99	ug/L	98
40) Toluene	8.152	91	2033618	170.42	ug/L	94
41) Tetrachloroethene (PCE)	8.596	166	514549	194.20	ug/L	98
42) 4-Methyl-2-Pentanone (...	8.614	43	1330786	368.28	ug/L	97
43) t-1,3-Dichloropropene	8.644	75	772812	217.86	ug/L	95
44) 1,1,2-Trichloroethane	8.815	97	500164	193.60	ug/L	97
45) Dibromochloromethane	9.003	129	499033	265.93	ug/L	97
46) 1,3-Dichloropropane	9.107	76	863655	183.00	ug/L	99
47) 1,2-Dibromoethane (EDB)	9.241	107	519720	202.26	ug/L	100
48) 2-Hexanone	9.496	43	1007307	386.60	ug/L	95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052916.D
Acq On : 29 May 2019 9:10 pm
Operator : TB
Sample : 9E29058-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration

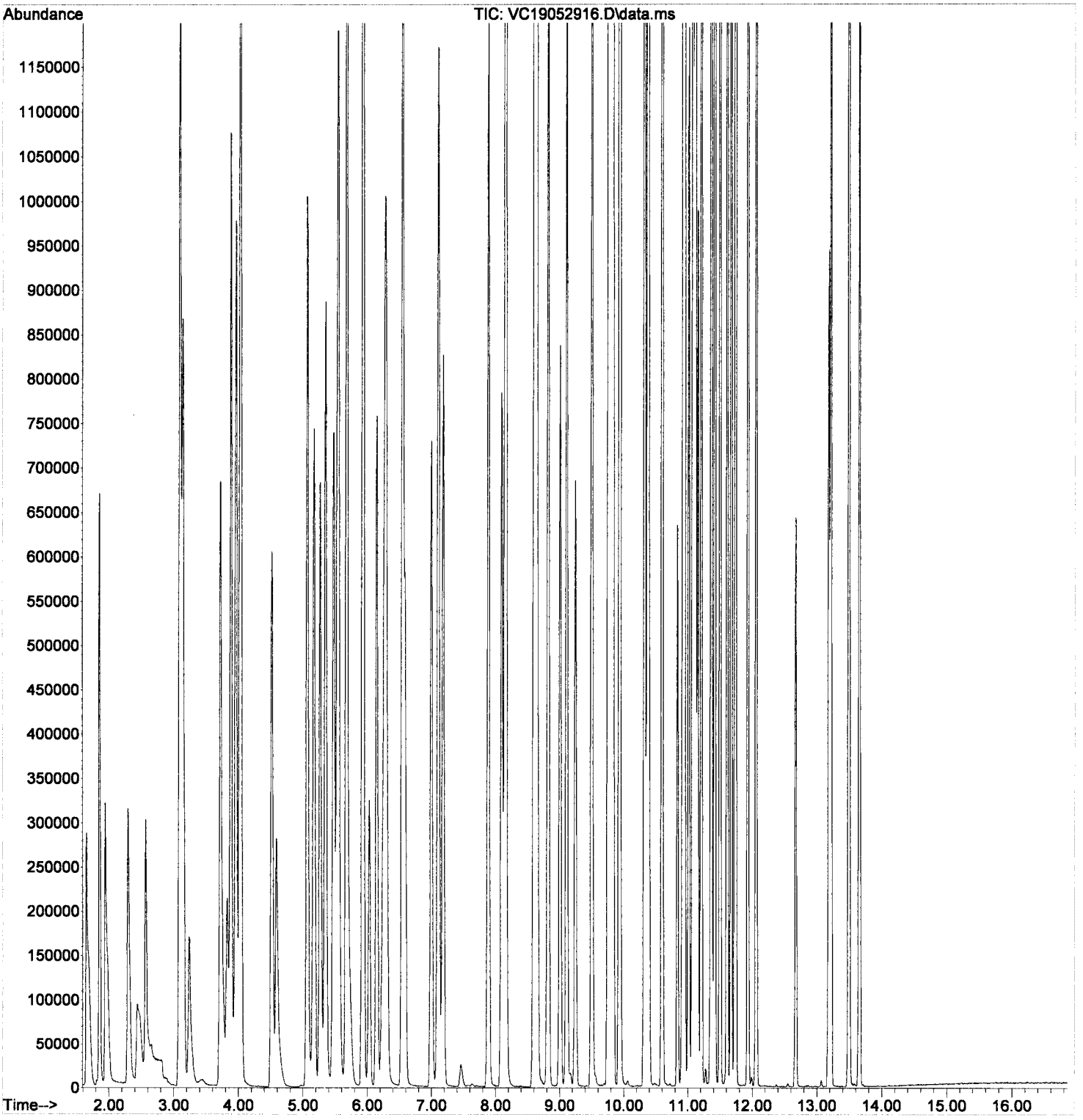
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	1272416	176.28	ug/L		94
50) Ethylbenzene	9.794	91	1992124	162.28	ug/L		91
51) 1,1,1,2-Tetrachloroethane	9.831	131	477013	215.17	ug/L		97
52) m,p-Xylenes (2)	9.934	91	2720941	300.35	ug/L		86
53) o-Xylene	10.317	91	1581408	167.98	ug/L		93
54) Styrene	10.366	104	1293977	181.65	ug/L		92
55) Bromoform	10.390	173	312567	304.58	ug/L		99
56) Isopropylbenzene	10.597	105	1774164	163.38	ug/L		93
59) Bromobenzene	10.920	156	503576	185.83	ug/L		98
60) n-Propylbenzene	10.944	91	1879841	157.12	ug/L		91
61) 1,1,2,2-Tetrachloroethane	11.011	83	542178	197.20	ug/L		99
62) 2-Chlorotoluene	11.072	126	452526	182.13	ug/L		97
63) 1,3,5-Trimethylbenzene	11.102	105	1378879	165.16	ug/L		94
64) 1,2,3-Trichloropropane	11.114	110	207925	187.97	ug/L		90
65) t-1,4-Dichloro-2-butene	11.151	88	84511	243.70	ug/L	#	74
66) 4-Chlorotoluene	11.206	91	1200687	167.33	ug/L		94
67) tert-Butylbenzene	11.358	91	765557	171.23	ug/L		94
68) 1,2,4-Trimethylbenzene	11.412	105	1351532	159.35	ug/L		92
69) sec-Butylbenzene	11.498	105	1543796	159.46	ug/L		95
70) 4-Isopropyltoluene	11.607	119	1333607	167.80	ug/L		95
71) 1,3-Dichlorobenzene	11.668	146	784949	175.60	ug/L		97
72) 1,4-Dichlorobenzene	11.741	146	784148	177.22	ug/L		97
73) n-Butylbenzene	11.929	91	1090372	165.52	ug/L		95
74) 1,2-Dichlorobenzene	12.057	146	746324	178.95	ug/L		95
75) 1,2-Dibromo-3-Chloropr...	12.672	157	172847	274.12	ug/L		92
76) Hexachlorobutadiene	13.183	223	115944	179.09	ug/L		98
77) 1,2,4-Trichlorobenzene	13.213	180	483143	195.98	ug/L		97
78) Naphthalene	13.493	128	1658112	184.18	ug/L		97
79) 1,2,3-Trichlorobenzene	13.651	180	476195	193.98	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052916.D
Acq On : 29 May 2019 9:10 pm
Operator : TB
Sample : 9E29058-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 11:46:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 11:44:49 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052917.D
Acq On : 29 May 2019 9:37 pm
Operator : TB
Sample : 9E29058-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:41 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.035	168	266471	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	468131	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	198041	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.536	111	145533	50.44 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	513391	50.09 ug/L		0.00
39) Toluene-d8 (S)	8.097	98	627007	49.51 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	174112	50.92 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.661	85	1425	0.60 ug/L		87
3) Chloromethane	1.861	50	1797	0.46 ug/L		93
4) Vinyl Chloride	1.946	62	700	0.26 ug/L		91
5) Bromomethane	2.311	96	2516	1.64 ug/L	#	68
6) Chloroethane	2.433	64	128	0.13 ug/L	#	1
7) Trichlorofluoromethane	2.585	101	522	0.34 ug/L	#	16
8) 1,1-Dichloroethene	3.096	61	781	0.29 ug/L		96
9) Carbon Disulfide	3.114	76	5429	1.27 ug/L		94
10) Freon 113	3.139	101	1424	0.62 ug/L	#	64
11) Iodomethane	3.254	142	1500	2.07 ug/L	#	89
12) Methylene Chloride	3.729	84	5380	Below Cal		98
13) Acetone	3.838	43	1747	1.45 ug/L		95
14) t-1,2-Dichloroethene	3.893	61	1472	0.47 ug/L		93
15) n-Hexane	3.972	86	243	Below Cal	#	83
19) c-1,2-Dichloroethene	5.085	61	580	0.17 ug/L		83
22) Chloroform	5.359	83	846	0.18 ug/L		85
23) Carbon Tetrachloride	5.487	117	459	0.19 ug/L		82
25) 1,1,1-Trichloroethane	5.542	97	318	0.09 ug/L	#	45
27) 1,1-Dichloropropene	5.682	75	1691	0.47 ug/L		90
28) 2-Butanone (MEK)	5.712	43	436	0.20 ug/L		54
29) Benzene	5.931	78	1907	0.16 ug/L		95
30) 1,2-Dichloroethane (EDC)	6.156	62	420	0.12 ug/L		71
31) iso-Butyl Alcohol	6.308	43	105	0.40 ug/L		92
33) Trichloroethene (TCE)	6.558	130	1357	0.42 ug/L		82
34) Dibromomethane	7.002	93	215	0.14 ug/L	#	25
38) c-1,3-Dichloropropene	7.896	75	390	0.11 ug/L		65
40) Toluene	8.158	91	3533	0.29 ug/L		98
41) Tetrachloroethene (PCE)	8.596	166	2047	0.71 ug/L		97
43) t-1,3-Dichloropropene	8.656	75	377	0.11 ug/L		57
46) 1,3-Dichloropropane	9.113	76	475	0.10 ug/L	#	73
47) 1,2-Dibromoethane (EDB)	9.247	107	201	0.08 ug/L		72
48) 2-Hexanone	9.520	43	358	0.14 ug/L	#	31
49) Chlorobenzene	9.764	112	2333	0.31 ug/L	#	58
50) Ethylbenzene	9.800	91	4828	0.38 ug/L		94
52) m,p-Xylenes (2)	9.940	91	8543	0.94 ug/L		95
53) o-Xylene	10.323	91	2908	0.30 ug/L		88
54) Styrene	10.378	104	1910	0.29 ug/L		88
56) Isopropylbenzene	10.597	105	9551	0.87 ug/L		98
59) Bromobenzene	10.920	156	911	0.35 ug/L		87
60) n-Propylbenzene	10.944	91	17507	1.47 ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.023	83	278	0.11 ug/L	#	25
62) 2-Chlorotoluene	11.072	126	1493	0.60 ug/L		93
63) 1,3,5-Trimethylbenzene	11.102	105	11474	1.42 ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052917.D
Acq On : 29 May 2019 9:37 pm
Operator : TB
Sample : 9E29058-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:41 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

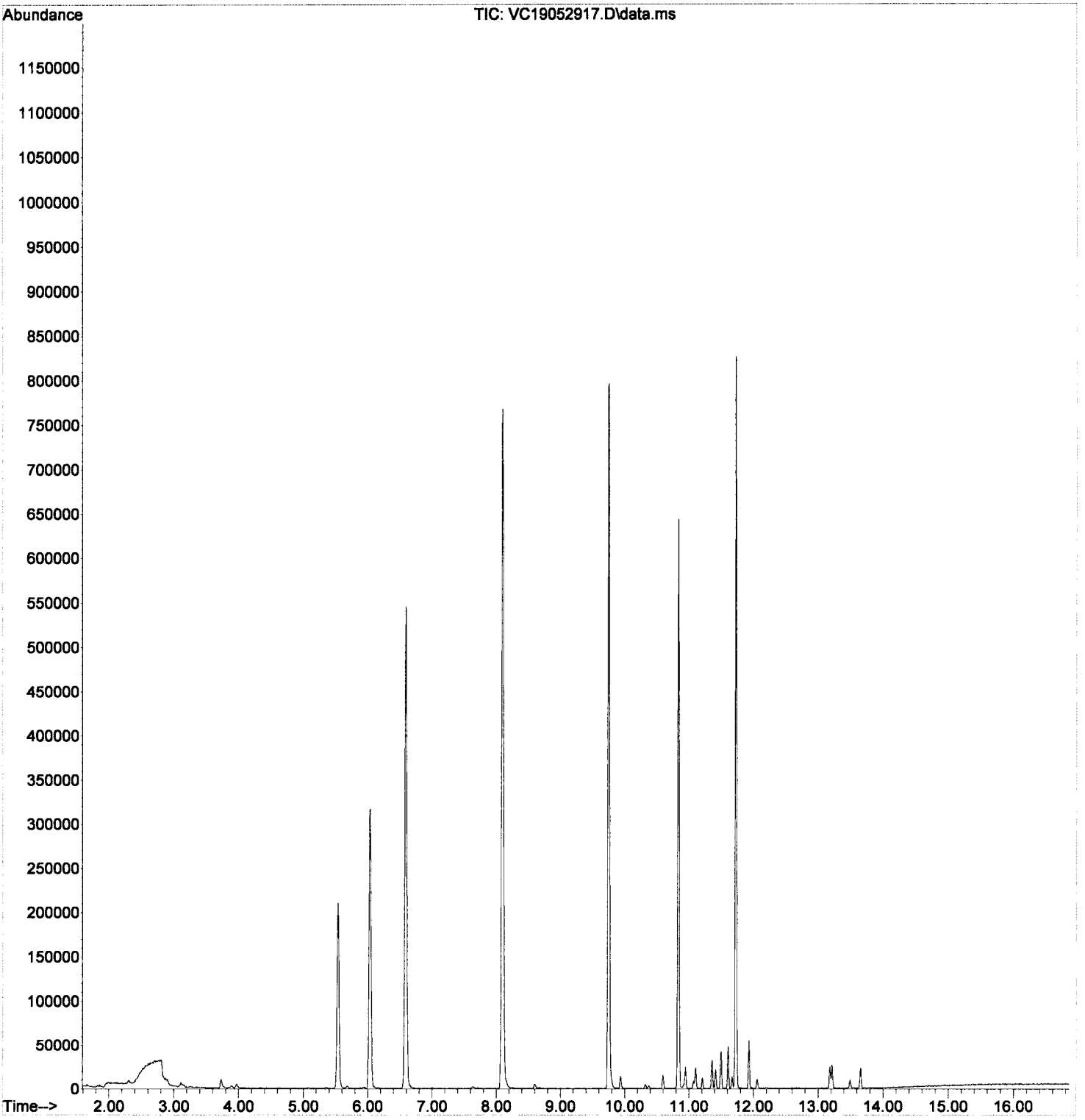
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) 4-Chlorotoluene	11.205	91	5419	0.76	ug/L	99
67) tert-Butylbenzene	11.358	91	8902	1.97	ug/L	98
68) 1,2,4-Trimethylbenzene	11.412	105	10380	1.26	ug/L	98
69) sec-Butylbenzene	11.497	105	27464	2.88	ug/L	98
70) 4-Isopropyltoluene	11.607	119	23355	3.01	ug/L	98
71) 1,3-Dichlorobenzene	11.674	146	4941	1.08	ug/L	94
72) 1,4-Dichlorobenzene	11.741	146	4659	1.02	ug/L	91
73) n-Butylbenzene	11.929	91	25413	3.85	ug/L	97
74) 1,2-Dichlorobenzene	12.057	146	3084	0.73	ug/L	97
76) Hexachlorobutadiene	13.183	223	2835	4.65	ug/L	96
77) 1,2,4-Trichlorobenzene	13.213	180	8316	3.39	ug/L	94
78) Naphthalene	13.493	128	8127	0.98	ug/L	100
79) 1,2,3-Trichlorobenzene	13.657	180	7607	3.27	ug/L	93

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052917.D
Acq On : 29 May 2019 9:37 pm
Operator : TB
Sample : 9E29058-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:41 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052918.D
Acq On : 29 May 2019 10:05 pm
Operator : TB
Sample : 9E29058-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

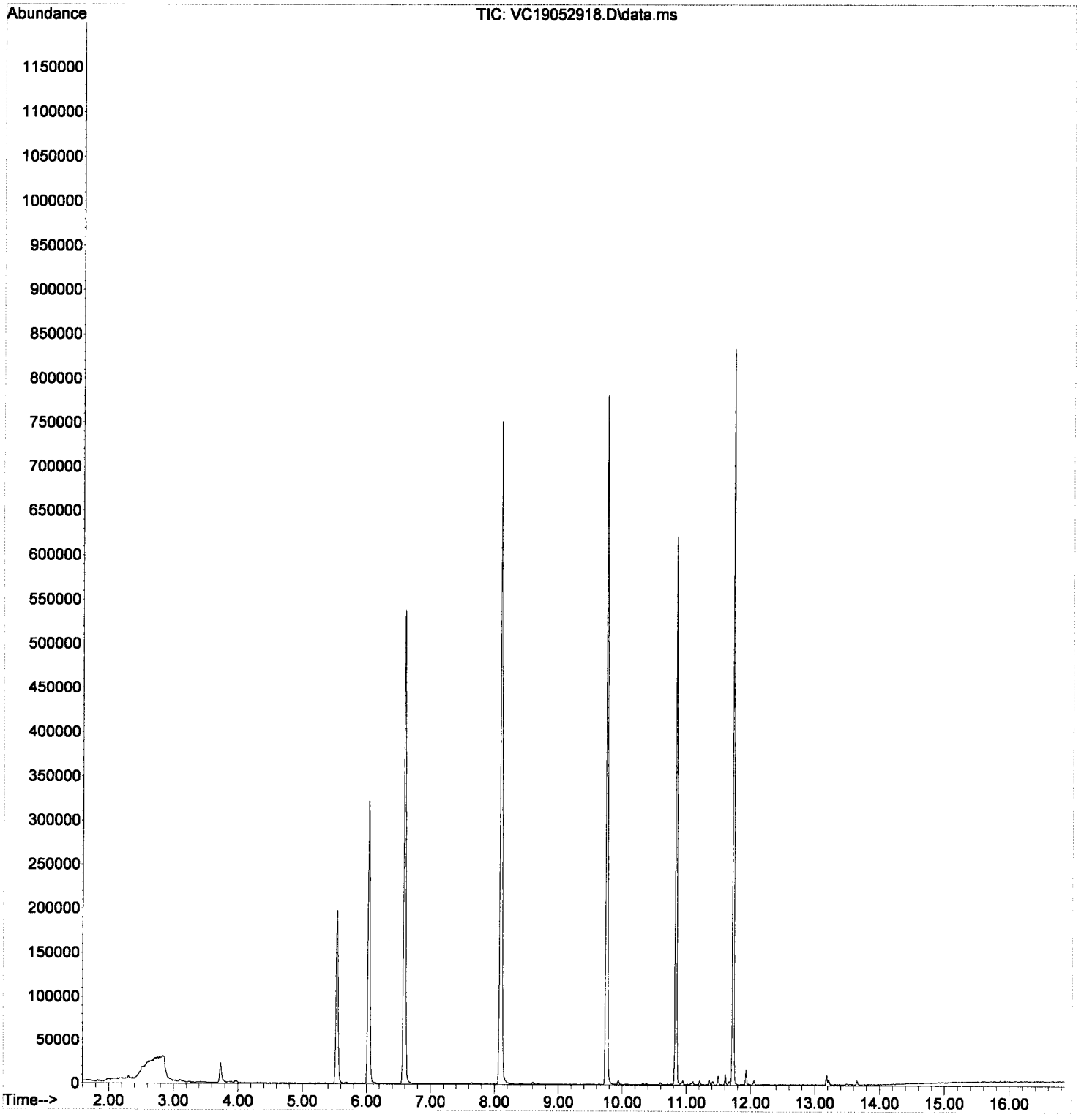
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.030	168	262431	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	460245	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	197727	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.538	111	139115	48.95	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	508408	50.37	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	623082	50.04	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	168233	49.27	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.668	85	297	0.13	ug/L	#	50
3) Chloromethane	1.863	50	964	0.25	ug/L		84
5) Bromomethane	2.301	96	1935	1.28	ug/L		71
6) Chloroethane	2.526	64	129	0.13	ug/L	#	1
8) 1,1-Dichloroethene	3.098	61	246	0.09	ug/L	#	72
9) Carbon Disulfide	3.104	76	1990	0.47	ug/L		88
10) Freon 113	3.153	101	635	0.28	ug/L		77
11) Iodomethane	3.262	142	695	1.37	ug/L	#	47
12) Methylene Chloride	3.731	84	13098	Below Cal			94
13) Acetone	3.859	43	2652	2.24	ug/L		78
14) t-1,2-Dichloroethene	3.889	61	496	0.16	ug/L	#	74
27) 1,1-Dichloropropene	5.690	75	683	0.19	ug/L		84
28) 2-Butanone (MEK)	5.732	43	375	0.18	ug/L		54
33) Trichloroethene (TCE)	6.553	130	416	0.13	ug/L		83
40) Toluene	8.166	91	1276	0.10	ug/L		90
41) Tetrachloroethene (PCE)	8.610	166	725	0.26	ug/L	#	60
49) Chlorobenzene	9.766	112	925	0.13	ug/L	#	1
50) Ethylbenzene	9.802	91	1878	0.15	ug/L		82
52) m,p-Xylenes (2)	9.936	91	2865	0.32	ug/L		95
53) o-Xylene	10.325	91	936	0.10	ug/L		75
54) Styrene	10.374	104	646	0.10	ug/L		93
56) Isopropylbenzene	10.599	105	1528	0.14	ug/L		89
59) Bromobenzene	10.915	156	389	0.15	ug/L		74
60) n-Propylbenzene	10.946	91	3694	0.31	ug/L		96
62) 2-Chlorotoluene	11.067	126	433	0.18	ug/L	#	58
63) 1,3,5-Trimethylbenzene	11.104	105	2122	0.26	ug/L		88
66) 4-Chlorotoluene	11.207	91	1647	0.23	ug/L		97
67) tert-Butylbenzene	11.359	91	1693	0.38	ug/L		92
68) 1,2,4-Trimethylbenzene	11.420	105	2188	0.27	ug/L		98
69) sec-Butylbenzene	11.499	105	6614	0.69	ug/L		95
70) 4-Isopropyltoluene	11.609	119	5729	0.74	ug/L		91
71) 1,3-Dichlorobenzene	11.670	146	1299	0.28	ug/L		92
72) 1,4-Dichlorobenzene	11.743	146	1341	0.29	ug/L		78
73) n-Butylbenzene	11.931	91	7709	1.17	ug/L		99
74) 1,2-Dichlorobenzene	12.053	146	631	0.15	ug/L		97
76) Hexachlorobutadiene	13.184	223	1476	2.42	ug/L		90
77) 1,2,4-Trichlorobenzene	13.215	180	2198	0.90	ug/L		98
78) Naphthalene	13.495	128	1302	0.16	ug/L		78
79) 1,2,3-Trichlorobenzene	13.659	180	1736	0.75	ug/L		78

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052918.D
Acq On : 29 May 2019 10:05 pm
Operator : TB
Sample : 9E29058-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

5/30/19

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.037	168	267090	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	469227	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	199143	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.538	111	150987	52.20	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	516911	50.32	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	628263	49.49	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172175	50.07	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	39805	16.60	ug/L		99
3) Chloromethane	1.863	50	73919	18.77	ug/L		100
4) Vinyl Chloride	1.955	62	52823	19.40	ug/L		93
5) Bromomethane	2.301	96	32111	20.91	ug/L		97
6) Chloroethane	2.447	64	21900	21.41	ug/L		83
7) Trichlorofluoromethane	2.575	101	27335	18.01	ug/L		97
8) 1,1-Dichloroethene	3.098	61	68501	25.35	ug/L		87
9) Carbon Disulfide	3.110	76	83938	19.57	ug/L		99
10) Freon 113	3.147	101	44798	19.53	ug/L		90
11) Iodomethane	3.250	142	17633	15.93	ug/L		97
12) Methylene Chloride	3.731	84	57801	18.27	ug/L		97
13) Acetone	3.834	43	48607	40.37	ug/L		94
14) t-1,2-Dichloroethene	3.889	61	76230	24.33	ug/L		94
15) n-Hexane	3.968	86	11789	21.52	ug/L	#	86
16) Methyl-tert-butyl-ether	4.035	73	188517	20.31	ug/L		98
17) 1,1-Dichloroethane	4.522	63	93082	24.10	ug/L		98
18) Acrylonitrile	4.595	53	32674	20.92	ug/L		98
19) c-1,2-Dichloroethene	5.069	61	75358	21.55	ug/L		96
20) 2,2-Dichloropropane	5.173	77	59131	19.54	ug/L		89
21) Bromochloromethane	5.270	49	44777	21.67	ug/L		97
22) Chloroform	5.349	83	94903	20.68	ug/L		99
23) Carbon Tetrachloride	5.477	117	53890	21.74	ug/L		98
24) Tetrahydrofuran	5.532	42	32013	18.31	ug/L		92
25) 1,1,1-Trichloroethane	5.550	97	78867	22.51	ug/L		99
27) 1,1-Dichloropropene	5.678	75	74489	20.65	ug/L		97
28) 2-Butanone (MEK)	5.690	43	86952	40.50	ug/L		96
29) Benzene	5.933	78	246265	21.21	ug/L		99
30) 1,2-Dichloroethane (EDC)	6.146	62	74000	21.38	ug/L		99
31) iso-Butyl Alcohol	6.274	43	134411	505.53	ug/L		93
33) Trichloroethene (TCE)	6.548	130	66523	20.43	ug/L		98
34) Dibromomethane	6.998	93	33103	21.33	ug/L		91
35) 1,2-Dichloropropane	7.107	63	62437	21.04	ug/L		93
36) Bromodichloromethane	7.180	83	57376	21.95	ug/L		96
38) c-1,3-Dichloropropene	7.886	75	81256	22.00	ug/L		99
40) Toluene	8.154	91	246595	19.87	ug/L		98
41) Tetrachloroethene (PCE)	8.604	166	55691	19.35	ug/L		100
42) 4-Methyl-2-Pentanone (...	8.616	43	148633	38.79	ug/L		100
43) t-1,3-Dichloropropene	8.646	75	74591	21.77	ug/L		98
44) 1,1,2-Trichloroethane	8.817	97	54388	21.45	ug/L		96
45) Dibromochloromethane	9.005	129	40277	18.92	ug/L		94
46) 1,3-Dichloropropane	9.109	76	97055	20.69	ug/L		99
47) 1,2-Dibromoethane (EDB)	9.243	107	54165	21.85	ug/L		100
48) 2-Hexanone	9.498	43	105747	40.70	ug/L		98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

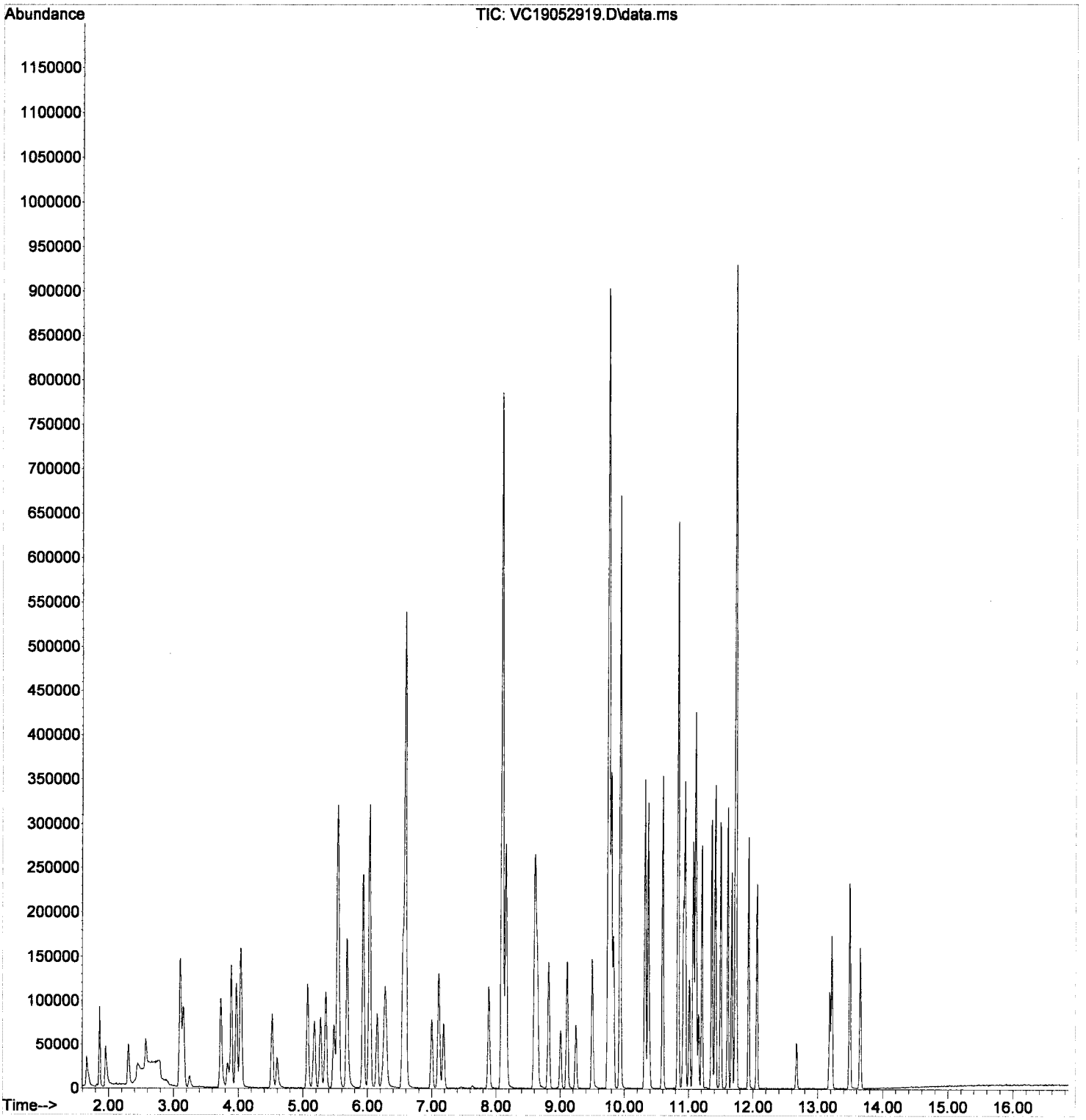
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	151633	20.14	ug/L		99
50) Ethylbenzene	9.796	91	250184	19.82	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.827	131	46738	22.01	ug/L		99
52) m,p-Xylenes (2)	9.930	91	369390	40.54	ug/L		100
53) o-Xylene	10.319	91	192124	20.06	ug/L		99
54) Styrene	10.368	104	143713	21.47	ug/L		98
55) Bromoform	10.386	173	22610	18.67	ug/L		95
56) Isopropylbenzene	10.593	105	216506	19.72	ug/L		99
59) Bromobenzene	10.922	156	56374	21.44	ug/L		99
60) n-Propylbenzene	10.940	91	236282	19.71	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	56206	21.54	ug/L		94
62) 2-Chlorotoluene	11.068	126	49936	20.12	ug/L	#	82
63) 1,3,5-Trimethylbenzene	11.104	105	168273	20.76	ug/L		98
64) 1,2,3-Trichloropropane	11.116	110	21880	20.34	ug/L	#	83
65) t-1,4-Dichloro-2-butene	11.153	88	6955	19.17	ug/L	#	86
66) 4-Chlorotoluene	11.208	91	145649	20.30	ug/L		98
67) tert-Butylbenzene	11.354	91	88273	19.43	ug/L		96
68) 1,2,4-Trimethylbenzene	11.414	105	167703	20.22	ug/L		97
69) sec-Butylbenzene	11.500	105	193906	20.19	ug/L		98
70) 4-Isopropyltoluene	11.609	119	164288	21.02	ug/L		97
71) 1,3-Dichlorobenzene	11.670	146	90545	19.62	ug/L		99
72) 1,4-Dichlorobenzene	11.737	146	90005	19.52	ug/L		96
73) n-Butylbenzene	11.931	91	134289	20.21	ug/L		99
74) 1,2-Dichlorobenzene	12.059	146	83574	19.72	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.674	157	12442	20.02	ug/L		98
76) Hexachlorobutadiene	13.179	223	13236	21.57	ug/L		98
77) 1,2,4-Trichlorobenzene	13.215	180	51658	20.93	ug/L		97
78) Naphthalene	13.489	128	180001	21.67	ug/L		99
79) 1,2,3-Trichlorobenzene	13.653	180	48911	20.92	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052919.D
Acq On : 29 May 2019 10:32 pm
Operator : TB
Sample : 9E29058-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052920.D
Acq On : 29 May 2019 10:59 pm
Operator : TB
Sample : 9E29058-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration

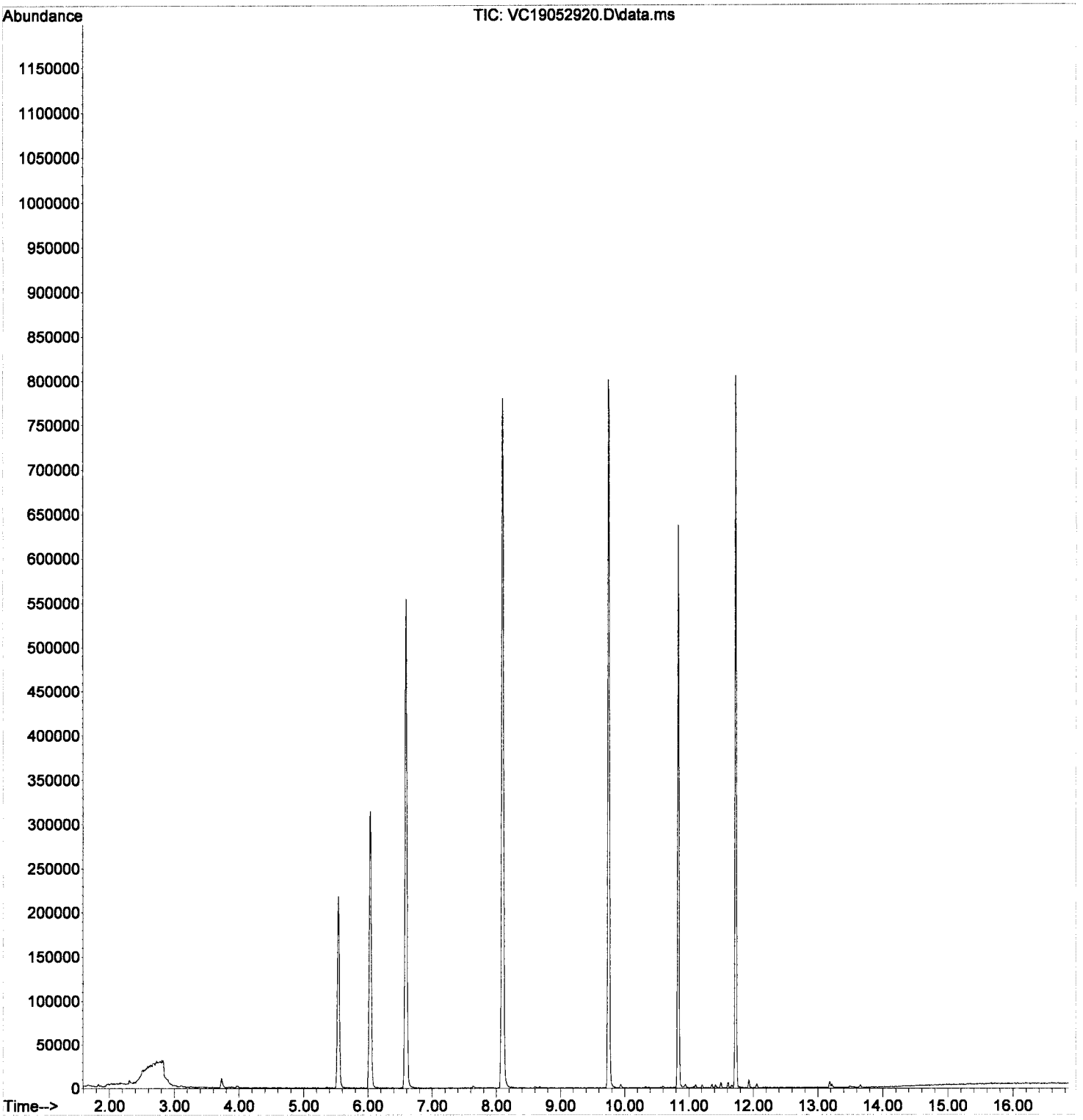
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	263418	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	469419	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	193137	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	149058	52.26	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	517972	51.12	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	636573	50.13	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	170886	51.24	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	391	0.17	ug/L	#	50
3) Chloromethane	1.861	50	1206	0.31	ug/L		94
5) Bromomethane	2.305	96	2643	1.75	ug/L		81
6) Chloroethane	2.531	64	502	0.50	ug/L	#	1
9) Carbon Disulfide	3.121	76	1128	0.27	ug/L		51
10) Freon 113	3.157	101	259	0.11	ug/L	#	79
11) Iodomethane	3.254	142	1123	1.75	ug/L	#	89
12) Methylene Chloride	3.735	84	5229	Below Cal			93
13) Acetone	3.851	43	2026	1.71	ug/L		85
14) t-1,2-Dichloroethene	3.893	61	342	0.11	ug/L		88
15) n-Hexane	3.960	86	175	Below Cal		#	1
22) Chloroform	5.353	83	416	0.09	ug/L		79
27) 1,1-Dichloropropene	5.688	75	499	0.14	ug/L	#	68
28) 2-Butanone (MEK)	5.737	43	239	0.11	ug/L		54
40) Toluene	8.158	91	1337	0.11	ug/L		72
41) Tetrachloroethene (PCE)	8.590	166	614	0.21	ug/L	#	67
49) Chlorobenzene	9.770	112	761	0.10	ug/L	#	41
50) Ethylbenzene	9.794	91	1537	0.12	ug/L		91
52) m,p-Xylenes (2)	9.934	91	2237	0.25	ug/L		92
53) o-Xylene	10.323	91	1026	0.11	ug/L		60
56) Isopropylbenzene	10.597	105	1697	0.15	ug/L		86
60) n-Propylbenzene	10.944	91	2962	0.25	ug/L		89
62) 2-Chlorotoluene	11.072	126	260	0.11	ug/L	#	86
63) 1,3,5-Trimethylbenzene	11.108	105	1782	0.23	ug/L		85
66) 4-Chlorotoluene	11.212	91	1495	0.21	ug/L		80
67) tert-Butylbenzene	11.358	91	1160	0.26	ug/L		82
68) 1,2,4-Trimethylbenzene	11.412	105	1662	0.21	ug/L		95
69) sec-Butylbenzene	11.498	105	3585	0.38	ug/L		96
70) 4-Isopropyltoluene	11.607	119	3334	0.44	ug/L		92
71) 1,3-Dichlorobenzene	11.674	146	1044	0.23	ug/L		87
72) 1,4-Dichlorobenzene	11.735	146	1219	0.27	ug/L	#	40
73) n-Butylbenzene	11.930	91	4399	0.68	ug/L		95
74) 1,2-Dichlorobenzene	12.063	146	605	0.15	ug/L		72
76) Hexachlorobutadiene	13.177	223	834	1.40	ug/L		89
77) 1,2,4-Trichlorobenzene	13.213	180	1499	0.63	ug/L		82
78) Naphthalene	13.499	128	1487	0.18	ug/L		89
79) 1,2,3-Trichlorobenzene	13.651	180	1110	0.49	ug/L	#	66

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052920.D
Acq On : 29 May 2019 10:59 pm
Operator : TB
Sample : 9E29058-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:28:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190529S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Thu May 30 14:50:00 2019
Response via : Initial Calibration



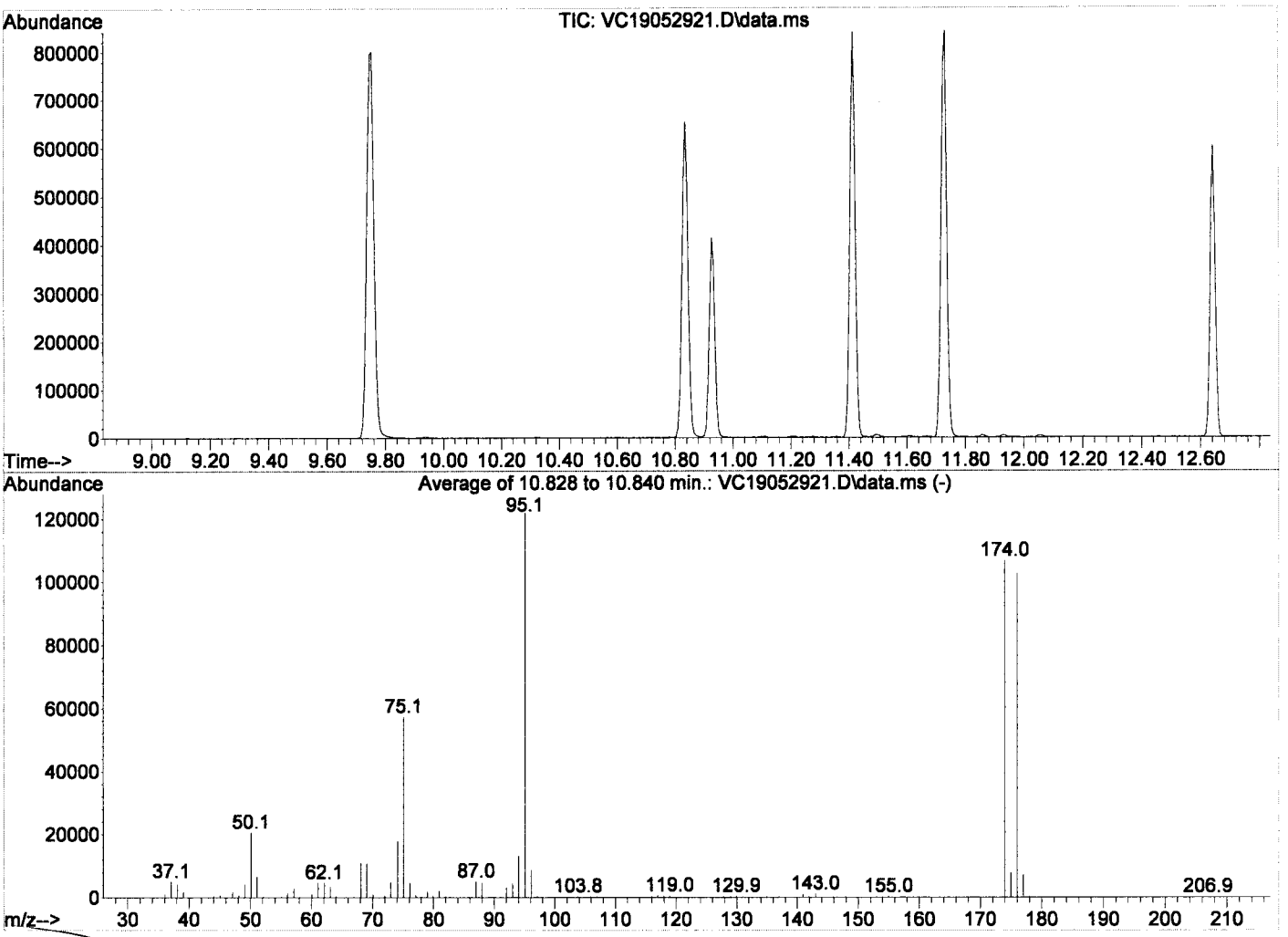
BFB

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190529G.M
Title : NWTPH-Gx by GC/MS
Last Update : Thu May 30 15:52:54 2019

5/30/19



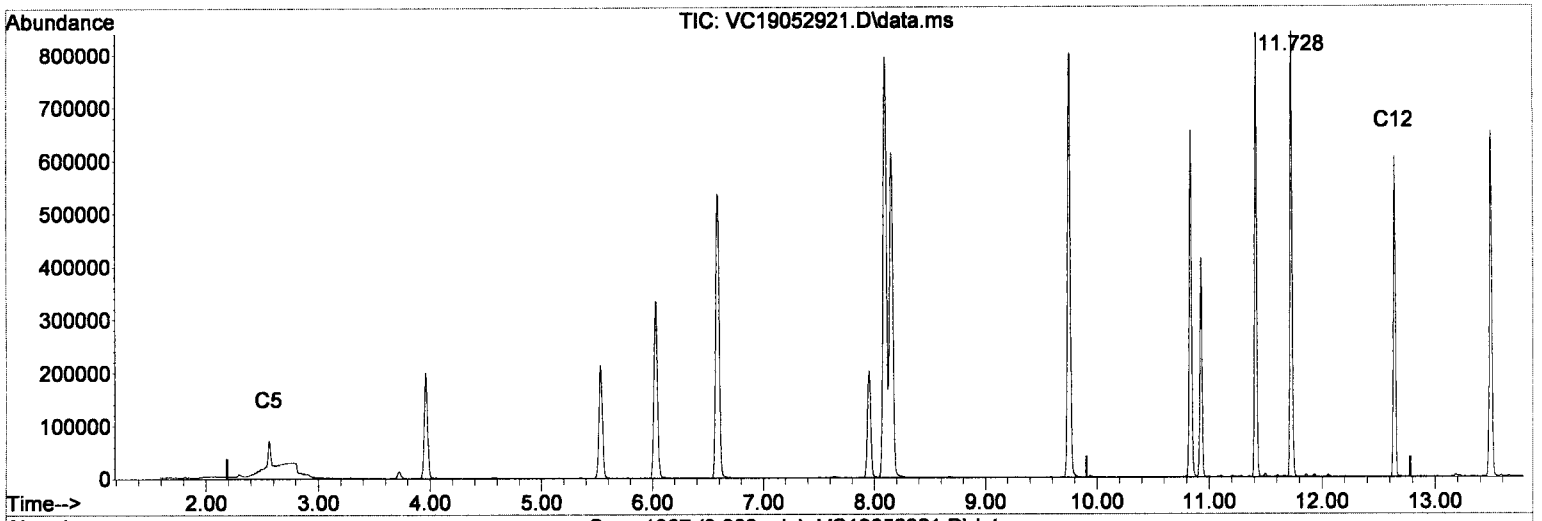
AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	16.8	20485	PASS
75	95	30	60	47.0	57338	PASS
95	95	100	100	100.0	121885	PASS
96	95	5	9	7.2	8794	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	87.5	106672	PASS
175	174	5	9	7.2	7710	PASS
176	174	95	101	96.1	102493	PASS
177	176	5	9	7.0	7180	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



TIC: VC19052921.D\data.ms

(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 392.07 ug/L m

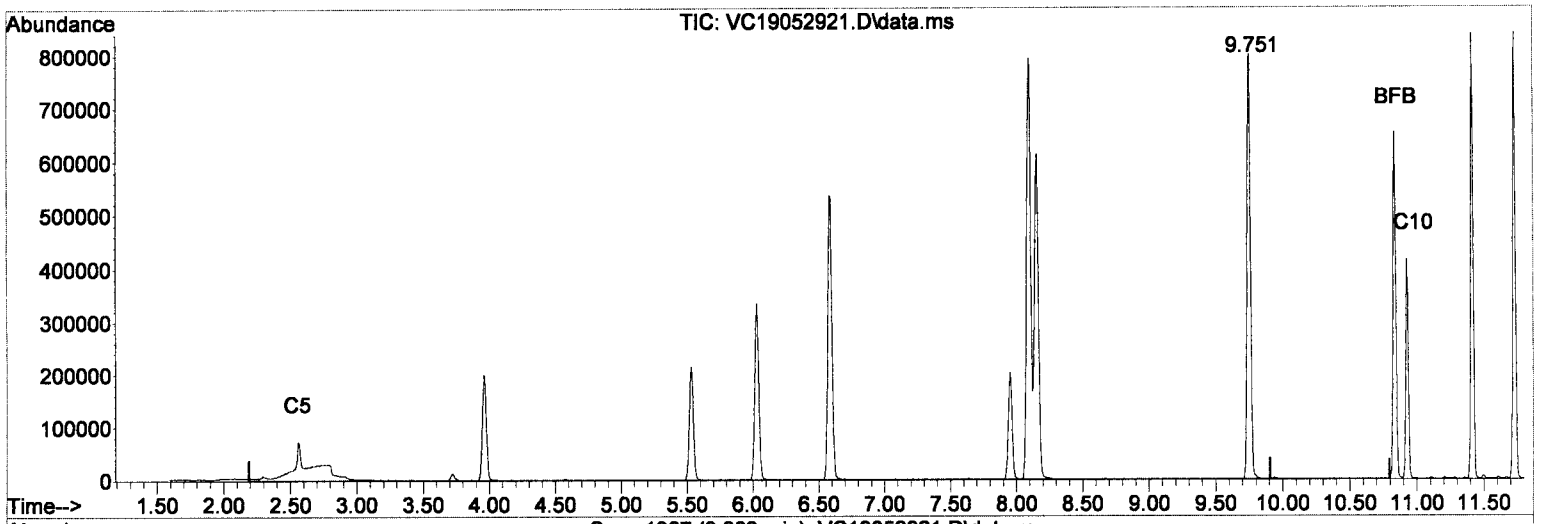
response 5195528

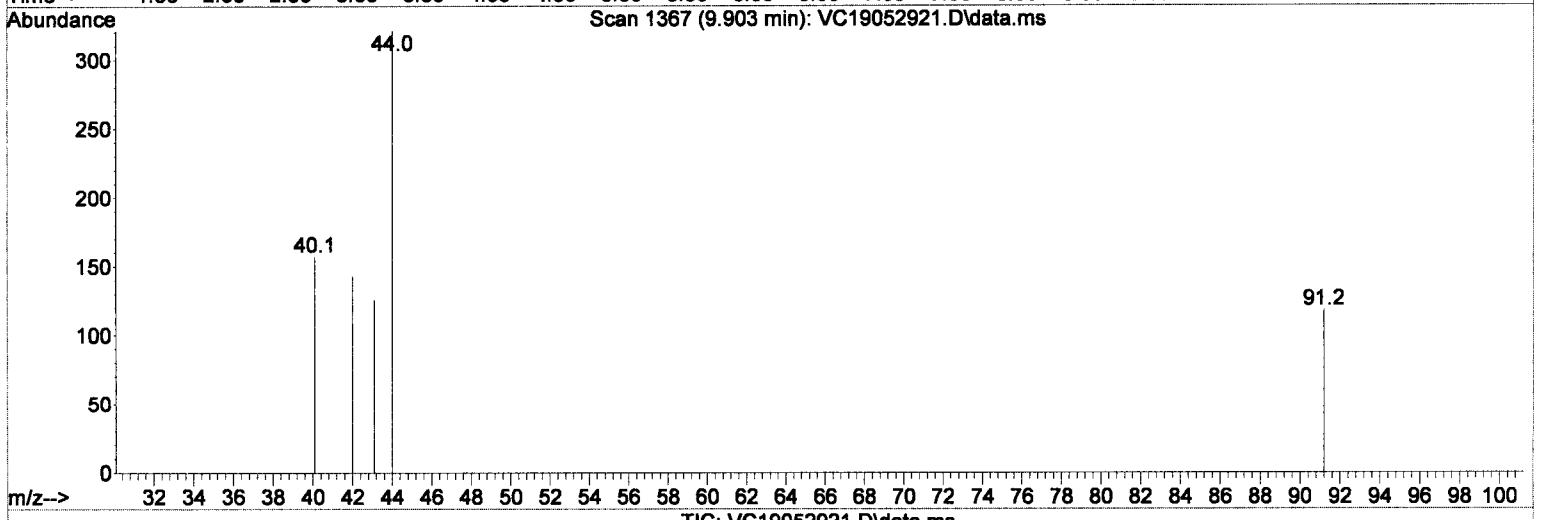
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.79#
0.00	0.00	0.62#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19052921.D\data.ms

(6) TPHg (C5-C9) (H)

9.906min (0.000) 229.20 ug/L m

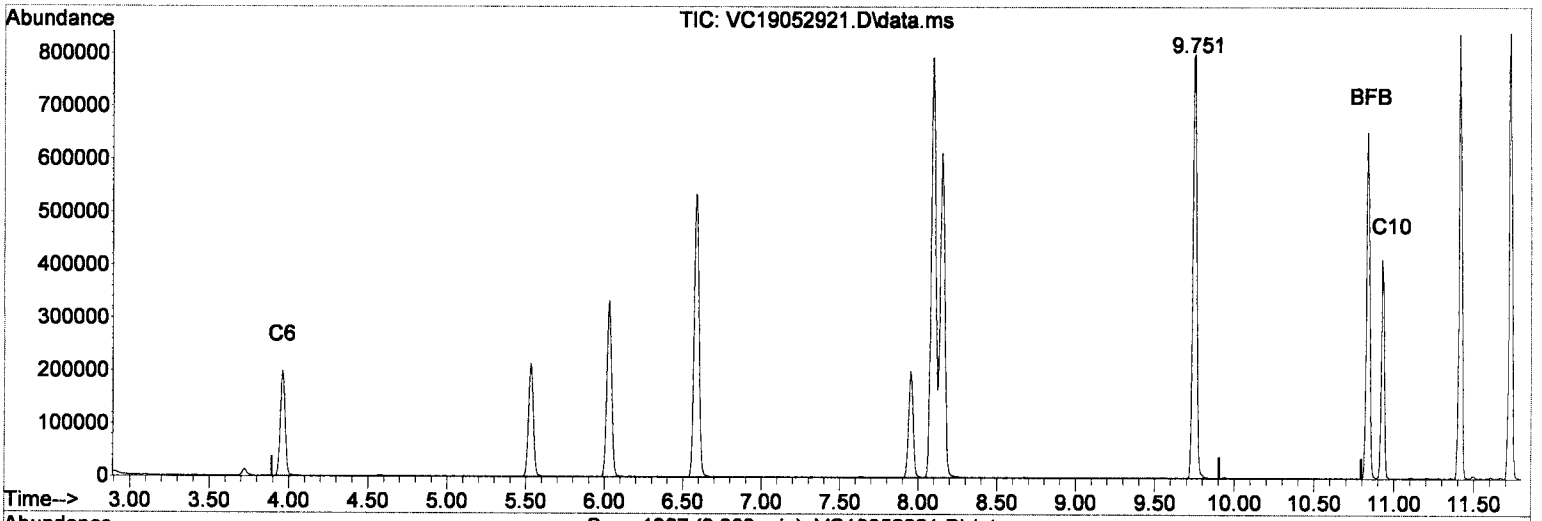
response 2819041

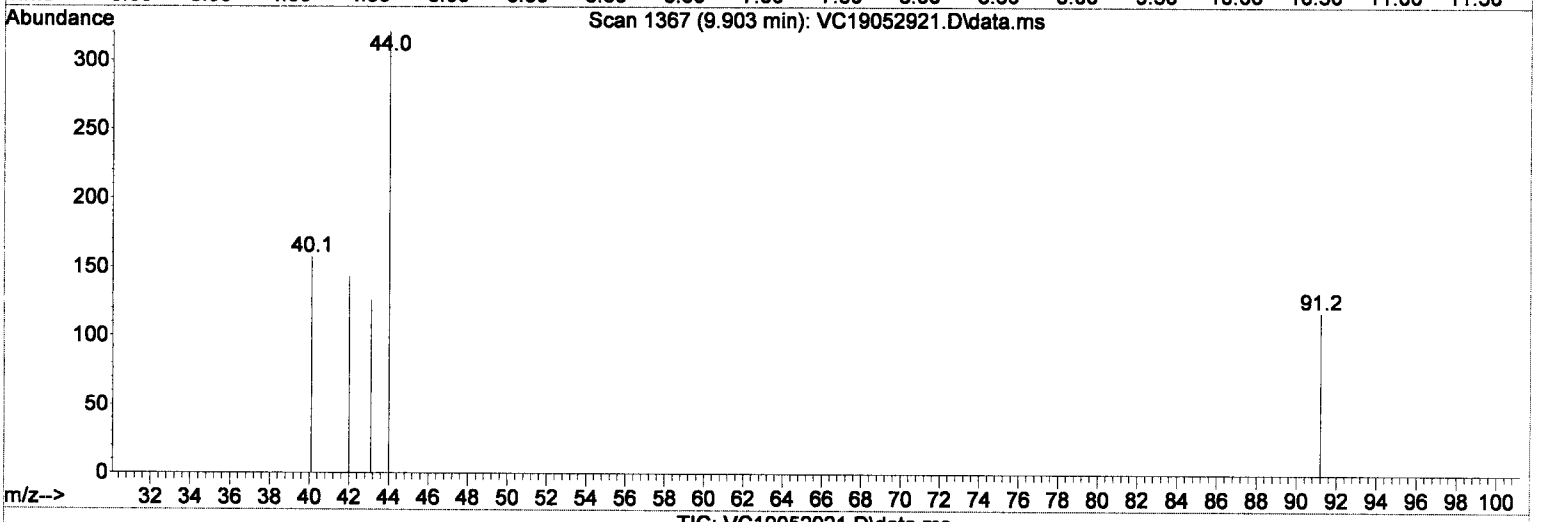
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.45#
0.00	0.00	1.14#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19052921.D\data.ms

(7) TPHg (C6-C10) (H)

9.906min (0.000) 281.64 ug/L m

response 2593656

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.58#
0.00	0.00	1.24#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

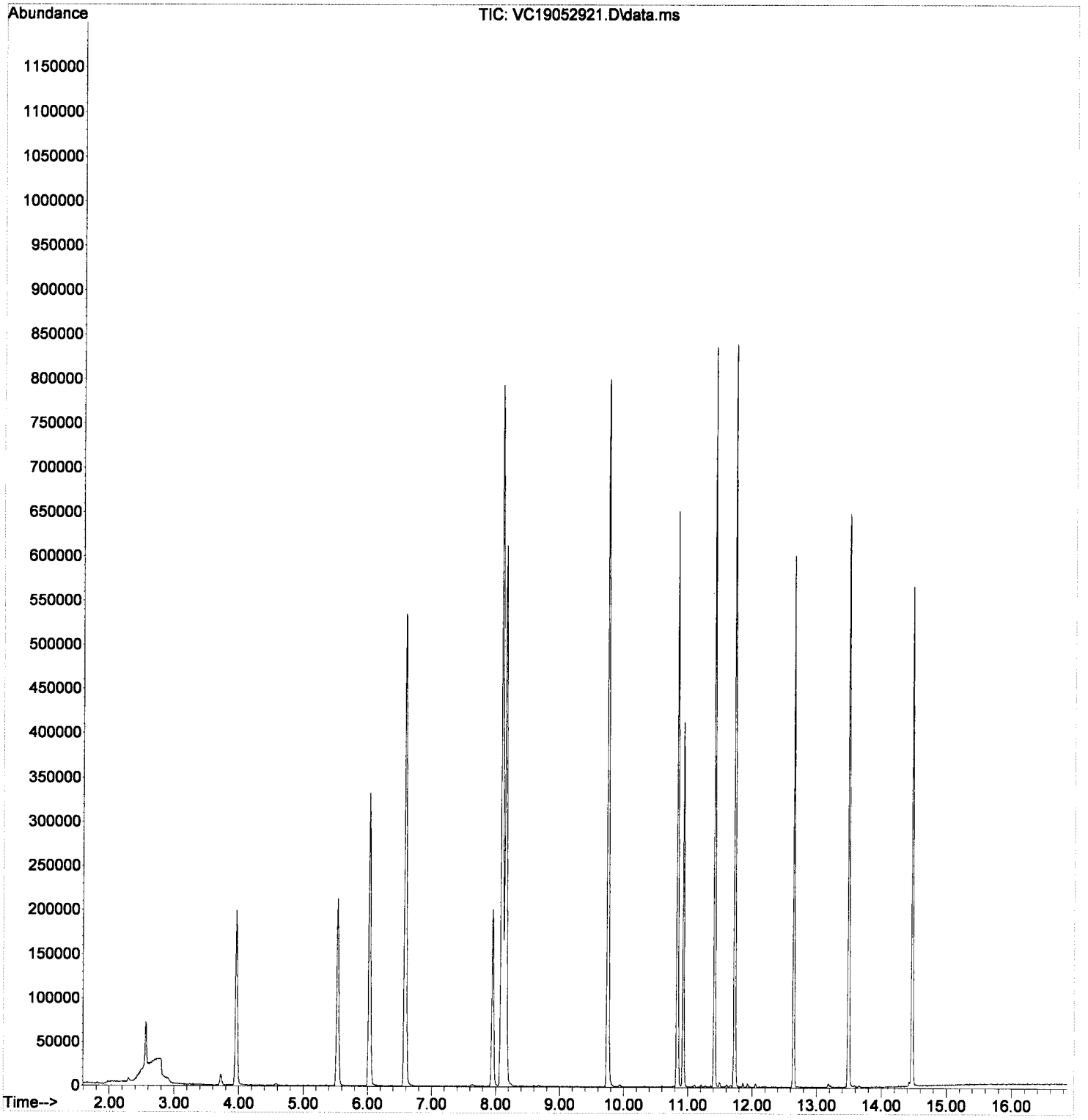
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	265731	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1164135	47.01	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	943243	50.99	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1393197	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1667197	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1147078	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	5195528m	392.07	ug/L	
6) TPHg (C5-C9)	9.906	TIC	2819041m	229.20	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2593656m	281.64	ug/L	
8) NWTPH-Gx	9.906	TIC	5082946m	669.68	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052921.D
Acq On : 29 May 2019 11:27 pm
Operator : TB
Sample : 9E29058-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

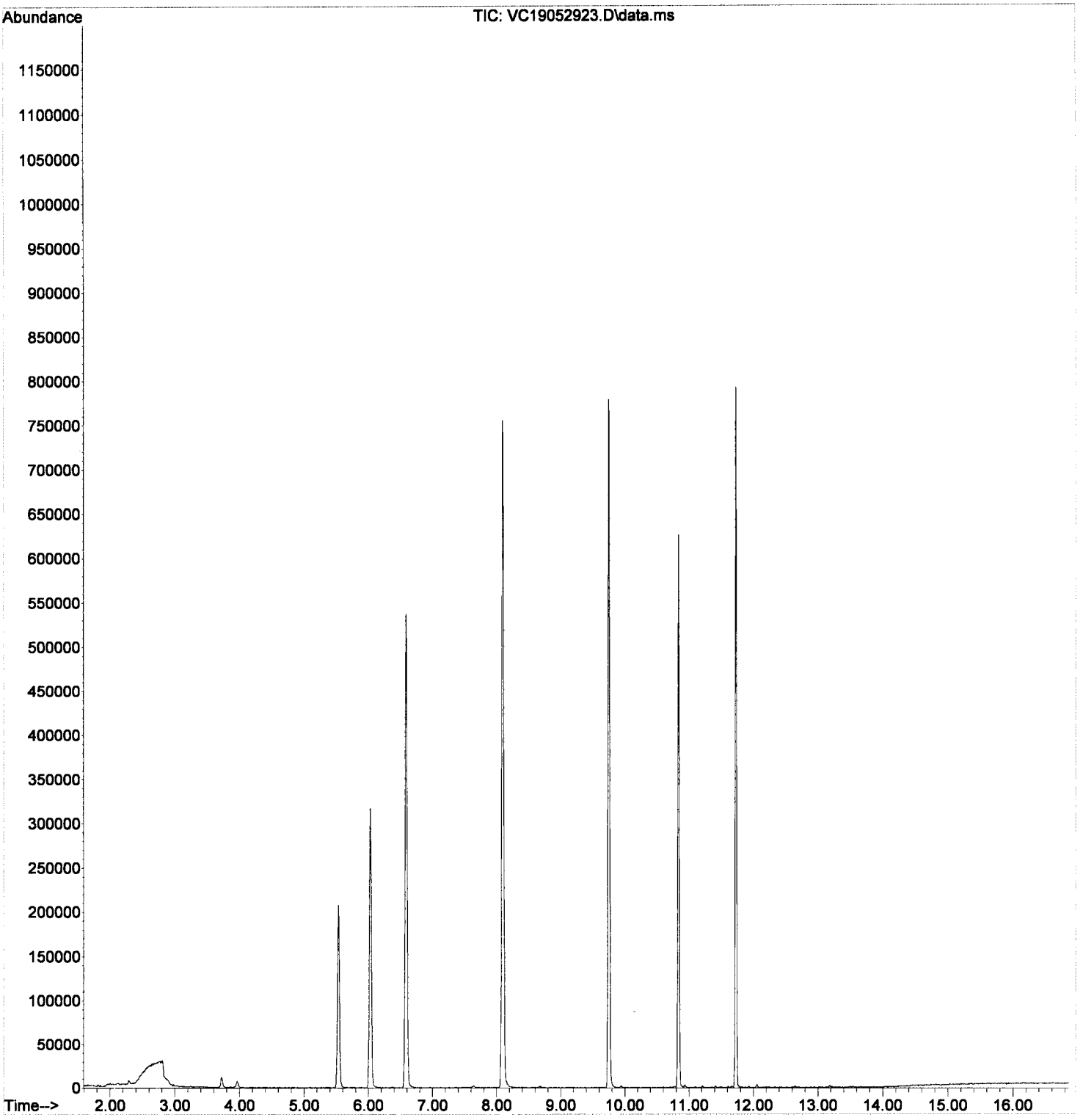
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	261900	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1130594	46.32	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	894652	49.07	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1326473	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1614341	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1093552	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	651712m	9.28	ug/L	LMQC
6) TPHg (C5-C9)	9.906	TIC	651712m	14.63	ug/L	
7) TPHg (C6-C10)	9.906	TIC	464649m	14.02	ug/L	
8) NWTPH-Gx	9.906	TIC	8855m	13.72	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052923.D
Acq On : 30 May 2019 12:22 am
Operator : TB
Sample : 9E29058-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052924.D
Acq On : 30 May 2019 12:49 am
Operator : TB
Sample : 9E29058-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

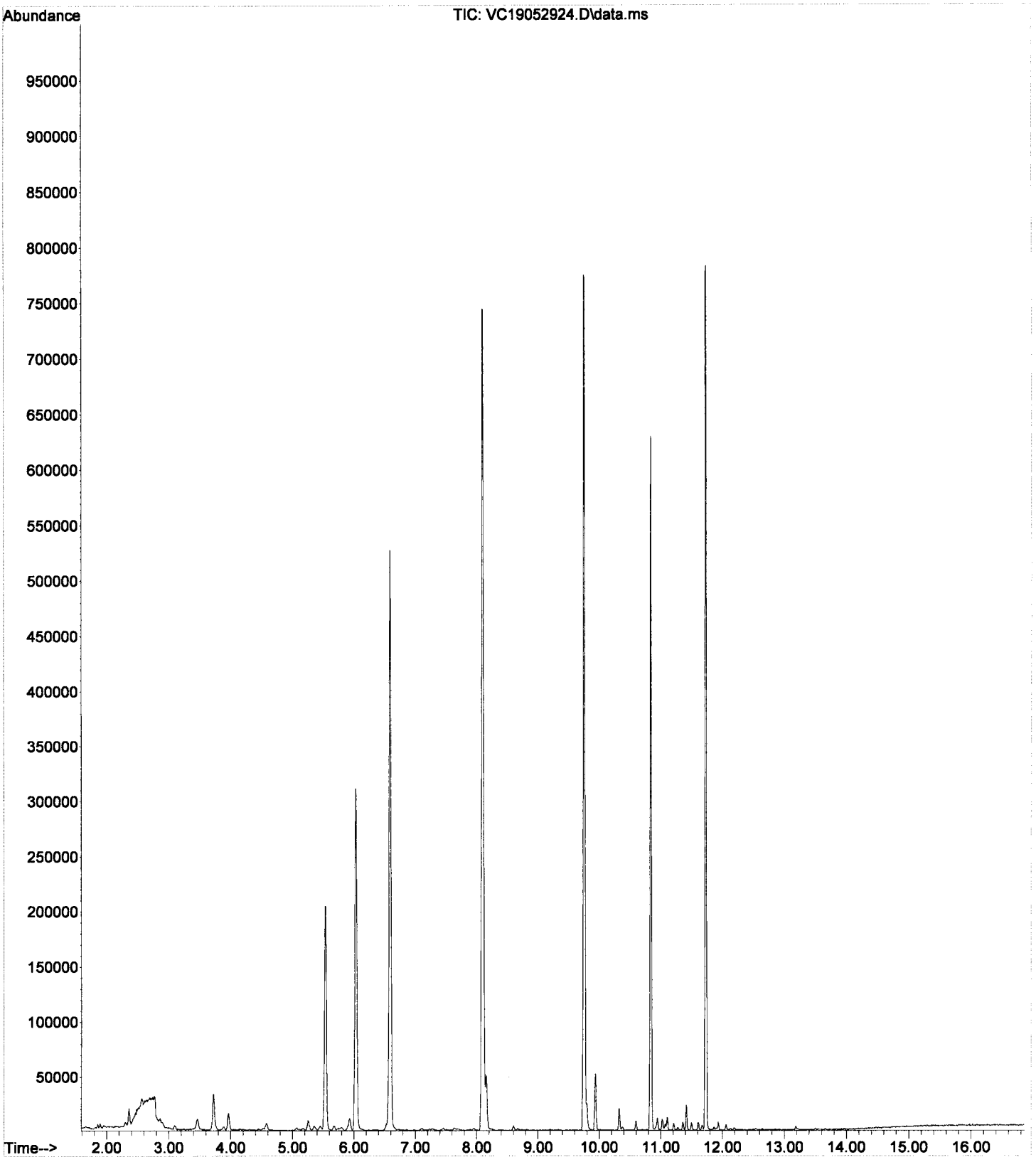
5/30/19

Quant Time: May 30 15:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	257140	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1139443	49.09	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	893711	50.46	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1364832	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1608804	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1090524	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1126234m	86.93	ug/L	
6) TPHg (C5-C9)	9.906	TIC	959474m	85.93	ug/L	
7) TPHg (C6-C10)	9.906	TIC	733539m	85.30	ug/L	
8) NWTPH-Gx	9.906	TIC	337341m	46.30	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052924.D
Operator : TB
Acquired : 30 May 2019 12:49 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALC
Misc Info : 1X 5mL 50ppb GX DI+MeOH
Vial Number: 24



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052925.D
Acq On : 30 May 2019 1:17 am
Operator : TB
Sample : 9E29058-CALD
Misc : 1X 5mL 100ppb GX DI+MeOH
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

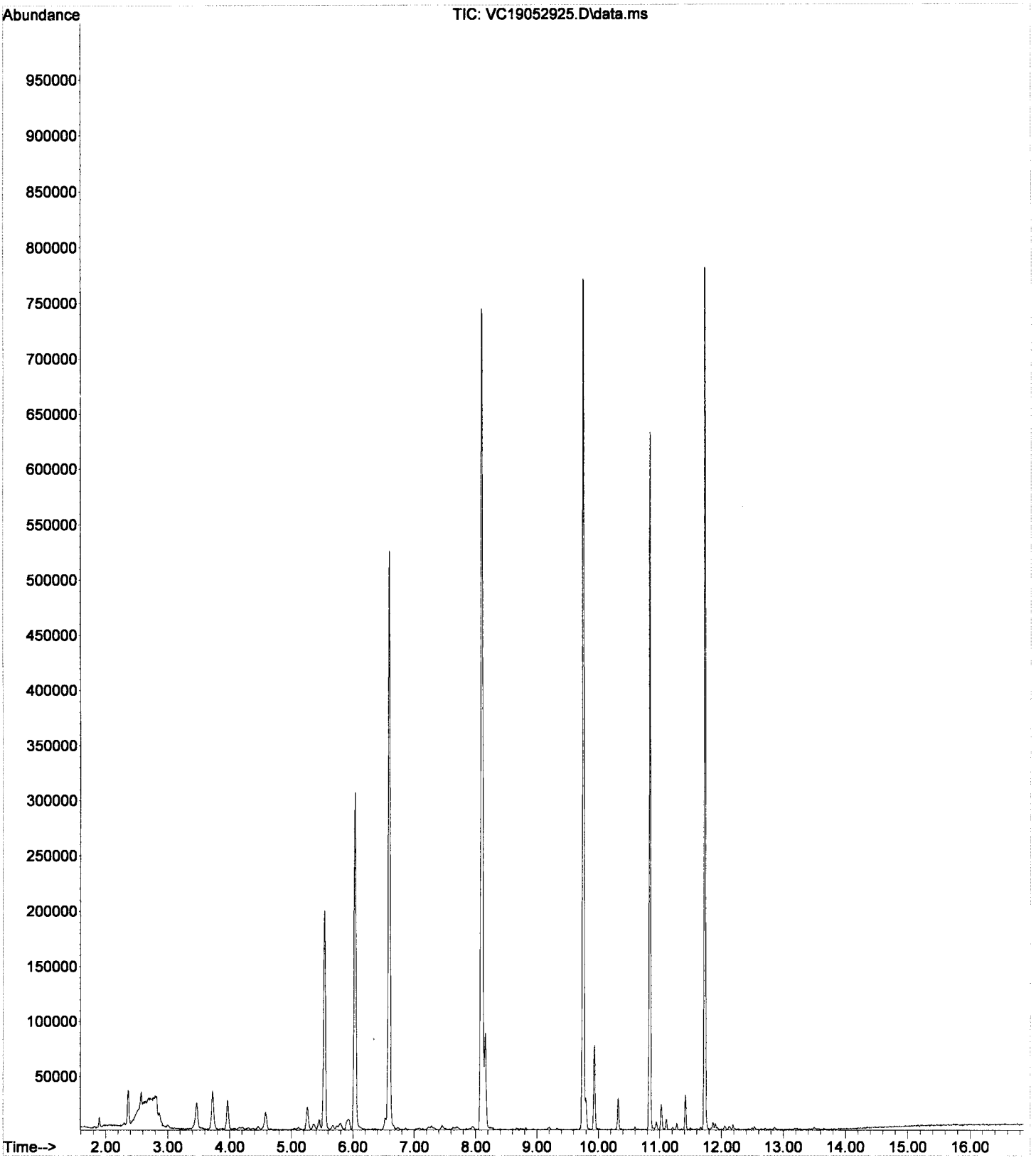
Quant Time: May 30 15:47:26 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	254092	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1130909	49.31	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	893010	51.02	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1356890	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.092	TIC	1598426	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.724	TIC	1104507	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1624353m	126.88	ug/L	
6) TPHg (C5-C9)	9.906	TIC	1478586m	134.01	ug/L	
7) TPHg (C6-C10)	9.906	TIC	1118241m	131.60	ug/L	
8) NWTPH-Gx	9.906	TIC	594153m	82.53	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052925.D
Operator : TB
Acquired : 30 May 2019 1:17 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALD
Misc Info : 1X 5mL 100ppb GX DI+MeOH
Vial Number: 25



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052926.D
Acq On : 30 May 2019 1:44 am
Operator : TB
Sample : 9E29058-CALE
Misc : 1X 5mL 250ppb GX DI+MeOH
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

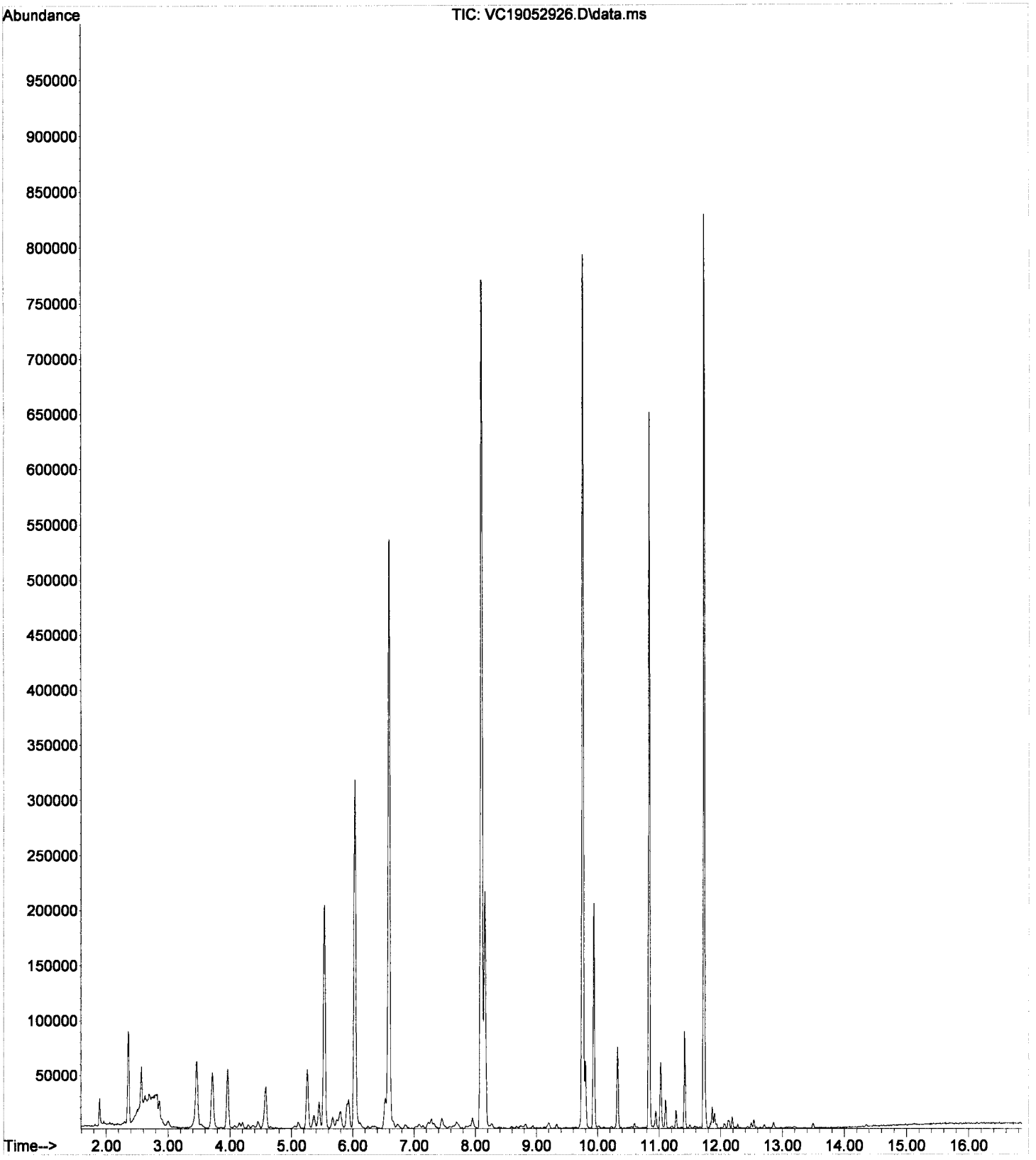
Quant Time: May 30 15:47:28 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	264662	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1181697	49.47	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	923159	50.64	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1373720	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1645193	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1147251	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	3450881m	258.79	ug/L	
6) TPHg (C5-C9)	9.906	TIC	3008909m	261.82	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2261282m	255.49	ug/L	
8) NWTPH-Gx	9.906	TIC	1724074m	229.91	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052926.D
Operator : TB
Acquired : 30 May 2019 1:44 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALE
Misc Info : 1X 5mL 250ppb GX DI+MeOH
Vial Number: 26



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052927.D
Acq On : 30 May 2019 2:12 am
Operator : TB
Sample : 9E29058-CALF
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

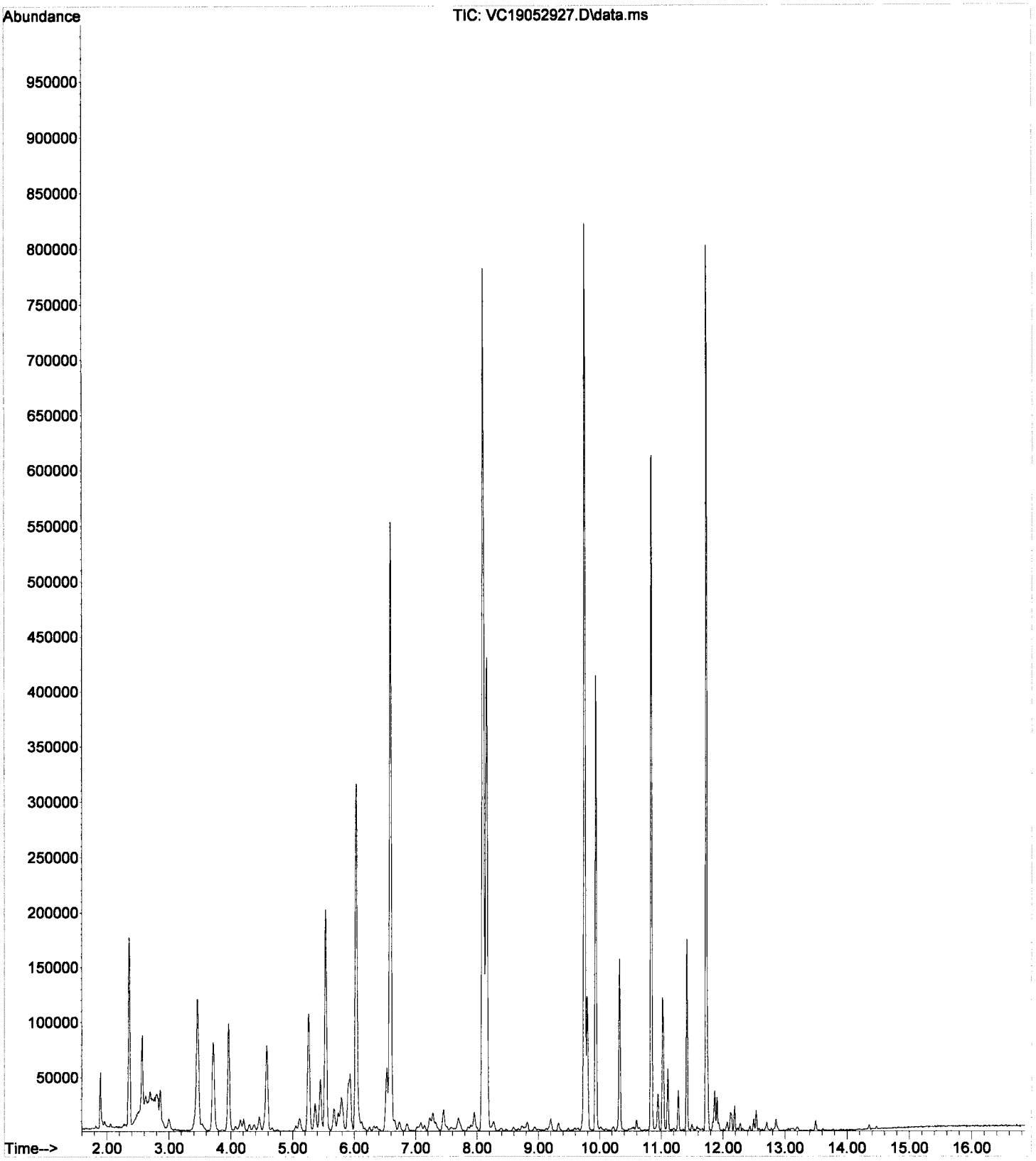
Quant Time: May 30 15:47:30 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	261529	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1178596	49.93	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.837	TIC	900724	50.00	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1373218	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.093	TIC	1631979	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1139134	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6589983m	500.13	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5679706m	500.15	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4374724m	500.19	ug/L	
8) NWTPH-Gx	9.906	TIC	3706703m	500.22	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052927.D
Operator : TB
Acquired : 30 May 2019 2:12 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALF
Misc Info : 1X 5mL 500ppb GX DI+MeOH
Vial Number: 27



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052928.D
Acq On : 30 May 2019 2:39 am
Operator : TB
Sample : 9E29058-CALG
Misc : 1X 5mL 1000ppb GX DI+MeOH
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

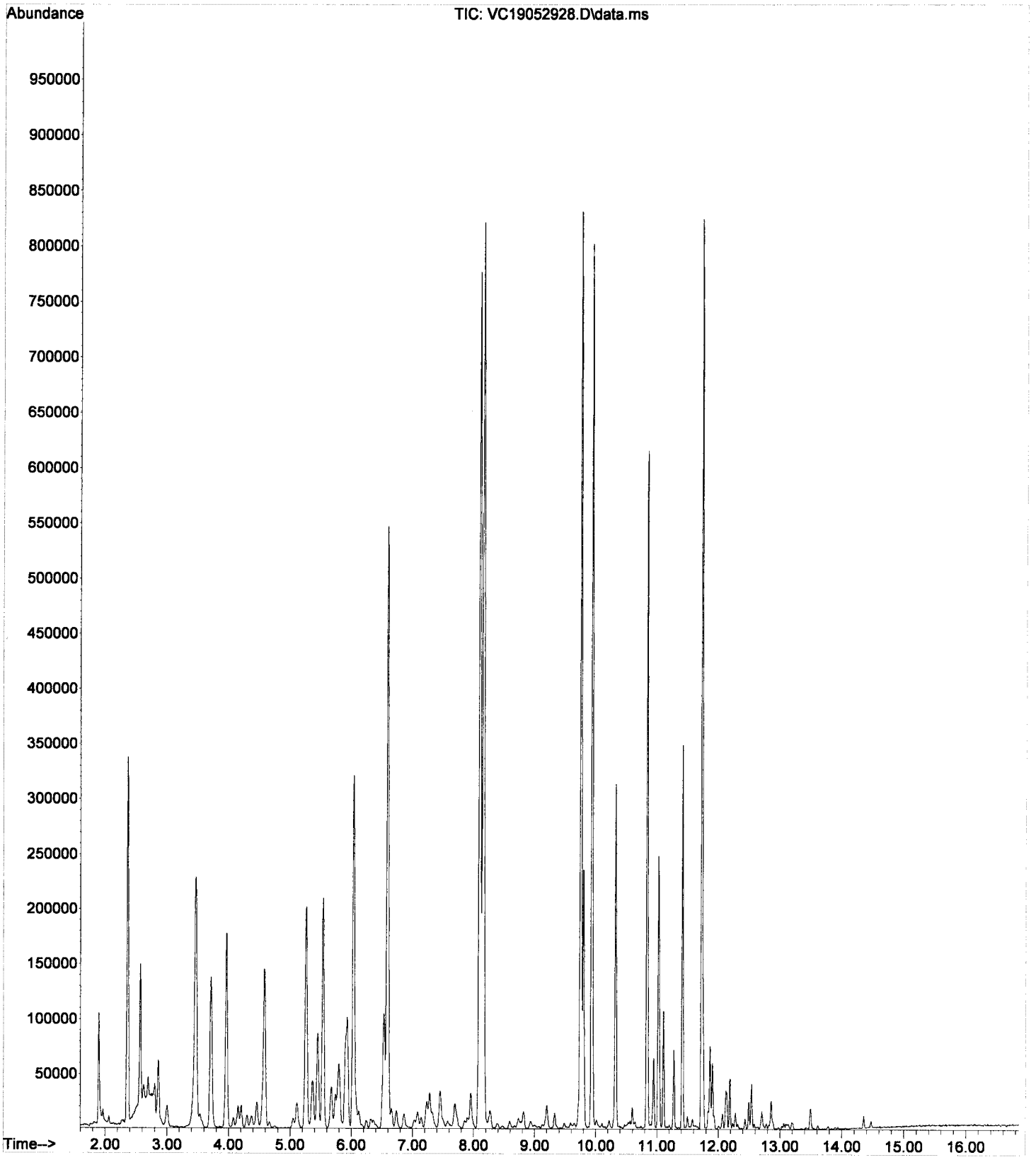
Quant Time: May 30 15:47:32 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	261111	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1170992	49.69	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.837	TIC	915240	50.89	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1421490	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1681294	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1206900	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	12264001m	932.23	ug/L	
6) TPHg (C5-C9)	9.906	TIC	10516295m	927.53	ug/L	
7) TPHg (C6-C10)	9.906	TIC	8234768m	943.04	ug/L	
8) NWTPH-Gx	9.906	TIC	7396048m	999.71	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052928.D
Operator : TB
Acquired : 30 May 2019 2:39 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALG
Misc Info : 1X 5mL 1000ppb GX DI+MeOH
Vial Number: 28



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052929.D
Acq On : 30 May 2019 3:07 am
Operator : TB
Sample : 9E29058-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

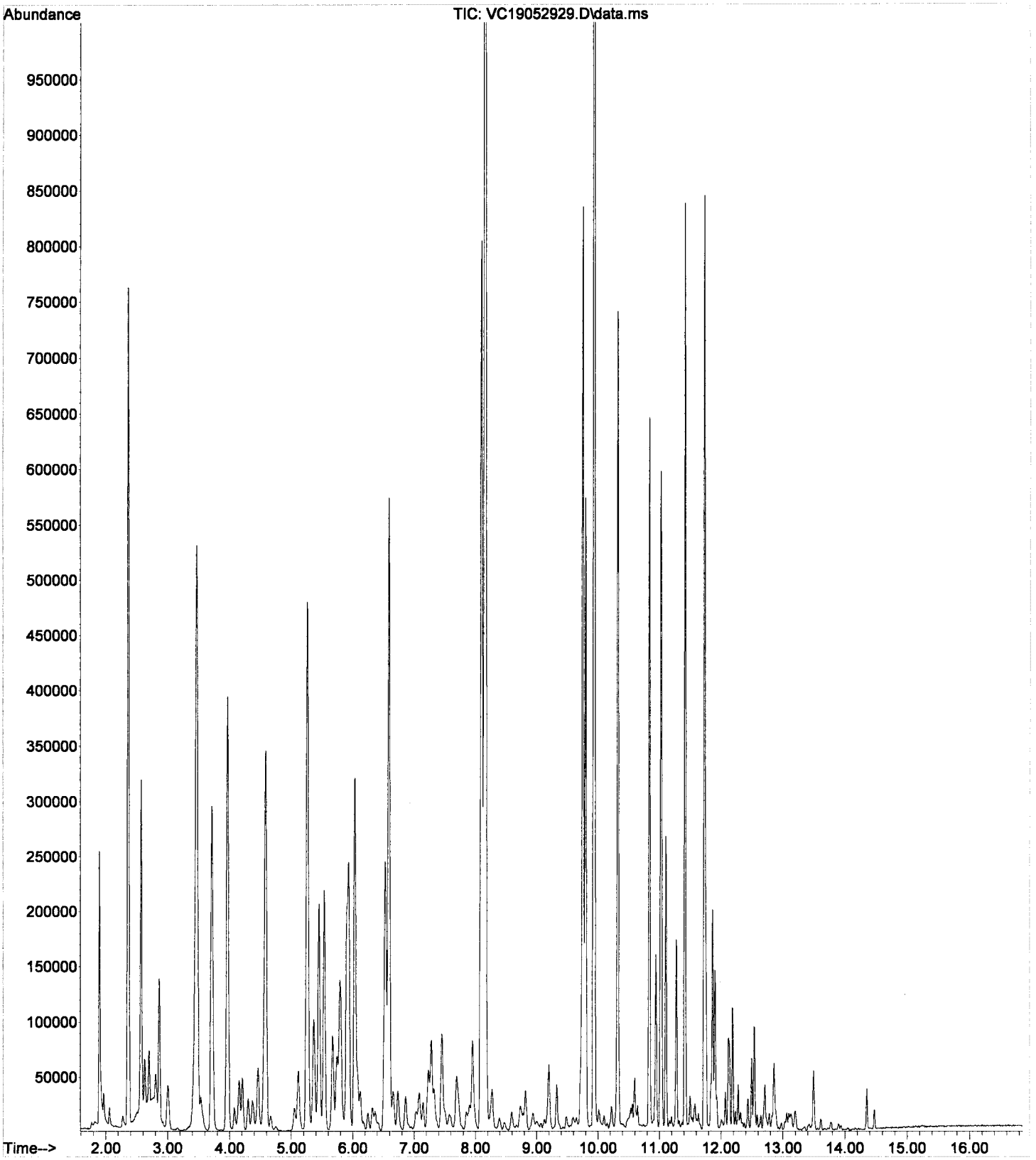
Quant Time: May 30 15:47:34 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529G~~.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.034	168	268653	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1212113	49.99	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	936867	50.63	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1507141	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.096	TIC	1729205	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1379986	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	28320107m	2092.27	ug/L	
6) TPHg (C5-C9)	9.906	TIC	23917340m	2050.28	ug/L	
7) TPHg (C6-C10)	9.906	TIC	18963080m	2110.68	ug/L	
8) NWTPH-Gx	9.906	TIC	18385276m	2415.33	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052929.D
Operator : TB
Acquired : 30 May 2019 3:07 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALH
Misc Info : 1X 5mL 2500ppb GX DI+MeOH
Vial Number: 29



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:50:56 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190529G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.035	168	266073	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1320230	54.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	922982	50.36	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.752	TIC	1171661m	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1683833	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1344258m	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	61543670m	4590.90	ug/L	
6) TPHg (C5-C9)	9.906	TIC	51205660m	4432.09	ug/L	
7) TPHg (C6-C10)	9.906	TIC	41070880m	4615.70	ug/L	
8) NWTPH-Gx	9.906	TIC	41069114m	5447.68	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

5/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.035	168	266073	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1320230	54.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	922982	50.36	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.752	TIC	1634465	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1683833	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1634619	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	60790505m	4534.72	ug/L	
6) TPHg (C5-C9)	9.906	TIC	50742856m	4392.03	ug/L	
7) TPHg (C6-C10)	9.906	TIC	40608076m	4563.69	ug/L	
8) NWTPH-Gx	9.906	TIC	40315949m	5347.78	ug/L	

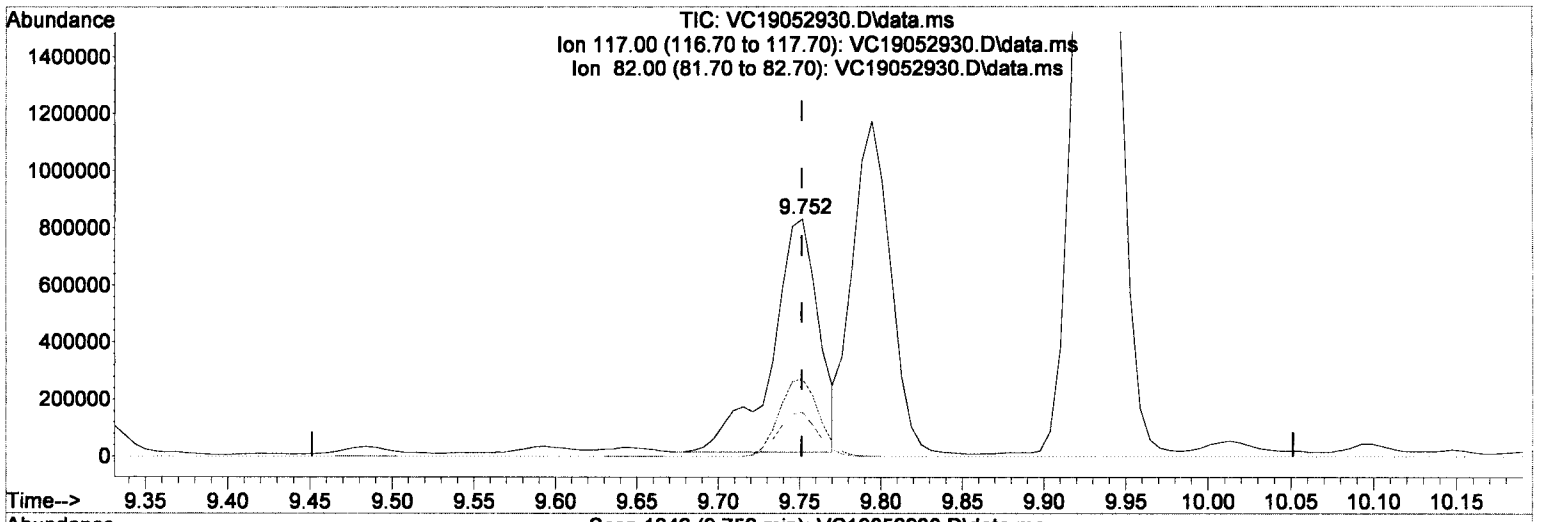
MT

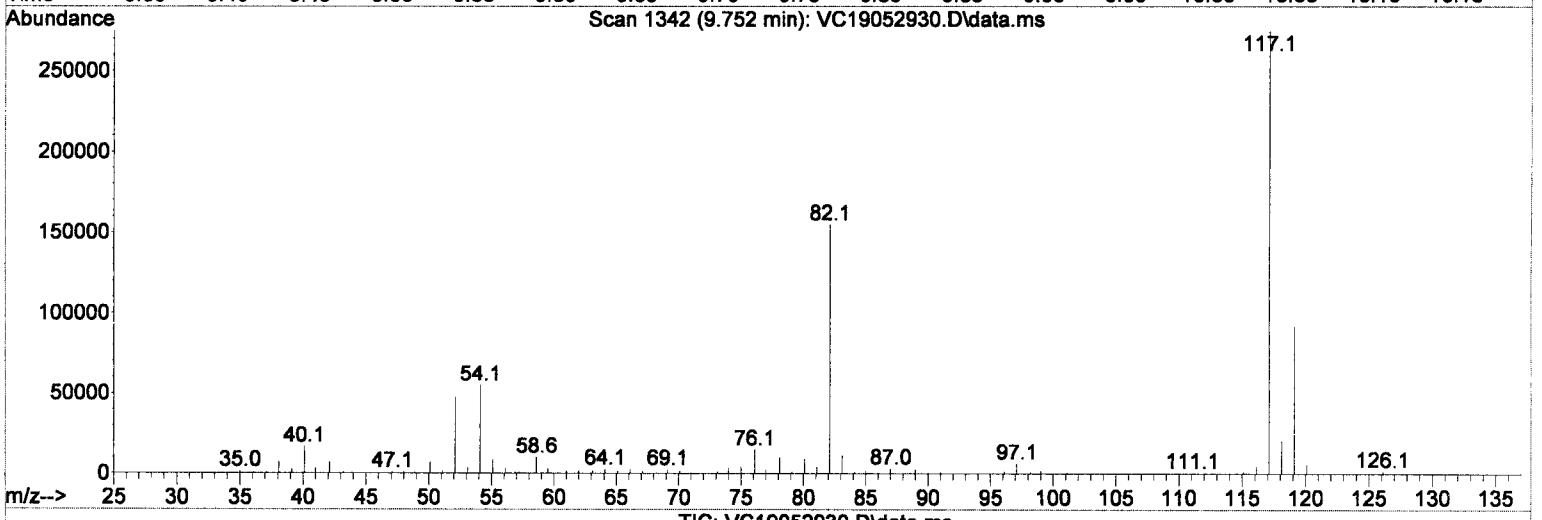
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.752min (+0.000) 0.00 ug/L

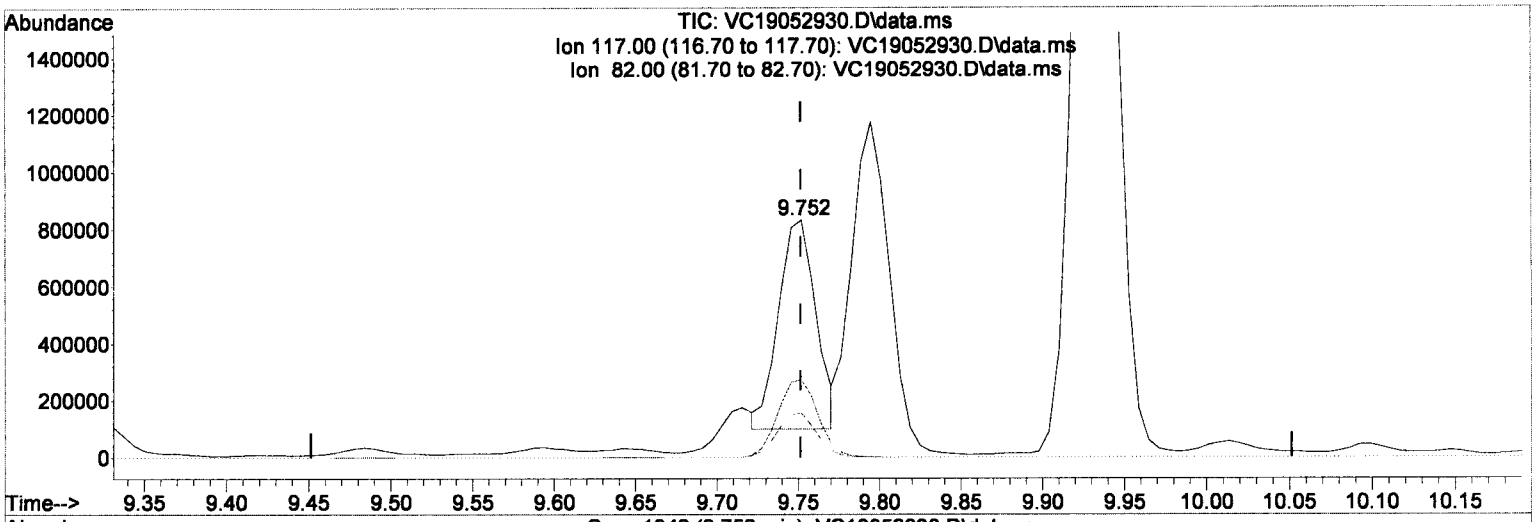
response 1634465

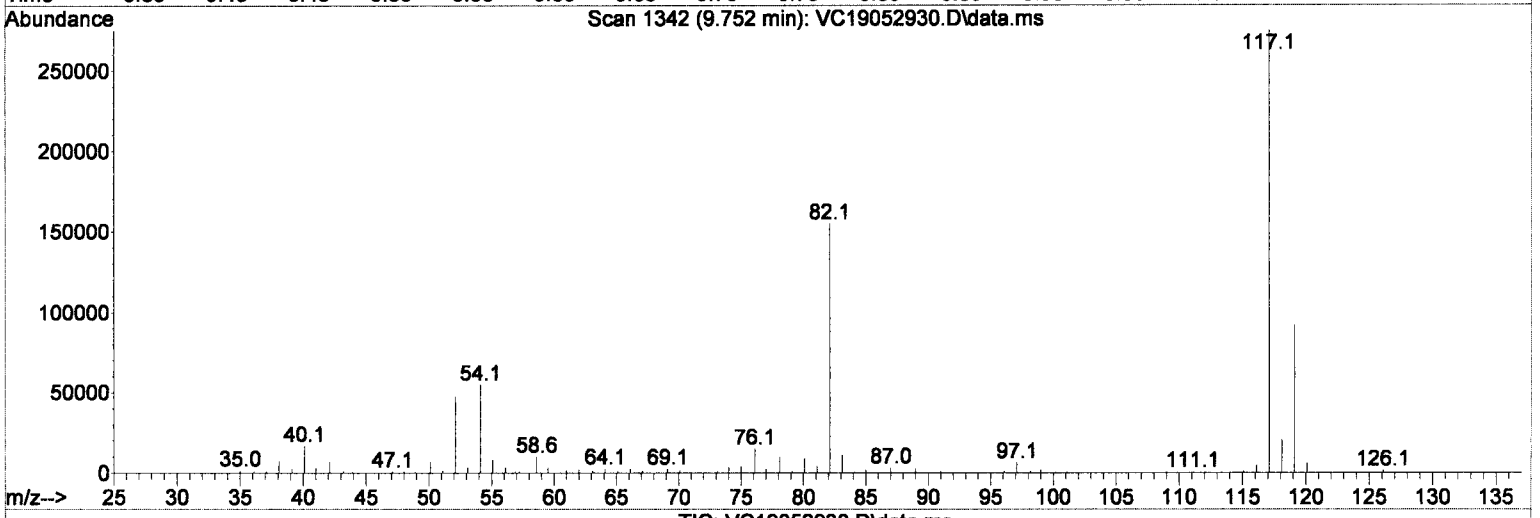
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	28.75
82.00	18.10	16.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.752min (+0.000) 0.00 ug/L (m)

5/30/19

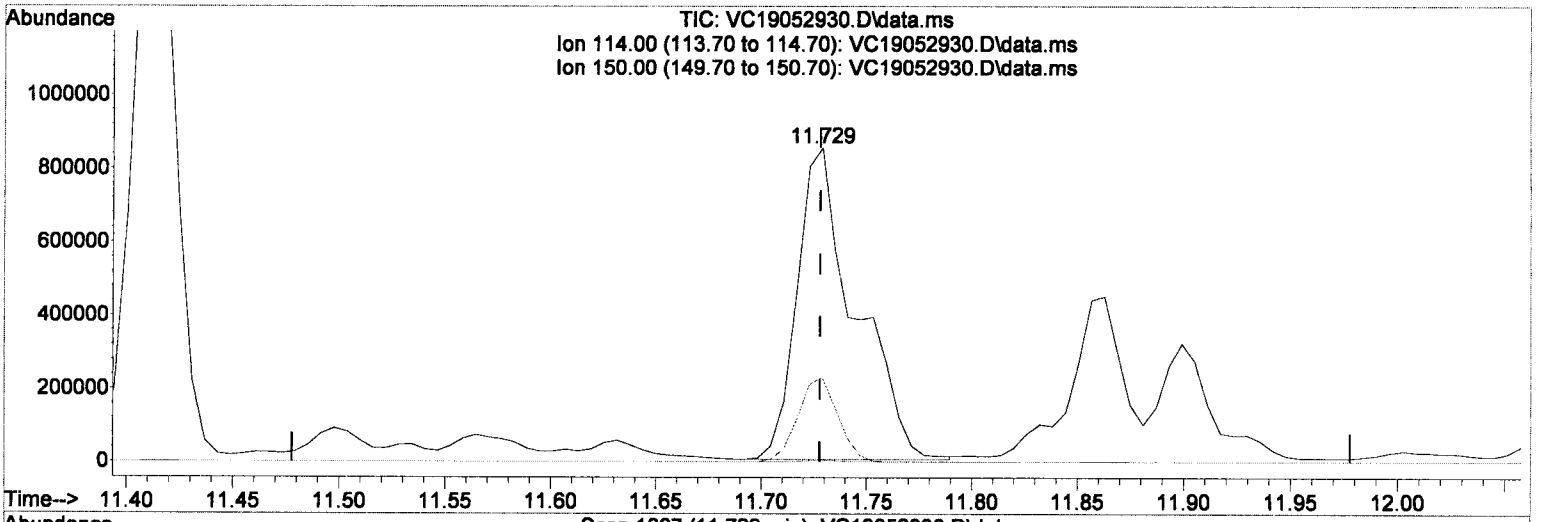
response 1171661

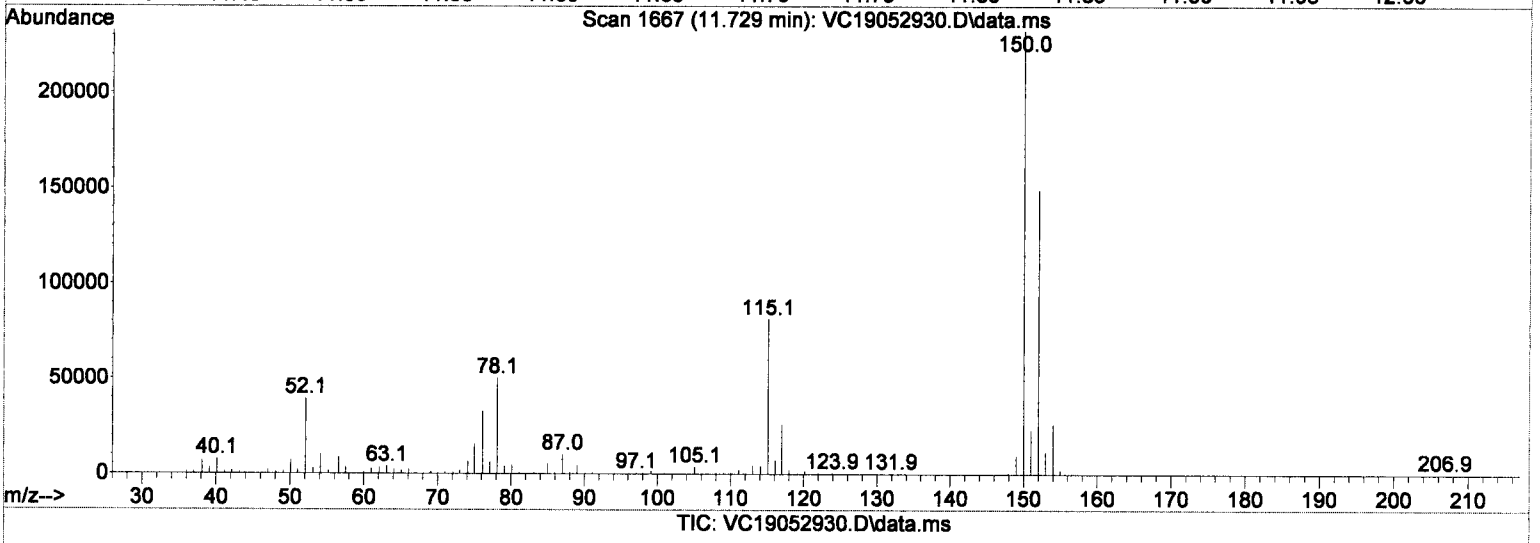
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	40.11
82.00	18.10	22.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.729min (+0.001) 0.00 ug/L

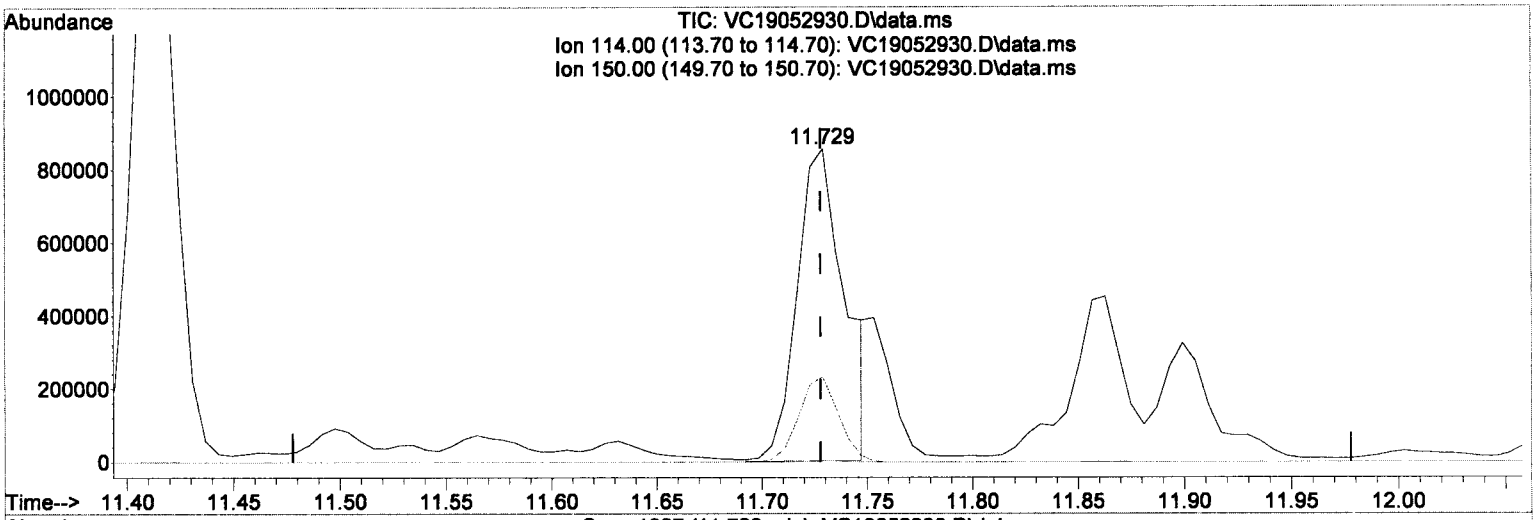
response 1634619

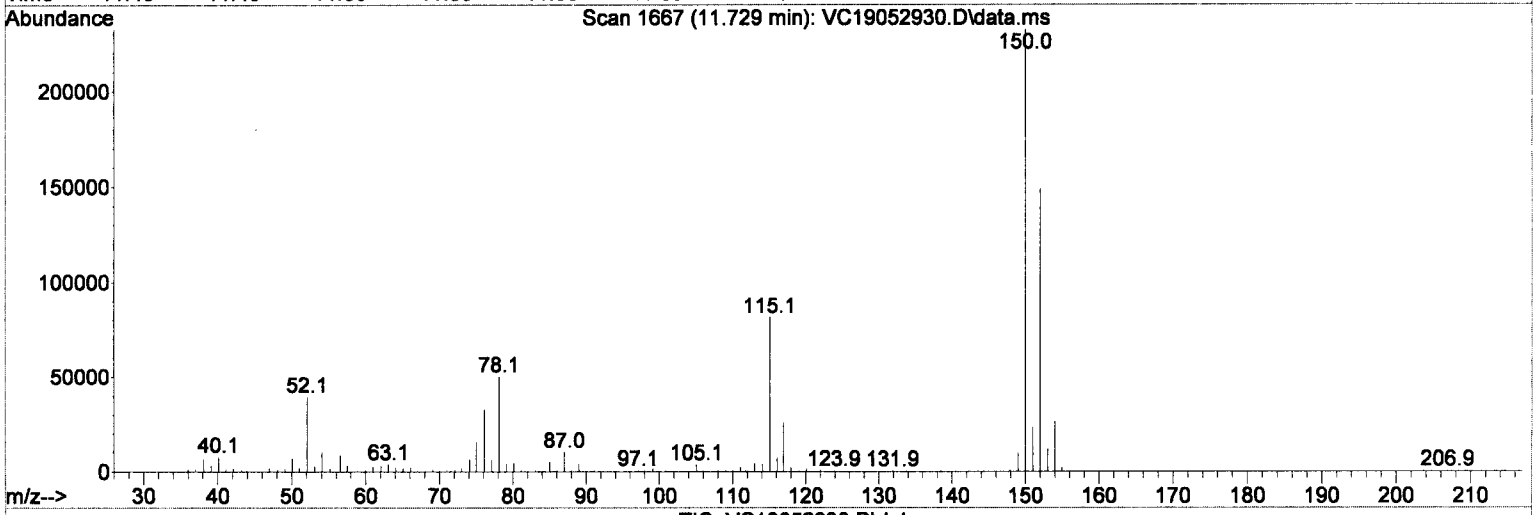
Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	18.78
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052930.D
Acq On : 30 May 2019 3:34 am
Operator : TB
Sample : 9E29058-CALI
Misc : 1X 5mL 5000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:47:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration





TIC: VC19052930.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

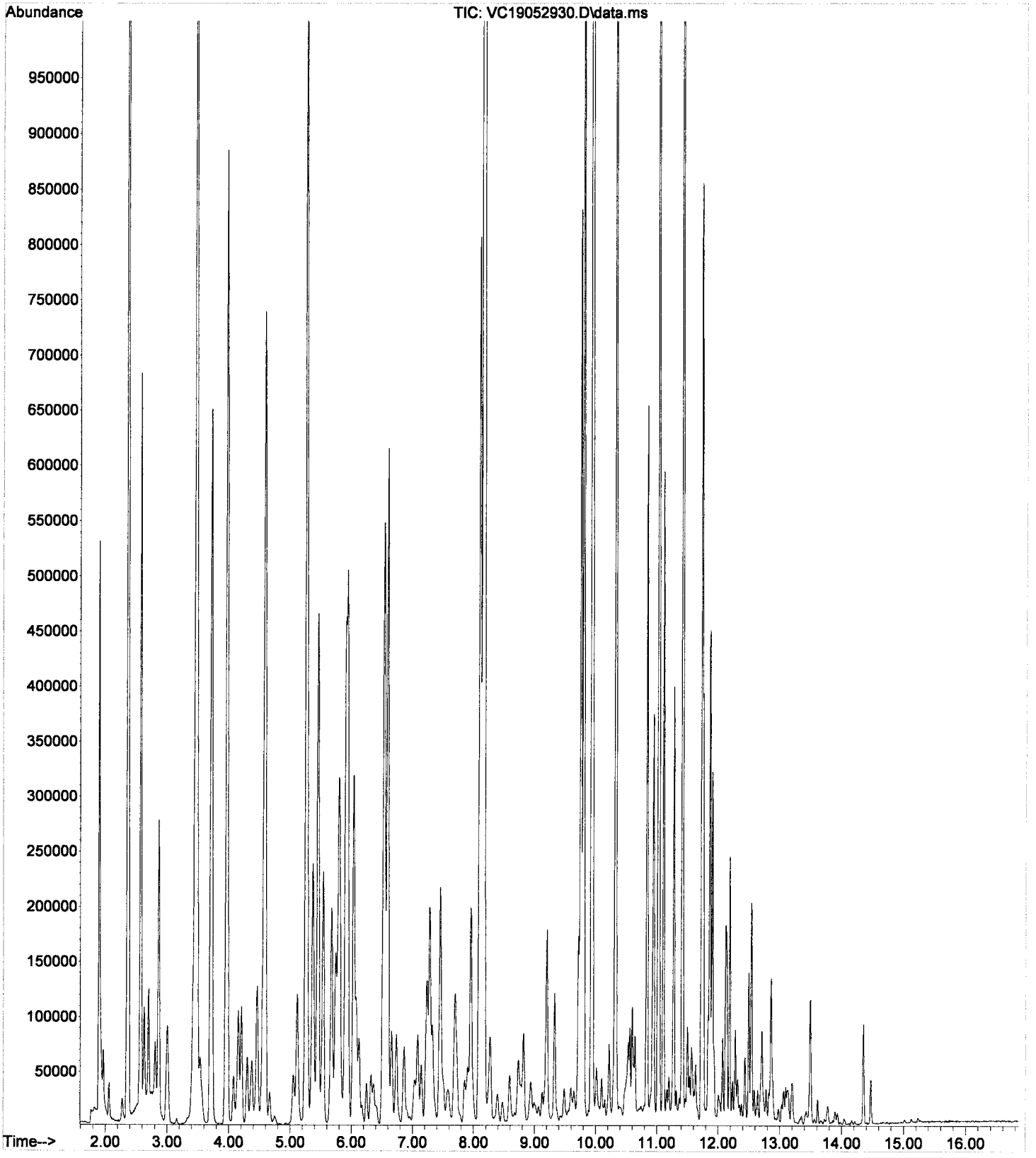
11.729min (+0.001) 0.00 ug/L m

response 1344258

Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	22.84
0.00	0.00	0.00

5/30/19

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052930.D
Operator : TB
Acquired : 30 May 2019 3:34 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALI
Misc Info : 1X 5mL 5000ppb GX DI+MeOH
Vial Number: 30



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052931.D
Acq On : 30 May 2019 4:02 am
Operator : TB
Sample : 9E29058-CALJ
Misc : 1X 5mL 10000ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

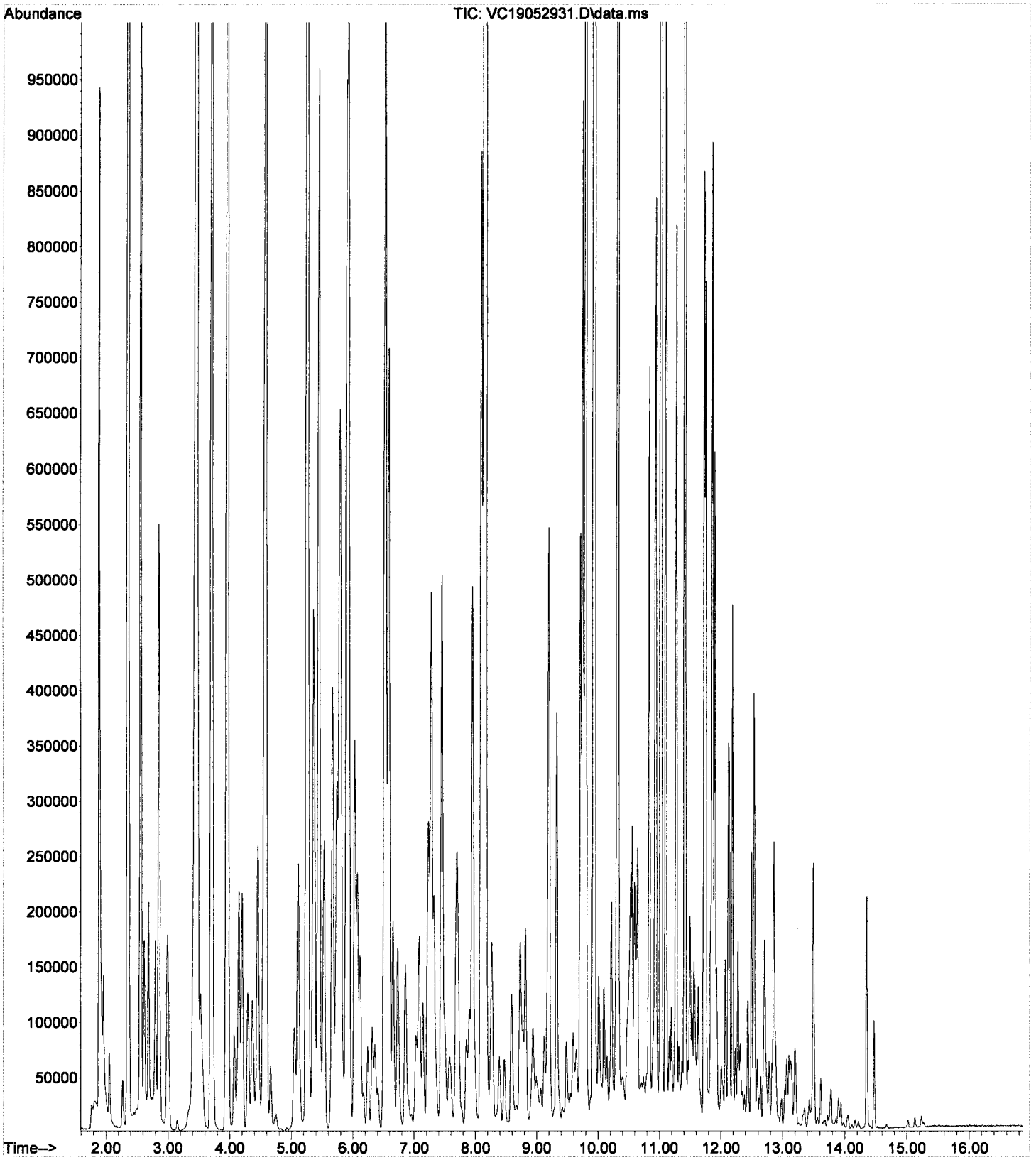
5/30/19

Quant Time: May 30 15:47:38 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:46:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	280943	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1535644	60.56	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	973205	50.29	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1469336	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1948912	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1323065	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	121522195m	8585.25	ug/L	
6) TPHg (C5-C9)	9.906	TIC	100273382m	8219.75	ug/L	
7) TPHg (C6-C10)	9.906	TIC	81063895m	8628.07	ug/L	
8) NWTPH-Gx	9.906	TIC	82431215m	10355.49	ug/L	

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

File :C:\msdchem\1\DATA\2019-05\9E29058\VC19052931.D
Operator : TB
Acquired : 30 May 2019 4:02 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9E29058-CALJ
Misc Info : 1X 5mL 10000ppb GX DI+MeOH
Vial Number: 31



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052932.D
Acq On : 30 May 2019 4:29 am
Operator : TB
Sample : 9E29058-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

NR

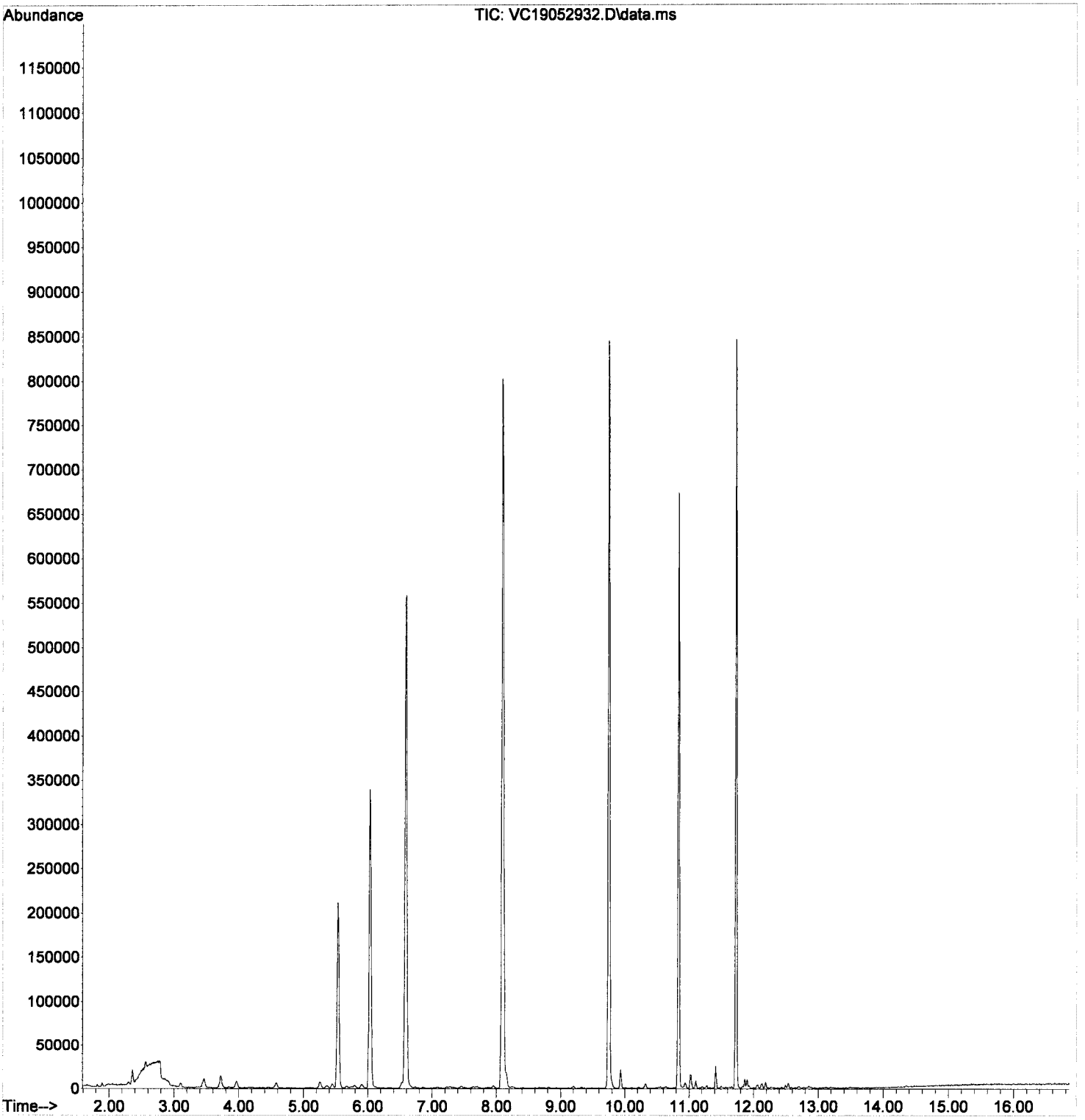
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	279728	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1222030	46.88	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	961897	49.39	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1419826	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1738033	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1151134	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1068894m	39.14	ug/L	
6) TPHg (C5-C9)	9.906	TIC	896529m	33.55	ug/L	
7) TPHg (C6-C10)	9.906	TIC	652995m	32.78	ug/L	
8) NWTPH-Gx	9.906	TIC	279571m	46.94	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052932.D
Acq On : 30 May 2019 4:29 am
Operator : TB
Sample : 9E29058-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 15:59:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052933.D
Acq On : 30 May 2019 4:57 am
Operator : TB
Sample : 9E29058-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

NR

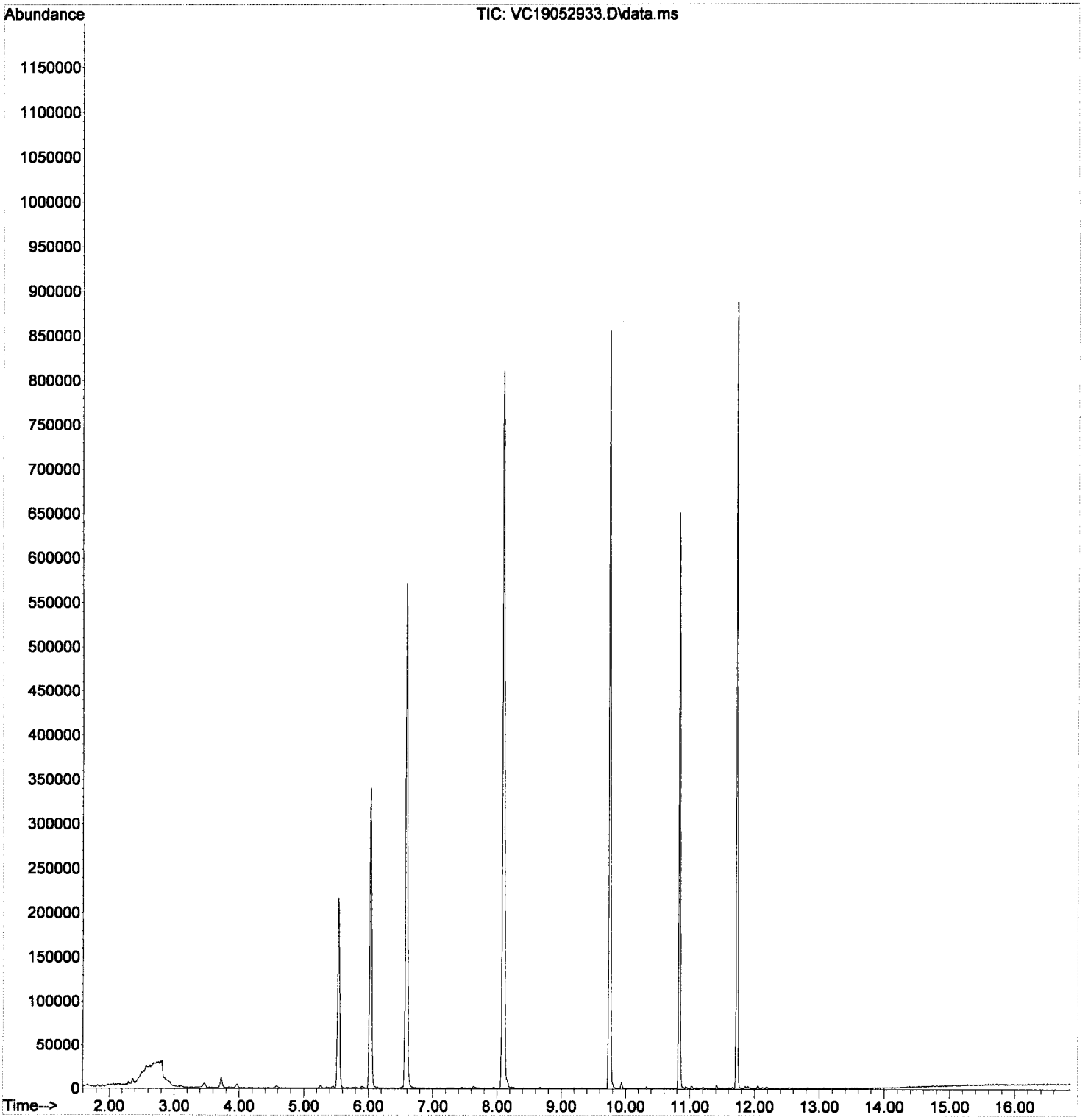
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	283591	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1202716	45.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	964432	48.85	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1423294	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1741215	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1168289	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	663119m	5.91	ug/L	
6) TPHg (C5-C9)	9.906	TIC	644102m	8.90	ug/L	
7) TPHg (C6-C10)	9.906	TIC	521725m	16.22	ug/L	
8) NWTPH-Gx	9.906	TIC	43772m	17.87	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052933.D
Acq On : 30 May 2019 4:57 am
Operator : TB
Sample : 9E29058-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052934.D
Acq On : 30 May 2019 5:25 am
Operator : TB
Sample : 9E29058-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

5/30/19

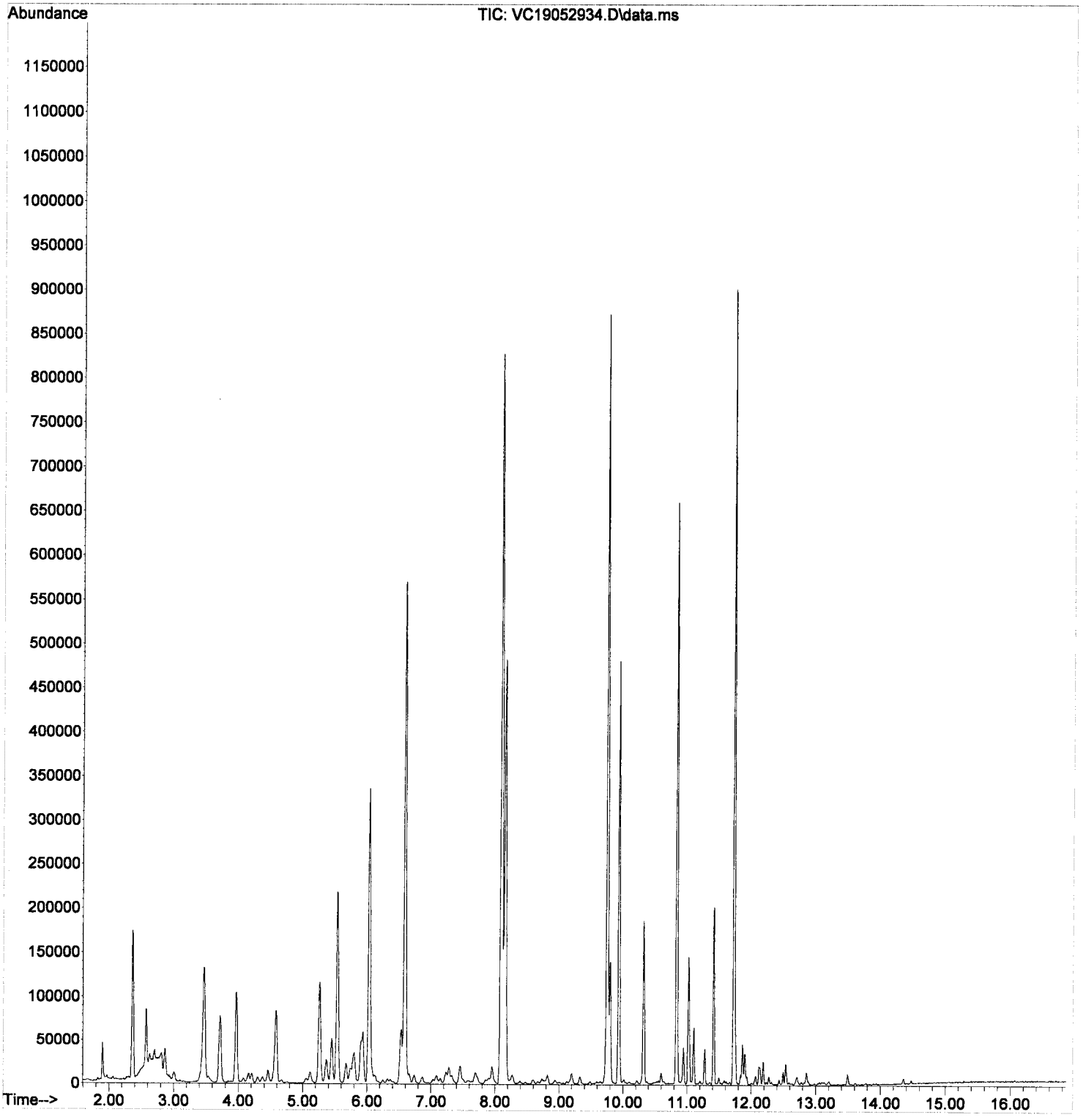
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.032	168	282127	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1225298	46.60	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	969339	49.35	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.749	TIC	1455006	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1726664	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.726	TIC	1226030	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	7243471m	529.63	ug/L	
6) TPHg (C5-C9)	9.906	TIC	6152737m	526.03	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4887342m	535.49	ug/L	
8) NWTPH-Gx	9.906	TIC	4278524m	533.68	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052934.D
Acq On : 30 May 2019 5:25 am
Operator : TB
Sample : 9E29058-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:02 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052935.D
Acq On : 30 May 2019 5:52 am
Operator : TB
Sample : 9E29058-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

NR

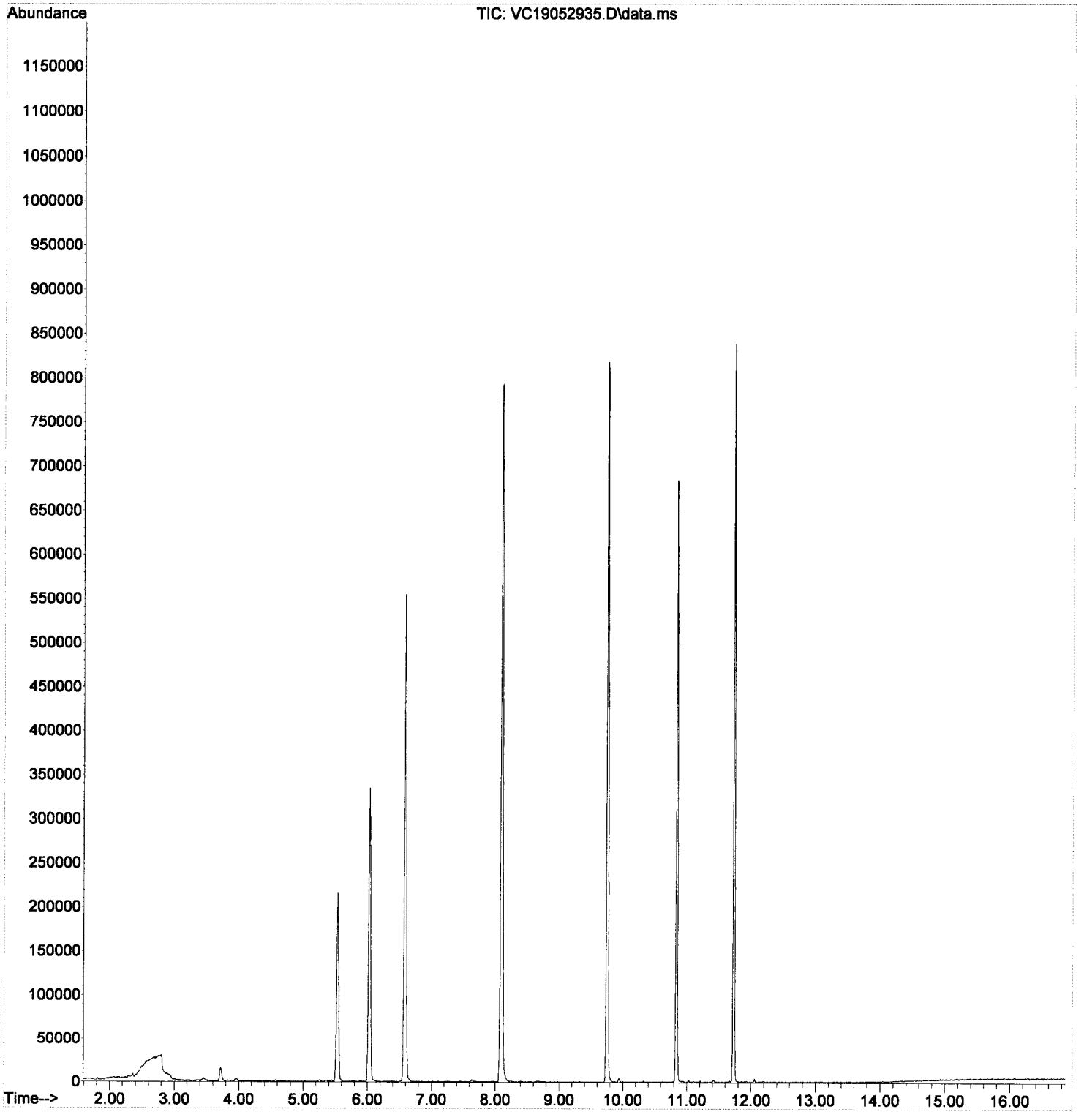
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	276844	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1199322	46.48	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	959696	49.79	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1402860	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.096	TIC	1704421	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1157049	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	652148m	6.30	ug/L	
6) TPHg (C5-C9)	9.906	TIC	651994m	11.11	ug/L	
7) TPHg (C6-C10)	9.906	TIC	497146m	14.74	ug/L	
8) NWTPH-Gx	9.906	TIC	16386m	14.59	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-05\9E29058\
Data File : VC19052935.D
Acq On : 30 May 2019 5:52 am
Operator : TB
Sample : 9E29058-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: May 30 16:00:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190529G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

SPLP Volatile Organic Compounds by EPA 1312/8260C

Benchsheet & Analysis Sequence Data

Batch 9060589

Sequence 9F05032 (A9E0785-01RE1)

PREPARATION BENCH SHEET

BATCH #: 9060589 (Water)

Apex Laboratories

Prep Method: EPA 1312/5030B SPLP Volatiles

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9060589-BLK1		QC	06/05/19 09:09	5	5							
9060589-BS1		QC	06/05/19 09:09	5	5	A19F008		5				
9060589-BS2		QC	06/05/19 09:09	5	5	A19E311		5				
A9E0723-01	A	8260C BTEX	06/05/19 12:17	5	5	Cancelled for BatchQC MK7 6/6/19				2708-190521-007	Added for BatchQC in: 9060589	<2 TNH
A9E0723-01	A	624 TCE+Naphthalene	06/05/19 12:17	5	5					2708-190521-007	Added for BatchQC in: 9060589	<2 PH7
A9E0723-01	A	1312/8260C SPLP/ZHE VOC	06/05/19 12:17	5	5					2708-190521-007	added 5-31-19 lad ok to run out of	<2
9060589-DUP2		QC	06/05/19 12:17	5	5		A9E0723-01					<2
A9E0723-01RE1	A	NWTPH-Gx	06/05/19 12:17	5	5	Cancelled				2708-190521-007	Added for BatchQC in: 9060589	<2
A9E0723-01RE1	A	8260C Full List	06/05/19 12:17	5	5					2708-190521-007	Added for BatchQC in: 9060589	<2
A9E0785-01	A	1312/8260C SPLP/ZHE VOC	06/05/19 12:17	5	5					2708-190522-011	added 5-31-19	<2
A9E0785-01RE1	A	1312/8260C SPLP/ZHE VOC	06/05/19 12:17	5	5					2708-190522-011	50X RR-01	<2
A9E0832-02	A	8260C BTEX	06/05/19 12:17	5	5	Cancelled				2708-190523-013	Added for BatchQC in: 9060589	<2
A9E0832-02	A	624 TCE+Naphthalene	06/05/19 12:17	5	5					2708-190523-013	Added for BatchQC in: 9060589	<2
A9E0832-02	A	1312/8260C SPLP/ZHE VOC	06/05/19 12:17	5	5					2708-190523-013	added 5-31-19	<2
9060589-MS2		QC	06/05/19 12:17	5	5	A19F008	A9E0832-02	2500			@500X	<2
A9E0832-02RE1	A	NWTPH-Gx	06/05/19 12:17	5	5	Cancelled.				2708-190523-013	Added for BatchQC in: 9060589	<2
A9E0832-02RE1	A	8260C Full List	06/05/19 12:17	5	5					2708-190523-013	Added for BatchQC in: 9060589	<2
A9E0832-02RE1	A	8260C BTEX	06/05/19 12:17	5	5					2708-190523-013	Added 6/6/2019 by tnl	<2
A9E0832-02RE1	A	624 TCE+Naphthalene	06/05/19 12:17	5	5					2708-190523-013	Added 6/6/2019 by tnl	<2
A9E0832-02RE1	A	1312/8260C SPLP/ZHE VOC	06/05/19 12:17	5	5					2708-190523-013	Added 6/5/2019 by tnl	<2
9060589-MS3		QC	06/05/19 12:17	5	5	A19F008	A9E0832-02RE1	250			@50X	<2
A9F0080-01	A	8260C BTEX	06/05/19 12:17	5	5					A1GP-1	Added for BatchQC in: 9060589	<2

Prepared By: 6/6/19 tnl Date

Reviewed By: MK7 6/10/19 Date

Cancelled = Removed test codes for Batch QC MK7 6/6/19

PREPARATION BENCH SHEET

BATCH #: 9060589 (Water)

Apex Laboratories

Prep Method: EPA 1312/5030B SPLP Volatiles

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0080-01	A	624 TCE+Naphthalene	06/05/19 12:17	5	5					A1GP-1	Added for BatchQC in: 9060589	<2
A9F0080-01	A	1312/8260C SPLP/ZHE VOC	06/05/19 12:17	5	5	Cancelled				A1GP-1	Added for BatchQC in: 9060589	<2
A9F0080-01	A	8260C Full List	06/05/19 12:17	5	5					A1GP-1		<2
A9F0080-01	A	NWTPH-Gx	06/05/19 12:17	5	5					A1GP-1		<2
9060589-DUP1		QC	06/05/19 12:17	5	5		A9F0080-01					<2
A9F0080-01RE1	B	NWTPH-Gx	06/05/19 12:17	5	5					A1GP-1	1X RR-01	<2
A9F0080-01RE1	B	8260C Full List	06/05/19 12:17	5	5					A1GP-1	1X RR-01	<2
A9F0080-02	A	8260C Full List	06/05/19 12:17	5	5					A1GP-2		<2
A9F0080-02	A	NWTPH-Gx	06/05/19 12:17	5	5					A1GP-2		<2
A9F0080-03	A	NWTPH-Gx	06/05/19 12:17	5	5					A1GP-Y		<2
A9F0080-03	A	8260C Full List	06/05/19 12:17	5	5					A1GP-Y		<2
A9F0080-04	A	NWTPH-Gx	06/05/19 12:17	5	5					A1GP-3		<2
A9F0080-04	A	8260C Full List	06/05/19 12:17	5	5					A1GP-3		<2
A9F0080-05	A	8260C BTEX	06/05/19 12:17	5	5					A1GP-4	Added for BatchQC in: 9060589	<2
A9F0080-05	A	624 TCE+Naphthalene	06/05/19 12:17	5	5					A1GP-4	Added for BatchQC in: 9060589	<2
A9F0080-05	A	1312/8260C SPLP/ZHE VOC	06/05/19 12:17	5	5	Cancelled				A1GP-4	Added for BatchQC in: 9060589	<2
A9F0080-05	A	NWTPH-Gx	06/05/19 12:17	5	5					A1GP-4		<2
A9F0080-05	A	8260C Full List	06/05/19 12:17	5	5					A1GP-4		<2
9060589-MS1		QC	06/05/19 12:17	5	5	A19F008	A9F0080-05	50			@10X	<2
A9F0080-06	A	NWTPH-Gx	06/05/19 12:17	5	5					Eq-053119		<2
A9F0080-06	A	8260C Full List	06/05/19 12:17	5	5					Eq-053119		<2
A9F0080-07	A	8260C Full List	06/05/19 12:17	5	5					Tb-060319		<2

Prepared By: Date

Reviewed By: Date

PREPARATION BENCH SHEET

BATCH #: 9060589 (Water)

Apex Laboratories

Prep Method: EPA 1312/5030B SPLP Volatiles

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0107-01	A	624 TCE+Naphthalene	06/05/19 12:17	5	5					Wastewater-Grab		<2

*pH <2 verified

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description

Analyte Spike(s)

Std ID	Exp. Date	Description
A19E311	11/09/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19F008	06/16/19	8260B Cal. Std. B VOCR Spike Mix (20-40ug/n

Surrogate(s)

Std ID	Exp. Date	Description

GCMS9

Prepared By: Date

Reviewed By: Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F05032	Instrument:	VOA-GCMS9
Date:	06/05/19 09:07	Calibration:	A9E1405

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F05032-IBL1	Water	QC	QC			A19C125	
2	9F05032-IBL2	Water	QC	QC			A19C125	
3	9F05032-TUN1	Water	QC	QC			A19C125	
4	9F05032-CCV1	Water	QC	QC			A19C125	
5	9060589-BS1	Water	QC	QC		9060589	A19C125	
6	9F05032-CCV2	Water	QC	QC			A19C125	
7	9060589-BS2	Water	QC	QC		9060589	A19C125	
8	9060589-BLK1	Water	QC	QC		9060589	A19C125	
9	A9F0080-07	Water	8260C Full List		06/17/19	9060589	A19C125	
10	A9F0080-06	Water	8260C Full List		06/13/19	9060589	A19C125	
"	"	Water	NWTPH-Gx	"	06/11/19	9060589	A19C125	
11	A9E0723-01	Water	1312/8260C SPLP/ZHE VOCs - Full li	Hahn and Associates	06/14/19	9060589	A19C125	
"	"	Water	624 TCE+Naphthalene	(QC Source)		9060589	A19C125	
"	"	Water	8260C BTEX	(QC Source)		9060589	A19C125	
12	9060589-DUP2	Water	QC	QC		9060589	A19C125	
13	9F05032-IBL4	Water	QC	QC			A19C125	
14	A9E0785-01	Water	1312/8260C SPLP/ZHE VOCs - Full li	Hahn and Associates	06/14/19	9060589	A19C125	
15	A9E0832-02	Water	1312/8260C SPLP/ZHE VOCs - Full li	Hahn and Associates	06/14/19	9060589	A19C125	
"	"	Water	624 TCE+Naphthalene	(QC Source)		9060589	A19C125	
"	"	Water	8260C BTEX	(QC Source)		9060589	A19C125	
16	9060589-MS2	Water	QC	QC		9060589	A19C125	
17	9F05032-IBL3	Water	QC	QC			A19C125	
18	A9E0785-01RE1	Water	1312/8260C SPLP/ZHE VOCs - Full li	Hahn and Associates	06/14/19	9060589	A19C125	
"	"	Soil	NWTPH-Gx	"	06/14/19	9060533	A19C125	
19	A9F0080-01	Water	8260C Full List		06/13/19	9060589	A19C125	
"	"	Water	NWTPH-Gx	"	06/11/19	9060589	A19C125	
"	"	Water	1312/8260C SPLP/ZHE VOCs - Full li	(QC Source)		9060589	A19C125	
"	"	Water	624 TCE+Naphthalene	(QC Source)		9060589	A19C125	
"	"	Water	8260C BTEX	(QC Source)		9060589	A19C125	
20	9060589-DUP1	Water	QC	QC		9060589	A19C125	
21	A9F0080-02	Water	8260C Full List		06/13/19	9060589	A19C125	
"	"	Water	NWTPH-Gx	"	06/11/19	9060589	A19C125	
22	A9F0080-03	Water	8260C Full List		06/13/19	9060589	A19C125	
"	"	Water	NWTPH-Gx	"	06/11/19	9060589	A19C125	
23	A9F0080-04	Water	8260C Full List		06/13/19	9060589	A19C125	
"	"	Water	NWTPH-Gx	"	06/11/19	9060589	A19C125	
24	A9F0080-05	Water	8260C Full List		06/13/19	9060589	A19C125	
"	"	Water	NWTPH-Gx	"	06/11/19	9060589	A19C125	
"	"	Water	1312/8260C SPLP/ZHE VOCs - Full li	(QC Source)		9060589	A19C125	
"	"	Water	624 TCE+Naphthalene	(QC Source)		9060589	A19C125	
"	"	Water	8260C BTEX	(QC Source)		9060589	A19C125	
25	9060589-MS1	Water	QC	QC		9060589	A19C125	
26	9F05032-IBL5	Water	QC	QC			A19C125	
27	A9F0107-01	Water	624 TCE+Naphthalene		06/18/19	9060589	A19C125	
28	A9F0080-01RE1	Water	8260C Full List		06/13/19	9060589	A19C125	
"	"	Water	NWTPH-Gx	"	06/11/19	9060589	A19C125	
29	A9E0832-02RE1	Water	1312/8260C SPLP/ZHE VOCs - Full li	Hahn and Associates	06/14/19	9060589	A19C125	
"	"	Water	624 TCE+Naphthalene	(QC Source)		9060589	A19C125	
"	"	Water	8260C Full List	(QC Source)		9060589	A19C125	
"	"	Water	8260C BTEX	(QC Source)		9060589	A19C125	
"	"	Water	NWTPH-Gx	(QC Source)		9060589	A19C125	

Sequence:	9F05032	Instrument:	VOA-GCMS9
Date:	06/05/19 09:07	Calibration:	A9E1405

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
30	9060589-MS3	Water	QC	QC		9060589	A19C125	
31	9F05032-IBL6	Water	QC	QC			A19C125	
32	9F05032-IBL7	Water	QC	QC			A19C125	

Data Entered By: 6/6/19 hl

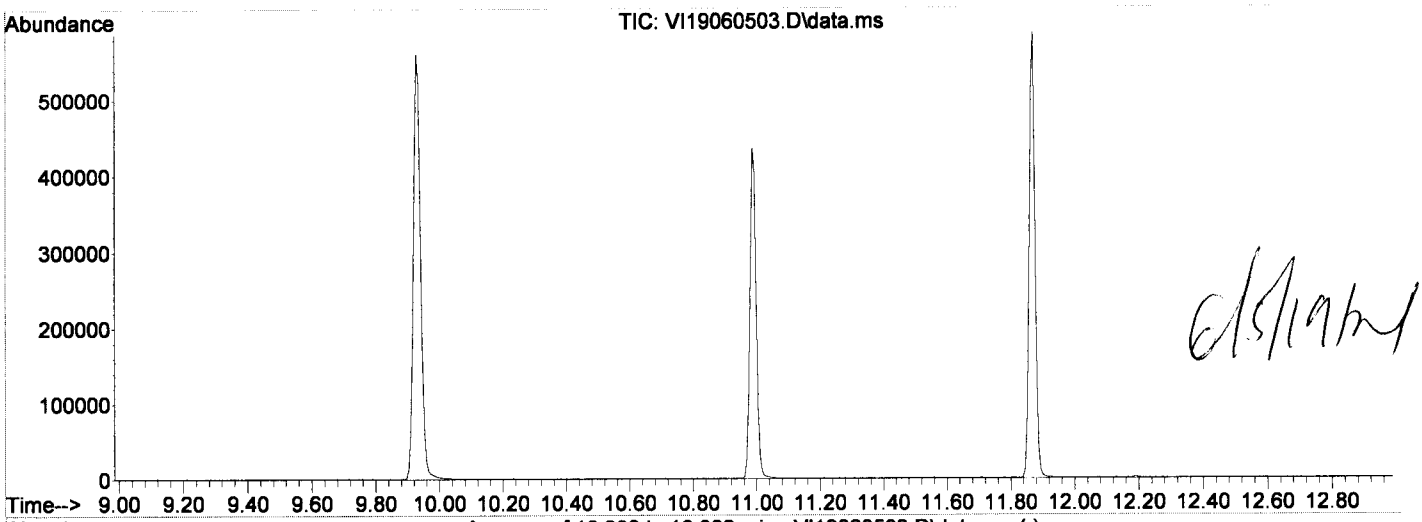
Data Reviewed By: MW 6/10/19

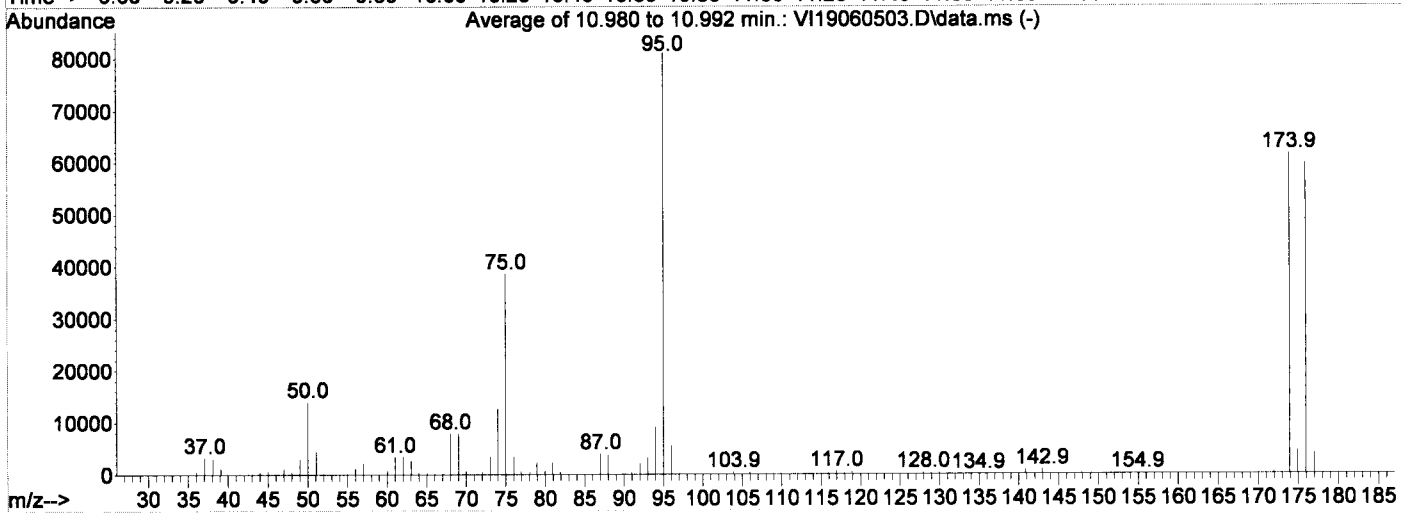
Comments:

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060503.D
Acq On : 5 Jun 2019 10:23 am
Operator : TNL
Sample : 9F05032-TUN1
Misc : A19C125 BFB (IS/SURR)
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI190514W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue May 14 09:28:30 2019





AutoFind: Scans 1545, 1546, 1547; Background Corrected with Scan 1539

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.3	14020	PASS
75	95	30	60	47.6	38619	PASS
95	95	100	100	100.0	81091	PASS
96	95	5	9	6.8	5512	PASS
173	174	0.00	2	0.1	85	PASS
174	95	50	200	75.8	61501	PASS
175	174	5	9	7.2	4405	PASS
176	174	95	101	96.9	59611	PASS
177	176	5	9	6.5	3874	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060503.D
Acq On : 5 Jun 2019 10:23 am
Operator : TNL
Sample : 9F05032-TUN1
Misc : A19C125 BFB (IS/SURR)
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:07 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.235	168	194303	50.00 ug/L	-0.01
39) Chlorobenzene-d5 (I)	9.928	117	301295	50.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.868	152	123750	50.00 ug/L	0.00
System Monitoring Compounds					
28) Dibromofluoromethane (S)	5.736	111	115408	56.75 ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.801	114	350301	54.29 ug/L	0.00
42) Toluene-d8 (S)	8.322	98	413818	50.80 ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	102362	51.33 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.910	50	388	0.16 ug/L #	47
5) Bromomethane	2.372	96	385	0.24 ug/L #	27
6) Chloroethane	2.457	64	119	Below Cal #	1
13) Methylene Chloride	3.887	84	1987	Below Cal	89
14) Acetone	3.966	43	1572	1.44 ug/L	92

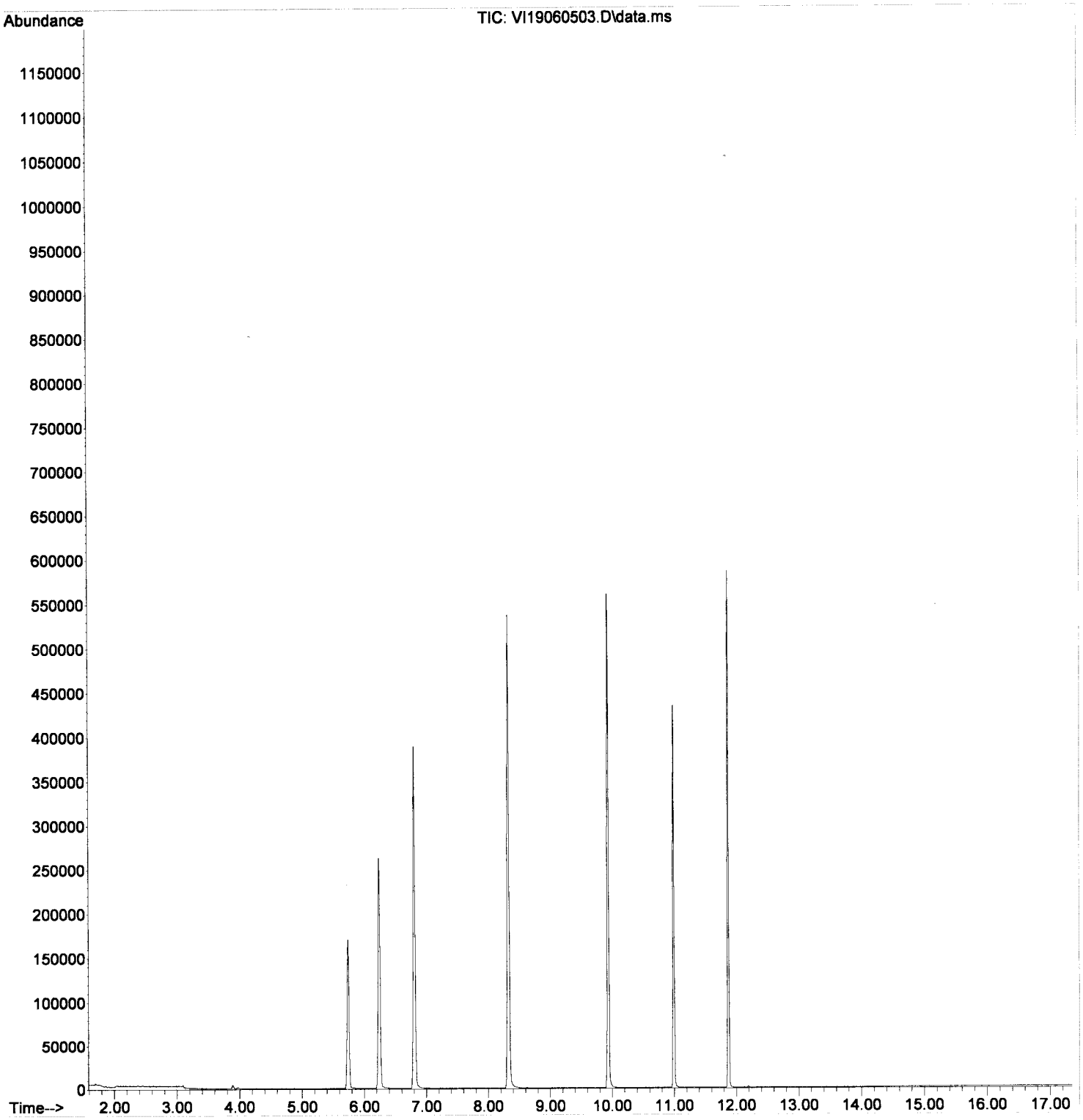
6/5/19 bcl

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060503.D
Acq On : 5 Jun 2019 10:23 am
Operator : TNL
Sample : 9F05032-TUN1
Misc : A19C125 BFB (IS/SURR)
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:07 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060504.D
Acq On : 5 Jun 2019 10:51 am
Operator : TNL
Sample : 9060589-BS1
Misc : 1X 5mL 20/40PPB VOCR A19F008
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:11 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

6/25/19 bt

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	93	-0.01
2		Dichlorodifluoromethane	20.000	19.483	2.6	91	-0.01
3	P	Chloromethane	20.000	22.876	-14.4	107	0.00
4	C	Vinyl Chloride	20.000	19.467	2.7	91	-0.01
5		Bromomethane	20.000	23.306	-16.5	105	-0.01
6		Chloroethane	20.000	15.146	24.3#	93	-0.01 Q55
7		Trichlorofluoromethane	20.000	24.275	-21.4#	111	-0.01 Q56
8	C	1,1-Dichloroethene	20.000	18.347	8.3	83	-0.01
9		Carbon Disulfide	20.000	17.735	11.3	81	-0.01
10		Freon 113	20.000	19.500	2.5	88	-0.01
11		Iodomethane	20.000	11.401	43.0#	56	-0.01 NR
12		~~Acrolein~~	~~20.000~~	~~0.000~~	~~100.0#~~	~~0~~	~~-0.02~~
13		Methylene Chloride	20.000	18.740	6.3	87	-0.01
14		Acetone	40.000	40.270	-0.7	98	-0.01
15		t-1,2-Dichloroethene	20.000	20.012	-0.1	87	-0.01
16		n-Hexane	20.000	17.215	13.9	77	-0.01
17		Methyl-tert-butyl-ether	20.000	17.394	13.0	78	-0.01
18	P	1,1-Dichloroethane	20.000	20.075	-0.4	90	-0.01
19		Acrylonitrile	20.000	22.323	-11.6	99	0.00
20		~~Vinyl Acetate~~	~~20.000~~	~~0.000~~	~~100.0#~~	~~0~~	~~0.00~~
21		c-1,2-Dichloroethene	20.000	20.497	-2.5	89	-0.01
22		2,2-Dichloropropane	20.000	16.665	16.7	76	-0.01
23		Bromochloromethane	20.000	23.129	-15.6	97	-0.01
24	C	Chloroform	20.000	21.126	-5.6	95	-0.01
25		Carbon Tetrachloride	20.000	20.611	-3.1	91	-0.01
26		Tetrahydrofuran	20.000	19.052	4.7	90	-0.01
27		1,1,1-Trichloroethane	20.000	19.344	3.3	86	-0.02
28	S	Dibromofluoromethane (S)	50.000	55.101	-10.2	101	-0.01
29		1,1-Dichloropropene	20.000	19.187	4.1	86	-0.01
30		2-Butanone (MEK)	40.000	42.701	-6.8	99	-0.01
31		Benzene	20.000	20.252	-1.3	93	0.00
32		1,2-Dichloroethane (EDC)	20.000	21.734	-8.7	94	-0.01
33		iso-Butyl Alcohol	500.000	509.216	-1.8	96	0.00
34	S	1,4-Difluorobenzene (S)	50.000	52.536	-5.1	97	0.00
35		Trichloroethene (TCE)	20.000	20.460	-2.3	89	0.00
36		Dibromomethane	20.000	22.389	-11.9	99	0.00
37	C	1,2-Dichloropropane	20.000	21.115	-5.6	93	-0.01
38		Bromodichloromethane	20.000	22.537	-12.7	100	-0.01
39		Chlorobenzene-d5 (I)	50.000	50.000	0.0	98	0.00
40		~~2-Chloroethyl Vinyl Ether~~	~~20.000~~	~~0.000~~	~~100.0#~~	~~0~~	~~0.00~~
41		c-1,3-Dichloropropene	20.000	19.148	4.3	93	-0.01
42	S	Toluene-d8 (S)	50.000	49.642	0.7	98	-0.01
43	C	Toluene	20.000	18.800	6.0	94	-0.01
44		Tetrachloroethene (PCE)	20.000	19.462	2.7	94	0.00
45		4-Methyl-2-Pentanone (MIBK)	40.000	39.176	2.1	94	0.00
46		t-1,3-Dichloropropene	20.000	18.247	8.8	95	0.00
47		1,1,2-Trichloroethane	20.000	21.506	-7.5	101	0.00
48		Dibromochloromethane	20.000	20.164	-0.8	106	-0.01
49		1,3-Dichloropropane	20.000	20.202	-1.0	95	0.00
50		1,2-Dibromoethane (EDB)	20.000	20.766	-3.8	96	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060504.D
Acq On : 5 Jun 2019 10:51 am
Operator : TNL
Sample : 9060589-BS1
Misc : 1X 5mL 20/40PPB VOCR A19F008
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:11 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		2-Hexanone	40.000	40.244	-0.6	95	0.00
52	P	Chlorobenzene	20.000	20.306	-1.5	99	0.00
53	C	Ethylbenzene	20.000	18.920	5.4	95	0.00
54		1,1,1,2-Tetrachloroethane	20.000	19.953	0.2	100	-0.01
55		m,p-Xylenes (2)	40.000	38.387	4.0	93	-0.01
56		o-Xylene	20.000	18.195	9.0	87	0.00
57		Styrene	20.000	20.730	-3.7	95	0.00
58	P	Bromoform	20.000	24.603	-23.0#	122	0.00
59		Isopropylbenzene	20.000	18.720	6.4	88	0.00
60	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	102	0.00
61	S	4-Bromofluorobenzene (S)	50.000	45.753	8.5	96	0.00
62		Bromobenzene	20.000	20.397	-2.0	99	0.00
63		n-Propylbenzene	20.000	18.348	8.3	95	0.00
64	P	1,1,2,2-Tetrachloroethane	20.000	21.888	-9.4	109	0.00
65		2-Chlorotoluene	20.000	19.099	4.5	94	0.00
66		1,3,5-Trimethylbenzene	20.000	19.081	4.6	94	0.00
67		1,2,3-Trichloropropane	20.000	19.753	1.2	101	0.00
68		t-1,4-Dichloro-2-butene	20.000	21.376	-6.9	108	0.00
69		4-Chlorotoluene	20.000	19.039	4.8	97	0.00
70		tert-Butylbenzene	20.000	17.797	11.0	89	0.00
71		1,2,4-Trimethylbenzene	20.000	19.475	2.6	94	0.00
72		sec-Butylbenzene	20.000	18.879	5.6	94	0.00
73		4-Isopropyltoluene	20.000	19.035	4.8	91	0.00
74		1,3-Dichlorobenzene	20.000	20.056	-0.3	101	0.00
75		1,4-Dichlorobenzene	20.000	19.809	1.0	104	0.00
76		n-Butylbenzene	20.000	19.733	1.3	92	0.00
77		1,2-Dichlorobenzene	20.000	20.237	-1.2	100	0.00
78		1,2-Dibromo-3-Chloropropane	20.000	19.866	0.7	110	0.00
79		Hexachlorobutadiene	20.000	19.748	1.3	90	0.00
80		1,2,4-Trichlorobenzene	20.000	18.770	6.2	90	0.00
81		Naphthalene	20.000	16.978	15.1	90	0.00
82		1,2,3-Trichlorobenzene	20.000	20.420	-2.1	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060504.D
Acq On : 5 Jun 2019 10:51 am
Operator : TNL
Sample : 9060589-BS1
Misc : 1X 5mL 20/40PPB VOCR A19F008
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:11 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.235	168	203251	50.00 ug/L		-0.01
39) Chlorobenzene-d5 (I)	9.928	117	317109	50.00 ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	156802	50.00 ug/L		0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.730	111	117220	55.10 ug/L		-0.01
34) 1,4-Difluorobenzene (S)	6.801	114	354625	52.54 ug/L		0.00
42) Toluene-d8 (S)	8.316	98	425598	49.64 ug/L		-0.01
61) 4-Bromofluorobenzene (S)	10.986	174	115616	45.75 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.685	85	44115	19.48 ug/L		98
3) Chloromethane	1.904	50	58121	22.88 ug/L		96
4) Vinyl Chloride	2.007	62	59025	19.47 ug/L		97
5) Bromomethane	2.366	96	38383	23.31 ug/L		99
6) Chloroethane	2.506	64	15884	15.15 ug/L		86
7) Trichlorofluoromethane	2.670	101	67139	24.27 ug/L		98
8) 1,1-Dichloroethene	3.242	61	44859	18.35 ug/L		98
9) Carbon Disulfide	3.260	76	87889	17.74 ug/L		98
10) Freon 113	3.297	101	35828	19.50 ug/L		96
11) Iodomethane	3.400	142	5983	11.40 ug/L		87
13) Methylene Chloride	3.887	84	42595	18.74 ug/L		93
14) Acetone	3.960	43	45949	40.27 ug/L		91
15) t-1,2-Dichloroethene	4.051	61	48686	20.01 ug/L		99
16) n-Hexane	4.136	86	7079	17.22 ug/L	#	79
17) Methyl-tert-butyl-ether	4.185	73	109637	17.39 ug/L		90
18) 1,1-Dichloroethane	4.702	63	68312	20.07 ug/L		96
19) Acrylonitrile	4.769	53	27202	22.32 ug/L		96
21) c-1,2-Dichloroethene	5.262	61	54996	20.50 ug/L		94
22) 2,2-Dichloropropane	5.371	77	41249	16.66 ug/L		94
23) Bromochloromethane	5.463	130	28840	23.13 ug/L		91
24) Chloroform	5.542	83	74799	21.13 ug/L		99
25) Carbon Tetrachloride	5.676	117	42758	20.61 ug/L		94
26) Tetrahydrofuran	5.718	42	23272	19.05 ug/L		92
27) 1,1,1-Trichloroethane	5.749	97	52804	19.34 ug/L		97
29) 1,1-Dichloropropene	5.882	75	51757	19.19 ug/L		98
30) 2-Butanone (MEK)	5.876	43	75390	42.70 ug/L		99
31) Benzene	6.144	78	167960	20.25 ug/L		96
32) 1,2-Dichloroethane (EDC)	6.357	62	58621	21.73 ug/L		93
33) iso-Butyl Alcohol	6.393	43	108749	509.22 ug/L		99
35) Trichloroethene (TCE)	6.765	130	40970	20.46 ug/L		95
36) Dibromomethane	7.221	93	29824	22.39 ug/L		91
37) 1,2-Dichloropropane	7.330	63	44469	21.12 ug/L		94
38) Bromodichloromethane	7.397	83	53805	22.54 ug/L		95
41) c-1,3-Dichloropropene	8.109	75	56962	19.15 ug/L		87
43) Toluene	8.377	91	178099	18.80 ug/L		98
44) Tetrachloroethene (PCE)	8.815	166	40289	19.46 ug/L		88
45) 4-Methyl-2-Pentanone (...	8.821	43	132119	39.18 ug/L		97
46) t-1,3-Dichloropropene	8.857	75	51149	18.25 ug/L		97
47) 1,1,2-Trichloroethane	9.028	97	44621	21.51 ug/L		96
48) Dibromochloromethane	9.204	129	39989	20.16 ug/L		98
49) 1,3-Dichloropropane	9.307	76	73113	20.20 ug/L		94
50) 1,2-Dibromoethane (EDB)	9.441	107	42860	20.77 ug/L		97
51) 2-Hexanone	9.672	43	96010	40.24 ug/L		90

6/25/19 MA

055
056

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060504.D
Acq On : 5 Jun 2019 10:51 am
Operator : TNL
Sample : 9060589-BS1
Misc : 1X 5mL 20/40PPB VOCR A19F008
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:11 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) Chlorobenzene	9.946	112	120799	20.31	ug/L		97
53) Ethylbenzene	9.971	91	196444	18.92	ug/L		99
54) 1,1,1,2-Tetrachloroethane	10.001	131	37200	19.95	ug/L		96
55) m,p-Xylenes (2)	10.098	91	294570	38.39	ug/L		97
56) o-Xylene	10.482	91	139149	18.19	ug/L		99
57) Styrene	10.530	104	115606	20.73	ug/L		94
58) Bromoform	10.555	173	29090	24.60	ug/L		97
59) Isopropylbenzene	10.749	105	168512	18.72	ug/L		99
62) Bromobenzene	11.072	156	47689	20.40	ug/L	#	81
63) n-Propylbenzene	11.090	91	214297	18.35	ug/L		98
64) 1,1,2,2-Tetrachloroethane	11.151	85	48293	21.89	ug/L		96
65) 2-Chlorotoluene	11.218	126	42816	19.10	ug/L		92
66) 1,3,5-Trimethylbenzene	11.242	105	144770	19.08	ug/L		96
67) 1,2,3-Trichloropropane	11.266	110	21787	19.75	ug/L		99
68) t-1,4-Dichloro-2-butene	11.291	53	15280	21.38	ug/L	#	66
69) 4-Chlorotoluene	11.352	91	134039	19.04	ug/L		95
70) tert-Butylbenzene	11.498	91	78643	17.80	ug/L		92
71) 1,2,4-Trimethylbenzene	11.552	105	145422	19.48	ug/L		96
72) sec-Butylbenzene	11.631	105	175104	18.88	ug/L		98
73) 4-Isopropyltoluene	11.741	119	139463	19.03	ug/L		100
74) 1,3-Dichlorobenzene	11.814	146	86593	20.06	ug/L		97
75) 1,4-Dichlorobenzene	11.881	146	91681	19.81	ug/L		98
76) n-Butylbenzene	12.057	91	125614	19.73	ug/L		96
77) 1,2-Dichlorobenzene	12.197	146	83404	20.24	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.812	157	14125	19.87	ug/L		72
79) Hexachlorobutadiene	13.323	223	10533	19.75	ug/L		95
80) 1,2,4-Trichlorobenzene	13.359	180	42109	18.77	ug/L		95
81) Naphthalene	13.645	128	134199	16.98	ug/L		96
82) 1,2,3-Trichlorobenzene	13.803	180	42772	20.42	ug/L		98

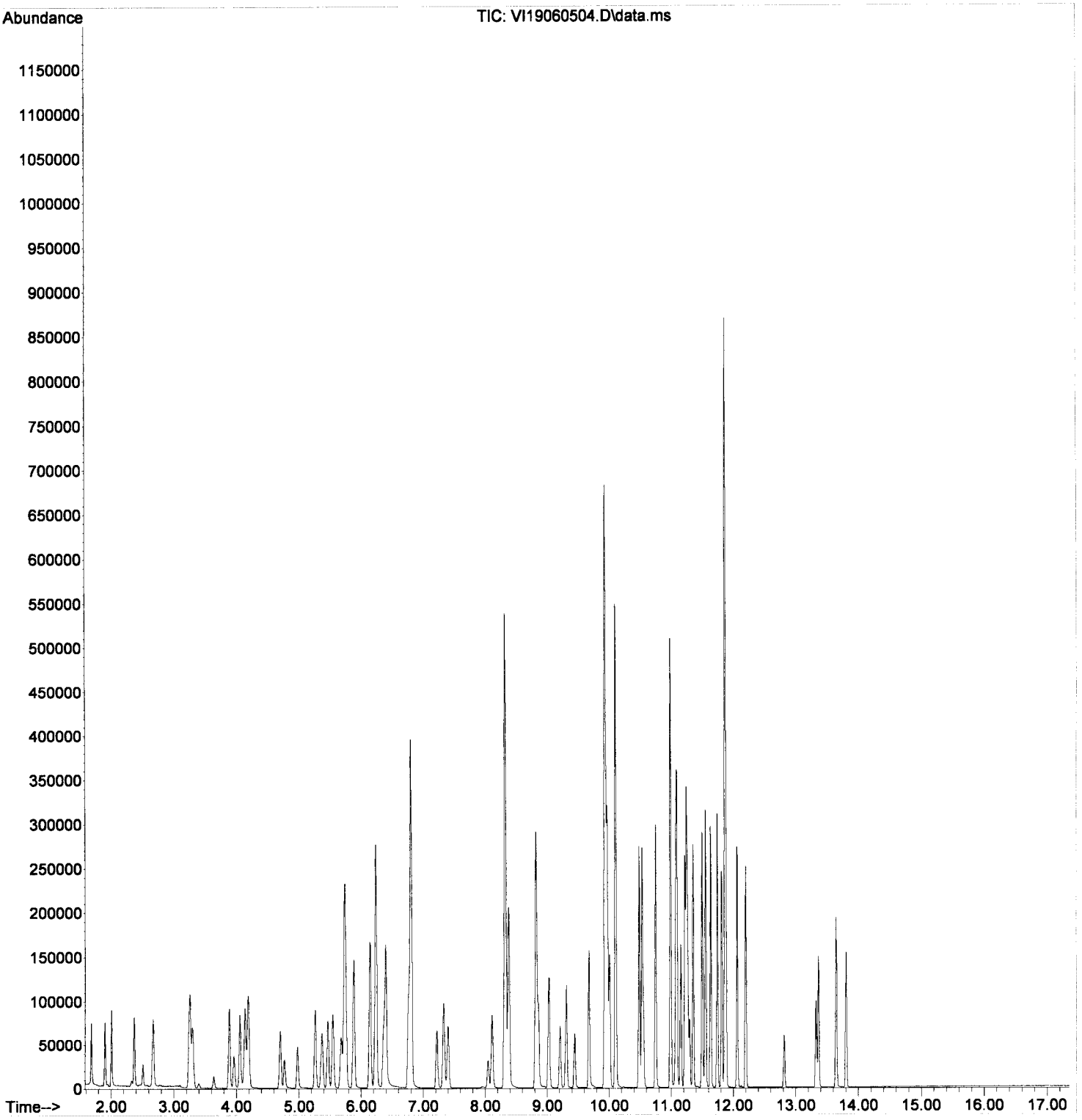
Q57

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060504.D
Acq On : 5 Jun 2019 10:51 am
Operator : TNL
Sample : 9060589-BS1
Misc : 1X 5mL 20/40PPB VOCR A19F008
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:11 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060505.D
Acq On : 5 Jun 2019 11:18 am
Operator : TNL
Sample : 9060589-BS2
Misc : 1X 5mL 500PPB GX A19E311
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:27 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	99	-0.01
2	S	1,4-Difluorobenzene (Sur)	50.000	52.296	-4.6	103	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	50.876	-1.8	100	0.00
4	H	NWTPH-Gx (TPH)	500.000	468.235	6.4	91	0.00
5	H	TPHg (C5-C9)	500.000	483.762	3.2	95	0.00
6	H	TPHg (C6-C10)	500.000	490.701	1.9	95	0.00
7	H	CA-LUFT (C5-C12)	500.000	472.712	5.5	93	0.00
8		Benzene (NR)	-1.000	0.000	0.0	103	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	104	0.00
10		Toluene (NR)	-1.000	0.000	0.0	103	-0.01
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	104	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	103	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	91	0.00

6/05/19 MV

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060505.D
Acq On : 5 Jun 2019 11:18 am
Operator : TNL
Sample : 9060589-BS2
Misc : 1X 5mL 500PPB GX A19E311
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:27 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.235	168	204186	50.00 ug/L	-0.01
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.801	114	356343	52.30 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.986	174	110530	50.88 ug/L	0.00
9) Toluene-d8 (NR)	8.322	98	425825	0.00 ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.928	117	313661	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.869	150	224451	0.00 ug/L	0.00
Target Compounds					Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	2773038m	468.23 ug/L	
5) TPHg (C5-C9)	9.910	TIC	4138259m	483.76 ug/L	
6) TPHg (C6-C10)	9.910	TIC	3529017m	490.70 ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	4759462m	472.71 ug/L	

6/05/19 tnl

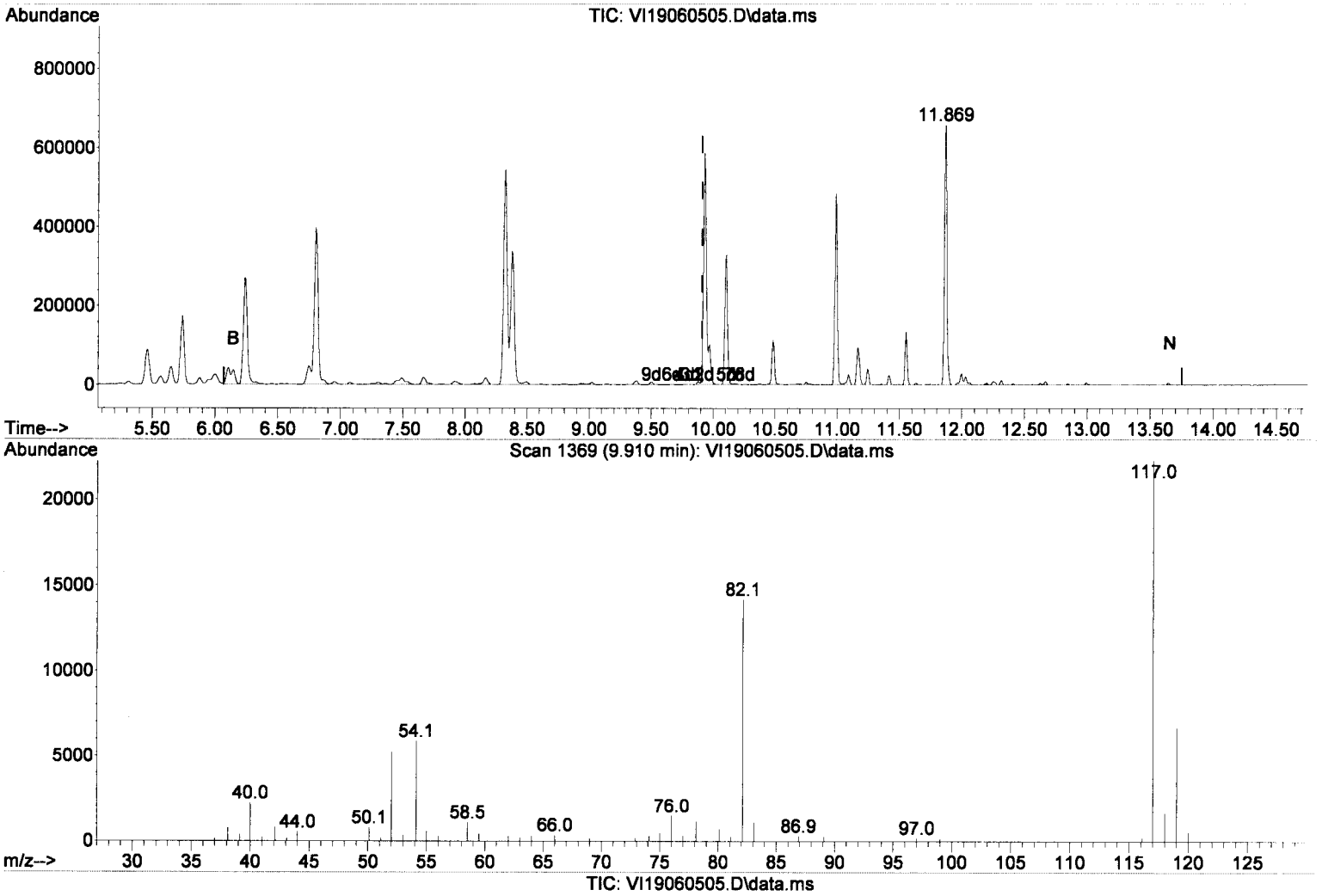
NR

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060505.D
Acq On : 5 Jun 2019 11:18 am
Operator : TNL
Sample : 9060589-BS2
Misc : 1X 5mL 500PPB GX A19E311
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 11:59:27 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



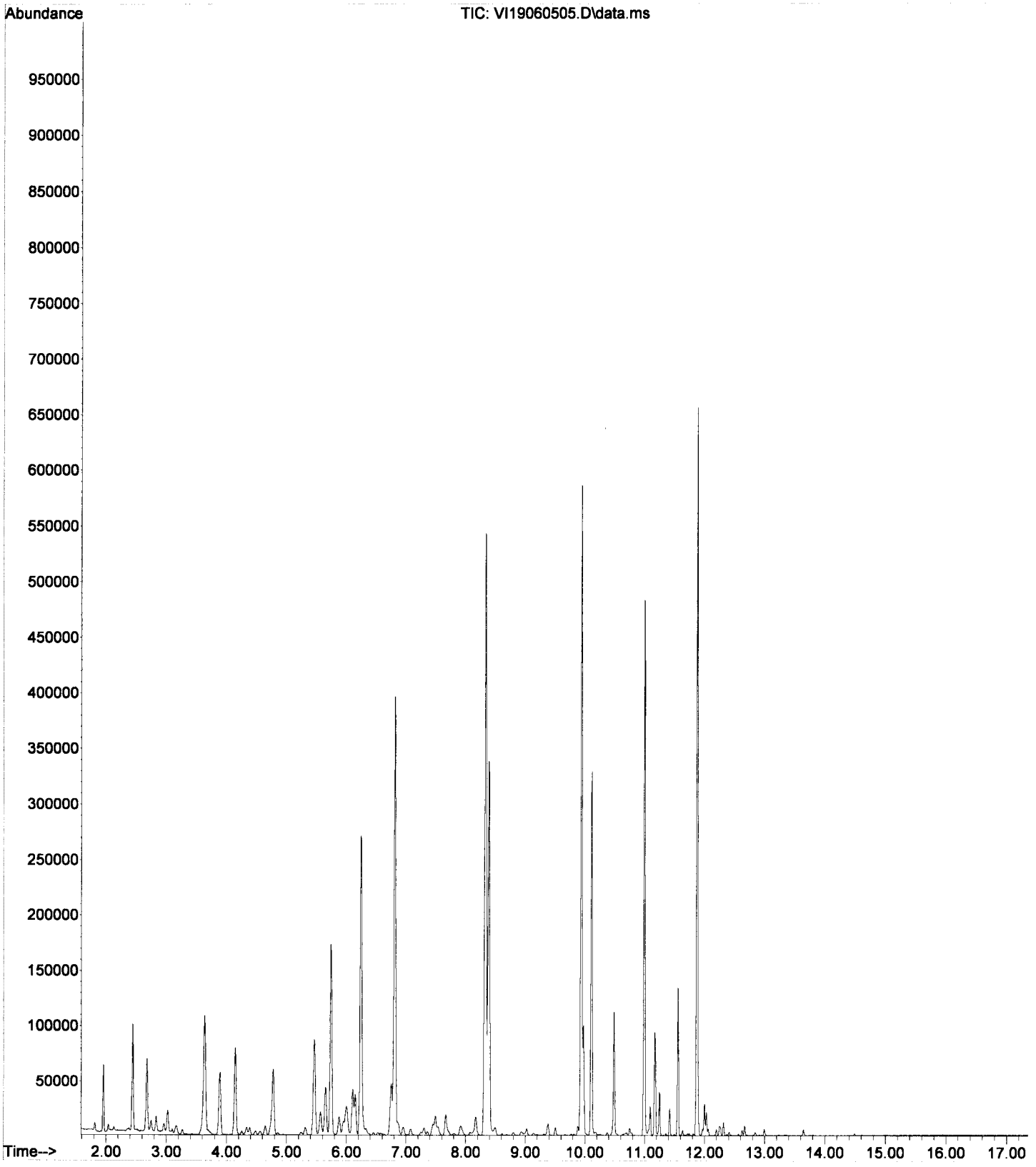
(4) NWTPH-Gx (TPH) (H)

9.910min (0.000) 468.23 ug/L 6/05/19 mf

response 2773038

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

File :C:\msdchem\1\data\2019-06\9F05032\VI19060505.D
Operator : TNL
Acquired : 5 Jun 2019 11:18 am using AcqMethod VI1611RUN.M
Instrument : VOA-GCMS9
Sample Name: 9060589-BS2
Misc Info : 1X 5mL 500PPB GX A19E311
Vial Number: 5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060506.D
Acq On : 5 Jun 2019 11:45 am
Operator : TNL
Sample : 9060589-BLK1
Misc : 1X 5mL DI
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:48 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.235	168	203190	50.00	ug/L	-0.01
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.801	114	360493	53.16	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.986	174	106784	49.39	ug/L	0.00
9) Toluene-d8 (NR)	8.322	98	425554	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.928	117	310373	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.868	150	206684	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	-16909m	32.93	ug/L	
5) TPHg (C5-C9)	9.910	TIC	376369m	26.17	ug/L	
6) TPHg (C6-C10)	9.910	TIC	356772m	34.20	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	368879m	26.51	ug/L	

6/5/19 CAM

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060506.D
Acq On : 5 Jun 2019 11:45 am
Operator : TNL
Sample : 9060589-BLK1
Misc : 1X 5mL DI
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:04 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.235	168	203191	50.00	ug/L		-0.01
39) Chlorobenzene-d5 (I)	9.928	117	310373	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.868	152	132036	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.730	111	117316	55.16	ug/L		-0.01
34) 1,4-Difluorobenzene (S)	6.801	114	359309	53.25	ug/L		0.00
42) Toluene-d8 (S)	8.322	98	425225	50.68	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.986	174	106784	50.18	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.903	50	400	0.16	ug/L	#	47
5) Bromomethane	2.372	96	404	0.25	ug/L	#	32
13) Methylene Chloride	3.881	84	1261	Below Cal			88
14) Acetone	3.966	43	1077	0.94	ug/L		98
53) Ethylbenzene	9.928	91	634	0.06	ug/L	#	1
81) Naphthalene	13.645	128	124	0.52	ug/L		81

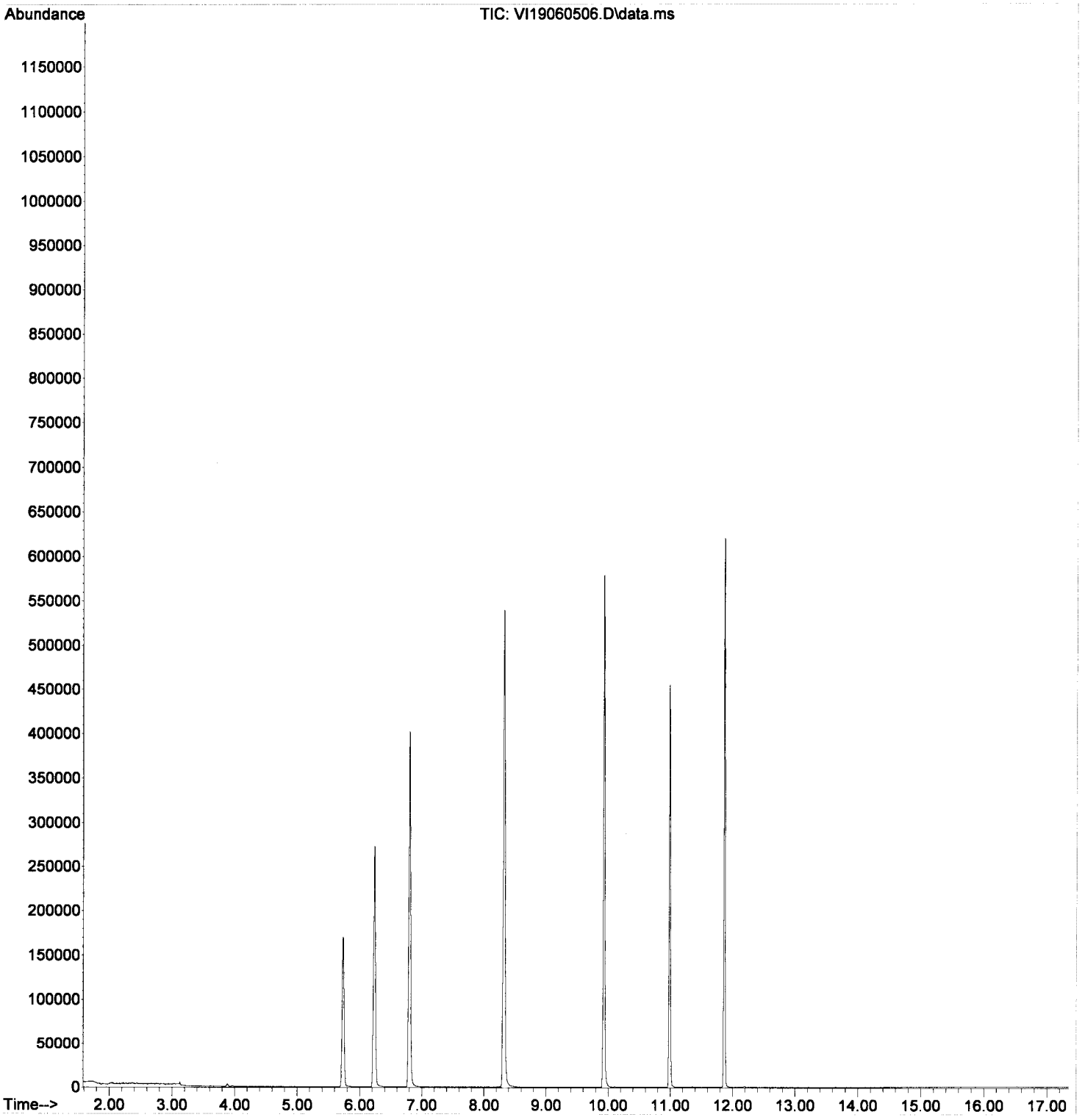
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/5/19 MM

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060506.D
Acq On : 5 Jun 2019 11:45 am
Operator : TNL
Sample : 9060589-BLK1
Misc : 1X 5mL DI
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:04 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

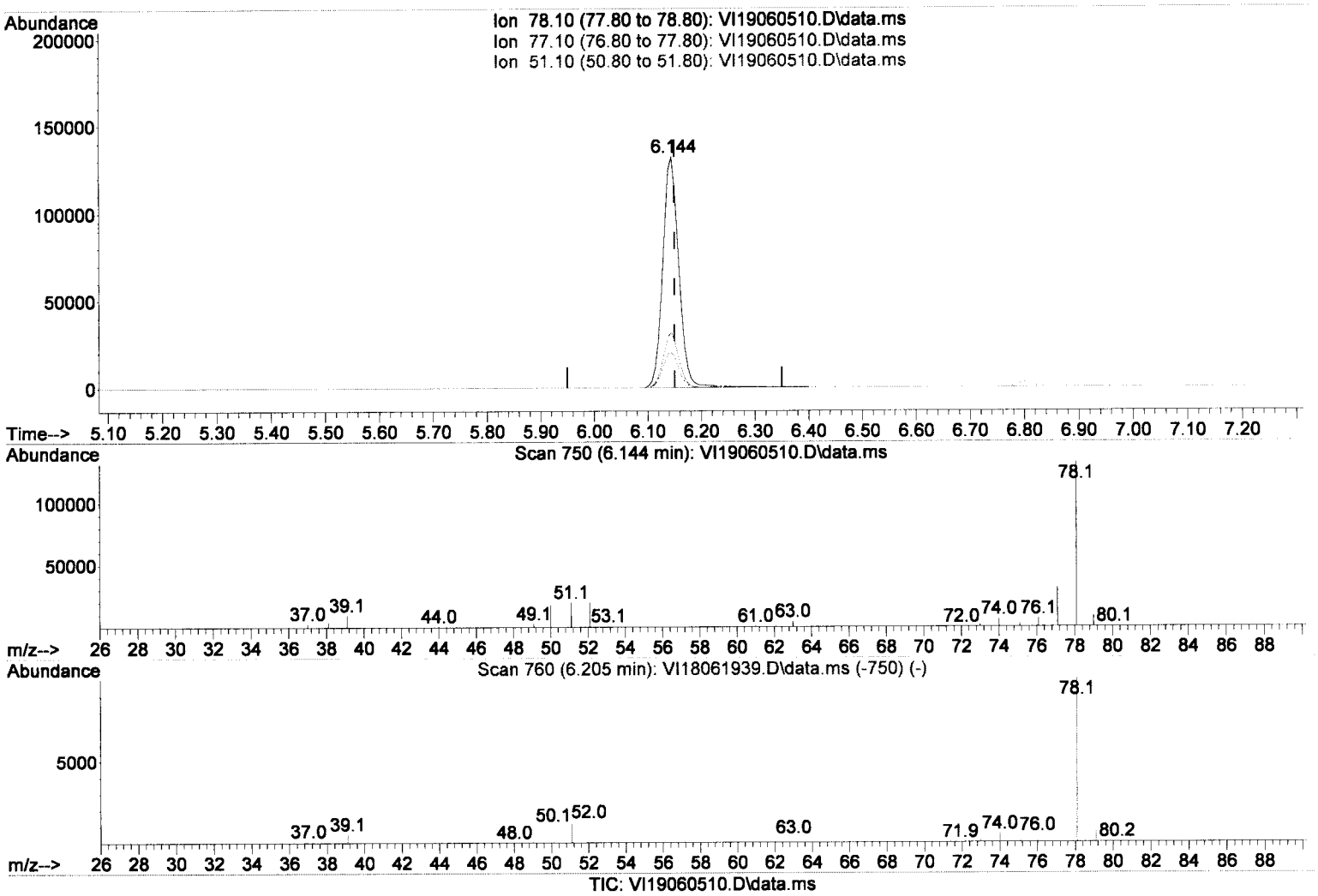
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.235	168	196229	50.00	ug/L		-0.01
39) Chlorobenzene-d5 (I)	9.928	117	288993	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	130165	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.736	111	109274	53.20	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.801	114	336076	51.57	ug/L		0.00
42) Toluene-d8 (S)	8.322	98	396963	50.81	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.993	174	101157	48.22	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.904	50	229	0.09	ug/L	#	47
5) Bromomethane	2.378	96	262	0.16	ug/L	#	25
6) Chloroethane	2.494	64	175	Below Cal		#	36
13) Methylene Chloride	3.887	84	1297	Below Cal			95
14) Acetone	3.966	43	576	0.52	ug/L	#	44
31) Benzene	6.144	78	272122	33.99	ug/L		97
43) Toluene	8.377	91	125733	14.56	ug/L		99
53) Ethylbenzene	9.971	91	29743	3.14	ug/L		99
55) m,p-Xylenes (2)	10.104	91	29319	4.19	ug/L		99
56) o-Xylene	10.482	91	9395	1.35	ug/L		95
57) Styrene	10.530	104	6893	1.36	ug/L		93
59) Isopropylbenzene	10.749	105	931	0.11	ug/L		54
66) 1,3,5-Trimethylbenzene	11.248	105	1697	0.27	ug/L		95
70) tert-Butylbenzene	11.552	91	234	0.06	ug/L	#	60
71) 1,2,4-Trimethylbenzene	11.552	105	2865	0.46	ug/L		98
72) sec-Butylbenzene	11.552	105	2865	0.37	ug/L		72
76) n-Butylbenzene	11.996	91	9551	1.81	ug/L	#	41
81) Naphthalene	13.645	128	1003273	138.91	ug/L		97

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



TIC: VI19060510.D\data.ms

(31) Benzene

6.144min (-0.006) 33.99 ug/L

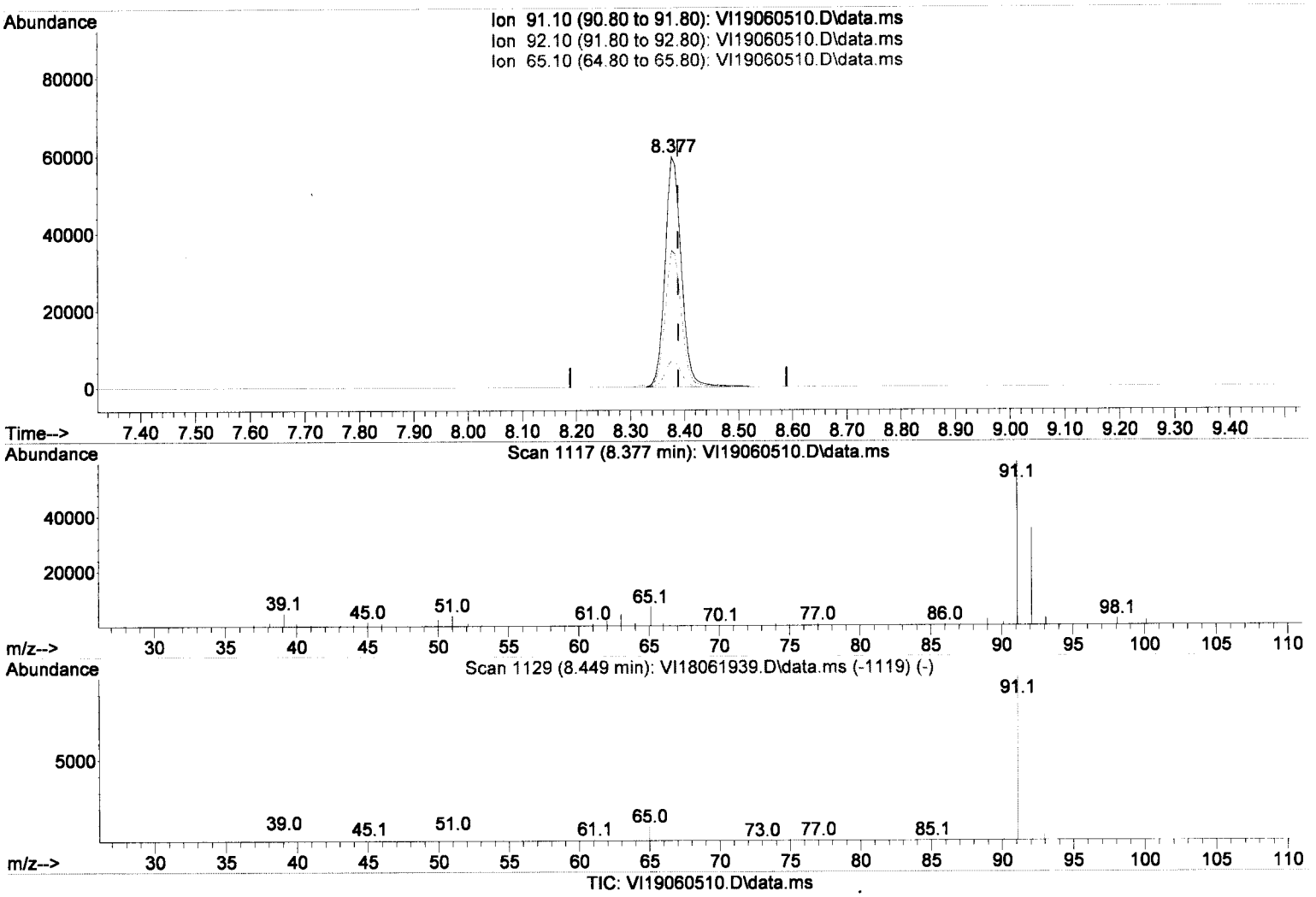
response 272122

Ion	Exp%	Act%
78.10	100.00	100.00
77.10	24.70	23.85
51.10	17.20	15.13
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



TIC: VI19060510.D\data.ms

(43) Toluene (C)

8.377min (-0.012) 14.56 ug/L

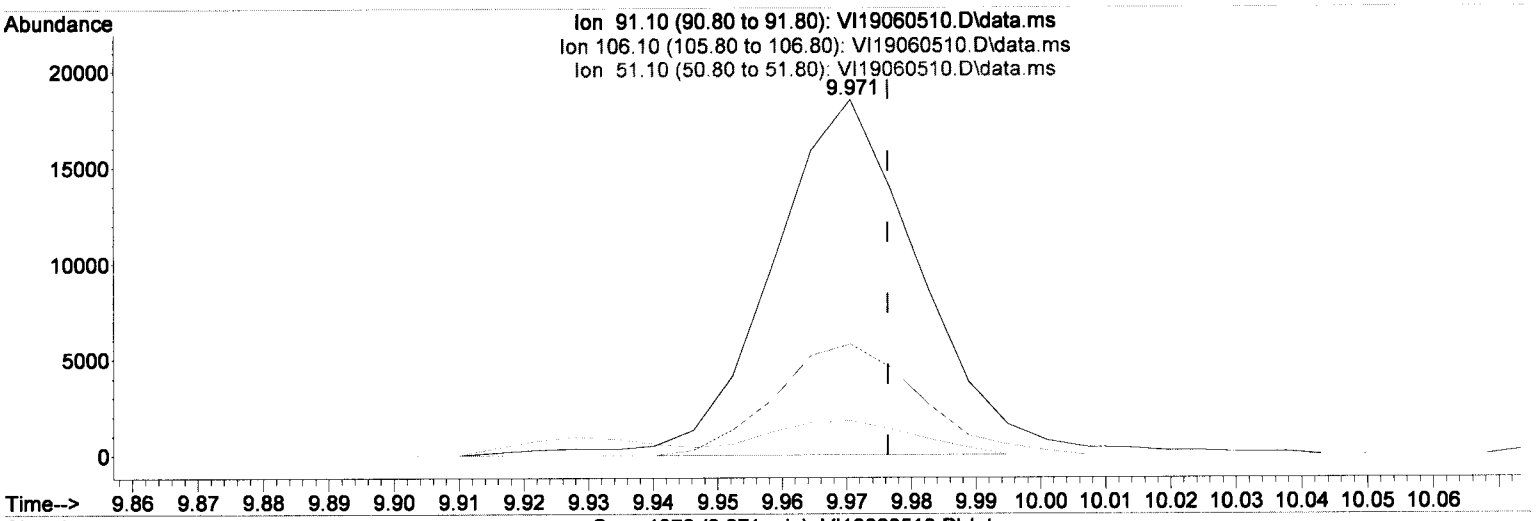
response 125733

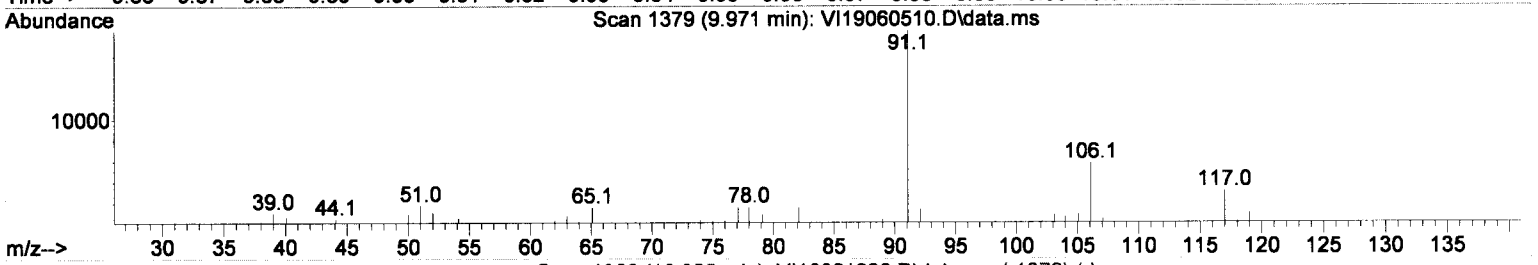
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	59.80	59.32
65.10	10.30	11.73
0.00	0.00	0.00

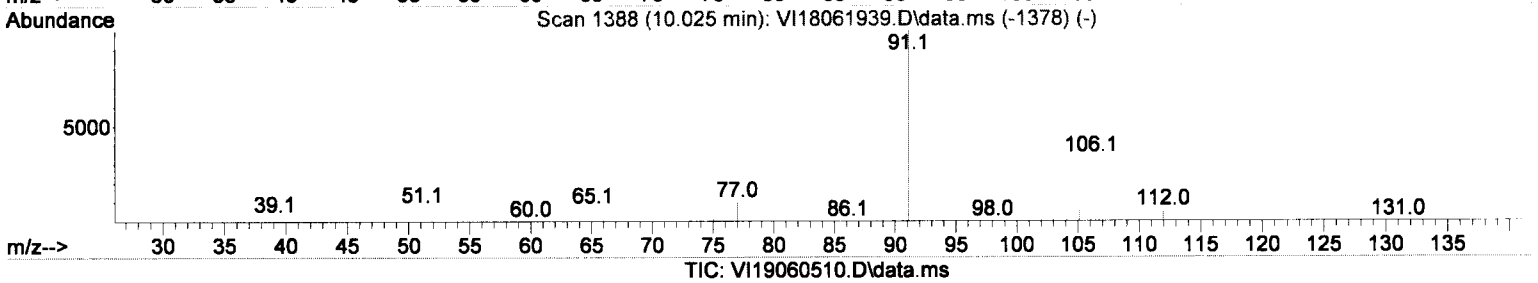
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







TIC: VI19060510.D\data.ms

(53) Ethylbenzene (C)

9.971min (-0.006) 3.14 ug/L

response 29743

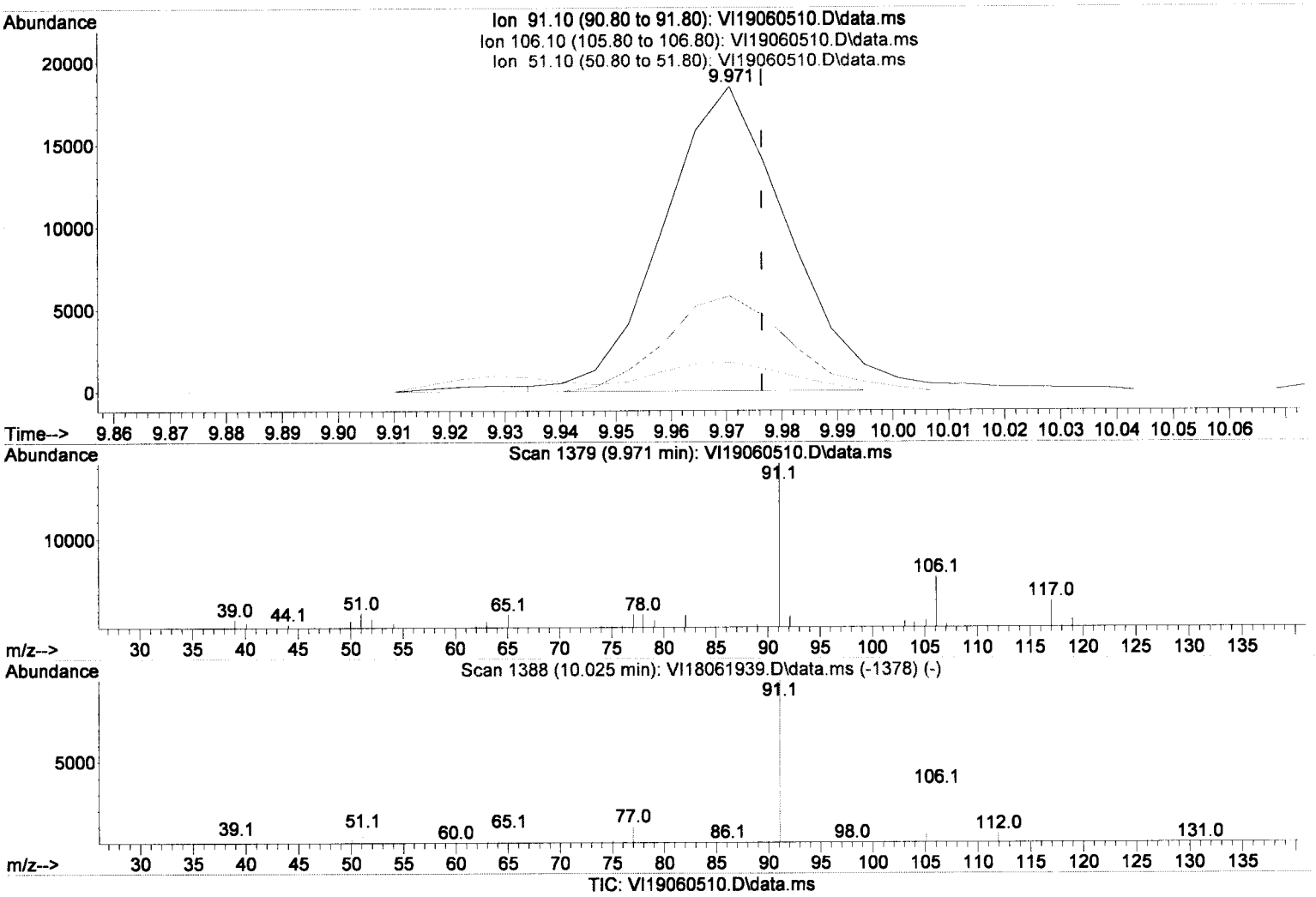
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.30
51.10	10.40	9.67
0.00	0.00	0.00

ME 6/5/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



TIC: VI19060510.D\data.ms

(53) Ethylbenzene (C)

9.971min (-0.006) 3.10 ug/L m

response 29335

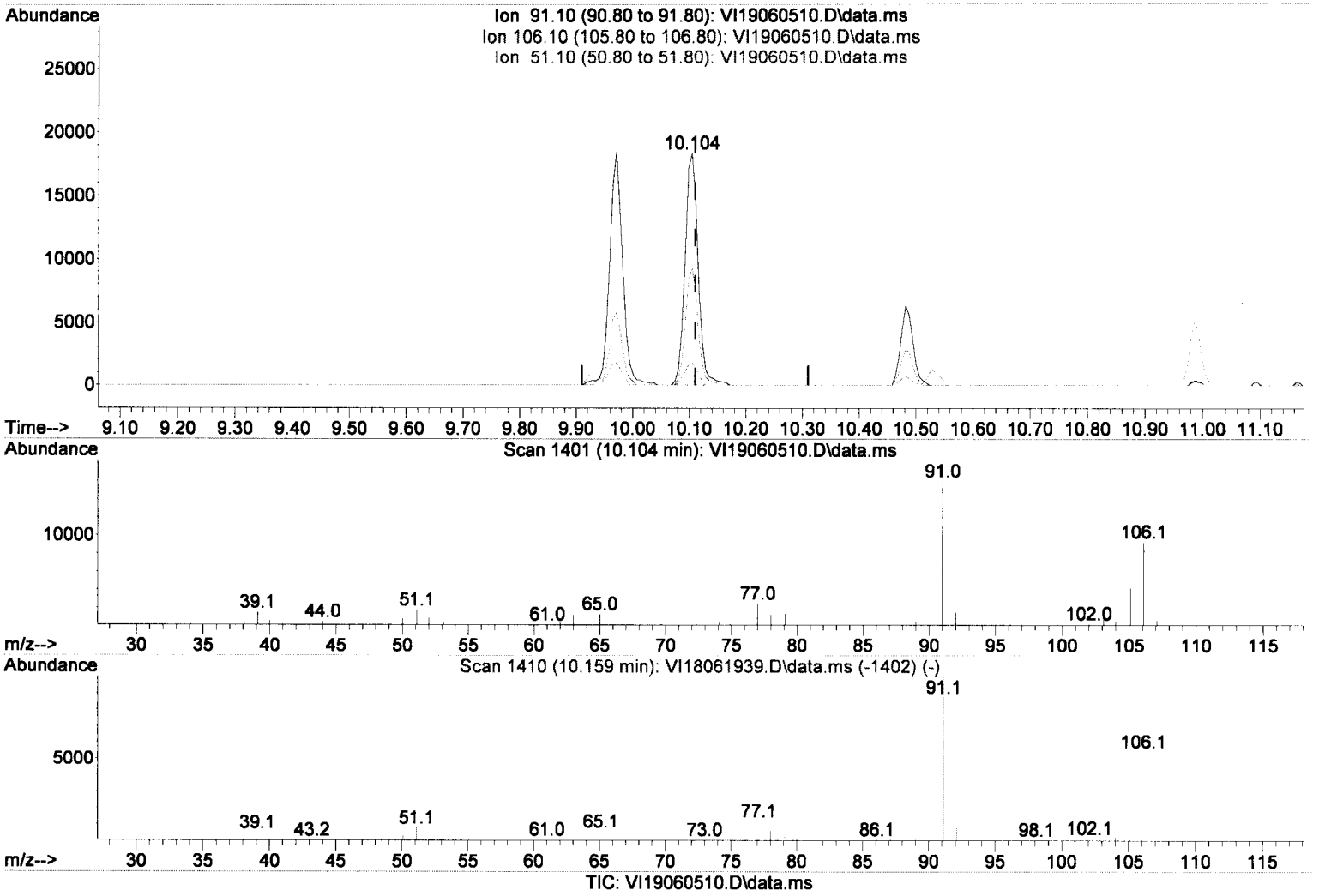
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.30
51.10	10.40	9.67
0.00	0.00	0.00

6/5/19 bm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



TIC: VI19060510.D\data.ms

(55) m,p-Xylenes (2)

10.104min (-0.006) 4.19 ug/L

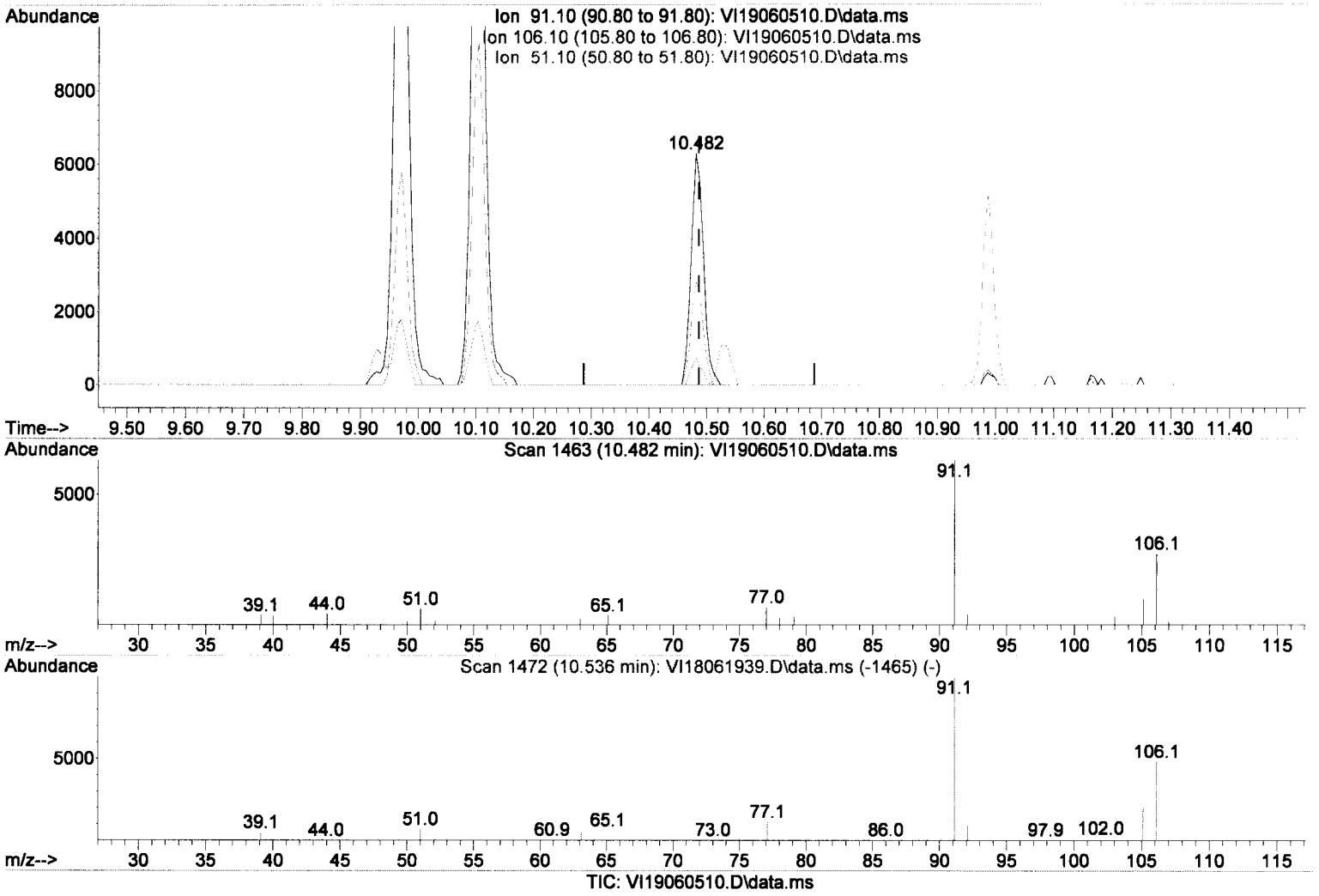
response 29319

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	51.20	50.73
51.10	9.80	9.61
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



TIC: VI19060510.D\data.ms

(56) o-Xylene

10.482min (-0.005) 1.35 ug/L

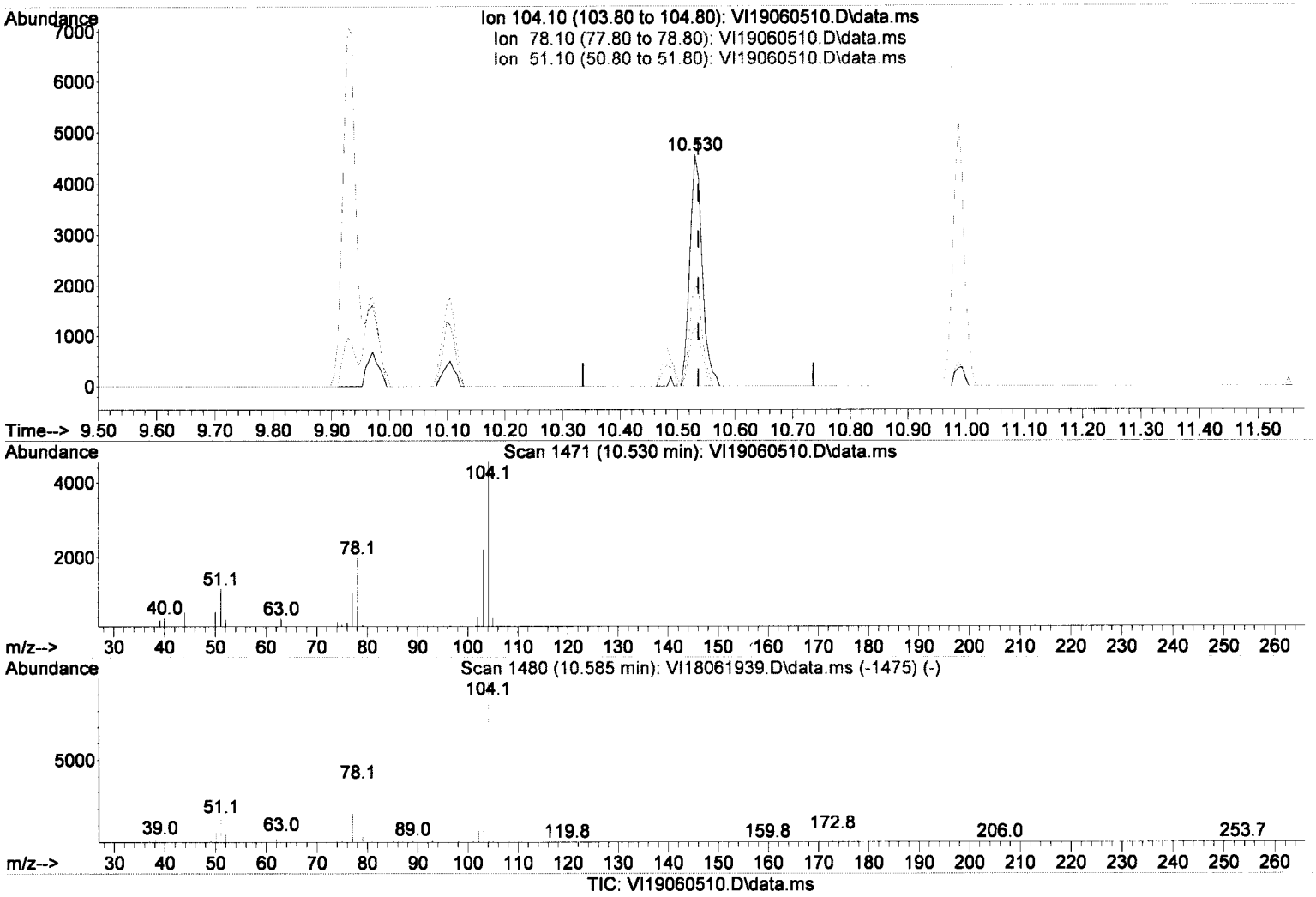
response 9395

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	48.30	44.50
51.10	10.20	11.91
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



TIC: VI19060510.D\data.ms

(57) Styrene

10.530min (-0.006) 1.36 ug/L

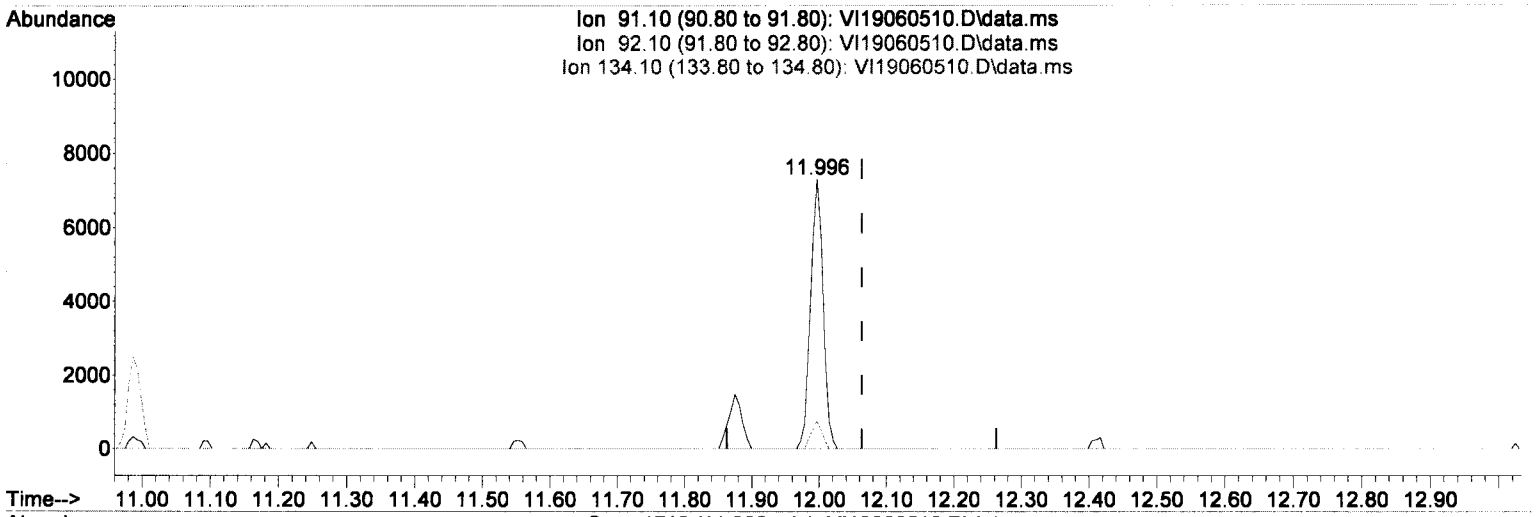
response 6893

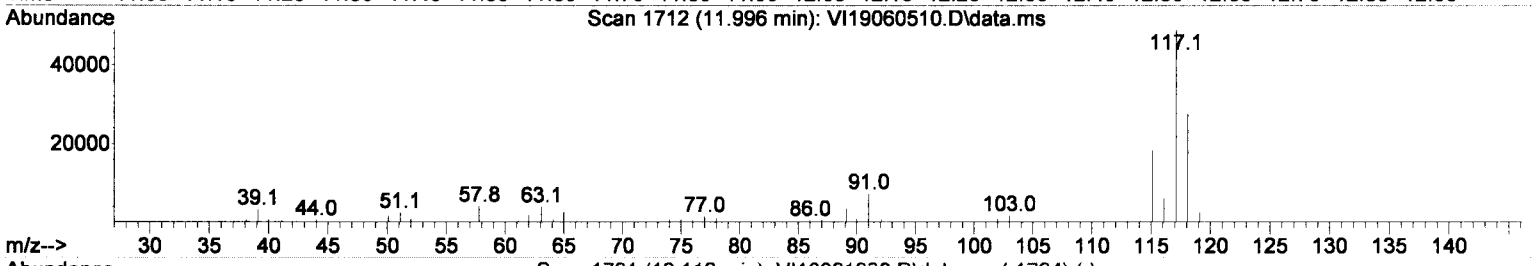
Ion	Exp%	Act%
104.10	100.00	100.00
78.10	39.40	43.70
51.10	22.20	25.27
0.00	0.00	0.00

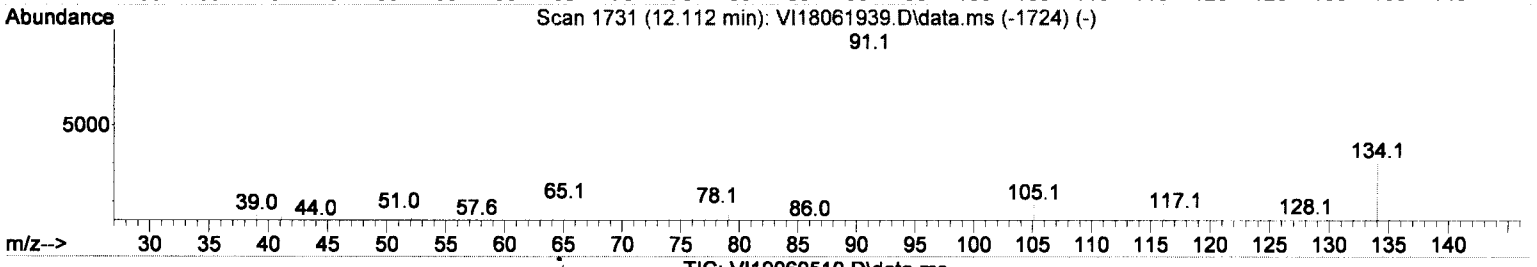
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







TIC: VI19060510.D\data.ms

(76) n-Butylbenzene

11.996min (-0.067) 1.81 ug/L

response 9551

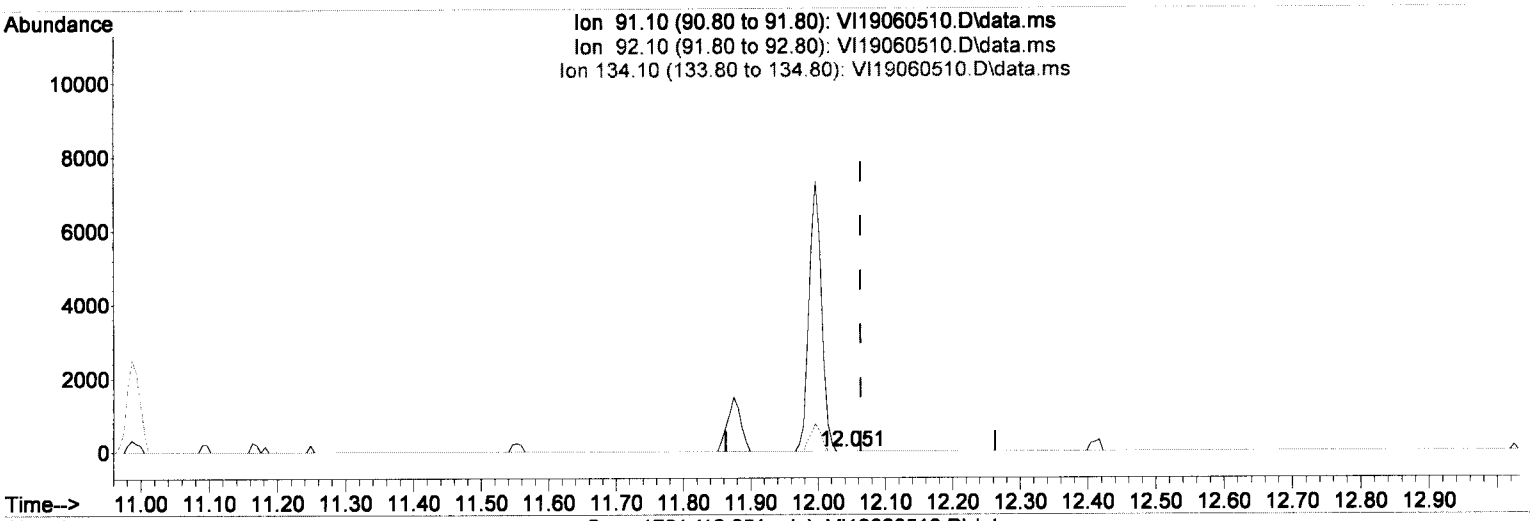
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	10.35#
134.10	28.20	0.00
0.00	0.00	0.00

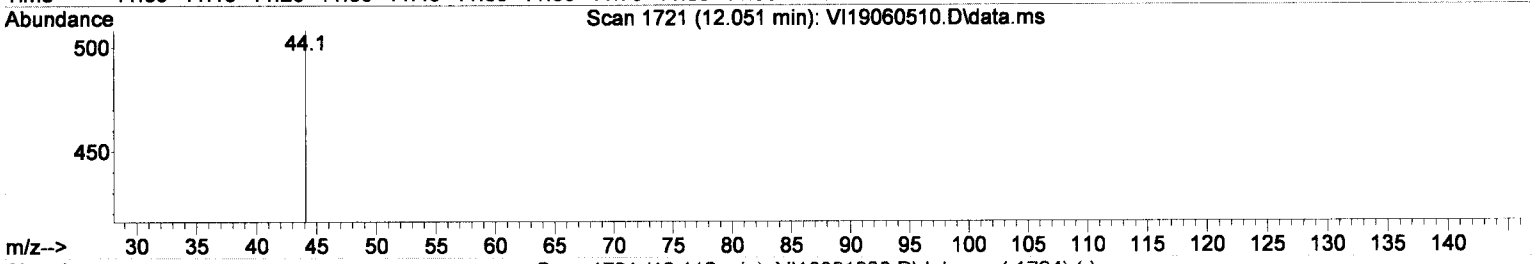
MC 6/5/19

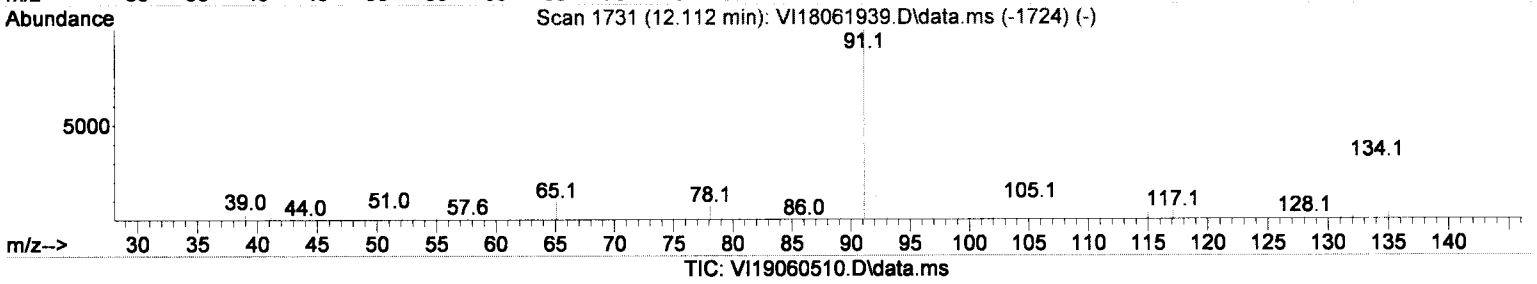
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







TIC: VI19060510.D\data.ms

(76) n-Butylbenzene

12.051min (-0.012) 0.00 ug/L m

response 0

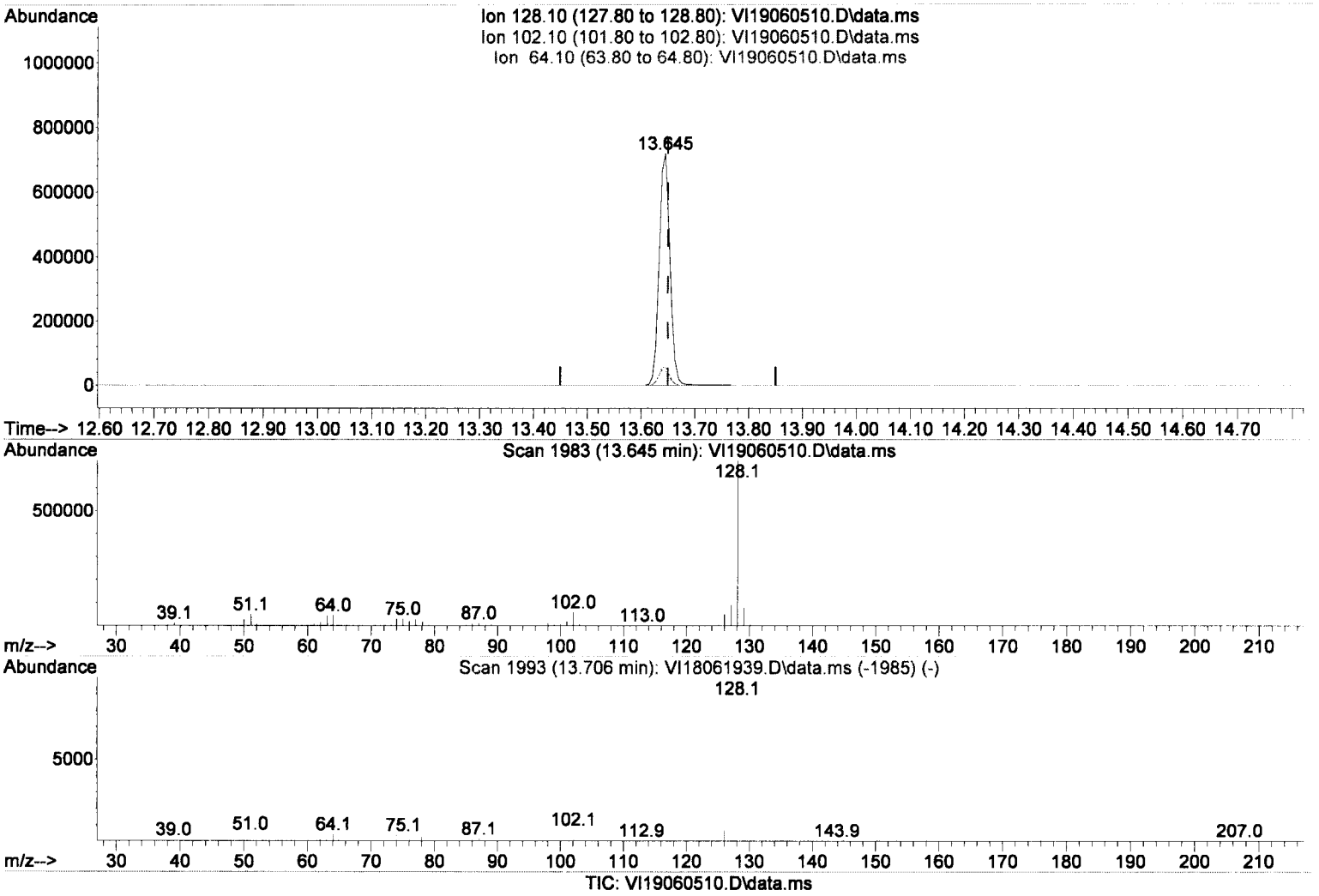
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

NP 6/5/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



(81) Naphthalene

13.645min (-0.005) 138.91 ug/L

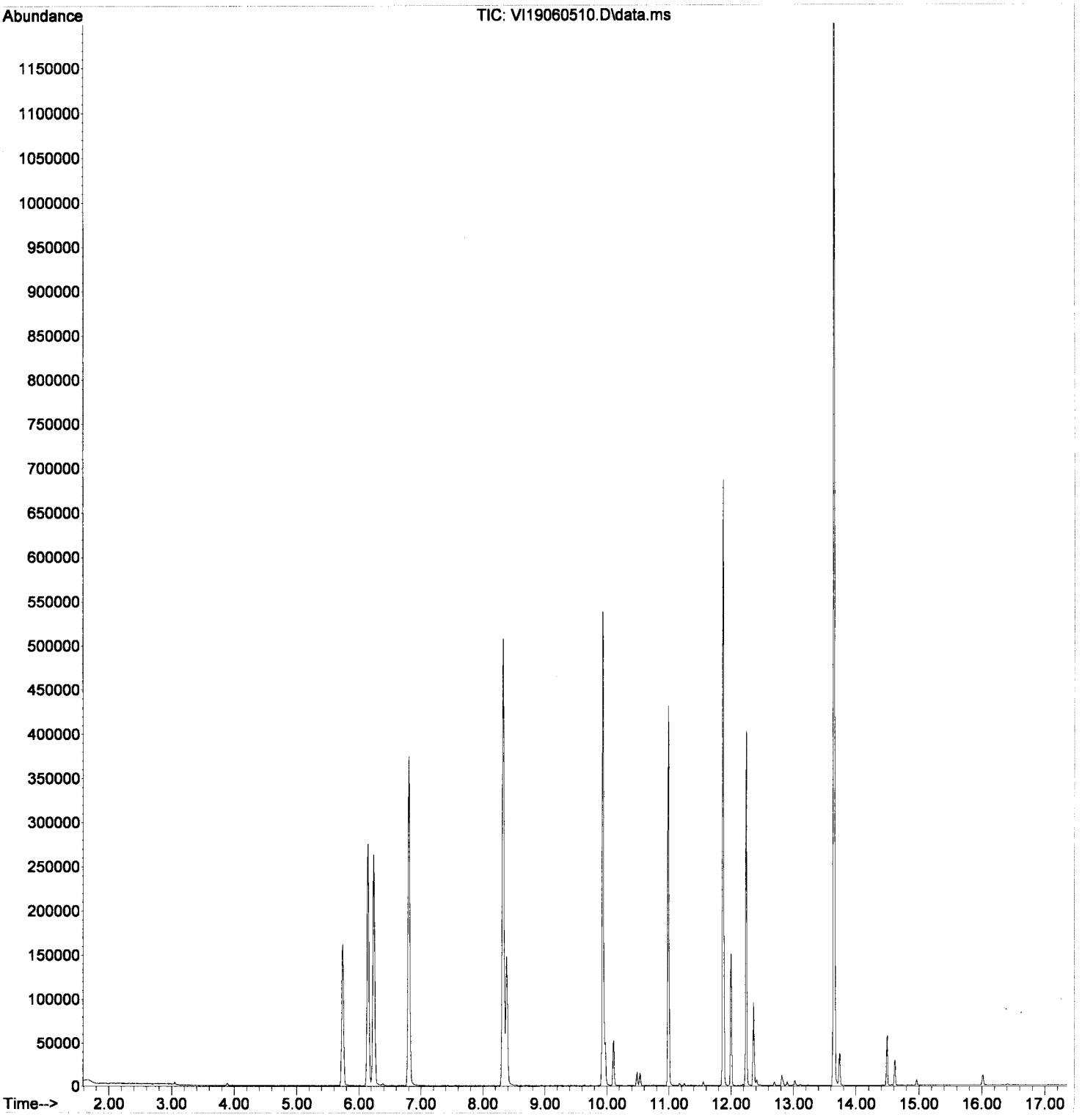
response 1003273

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	8.07
64.10	4.70	6.34
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060510.D
Acq On : 5 Jun 2019 1:33 pm
Operator : TNL
Sample : A9E0723-01@100
Misc : 100X 500uL/50mL SPLP FULL LIST
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060511.D
Acq On : 5 Jun 2019 2:00 pm
Operator : TNL
Sample : 9060589-DUP2@100
Misc : 100X 500uL/50mL A9F0723-01
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

SPLP dup only!

Quant Time: Jun 05 16:41:17 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.235	168	198331	50.00	ug/L		-0.01
39) Chlorobenzene-d5 (I)	9.928	117	296798	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	136660	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.730	111	111566	53.74	ug/L		-0.01
34) 1,4-Difluorobenzene (S)	6.801	114	339755	51.58	ug/L		0.00
42) Toluene-d8 (S)	8.322	98	403095	50.24	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.986	174	105219	47.78	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.904	50	289	0.12	ug/L	#	47
5) Bromomethane	2.366	96	306	0.19	ug/L	#	45
6) Chloroethane	2.530	64	239	Below Cal		#	36
13) Methylene Chloride	3.887	84	1465	Below Cal			81
14) Acetone	3.966	43	639	0.57	ug/L	#	44
31) Benzene	6.138	78	259377	32.05	ug/L		97
43) Toluene	8.377	91	121426	13.69	ug/L		98
53) Ethylbenzene	9.970	91	29339	3.02	ug/L		99
55) m,p-Xylenes (2)	10.104	91	28005	3.90	ug/L		96
56) o-Xylene	10.482	91	8978	1.25	ug/L		95
57) Styrene	10.530	104	6661	1.28	ug/L		89
59) Isopropylbenzene	10.749	105	960	0.11	ug/L		84
66) 1,3,5-Trimethylbenzene	11.248	105	1685	0.25	ug/L		83
71) 1,2,4-Trimethylbenzene	11.552	105	2628	0.40	ug/L		94
72) sec-Butylbenzene	11.552	105	2628	0.33	ug/L		74
76) n-Butylbenzene	11.996	91	9132	1.65	ug/L	#	40
81) Naphthalene	13.645	128	964571	128.01	ug/L		97

6/5/19 MA

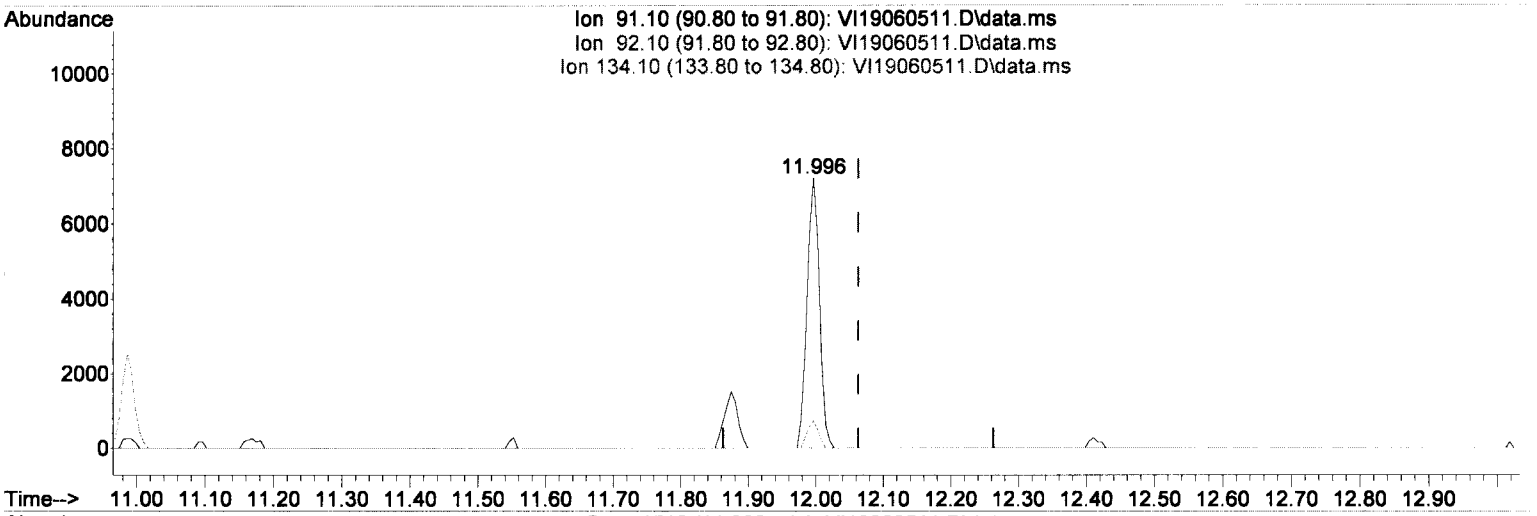
NE ND

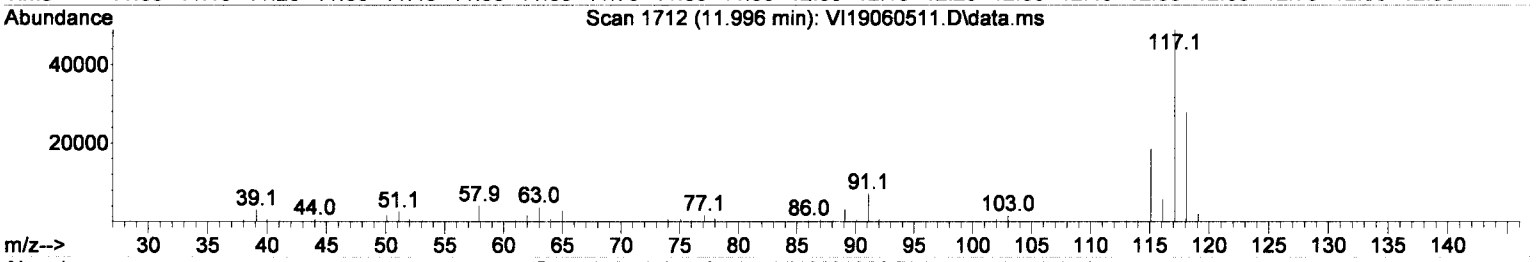
(#) = qualifier out of range (m) = manual integration (+) = signals summed

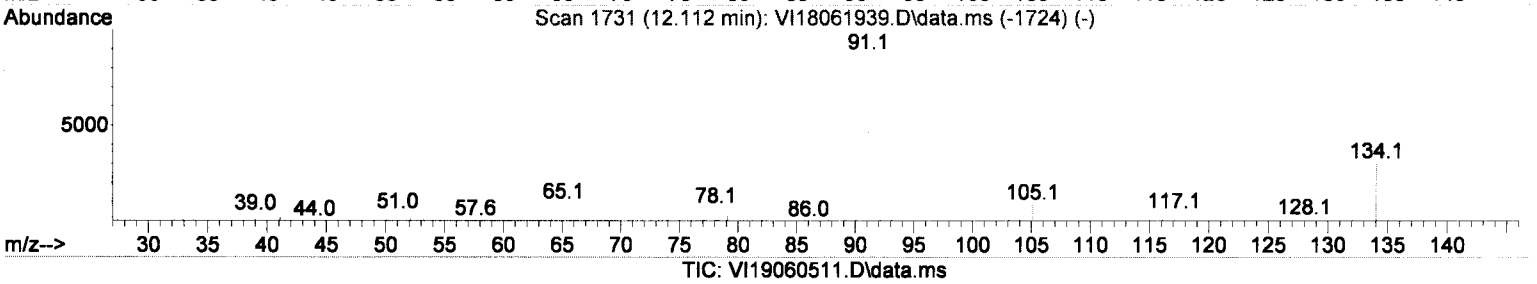
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060511.D
Acq On : 5 Jun 2019 2:00 pm
Operator : TNL
Sample : 9060589-DUP2@100
Misc : 100X 500uL/50mL A9F0723-01
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:17 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







TIC: VI19060511.D\data.ms

(76) n-Butylbenzene

11.996min (-0.067) 1.65 ug/L

response 9132

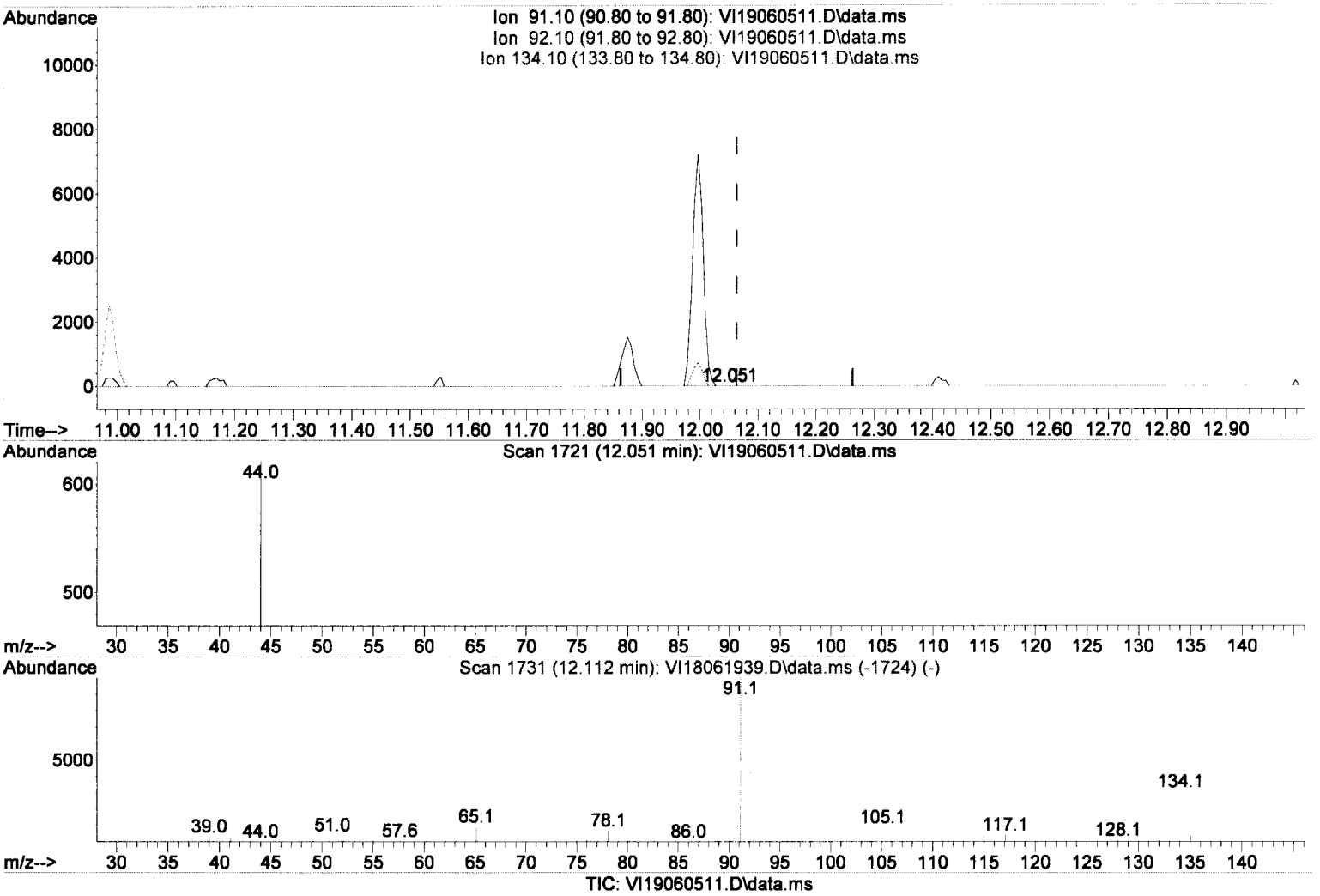
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	10.16#
134.10	28.20	0.00
0.00	0.00	0.00

(NE) 6/5/19 mf

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060511.D
Acq On : 5 Jun 2019 2:00 pm
Operator : TNL
Sample : 9060589-DUP2@100
Misc : 100X 500uL/50mL A9F0723-01
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:17 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



TIC: VI19060511.D\data.ms

(76) n-Butylbenzene

12.051min (-0.012) 0.00 ug/L m

response 0

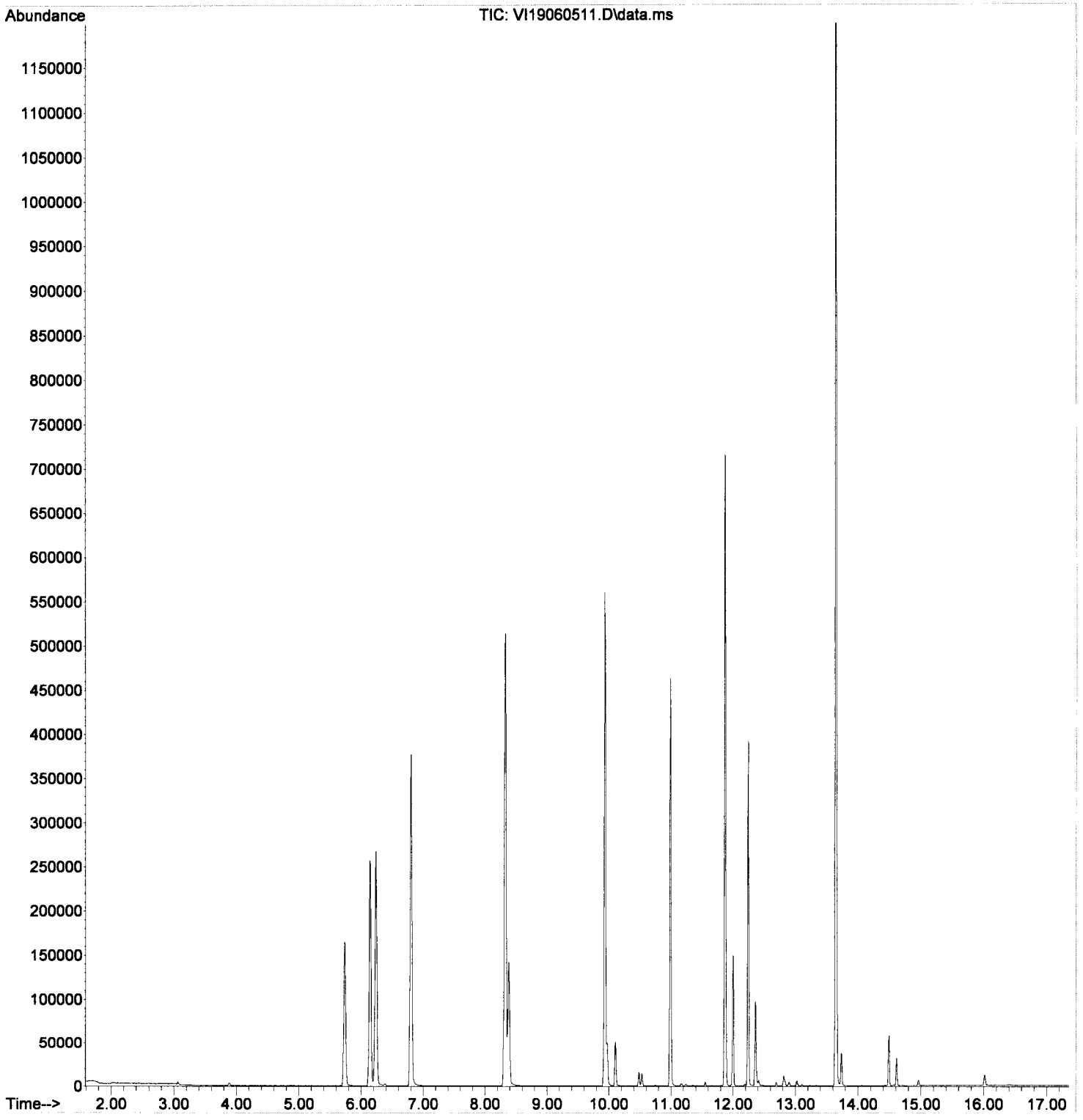
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

ND 6/5/19 KM

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060511.D
Acq On : 5 Jun 2019 2:00 pm
Operator : TNL
Sample : 9060589-DUP2@100
Misc : 100X 500uL/50mL A9F0723-01
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:17 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060515.D
Acq On : 5 Jun 2019 3:48 pm
Operator : TNL
Sample : 9060589-MS2@500
Misc : 500X 100uL/50mL A19F008 (A9E0832-02)
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

SPLP only

Quant Time: Jun 05 16:41:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.241	168	220879	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.928	117	335348	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.868	152	172079	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.736	111	123229	53.30	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.807	114	380895	51.92	ug/L		0.00
42) Toluene-d8 (S)	8.322	98	451774	49.83	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.986	174	125717	45.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.697	85	52295	21.25	ug/L		97
3) Chloromethane	1.916	50	60855	22.04	ug/L		97
4) Vinyl Chloride	2.019	62	68059	20.66	ug/L		95
5) Bromomethane	2.378	96	44600	24.92	ug/L		99
6) Chloroethane	2.518	64	17079	14.98	ug/L		84
7) Trichlorofluoromethane	2.676	101	80139	26.66	ug/L		97
8) 1,1-Dichloroethene	3.254	61	51961	19.56	ug/L		93
9) Carbon Disulfide	3.272	76	100385	18.64	ug/L		98
10) Freon 113	3.309	101	42868	21.47	ug/L		97
11) Iodomethane	3.406	142	7967	12.61	ug/L	#	86
13) Methylene Chloride	3.893	84	45910	18.56	ug/L		94
14) Acetone	3.966	43	46655	37.63	ug/L		89
15) t-1,2-Dichloroethene	4.063	61	54235	20.51	ug/L		97
16) n-Hexane	4.142	86	8443	18.89	ug/L	#	75
17) Methyl-tert-butyl-ether	4.191	73	118667	17.32	ug/L		94
18) 1,1-Dichloroethane	4.708	63	76039	20.56	ug/L		97
19) Acrylonitrile	4.775	53	28081	21.21	ug/L		99
21) c-1,2-Dichloroethene	5.268	61	60516	20.75	ug/L		95
22) 2,2-Dichloropropane	5.377	77	46267	17.20	ug/L		95
23) Bromochloromethane	5.468	130	31840	23.50	ug/L		88
24) Chloroform	5.548	83	83035	21.58	ug/L		98
25) Carbon Tetrachloride	5.681	117	49876	22.12	ug/L		97
26) Tetrahydrofuran	5.724	42	24137	18.18	ug/L		91
27) 1,1,1-Trichloroethane	5.760	97	59727	20.13	ug/L		97
29) 1,1-Dichloropropene	5.888	75	60404	20.61	ug/L		97
30) 2-Butanone (MEK)	5.882	43	78154	40.73	ug/L		99
31) Benzene	6.144	78	232103	25.75	ug/L		97
32) 1,2-Dichloroethane (EDC)	6.363	62	62091	21.18	ug/L		94
33) iso-Butyl Alcohol	6.393	43	111622	480.96	ug/L		100
35) Trichloroethene (TCE)	6.764	130	47658	21.90	ug/L		95
36) Dibromomethane	7.221	93	32405	22.39	ug/L		91
37) 1,2-Dichloropropane	7.330	63	48479	21.18	ug/L		90
38) Bromodichloromethane	7.403	83	57866	22.30	ug/L		89
41) c-1,3-Dichloropropene	8.115	75	61321	19.49	ug/L		86
43) Toluene	8.382	91	221884	22.15	ug/L		98
44) Tetrachloroethene (PCE)	8.814	166	47058	21.50	ug/L		83
45) 4-Methyl-2-Pentanone (...	8.820	43	137071	38.43	ug/L		96
46) t-1,3-Dichloropropene	8.857	75	54724	18.45	ug/L		96
47) 1,1,2-Trichloroethane	9.027	97	48095	21.92	ug/L		96
48) Dibromochloromethane	9.204	129	43672	20.80	ug/L		96
49) 1,3-Dichloropropane	9.307	76	79492	20.77	ug/L		93
50) 1,2-Dibromoethane (EDB)	9.441	107	46275	21.20	ug/L		96
51) 2-Hexanone	9.672	43	98279	38.95	ug/L		92

6/5/19 TNL

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060515.D
Acq On : 5 Jun 2019 3:48 pm
Operator : TNL
Sample : 9060589-MS2@500
Misc : 500X 100uL/50mL A19F008 (A9E0832-02)
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

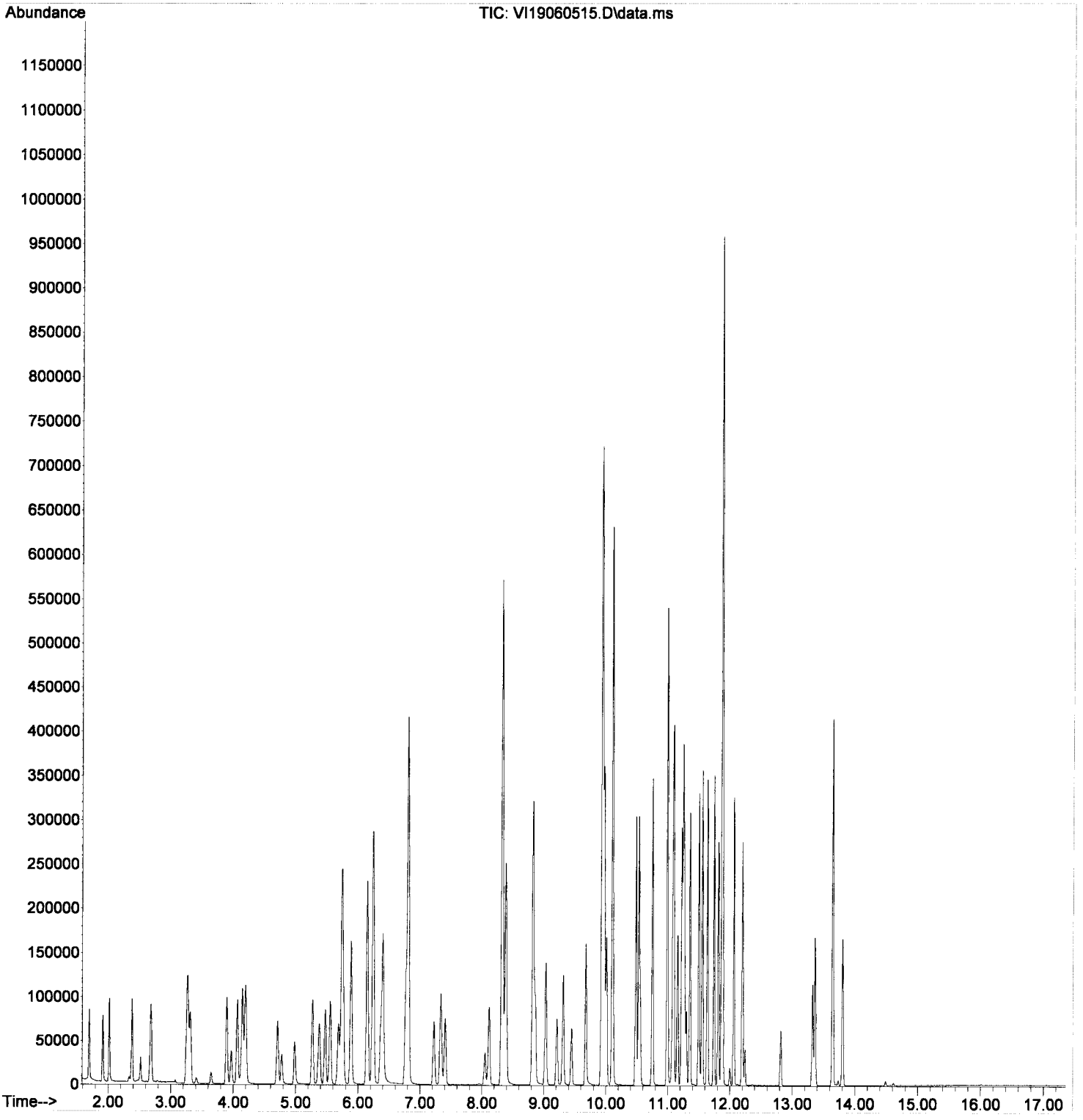
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) Chlorobenzene	9.946	112	134624	21.40	ug/L		96
53) Ethylbenzene	9.970	91	224053	20.41	ug/L		98
54) 1,1,1,2-Tetrachloroethane	10.007	131	41637	21.10	ug/L		96
55) m,p-Xylenes (2)	10.104	91	340368	41.94	ug/L		99
56) o-Xylene	10.481	91	158355	19.58	ug/L		99
57) Styrene	10.530	104	131388	22.28	ug/L		96
58) Bromoform	10.554	173	30979	24.76	ug/L		95
59) Isopropylbenzene	10.749	105	196642	20.66	ug/L		100
62) Bromobenzene	11.071	156	52549	20.48	ug/L	#	79
63) n-Propylbenzene	11.090	91	247532	19.31	ug/L		98
64) 1,1,2,2-Tetrachloroethane	11.151	85	50828	20.99	ug/L		95
65) 2-Chlorotoluene	11.217	126	49541	20.14	ug/L		94
66) 1,3,5-Trimethylbenzene	11.242	105	164650	19.77	ug/L		97
67) 1,2,3-Trichloropropane	11.266	110	23337	19.28	ug/L		98
68) t-1,4-Dichloro-2-butene	11.297	53	16192	20.64	ug/L	#	72
69) 4-Chlorotoluene	11.351	91	148828	19.26	ug/L		95
70) tert-Butylbenzene	11.497	91	88606	18.27	ug/L		95
71) 1,2,4-Trimethylbenzene	11.552	105	160159	19.54	ug/L		97
72) sec-Butylbenzene	11.631	105	203114	19.95	ug/L		98
73) 4-Isopropyltoluene	11.741	119	159511	19.84	ug/L		99
74) 1,3-Dichlorobenzene	11.814	146	96747	20.42	ug/L		98
75) 1,4-Dichlorobenzene	11.881	146	103552	20.39	ug/L		95
76) n-Butylbenzene	12.057	91	146503	20.97	ug/L		96
77) 1,2-Dichlorobenzene	12.197	146	93604	20.70	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.811	157	14952	19.16	ug/L		76
79) Hexachlorobutadiene	13.322	223	12515	21.38	ug/L		91
80) 1,2,4-Trichlorobenzene	13.359	180	47310	19.22	ug/L		93
81) Naphthalene	13.645	128	300094	33.74	ug/L		97
82) 1,2,3-Trichlorobenzene	13.803	180	49117	21.37	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060515.D
Acq On : 5 Jun 2019 3:48 pm
Operator : TNL
Sample : 9060589-MS2@500
Misc : 500X 100uL/50mL A19F008 (A9E0832-02)
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 05 16:41:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060524.D
Acq On : 5 Jun 2019 7:52 pm
Operator : TNL
Sample : 9060589-MS1@10
Misc : 10X 5ml/50mL A19F008 (A9F0080-05)
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 06 14:09:00 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.235	168	208418	50.00	ug/L		-0.01
39) Chlorobenzene-d5 (I)	9.928	117	323048	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	160641	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.730	111	118570	54.35	ug/L		-0.01
34) 1,4-Difluorobenzene (S)	6.801	114	363634	52.54	ug/L		0.00
42) Toluene-d8 (S)	8.322	98	428709	49.09	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.986	174	118603	45.81	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	47285	20.37	ug/L		98
3) Chloromethane	1.898	50	58776	22.56	ug/L		98
4) Vinyl Chloride	2.001	62	65171	20.96	ug/L		97
5) Bromomethane	2.366	96	45113	26.71	ug/L		97
6) Chloroethane	2.506	64	19767	18.49	ug/L		80
7) Trichlorofluoromethane	2.670	101	75829	26.74	ug/L		97
8) 1,1-Dichloroethene	3.242	61	49390	19.70	ug/L		96
9) Carbon Disulfide	3.260	76	95112	18.72	ug/L		99
10) Freon 113	3.297	101	38356	20.36	ug/L		99
11) Iodomethane	3.394	142	9114	14.01	ug/L		89
13) Methylene Chloride	3.881	84	44885	19.35	ug/L		93
14) Acetone	3.960	43	44844	38.33	ug/L		92
15) t-1,2-Dichloroethene	4.051	61	51707	20.73	ug/L		97
16) n-Hexane	4.136	86	7039	16.69	ug/L	#	77
17) Methyl-tert-butyl-ether	4.185	73	111777	17.29	ug/L		92
18) 1,1-Dichloroethane	4.702	63	72249	20.71	ug/L		95
19) Acrylonitrile	4.769	53	26616	21.30	ug/L		99
21) c-1,2-Dichloroethene	5.262	61	57826	21.02	ug/L		94
22) 2,2-Dichloropropane	5.365	77	40227	15.85	ug/L		91
23) Bromochloromethane	5.463	130	30436	23.80	ug/L		92
24) Chloroform	5.542	83	79295	21.84	ug/L		98
25) Carbon Tetrachloride	5.676	117	47463	22.31	ug/L		97
26) Tetrahydrofuran	5.718	42	22605	18.05	ug/L		92
27) 1,1,1-Trichloroethane	5.755	97	56972	20.35	ug/L		94
29) 1,1-Dichloropropene	5.882	75	57278	20.71	ug/L		97
30) 2-Butanone (MEK)	5.876	43	71859	39.69	ug/L		98
31) Benzene	6.144	78	180890	21.27	ug/L		97
32) 1,2-Dichloroethane (EDC)	6.357	62	59568	21.54	ug/L		90
33) iso-Butyl Alcohol	6.393	43	103513	472.68	ug/L		99
35) Trichloroethene (TCE)	6.764	130	45257	22.04	ug/L		99
36) Dibromomethane	7.221	93	30629	22.42	ug/L		93
37) 1,2-Dichloropropane	7.330	63	45958	21.28	ug/L		92
38) Bromodichloromethane	7.397	83	55561	22.70	ug/L		95
41) c-1,3-Dichloropropene	8.109	75	52618	17.36	ug/L		88
43) Toluene	8.377	91	192587	19.96	ug/L		99
44) Tetrachloroethene (PCE)	8.815	166	43423	20.59	ug/L		85
45) 4-Methyl-2-Pentanone (...	8.821	43	127131	37.00	ug/L		95
46) t-1,3-Dichloropropene	8.857	75	51525	18.05	ug/L		96
47) 1,1,2-Trichloroethane	9.028	97	45574	21.56	ug/L		96
48) Dibromochloromethane	9.204	129	41367	20.47	ug/L		98
49) 1,3-Dichloropropane	9.307	76	75597	20.50	ug/L		93
50) 1,2-Dibromoethane (EDB)	9.441	107	44686	21.25	ug/L		97
51) 2-Hexanone	9.672	43	91364	37.59	ug/L		90

6/6/19 M

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060524.D
Acq On : 5 Jun 2019 7:52 pm
Operator : TNL
Sample : 9060589-MS1@10
Misc : 10X 5ml/50mL A19F008 (A9F0080-05)
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 06 14:09:00 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

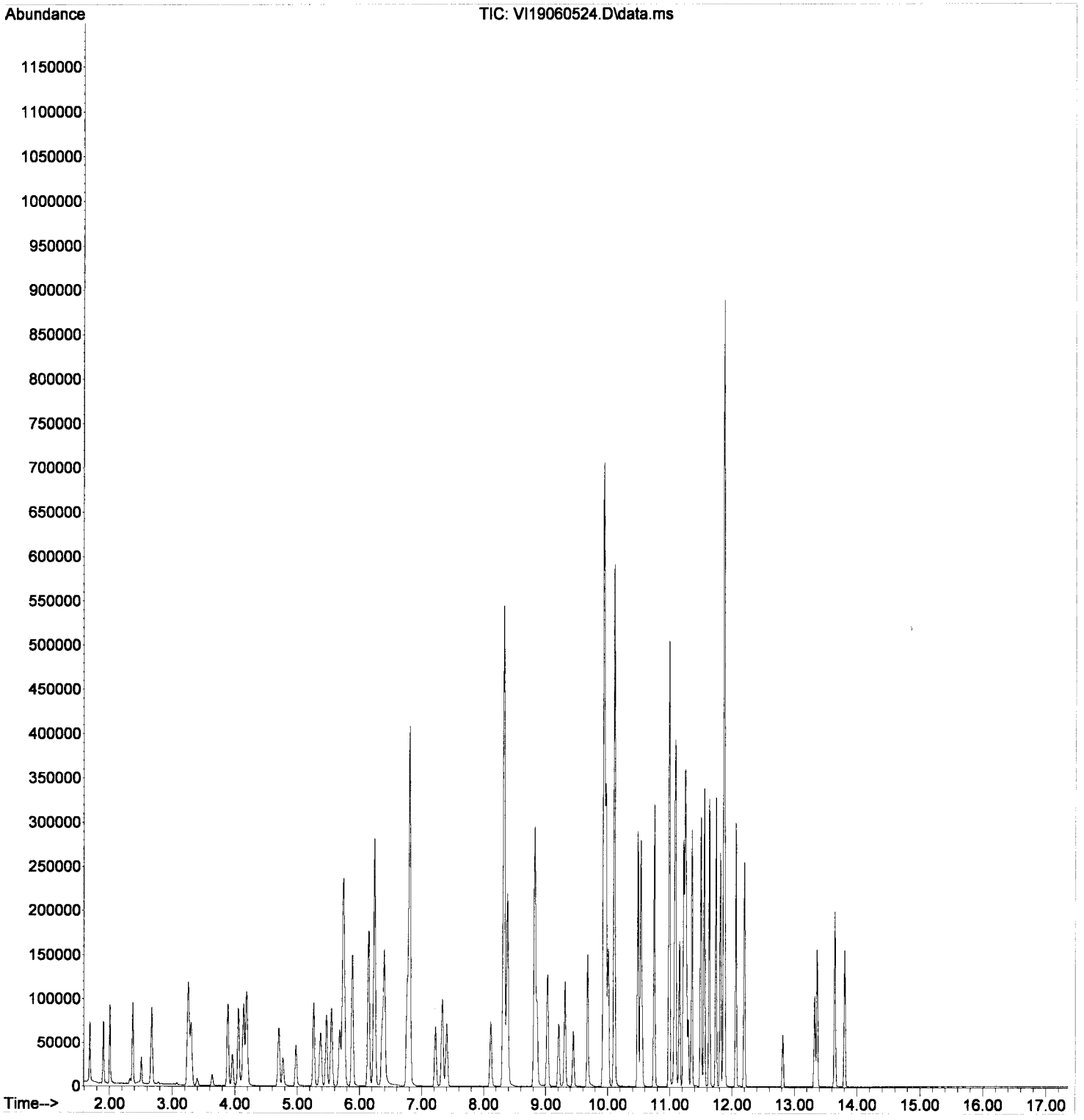
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) Chlorobenzene	9.946	112	129716	21.40	ug/L		98
53) Ethylbenzene	9.971	91	209286	19.79	ug/L		98
54) 1,1,1,2-Tetrachloroethane	10.007	131	39689	20.88	ug/L		97
55) m,p-Xylenes (2)	10.104	91	318003	40.68	ug/L		99
56) o-Xylene	10.482	91	148801	19.10	ug/L		98
57) Styrene	10.530	104	123349	21.71	ug/L		97
58) Bromoform	10.555	173	29474	24.48	ug/L		96
59) Isopropylbenzene	10.749	105	181892	19.83	ug/L		100
62) Bromobenzene	11.072	156	50868	21.24	ug/L	#	80
63) n-Propylbenzene	11.090	91	234031	19.56	ug/L		99
64) 1,1,2,2-Tetrachloroethane	11.151	85	49280	21.80	ug/L		94
65) 2-Chlorotoluene	11.218	126	46338	20.18	ug/L		95
66) 1,3,5-Trimethylbenzene	11.242	105	155339	19.98	ug/L		98
67) 1,2,3-Trichloropropane	11.266	110	23000	20.35	ug/L		91
68) t-1,4-Dichloro-2-butene	11.297	53	15304	20.90	ug/L	#	65
69) 4-Chlorotoluene	11.352	91	141638	19.64	ug/L		95
70) tert-Butylbenzene	11.498	91	84046	18.56	ug/L		94
71) 1,2,4-Trimethylbenzene	11.552	105	153023	20.00	ug/L		96
72) sec-Butylbenzene	11.631	105	192278	20.24	ug/L		98
73) 4-Isopropyltoluene	11.741	119	150568	20.06	ug/L		99
74) 1,3-Dichlorobenzene	11.808	146	92872	21.00	ug/L		97
75) 1,4-Dichlorobenzene	11.875	146	97503	20.56	ug/L		96
76) n-Butylbenzene	12.057	91	136263	20.89	ug/L		95
77) 1,2-Dichlorobenzene	12.197	146	89117	21.11	ug/L		99
78) 1,2-Dibromo-3-Chloropr...	12.812	157	13955	19.16	ug/L		74
79) Hexachlorobutadiene	13.323	223	11735	21.48	ug/L		93
80) 1,2,4-Trichlorobenzene	13.359	180	43408	18.89	ug/L		97
81) Naphthalene	13.645	128	138339	17.08	ug/L		97
82) 1,2,3-Trichlorobenzene	13.803	180	45285	21.10	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060524.D
Acq On : 5 Jun 2019 7:52 pm
Operator : TNL
Sample : 9060589-MS1@10
Misc : 10X 5ml/50mL A19F008 (A9F0080-05)
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 06 14:09:00 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060529.D
Acq On : 5 Jun 2019 10:07 pm
Operator : TNL
Sample : 9060589-MS3@50
Misc : 50X 1mL/50mL A19F008 (A9E0832-02RE1)
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 06 14:09:15 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.235	168	216867	50.00	ug/L		-0.01
39) Chlorobenzene-d5 (I)	9.928	117	331580	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	166912	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.730	111	120621	53.14	ug/L		-0.01
34) 1,4-Difluorobenzene (S)	6.801	114	372823	51.76	ug/L		0.00
42) Toluene-d8 (S)	8.322	98	442727	49.39	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.986	174	122529	45.55	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	50803	21.03	ug/L		99
3) Chloromethane	1.904	50	59413	21.92	ug/L		97
4) Vinyl Chloride	2.007	62	66672	20.61	ug/L		96
5) Bromomethane	2.366	96	44772	25.48	ug/L		98
6) Chloroethane	2.506	64	18945	16.99	ug/L		84
7) Trichlorofluoromethane	2.670	101	76755	26.01	ug/L		97
8) 1,1-Dichloroethene	3.242	61	50403	19.32	ug/L		98
9) Carbon Disulfide	3.260	76	97057	18.36	ug/L		98
10) Freon 113	3.297	101	41165	21.00	ug/L		98
11) Iodomethane	3.400	142	10558	14.90	ug/L		95
13) Methylene Chloride	3.887	84	43587	17.83	ug/L		93
14) Acetone	3.960	43	45322	37.23	ug/L		92
15) t-1,2-Dichloroethene	4.057	61	53261	20.52	ug/L		96
16) n-Hexane	4.136	86	8124	18.52	ug/L	#	79
17) Methyl-tert-butyl-ether	4.185	73	111624	16.60	ug/L		93
18) 1,1-Dichloroethane	4.702	63	72542	19.98	ug/L		96
19) Acrylonitrile	4.769	53	27194	20.92	ug/L		98
21) c-1,2-Dichloroethene	5.262	61	57990	20.26	ug/L		94
22) 2,2-Dichloropropane	5.371	77	41875	15.86	ug/L		96
23) Bromochloromethane	5.463	130	30475	22.91	ug/L		90
24) Chloroform	5.548	83	79142	20.95	ug/L		98
25) Carbon Tetrachloride	5.675	117	47950	21.66	ug/L		95
26) Tetrahydrofuran	5.724	42	22952	17.61	ug/L		89
27) 1,1,1-Trichloroethane	5.748	97	57670	19.80	ug/L		97
29) 1,1-Dichloropropene	5.882	75	57753	20.07	ug/L		96
30) 2-Butanone (MEK)	5.876	43	73726	39.14	ug/L		98
31) Benzene	6.144	78	602906	68.13	ug/L		96
32) 1,2-Dichloroethane (EDC)	6.357	62	58802	20.43	ug/L		93
33) iso-Butyl Alcohol	6.393	43	105753	464.10	ug/L		99
35) Trichloroethene (TCE)	6.764	130	46240	21.64	ug/L		95
36) Dibromomethane	7.221	93	30814	21.68	ug/L		92
37) 1,2-Dichloropropane	7.330	63	46363	20.63	ug/L		93
38) Bromodichloromethane	7.403	83	56456	22.16	ug/L		94
41) c-1,3-Dichloropropene	8.109	75	57827	18.59	ug/L		89
43) Toluene	8.377	91	395569	39.93	ug/L		98
44) Tetrachloroethene (PCE)	8.815	166	44270	20.45	ug/L		88
45) 4-Methyl-2-Pentanone (...	8.821	43	130605	37.04	ug/L		95
46) t-1,3-Dichloropropene	8.857	75	52532	17.93	ug/L		95
47) 1,1,2-Trichloroethane	9.028	97	45728	21.08	ug/L		96
48) Dibromochloromethane	9.210	129	42601	20.53	ug/L		100
49) 1,3-Dichloropropane	9.307	76	75902	20.06	ug/L		91
50) 1,2-Dibromoethane (EDB)	9.441	107	44921	20.81	ug/L		95
51) 2-Hexanone	9.672	43	94719	37.97	ug/L		91

6/6/19 MJ

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060529.D
Acq On : 5 Jun 2019 10:07 pm
Operator : TNL
Sample : 9060589-MS3@50
Misc : 50X 1mL/50mL A19F008 (A9E0832-02RE1)
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 06 14:09:15 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

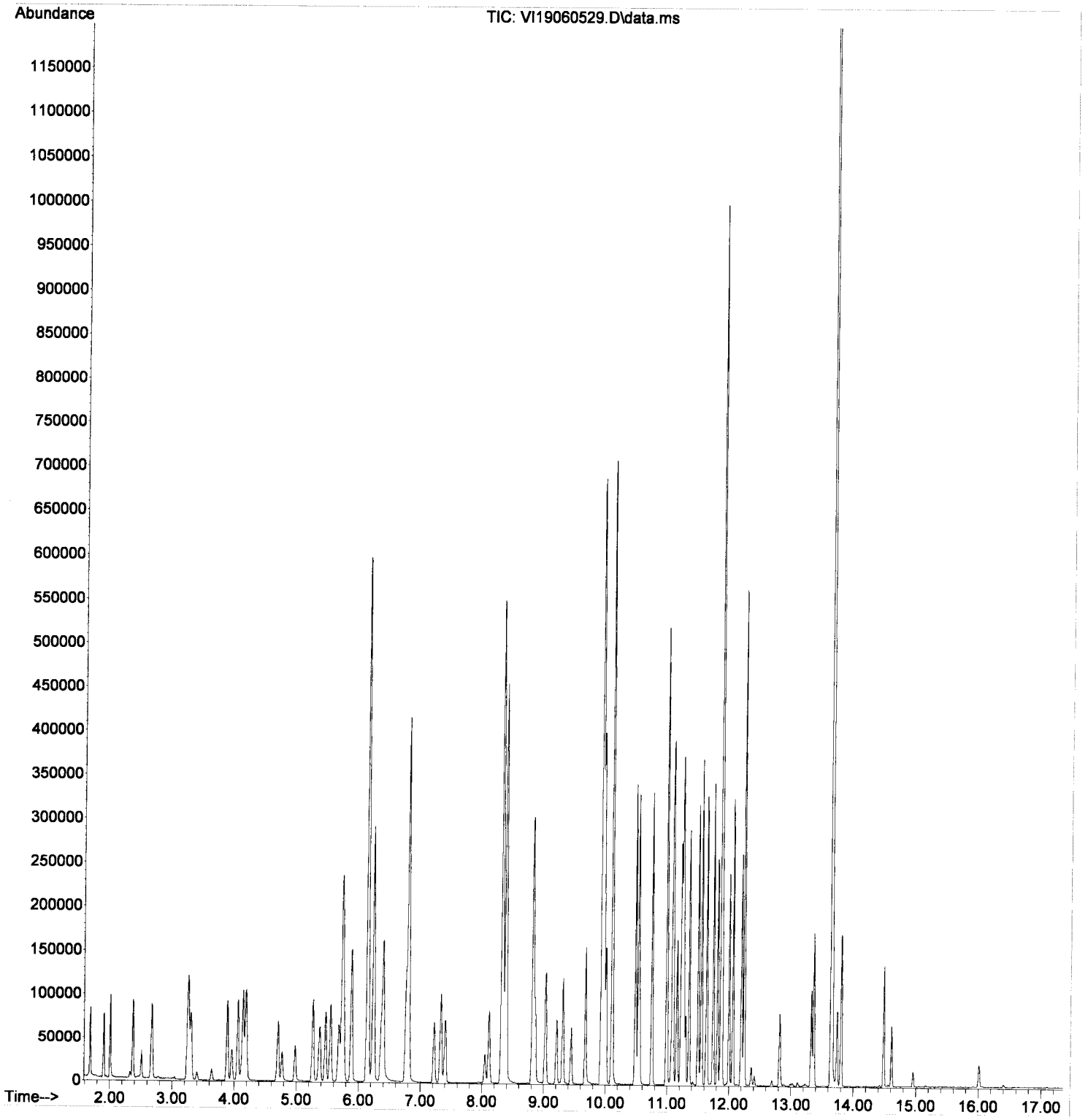
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) Chlorobenzene	9.946	112	129026	20.74	ug/L		98
53) Ethylbenzene	9.970	91	254078	23.40	ug/L		98
54) 1,1,1,2-Tetrachloroethane	10.007	131	39307	20.16	ug/L		96
55) m,p-Xylenes (2)	10.104	91	383468	47.79	ug/L		100
56) o-Xylene	10.482	91	173988	21.76	ug/L		98
57) Styrene	10.530	104	143729	24.65	ug/L		98
58) Bromoform	10.555	173	30288	24.51	ug/L		96
59) Isopropylbenzene	10.749	105	189822	20.17	ug/L		99
62) Bromobenzene	11.072	156	50046	20.11	ug/L	#	79
63) n-Propylbenzene	11.090	91	236403	19.01	ug/L		98
64) 1,1,2,2-Tetrachloroethane	11.157	85	47626	20.28	ug/L		93
65) 2-Chlorotoluene	11.218	126	47129	19.75	ug/L		95
66) 1,3,5-Trimethylbenzene	11.242	105	163080	20.19	ug/L		98
67) 1,2,3-Trichloropropane	11.260	110	22392	19.07	ug/L		96
68) t-1,4-Dichloro-2-butene	11.297	53	15193	19.97	ug/L	#	71
69) 4-Chlorotoluene	11.351	91	141834	18.93	ug/L		96
70) tert-Butylbenzene	11.497	91	84843	18.04	ug/L		95
71) 1,2,4-Trimethylbenzene	11.552	105	169200	21.29	ug/L		96
72) sec-Butylbenzene	11.631	105	196441	19.90	ug/L		98
73) 4-Isopropyltoluene	11.741	119	154873	19.86	ug/L		100
74) 1,3-Dichlorobenzene	11.814	146	92636	20.16	ug/L		99
75) 1,4-Dichlorobenzene	11.881	146	99263	20.15	ug/L		96
76) n-Butylbenzene	12.057	91	149025	21.99	ug/L		96
77) 1,2-Dichlorobenzene	12.197	146	89778	20.46	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.818	157	15061	19.90	ug/L		93
79) Hexachlorobutadiene	13.323	223	11939	21.03	ug/L		90
80) 1,2,4-Trichlorobenzene	13.359	180	48340	20.24	ug/L		97
81) Naphthalene	13.645	128	1892400	197.71	ug/L		97
82) 1,2,3-Trichlorobenzene	13.803	180	50926	22.84	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F05032\
Data File : VI19060529.D
Acq On : 5 Jun 2019 10:07 pm
Operator : TNL
Sample : 9060589-MS3@50
Misc : 50X 1mL/50mL A19F008 (A9E0832-02RE1)
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 06 14:09:15 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

SPLP Volatile Organic Compounds by EPA 1312/8260C

Calibration Data

Sequence 9E13041 (Cal ID A9E1405) VOA-GCMS9

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9E13041	Instrument:	VOA-GCMS9
Date:	05/13/19 15:47	Calibration:	A9E1405

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E13041-IBL1	Water	QC	QC			A19C125	
2	9E13041-TUN1	Water	QC	QC			A19C125	
3	9E13041-ICB1	Water	QC	QC			A19C125	
4	9E13041-CAL1	Water	QC	QC			A19C125	A19E168
5	9E13041-CAL2	Water	QC	QC			A19C125	A19E169
6	9E13041-CAL3	Water	QC	QC			A19C125	A19E170
7	9E13041-CAL4	Water	QC	QC			A19C125	A19E171
8	9E13041-CAL5	Water	QC	QC			A19C125	A19E172
9	9E13041-CAL6	Water	QC	QC			A19C125	A19E173
10	9E13041-CAL7	Water	QC	QC			A19C125	A19E174
11	9E13041-CAL8	Water	QC	QC			A19C125	A19E175
12	9E13041-CAL9	Water	QC	QC			A19C125	A19E176
13	9E13041-IBL2	Water	QC	QC			A19C125	
14	9E13041-CALA	Water	QC	QC			A19C125	A19E177
15	9E13041-IBL3	Water	QC	QC			A19C125	
16	9E13041-CALB	Water	QC	QC			A19C125	A19E178
17	9E13041-IBL4	Water	QC	QC			A19C125	
18	9E13041-IBL5	Water	QC	QC			A19C125	
19	9E13041-ICV1	Water	QC	QC			A19C125	A19D180
20	9E13041-IBL6	Water	QC	QC			A19C125	
21	9E13041-TUN2	Water	QC	QC			A19C125	
22	9E13041-IBL7	Water	QC	QC			A19C125	
23	9E13041-ICB2	Water	QC	QC			A19C125	
24	9E13041-CALC	Water	QC	QC			A19C125	A19E179
25	9E13041-CALD	Water	QC	QC			A19C125	A19E180
26	9E13041-CALE	Water	QC	QC			A19C125	A19E181
27	9E13041-CALF	Water	QC	QC			A19C125	A19E182
28	9E13041-CALG	Water	QC	QC			A19C125	A19E183
29	9E13041-CALH	Water	QC	QC			A19C125	A19E184
30	9E13041-CALI	Water	QC	QC			A19C125	A19E185
31	9E13041-CALJ	Water	QC	QC			A19C125	A19E186
32	9E13041-IBL8	Water	QC	QC			A19C125	
33	9E13041-IBL9	Water	QC	QC			A19C125	
34	9E13041-ICV2	Water	QC	QC			A19C125	A19B262
35	9E13041-IBLA	Water	QC	QC			A19C125	

No Reactives

Data Entered By: 5/14/19

Data Reviewed By: MH 5/15/19

Comments:

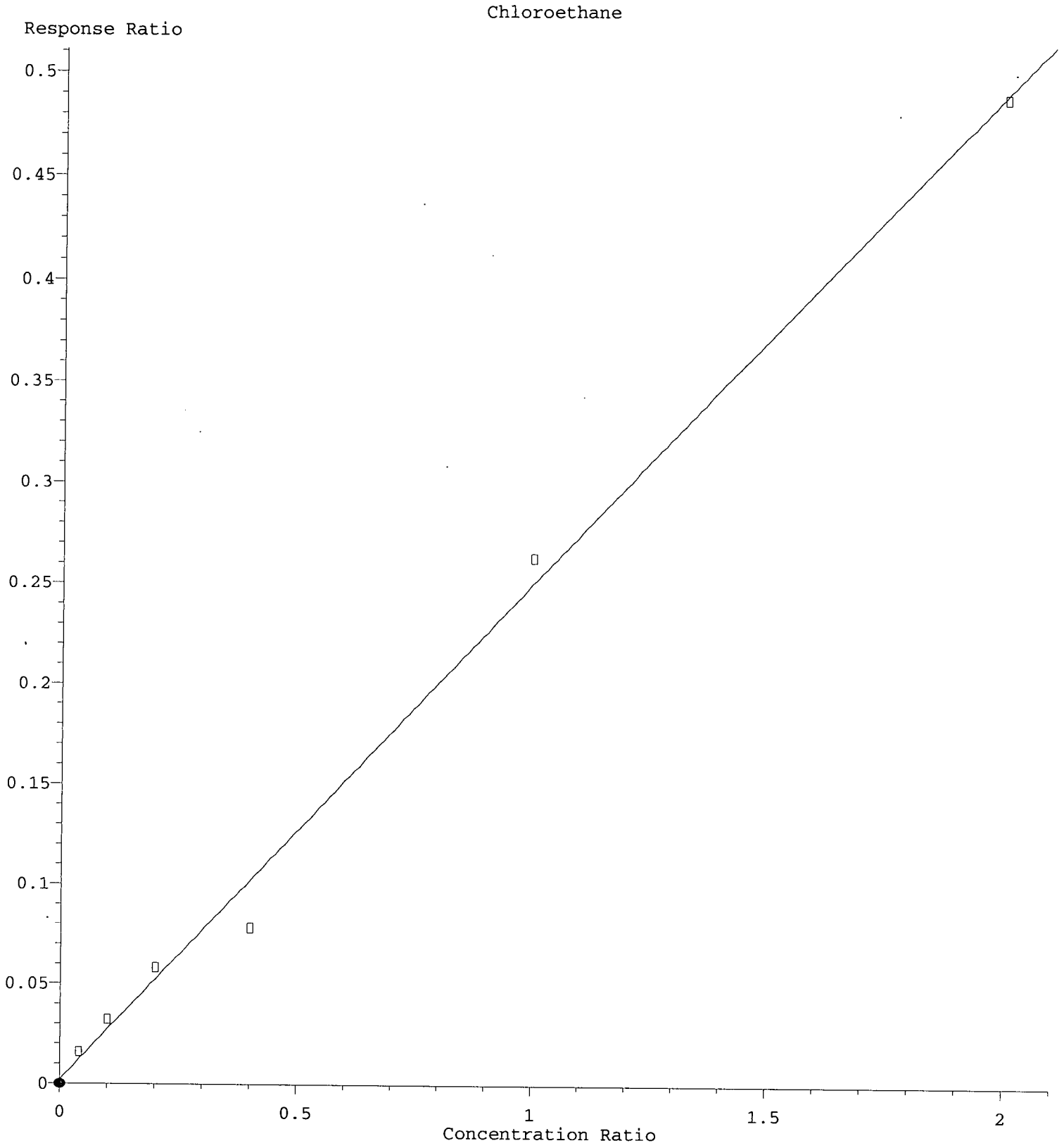
Calibration Status Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190514W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue May 14 09:28:30 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	-1	50	C:\msdchem\1\data\2019-05\9E13041\VI19051318.D
2	0.2	0	50	C:\msdchem\1\data\2019-05\9E13041\VI19051319.D
3	0.5	0	50	C:\msdchem\1\data\2019-05\9E13041\VI19051320.D
4	1	1	50	C:\msdchem\1\data\2019-05\9E13041\VI19051321.D
5	2	2	50	C:\msdchem\1\data\2019-05\9E13041\VI19051322.D
6	5	5	50	C:\msdchem\1\data\2019-05\9E13041\VI19051323.D
7	10	10	50	C:\msdchem\1\data\2019-05\9E13041\VI19051324.D
8	20	20	50	C:\msdchem\1\data\2019-05\9E13041\VI19051325.D
9	50	50	50	C:\msdchem\1\data\2019-05\9E13041\VI19051326.D
10	100	100	50	C:\msdchem\1\data\2019-05\9E13041\VI19051328.D
11	200	200	50	C:\msdchem\1\data\2019-05\9E13041\VI19051330.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	May 14 09:28 2019	May 14 09:13 2019	13 May 2019 5:33 pm
2	0.2	May 14 09:28 2019	May 14 09:16 2019	13 May 2019 6:00 pm
3	0.5	May 14 09:28 2019	May 14 09:18 2019	13 May 2019 6:27 pm
4	1	May 14 09:28 2019	May 14 09:19 2019	13 May 2019 6:54 pm
5	2	May 14 09:28 2019	May 14 09:21 2019	13 May 2019 7:21 pm
6	5	May 14 09:28 2019	May 14 09:22 2019	13 May 2019 7:48 pm
7	10	May 14 09:28 2019	May 14 09:23 2019	13 May 2019 8:15 pm
8	20	May 14 09:28 2019	May 14 09:24 2019	13 May 2019 8:42 pm
9	50	May 14 09:28 2019	May 14 09:25 2019	13 May 2019 9:09 pm
10	100	May 14 09:28 2019	May 14 09:26 2019	13 May 2019 10:04 pm
11	200	May 14 09:28 2019	May 14 09:27 2019	13 May 2019 10:58 pm

VI190514W.M Tue May 14 09:53:51 2019

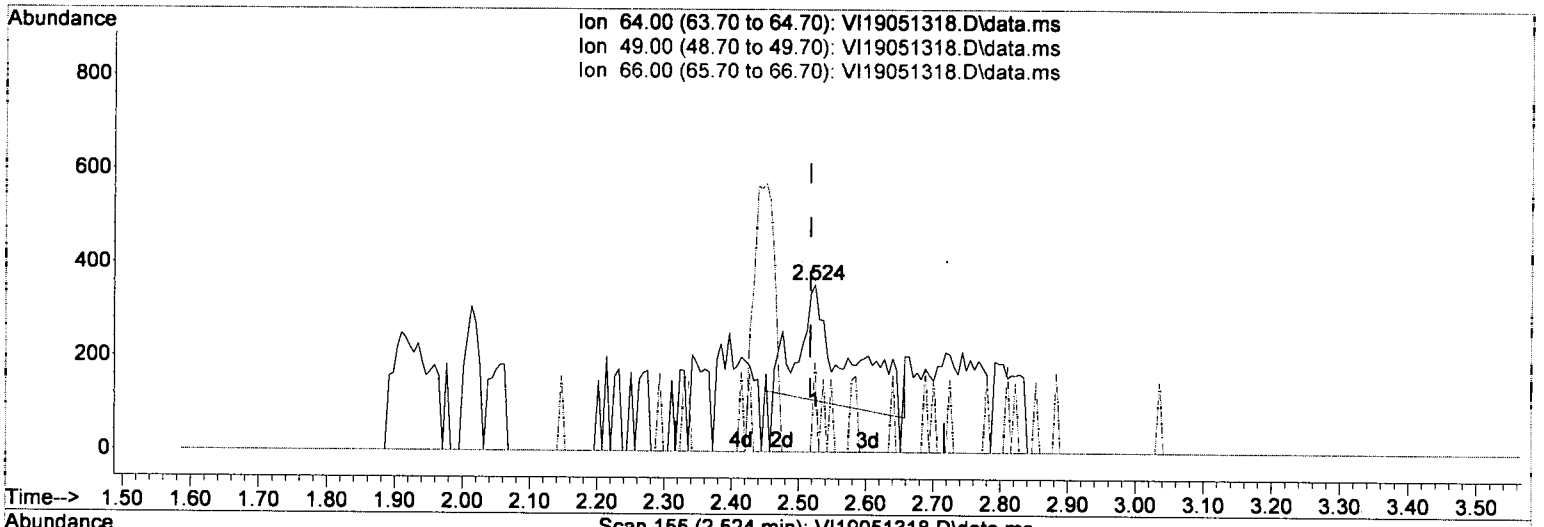


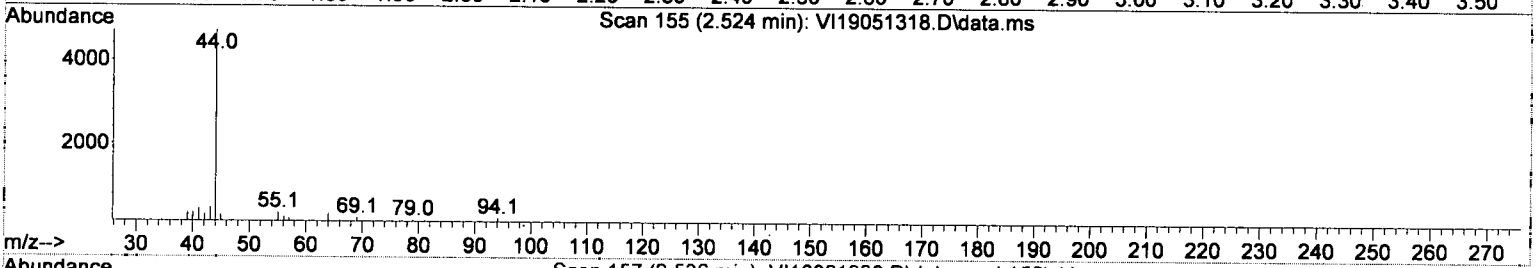
R = -4.33e-003 A*A + 2.52e-001 A + 2.11e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic
Method Name: C:\msdchem\1\methods\vs190514w.m
Calibration Table Last Updated: Tue May 14 09:29:27 2019

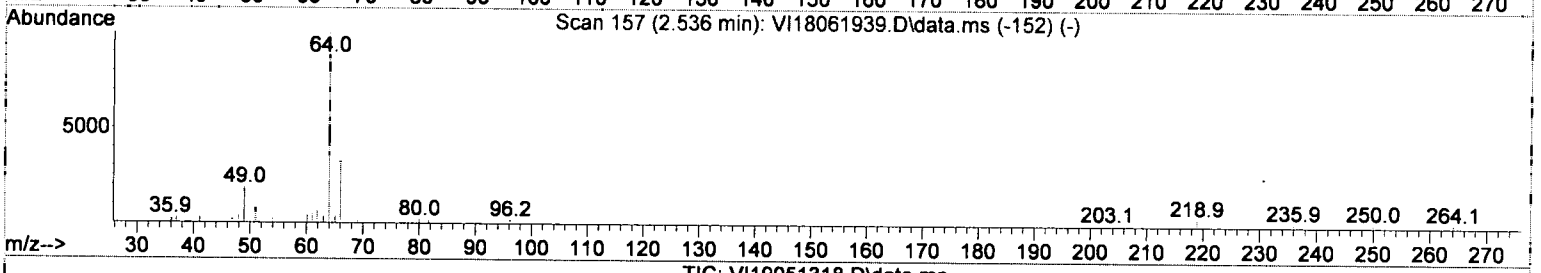
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051318.D
Acq On : 13 May 2019 5:33 pm
Operator : MM
Sample : 9E13041-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOC
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:45:21 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







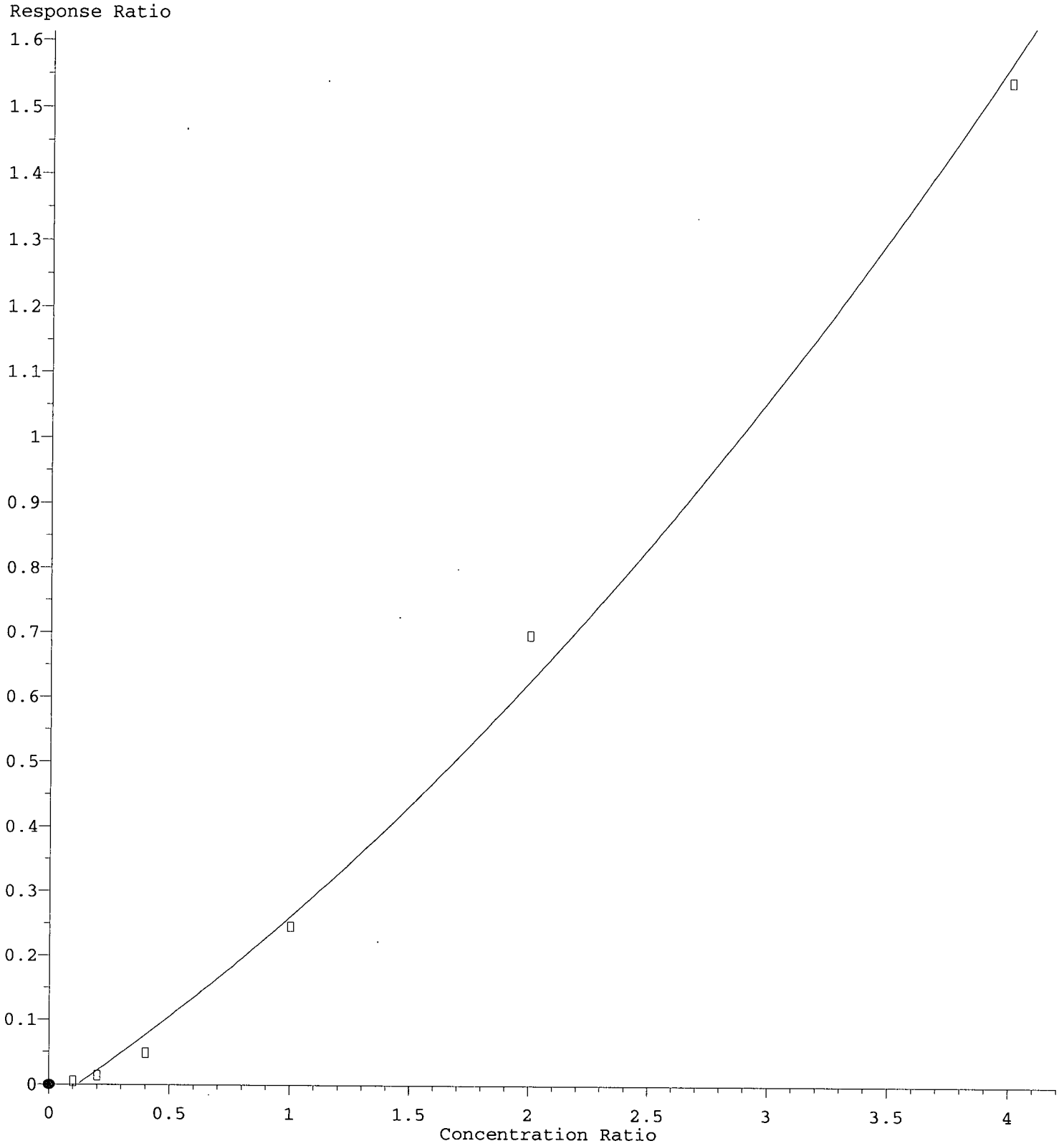
TIC: VI19051318.D\data.ms

(6) Chloroethane

2.524min (+ 0.007) 0.59 ug/L m

response 1193

Ion	Exp%	Act%
64.00	100.00	100.00
49.00	39.40	0.00#
66.00	38.90	53.50
0.00	0.00	0.00

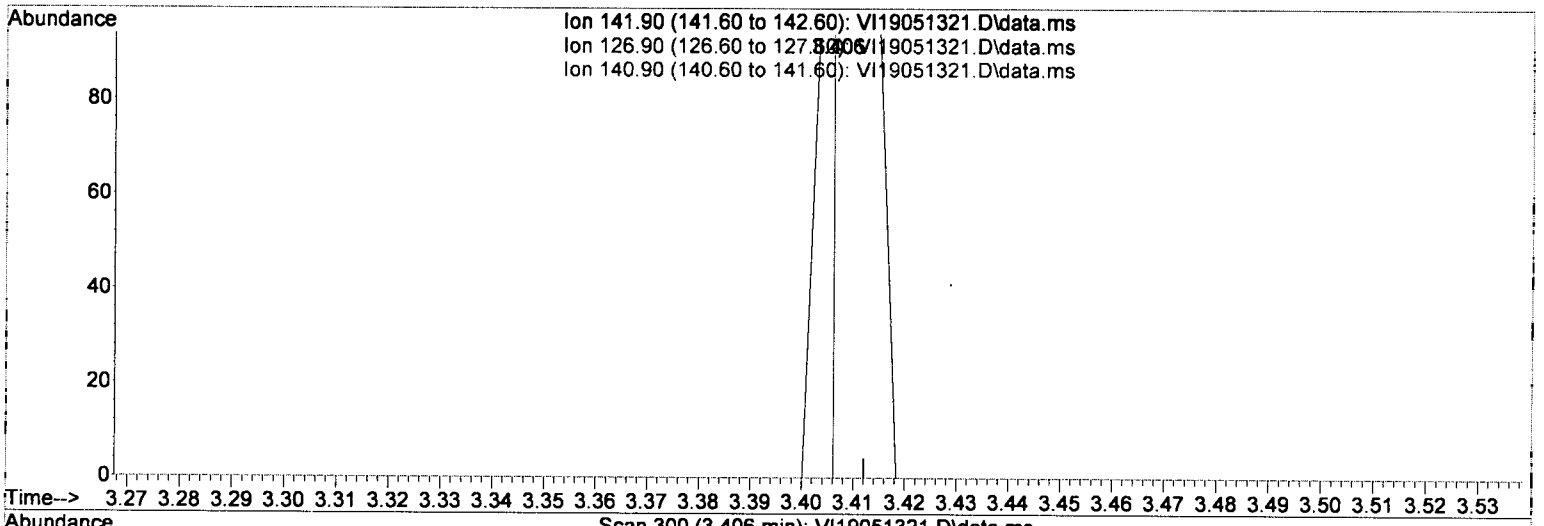


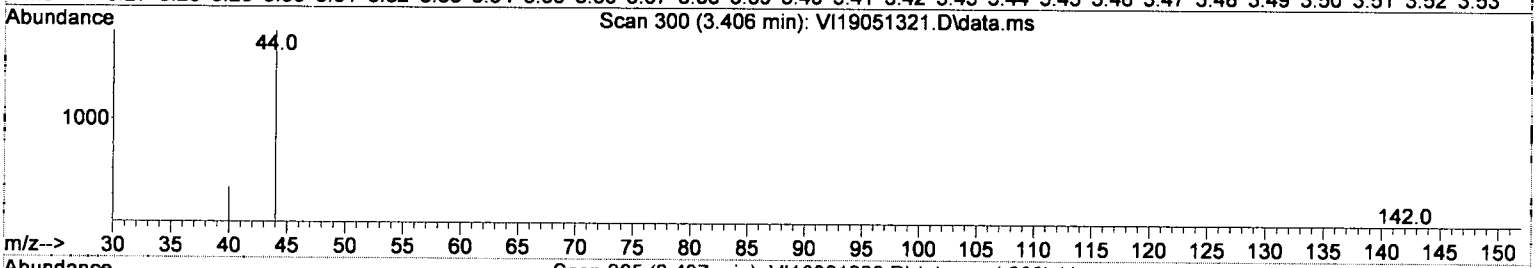
R = 3.57e-002 A*A + 2.56e-001 A - 3.09e-002
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V1905514W.M
Calibration Table Last Updated: Tue May 14 09:30:04 2019

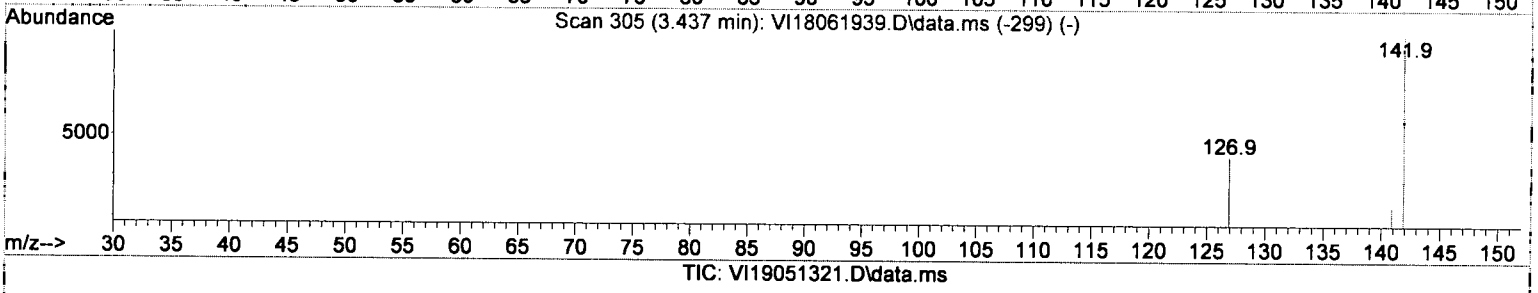
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:45:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







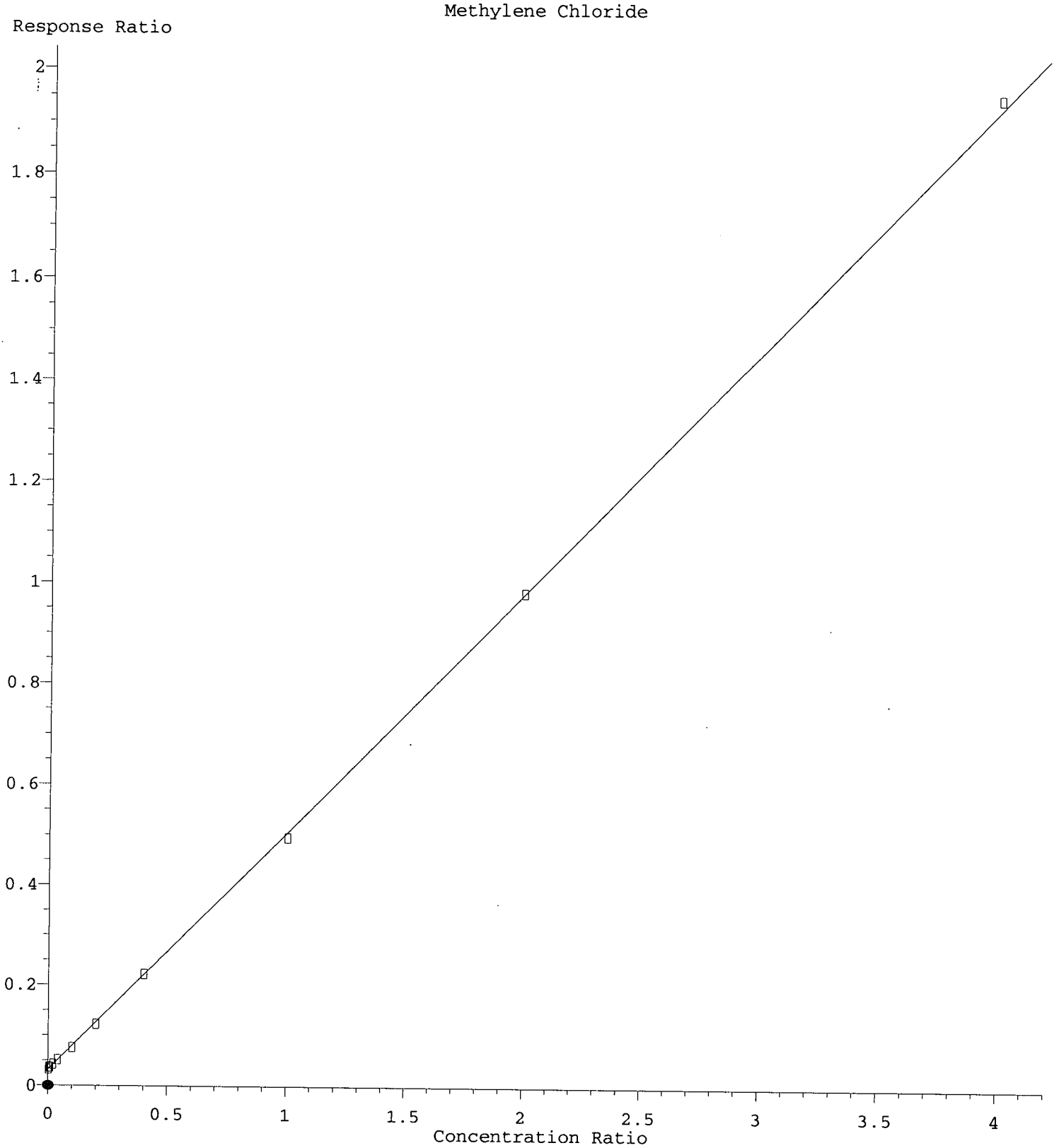
TIC: VI19051321.D\data.ms

(11) Iodomethane

3.406min (-0.006) 5.97 ug/L m

response 64

Ion	Exp%	Act%
141.90	100.00	100.00
126.90	34.80	0.00#
140.90	15.30	0.00#
0.00	0.00	0.00

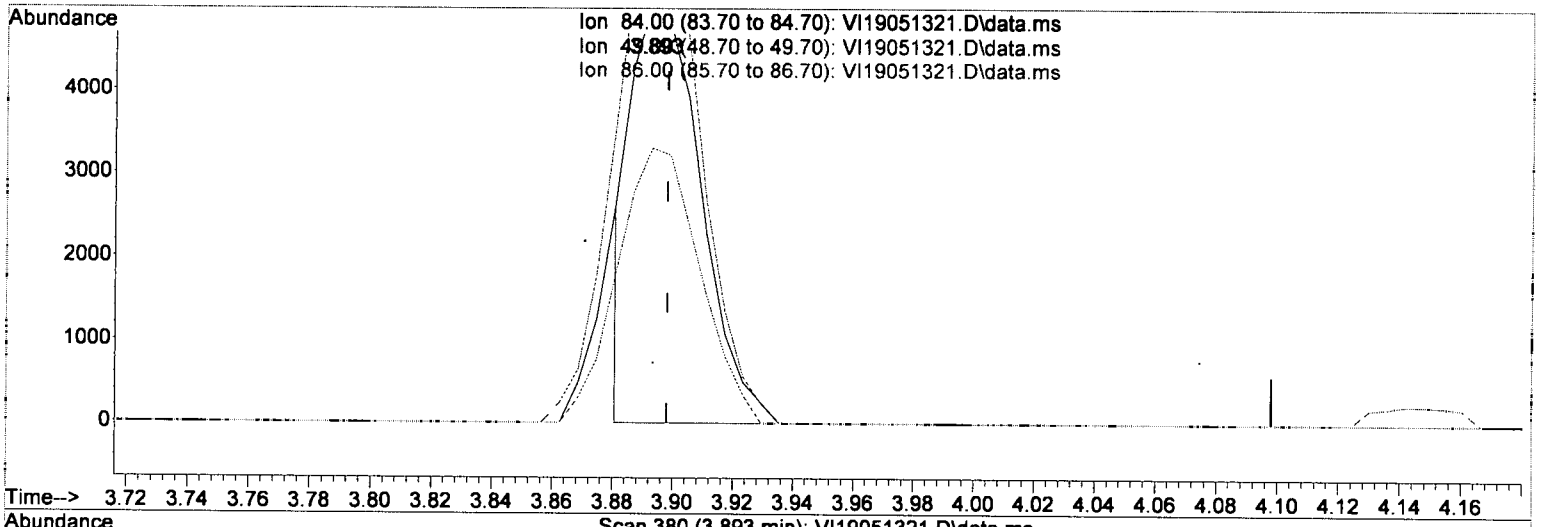


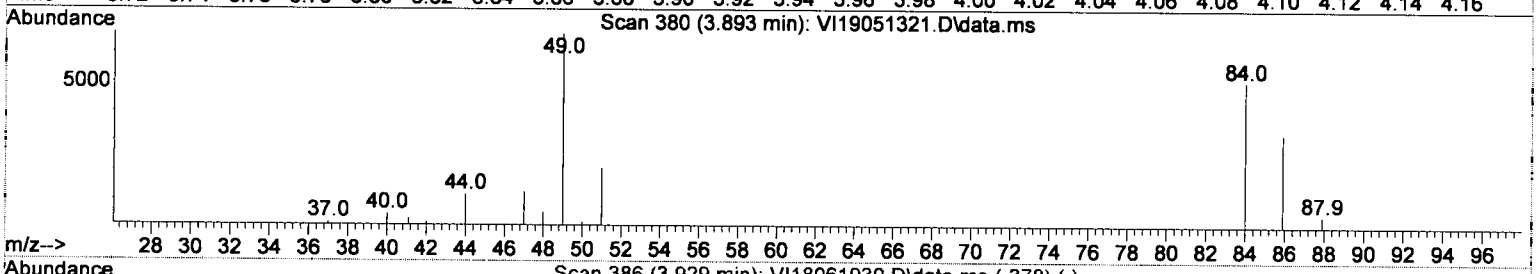
Resp Ratio = 4.74e-001 * Amt + 3.21e-002
Coef of Det (r^2) = 0.999 Curve Fit: wlr(1/a)
Method Name: C:\msdchem\1\methods\vis1905l4w.m
Calibration Table Last Updated: Tue May 14 09:30:32 2019

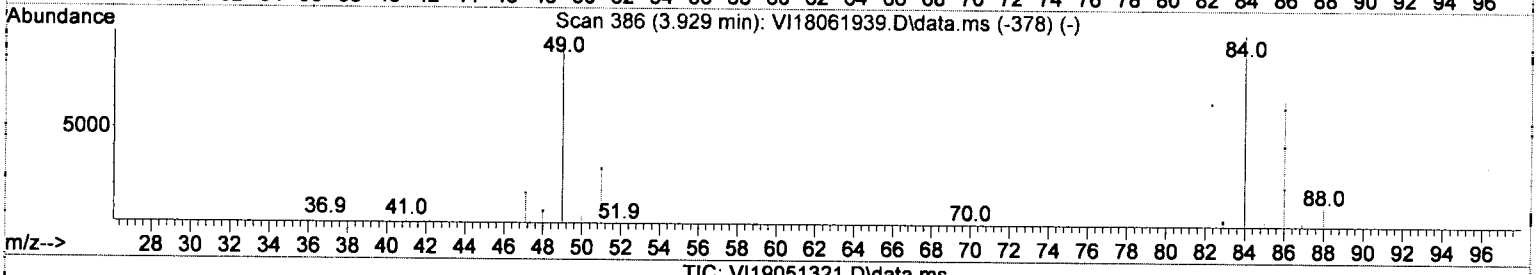
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:45:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







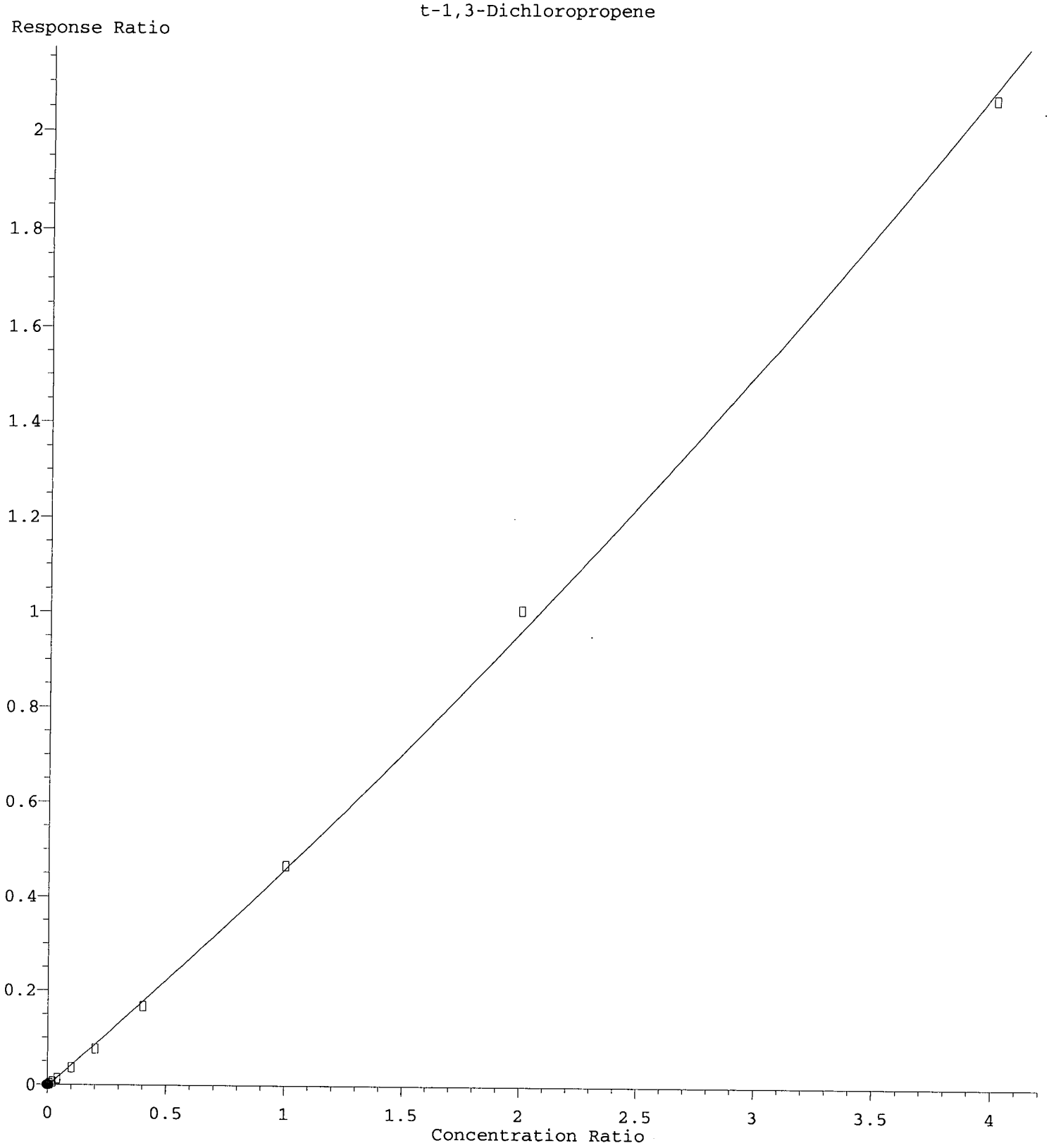
TIC: VI19051321.D\data.ms

(13) Methylene Chloride

3.893min (-0.005) 0.32 ug/L m

response 8094

Ion	Exp%	Act%
84.00	100.00	100.00
49.00	134.70	130.99
86.00	61.50	64.97
0.00	0.00	0.00

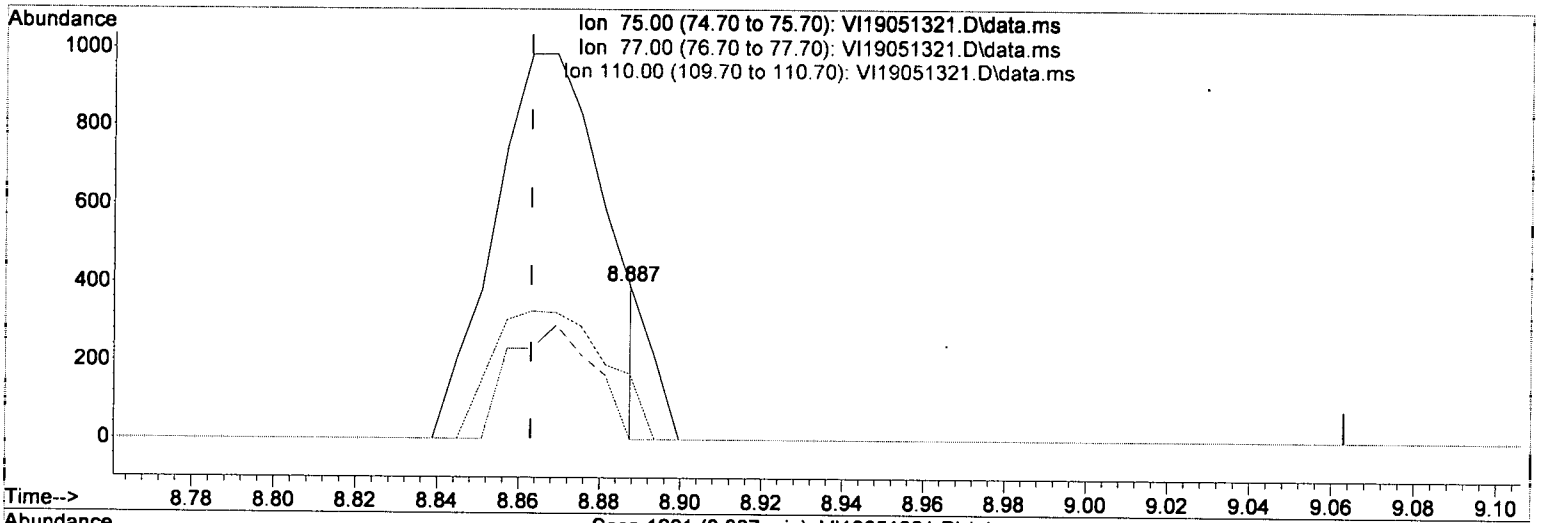


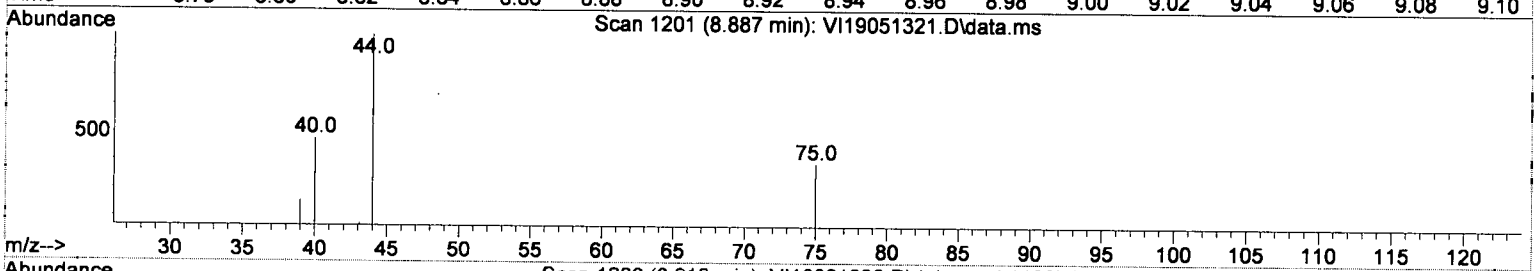
R = 1.99e-002 A*A + 4.43e-001 A - 2.91e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V1190514W.M
Calibration Table Last Updated: Tue May 14 09:33:08 2019

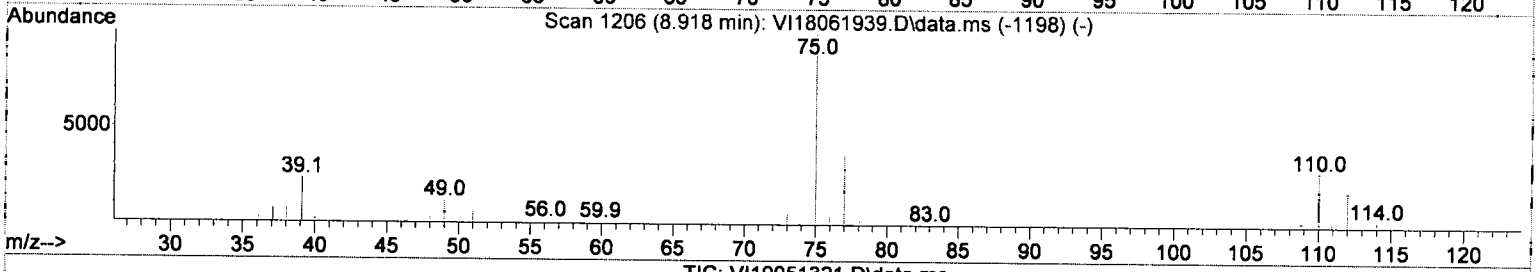
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:45:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







TIC: VI19051321.D\data.ms

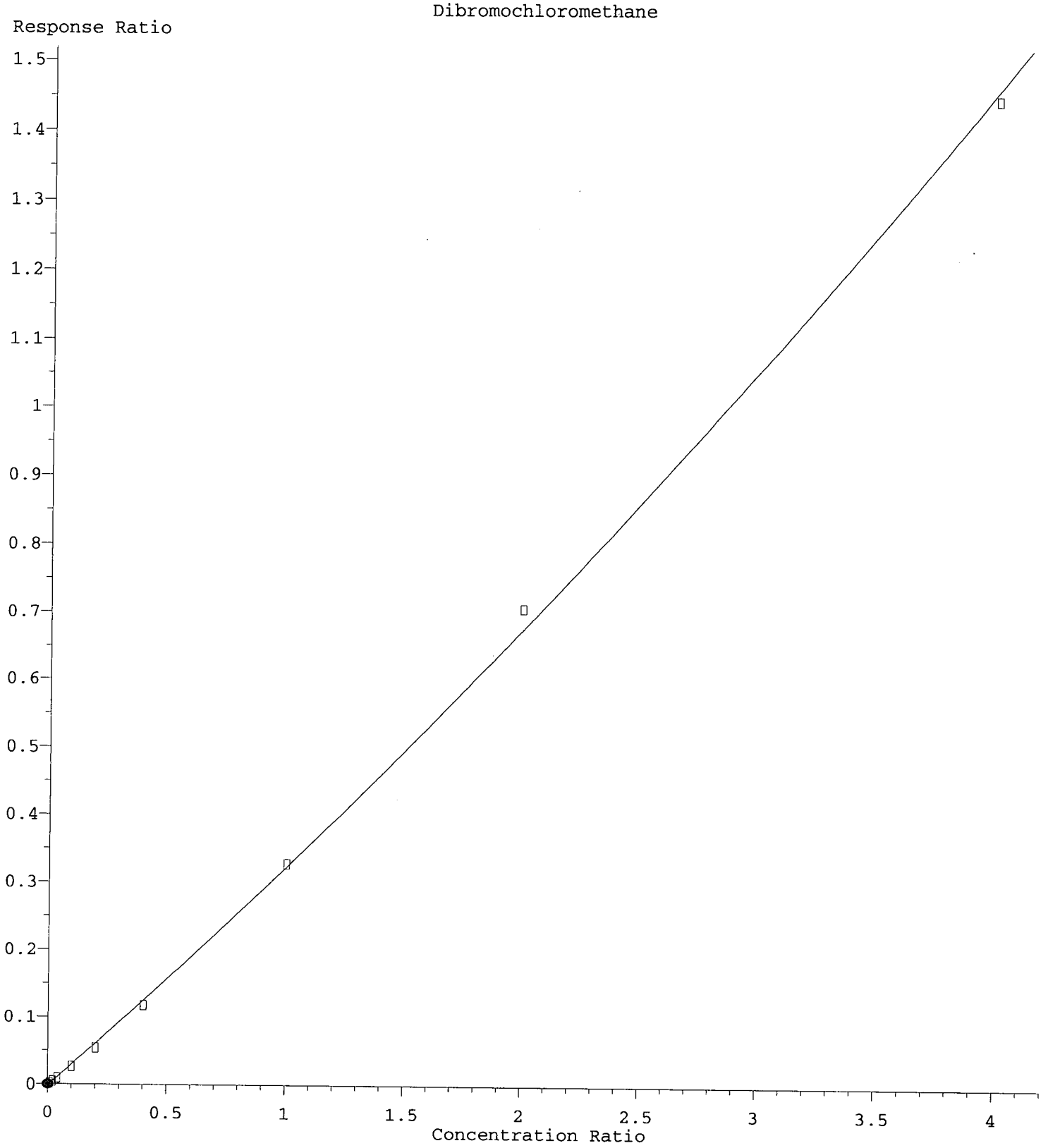
(46) t-1,3-Dichloropropene

8.887min (+ 0.024) 0.35 ug/L m

response 77

Ion	Exp%	Act%
75.00	100.00	100.00
77.00	31.40	42.49
110.00	27.40	0.00
0.00	0.00	0.00

5/14/19

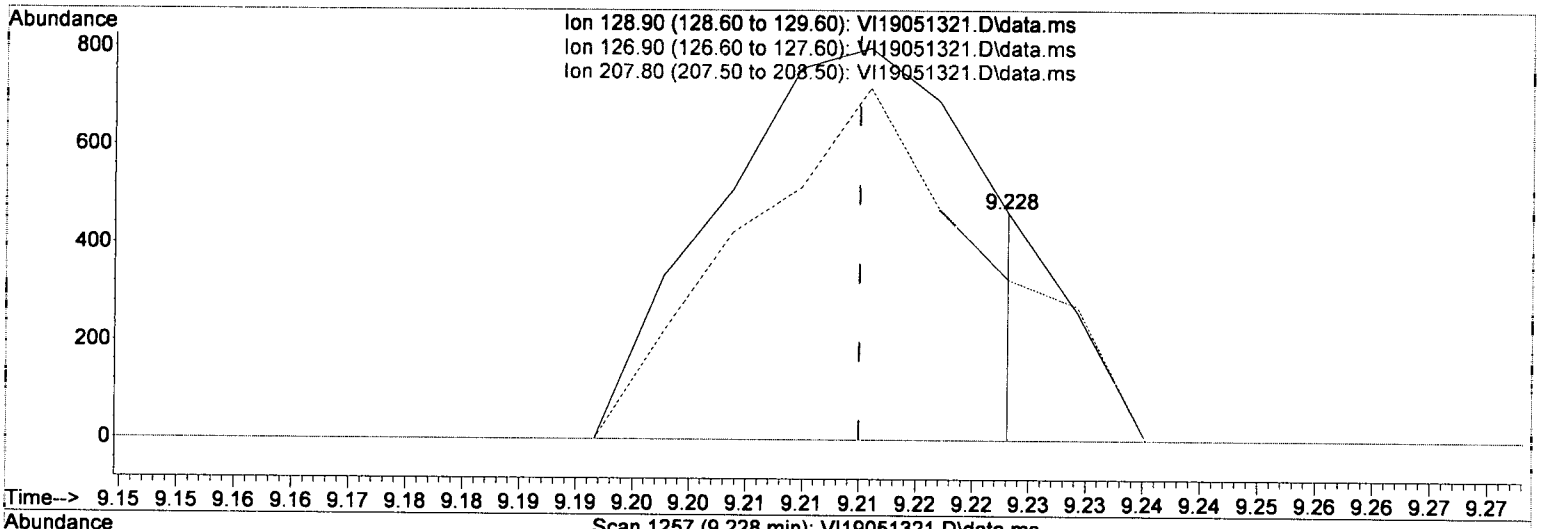


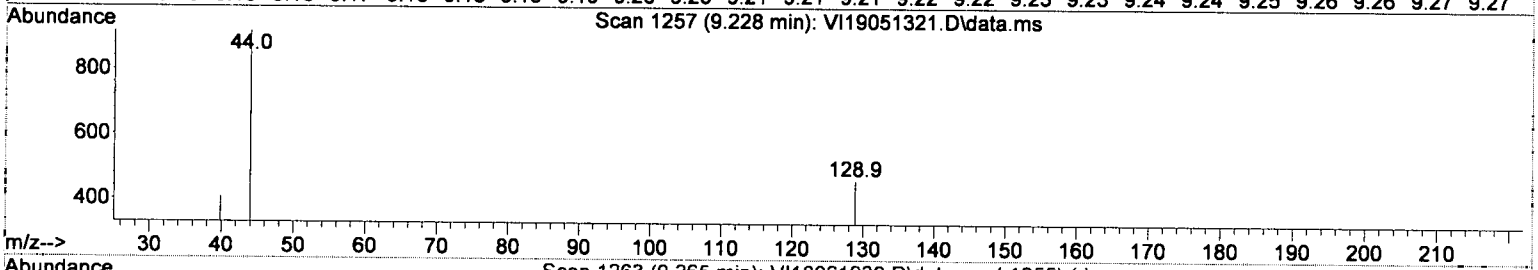
R = 1.33e-002 A*A + 3.12e-001 A - 2.03e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V1190514W.M
Calibration Table Last Updated: Tue May 14 09:33:38 2019

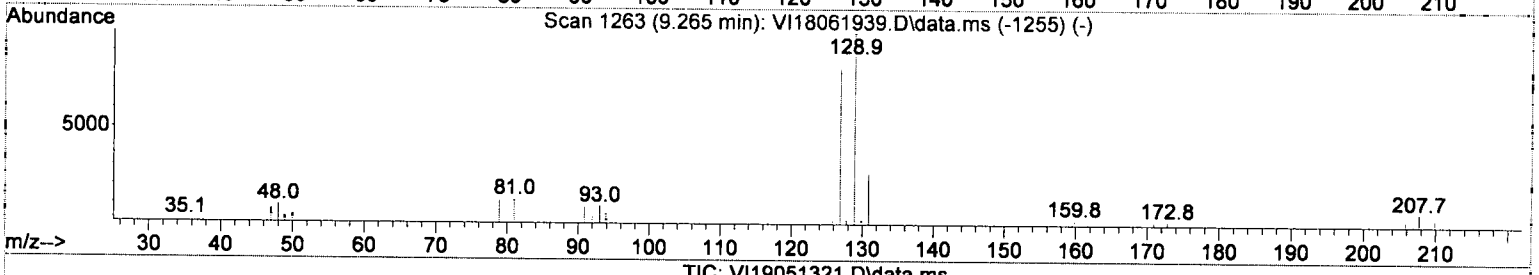
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:45:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







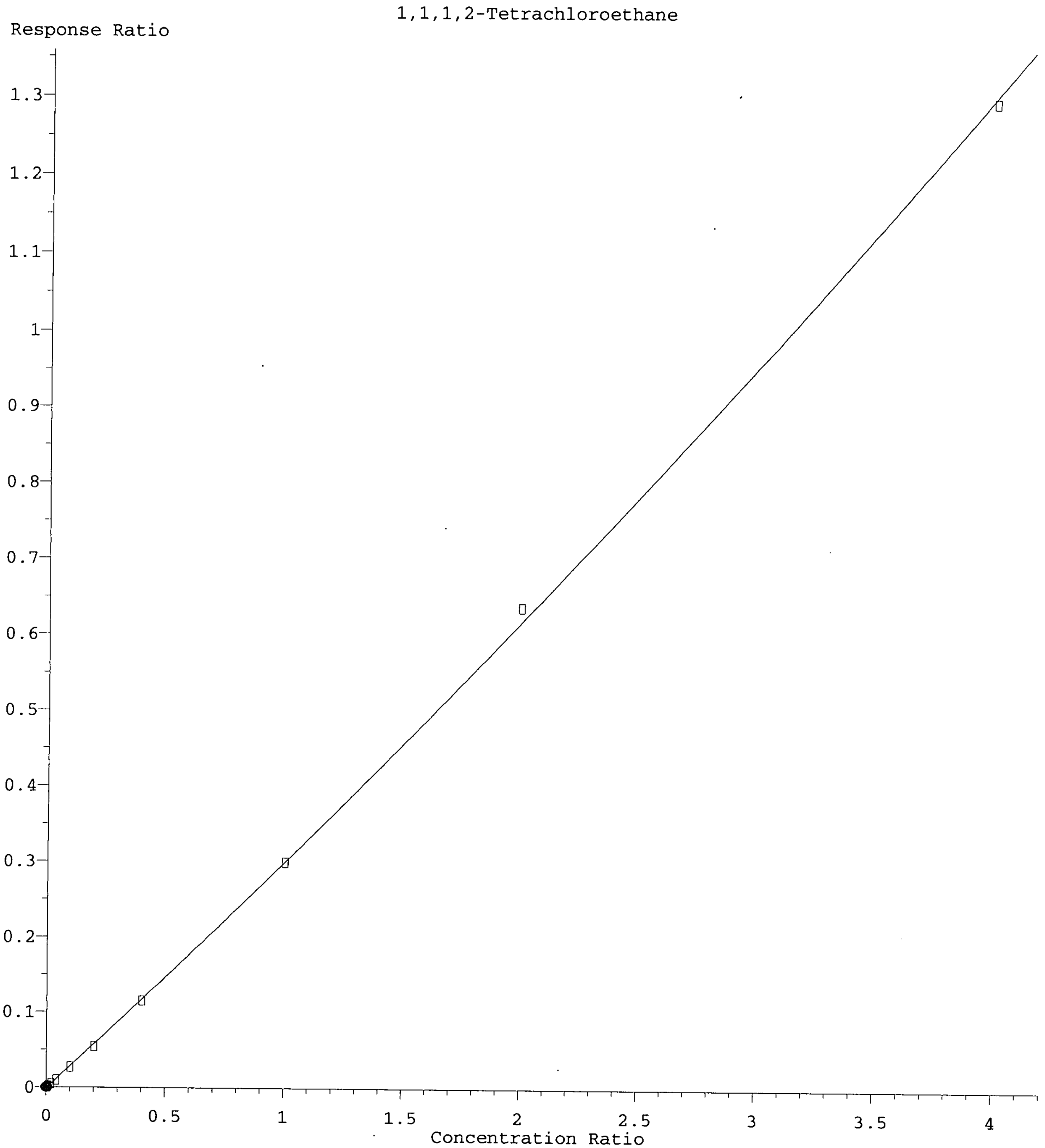
TIC: VI19051321.D\data.ms

(48) Dibromochloromethane

9.228min (+ 0.013) 0.37 ug/L m

response 96

Ion	Exp%	Act%
128.90	100.00	100.00
126.90	75.70	70.91
207.80	6.30	0.00
0.00	0.00	0.00

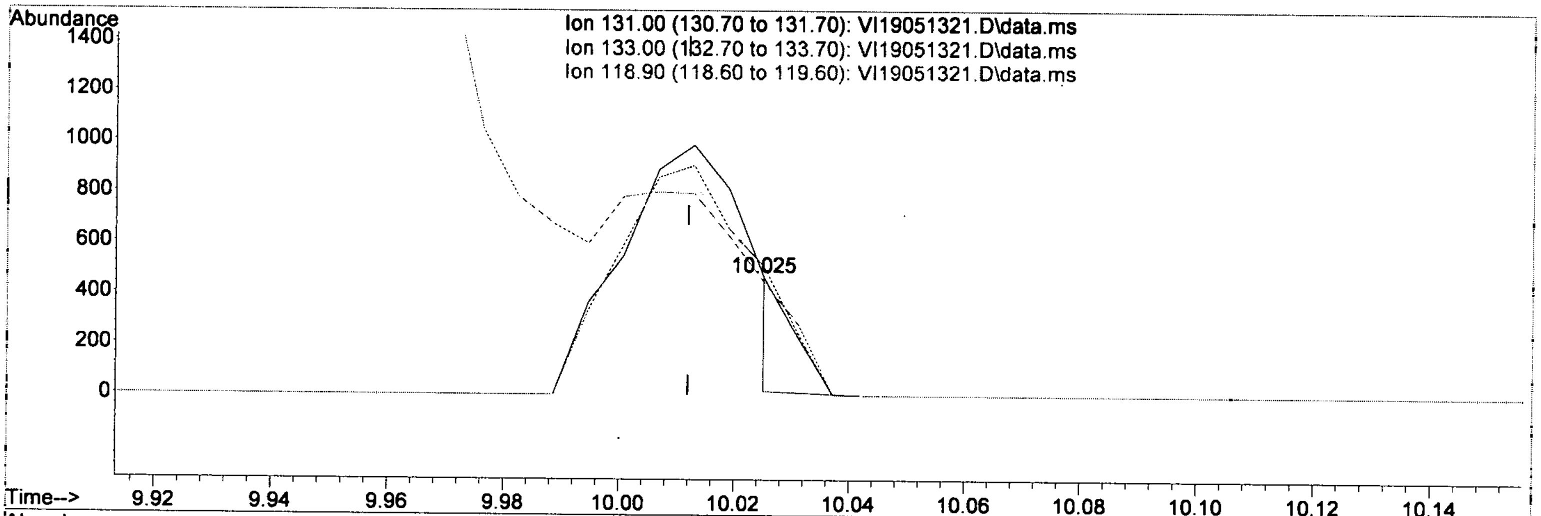


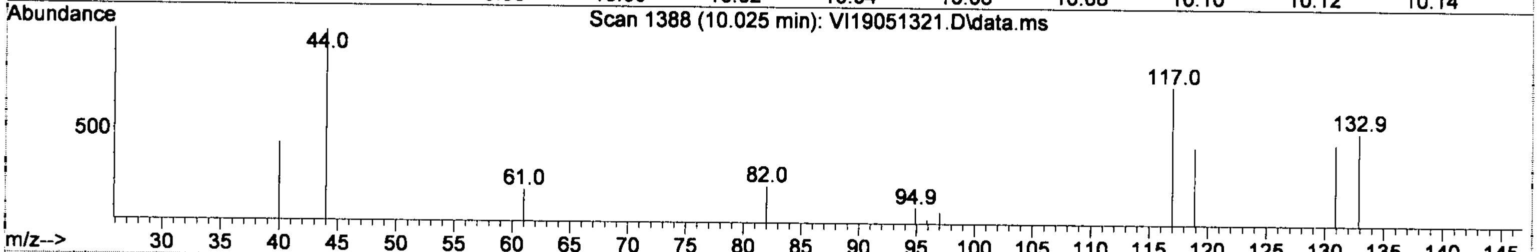
R = 8.20e-003 A*A + 2.93e-001 A - 8.64e-004
Coef of Det (r^2) = 1.000   Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VS190514W.M
Calibration Table Last Updated: Tue May 14 09:34:30 2019

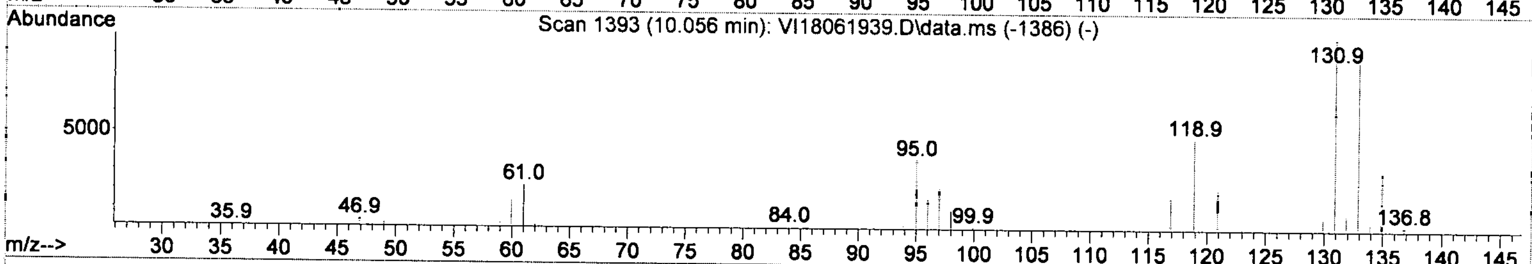
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051321.D
Acq On    : 13 May 2019   6:54 pm
Operator  : MM
Sample    : 9E13041-CAL4
Misc      : 1X  5mL  1/2PPB VOC
ALS Vial  : 7   Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:45:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title  : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration
```







TIC: VI19051321.D\data.ms

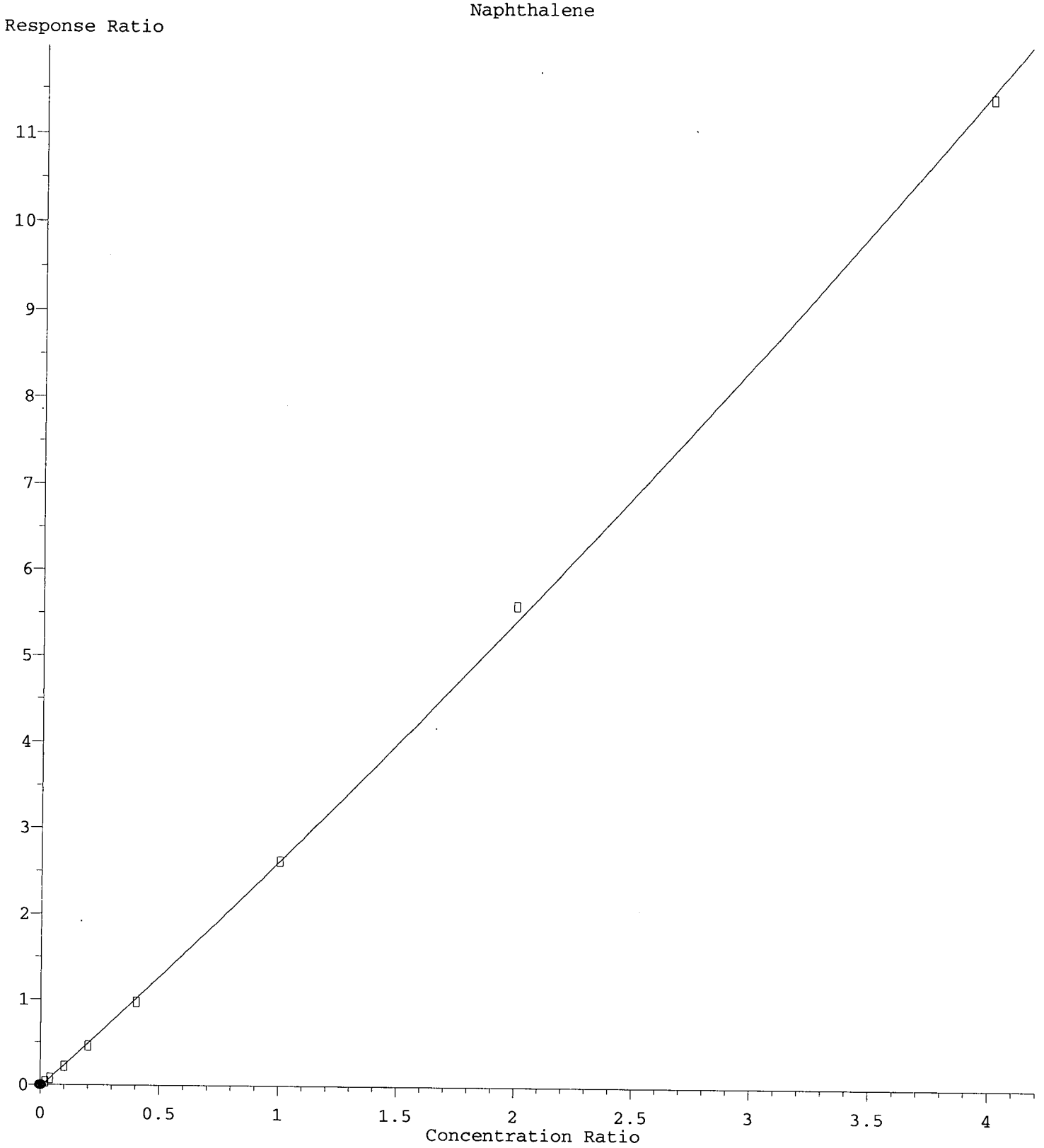
(54) 1,1,1,2-Tetrachloroethane

10.025min (+ 0.013) 0.19 ug/L m

response 74

Ion	Exp%	Act%
131.00	100.00	100.00
133.00	97.50	109.01
118.90	61.70	96.35#
0.00	0.00	0.00

M 5/14/19

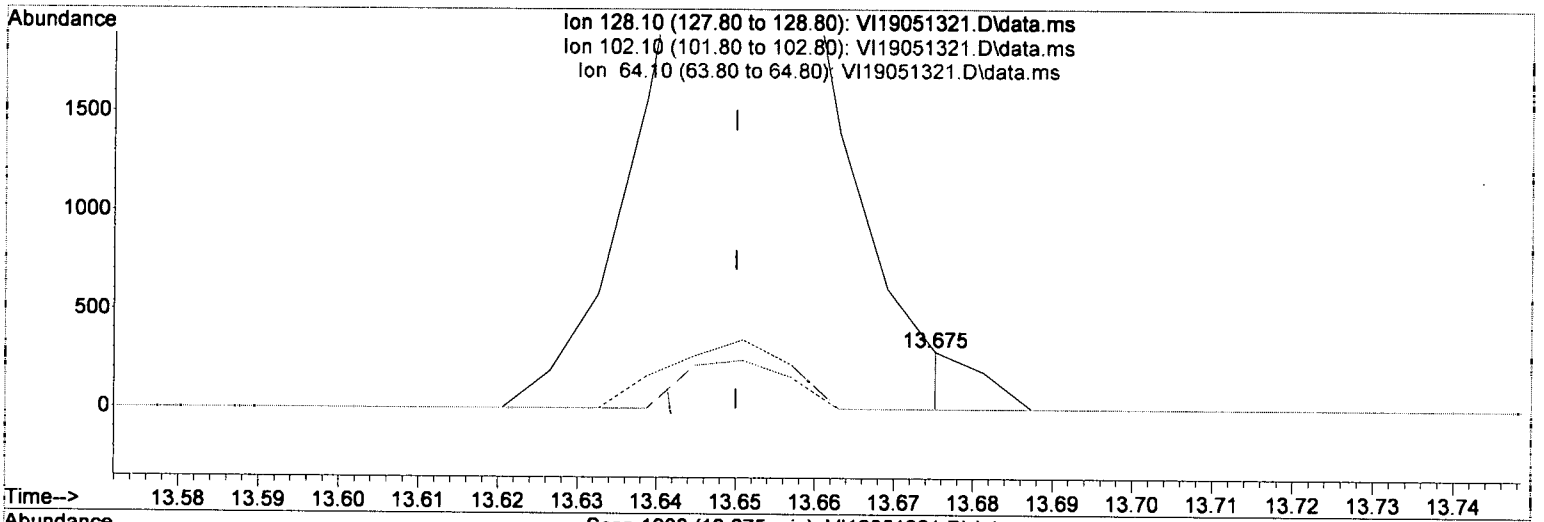


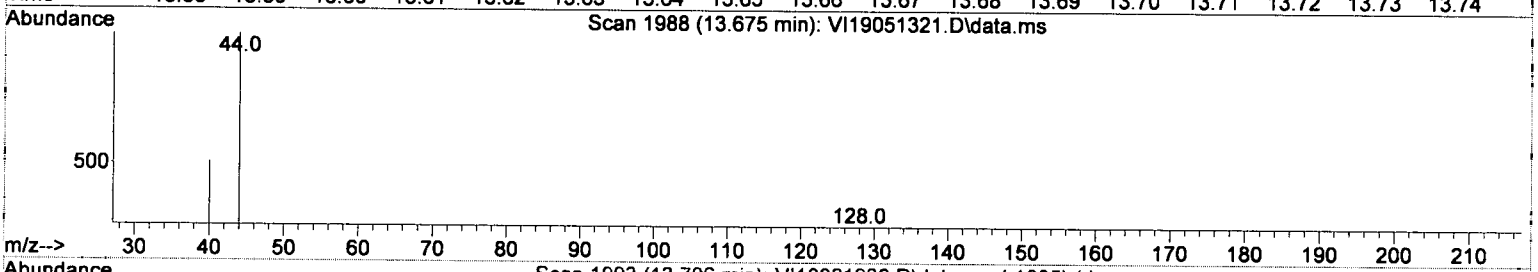
R = 7.67e-002 A*A + 2.57e+000 A - 2.58e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\ats1905302.m
Calibration Table Last Updated: Tue May 14 09:37:44 2019

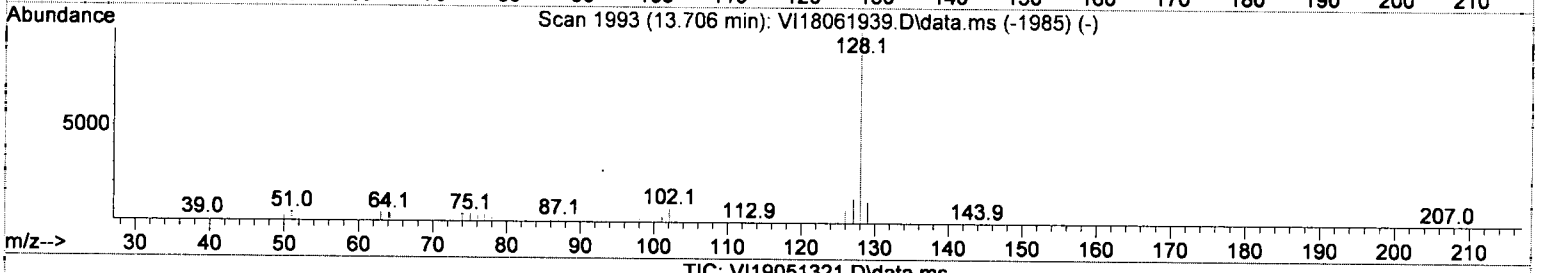
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:45:29 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







TIC: VI19051321.D\data.ms

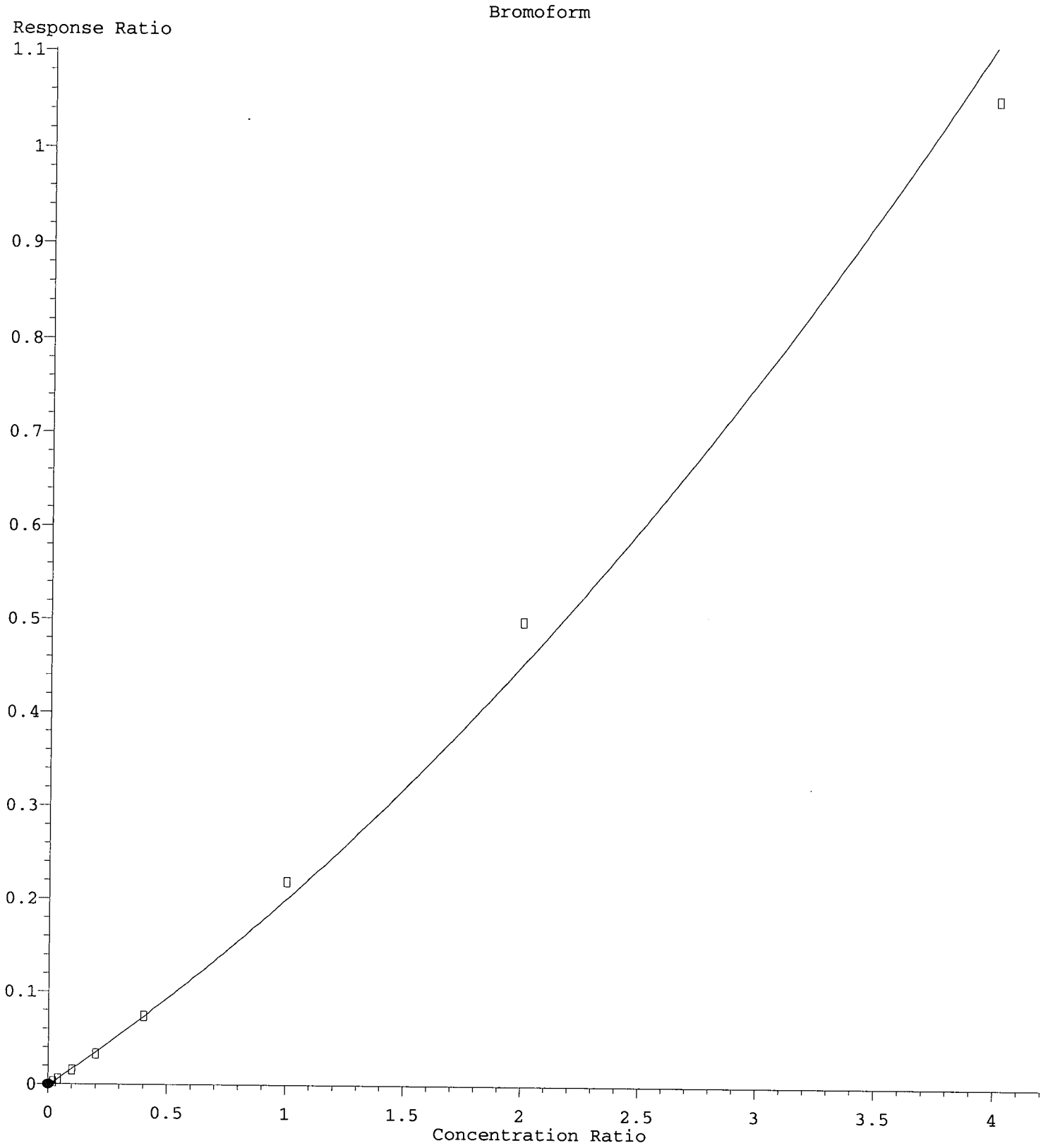
(81) Naphthalene

13.675min (+ 0.025) 0.51 ug/L m

response 68

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	0.00
64.10	4.70	0.00
0.00	0.00	0.00

5/14/19

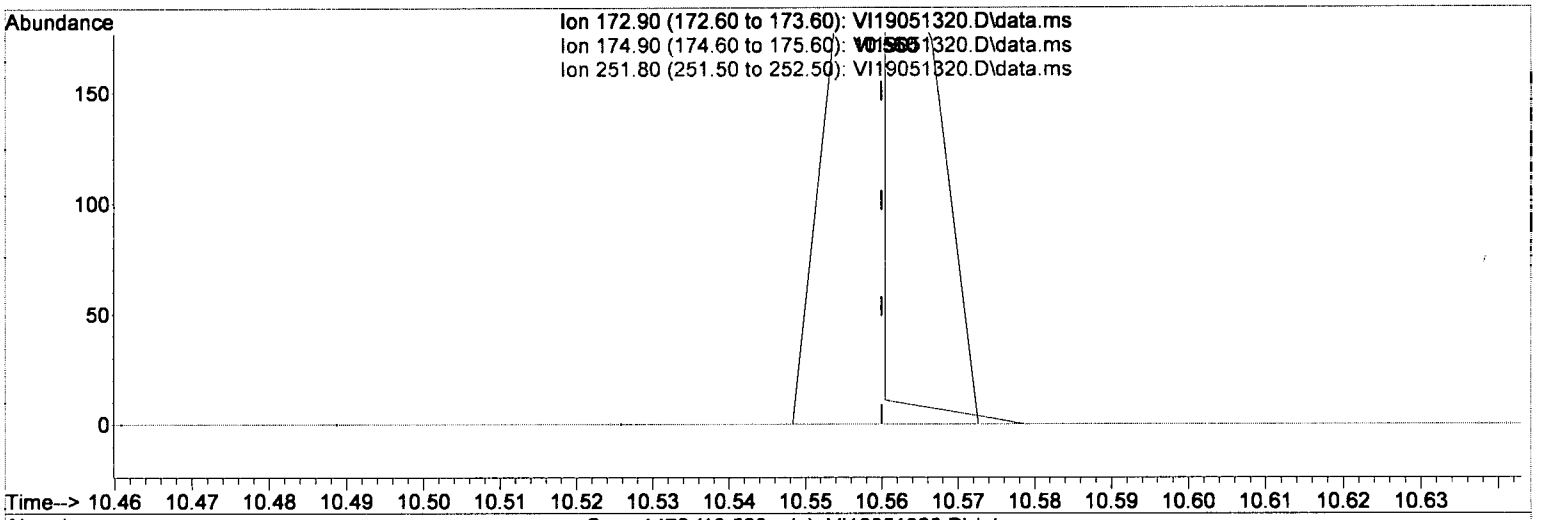


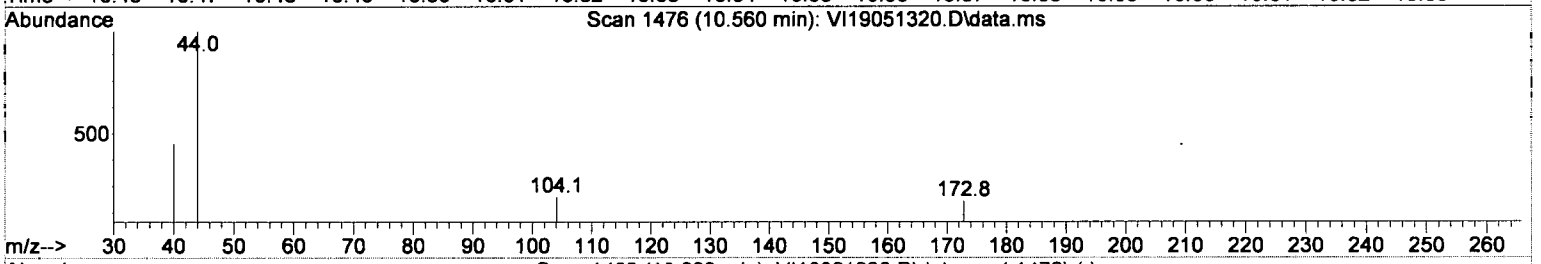
R = 2.53e-002 A*A + 1.77e-001 A - 1.27e-003
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\1905102W.m
Calibration Table Last Updated: Tue May 14 09:48:01 2019

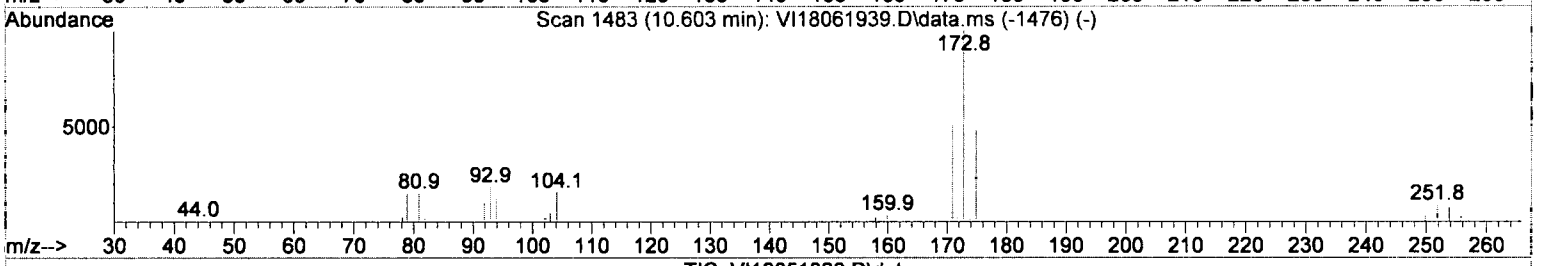
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051320.D
Acq On : 13 May 2019 6:27 pm
Operator : MM
Sample : 9E13041-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOC
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:48:08 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration







TIC: VI19051320.D\data.ms

(58) Bromoform (P)

10.560min (+ 0.000) 0.41 ug/L m

response 57

Ion	Exp%	Act%
172.90	100.00	100.00
174.90	49.20	0.00#
251.80	13.30	0.00
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E13041

Analysis Included
8260C Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9E13041-TUN1	MS Tune	Water		A19C125	5/13/2019 4:39:00PM
9E13041-ICB1	Initial Cal Blank	Water		A19C125	5/13/2019 5:06:00PM
9E13041-CAL1	Cal Standard	Water	A19E168	"	5/13/2019 5:33:00PM
9E13041-CAL2	Cal Standard	Water	A19E169	"	5/13/2019 6:00:00PM
9E13041-CAL3	Cal Standard	Water	A19E170	"	5/13/2019 6:27:00PM
9E13041-CAL4	Cal Standard	Water	A19E171	"	5/13/2019 6:54:00PM
9E13041-CAL5	Cal Standard	Water	A19E172	"	5/13/2019 7:21:00PM
9E13041-CAL6	Cal Standard	Water	A19E173	"	5/13/2019 7:48:00PM
9E13041-CAL7	Cal Standard	Water	A19E174	"	5/13/2019 8:15:00PM
9E13041-CAL8	Cal Standard	Water	A19E175	"	5/13/2019 8:42:00PM
9E13041-CAL9	Cal Standard	Water	A19E176	"	5/13/2019 9:09:00PM
9E13041-CALA	Cal Standard	Water	A19E177	"	5/13/2019 10:04:00PM
9E13041-CALB	Cal Standard	Water	A19E178	"	5/13/2019 10:58:00PM
9E13041-ICV1	Initial Cal Check	Water	A19D180	"	5/14/2019 12:19:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: A9E1405 Instrument: VOA-GCMS9

8260C Full List Sequence: 9E13041 Matrix: Water

9E13041-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E13041

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E1405** Instrument: **VOA-GCMS9**

8260C Full List Sequence: **9E13041** Matrix: **Water**

9E13041-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051333.D
Acq On : 14 May 2019 12:19 am
Operator : MM
Sample : 9E13041-ICV1
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:31 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	107	0.00
2		Dichlorodifluoromethane	20.000	18.144	9.3	98	0.00
3	P	Chloromethane	20.000	20.005	-0.0	108	0.00
4	C	Vinyl Chloride	20.000	18.629	6.9	101	0.00
5		Bromomethane	20.000	17.822	10.9	93	0.00
6		Chloroethane	20.000	14.536	27.3#	103	0.00
7		Trichlorofluoromethane	20.000	19.420	2.9	102	0.00
8	C	1,1-Dichloroethene	20.000	22.978	-14.9	120	0.00
9		Carbon Disulfide	20.000	17.457	12.7	92	0.00
10		Freon 113	20.000	19.548	2.3	102	0.00
11		Iodomethane	20.000	14.703	26.5#	104	0.00
12		~~Acrolein~~	~~20.000~~	~~0.000~~	~~100.0#~~	~~0~~	~~0.00~~
13		Methylene Chloride	20.000	20.789	-3.9	110	0.00
14		Acetone	40.000	36.558	8.6	103	0.00
15		t-1,2-Dichloroethene	20.000	22.992	-15.0	115	0.00
16		n-Hexane	20.000	19.516	2.4	101	0.00
17		Methyl-tert-butyl-ether	20.000	19.308	3.5	100	0.00
18	P	1,1-Dichloroethane	20.000	22.033	-10.2	114	0.00
19		Acrylonitrile	20.000	20.398	-2.0	104	0.00
20		~~Vinyl Acetate~~	~~20.000~~	~~0.000~~	~~100.0#~~	~~0~~	~~-4.98#~~
21		c-1,2-Dichloroethene	20.000	20.848	-4.2	104	0.00
22		2,2-Dichloropropane	20.000	18.191	9.0	96	0.00
23		Bromochloromethane	20.000	21.884	-9.4	106	0.00
24	C	Chloroform	20.000	20.051	-0.3	104	0.00
25		Carbon Tetrachloride	20.000	21.052	-5.3	107	0.00
26		Tetrahydrofuran	20.000	18.692	6.5	102	0.00
27		1,1,1-Trichloroethane	20.000	21.446	-7.2	110	0.00
28	S	Dibromofluoromethane (S)	50.000	49.605	0.8	105	0.00
29		1,1-Dichloropropene	20.000	20.647	-3.2	107	0.00
30		2-Butanone (MEK)	40.000	37.821	5.4	101	0.00
31		Benzene	20.000	20.031	-0.2	106	0.00
32		1,2-Dichloroethane (EDC)	20.000	21.267	-6.3	106	0.00
33		iso-Butyl Alcohol	500.000	500.681	-0.1	109	0.00
34	S	1,4-Difluorobenzene (S)	50.000	49.621	0.8	106	0.00
35		Trichloroethene (TCE)	20.000	20.900	-4.5	105	0.00
36		Dibromomethane	20.000	20.423	-2.1	104	0.00
37	C	1,2-Dichloropropane	20.000	20.218	-1.1	103	0.00
38		Bromodichloromethane	20.000	20.270	-1.3	104	0.00
39		Chlorobenzene-d5 (I)	50.000	50.000	0.0	105	0.00
40		~~2-Chloroethyl Vinyl Ether~~	~~20.000~~	~~0.000~~	~~100.0#~~	~~0~~	~~0.00~~
41		c-1,3-Dichloropropene	20.000	19.912	0.4	103	0.00
42	S	Toluene-d8 (S)	50.000	49.806	0.4	105	0.00
43	C	Toluene	20.000	19.361	3.2	104	0.00
44		Tetrachloroethene (PCE)	20.000	20.370	-1.9	105	0.00
45		4-Methyl-2-Pentanone (MIBK)	40.000	39.710	0.7	102	0.00
46		t-1,3-Dichloropropene	20.000	18.507	7.5	104	0.00
47		1,1,2-Trichloroethane	20.000	20.520	-2.6	103	0.00
48		Dibromochloromethane	20.000	18.644	6.8	104	0.00
49		1,3-Dichloropropane	20.000	20.226	-1.1	101	0.00
50		1,2-Dibromoethane (EDB)	20.000	20.838	-4.2	103	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051333.D
Acq On : 14 May 2019 12:19 am
Operator : MM
Sample : 9E13041-ICV1
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:31 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		2-Hexanone	40.000	41.312	-3.3	104	0.00
52	P	Chlorobenzene	20.000	20.075	-0.4	105	0.00
53	C	Ethylbenzene	20.000	19.235	3.8	103	0.00
54		1,1,1,2-Tetrachloroethane	20.000	19.335	3.3	104	0.00
55		m,p-Xylenes (2)	40.000	39.795	0.5	104	0.00
56		o-Xylene	20.000	20.227	-1.1	104	0.00
57		Styrene	20.000	21.528	-7.6	105	0.00
58	P	Bromoform	20.000	20.609	-3.0	108	0.00
59		Isopropylbenzene	20.000	20.268	-1.3	103	0.00
60	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	106	0.00
61	S	4-Bromofluorobenzene (S)	50.000	48.711	2.6	106	0.00
62		Bromobenzene	20.000	20.876	-4.4	105	0.00
63		n-Propylbenzene	20.000	19.103	4.5	102	0.00
64	P	1,1,2,2-Tetrachloroethane	20.000	20.196	-1.0	104	0.00
65		2-Chlorotoluene	20.000	20.652	-3.3	105	0.00
66		1,3,5-Trimethylbenzene	20.000	20.336	-1.7	104	0.00
67		1,2,3-Trichloropropane	20.000	19.564	2.2	104	0.00
68		t-1,4-Dichloro-2-butene	20.000	20.172	-0.9	106	0.00
69		4-Chlorotoluene	20.000	19.863	0.7	105	0.00
70		tert-Butylbenzene	20.000	19.795	1.0	103	0.00
71		1,2,4-Trimethylbenzene	20.000	20.671	-3.4	104	0.00
72		sec-Butylbenzene	20.000	20.221	-1.1	104	0.00
73		4-Isopropyltoluene	20.000	21.060	-5.3	104	0.00
74		1,3-Dichlorobenzene	20.000	20.408	-2.0	107	0.00
75		1,4-Dichlorobenzene	20.000	19.607	2.0	106	0.00
76		n-Butylbenzene	20.000	21.155	-5.8	102	0.00
77		1,2-Dichlorobenzene	20.000	20.719	-3.6	106	0.00
78		1,2-Dibromo-3-Chloropropane	20.000	19.227	3.9	110	0.00
79		Hexachlorobutadiene	20.000	22.374	-11.9	106	0.00
80		1,2,4-Trichlorobenzene	20.000	21.410	-7.1	107	0.00
81		Naphthalene	20.000	19.395	3.0	107	0.00
82		1,2,3-Trichlorobenzene	20.000	22.125	-10.6	108	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Compound List Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190514W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue May 14 09:28:30 2019
Response Via : Initial Calibration

Total Cpnds : 82

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	168	6.247	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.697	0.272	A	2	A	R
3	P	Chloromethane	50	1.909	0.306	A	2	A	R
4	C	Vinyl Chloride	62	2.019	0.323	A	2	A	R
5		Bromomethane	96	2.378	0.381	A	2	A	R
6		Chloroethane	64	2.517	0.403	Q	2	A	R
7		Trichlorofluoromethane	101	2.682	0.429	A	2	A	R
8	C	1,1-Dichloroethene	61	3.254	0.521	A	2	A	R
9		Carbon Disulfide	76	3.272	0.524	A	2	A	R
10		Freon 113	101	3.309	0.530	A	2	A	R
11		Iodomethane	142	3.412	0.546	Q	2	A	R
12		Acrolein	56	3.662	0.586	A	2	A	R
13		Methylene Chloride	84	3.898	0.624	L	2	A	R
14		Acetone	43	3.972	0.636	A	1	A	R
15		t-1,2-Dichloroethene	61	4.063	0.650	A	2	A	R
16		n-Hexane	86	4.148	0.664	A	3	A	R
17		Methyl-tert-butyl-ether	73	4.197	0.672	A	3	A	R
18	P	1,1-Dichloroethane	63	4.714	0.755	A	2	A	R
19		Acrylonitrile	53	4.774	0.764	A	2	A	R
20		Vinyl Acetate	43	4.981	0.797	A	2	A	R
21		c-1,2-Dichloroethene	61	5.274	0.844	A	2	A	R
22		2,2-Dichloropropane	77	5.383	0.862	A	2	A	R
23		Bromochloromethane	130	5.475	0.876	A	2	A	R
24	C	Chloroform	83	5.554	0.889	A	2	A	R
25		Carbon Tetrachloride	117	5.687	0.910	A	2	A	R
26		Tetrahydrofuran	42	5.730	0.917	A	2	A	R
27		1,1,1-Trichloroethane	97	5.767	0.923	A	2	A	R
28	S	Dibromofluoromethane (S)	111	5.742	0.919	A	2	A	R
29		1,1-Dichloropropene	75	5.894	0.944	A	2	A	R
30		2-Butanone (MEK)	43	5.888	0.943	A	2	A	R
31		Benzene	78	6.150	0.984	A	2	A	R
32		1,2-Dichloroethane (EDC)	62	6.369	1.019	A	2	A	R
33		iso-Butyl Alcohol	43	6.399	1.024	A	2	A	R
34	S	1,4-Difluorobenzene (S)	114	6.807	1.090	A	2	A	R
35		Trichloroethene (TCE)	130	6.770	1.084	A	2	A	R
36		Dibromomethane	93	7.227	1.157	A	2	A	R
37	C	1,2-Dichloropropane	63	7.342	1.175	A	2	A	R
38		Bromodichloromethane	83	7.409	1.186	A	2	A	R
39	I	Chlorobenzene-d5 (I)	117	9.934	1.000	A	2	A	R
40		2-Chloroethyl Vinyl Ether	63	7.944	0.800	Q	2	A	R
41		c-1,3-Dichloropropene	75	8.120	0.817	A	2	A	R
42	S	Toluene-d8 (S)	98	8.328	0.838	A	2	A	R
43	C	Toluene	91	8.389	0.844	A	2	A	R
44		Tetrachloroethene (PCE)	166	8.821	0.888	A	2	A	R
45		4-Methyl-2-Pentanone (MIBK)	43	8.826	0.888	A	2	A	R
46		t-1,3-Dichloropropene	75	8.863	0.892	Q	2	A	R
47		1,1,2-Trichloroethane	97	9.033	0.909	A	2	A	R
48		Dibromochloromethane	129	9.215	0.928	Q	2	A	R
49		1,3-Dichloropropane	76	9.313	0.938	A	2	A	R
50		1,2-Dibromoethane (EDB)	107	9.447	0.951	A	2	A	R
51		2-Hexanone	43	9.678	0.974	A	2	A	R
52	P	Chlorobenzene	112	9.952	1.002	A	2	A	R
53	C	Ethylbenzene	91	9.976	1.004	A	2	A	R
54		1,1,1,2-Tetrachloroethane	131	10.012	1.008	Q	2	A	R
55		m,p-Xylenes (2)	91	10.110	1.018	A	2	A	R

56		o-Xylene	91	10.487	1.056	A	2	A	R
57		Styrene	104	10.536	1.061	A	2	A	R
58	P	Bromoform	173	10.560	1.063	Q	2	A	R
59		Isopropylbenzene	105	10.755	1.083	A	2	A	R
60	I	1,4-Dichlorobenzene-d4 (I)	152	11.874	1.000	A	2	A	R
61	S	4-Bromofluorobenzene (S)	174	10.992	0.926	A	2	A	R
62		Bromobenzene	156	11.077	0.933	A	2	A	R
63		n-Propylbenzene	91	11.096	0.934	A	2	A	R
64	P	1,1,2,2-Tetrachloroethane	85	11.157	0.940	A	2	A	R
65		2-Chlorotoluene	126	11.224	0.945	A	2	A	R
66		1,3,5-Trimethylbenzene	105	11.247	0.947	A	2	A	R
67		1,2,3-Trichloropropane	110	11.272	0.949	A	2	A	R
68		t-1,4-Dichloro-2-butene	53	11.297	0.951	A	3	A	R
69		4-Chlorotoluene	91	11.357	0.956	A	2	A	R
70		tert-Butylbenzene	91	11.503	0.969	A	2	A	R
71		1,2,4-Trimethylbenzene	105	11.558	0.973	A	2	A	R
72		sec-Butylbenzene	105	11.637	0.980	A	2	A	R
73		4-Isopropyltoluene	119	11.746	0.989	A	2	A	R
74		1,3-Dichlorobenzene	146	11.814	0.995	A	2	A	R
75		1,4-Dichlorobenzene	146	11.881	1.001	A	2	A	R
76		n-Butylbenzene	91	12.063	1.016	A	2	A	R
77		1,2-Dichlorobenzene	146	12.203	1.028	A	2	A	R
78		1,2-Dibromo-3-Chloropropane	157	12.817	1.079	A	2	A	R
79		Hexachlorobutadiene	223	13.328	1.122	A	3	A	R
80		1,2,4-Trichlorobenzene	180	13.364	1.125	A	2	A	R
81		Naphthalene	128	13.650	1.150	Q	2	A	R
82		1,2,3-Trichlorobenzene	180	13.809	1.163	A	2	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VI190514W.M Tue May 14 09:53:47 2019

Response Factor Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190514W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue May 14 09:28:30 2019
Response Via : Initial Calibration

Calibration Files
0.1 =VI19051318.D 0.2 =VI19051319.D 0.5 =VI19051320.D 1 =VI19051321.D 2 =VI19051322.D 5 =VI19051323.D
10 =VI19051324.D 20 =VI19051325.D 50 =VI19051326.D 100 =VI19051328.D 200 =VI19051330.D

		Compound	0.1	0.2	0.5	1	2	5	10	20	50	100	200	Avg		%RSD
1)	I	Pentafluorobenzene...	----------			ISTD										
2)		Dichlorodifluo...			0.500	0.494	0.543	0.532	0.536	0.551	0.596	0.628	0.633	0.557		9.20
3)	P	Chloromethane			0.765	0.672	0.608	0.598	0.594	0.620	0.570	0.596	0.602	0.625		9.50
4)	C	Vinyl Chloride	1.043	0.709	0.672	0.677	0.721	0.713	0.724	0.737	0.711	0.748	0.751	0.746		13.64
5)		Bromomethane					0.479	0.453	0.436	0.416	0.359	0.354	0.339	0.405		13.50
6)		Chloroethane					0.396	0.322	0.290	0.195	0.262	0.244		0.285		24.31
7)		Trichlorofluor...			0.721	0.707	0.677	0.687	0.682	0.692	0.642	0.668	0.648	0.680		3.74
8)	C	1,1-Dichloroet...		0.611	0.565	0.604	0.596	0.593	0.588	0.616	0.592	0.619	0.631	0.601		3.11
9)		Carbon Disulfide			1.209	1.197	1.149	1.151	1.186	1.240	1.215	1.295	1.331	1.219		5.01
10)		Freon 113			0.429	0.457	0.467	0.440	0.451	0.462	0.437	0.461	0.465	0.452		3.07
11)		Iodomethane						0.051	0.069	0.122	0.245	0.348	0.384	0.203		70.81
12)		Acrolein												0.000		-1.00
13)		Methylene Chlo...	1.601	0.905	0.448	0.210	0.129	0.075	0.061	0.055	0.049	0.049	0.049	0.330	E1	150.35
14)		Acetone				0.340	0.303	0.275	0.277	0.266	0.265	0.262	0.258	0.281		9.89
15)		t-1,2-Dichloro...		0.503	0.554	0.602	0.594	0.593	0.614	0.637	0.611	0.636	0.640	0.598		7.06
16)		n-Hexane				0.098	0.094	0.097	0.098	0.104	0.100	0.109	0.110	0.101		5.86
17)		Methyl-tert-bu...		1.579	1.418	1.507	1.467	1.515	1.555	1.600	1.592	1.620	1.652	1.551		4.70
18)	P	1,1-Dichloroet...			0.789	0.857	0.807	0.831	0.834	0.866	0.833	0.856	0.861	0.837		3.12
19)		Acrylonitrile				0.241	0.273	0.295	0.305	0.314	0.321	0.325	0.324	0.300		9.83
20)		Vinyl Acetate												0.000		-1.00
21)		c-1,2-Dichloro...		0.572	0.591	0.651	0.649	0.658	0.683	0.704	0.682	0.700	0.710	0.660		7.07
22)		2,2-Dichloropr...			0.591	0.600	0.591	0.601	0.599	0.619	0.612	0.632	0.633	0.609		2.67
23)		Bromochloromet...			0.215	0.283	0.293	0.318	0.328	0.338	0.332	0.333	0.319	0.307		12.73
24)	C	Chloroform		0.837	0.837	0.885	0.874	0.850	0.874	0.896	0.866	0.891	0.899	0.871		2.64
25)		Carbon Tetrach...			0.384	0.457	0.462	0.487	0.505	0.537	0.542	0.598	0.622	0.510		14.43
26)		Tetrahydrofuran				0.301	0.306	0.293	0.298	0.294	0.304	0.303	0.304	0.300		1.64
27)		1,1,1-Trichlor...			0.621	0.643	0.632	0.657	0.672	0.699	0.675	0.718	0.727	0.672		5.56
28)	S	Dibromofluorom...	0.516	0.515	0.514	0.517	0.518	0.513	0.518	0.527	0.532	0.538	0.550	0.523		2.26
29)		1,1-Dichloropr...			0.608	0.635	0.644	0.651	0.656	0.687	0.668	0.705	0.717	0.664		5.24
30)		2-Butanone (MEK)				0.422	0.417	0.423	0.431	0.433	0.447	0.448	0.452	0.434		3.10
31)		Benzene	2.403	2.093	1.908	1.947	1.931	1.954	2.007	2.062	1.991	2.058	2.088	2.040		6.69
32)		1,2-Dichloroet...		0.540	0.604	0.643	0.667	0.685	0.686	0.711	0.690	0.702	0.707	0.664		8.22
33)		iso-Butyl Alcohol				0.048	0.047	0.051	0.052	0.051	0.056	0.058	0.057	0.053		7.50
34)	S	1,4-Difluorobe...	1.639	1.655	1.662	1.654	1.657	1.647	1.662	1.665	1.662	1.680	1.683	1.661		0.77
35)		Trichloroethen...		0.420	0.433	0.514	0.484	0.497	0.498	0.522	0.502	0.526	0.530	0.493		7.67
36)		Dibromomethane			0.260	0.294	0.314	0.330	0.334	0.344	0.350	0.360	0.364	0.328		10.29
37)	C	1,2-Dichloropr...			0.425	0.499	0.509	0.518	0.527	0.545	0.533	0.549	0.557	0.518		7.65
38)		Bromodichlorom...			0.496	0.532	0.534	0.558	0.573	0.611	0.632	0.663	0.686	0.587		10.99
39)		Chlorobenzene-d5 (I)	----------			ISTD										
40)		2-Chloroethyl ...												0.000		-1.00

Method Path : C:\msdchem\1\methods\
Method File : VI190514W.M
Title : EPA 8260: Volatile Organic Compounds

41)		c-1,3-Dichloro...				0.397	0.394	0.423	0.452	0.477	0.511	0.547	0.552	0.469	13.46
42)	S	Toluene-d8 (S)	1.363	1.372	1.363	1.364	1.367	1.362	1.349	1.348	1.344	1.339	1.299	1.352	1.51
43)	C	Toluene	1.915	1.560	1.417	1.465	1.398	1.431	1.442	1.473	1.420	1.466	1.444	1.494	9.77
44)		Tetrachloroeth...			0.283	0.326	0.316	0.326	0.330	0.334	0.328	0.347	0.349	0.326	5.95
45)		4-Methyl-2-Pen...			0.474	0.518	0.493	0.531	0.539	0.546	0.567	0.573	0.545	0.532	6.08
46)		t-1,3-Dichloro...			0.255	0.292	0.315	0.358	0.380	0.416	0.466	0.503	0.516	0.389	24.01
47)		1,1,2-Trichlor...			0.262	0.329	0.313	0.333	0.336	0.342	0.342	0.346	0.340	0.327	8.05
48)		Dibromochlorom...			0.178	0.209	0.220	0.258	0.268	0.294	0.328	0.353	0.361	0.274	23.69
49)		1,3-Dichloropr...		0.514	0.512	0.561	0.548	0.582	0.583	0.599	0.604	0.606	0.596	0.571	6.25
50)		1,2-Dibromoeth...			0.237	0.306	0.298	0.325	0.335	0.346	0.354	0.366	0.362	0.325	12.54
51)		2-Hexanone			0.290	0.364	0.335	0.380	0.389	0.392	0.413	0.423	0.400	0.376	11.04
52)	P	Chlorobenzene	0.980	0.947	0.887	0.915	0.888	0.962	0.942	0.946	0.928	0.961	0.960	0.938	3.25
53)	C	Ethylbenzene	2.260	1.611	1.435	1.565	1.507	1.564	1.574	1.608	1.570	1.662	1.651	1.637	13.20
54)		1,1,1,2-Tetrac...		0.158	0.186	0.236	0.240	0.266	0.271	0.289	0.299	0.318	0.323	0.259	21.08
55)		m,p-Xylenes (2)	1.605	1.101	1.056	1.092	1.083	1.146	1.183	1.223	1.215	1.300	1.305	1.210	12.90
56)		o-Xylene	1.462	1.123	1.056	1.143	1.079	1.166	1.193	1.234	1.238	1.294	1.277	1.206	9.50
57)		Styrene			0.704	0.745	0.759	0.858	0.894	0.947	0.962	1.022	1.023	0.879	13.72
58)	P	Bromoform				0.124	0.131	0.155	0.165	0.184	0.219	0.249	0.263	0.186	28.17
59)		Isopropylbenzene	1.888	1.218	1.179	1.311	1.252	1.372	1.411	1.477	1.455	1.528	1.521	1.419	13.85
60)	I	1,4-Dichlorobenzen...	----------			ISTD	----------									
61)	S	4-Bromofluorob...	0.835	0.841	0.824	0.820	0.827	0.816	0.804	0.780	0.784	0.773	0.759	0.806	3.41
62)		Bromobenzene	0.471	0.706	0.729	0.740	0.763	0.813	0.787	0.779	0.784	0.817	0.813	0.746	13.15
63)		n-Propylbenzene	4.921	3.539	3.407	3.453	3.464	3.606	3.605	3.669	3.624	3.839	3.840	3.724	11.32
64)	P	1,1,2,2-Tetrac...		0.613	0.651	0.690	0.697	0.756	0.719	0.718	0.732	0.748	0.709	0.704	6.21
65)		2-Chlorotoluene		0.586	0.663	0.676	0.722	0.747	0.733	0.741	0.740	0.774	0.767	0.715	8.03
66)		1,3,5-Trimethy...	2.902	2.189	2.039	2.175	2.199	2.382	2.425	2.507	2.488	2.652	2.654	2.419	10.63
67)		1,2,3-Trichlor...			0.312	0.353	0.365	0.368	0.356	0.349	0.357	0.360	0.346	0.352	4.67
68)		t-1,4-Dichloro...				0.199	0.202	0.234	0.229	0.230	0.240	0.248	0.243	0.228	8.05
69)		4-Chlorotoluene	2.720	2.150	1.993	2.150	2.125	2.271	2.233	2.254	2.230	2.302	2.267	2.245	8.06
70)		tert-Butylbenzene	1.824	1.315	1.190	1.358	1.304	1.398	1.385	1.429	1.384	1.470	1.443	1.409	11.21
71)		1,2,4-Trimethy...	2.724	2.179	2.003	2.105	2.163	2.386	2.426	2.508	2.486	2.620	2.592	2.381	9.90
72)		sec-Butylbenzene	3.781	2.564	2.529	2.719	2.785	2.950	2.966	3.036	2.965	3.152	3.086	2.958	11.53
73)		4-Isopropyltol...	2.860	2.003	1.869	2.169	2.060	2.280	2.367	2.488	2.428	2.608	2.566	2.336	12.62
74)		1,3-Dichlorobe...	1.465	1.274	1.357	1.302	1.345	1.429	1.386	1.387	1.381	1.428	1.392	1.377	4.06
75)		1,4-Dichlorobe...	1.712	1.476	1.432	1.493	1.419	1.513	1.436	1.439	1.424	1.472	1.417	1.476	5.74
76)		n-Butylbenzene	2.448	1.628	1.660	1.878	1.708	1.995	2.089	2.228	2.144	2.297	2.253	2.030	13.74
77)		1,2-Dichlorobe...		1.238	1.184	1.280	1.290	1.376	1.353	1.358	1.342	1.386	1.335	1.314	4.96
78)		1,2-Dibromo-3-...						0.196	0.200	0.209	0.240	0.259	0.257	0.227	12.69
79)		Hexachlorobuta...				0.138	0.146	0.179	0.179	0.190	0.164	0.183	0.182	0.170	11.12
80)		1,2,4-Trichlor...				0.584	0.615	0.703	0.731	0.758	0.739	0.794	0.800	0.715	11.01
81)		Naphthalene				1.747	1.830	2.171	2.286	2.426	2.617	2.795	2.852	2.341	17.66
82)		1,2,3-Trichlor...			0.497	0.557	0.587	0.676	0.694	0.724	0.718	0.775	0.783	0.668	14.89

(#) = Out of Range

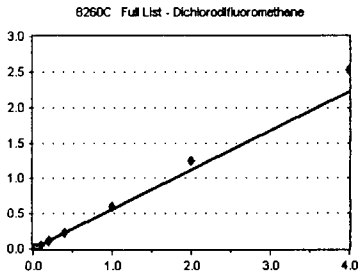
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

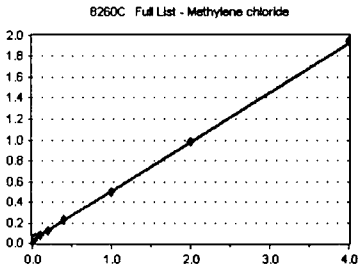


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	936	0.500	1.69
9E13041-CAL4	1	2276	0.494	1.69
9E13041-CAL5	2	4991	0.543	1.70
9E13041-CAL6	5	12494	0.532	1.70
9E13041-CAL7	10	24928	0.536	1.69
9E13041-CAL8	20	48393	0.551	1.70
9E13041-CAL9	50	136952	0.596	1.70
9E13041-CALA	100	288867	0.628	1.70
9E13041-CALB	200	588294	0.633	1.70

AVE RF **0.557** RF RSD **9.20** AVE RT **1.70**

Methylene chloride

Curve Fit: **LINEAR: Weighting: (1/a), Origin: Ignore**

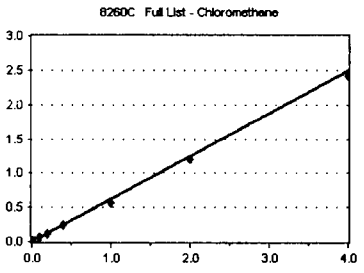


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	7534	16.007	0.00
9E13041-CAL2	0.2	8267	9.049	0.00
9E13041-CAL3	0.4	8394	4.480	0.00
9E13041-CAL4	1	9679	2.102	0.00
9E13041-CAL5	2	11818	1.285	0.00
9E13041-CAL6	5	17722	0.755	0.00
9E13041-CAL7	10	28397	0.610	3.89
9E13041-CAL8	20	48710	0.555	3.90
9E13041-CAL9	50	113604	0.494	3.90
9E13041-CALA	100	225143	0.490	3.90
9E13041-CALB	200	451305	0.486	3.90

AVE RF **3.301** RF RSD **150.35** AVE RT **1.77**

Chloromethane

Curve Fit: **AVERAGE RF**

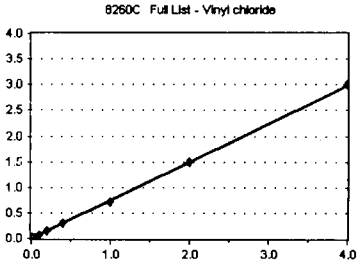


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~767~~	~~1.630~~	~~1.90~~
~~9E13041-CAL2~~	~~0.2~~	~~894~~	~~0.979~~	~~1.91~~
9E13041-CAL3	0.4	1434	0.765	1.91
9E13041-CAL4	1	3093	0.672	1.91
9E13041-CAL5	2	5586	0.608	1.92
9E13041-CAL6	5	14055	0.598	1.92
9E13041-CAL7	10	27622	0.594	1.91
9E13041-CAL8	20	54416	0.620	1.91
9E13041-CAL9	50	130990	0.570	1.92
9E13041-CALA	100	274306	0.596	1.92
9E13041-CALB	200	559435	0.602	1.91

AVE RF **0.625** RF RSD **9.50** AVE RT **1.91**

Vinyl chloride

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	491	1.043	2.01
9E13041-CAL2	0.2	648	0.709	2.01
9E13041-CAL3	0.4	1259	0.672	2.01
9E13041-CAL4	1	3117	0.677	2.01
9E13041-CAL5	2	6627	0.721	2.02
9E13041-CAL6	5	16740	0.713	2.02
9E13041-CAL7	10	33676	0.724	2.01
9E13041-CAL8	20	64698	0.737	2.02
9E13041-CAL9	50	163332	0.711	2.02
9E13041-CALA	100	343827	0.748	2.02
9E13041-CALB	200	697351	0.751	2.01

AVE RF **0.746** RF RSD **13.64** AVE RT **2.02**

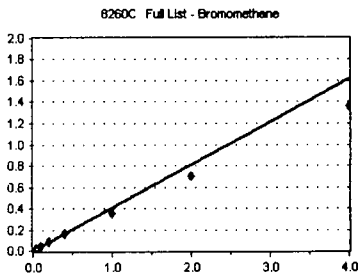
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Bromomethane

Curve Fit: **AVERAGE RF**

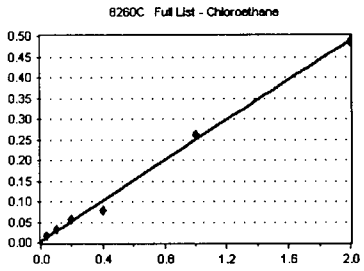


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~744~~	~~1.581~~	~~2.38~~
~~9E13041-CAL2~~	~~0.2~~	~~880~~	~~0.963~~	~~2.38~~
~~9E13041-CAL3~~	~~0.4~~	~~1368~~	~~0.730~~	~~2.37~~
~~9E13041-CAL4~~	~~1~~	~~2647~~	~~0.575~~	~~2.38~~
9E13041-CAL5	2	4405	0.479	2.38
9E13041-CAL6	5	10639	0.453	2.38
9E13041-CAL7	10	20274	0.436	2.38
9E13041-CAL8	20	36561	0.416	2.38
9E13041-CAL9	50	82438	0.359	2.38
9E13041-CALA	100	162653	0.354	2.38
9E13041-CALB	200	315134	0.339	2.38

AVE RF **0.405** RF RSD **13.50** AVE RT **2.38**

Chloroethane

Curve Fit: **QUADRATIC: Weighting: None, Origin: Ignore**

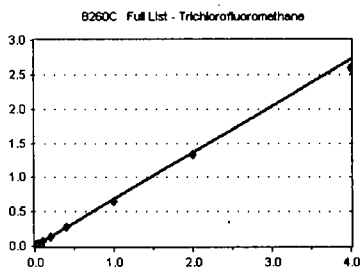


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL5	2	3640	0.396	2.53
9E13041-CAL6	5	7556	0.322	2.53
9E13041-CAL7	10	13509	0.290	2.52
9E13041-CAL8	20	17132	0.195	2.52
9E13041-CAL9	50	60291	0.262	2.52
9E13041-CALA	100	112052	0.244	2.52
~~9E13041-CALB~~	~~200~~	~~53556~~	~~5.767~~	~~2.51~~

AVE RF **0.285** RF RSD **24.31** AVE RT **2.52**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

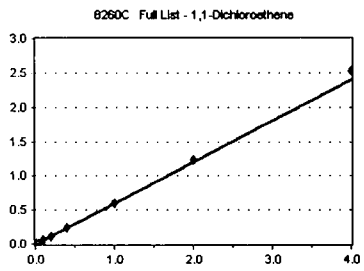


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	1351	0.721	2.68
9E13041-CAL4	1	3254	0.707	2.69
9E13041-CAL5	2	6222	0.677	2.69
9E13041-CAL6	5	16143	0.687	2.69
9E13041-CAL7	10	31730	0.682	2.68
9E13041-CAL8	20	60726	0.692	2.68
9E13041-CAL9	50	147423	0.642	2.69
9E13041-CALA	100	307365	0.668	2.69
9E13041-CALB	200	602175	0.648	2.68

AVE RF **0.680** RF RSD **3.74** AVE RT **2.68**

1,1-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	558	0.611	3.25
9E13041-CAL3	0.4	1059	0.565	3.25
9E13041-CAL4	1	2780	0.604	3.25
9E13041-CAL5	2	5477	0.596	3.25
9E13041-CAL6	5	13939	0.593	3.26
9E13041-CAL7	10	27340	0.588	3.25
9E13041-CAL8	20	54124	0.616	3.25
9E13041-CAL9	50	136114	0.592	3.26
9E13041-CALA	100	284593	0.619	3.26
9E13041-CALB	200	585731	0.631	3.25

AVE RF **0.601** RF RSD **3.12** AVE RT **3.26**

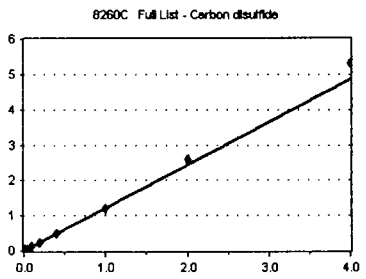
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.N**

Carbon disulfide

Curve Fit: **AVERAGE RF**

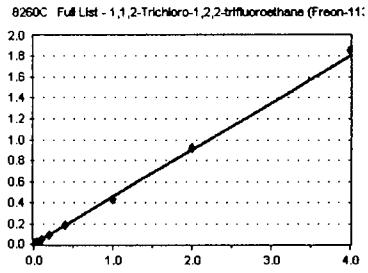


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	2265	1.209	3.27
9E13041-CAL4	1	5510	1.197	3.27
9E13041-CAL5	2	10569	1.149	3.27
9E13041-CAL6	5	27026	1.151	3.27
9E13041-CAL7	10	55204	1.186	3.27
9E13041-CAL8	20	108849	1.240	3.27
9E13041-CAL9	50	279033	1.215	3.28
9E13041-CALA	100	595514	1.295	3.28
9E13041-CALB	200	1235990	1.331	3.27

AVE RF **1.219** RF RSD **5.01** AVE RT **3.27**

1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Fit: **AVERAGE RF**

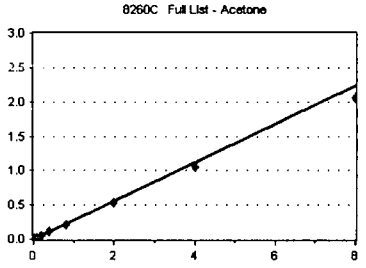


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	803	0.429	3.30
9E13041-CAL4	1	2104	0.457	3.30
9E13041-CAL5	2	4294	0.467	3.31
9E13041-CAL6	5	10335	0.440	3.32
9E13041-CAL7	10	20964	0.451	3.31
9E13041-CAL8	20	40582	0.462	3.31
9E13041-CAL9	50	100289	0.437	3.32
9E13041-CALA	100	211945	0.461	3.32
9E13041-CALB	200	432176	0.465	3.31

AVE RF **0.452** RF RSD **3.07** AVE RT **3.31**

Acetone

Curve Fit: **AVERAGE RF**

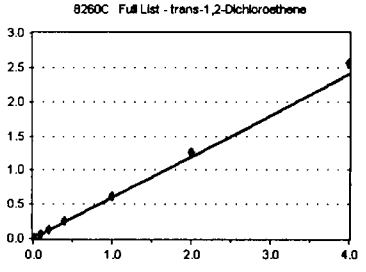


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	2	3132	0.340	3.97
9E13041-CAL5	4	5566	0.303	3.97
9E13041-CAL6	10	12918	0.275	3.97
9E13041-CAL7	20	25786	0.277	3.97
9E13041-CAL8	40	46729	0.266	3.97
9E13041-CAL9	100	121870	0.265	3.97
9E13041-CALA	200	240695	0.262	3.97
9E13041-CALB	400	478638	0.258	3.97

AVE RF **0.281** RF RSD **9.89** AVE RT **3.97**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	460	0.503	4.06
9E13041-CAL3	0.4	1038	0.554	4.06
9E13041-CAL4	1	2772	0.602	4.06
9E13041-CAL5	2	5463	0.594	4.07
9E13041-CAL6	5	13936	0.593	4.07
9E13041-CAL7	10	28575	0.614	4.06
9E13041-CAL8	20	55942	0.637	4.06
9E13041-CAL9	50	140409	0.611	4.07
9E13041-CALA	100	292445	0.636	4.07
9E13041-CALB	200	594115	0.640	4.06

AVE RF **0.598** RF RSD **7.06** AVE RT **4.07**

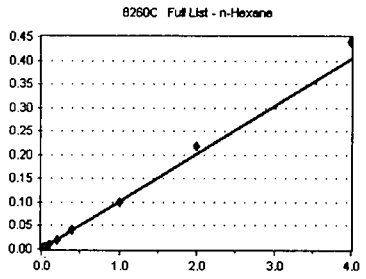
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

n-Hexane

Curve Fit: **AVERAGE RF**

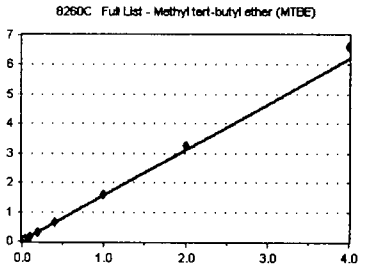


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	1	452	9.815	4.14
9E13041-CAL5	2	861	9.364	4.15
9E13041-CAL6	5	2278	9.699	4.15
9E13041-CAL7	10	4544	9.766	4.15
9E13041-CAL8	20	9157	0.104	4.15
9E13041-CAL9	50	22883	0.100	4.15
9E13041-CALA	100	50068	0.109	4.15
9E13041-CALB	200	102203	0.110	4.15

AVE RF **0.101** RF RSD **5.86** AVE RT **4.15**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

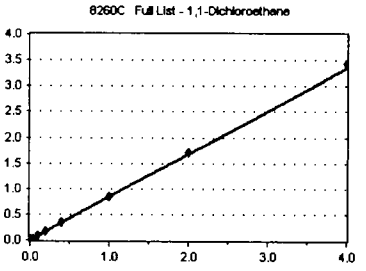


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	1443	1.579	4.20
9E13041-CAL3	0.4	2657	1.418	4.19
9E13041-CAL4	1	6939	1.507	4.20
9E13041-CAL5	2	13492	1.467	4.20
9E13041-CAL6	5	35574	1.515	4.20
9E13041-CAL7	10	72369	1.555	4.20
9E13041-CAL8	20	140539	1.600	4.20
9E13041-CAL9	50	365801	1.592	4.20
9E13041-CALA	100	744823	1.620	4.20
9E13041-CALB	200	1534372	1.652	4.20

AVE RF **1.551** RF RSD **4.70** AVE RT **4.20**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

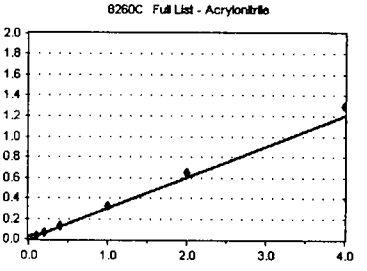


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	1479	0.789	4.71
9E13041-CAL4	1	3947	0.857	4.71
9E13041-CAL5	2	7416	0.807	4.71
9E13041-CAL6	5	19524	0.831	4.71
9E13041-CAL7	10	38784	0.834	4.71
9E13041-CAL8	20	76044	0.866	4.71
9E13041-CAL9	50	191406	0.833	4.71
9E13041-CALA	100	393700	0.856	4.71
9E13041-CALB	200	799678	0.861	4.71

AVE RF **0.837** RF RSD **3.12** AVE RT **4.71**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~370~~	~~0.197~~	~~4.79~~
9E13041-CAL4	1	1112	0.241	4.78
9E13041-CAL5	2	2509	0.273	4.78
9E13041-CAL6	5	6917	0.295	4.78
9E13041-CAL7	10	14188	0.305	4.78
9E13041-CAL8	20	27531	0.314	4.78
9E13041-CAL9	50	73845	0.321	4.78
9E13041-CALA	100	149538	0.325	4.78
9E13041-CALB	200	301125	0.324	4.78

AVE RF **0.300** RF RSD **9.83** AVE RT **4.78**

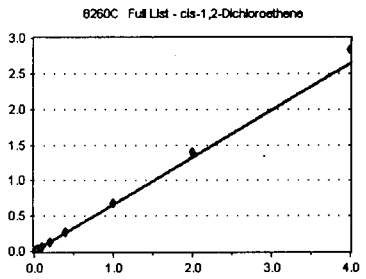
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

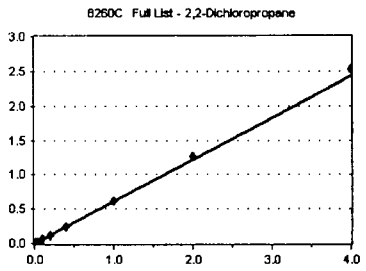


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	523	0.572	5.28
9E13041-CAL3	0.4	1108	0.591	5.27
9E13041-CAL4	1	3000	0.651	5.27
9E13041-CAL5	2	5971	0.649	5.27
9E13041-CAL6	5	15449	0.658	5.27
9E13041-CAL7	10	31766	0.683	5.27
9E13041-CAL8	20	61835	0.704	5.27
9E13041-CAL9	50	156579	0.682	5.27
9E13041-CALA	100	321721	0.700	5.27
9E13041-CALB	200	659466	0.710	5.27

AVE RF **0.660** RF RSD **7.07** AVE RT **5.27**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

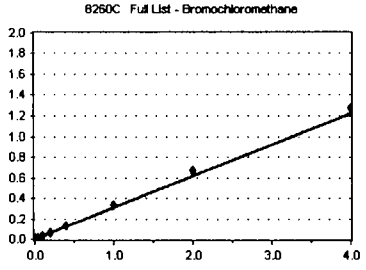


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	1108	0.591	5.38
9E13041-CAL4	1	2765	0.600	5.38
9E13041-CAL5	2	5434	0.591	5.38
9E13041-CAL6	5	14125	0.601	5.38
9E13041-CAL7	10	27884	0.599	5.38
9E13041-CAL8	20	54385	0.619	5.38
9E13041-CAL9	50	140568	0.612	5.38
9E13041-CALA	100	290811	0.632	5.38
9E13041-CALB	200	588101	0.633	5.38

AVE RF **0.609** RF RSD **2.67** AVE RT **5.38**

Bromochloromethane

Curve Fit: **AVERAGE RF**

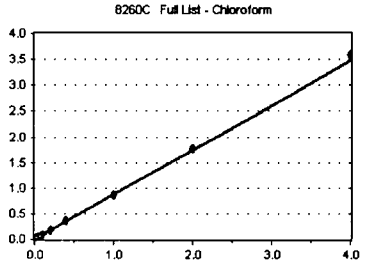


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	403	0.215	5.48
9E13041-CAL4	1	1305	0.283	5.47
9E13041-CAL5	2	2697	0.293	5.48
9E13041-CAL6	5	7470	0.318	5.48
9E13041-CAL7	10	15271	0.328	5.48
9E13041-CAL8	20	29657	0.338	5.48
9E13041-CAL9	50	76361	0.332	5.48
9E13041-CALA	100	153192	0.333	5.48
9E13041-CALB	200	296640	0.319	5.48

AVE RF **0.307** RF RSD **12.73** AVE RT **5.47**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	765	0.837	5.55
9E13041-CAL3	0.4	1568	0.837	5.56
9E13041-CAL4	1	4074	0.885	5.55
9E13041-CAL5	2	8040	0.874	5.56
9E13041-CAL6	5	19975	0.850	5.55
9E13041-CAL7	10	40653	0.874	5.55
9E13041-CAL8	20	78701	0.896	5.55
9E13041-CAL9	50	199012	0.866	5.56
9E13041-CALA	100	409736	0.891	5.55
9E13041-CALB	200	834920	0.899	5.55

AVE RF **0.871** RF RSD **2.64** AVE RT **5.56**

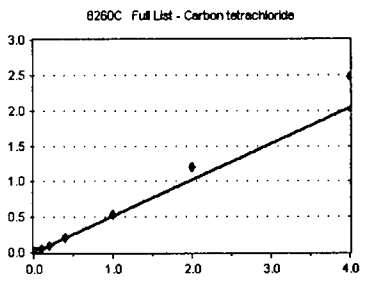
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

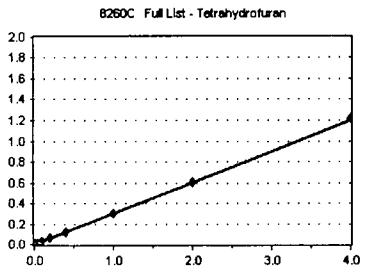


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	720	0.384	5.68
9E13041-CAL4	1	2106	0.457	5.69
9E13041-CAL5	2	4244	0.462	5.69
9E13041-CAL6	5	11440	0.487	5.69
9E13041-CAL7	10	23477	0.505	5.69
9E13041-CAL8	20	47184	0.537	5.69
9E13041-CAL9	50	124452	0.542	5.69
9E13041-CALA	100	274863	0.598	5.69
9E13041-CALB	200	577246	0.622	5.69

AVE RF **0.510** RF RSD **14.43** AVE RT **5.69**

Tetrahydrofuran

Curve Fit: **AVERAGE RF**

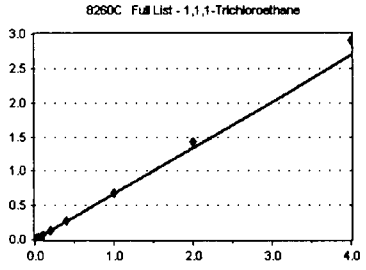


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	1	1387	0.301	5.74
9E13041-CAL5	2	2814	0.306	5.74
9E13041-CAL6	5	6880	0.293	5.74
9E13041-CAL7	10	13855	0.298	5.73
9E13041-CAL8	20	25840	0.294	5.73
9E13041-CAL9	50	69920	0.304	5.73
9E13041-CALA	100	139372	0.303	5.72
9E13041-CALB	200	282630	0.304	5.72

AVE RF **0.300** RF RSD **1.64** AVE RT **5.73**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**

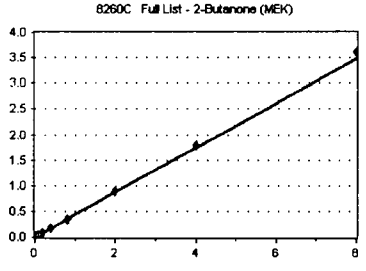


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	1163	0.621	5.75
9E13041-CAL4	1	2963	0.643	5.77
9E13041-CAL5	2	5809	0.632	5.76
9E13041-CAL6	5	15422	0.657	5.77
9E13041-CAL7	10	31265	0.672	5.76
9E13041-CAL8	20	61392	0.699	5.77
9E13041-CAL9	50	155174	0.675	5.77
9E13041-CALA	100	329979	0.718	5.76
9E13041-CALB	200	675270	0.727	5.76

AVE RF **0.672** RF RSD **5.56** AVE RT **5.76**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	2	3883	0.422	5.89
9E13041-CAL5	4	7674	0.417	5.89
9E13041-CAL6	10	19892	0.423	5.89
9E13041-CAL7	20	40145	0.431	5.89
9E13041-CAL8	40	76037	0.433	5.89
9E13041-CAL9	100	205371	0.447	5.89
9E13041-CALA	200	412470	0.448	5.88
9E13041-CALB	400	840405	0.452	5.88

AVE RF **0.434** RF RSD **3.10** AVE RT **5.89**

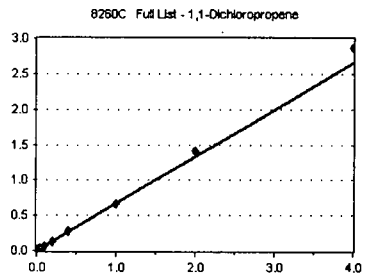
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

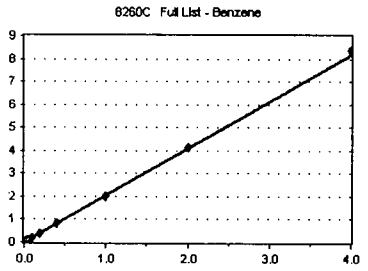


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	1140	0.608	5.89
9E13041-CAL4	1	2926	0.635	5.89
9E13041-CAL5	2	5918	0.644	5.89
9E13041-CAL6	5	15281	0.651	5.90
9E13041-CAL7	10	30540	0.656	5.89
9E13041-CAL8	20	60349	0.687	5.89
9E13041-CAL9	50	153463	0.668	5.89
9E13041-CALA	100	324438	0.705	5.89
9E13041-CALB	200	665972	0.717	5.89

AVE RF **0.664** RF RSD **5.24** AVE RT **5.89**

Benzene

Curve Fit: **AVERAGE RF**

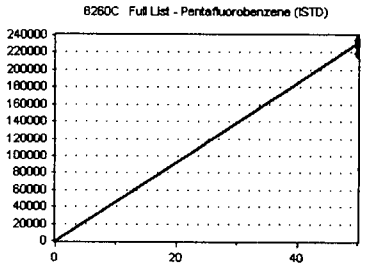


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	1131	2.403	6.15
9E13041-CAL2	0.2	1912	2.093	6.15
9E13041-CAL3	0.4	3575	1.908	6.15
9E13041-CAL4	1	8968	1.947	6.15
9E13041-CAL5	2	17757	1.931	6.16
9E13041-CAL6	5	45883	1.954	6.15
9E13041-CAL7	10	93393	2.007	6.15
9E13041-CAL8	20	181075	2.062	6.15
9E13041-CAL9	50	457394	1.991	6.15
9E13041-CALA	100	946643	2.058	6.15
9E13041-CALB	200	1939385	2.088	6.15

AVE RF **2.040** RF RSD **6.69** AVE RT **6.15**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

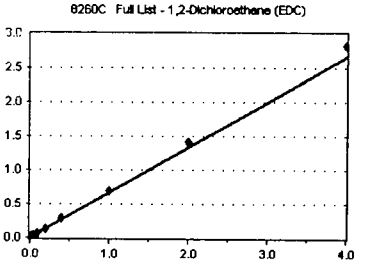


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	50	235333	4706.660	6.24
9E13041-CAL2	50	228403	4568.060	6.25
9E13041-CAL3	50	234232	4684.640	6.24
9E13041-CAL4	50	230252	4605.040	6.24
9E13041-CAL5	50	229864	4597.280	6.25
9E13041-CAL6	50	234867	4697.340	6.25
9E13041-CAL7	50	232644	4652.880	6.25
9E13041-CAL8	50	219527	4390.540	6.25
9E13041-CAL9	50	229746	4594.920	6.25
9E13041-CALA	50	229946	4598.920	6.25
9E13041-CALB	50	232177	4643.540	6.25

AVE RF **4612.711** RF RSD **1.89** AVE RT **6.25**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	493	0.540	6.37
9E13041-CAL3	0.4	1131	0.604	6.36
9E13041-CAL4	1	2961	0.643	6.37
9E13041-CAL5	2	6131	0.667	6.38
9E13041-CAL6	5	16098	0.685	6.37
9E13041-CAL7	10	31922	0.686	6.37
9E13041-CAL8	20	62475	0.711	6.37
9E13041-CAL9	50	158514	0.690	6.37
9E13041-CALA	100	322981	0.702	6.37
9E13041-CALB	200	656567	0.707	6.37

AVE RF **0.664** RF RSD **8.22** AVE RT **6.37**

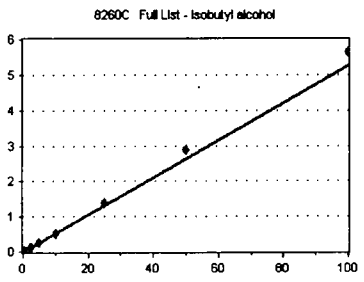
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Isobutyl alcohol

Curve Fit: **AVERAGE RF**

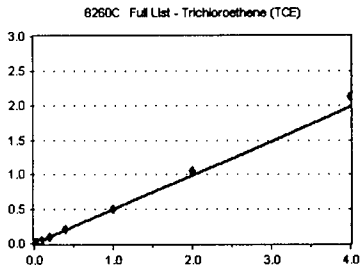


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~2.5~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~5~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~10~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	25	5529	4.803	6.41
9E13041-CAL5	50	10817	4.706	6.40
9E13041-CAL6	125	30097	5.126	6.41
9E13041-CAL7	250	60752	5.223	6.40
9E13041-CAL8	500	112947	5.145	6.40
9E13041-CAL9	1250	320954	0.056	6.40
9E13041-CALA	2500	665403	5.787	6.40
9E13041-CALB	5000	1312196	5.652	6.40

AVE RF **5.254** RF RSD **7.50** AVE RT **6.40**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**

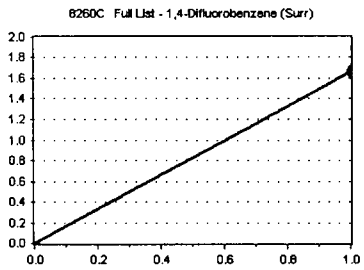


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	384	0.420	6.78
9E13041-CAL3	0.4	811	0.433	6.78
9E13041-CAL4	1	2367	0.514	6.77
9E13041-CAL5	2	4454	0.484	6.77
9E13041-CAL6	5	11665	0.497	6.77
9E13041-CAL7	10	23159	0.498	6.77
9E13041-CAL8	20	45873	0.522	6.77
9E13041-CAL9	50	115242	0.502	6.77
9E13041-CALA	100	241711	0.526	6.77
9E13041-CALB	200	492659	0.530	6.77

AVE RF **0.493** RF RSD **7.67** AVE RT **6.77**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

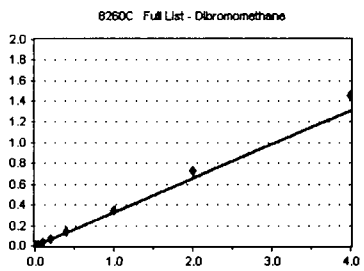


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	50	385697	1.639	6.81
9E13041-CAL2	50	378112	1.655	6.81
9E13041-CAL3	50	389226	1.662	6.81
9E13041-CAL4	50	380852	1.654	6.81
9E13041-CAL5	50	380962	1.657	6.81
9E13041-CAL6	50	386851	1.647	6.81
9E13041-CAL7	50	386626	1.662	6.81
9E13041-CAL8	50	365426	1.665	6.81
9E13041-CAL9	50	381879	1.662	6.81
9E13041-CALA	50	386280	1.680	6.81
9E13041-CALB	50	390714	1.683	6.81

AVE RF **1.661** RF RSD **0.77** AVE RT **6.81**

Dibromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	487	0.260	7.23
9E13041-CAL4	1	1355	0.294	7.23
9E13041-CAL5	2	2884	0.314	7.23
9E13041-CAL6	5	7741	0.330	7.23
9E13041-CAL7	10	15518	0.334	7.23
9E13041-CAL8	20	30236	0.344	7.23
9E13041-CAL9	50	80374	0.350	7.23
9E13041-CALA	100	165522	0.360	7.23
9E13041-CALB	200	338301	0.364	7.23

AVE RF **0.328** RF RSD **10.29** AVE RT **7.23**

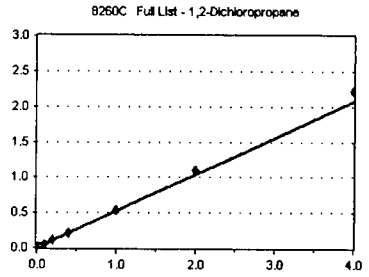
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

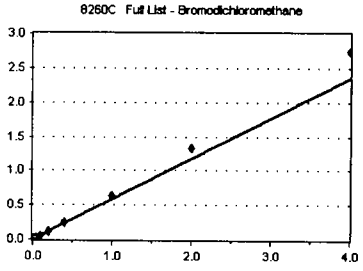


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	797	0.425	7.34
9E13041-CAL4	1	2298	0.499	7.34
9E13041-CAL5	2	4678	0.509	7.34
9E13041-CAL6	5	12167	0.518	7.34
9E13041-CAL7	10	24538	0.527	7.34
9E13041-CAL8	20	47875	0.545	7.34
9E13041-CAL9	50	122510	0.533	7.34
9E13041-CALA	100	252599	0.549	7.34
9E13041-CALB	200	516835	0.557	7.34

AVE RF **0.518** RF RSD **7.65** AVE RT **7.34**

Bromodichloromethane

Curve Fit: **AVERAGE RF**

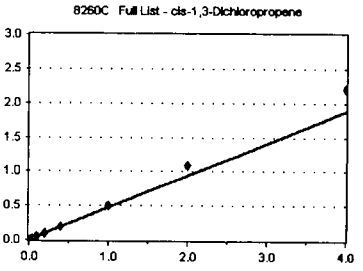


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~313~~	~~0.343~~	~~7.41~~
9E13041-CAL3	0.4	929	0.496	7.42
9E13041-CAL4	1	2451	0.532	7.41
9E13041-CAL5	2	4912	0.534	7.41
9E13041-CAL6	5	13110	0.558	7.41
9E13041-CAL7	10	26653	0.573	7.41
9E13041-CAL8	20	53694	0.611	7.41
9E13041-CAL9	50	145265	0.632	7.41
9E13041-CALA	100	304930	0.663	7.41
9E13041-CALB	200	636835	0.686	7.41

AVE RF **0.587** RF RSD **10.99** AVE RT **7.41**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

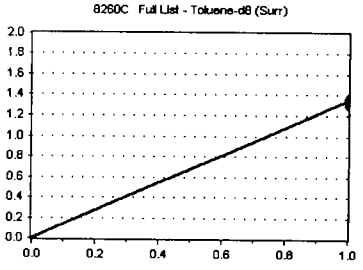


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~953~~	~~0.351~~	~~8.12~~
9E13041-CAL4	1	2641	0.397	8.12
9E13041-CAL5	2	5212	0.394	8.12
9E13041-CAL6	5	14338	0.423	8.12
9E13041-CAL7	10	30652	0.452	8.12
9E13041-CAL8	20	61544	0.477	8.12
9E13041-CAL9	50	170286	0.511	8.12
9E13041-CALA	100	370081	0.547	8.12
9E13041-CALB	200	781806	0.552	8.12

AVE RF **0.469** RF RSD **13.46** AVE RT **8.12**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	50	457483	1.363	8.33
9E13041-CAL2	50	447987	1.372	8.33
9E13041-CAL3	50	462953	1.363	8.33
9E13041-CAL4	50	453698	1.364	8.33
9E13041-CAL5	50	452395	1.367	8.33
9E13041-CAL6	50	461181	1.362	8.33
9E13041-CAL7	50	457030	1.349	8.33
9E13041-CAL8	50	434842	1.348	8.33
9E13041-CAL9	50	448405	1.344	8.33
9E13041-CALA	50	453182	1.339	8.33
9E13041-CALB	50	460064	1.299	8.33

AVE RF **1.352** RF RSD **1.51** AVE RT **8.33**

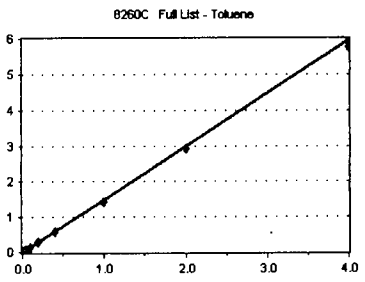
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Toluene

Curve Fit: **AVERAGE RF**

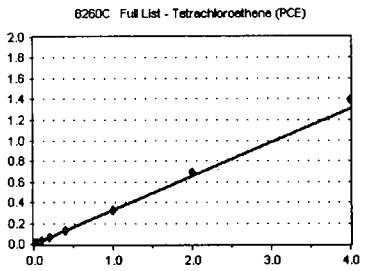


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	1285	1.915	8.39
9E13041-CAL2	0.2	2037	1.560	8.39
9E13041-CAL3	0.4	3852	1.417	8.38
9E13041-CAL4	1	9750	1.465	8.38
9E13041-CAL5	2	18509	1.398	8.39
9E13041-CAL6	5	48457	1.431	8.39
9E13041-CAL7	10	97687	1.442	8.39
9E13041-CAL8	20	190049	1.473	8.39
9E13041-CAL9	50	473581	1.420	8.39
9E13041-CALA	100	992388	1.466	8.39
9E13041-CALB	200	2046373	1.444	8.39

AVE RF **1.494** RF RSD **9.77** AVE RT **8.39**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**

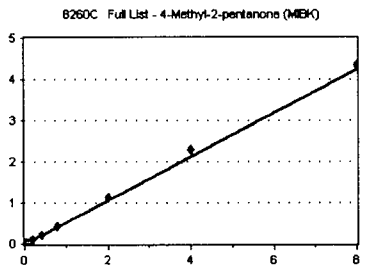


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	768	0.283	8.82
9E13041-CAL4	1	2170	0.326	8.82
9E13041-CAL5	2	4184	0.316	8.83
9E13041-CAL6	5	11044	0.326	8.82
9E13041-CAL7	10	22333	0.330	8.83
9E13041-CAL8	20	43045	0.334	8.82
9E13041-CAL9	50	109302	0.328	8.82
9E13041-CALA	100	234986	0.347	8.83
9E13041-CALB	200	494225	0.349	8.82

AVE RF **0.326** RF RSD **5.95** AVE RT **8.82**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

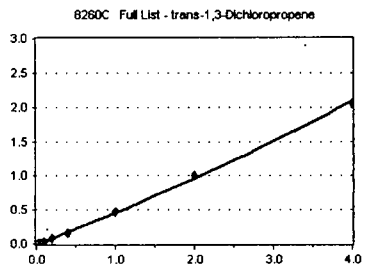


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.8	2579	0.474	8.83
9E13041-CAL4	2	6887	0.518	8.83
9E13041-CAL5	4	13047	0.493	8.83
9E13041-CAL6	10	35965	0.531	8.83
9E13041-CAL7	20	73002	0.539	8.83
9E13041-CAL8	40	140869	0.546	8.83
9E13041-CAL9	100	378445	0.567	8.83
9E13041-CALA	200	775650	0.573	8.83
9E13041-CALB	400	1544779	0.545	8.83

AVE RF **0.532** RF RSD **6.08** AVE RT **8.83**

trans-1,3-Dichloropropene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	692	0.255	8.88
9E13041-CAL4	1	1942	0.292	8.87
9E13041-CAL5	2	4168	0.315	8.86
9E13041-CAL6	5	12117	0.358	8.86
9E13041-CAL7	10	25782	0.380	8.86
9E13041-CAL8	20	53747	0.416	8.86
9E13041-CAL9	50	155338	0.466	8.86
9E13041-CALA	100	340262	0.503	8.86
9E13041-CALB	200	731463	0.516	8.86

AVE RF **0.389** RF RSD **24.01** AVE RT **8.87**

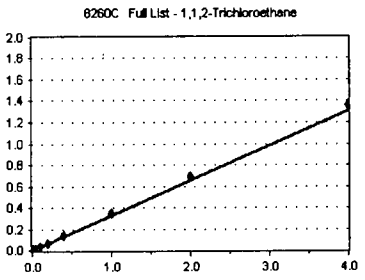
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

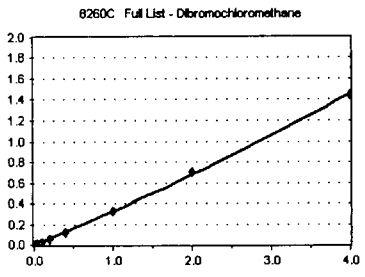


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	712	0.262	9.03
9E13041-CAL4	1	2192	0.329	9.03
9E13041-CAL5	2	4144	0.313	9.03
9E13041-CAL6	5	11278	0.333	9.03
9E13041-CAL7	10	22740	0.336	9.03
9E13041-CAL8	20	44178	0.342	9.03
9E13041-CAL9	50	114217	0.342	9.03
9E13041-CALA	100	234496	0.346	9.03
9E13041-CALB	200	481843	0.340	9.03

AVE RF **0.327** RF RSD **8.05** AVE RT **9.03**

Dibromochloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

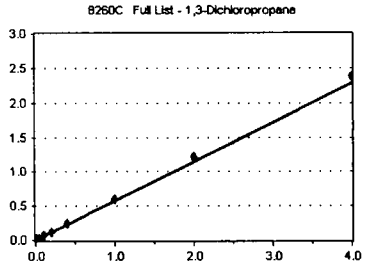


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	484	0.178	9.22
9E13041-CAL4	1	1394	0.209	9.22
9E13041-CAL5	2	2906	0.220	9.22
9E13041-CAL6	5	8724	0.258	9.22
9E13041-CAL7	10	18193	0.268	9.22
9E13041-CAL8	20	37884	0.294	9.22
9E13041-CAL9	50	109312	0.328	9.22
9E13041-CALA	100	238965	0.353	9.22
9E13041-CALB	200	512123	0.361	9.22

AVE RF **0.274** RF RSD **23.69** AVE RT **9.22**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

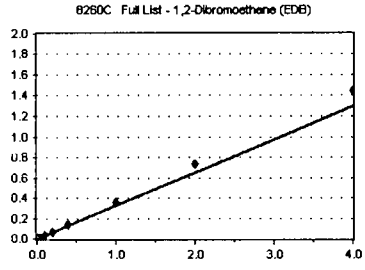


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	671	0.514	9.32
9E13041-CAL3	0.4	1391	0.512	9.32
9E13041-CAL4	1	3735	0.561	9.31
9E13041-CAL5	2	7255	0.548	9.31
9E13041-CAL6	5	19721	0.582	9.31
9E13041-CAL7	10	39507	0.583	9.31
9E13041-CAL8	20	77353	0.599	9.31
9E13041-CAL9	50	201354	0.604	9.31
9E13041-CALA	100	410573	0.606	9.31
9E13041-CALB	200	845046	0.596	9.31

AVE RF **0.571** RF RSD **6.25** AVE RT **9.31**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~224~~	~~0.172~~	~~9.46~~
9E13041-CAL3	0.4	643	0.237	9.45
9E13041-CAL4	1	2036	0.306	9.45
9E13041-CAL5	2	3947	0.298	9.45
9E13041-CAL6	5	11018	0.325	9.45
9E13041-CAL7	10	22669	0.335	9.45
9E13041-CAL8	20	44644	0.346	9.45
9E13041-CAL9	50	118187	0.354	9.45
9E13041-CALA	100	247645	0.366	9.45
9E13041-CALB	200	513036	0.362	9.45

AVE RF **0.325** RF RSD **12.54** AVE RT **9.45**

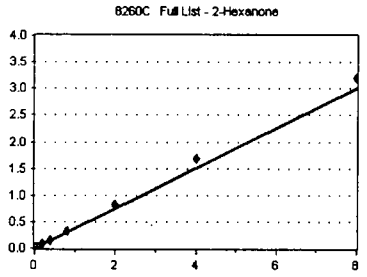
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.N**

2-Hexanone

Curve Fit: **AVERAGE RF**

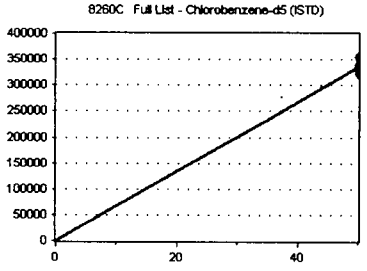


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.8	1574	0.290	9.68
9E13041-CAL4	2	4847	0.364	9.68
9E13041-CAL5	4	8880	0.335	9.68
9E13041-CAL6	10	25717	0.380	9.68
9E13041-CAL7	20	52691	0.389	9.68
9E13041-CAL8	40	101198	0.392	9.68
9E13041-CAL9	100	275357	0.413	9.68
9E13041-CALA	200	572477	0.423	9.68
9E13041-CALB	400	1133575	0.400	9.68

AVE RF **0.376** RF RSD **11.04** AVE RT **9.68**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

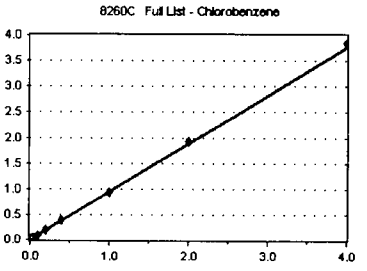


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	50	335588	6711.760	9.93
9E13041-CAL2	50	326502	6530.040	9.93
9E13041-CAL3	50	339703	6794.060	9.93
9E13041-CAL4	50	332700	6654.000	9.93
9E13041-CAL5	50	330884	6617.680	9.93
9E13041-CAL6	50	338675	6773.500	9.93
9E13041-CAL7	50	338803	6776.060	9.93
9E13041-CAL8	50	322615	6452.300	9.93
9E13041-CAL9	50	333564	6671.280	9.93
9E13041-CALA	50	338491	6769.820	9.93
9E13041-CALB	50	354175	7083.500	9.94

AVE RF **6712.182** RF RSD **2.45** AVE RT **9.93**

Chlorobenzene

Curve Fit: **AVERAGE RF**

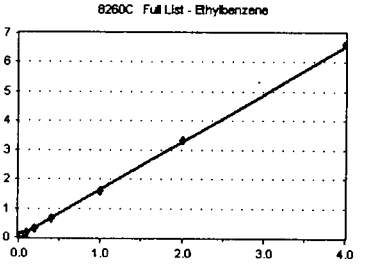


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	658	0.980	9.95
9E13041-CAL2	0.2	1237	0.947	9.95
9E13041-CAL3	0.4	2410	0.887	9.95
9E13041-CAL4	1	6088	0.915	9.95
9E13041-CAL5	2	11755	0.888	9.95
9E13041-CAL6	5	32594	0.962	9.95
9E13041-CAL7	10	63842	0.942	9.95
9E13041-CAL8	20	122138	0.946	9.95
9E13041-CAL9	50	309625	0.928	9.95
9E13041-CALA	100	650727	0.961	9.95
9E13041-CALB	200	1359758	0.960	9.95

AVE RF **0.938** RF RSD **3.25** AVE RT **9.95**

Ethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	1517	2.260	9.98
9E13041-CAL2	0.2	2104	1.611	9.98
9E13041-CAL3	0.4	3901	1.435	9.98
9E13041-CAL4	1	10411	1.565	9.98
9E13041-CAL5	2	19952	1.507	9.98
9E13041-CAL6	5	52970	1.564	9.98
9E13041-CAL7	10	106682	1.574	9.98
9E13041-CAL8	20	207553	1.608	9.98
9E13041-CAL9	50	523821	1.570	9.98
9E13041-CALA	100	1124941	1.662	9.98
9E13041-CALB	200	2338918	1.651	9.98

AVE RF **1.637** RF RSD **13.20** AVE RT **9.98**

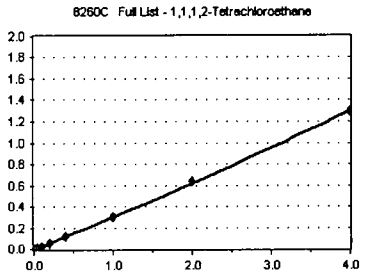
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

1,1,1,2-Tetrachloroethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

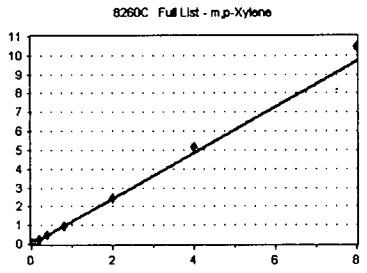


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	206	0.158	10.01
9E13041-CAL3	0.4	506	0.186	10.01
9E13041-CAL4	1	1569	0.236	10.01
9E13041-CAL5	2	3181	0.240	10.01
9E13041-CAL6	5	9011	0.266	10.01
9E13041-CAL7	10	18376	0.271	10.01
9E13041-CAL8	20	37245	0.289	10.01
9E13041-CAL9	50	99888	0.299	10.01
9E13041-CALA	100	215249	0.318	10.01
9E13041-CALB	200	458067	0.323	10.01

AVE RF **0.259** RF RSD **21.08** AVE RT **10.01**

m,p-Xylene

Curve Fit: **AVERAGE RF**

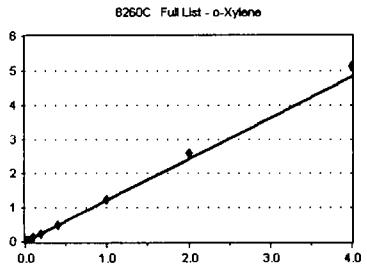


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.2	2154	1.605	10.11
9E13041-CAL2	0.4	2876	1.101	10.11
9E13041-CAL3	0.8	5738	1.056	10.11
9E13041-CAL4	2	14538	1.092	10.11
9E13041-CAL5	4	28674	1.083	10.11
9E13041-CAL6	10	77604	1.146	10.11
9E13041-CAL7	20	160310	1.183	10.10
9E13041-CAL8	40	315670	1.223	10.11
9E13041-CAL9	100	810888	1.215	10.11
9E13041-CALA	200	1760528	1.300	10.11
9E13041-CALB	400	3697595	1.305	10.11

AVE RF **1.210** RF RSD **12.90** AVE RT **10.11**

o-Xylene

Curve Fit: **AVERAGE RF**

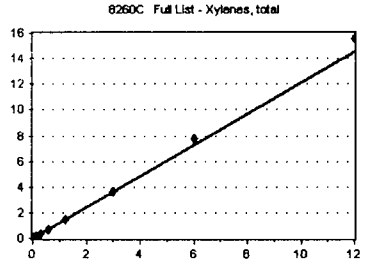


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	981	1.462	10.49
9E13041-CAL2	0.2	1466	1.123	10.49
9E13041-CAL3	0.4	2869	1.056	10.49
9E13041-CAL4	1	7608	1.143	10.49
9E13041-CAL5	2	14280	1.079	10.49
9E13041-CAL6	5	39502	1.166	10.49
9E13041-CAL7	10	80820	1.193	10.49
9E13041-CAL8	20	159256	1.234	10.49
9E13041-CAL9	50	413022	1.238	10.49
9E13041-CALA	100	875842	1.294	10.49
9E13041-CALB	200	1809534	1.277	10.49

AVE RF **1.206** RF RSD **9.50** AVE RT **10.49**

Xylenes, total

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.3	3135	1.557	10.49
9E13041-CAL2	0.6	4342	1.108	10.49
9E13041-CAL3	1.2	8607	1.056	10.49
9E13041-CAL4	3	22146	1.109	10.49
9E13041-CAL5	6	42954	1.082	10.49
9E13041-CAL6	15	117106	1.153	10.49
9E13041-CAL7	30	241130	1.186	10.49
9E13041-CAL8	60	474926	1.227	10.49
9E13041-CAL9	150	1223910	1.223	10.49
9E13041-CALA	300	2636370	1.298	10.49
9E13041-CALB	600	5507129	1.296	10.49

AVE RF **1.209** RF RSD **11.72** AVE RT **10.49**

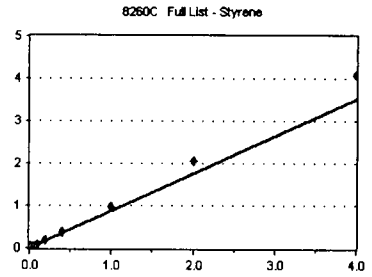
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Styrene

Curve Fit: **AVERAGE RF**

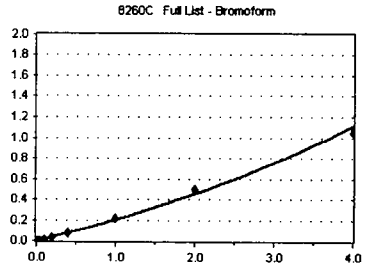


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~489~~	~~0.729~~	~~10.54~~
~~9E13041-CAL2~~	~~0.2~~	~~892~~	~~0.683~~	~~10.54~~
9E13041-CAL3	0.4	1912	0.704	10.54
9E13041-CAL4	1	4958	0.745	10.54
9E13041-CAL5	2	10047	0.759	10.54
9E13041-CAL6	5	29055	0.858	10.54
9E13041-CAL7	10	60588	0.894	10.54
9E13041-CAL8	20	122271	0.947	10.54
9E13041-CAL9	50	320799	0.962	10.54
9E13041-CALA	100	691572	1.022	10.54
9E13041-CALB	200	1449426	1.023	10.54

AVE RF **0.879** RF RSD **13.72** AVE RT **10.54**

Bromoform

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

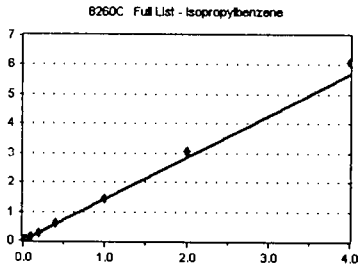


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	1	823	0.124	10.56
9E13041-CAL5	2	1735	0.131	10.56
9E13041-CAL6	5	5240	0.155	10.56
9E13041-CAL7	10	11172	0.165	10.56
9E13041-CAL8	20	23776	0.184	10.56
9E13041-CAL9	50	73039	0.219	10.56
9E13041-CALA	100	168589	0.249	10.56
9E13041-CALB	200	371937	0.263	10.56

AVE RF **0.186** RF RSD **28.17** AVE RT **10.56**

Isopropylbenzene

Curve Fit: **AVERAGE RF**

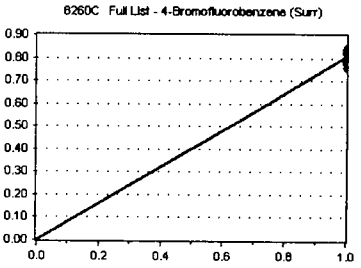


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	1267	1.888	10.76
9E13041-CAL2	0.2	1591	1.218	10.76
9E13041-CAL3	0.4	3205	1.179	10.76
9E13041-CAL4	1	8722	1.311	10.76
9E13041-CAL5	2	16568	1.252	10.76
9E13041-CAL6	5	46461	1.372	10.76
9E13041-CAL7	10	95633	1.411	10.76
9E13041-CAL8	20	190588	1.477	10.76
9E13041-CAL9	50	485397	1.455	10.76
9E13041-CALA	100	1034763	1.528	10.76
9E13041-CALB	200	2154940	1.521	10.76

AVE RF **1.419** RF RSD **13.85** AVE RT **10.76**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	50	119758	0.835	10.99
9E13041-CAL2	50	116173	0.841	10.99
9E13041-CAL3	50	120173	0.824	10.99
9E13041-CAL4	50	120544	0.820	10.99
9E13041-CAL5	50	117934	0.827	10.99
9E13041-CAL6	50	123359	0.816	10.99
9E13041-CAL7	50	125513	0.804	10.99
9E13041-CAL8	50	120001	0.780	10.99
9E13041-CAL9	50	123362	0.784	10.99
9E13041-CALA	50	124117	0.773	10.99
9E13041-CALB	50	126885	0.759	10.99

AVE RF **0.806** RF RSD **3.41** AVE RT **10.99**

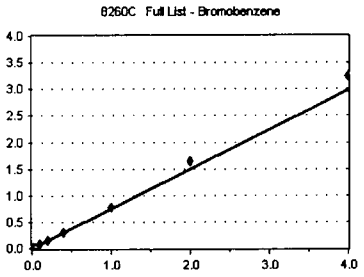
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Bromobenzene

Curve Fit: **AVERAGE RF**

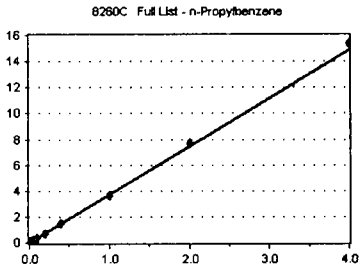


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	135	0.471	11.08
9E13041-CAL2	0.2	390	0.706	11.08
9E13041-CAL3	0.4	851	0.729	11.08
9E13041-CAL4	1	2175	0.740	11.08
9E13041-CAL5	2	4353	0.763	11.08
9E13041-CAL6	5	12298	0.813	11.08
9E13041-CAL7	10	24556	0.787	11.08
9E13041-CAL8	20	47950	0.779	11.08
9E13041-CAL9	50	123228	0.784	11.08
9E13041-CALA	100	262375	0.817	11.08
9E13041-CALB	200	543291	0.813	11.08

AVE RF **0.746** RF RSD **13.15** AVE RT **11.08**

n-Propylbenzene

Curve Fit: **AVERAGE RF**

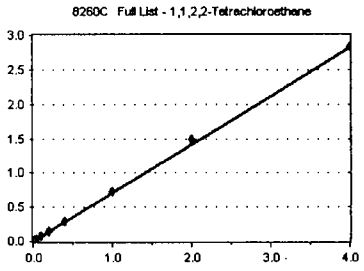


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	1411	4.921	11.10
9E13041-CAL2	0.2	1956	3.539	11.10
9E13041-CAL3	0.4	3975	3.407	11.10
9E13041-CAL4	1	10156	3.453	11.10
9E13041-CAL5	2	19757	3.464	11.10
9E13041-CAL6	5	54521	3.606	11.10
9E13041-CAL7	10	112532	3.605	11.10
9E13041-CAL8	20	225723	3.669	11.10
9E13041-CAL9	50	569978	3.624	11.10
9E13041-CALA	100	1233347	3.839	11.10
9E13041-CALB	200	2567034	3.840	11.10

AVE RF **3.724** RF RSD **11.32** AVE RT **11.10**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

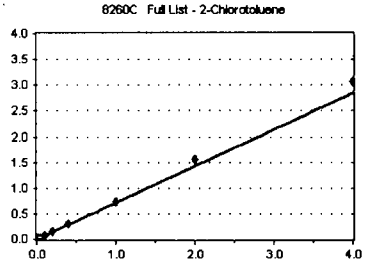


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	339	0.613	11.16
9E13041-CAL3	0.4	760	0.651	11.16
9E13041-CAL4	1	2028	0.690	11.16
9E13041-CAL5	2	3977	0.697	11.16
9E13041-CAL6	5	11438	0.756	11.16
9E13041-CAL7	10	22440	0.719	11.16
9E13041-CAL8	20	44197	0.718	11.16
9E13041-CAL9	50	115201	0.732	11.16
9E13041-CALA	100	240330	0.748	11.16
9E13041-CALB	200	474315	0.709	11.16

AVE RF **0.704** RF RSD **6.21** AVE RT **11.16**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	324	0.586	11.22
9E13041-CAL3	0.4	773	0.663	11.23
9E13041-CAL4	1	1989	0.676	11.23
9E13041-CAL5	2	4118	0.722	11.22
9E13041-CAL6	5	11289	0.747	11.22
9E13041-CAL7	10	22885	0.733	11.22
9E13041-CAL8	20	45574	0.741	11.22
9E13041-CAL9	50	116421	0.740	11.22
9E13041-CALA	100	248618	0.774	11.22
9E13041-CALB	200	512692	0.767	11.22

AVE RF **0.715** RF RSD **8.03** AVE RT **11.23**

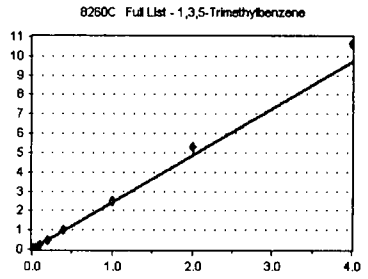
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

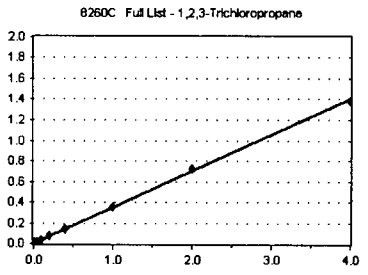


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	832	2.902	11.25
9E13041-CAL2	0.2	1210	2.189	11.25
9E13041-CAL3	0.4	2379	2.039	11.25
9E13041-CAL4	1	6397	2.175	11.25
9E13041-CAL5	2	12545	2.199	11.25
9E13041-CAL6	5	36019	2.382	11.25
9E13041-CAL7	10	75689	2.425	11.25
9E13041-CAL8	20	154226	2.507	11.25
9E13041-CAL9	50	391276	2.488	11.25
9E13041-CALA	100	852022	2.652	11.25
9E13041-CALB	200	1774344	2.654	11.25

AVE RF **2.419** RF RSD **10.63** AVE RT **11.25**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**

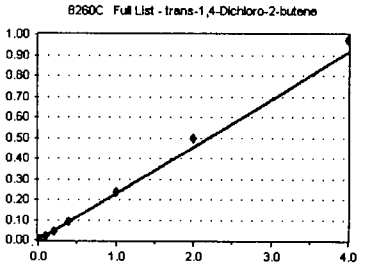


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL3	0.4	364	0.312	11.27
9E13041-CAL4	1	1037	0.353	11.27
9E13041-CAL5	2	2081	0.365	11.27
9E13041-CAL6	5	5567	0.368	11.27
9E13041-CAL7	10	11100	0.356	11.27
9E13041-CAL8	20	21485	0.349	11.27
9E13041-CAL9	50	56138	0.357	11.27
9E13041-CALA	100	115501	0.360	11.27
9E13041-CALB	200	231633	0.346	11.27

AVE RF **0.352** RF RSD **4.67** AVE RT **11.27**

trans-1,4-Dichloro-2-butene

Curve Fit: **AVERAGE RF**

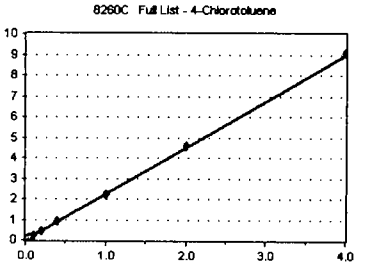


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	1	584	0.199	11.30
9E13041-CAL5	2	1150	0.202	11.30
9E13041-CAL6	5	3539	0.234	11.30
9E13041-CAL7	10	7147	0.229	11.30
9E13041-CAL8	20	14123	0.230	11.30
9E13041-CAL9	50	37807	0.240	11.30
9E13041-CALA	100	79558	0.248	11.30
9E13041-CALB	200	162249	0.243	11.30

AVE RF **0.228** RF RSD **8.05** AVE RT **11.30**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	780	2.720	11.36
9E13041-CAL2	0.2	1188	2.150	11.36
9E13041-CAL3	0.4	2325	1.993	11.36
9E13041-CAL4	1	6322	2.150	11.36
9E13041-CAL5	2	12121	2.125	11.36
9E13041-CAL6	5	34341	2.271	11.36
9E13041-CAL7	10	69695	2.233	11.36
9E13041-CAL8	20	138653	2.254	11.36
9E13041-CAL9	50	350719	2.230	11.36
9E13041-CALA	100	739713	2.302	11.36
9E13041-CALB	200	1515683	2.267	11.36

AVE RF **2.245** RF RSD **8.06** AVE RT **11.36**

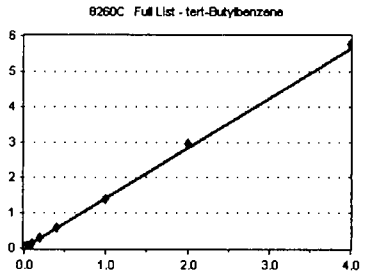
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

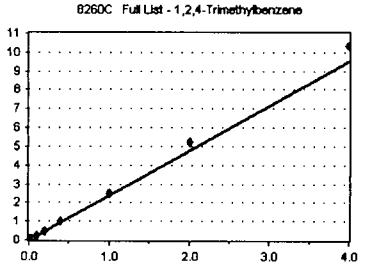


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	523	1.824	11.50
9E13041-CAL2	0.2	727	1.315	11.50
9E13041-CAL3	0.4	1388	1.190	11.50
9E13041-CAL4	1	3993	1.358	11.50
9E13041-CAL5	2	7437	1.304	11.50
9E13041-CAL6	5	21142	1.398	11.50
9E13041-CAL7	10	43225	1.385	11.50
9E13041-CAL8	20	87898	1.429	11.50
9E13041-CAL9	50	217723	1.384	11.50
9E13041-CALA	100	472382	1.470	11.50
9E13041-CALB	200	964538	1.443	11.50

AVE RF **1.409** RF RSD **11.21** AVE RT **11.50**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**

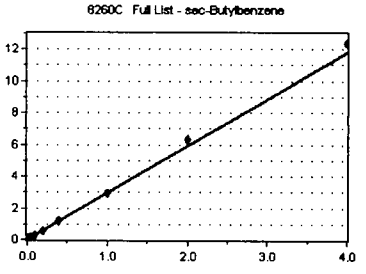


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	781	2.724	11.56
9E13041-CAL2	0.2	1204	2.179	11.56
9E13041-CAL3	0.4	2337	2.003	11.56
9E13041-CAL4	1	6190	2.105	11.56
9E13041-CAL5	2	12337	2.163	11.56
9E13041-CAL6	5	36077	2.386	11.56
9E13041-CAL7	10	75733	2.426	11.56
9E13041-CAL8	20	154286	2.508	11.56
9E13041-CAL9	50	391053	2.486	11.56
9E13041-CALA	100	841804	2.620	11.56
9E13041-CALB	200	1732601	2.592	11.56

AVE RF **2.381** RF RSD **9.90** AVE RT **11.56**

sec-Butylbenzene

Curve Fit: **AVERAGE RF**

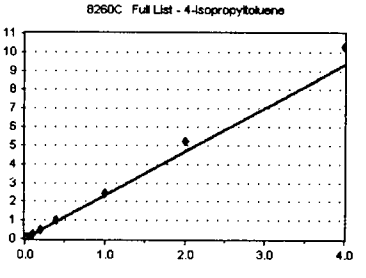


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	1084	3.781	11.64
9E13041-CAL2	0.2	1417	2.564	11.64
9E13041-CAL3	0.4	2951	2.529	11.64
9E13041-CAL4	1	7997	2.719	11.64
9E13041-CAL5	2	15887	2.785	11.64
9E13041-CAL6	5	44610	2.950	11.64
9E13041-CAL7	10	92595	2.966	11.64
9E13041-CAL8	20	186769	3.036	11.64
9E13041-CAL9	50	466263	2.965	11.64
9E13041-CALA	100	1012539	3.152	11.64
9E13041-CALB	200	2063274	3.086	11.64

AVE RF **2.958** RF RSD **11.53** AVE RT **11.64**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	820	2.860	11.75
9E13041-CAL2	0.2	1107	2.003	11.75
9E13041-CAL3	0.4	2181	1.869	11.75
9E13041-CAL4	1	6380	2.169	11.75
9E13041-CAL5	2	11752	2.060	11.75
9E13041-CAL6	5	34470	2.280	11.75
9E13041-CAL7	10	73885	2.367	11.75
9E13041-CAL8	20	153054	2.488	11.75
9E13041-CAL9	50	381897	2.428	11.75
9E13041-CALA	100	837873	2.608	11.75
9E13041-CALB	200	1715693	2.566	11.75

AVE RF **2.336** RF RSD **12.62** AVE RT **11.75**

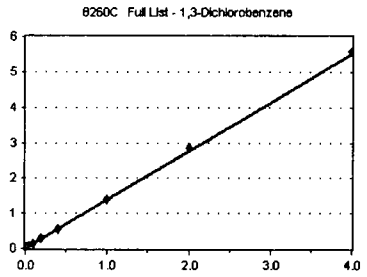
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

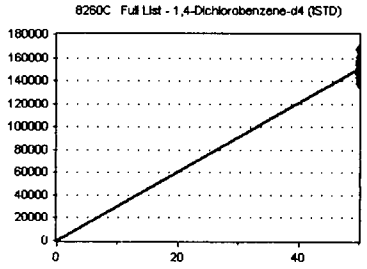


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	420	1.465	11.82
9E13041-CAL2	0.2	704	1.274	11.81
9E13041-CAL3	0.4	1583	1.357	11.82
9E13041-CAL4	1	3828	1.302	11.82
9E13041-CAL5	2	7669	1.345	11.82
9E13041-CAL6	5	21604	1.429	11.81
9E13041-CAL7	10	43251	1.386	11.81
9E13041-CAL8	20	85345	1.387	11.81
9E13041-CAL9	50	217251	1.381	11.81
9E13041-CALA	100	458828	1.428	11.81
9E13041-CALB	200	930398	1.392	11.81

AVE RF **1.377** RF RSD **4.06** AVE RT **11.82**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**

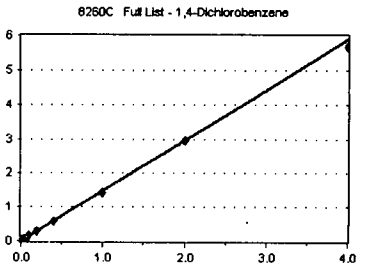


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	50	143363	2867.260	11.88
9E13041-CAL2	50	138166	2763.320	11.88
9E13041-CAL3	50	145839	2916.780	11.88
9E13041-CAL4	50	147052	2941.040	11.87
9E13041-CAL5	50	142592	2851.840	11.87
9E13041-CAL6	50	151207	3024.140	11.87
9E13041-CAL7	50	156081	3121.620	11.87
9E13041-CAL8	50	153786	3075.720	11.87
9E13041-CAL9	50	157275	3145.500	11.88
9E13041-CALA	50	160638	3212.760	11.87
9E13041-CALB	50	167132	3342.640	11.88

AVE RF **3023.875** RF RSD **5.77** AVE RT **11.87**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

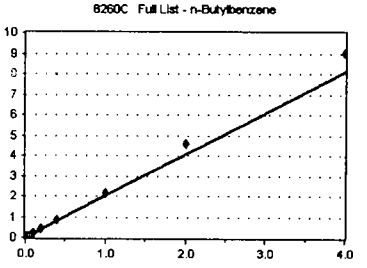


Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	491	1.712	11.88
9E13041-CAL2	0.2	816	1.476	11.88
9E13041-CAL3	0.4	1671	1.432	11.88
9E13041-CAL4	1	4390	1.493	11.88
9E13041-CAL5	2	8094	1.419	11.89
9E13041-CAL6	5	22880	1.513	11.88
9E13041-CAL7	10	44825	1.436	11.88
9E13041-CAL8	20	88540	1.439	11.88
9E13041-CAL9	50	223897	1.424	11.88
9E13041-CALA	100	472942	1.472	11.88
9E13041-CALB	200	947491	1.417	11.88

AVE RF **1.476** RF RSD **5.74** AVE RT **11.88**

n-Butylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CAL1	0.1	702	2.448	12.07
9E13041-CAL2	0.2	900	1.628	12.07
9E13041-CAL3	0.4	1937	1.660	12.07
9E13041-CAL4	1	5522	1.878	12.06
9E13041-CAL5	2	9743	1.708	12.06
9E13041-CAL6	5	30169	1.995	12.06
9E13041-CAL7	10	65197	2.089	12.06
9E13041-CAL8	20	137043	2.228	12.06
9E13041-CAL9	50	337143	2.144	12.06
9E13041-CALA	100	738001	2.297	12.06
9E13041-CALB	200	1506161	2.253	12.06

AVE RF **2.030** RF RSD **13.74** AVE RT **12.06**

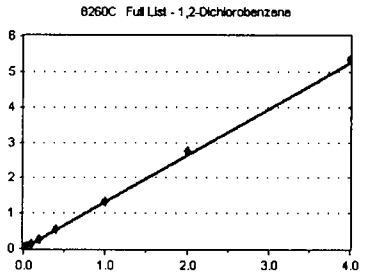
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

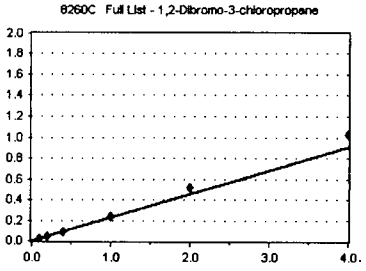


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL2	0.2	684	1.238	12.20
9E13041-CAL3	0.4	1381	1.184	12.20
9E13041-CAL4	1	3765	1.280	12.20
9E13041-CAL5	2	7358	1.290	12.20
9E13041-CAL6	5	20812	1.376	12.20
9E13041-CAL7	10	42245	1.353	12.20
9E13041-CAL8	20	83556	1.358	12.20
9E13041-CAL9	50	211065	1.342	12.20
9E13041-CALA	100	445214	1.386	12.20
9E13041-CALB	200	892396	1.335	12.20

AVE RF **1.314** RF RSD **4.96** AVE RT **12.20**

1,2-Dibromo-3-chloropropane

Curve Fit: **AVERAGE RF**

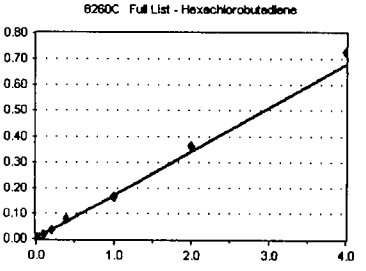


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL4~~	~~1~~	~~424~~	~~0.144~~	~~12.82~~
~~9E13041-CAL5~~	~~2~~	~~829~~	~~0.145~~	~~12.82~~
9E13041-CAL6	5	2965	0.196	12.82
9E13041-CAL7	10	6229	0.200	12.82
9E13041-CAL8	20	12829	0.209	12.82
9E13041-CAL9	50	37794	0.240	12.82
9E13041-CALA	100	83189	0.259	12.82
9E13041-CALB	200	171743	0.257	12.82

AVE RF **0.227** RF RSD **12.69** AVE RT **12.82**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

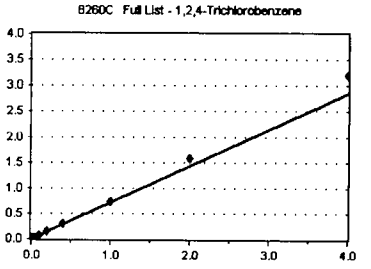


Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	1	406	0.138	13.33
9E13041-CAL5	2	832	0.146	13.33
9E13041-CAL6	5	2701	0.179	13.33
9E13041-CAL7	10	5579	0.179	13.33
9E13041-CAL8	20	11710	0.190	13.33
9E13041-CAL9	50	25849	0.164	13.33
9E13041-CALA	100	58685	0.183	13.33
9E13041-CALB	200	121639	0.182	13.33

AVE RF **0.170** RF RSD **11.12** AVE RT **13.33**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~259~~	~~0.469~~	~~13.37~~
~~9E13041-CAL3~~	~~0.4~~	~~580~~	~~0.497~~	~~13.37~~
9E13041-CAL4	1	1717	0.584	13.37
9E13041-CAL5	2	3509	0.615	13.37
9E13041-CAL6	5	10624	0.703	13.37
9E13041-CAL7	10	22804	0.731	13.37
9E13041-CAL8	20	46601	0.758	13.37
9E13041-CAL9	50	116239	0.739	13.37
9E13041-CALA	100	255056	0.794	13.37
9E13041-CALB	200	534941	0.800	13.37

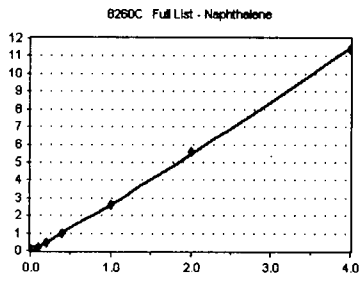
AVE RF **0.715** RF RSD **11.01** AVE RT **13.37**

Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190514W.M VI190514G.M**

Naphthalene

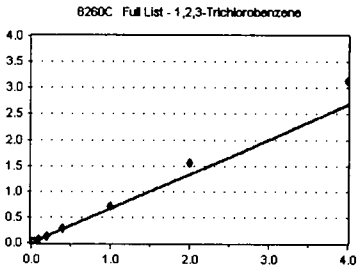


Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9E13041-CAL4	1	5137	1.747	13.65
9E13041-CAL5	2	10440	1.830	13.65
9E13041-CAL6	5	32829	2.171	13.65
9E13041-CAL7	10	71371	2.286	13.65
9E13041-CAL8	20	149237	2.426	13.65
9E13041-CAL9	50	411643	2.617	13.65
9E13041-CALA	100	898058	2.795	13.65
9E13041-CALB	200	1906386	2.852	13.65

AVE RF **2.341** RF RSD **17.66** AVE RT **13.65**

1,2,3-Trichlorobenzene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9E13041-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9E13041-CAL2~~	~~0.2~~	~~230~~	~~0.416~~	~~13.81~~
9E13041-CAL3	0.4	580	0.497	13.81
9E13041-CAL4	1	1638	0.557	13.81
9E13041-CAL5	2	3348	0.587	13.81
9E13041-CAL6	5	10219	0.676	13.81
9E13041-CAL7	10	21652	0.694	13.81
9E13041-CAL8	20	44563	0.724	13.81
9E13041-CAL9	50	112979	0.718	13.81
9E13041-CALA	100	249092	0.775	13.81
9E13041-CALB	200	523145	0.783	13.81

AVE RF **0.668** RF RSD **14.89** AVE RT **13.81**

Calibration Status Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190514G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue May 14 10:07:28 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	50	50	50	C:\msdchem\1\data\2019-05\9E13041\VI19051339.D
2	100	100	50	C:\msdchem\1\data\2019-05\9E13041\VI19051340.D
3	250	250	50	C:\msdchem\1\data\2019-05\9E13041\VI19051341.D
4	500	500	50	C:\msdchem\1\data\2019-05\9E13041\VI19051342.D
5	1000	1000	50	C:\msdchem\1\data\2019-05\9E13041\VI19051343.D
6	2500	2500	50	C:\msdchem\1\data\2019-05\9E13041\VI19051344.D
7	5000	5000	50	C:\msdchem\1\data\2019-05\9E13041\VI19051345.D
8	10K	10000	50	C:\msdchem\1\data\2019-05\9E13041\VI19051346.D

#	ID	Update Time	Quant Time	Acquisition Time
1	50	May 14 10:07 2019	May 14 09:55 2019	14 May 2019 3:00 am
2	100	May 14 10:07 2019	May 14 09:55 2019	14 May 2019 3:27 am
3	250	May 14 10:07 2019	May 14 09:55 2019	14 May 2019 3:54 am
4	500	May 14 10:07 2019	May 14 09:55 2019	14 May 2019 4:21 am
5	1000	May 14 10:07 2019	May 14 09:55 2019	14 May 2019 4:48 am
6	2500	May 14 10:07 2019	May 14 09:55 2019	14 May 2019 5:15 am
7	5000	May 14 10:07 2019	May 14 09:56 2019	14 May 2019 5:42 am
8	10K	May 14 10:07 2019	May 14 09:56 2019	14 May 2019 6:09 am

VI190514G.M Tue May 14 10:14:36 2019

Response Factor Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190514G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue May 14 10:07:28 2019
Response Via : Initial Calibration

Calibration Files
50 =VI19051339.D 100 =VI19051340.D 250 =VI19051341.D 500 =VI19051342.D 1000=VI19051343.D 2500=VI19051344.D
5000=VI19051345.D 10K =VI19051346.D

		Compound	50	100	250	500	1000	2500	5000	10K	Avg	%RSD
1)	I	Pentafluorobenzene...	----------	----------	----------	ISTD	----------	----------	----------	----------		
2)	S	1,4-Difluorobe...	1.664	1.654	1.675	1.672	1.661	1.666	1.675	1.683	1.669	0.55
3)	S	4-Bromofluorob...	0.515	0.514	0.539	0.533	0.528	0.542	0.537	0.549	0.532	2.35
4)	H	NWTPH-Gx (TPH)	0.546	1.059	1.213	1.478	1.446	1.624	1.664	1.767	1.350	29.68
5)	H	TPHg (C5-C9)	2.814	2.493	2.084	2.118	1.994	2.097	2.073	2.144	2.227	12.58
6)	H	TPHg (C6-C10)	2.281	2.077	1.734	1.795	1.685	1.772	1.754	1.825	1.865	11.00
7)	H	CA-LUFT (C5-C12)	3.071	2.737	2.352	2.478	2.340	2.523	2.519	2.625	2.581	9.20
8)		Benzene (NR)									0.000	-1.00
9)	S	Toluene-d8 (NR)									0.000	-1.00
10)		Toluene (NR)									0.000	-1.00
11)	S	Chlorobenzene-...									0.000	-1.00
12)	S	1,4-Dichlorobe...									0.000	-1.00
13)		Naphthalene (NR)									0.000	-1.00

(#) = Out of Range

Compound List Report VOA-GCMS9

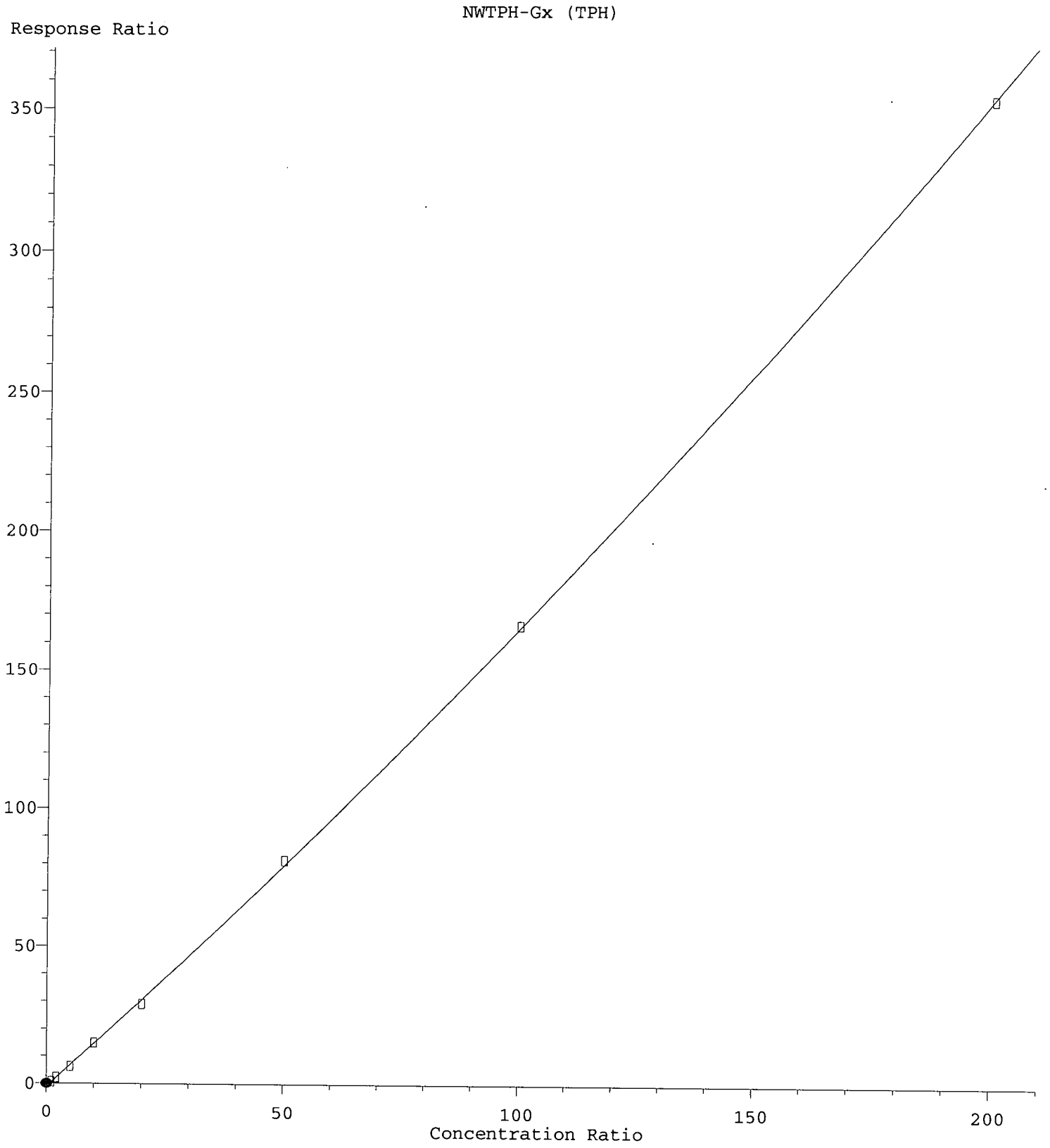
Method Path : C:\msdchem\1\methods\
Method File : VI190514G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue May 14 10:07:28 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.247	1.000	A	2	A	B
2	S	1,4-Difluorobenzene (Sur)	114	6.806	1.089	A	2	A	B
3	S	4-Bromofluorobenzene (Sur)	174	10.992	1.760	A	2	A	B
4	H	NWTPH-Gx (TPH)	TIC	9.910	1.586	Q	0	A	B
5	H	TPHg (C5-C9)	TIC	9.910	1.586	Q	0	A	B
6	H	TPHg (C6-C10)	TIC	9.910	1.586	Q	0	A	B
7	H	CA-LUFT (C5-C12)	TIC	9.910	1.586	Q	0	A	B
8		Benzene (NR)	78	6.150	0.984	A	2	A	B
9	S	Toluene-d8 (NR)	98	8.328	1.333	A	2	A	B
10		Toluene (NR)	91	8.389	1.343	A	2	A	B
11	S	Chlorobenzene-d5 (NR)	117	9.934	1.590	A	2	A	B
12	S	1,4-Dichlorobenzene-d4 (NR)	150	11.874	1.901	A	2	A	B
13		Naphthalene (NR)	128	13.651	2.185	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VI190514G.M Tue May 14 10:14:31 2019

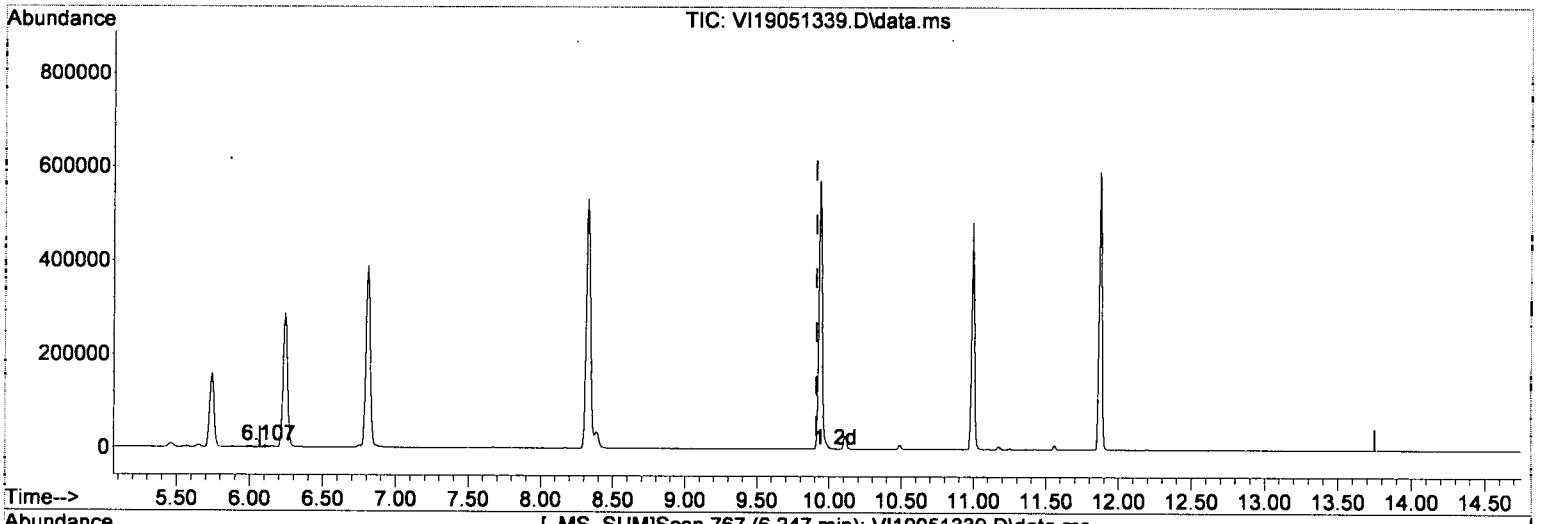


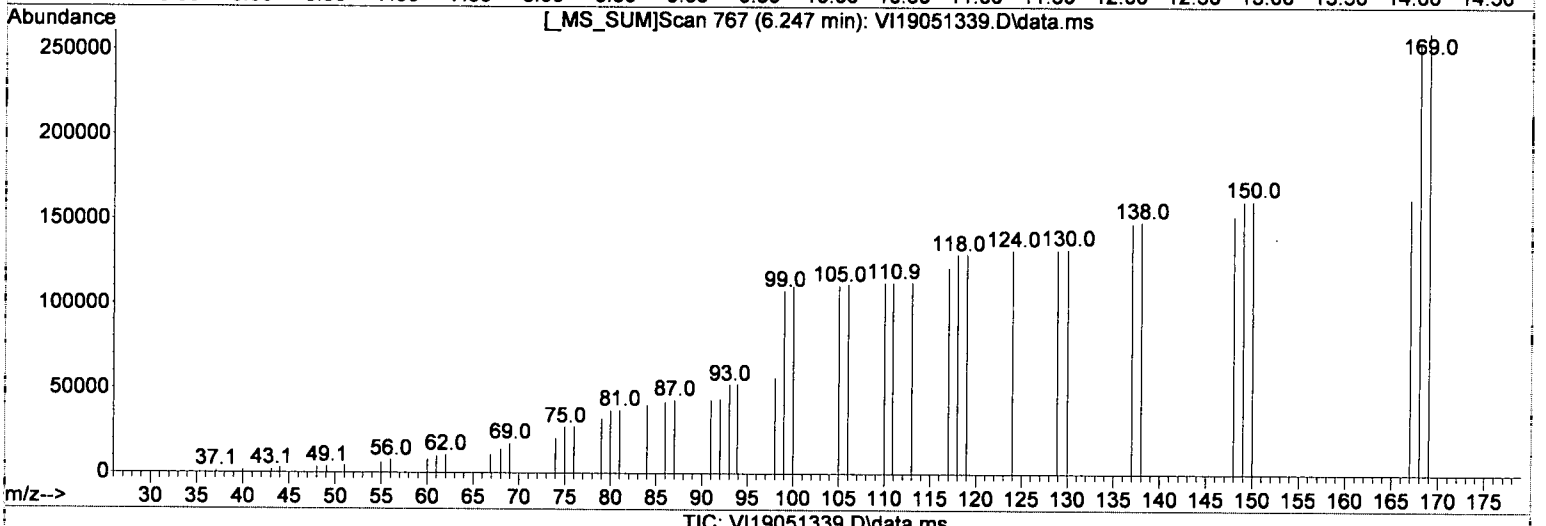
R = 1.08e-003 A*A + 1.56e+000 A - 1.11e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V11905146.M
Calibration Table Last Updated: Tue May 14 10:07:43 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051339.D
Acq On : 14 May 2019 3:00 am
Operator : MM
Sample : 9E13041-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:10:00 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





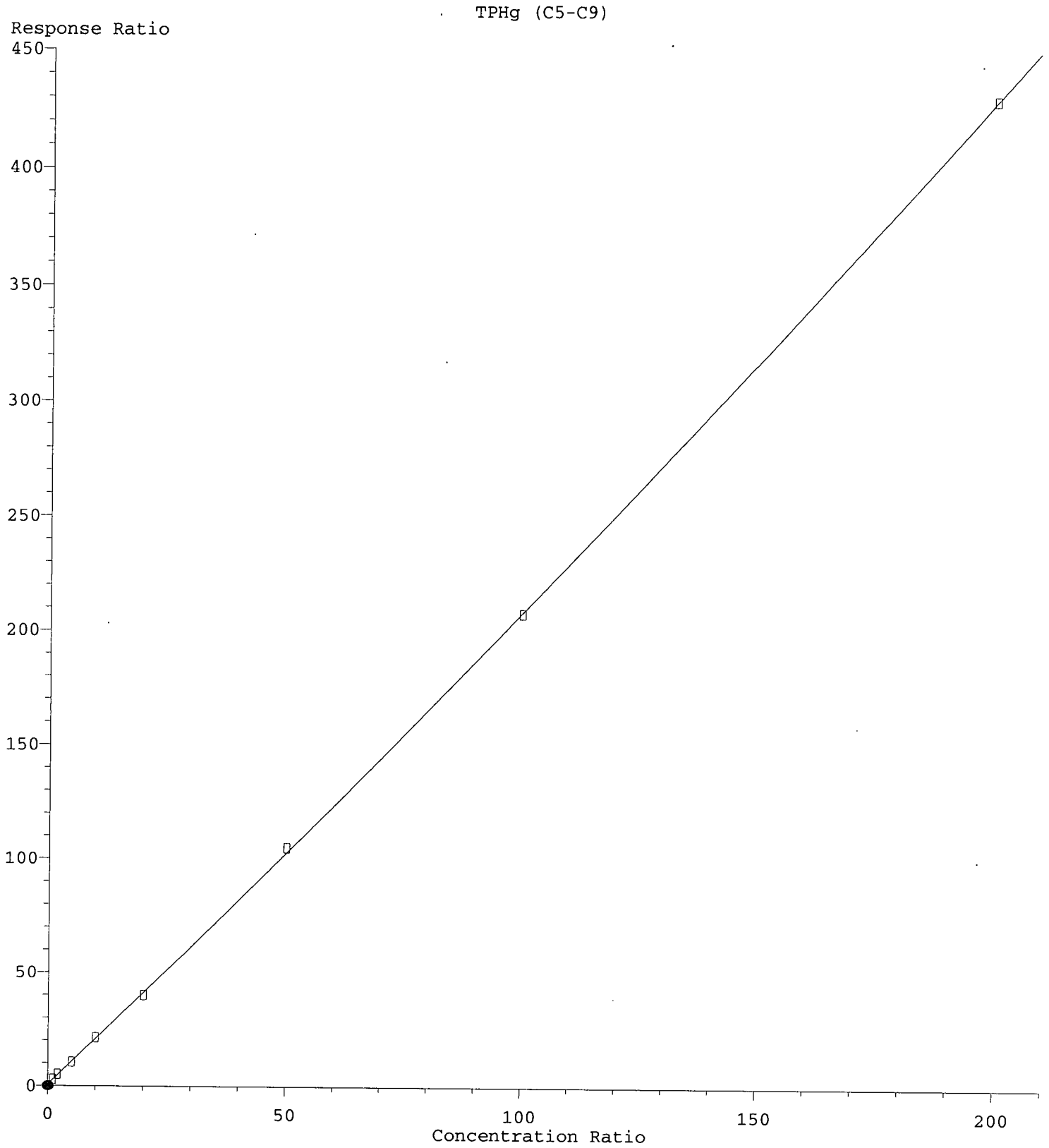
TIC: VI19051339.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.910min (0.000) 38.69 ug/L m

response 20593

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	67.89#
0.00	0.00	52.32#
0.00	0.00	0.00

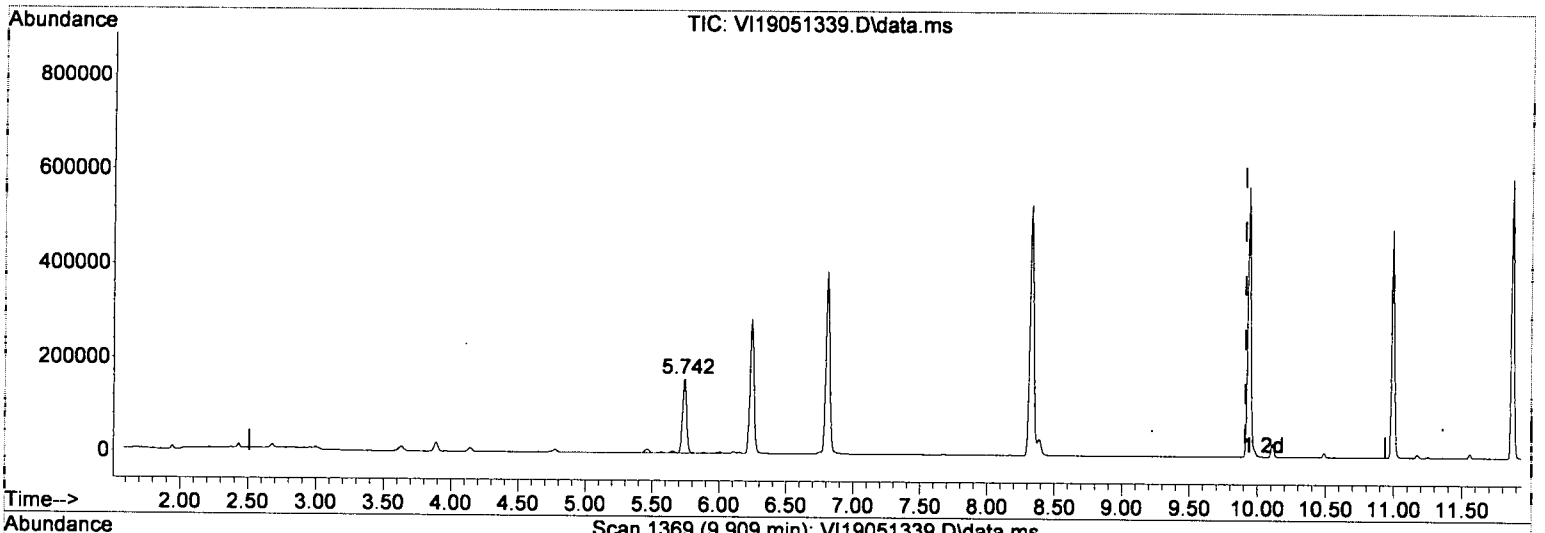


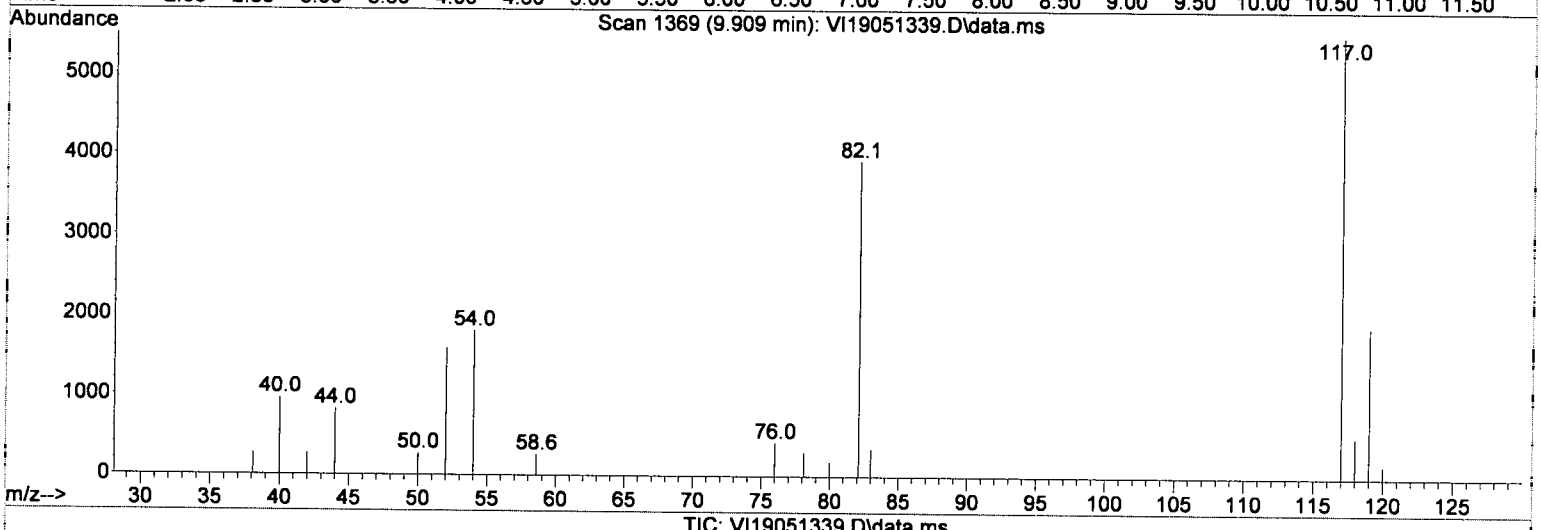
R = 6.76e-004 A*A + 2.01e+000 A + 8.03e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\[illegible]
Calibration Table Last Updated: Tue May 14 10:08:12 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051339.D
Acq On : 14 May 2019 3:00 am
Operator : MM
Sample : 9E13041-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:10:00 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





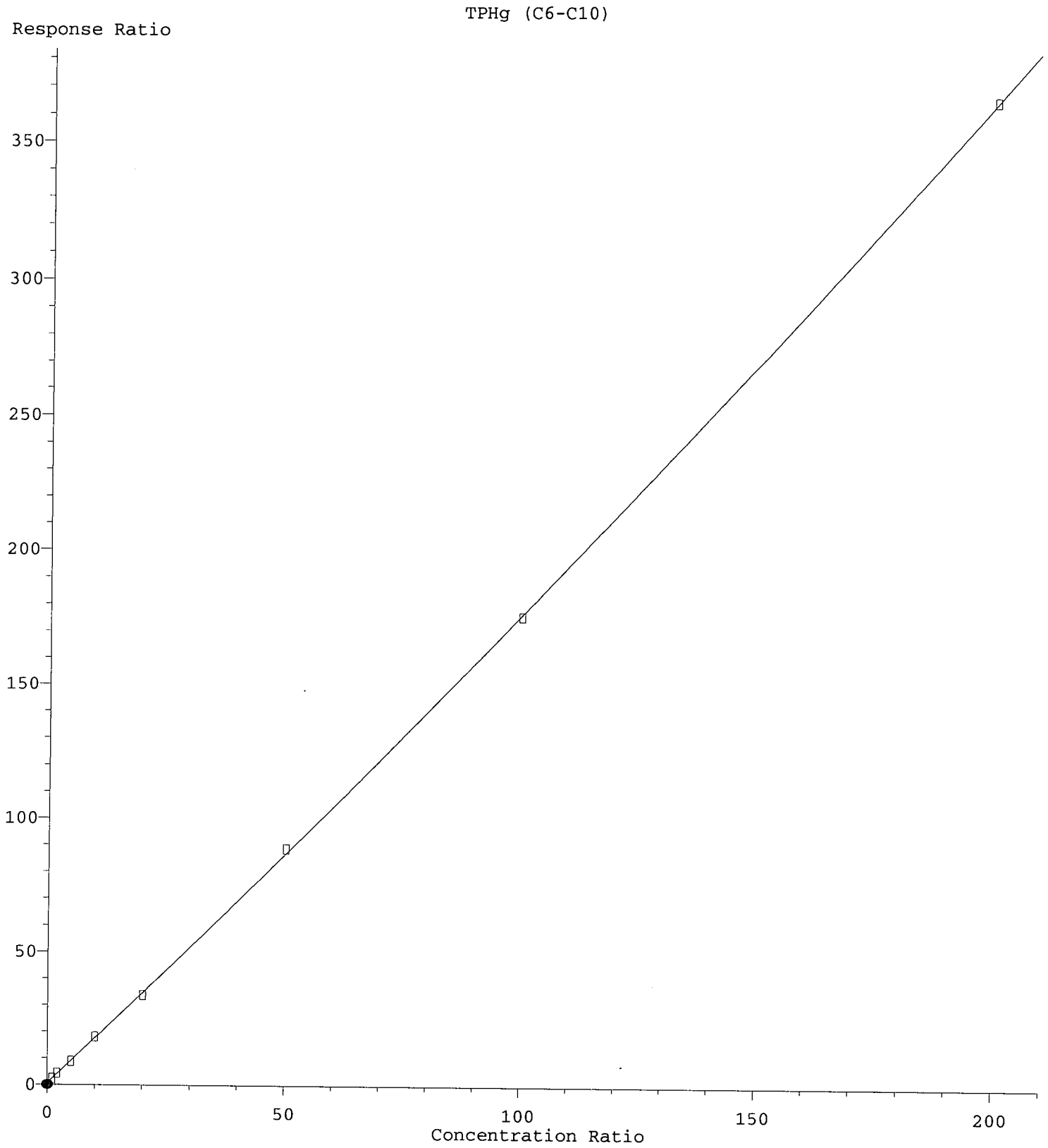
TIC: VI19051339.D\data.ms

(5) TPHg (C5-C9) (H)

9.910min (0.000) 27.10 ug/L m

response 402959

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	3.47#
0.00	0.00	2.67#
0.00	0.00	0.00

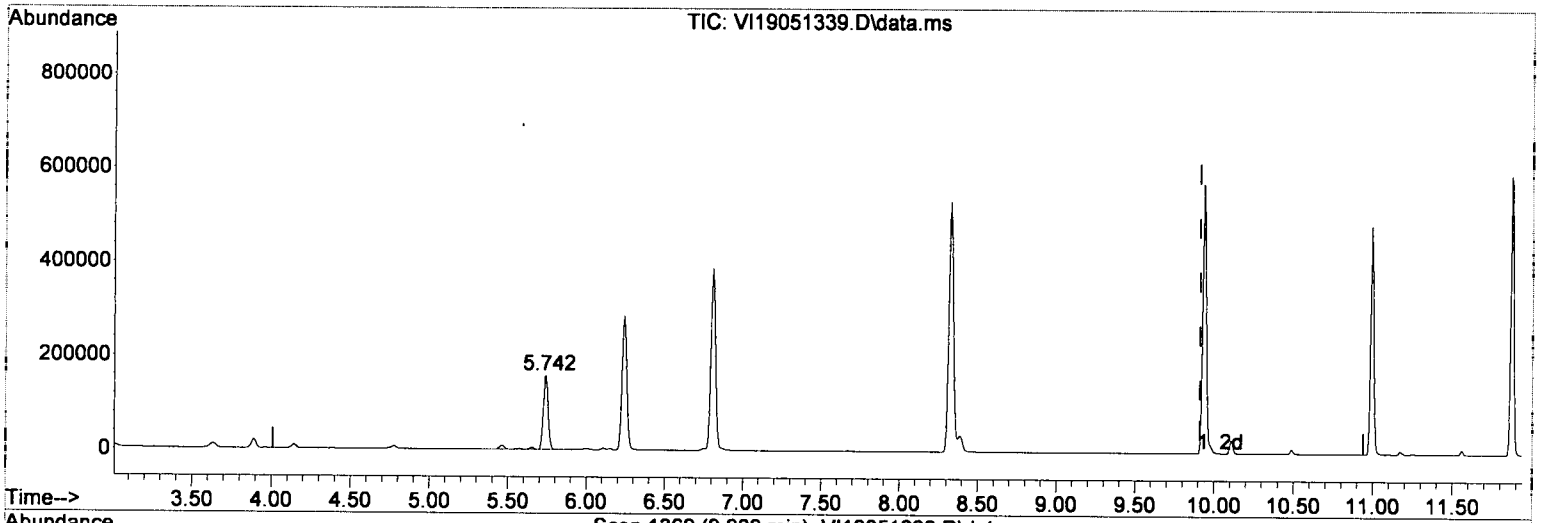


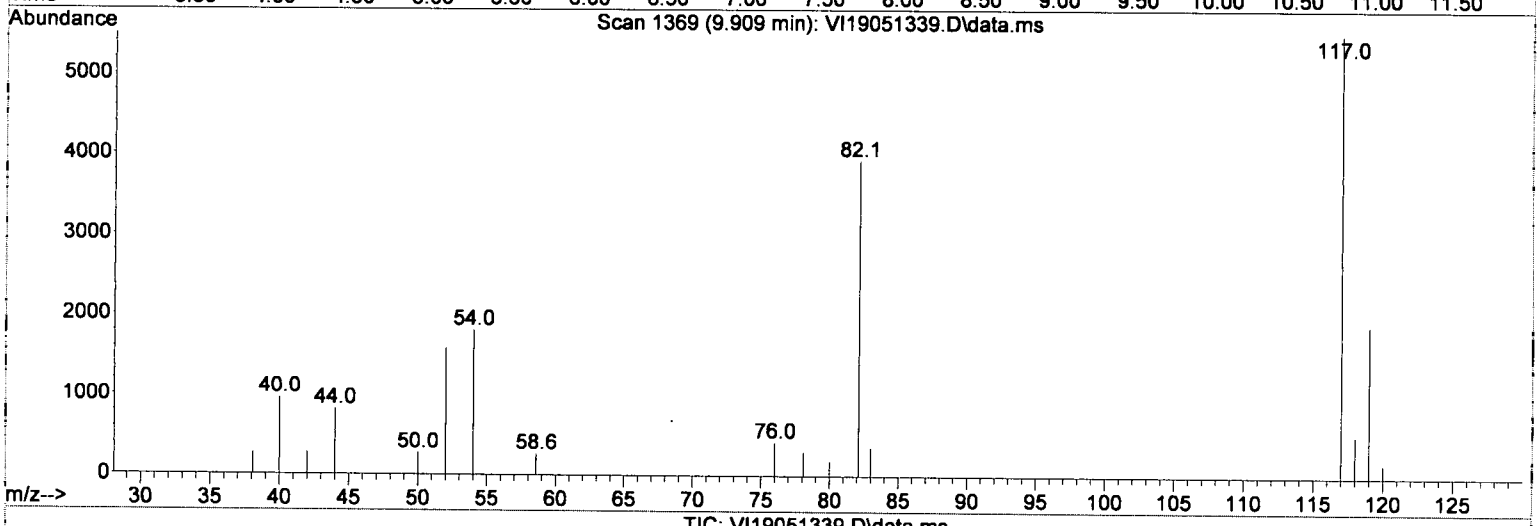
R = 6.35e-004 A*A + 1.69e+000 A + 5.97e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VE1905D2D.m
Calibration Table Last Updated: Tue May 14 10:08:23 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051339.D
Acq On : 14 May 2019 3:00 am
Operator : MM
Sample : 9E13041-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:10:00 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





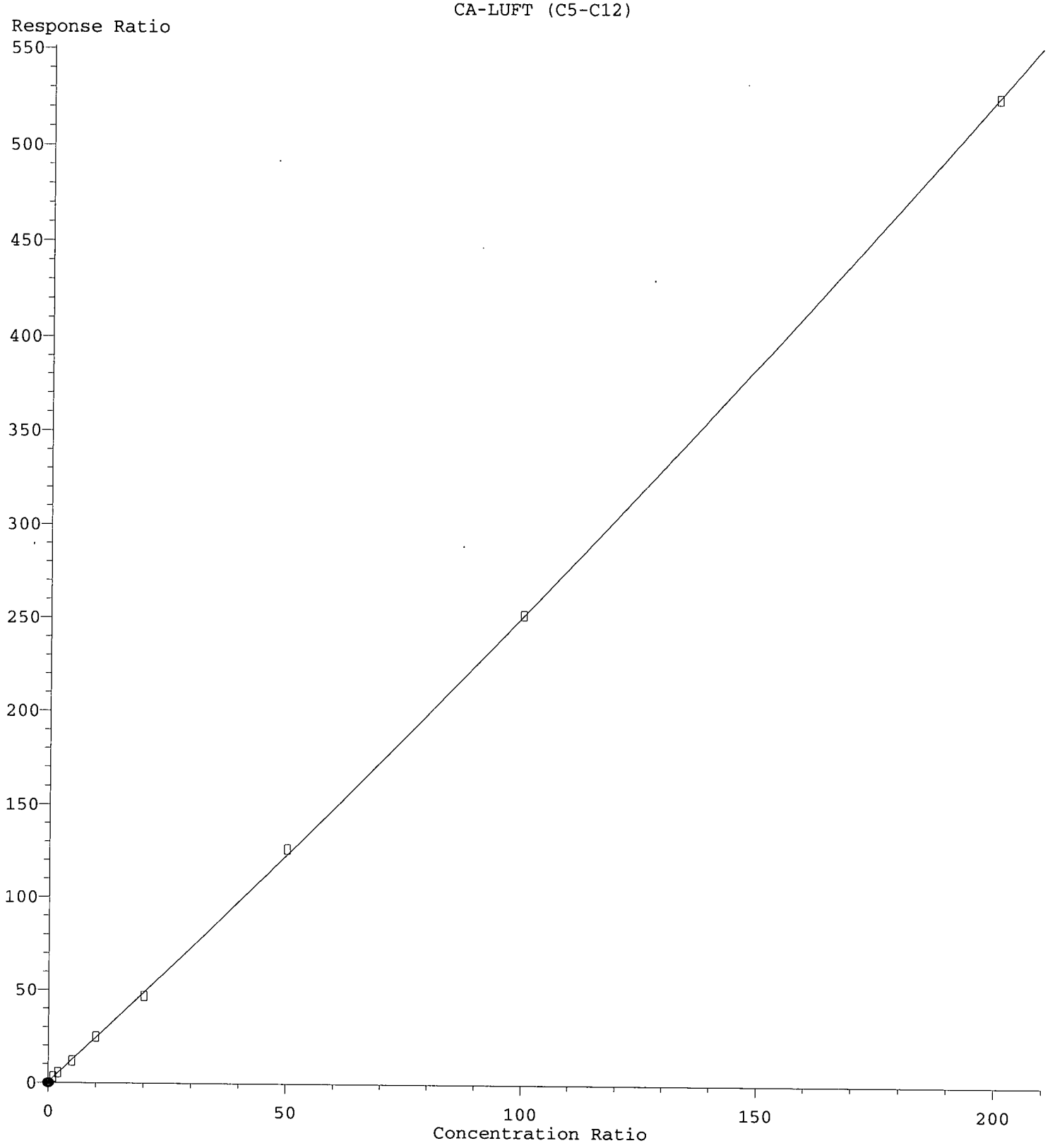
TIC: VI19051339.D\data.ms

(6) TPHg (C6-C10) (H)

9.910min (0.000) 35.42 ug/L m

response 383262

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	3.65#
0.00	0.00	2.81#
0.00	0.00	0.00

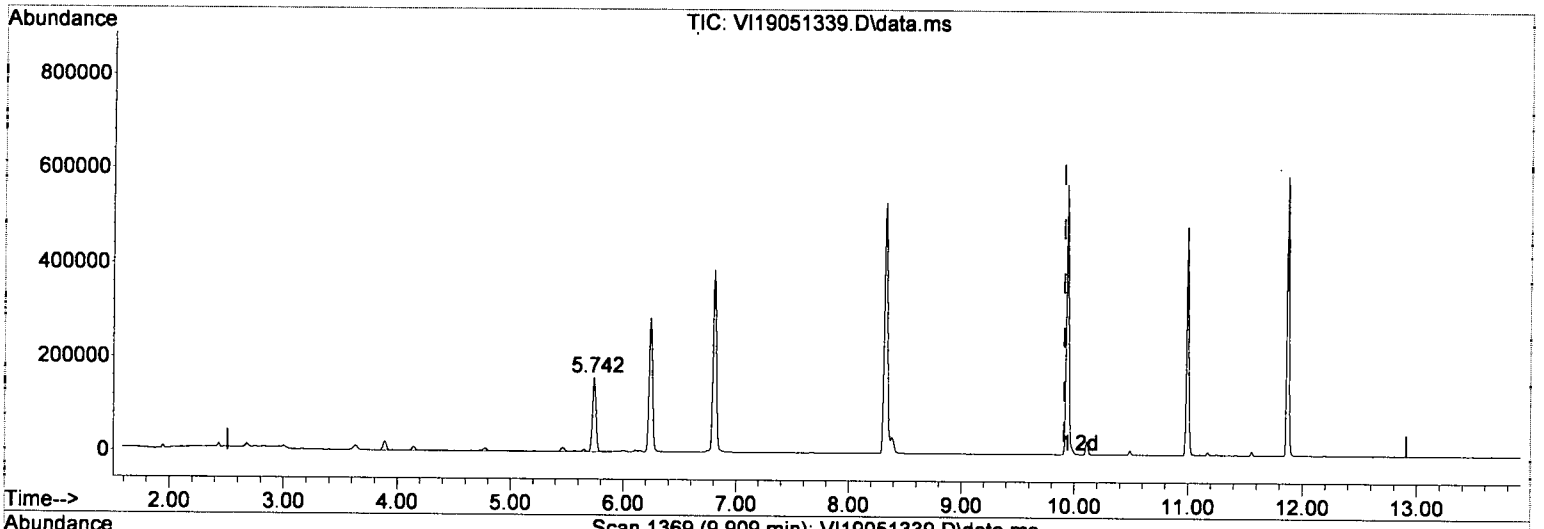


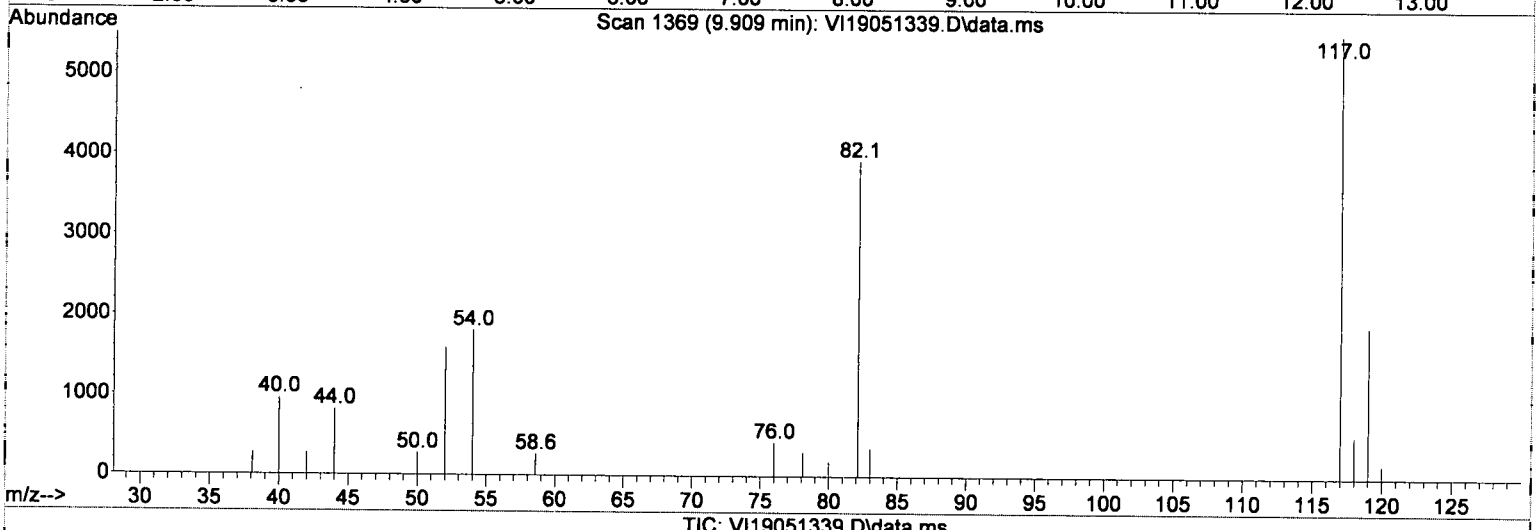
R = 1.14e-003 A*A + 2.40e+000 A + 5.44e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\v1905140.m
Calibration Table Last Updated: Tue May 14 10:08:23 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\REQUANT\
Data File : VI19051339.D
Acq On : 14 May 2019 3:00 am
Operator : MM
Sample : 9E13041-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:10:00 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





TIC: VI19051339.D\data.ms

(7) CA-LUFT (C5-C12) (H)

9.910min (0.000) 37.13 ug/L m

response 495782

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	2.82#
0.00	0.00	2.17#
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E13041

Analysis Included
NWTPH-Gx

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9E13041-TUN2	MS Tune	Water		A19C125	5/14/2019 1:13:00AM
9E13041-ICB2	Initial Cal Blank	Water		A19C125	5/14/2019 2:33:00AM
9E13041-CALC	Cal Standard	Water	A19E179	"	5/14/2019 3:00:00AM
9E13041-CALD	Cal Standard	Water	A19E180	"	5/14/2019 3:27:00AM
9E13041-CALE	Cal Standard	Water	A19E181	"	5/14/2019 3:54:00AM
9E13041-CALF	Cal Standard	Water	A19E182	"	5/14/2019 4:21:00AM
9E13041-CALG	Cal Standard	Water	A19E183	"	5/14/2019 4:48:00AM
9E13041-CALH	Cal Standard	Water	A19E184	"	5/14/2019 5:15:00AM
9E13041-CALI	Cal Standard	Water	A19E185	"	5/14/2019 5:42:00AM
9E13041-CALJ	Cal Standard	Water	A19E186	"	5/14/2019 6:09:00AM
9E13041-ICV2	Initial Cal Check	Water	A19B262	"	5/14/2019 7:30:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9E1405** Instrument: **VOA-GCMS9**

NWTPH-Gx Sequence: 9E13041 Matrix: Water

9E13041-CALC	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALD	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALE	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALF	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALG	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALH	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALI	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E13041-CALJ	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E13041

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E1405** Instrument: **VOA-GCMS9**

NWTPH-Gx Sequence: **9E13041** Matrix: **Water**

9E13041-ICV2	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051349.D
Acq On : 14 May 2019 7:30 am
Operator : MM
Sample : 9E13041-ICV2
Misc : 1X 5mL 500PPB GX
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:14:02 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	108	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	49.627	0.7	107	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	50.717	-1.4	109	0.00
4	H	NWTPH-Gx (TPH)	500.000	476.523	4.7	101	0.00
5	H	TPHg (C5-C9)	500.000	454.267	9.1	97	0.00
6	H	TPHg (C6-C10)	500.000	467.223	6.6	99	0.00
7	H	CA-LUFT (C5-C12)	500.000	454.817	9.0	98	0.00
8		Benzene (NR)	-1.000	0.000	0.0	102	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	107	0.00
10		Toluene (NR)	-1.000	0.000	0.0	105	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	107	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	108	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	111	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

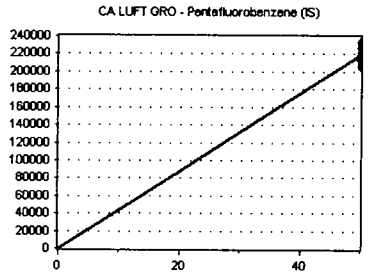
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **VI190514W.M VI190514G.M**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

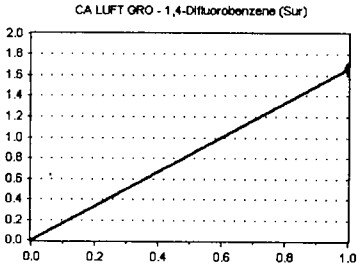


Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	213252	4265.040	6.24
9E13041-CALD	50	218202	4364.040	6.24
9E13041-CALE	50	215486	4309.720	6.24
9E13041-CALF	50	206716	4134.320	6.25
9E13041-CALG	50	219634	4392.680	6.25
9E13041-CALH	50	221987	4439.740	6.24
9E13041-CALI	50	227151	4543.020	6.25
9E13041-CALJ	50	233524	4670.480	6.25

AVE RF **4389.880** RF RSD **3.78** AVE RT **6.24**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

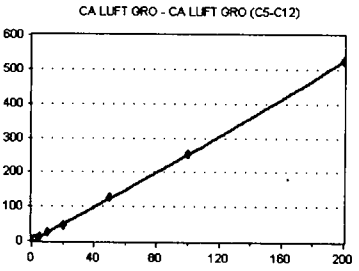


Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	354850	1.664	6.81
9E13041-CALD	50	360935	1.654	6.81
9E13041-CALE	50	360856	1.675	6.81
9E13041-CALF	50	345537	1.672	6.81
9E13041-CALG	50	364781	1.661	6.81
9E13041-CALH	50	369760	1.666	6.81
9E13041-CALI	50	380473	1.675	6.81
9E13041-CALJ	50	392928	1.683	6.81

AVE RF **1.669** RF RSD **0.55** AVE RT **6.81**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

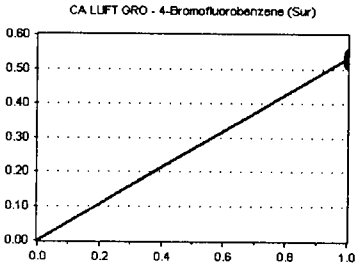


Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	654959	3.071	9.91
9E13041-CALD	100	1194352	2.737	9.91
9E13041-CALE	250	2534619	2.352	9.91
9E13041-CALF	500	5122974	2.478	9.91
9E13041-CALG	1000	1.027751E+07	2.340	9.91
9E13041-CALH	2500	2.80011E+07	2.523	9.91
9E13041-CALI	5000	5.722871E+07	2.519	9.91
9E13041-CALJ	10000	1.225811E+08	2.625	9.91

AVE RF **2.581** RF RSD **9.20** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	109779	0.515	10.99
9E13041-CALD	50	112129	0.514	10.99
9E13041-CALE	50	116230	0.539	10.99
9E13041-CALF	50	110148	0.533	10.99
9E13041-CALG	50	115923	0.528	10.99
9E13041-CALH	50	120217	0.542	10.99
9E13041-CALI	50	121963	0.537	10.99
9E13041-CALJ	50	128168	0.549	10.99

AVE RF **0.532** RF RSD **2.35** AVE RT **10.99**

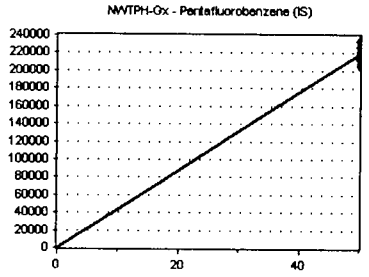
Element Calibration Review Sheet

Calibration ID: **A9E1405** Instrument: **VOA-GCMS9** Calibration Date: **05/14/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **VI190514W.M VI190514G.M**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

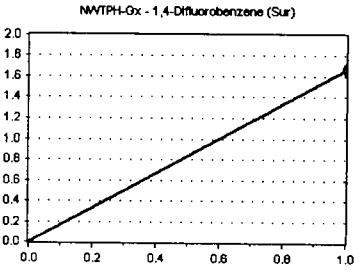


Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	213252	4265.040	6.24
9E13041-CALD	50	218202	4364.040	6.24
9E13041-CALE	50	215486	4309.720	6.24
9E13041-CALF	50	206716	4134.320	6.25
9E13041-CALG	50	219634	4392.680	6.25
9E13041-CALH	50	221987	4439.740	6.24
9E13041-CALI	50	227151	4543.020	6.25
9E13041-CALJ	50	233524	4670.480	6.25

AVE RF **4389.880** RF RSD **3.78** AVE RT **6.24**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

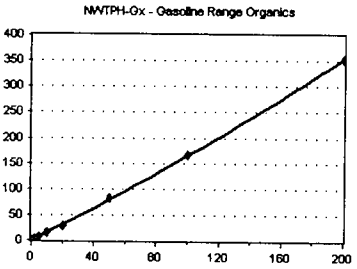


Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	354850	1.664	6.81
9E13041-CALD	50	360935	1.654	6.81
9E13041-CALE	50	360856	1.675	6.81
9E13041-CALF	50	345537	1.672	6.81
9E13041-CALG	50	364781	1.661	6.81
9E13041-CALH	50	369760	1.666	6.81
9E13041-CALI	50	380473	1.675	6.81
9E13041-CALJ	50	392928	1.683	6.81

AVE RF **1.669** RF RSD **0.55** AVE RT **6.81**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

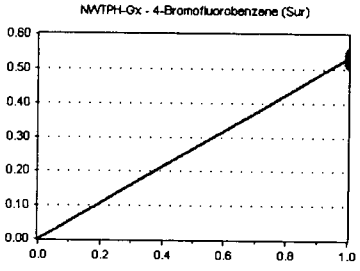


Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	116410	0.546	9.91
9E13041-CALD	100	462241	1.059	9.91
9E13041-CALE	250	1307051	1.213	9.91
9E13041-CALF	500	3055141	1.478	9.91
9E13041-CALG	1000	6352338	1.446	9.91
9E13041-CALH	2500	1.802898E+07	1.624	9.91
9E13041-CALI	5000	3.779466E+07	1.664	9.91
9E13041-CALJ	10000	8.251387E+07	1.767	9.91

AVE RF **1.350** RF RSD **29.68** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E13041-CALC	50	109779	0.515	10.99
9E13041-CALD	50	112129	0.514	10.99
9E13041-CALE	50	116230	0.539	10.99
9E13041-CALF	50	110148	0.533	10.99
9E13041-CALG	50	115923	0.528	10.99
9E13041-CALH	50	120217	0.542	10.99
9E13041-CALI	50	121963	0.537	10.99
9E13041-CALJ	50	128168	0.549	10.99

AVE RF **0.532** RF RSD **2.35** AVE RT **10.99**

Injection Log

Directory: h:\data\2019-05\9E13041

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	Vi19051315.d	1.	9E13041-IBL1	1X 5mL DI	13 May 2019 16:12
2	2	Vi19051316.d	1.	9E13041-TUN1	A19C125 5mL BFB...	13 May 2019 16:39
3	3	Vi19051317.d	1.	9E13041-ICB1	1X 5mL DI	13 May 2019 17:06
4	4	Vi19051318.d	1.	9E13041-CAL1	1X 5mL 0.1/0.2P...	13 May 2019 17:33
5	5	Vi19051319.d	1.	9E13041-CAL2	1X 5mL 0.2/0.4P...	13 May 2019 18:00
6	6	Vi19051320.d	1.	9E13041-CAL3	1X 5mL 0.4/0.8P...	13 May 2019 18:27
7	7	Vi19051321.d	1.	9E13041-CAL4	1X 5mL 1/2PPB VOC	13 May 2019 18:54
8	8	Vi19051322.d	1.	9E13041-CAL5	1X 5mL 2/4PPB VOC	13 May 2019 19:21
9	9	Vi19051323.d	1.	9E13041-CAL6	1X 5mL 5/10PPB VOC	13 May 2019 19:48
10	10	Vi19051324.d	1.	9E13041-CAL7	1X 5mL 10/20PPB...	13 May 2019 20:15
11	11	Vi19051325.d	1.	9E13041-CAL8	1X 5mL 20/40PPB...	13 May 2019 20:42
12	12	Vi19051326.d	1.	9E13041-CAL9	1X 5mL 50/100PP...	13 May 2019 21:09
13	13	Vi19051327.d	1.	9E13041-IBL2	1X 5mL DI	13 May 2019 21:37
14	14	Vi19051328.d	1.	9E13041-CALA	1X 5mL 100/200P...	13 May 2019 22:04
15	15	Vi19051329.d	1.	9E13041-IBL3	1X 5mL DI	13 May 2019 22:31
16	16	Vi19051330.d	1.	9E13041-CALB	1X 5mL 200/400P...	13 May 2019 22:58
17	17	Vi19051331.d	1.	9E13041-IBL4	1X 5mL DI	13 May 2019 23:25
18	18	Vi19051332.d	1.	9E13041-IBL5	1X 5mL DI	13 May 2019 23:52
19	19	Vi19051333.d	1.	9E13041-ICV1	1X 5mL 20/40PPB...	14 May 2019 00:19
20	20	Vi19051334.d	1.	9E13041-IBL6	1X 5mL DI	14 May 2019 00:46
21	21	Vi19051335.d	1.	9E13041-TUN2	A19C125 5mL BFB...	14 May 2019 01:13
22	22	Vi19051336.d	1.	9E13041-RT1	A18A167 VPH RT STD	14 May 2019 01:40
23	23	Vi19051337.d	1.	9E13041-IBL7	1X 5mL DI	14 May 2019 02:07
24	24	Vi19051338.d	1.	9E13041-ICB2	1X 5mL DI	14 May 2019 02:33
25	25	Vi19051339.d	1.	9E13041-CALC	1X 5mL 50PPB GX	14 May 2019 03:00
26	26	Vi19051340.d	1.	9E13041-CALD	1X 5mL 100PPB GX	14 May 2019 03:27
27	27	Vi19051341.d	1.	9E13041-CALE	1X 5mL 250PPB GX	14 May 2019 03:54
28	28	Vi19051342.d	1.	9E13041-CALF	1X 5mL 500PPB GX	14 May 2019 04:21
29	29	Vi19051343.d	1.	9E13041-CALG	1X 5mL 1000PPB GX	14 May 2019 04:48
30	30	Vi19051344.d	1.	9E13041-CALH	1X 5mL 2500PPB GX	14 May 2019 05:15
31	31	Vi19051345.d	1.	9E13041-CALI	1X 5mL 5000PPB GX	14 May 2019 05:42
32	32	Vi19051346.d	1.	9E13041-CALJ	1X 5mL 10000PPB GX	14 May 2019 06:09
33	33	Vi19051347.d	1.	9E13041-IBL8	1X 5mL DI	14 May 2019 06:36
34	34	Vi19051348.d	1.	9E13041-IBL9	1X 5mL DI	14 May 2019 07:03
35	35	Vi19051349.d	1.	9E13041-ICV2	1X 5mL 500PPB GX	14 May 2019 07:30
36	36	Vi19051350.d	1.	9E13041-IBLA	1X 5mL DI	14 May 2019 07:57

5/14/19 tm

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051315.D
Acq On : 13 May 2019 4:12 pm
Operator : MM
Sample : 9E13041-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:52:36 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

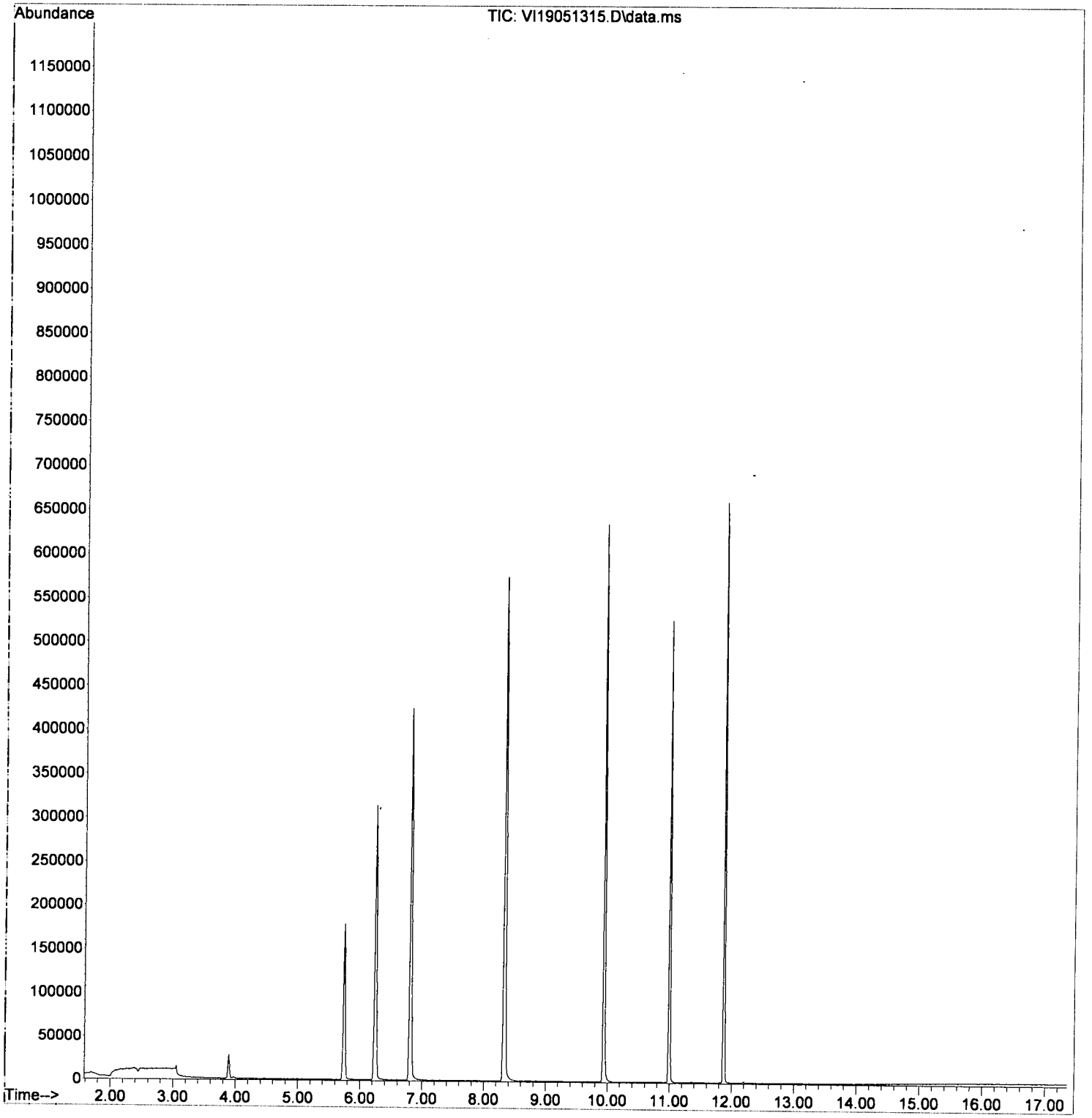
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.241	168	233833	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	338512	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	144435	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	121216	49.53	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.807	114	388161	49.98	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	462420	50.53	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	119915	51.52	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.904	50	477	0.16	ug/L	#	47
5) Bromomethane	2.378	96	464	0.24	ug/L	#	64
6) Chloroethane	2.475	64	671	0.15	ug/L	#	36
13) Methylene Chloride	3.893	84	12610	2.31	ug/L		93
14) Acetone	3.972	43	2758	2.10	ug/L		99
45) 4-Methyl-2-Pentanone (...	8.839	43	473	0.13	ug/L	#	43
51) 2-Hexanone	9.684	43	351	0.14	ug/L	#	35
81) Naphthalene	13.657	128	123	0.52	ug/L		81

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051315.D
Acq On : 13 May 2019 4:12 pm
Operator : MM
Sample : 9E13041-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:52:36 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

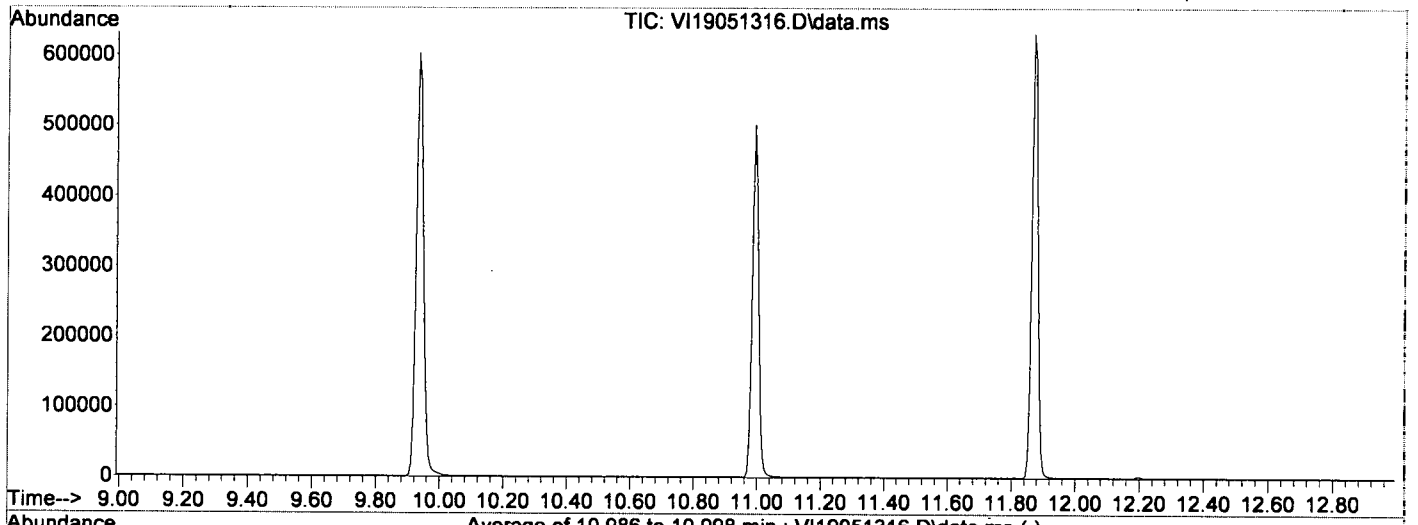


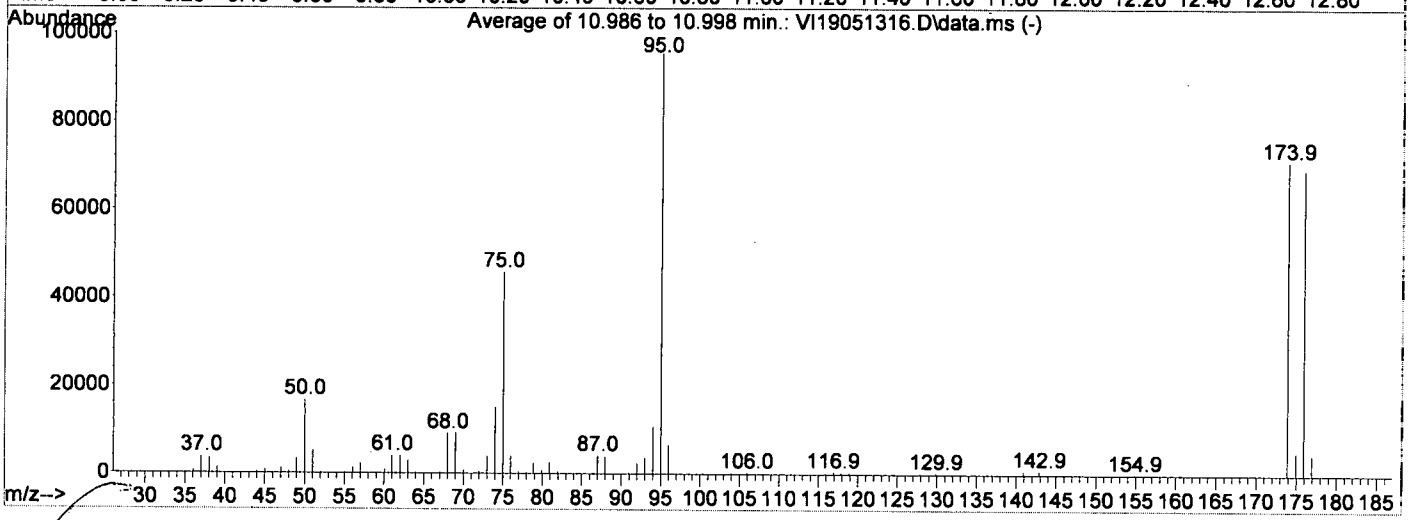
BFB

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051316.D
Acq On : 13 May 2019 4:39 pm
Operator : MM
Sample : 9E13041-TUN1
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI190514W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue May 14 09:28:30 2019





AutoFind: Scans 1546, 1547, 1548; Background Corrected with Scan 1539

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.6	16748	PASS
75	95	30	60	48.1	45875	PASS
95	95	100	100	100.0	95419	PASS
96	95	5	9	6.9	6600	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	74.6	71176	PASS
175	174	5	9	7.2	5113	PASS
176	174	95	101	97.4	69307	PASS
177	176	5	9	6.6	4586	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051316.D
Acq On : 13 May 2019 4:39 pm
Operator : MM
Sample : 9E13041-TUN1
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:52:48 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

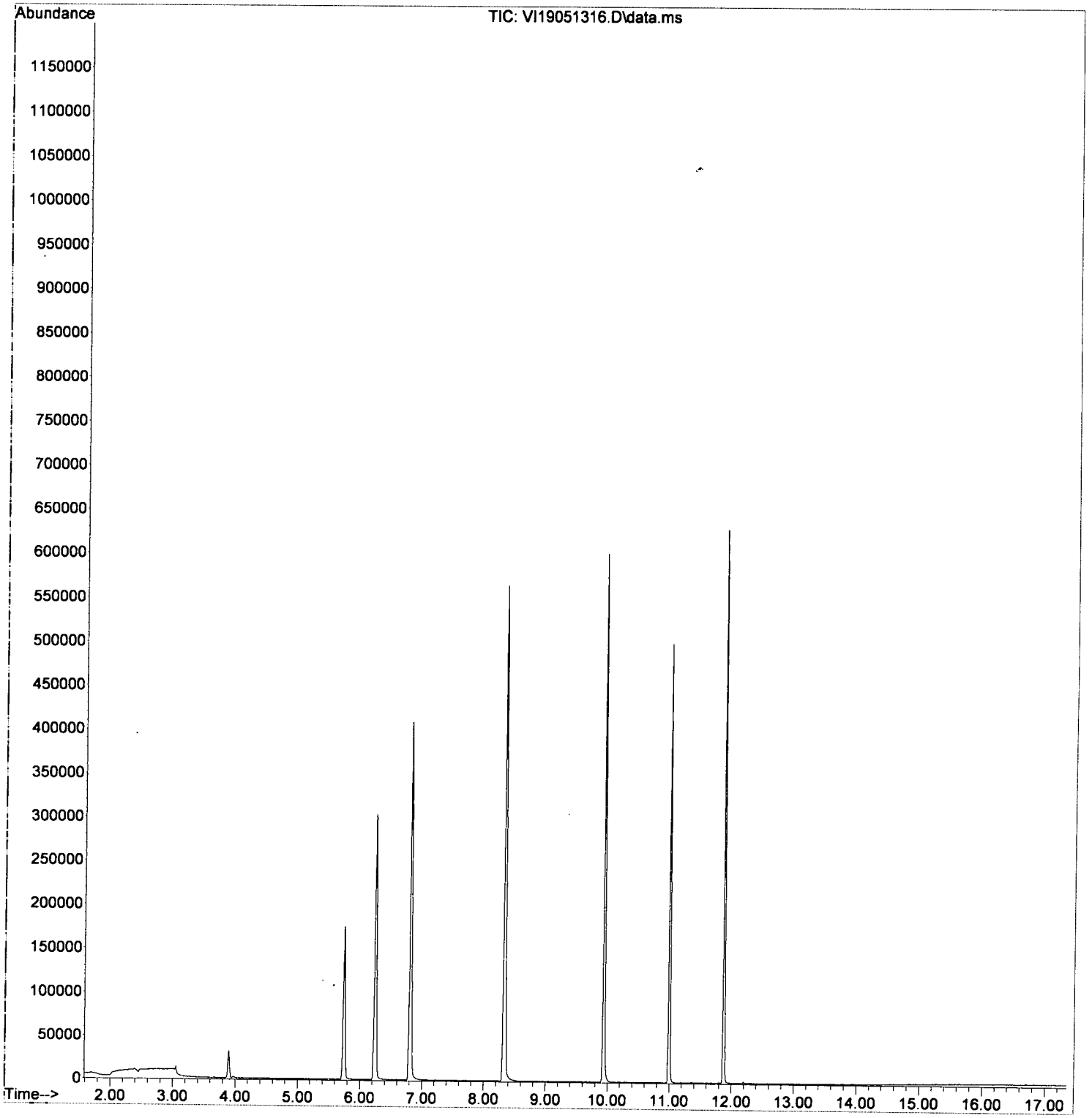
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.247	168	229894	50.00 ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	328730	50.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	140094	50.00 ug/L	0.00
System Monitoring Compounds					
28) Dibromofluoromethane (S)	5.742	111	119068	49.48 ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	381121	49.92 ug/L	0.00
42) Toluene-d8 (S)	8.328	98	449436	50.57 ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	117085	51.86 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.910	50	319	0.11 ug/L #	47
5) Bromomethane	2.378	96	397	0.21 ug/L #	48
6) Chloroethane	2.481	64	329	Below Cal #	36
13) Methylene Chloride	3.893	84	14819	3.42 ug/L	92
14) Acetone	3.972	43	1948	1.51 ug/L	92

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051316.D
Acq On : 13 May 2019 4:39 pm
Operator : MM
Sample : 9E13041-TUN1
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:52:48 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051317.D
Acq On : 13 May 2019 5:06 pm
Operator : MM
Sample : 9E13041-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:02 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

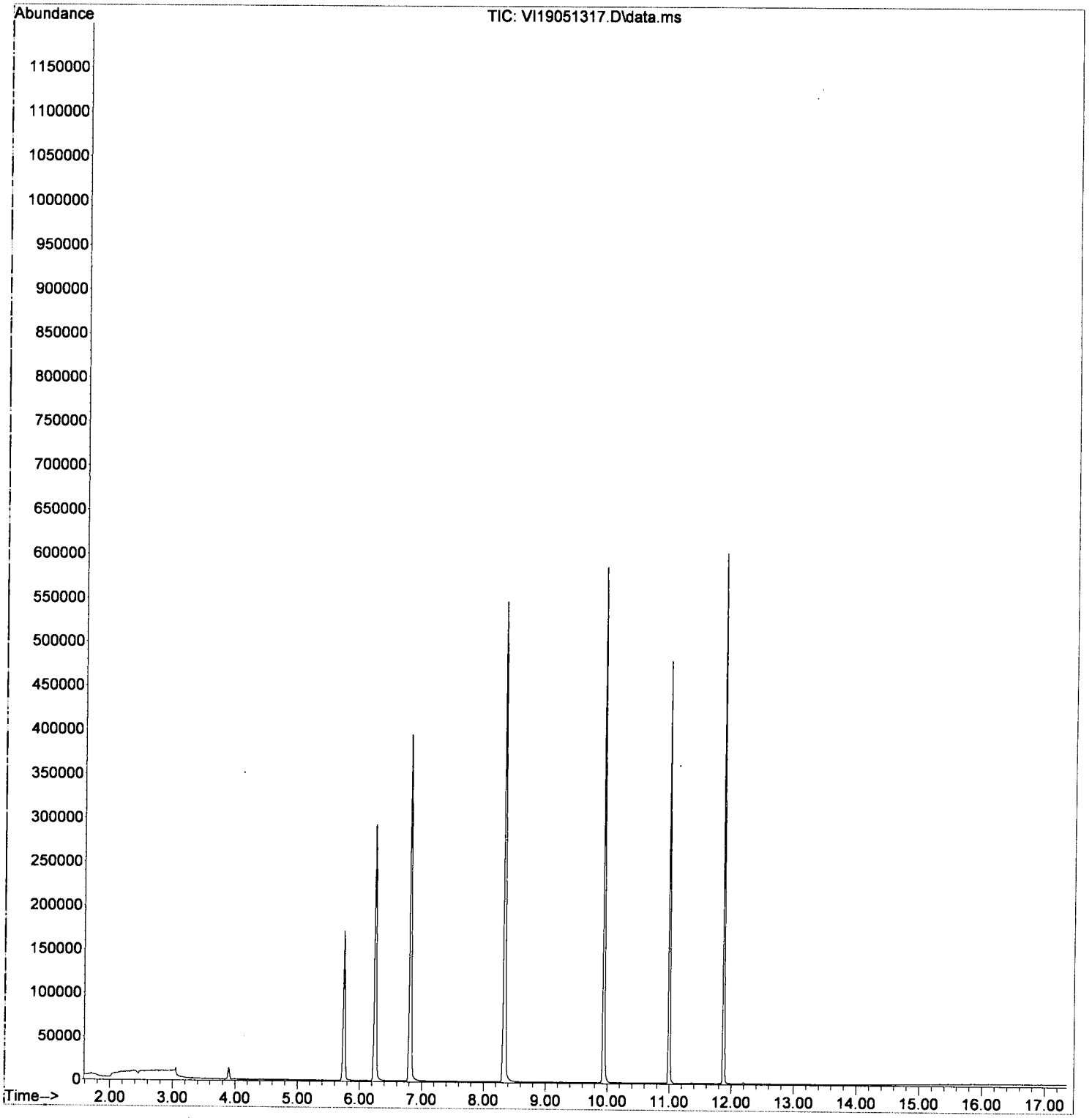
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.247	168	221478	50.00 ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	317475	50.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.868	152	132266	50.00 ug/L	0.00
System Monitoring Compounds					
28) Dibromofluoromethane (S)	5.742	111	116721	50.35 ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.813	114	369133	50.18 ug/L	0.00
42) Toluene-d8 (S)	8.328	98	434441	50.62 ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	110849	52.00 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.916	50	271	0.10 ug/L #	47
5) Bromomethane	2.384	96	403	0.22 ug/L #	57
6) Chloroethane	2.482	64	335	Below Cal #	36
13) Methylene Chloride	3.899	84	6324	Below Cal	97
14) Acetone	3.984	43	986	0.79 ug/L #	44
53) Ethylbenzene	9.934	91	660	0.06 ug/L #	1

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051317.D
Acq On : 13 May 2019 5:06 pm
Operator : MM
Sample : 9E13041-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:02 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051318.D
Acq On : 13 May 2019 5:33 pm
Operator : MM
Sample : 9E13041-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOC
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:13:31 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.241	168	235333	50.00 ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	335588	50.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	143363	50.00 ug/L	0.00
System Monitoring Compounds					
28) Dibromofluoromethane (S)	5.742	111	121317	41.66 ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	385697	46.36 ug/L	0.00
42) Toluene-d8 (S)	8.328	98	457483	51.78 ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	119758	53.80 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D. d	
3) Chloromethane	1.904	50	767	0.24 ug/L	84
4) Vinyl Chloride	2.013	62	491	0.16 ug/L	54
5) Bromomethane	2.378	96	744	0.29 ug/L	70
6) Chloroethane	0.000		0	N.D. d	
7) Trichlorofluoromethane	0.000		0	N.D. d	
8) 1,1-Dichloroethene	0.000		0	N.D. d	
9) Carbon Disulfide	0.000		0	N.D. d	
10) Freon 113	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acrolein	0.000		0	N.D.	
13) Methylene Chloride	3.893	84	7534	Below Cal	95
14) Acetone	0.000		0	N.D. d	
15) t-1,2-Dichloroethene	0.000		0	N.D. d	
16) n-Hexane	0.000		0	N.D.	
17) Methyl-tert-butyl-ether	0.000		0	N.D. d	
18) 1,1-Dichloroethane	0.000		0	N.D. d	
19) Acrylonitrile	0.000		0	N.D.	
20) Vinyl Acetate	0.000		0	N.D.	
21) c-1,2-Dichloroethene	0.000		0	N.D. d	
22) 2,2-Dichloropropane	0.000		0	N.D. d	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	0.000		0	N.D. d	
25) Carbon Tetrachloride	0.000		0	N.D.	
26) Tetrahydrofuran	0.000		0	N.D.	
27) 1,1,1-Trichloroethane	0.000		0	N.D. d	
29) 1,1-Dichloropropene	0.000		0	N.D. d	
30) 2-Butanone (MEK)	0.000		0	N.D. d	
31) Benzene	6.150	78	1131	0.12 ug/L	75
32) 1,2-Dichloroethane (EDC)	0.000		0	N.D. d	
33) iso-Butyl Alcohol	0.000		0	N.D. d	
35) Trichloroethene (TCE)	0.000		0	N.D. d	
36) Dibromomethane	0.000		0	N.D.	
37) 1,2-Dichloropropane	0.000		0	N.D.	
38) Bromodichloromethane	0.000		0	N.D.	
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
41) c-1,3-Dichloropropene	0.000		0	N.D.	
43) Toluene	8.389	91	1285	0.14 ug/L	88
44) Tetrachloroethene (PCE)	0.000		0	N.D. d	
45) 4-Methyl-2-Pentanone (...	0.000		0	N.D. d	
46) t-1,3-Dichloropropene	0.000		0	N.D.	
47) 1,1,2-Trichloroethane	0.000		0	N.D.	
48) Dibromochloromethane	0.000		0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051318.D
Acq On : 13 May 2019 5:33 pm
Operator : MM
Sample : 9E13041-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOC
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:13:31 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) 1,3-Dichloropropane	0.000		0	N.D. d	
50) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
51) 2-Hexanone	0.000		0	N.D. d	
52) Chlorobenzene	9.952	112	658	0.11 ug/L #	1
53) Ethylbenzene	9.976	91	1517	0.16 ug/L	90
54) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
55) m,p-Xylenes (2)	10.110	91	2154	0.61 ug/L	91
56) o-Xylene	10.488	91	981	0.38 ug/L	80
57) Styrene	10.536	104	489	0.53 ug/L	76
58) Bromoform	0.000		0	N.D.	
59) Isopropylbenzene	10.755	105	1267	0.54 ug/L	84
62) Bromobenzene	11.084	156	135	0.07 ug/L	84
63) n-Propylbenzene	11.096	91	1411	0.16 ug/L	89
64) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
65) 2-Chlorotoluene	0.000		0	N.D. d	
66) 1,3,5-Trimethylbenzene	11.248	105	832	0.41 ug/L	86
67) 1,2,3-Trichloropropane	0.000		0	N.D.	
68) t-1,4-Dichloro-2-butene	0.000		0	N.D.	
69) 4-Chlorotoluene	11.364	91	780	0.14 ug/L	91
70) tert-Butylbenzene	11.503	91	523	0.41 ug/L	89
71) 1,2,4-Trimethylbenzene	11.558	105	781	0.33 ug/L	86
72) sec-Butylbenzene	11.643	105	1084	0.47 ug/L	82
73) 4-Isopropyltoluene	11.747	119	820	0.53 ug/L	98
74) 1,3-Dichlorobenzene	11.820	146	420	0.12 ug/L	84
75) 1,4-Dichlorobenzene	11.881	146	491	0.12 ug/L #	1
76) n-Butylbenzene	12.069	91	702	0.31 ug/L	81
77) 1,2-Dichlorobenzene	0.000		0	N.D. d	
78) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
81) Naphthalene	0.000		0	N.D. d	
82) 1,2,3-Trichlorobenzene	0.000		0	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051318.D
Acq On : 13 May 2019 5:33 pm
Operator : MM
Sample : 9E13041-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOC
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:05:55 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.241	168	235333	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	335588	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	143363	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	121317	41.66	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.807	114	385697	46.36	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	457483	51.78	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	119758	53.80	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	254	0.09	ug/L	#	49
3) Chloromethane	1.904	50	767	0.24	ug/L		84
4) Vinyl Chloride	2.013	62	491	0.16	ug/L		54
5) Bromomethane	2.378	96	744	0.29	ug/L		70
6) Chloroethane	2.524	64	705	0.47	ug/L	#	56
7) Trichlorofluoromethane	2.688	101	470	0.09	ug/L	#	63
8) 1,1-Dichloroethene	3.254	61	292	0.09	ug/L	#	62
9) Carbon Disulfide	3.272	76	1095	0.20	ug/L		78
10) Freon 113	0.000		0	N.D.			
11) Iodomethane	0.000		0	N.D.			
12) Acrolein	0.000		0	N.D.			
13) Methylene Chloride	3.893	84	7534	Below Cal			95
14) Acetone	3.972	43	1207	0.85	ug/L		86
15) t-1,2-Dichloroethene	4.069	61	439	0.14	ug/L	#	58
16) n-Hexane	0.000		0	N.D.			
17) Methyl-tert-butyl-ether	4.203	73	628	0.10	ug/L		63
18) 1,1-Dichloroethane	4.702	63	358	0.08	ug/L	#	48
19) Acrylonitrile	0.000		0	N.D.			
20) Vinyl Acetate	0.000		0	N.D.			
21) c-1,2-Dichloroethene	5.274	61	218	0.07	ug/L	#	66
22) 2,2-Dichloropropane	5.377	77	267	0.11	ug/L		75
23) Bromochloromethane	0.000		0	N.D.			
24) Chloroform	5.560	83	381	0.08	ug/L		83
25) Carbon Tetrachloride	0.000		0	N.D.			
26) Tetrahydrofuran	0.000		0	N.D.			
27) 1,1,1-Trichloroethane	5.755	97	386	0.10	ug/L	#	25
29) 1,1-Dichloropropene	5.894	75	266	0.09	ug/L	#	43
30) 2-Butanone (MEK)	5.913	43	394	0.18	ug/L		52
31) Benzene	6.150	78	1131	0.12	ug/L		75
32) 1,2-Dichloroethane (EDC)	6.375	62	181	0.05	ug/L		54
33) iso-Butyl Alcohol	6.418	43	508	2.14	ug/L		89
35) Trichloroethene (TCE)	6.770	130	190	0.08	ug/L	#	76
36) Dibromomethane	0.000		0	N.D.			
37) 1,2-Dichloropropane	0.000		0	N.D.			
38) Bromodichloromethane	0.000		0	N.D.			
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.			
41) c-1,3-Dichloropropene	0.000		0	N.D.			
43) Toluene	8.389	91	1285	0.14	ug/L		88
44) Tetrachloroethene (PCE)	8.827	166	294	0.14	ug/L	#	71
45) 4-Methyl-2-Pentanone (...	8.827	43	704	0.20	ug/L	#	43
46) t-1,3-Dichloropropene	0.000		0	N.D.			
47) 1,1,2-Trichloroethane	0.000		0	N.D.			
48) Dibromochloromethane	0.000		0	N.D.			

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051318.D
Acq On : 13 May 2019 5:33 pm
Operator : MM
Sample : 9E13041-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOC
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:05:55 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

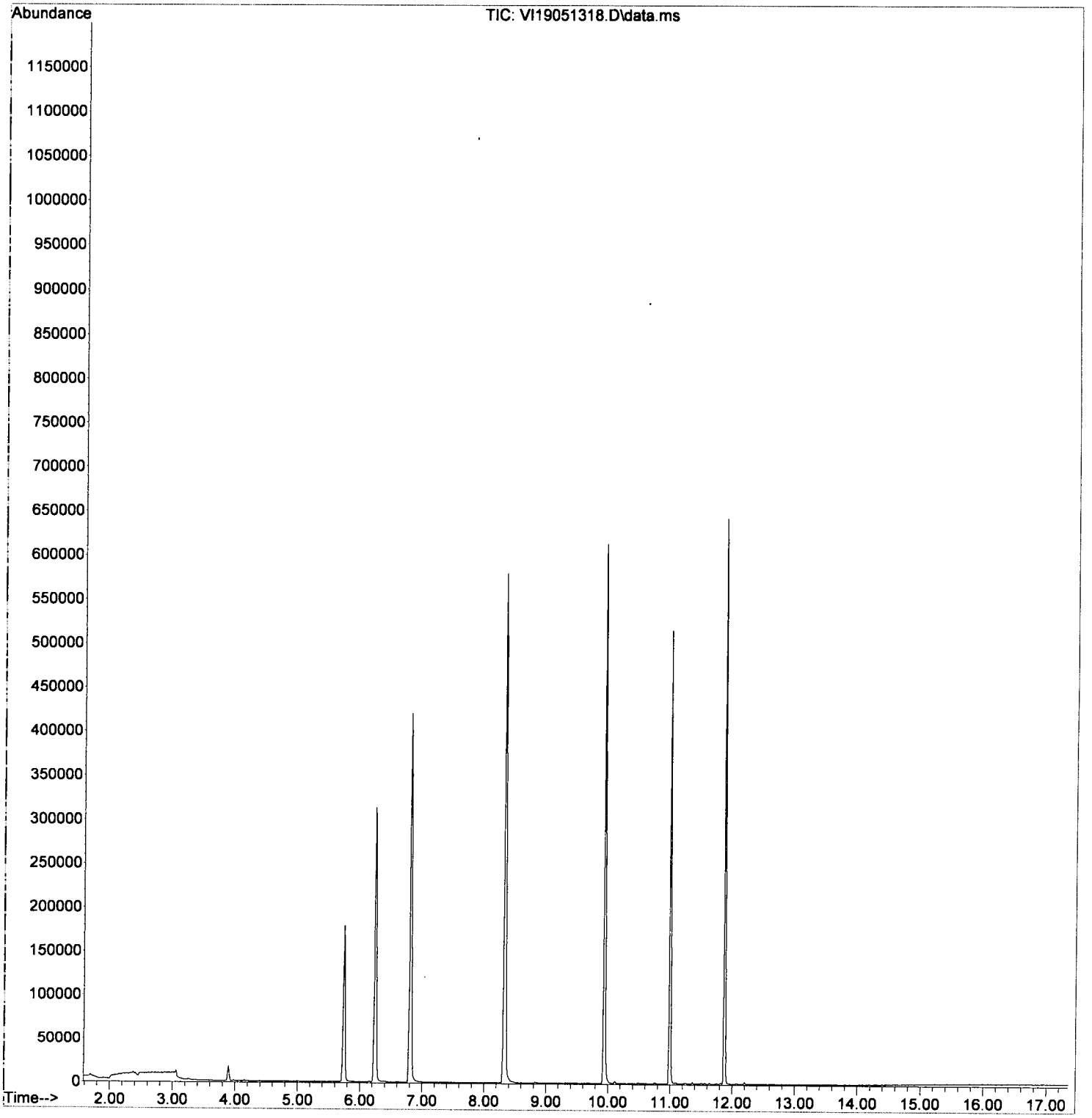
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) 1,3-Dichloropropane	9.319	76	274	0.08 ug/L #	65
50) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
51) 2-Hexanone	9.691	43	376	0.14 ug/L #	35
52) Chlorobenzene	9.952	112	658	0.11 ug/L #	1
53) Ethylbenzene	9.976	91	1517	0.16 ug/L	90
54) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
55) m,p-Xylenes (2)	10.110	91	2154	0.61 ug/L	91
56) o-Xylene	10.488	91	981	0.33 ug/L	80
57) Styrene	10.536	104	489	0.53 ug/L	76
58) Bromoform	0.000		0	N.D.	
59) Isopropylbenzene	10.755	105	1267	0.54 ug/L	84
62) Bromobenzene	11.084	156	135	0.07 ug/L	84
63) n-Propylbenzene	11.096	91	1411	0.16 ug/L	89
64) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
65) 2-Chlorotoluene	11.224	126	141	0.08 ug/L #	91
66) 1,3,5-Trimethylbenzene	11.248	105	832	0.41 ug/L	86
67) 1,2,3-Trichloropropane	0.000		0	N.D.	
68) t-1,4-Dichloro-2-butene	0.000		0	N.D.	
69) 4-Chlorotoluene	11.364	91	780	0.14 ug/L	91
70) tert-Butylbenzene	11.503	91	523	0.41 ug/L	89
71) 1,2,4-Trimethylbenzene	11.558	105	781	0.33 ug/L	86
72) sec-Butylbenzene	11.643	105	1084	0.47 ug/L	82
73) 4-Isopropyltoluene	11.747	119	820	0.53 ug/L	98
74) 1,3-Dichlorobenzene	11.820	146	420	0.12 ug/L	84
75) 1,4-Dichlorobenzene	11.881	146	491	0.12 ug/L #	1
76) n-Butylbenzene	12.069	91	702	0.31 ug/L	81
77) 1,2-Dichlorobenzene	12.209	146	251	0.07 ug/L #	65
78) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
81) Naphthalene	13.651	128	523	0.10 ug/L	81
82) 1,2,3-Trichlorobenzene	0.000		0	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051318.D
Acq On : 13 May 2019 5:33 pm
Operator : MM
Sample : 9E13041-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOC
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:05:55 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051319.D
Acq On : 13 May 2019 6:00 pm
Operator : MM
Sample : 9E13041-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOC
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:16:00 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.247	168	228403	50.00	ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	326502	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	138166	50.00	ug/L	0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.742	111	117563	41.60	ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	378112	46.83	ug/L	0.00
42) Toluene-d8 (S)	8.328	98	447987	52.12	ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.993	174	116173	54.15	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d	
3) Chloromethane	1.910	50	894	0.29	ug/L	91
4) Vinyl Chloride	2.013	62	648	0.22	ug/L	72
5) Bromomethane	2.378	96	880	0.35	ug/L	73
6) Chloroethane	0.000		0	N.D.	d	
7) Trichlorofluoromethane	0.000		0	N.D.	d	
8) 1,1-Dichloroethene	3.254	61	558	0.17	ug/L	94
9) Carbon Disulfide	0.000		0	N.D.	d	
10) Freon 113	0.000		0	N.D.	d	
11) Iodomethane	0.000		0	N.D.		
12) Acrolein	0.000		0	N.D.		
13) Methylene Chloride	3.899	84	8267	Below Cal		93
14) Acetone	0.000		0	N.D.	d	
15) t-1,2-Dichloroethene	4.063	61	460	0.15	ug/L	89
16) n-Hexane	0.000		0	N.D.		
17) Methyl-tert-butyl-ether	4.203	73	1443	0.24	ug/L	83
18) 1,1-Dichloroethane	0.000		0	N.D.	d	
19) Acrylonitrile	0.000		0	N.D.		
20) Vinyl Acetate	0.000		0	N.D.		
21) c-1,2-Dichloroethene	5.280	61	523	0.18	ug/L	97
22) 2,2-Dichloropropane	0.000		0	N.D.	d	
23) Bromochloromethane	0.000		0	N.D.		
24) Chloroform	5.554	83	765	0.17	ug/L	81
25) Carbon Tetrachloride	0.000		0	N.D.	d	
26) Tetrahydrofuran	0.000		0	N.D.	d	
27) 1,1,1-Trichloroethane	0.000		0	N.D.	d	
29) 1,1-Dichloropropene	0.000		0	N.D.	d	
30) 2-Butanone (MEK)	0.000		0	N.D.	d	
31) Benzene	6.150	78	1912	0.21	ug/L	94
32) 1,2-Dichloroethane (EDC)	6.369	62	493	0.14	ug/L	55
33) iso-Butyl Alcohol	0.000		0	N.D.	d	
35) Trichloroethene (TCE)	6.777	130	384	0.17	ug/L #	71
36) Dibromomethane	0.000		0	N.D.		
37) 1,2-Dichloropropane	0.000		0	N.D.	d	
38) Bromodichloromethane	7.409	83	313	0.10	ug/L	78
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
41) c-1,3-Dichloropropene	0.000		0	N.D.	d	
43) Toluene	8.389	91	2037	0.22	ug/L	96
44) Tetrachloroethene (PCE)	0.000		0	N.D.	d	
45) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d	
46) t-1,3-Dichloropropene	0.000		0	N.D.	d	
47) 1,1,2-Trichloroethane	0.000		0	N.D.	d	
48) Dibromochloromethane	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051319.D
Acq On : 13 May 2019 6:00 pm
Operator : MM
Sample : 9E13041-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOC
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:16:00 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,3-Dichloropropane	9.320	76	671	0.19	ug/L	78
50) 1,2-Dibromoethane (EDB)	9.459	107	224	0.11	ug/L	90
51) 2-Hexanone	0.000		0	N.D.	d	
52) Chlorobenzene	9.952	112	1237	0.21	ug/L #	37
53) Ethylbenzene	9.977	91	2104	0.23	ug/L	90
54) 1,1,1,2-Tetrachloroethane	10.013	131	206	0.11	ug/L #	48
55) m,p-Xylenes (2)	10.110	91	2876	0.71	ug/L	96
56) o-Xylene	10.488	91	1466	0.40	ug/L	95
57) Styrene	10.536	104	892	0.60	ug/L	81
58) Bromoform	0.000		0	N.D.		
59) Isopropylbenzene	10.755	105	1591	0.58	ug/L	95
62) Bromobenzene	11.078	156	390	0.20	ug/L #	77
63) n-Propylbenzene	11.096	91	1956	0.23	ug/L	97
64) 1,1,2,2-Tetrachloroethane	11.163	85	339	0.16	ug/L	85
65) 2-Chlorotoluene	11.224	126	324	0.20	ug/L	96
66) 1,3,5-Trimethylbenzene	11.254	105	1210	0.48	ug/L	95
67) 1,2,3-Trichloropropane	0.000		0	N.D.		
68) t-1,4-Dichloro-2-butene	0.000		0	N.D.		
69) 4-Chlorotoluene	11.358	91	1188	0.22	ug/L	90
70) tert-Butylbenzene	11.504	91	727	0.48	ug/L #	75
71) 1,2,4-Trimethylbenzene	11.558	105	1204	0.40	ug/L	95
72) sec-Butylbenzene	11.637	105	1417	0.52	ug/L	98
73) 4-Isopropyltoluene	11.747	119	1107	0.59	ug/L	91
74) 1,3-Dichlorobenzene	11.814	146	704	0.21	ug/L	85
75) 1,4-Dichlorobenzene	11.881	146	816	0.21	ug/L #	15
76) n-Butylbenzene	12.069	91	900	0.36	ug/L	81
77) 1,2-Dichlorobenzene	12.203	146	684	0.21	ug/L	96
78) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.		
79) Hexachlorobutadiene	0.000		0	N.D.		
80) 1,2,4-Trichlorobenzene	13.365	180	259	0.76	ug/L	87
81) Naphthalene	0.000		0	N.D.	d	
82) 1,2,3-Trichlorobenzene	13.809	180	230	0.44	ug/L	79

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051319.D
Acq On : 13 May 2019 6:00 pm
Operator : MM
Sample : 9E13041-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOC
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:05:59 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	228403	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	326502	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	138166	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	117563	41.60	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.807	114	378112	46.83	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	447987	52.12	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.993	174	116173	54.15	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	481	0.18	ug/L	#	49
3) Chloromethane	1.910	50	894	0.29	ug/L		91
4) Vinyl Chloride	2.013	62	648	0.22	ug/L		72
5) Bromomethane	2.378	96	880	0.35	ug/L		73
6) Chloroethane	2.530	64	1446	0.99	ug/L	#	57
7) Trichlorofluoromethane	2.688	101	760	0.15	ug/L		86
8) 1,1-Dichloroethene	3.254	61	558	0.17	ug/L		94
9) Carbon Disulfide	3.272	76	1343	0.25	ug/L		78
10) Freon 113	3.303	101	329	0.15	ug/L	#	19
11) Iodomethane	0.000		0	N.D.			
12) Acrolein	0.000		0	N.D.			
13) Methylene Chloride	3.899	84	8267	Below Cal			93
14) Acetone	3.972	43	1365	0.99	ug/L		95
15) t-1,2-Dichloroethene	4.063	61	460	0.15	ug/L		89
16) n-Hexane	0.000		0	N.D.			
17) Methyl-tert-butyl-ether	4.203	73	1443	0.24	ug/L		83
18) 1,1-Dichloroethane	4.714	63	722	0.16	ug/L	#	48
19) Acrylonitrile	0.000		0	N.D.			
20) Vinyl Acetate	0.000		0	N.D.			
21) c-1,2-Dichloroethene	5.280	61	523	0.18	ug/L		97
22) 2,2-Dichloropropane	5.371	77	450	0.19	ug/L		76
23) Bromochloromethane	0.000		0	N.D.			
24) Chloroform	5.554	83	765	0.17	ug/L		81
25) Carbon Tetrachloride	5.688	117	253	0.08	ug/L		86
26) Tetrahydrofuran	5.730	42	286	0.21	ug/L	#	68
27) 1,1,1-Trichloroethane	5.761	97	498	0.14	ug/L	#	65
29) 1,1-Dichloropropene	5.888	75	464	0.16	ug/L	#	43
30) 2-Butanone (MEK)	5.901	43	727	0.35	ug/L		52
31) Benzene	6.150	78	1912	0.21	ug/L		94
32) 1,2-Dichloroethane (EDC)	6.369	62	493	0.14	ug/L		55
33) iso-Butyl Alcohol	6.412	43	1117	4.84	ug/L		86
35) Trichloroethene (TCE)	6.777	130	384	0.17	ug/L	#	71
36) Dibromomethane	0.000		0	N.D.			
37) 1,2-Dichloropropane	7.342	63	366	0.15	ug/L	#	35
38) Bromodichloromethane	7.409	83	313	0.10	ug/L		78
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.			
41) c-1,3-Dichloropropene	8.127	75	390	0.15	ug/L	#	72
43) Toluene	8.389	91	2037	0.22	ug/L		96
44) Tetrachloroethene (PCE)	8.827	166	418	0.20	ug/L	#	72
45) 4-Methyl-2-Pentanone (...	8.833	43	1311	0.39	ug/L		88
46) t-1,3-Dichloropropene	8.869	75	269	0.43	ug/L	#	45
47) 1,1,2-Trichloroethane	9.040	97	302	0.14	ug/L	#	65
48) Dibromochloromethane	9.216	129	125	0.06	ug/L	#	17

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051319.D
Acq On : 13 May 2019 6:00 pm
Operator : MM
Sample : 9E13041-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOC
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:05:59 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

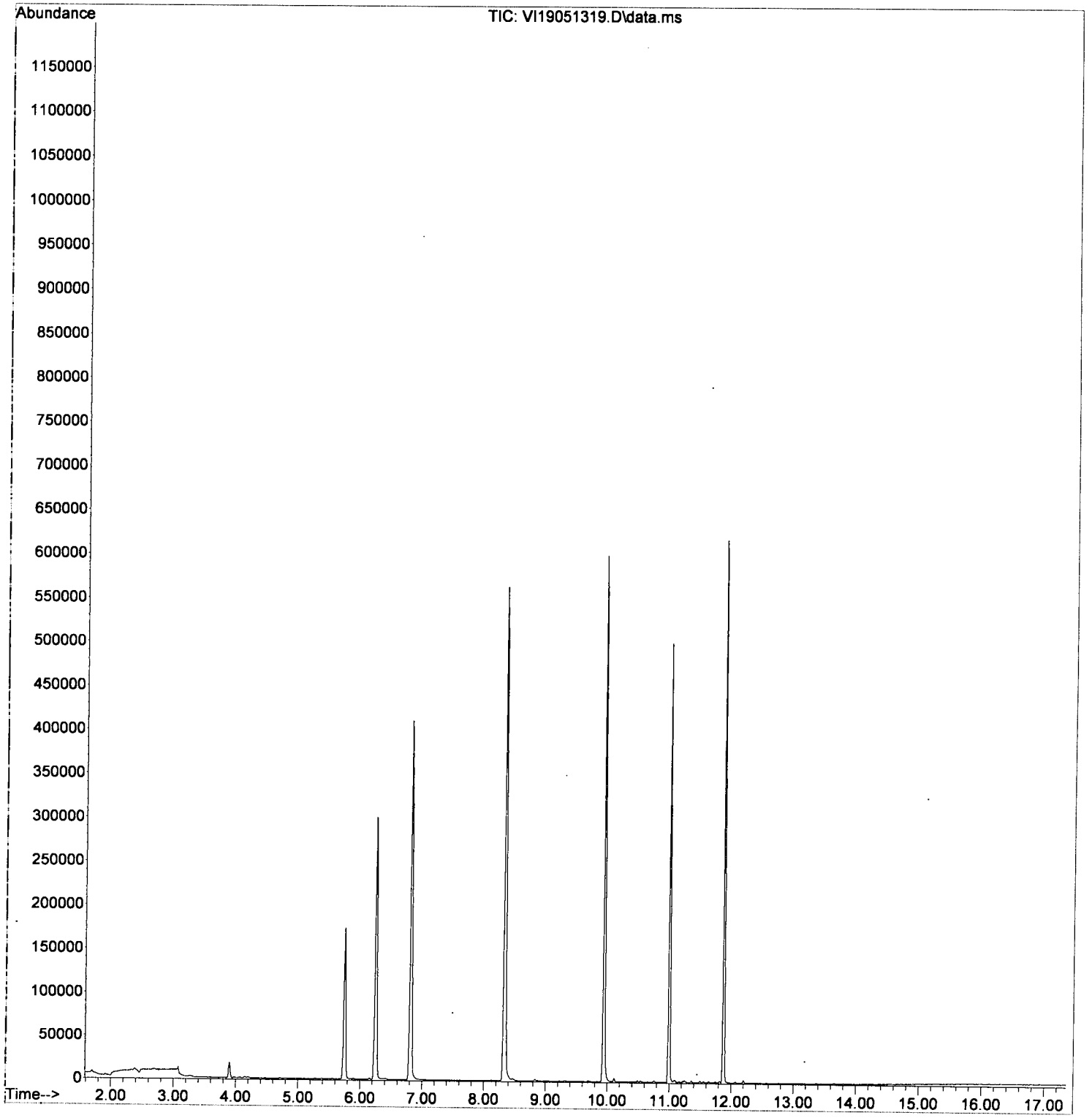
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.320	76	671	0.19	ug/L		78
50) 1,2-Dibromoethane (EDB)	9.459	107	224	0.11	ug/L		90
51) 2-Hexanone	9.685	43	903	0.36	ug/L		85
52) Chlorobenzene	9.952	112	1237	0.21	ug/L	#	37
53) Ethylbenzene	9.977	91	2104	0.23	ug/L		90
54) 1,1,1,2-Tetrachloroethane	10.013	131	206	0.11	ug/L	#	48
55) m,p-Xylenes (2)	10.110	91	2876	0.71	ug/L		96
56) o-Xylene	10.488	91	1466	0.40	ug/L		95
57) Styrene	10.536	104	892	0.60	ug/L		81
58) Bromoform	0.000		0	N.D.			
59) Isopropylbenzene	10.755	105	1591	0.58	ug/L		95
62) Bromobenzene	11.078	156	390	0.20	ug/L	#	77
63) n-Propylbenzene	11.096	91	1956	0.23	ug/L		97
64) 1,1,2,2-Tetrachloroethane	11.163	85	339	0.16	ug/L		85
65) 2-Chlorotoluene	11.224	126	324	0.20	ug/L		96
66) 1,3,5-Trimethylbenzene	11.254	105	1210	0.48	ug/L		95
67) 1,2,3-Trichloropropane	0.000		0	N.D			
68) t-1,4-Dichloro-2-butene	0.000		0	N.D			
69) 4-Chlorotoluene	11.358	91	1188	0.22	ug/L		90
70) tert-Butylbenzene	11.504	91	727	0.48	ug/L	#	75
71) 1,2,4-Trimethylbenzene	11.558	105	1204	0.40	ug/L		95
72) sec-Butylbenzene	11.637	105	1417	0.52	ug/L		98
73) 4-Isopropyltoluene	11.747	119	1107	0.59	ug/L		91
74) 1,3-Dichlorobenzene	11.814	146	704	0.21	ug/L		85
75) 1,4-Dichlorobenzene	11.881	146	816	0.21	ug/L	#	15
76) n-Butylbenzene	12.069	91	900	0.36	ug/L		81
77) 1,2-Dichlorobenzene	12.203	146	684	0.21	ug/L		96
78) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
79) Hexachlorobutadiene	0.000		0	N.D.			
80) 1,2,4-Trichlorobenzene	13.365	180	259	0.76	ug/L		87
81) Naphthalene	13.651	128	1023	0.20	ug/L		81
82) 1,2,3-Trichlorobenzene	13.809	180	230	0.44	ug/L		79

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051319.D
Acq On : 13 May 2019 6:00 pm
Operator : MM
Sample : 9E13041-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOC
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:05:59 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051320.D
Acq On : 13 May 2019 6:27 pm
Operator : MM
Sample : 9E13041-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOC
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:18:31 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.241	168	234232	50.00	ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	339703	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	145839	50.00	ug/L	0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.742	111	120419	41.55	ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	389226	47.00	ug/L	0.00
42) Toluene-d8 (S)	8.328	98	462953	51.76	ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	120173	53.07	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.691	85	936	0.34	ug/L	87
3) Chloromethane	1.910	50	1434	0.45	ug/L	98
4) Vinyl Chloride	2.007	62	1259	0.41	ug/L	81
5) Bromomethane	2.372	96	1368	0.54	ug/L	89
6) Chloroethane	0.000		0	N.D.	d	
7) Trichlorofluoromethane	2.682	101	1351	0.25	ug/L	95
8) 1,1-Dichloroethene	3.248	61	1059	0.32	ug/L	97
9) Carbon Disulfide	3.266	76	2265	0.41	ug/L	92
10) Freon 113	3.297	101	803	0.36	ug/L	78
11) Iodomethane	0.000		0	N.D.		
12) Acrolein	0.000		0	N.D.		
13) Methylene Chloride	3.893	84	8394	Below Cal		97
14) Acetone	0.000		0	N.D.	d	
15) t-1,2-Dichloroethene	4.063	61	1038	0.33	ug/L	97
16) n-Hexane	0.000		0	N.D.		
17) Methyl-tert-butyl-ether	4.191	73	2657	0.44	ug/L	84
18) 1,1-Dichloroethane	4.708	63	1479	0.33	ug/L	88
19) Acrylonitrile	4.787	53	370	0.25	ug/L	97
20) Vinyl Acetate	0.000		0	N.D.		
21) c-1,2-Dichloroethene	5.274	61	1108	0.36	ug/L	78
22) 2,2-Dichloropropane	5.377	77	1108	0.47	ug/L	87
23) Bromochloromethane	5.475	130	403	0.25	ug/L	87
24) Chloroform	5.560	83	1568	0.34	ug/L	95
25) Carbon Tetrachloride	5.681	117	720	0.23	ug/L	89
26) Tetrahydrofuran	0.000		0	N.D.	d	
27) 1,1,1-Trichloroethane	5.754	97	1163	0.32	ug/L	97
29) 1,1-Dichloropropene	5.888	75	1140	0.39	ug/L	92
30) 2-Butanone (MEK)	0.000		0	N.D.	d	
31) Benzene	6.150	78	3575	0.39	ug/L	97
32) 1,2-Dichloroethane (EDC)	6.363	62	1131	0.31	ug/L	86
33) iso-Butyl Alcohol	0.000		0	N.D.	d	
35) Trichloroethene (TCE)	6.776	130	811	0.36	ug/L	80
36) Dibromomethane	7.233	93	487	0.28	ug/L	84
37) 1,2-Dichloropropane	7.342	63	797	0.32	ug/L	87
38) Bromodichloromethane	7.415	83	929	0.28	ug/L	96
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
41) c-1,3-Dichloropropene	8.121	75	953	0.36	ug/L	90
43) Toluene	8.383	91	3852	0.40	ug/L	98
44) Tetrachloroethene (PCE)	8.821	166	768	0.35	ug/L	84
45) 4-Methyl-2-Pentanone (...	8.833	43	2579	0.73	ug/L	96
46) t-1,3-Dichloropropene	8.875	75	692	0.58	ug/L	71
47) 1,1,2-Trichloroethane	9.033	97	712	0.31	ug/L	89
48) Dibromochloromethane	9.216	129	484	0.21	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051320.D
Acq On : 13 May 2019 6:27 pm
Operator : MM
Sample : 9E13041-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOC
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:18:31 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.319	76	1391	0.39	ug/L		95
50) 1,2-Dibromoethane (EDB)	9.447	107	643	0.30	ug/L		91
51) 2-Hexanone	9.684	43	1574	0.60	ug/L		95
52) Chlorobenzene	9.952	112	2410	0.40	ug/L	#	69
53) Ethylbenzene	9.976	91	3901	0.40	ug/L		97
54) 1,1,1,2-Tetrachloroethane	10.007	131	506	0.25	ug/L	#	66
55) m,p-Xylenes (2)	10.110	91	5738	1.07	ug/L		98
56) o-Xylene	10.487	91	2869	0.59	ug/L		95
57) Styrene	10.536	104	1912	0.77	ug/L		90
58) Bromoform	0.000		0	N.D.	d		
59) Isopropylbenzene	10.755	105	3205	0.75	ug/L		98
62) Bromobenzene	11.078	156	851	0.40	ug/L	#	75
63) n-Propylbenzene	11.096	91	3975	0.44	ug/L		96
64) 1,1,2,2-Tetrachloroethane	11.163	85	760	0.35	ug/L		89
65) 2-Chlorotoluene	11.230	126	773	0.44	ug/L		93
66) 1,3,5-Trimethylbenzene	11.248	105	2379	0.65	ug/L		94
67) 1,2,3-Trichloropropane	11.272	110	364	0.35	ug/L	#	77
68) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
69) 4-Chlorotoluene	11.357	91	2325	0.42	ug/L		89
70) tert-Butylbenzene	11.503	91	1388	0.56	ug/L		95
71) 1,2,4-Trimethylbenzene	11.558	105	2337	0.57	ug/L		95
72) sec-Butylbenzene	11.637	105	2951	0.71	ug/L		98
73) 4-Isopropyltoluene	11.747	119	2181	0.76	ug/L		92
74) 1,3-Dichlorobenzene	11.820	146	1583	0.44	ug/L		96
75) 1,4-Dichlorobenzene	11.881	146	1671	0.41	ug/L	#	51
76) n-Butylbenzene	12.069	91	1937	0.54	ug/L		97
77) 1,2-Dichlorobenzene	12.203	146	1381	0.39	ug/L		96
78) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
79) Hexachlorobutadiene	0.000		0	N.D.			
80) 1,2,4-Trichlorobenzene	13.365	180	580	0.95	ug/L		78
81) Naphthalene	0.000		0	N.D.	d		
82) 1,2,3-Trichlorobenzene	13.809	180	580	0.64	ug/L		80

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

Quantitation Report (Not Reviewed)

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Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051320.D
Acq On    : 13 May 2019   6:27 pm
Operator  : MM
Sample    : 9E13041-CAL3
Misc      : 1X  5mL  0.4/0.8PPB VOC
ALS Vial  : 6   Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:02 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title  : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration
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Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.241	168	234232	50.00	ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	339703	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	145839	50.00	ug/L	0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.742	111	120419	41.55	ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	389226	47.00	ug/L	0.00
42) Toluene-d8 (S)	8.328	98	462953	51.76	ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	120173	53.07	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.691	85	936	0.34	ug/L	87
3) Chloromethane	1.910	50	1434	0.45	ug/L	98
4) Vinyl Chloride	2.007	62	1259	0.41	ug/L	81
5) Bromomethane	2.372	96	1368	0.54	ug/L	89
6) Chloroethane	2.518	64	1864	1.25	ug/L #	60
7) Trichlorofluoromethane	2.682	101	1351	0.25	ug/L	95
8) 1,1-Dichloroethene	3.248	61	1059	0.32	ug/L	97
9) Carbon Disulfide	3.266	76	2265	0.41	ug/L	92
10) Freon 113	3.297	101	803	0.36	ug/L	78
11) Iodomethane	0.000		0	N.D.		
12) Acrolein	0.000		0	N.D.		
13) Methylene Chloride	3.893	84	8394	Below	Cal	97
14) Acetone	3.972	43	1955	1.38	ug/L	100
15) t-1,2-Dichloroethene	4.063	61	1038	0.33	ug/L	97
16) n-Hexane	0.000		0	N.D.		
17) Methyl-tert-butyl-ether	4.191	73	2657	0.44	ug/L	84
18) 1,1-Dichloroethane	4.708	63	1479	0.33	ug/L	88
19) Acrylonitrile	4.787	53	370	0.25	ug/L	97
20) Vinyl Acetate	0.000		0	N.D.		
21) c-1,2-Dichloroethene	5.274	61	1108	0.36	ug/L	78
22) 2,2-Dichloropropane	5.377	77	1108	0.47	ug/L	87
23) Bromochloromethane	5.475	130	403	0.25	ug/L	87
24) Chloroform	5.560	83	1568	0.34	ug/L	95
25) Carbon Tetrachloride	5.681	117	720	0.23	ug/L	89
26) Tetrahydrofuran	5.736	42	610	0.44	ug/L #	66
27) 1,1,1-Trichloroethane	5.754	97	1163	0.32	ug/L	97
29) 1,1-Dichloropropene	5.888	75	1140	0.39	ug/L	92
30) 2-Butanone (MEK)	5.888	43	1505	0.71	ug/L	52
31) Benzene	6.150	78	3575	0.39	ug/L	97
32) 1,2-Dichloroethane (EDC)	6.363	62	1131	0.31	ug/L	86
33) iso-Butyl Alcohol	6.405	43	1956	8.26	ug/L	96
35) Trichloroethene (TCE)	6.776	130	811	0.36	ug/L	80
36) Dibromomethane	7.233	93	487	0.28	ug/L	84
37) 1,2-Dichloropropane	7.342	63	797	0.32	ug/L	87
38) Bromodichloromethane	7.415	83	929	0.28	ug/L	96
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
41) c-1,3-Dichloropropene	8.121	75	953	0.36	ug/L	90
43) Toluene	8.383	91	3852	0.40	ug/L	98
44) Tetrachloroethene (PCE)	8.821	166	768	0.35	ug/L	84
45) 4-Methyl-2-Pentanone (...	8.833	43	2579	0.73	ug/L	96
46) t-1,3-Dichloropropene	8.875	75	692	0.58	ug/L	71
47) 1,1,2-Trichloroethane	9.033	97	712	0.31	ug/L	89
48) Dibromochloromethane	9.216	129	484	0.21	ug/L	96

MM 5/13/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051320.D
Acq On : 13 May 2019 6:27 pm
Operator : MM
Sample : 9E13041-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOC
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:02 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

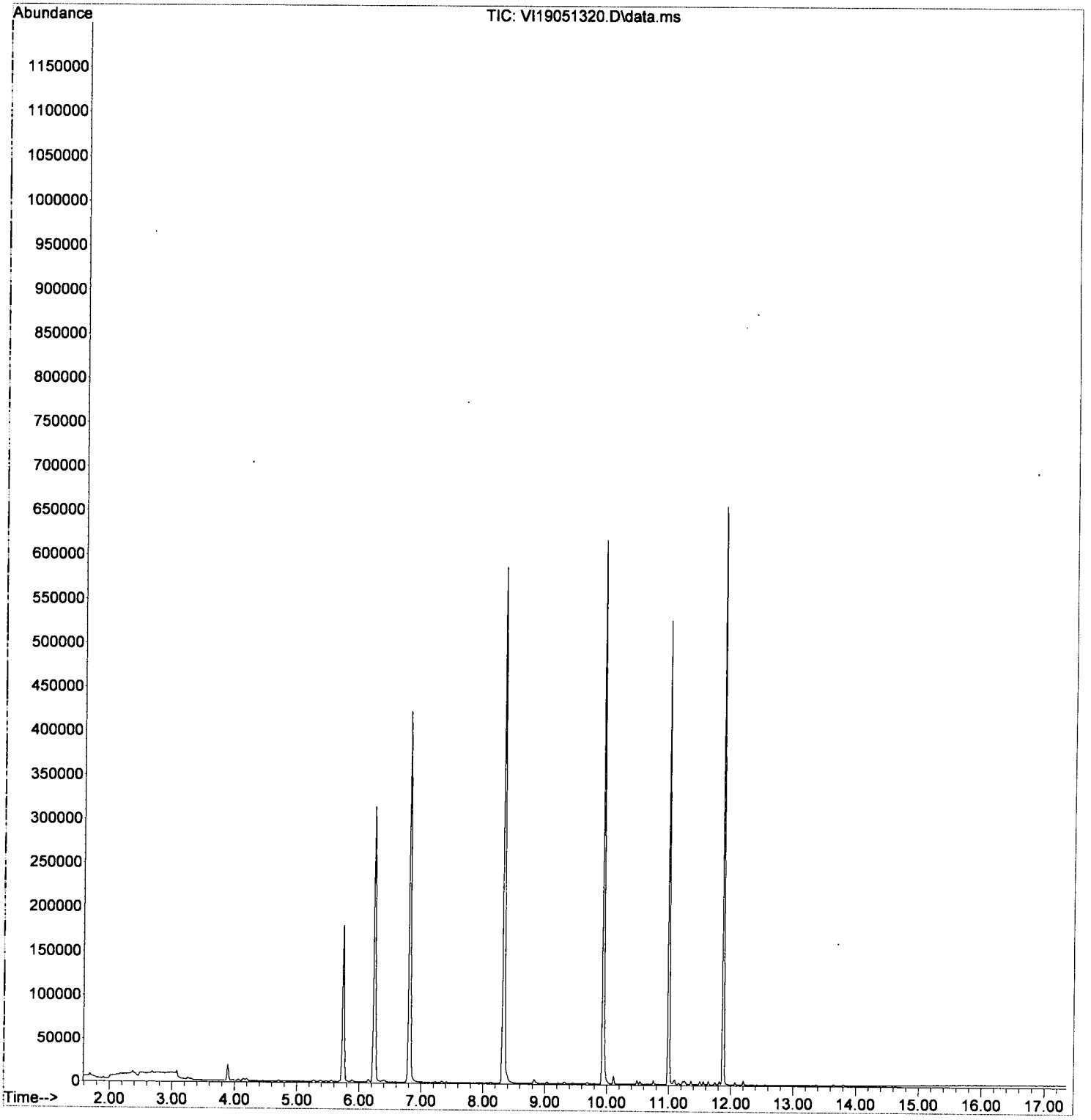
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.319	76	1391	0.39	ug/L		95
50) 1,2-Dibromoethane (EDB)	9.447	107	643	0.30	ug/L		91
51) 2-Hexanone	9.684	43	1574	0.60	ug/L		95
52) Chlorobenzene	9.952	112	2410	0.40	ug/L	#	69
53) Ethylbenzene	9.976	91	3901	0.40	ug/L		97
54) 1,1,1,2-Tetrachloroethane	10.007	131	506	0.25	ug/L	#	66
55) m,p-Xylenes (2)	10.110	91	5738	1.07	ug/L		98
56) o-Xylene	10.487	91	2869	0.59	ug/L		95
57) Styrene	10.536	104	1912	0.77	ug/L		90
58) Bromoform	10.560	173	224	0.13	ug/L	#	36
59) Isopropylbenzene	10.755	105	3205	0.75	ug/L		98
62) Bromobenzene	11.078	156	851	0.40	ug/L	#	75
63) n-Propylbenzene	11.096	91	3975	0.44	ug/L		96
64) 1,1,2,2-Tetrachloroethane	11.163	85	760	0.35	ug/L		89
65) 2-Chlorotoluene	11.230	126	773	0.44	ug/L		93
66) 1,3,5-Trimethylbenzene	11.248	105	2379	0.65	ug/L		94
67) 1,2,3-Trichloropropane	11.272	110	364	0.35	ug/L	#	77
68) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
69) 4-Chlorotoluene	11.357	91	2325	0.42	ug/L		89
70) tert-Butylbenzene	11.503	91	1388	0.66	ug/L		95
71) 1,2,4-Trimethylbenzene	11.558	105	2337	0.57	ug/L		95
72) sec-Butylbenzene	11.637	105	2951	0.71	ug/L		98
73) 4-Isopropyltoluene	11.747	119	2181	0.76	ug/L		92
74) 1,3-Dichlorobenzene	11.820	146	1583	0.44	ug/L		96
75) 1,4-Dichlorobenzene	11.881	146	1671	0.41	ug/L	#	51
76) n-Butylbenzene	12.069	91	1937	0.54	ug/L		97
77) 1,2-Dichlorobenzene	12.203	146	1381	0.39	ug/L		96
78) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
79) Hexachlorobutadiene	0.000		0	N.D.			
80) 1,2,4-Trichlorobenzene	13.365	180	580	0.95	ug/L		78
81) Naphthalene	13.651	128	1993	0.38	ug/L		81
82) 1,2,3-Trichlorobenzene	13.809	180	580	0.64	ug/L		80

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051320.D
Acq On : 13 May 2019 6:27 pm
Operator : MM
Sample : 9E13041-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOC
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:02 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:19:47 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.241	168	230252	50.00	ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	332700	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	147052	50.00	ug/L	0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.742	111	119010	41.77	ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	380852	46.79	ug/L	0.00
42) Toluene-d8 (S)	8.328	98	453698	51.80	ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	120544	52.80	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.691	85	2276	0.85	ug/L	97
3) Chloromethane	1.910	50	3093	0.99	ug/L	94
4) Vinyl Chloride	2.013	62	3117	1.03	ug/L	97
5) Bromomethane	2.378	96	2647	1.06	ug/L	92
6) Chloroethane	0.000		0	N.D. d		
7) Trichlorofluoromethane	2.688	101	3254	0.62	ug/L	95
8) 1,1-Dichloroethene	3.254	61	2780	0.85	ug/L	99
9) Carbon Disulfide	3.272	76	5510	1.01	ug/L	95
10) Freon 113	3.303	101	2104	0.97	ug/L	85
11) Iodomethane	0.000		0	N.D. d		
12) Acrolein	0.000		0	N.D.		
13) Methylene Chloride	3.893	84	9679	Below Cal		96
14) Acetone	3.972	43	3132	2.24	ug/L	90
15) t-1,2-Dichloroethene	4.063	61	2772	0.91	ug/L	96
16) n-Hexane	4.142	86	452	1.23	ug/L #	88
17) Methyl-tert-butyl-ether	4.203	73	6939	1.17	ug/L	90
18) 1,1-Dichloroethane	4.714	63	3947	0.88	ug/L	92
19) Acrylonitrile	4.781	53	1112	0.77	ug/L	88
20) Vinyl Acetate	0.000		0	N.D.		
21) c-1,2-Dichloroethene	5.274	61	3000	1.00	ug/L	94
22) 2,2-Dichloropropane	5.377	77	2765	1.19	ug/L	95
23) Bromochloromethane	5.468	130	1305	0.84	ug/L	92
24) Chloroform	5.554	83	4074	0.89	ug/L	95
25) Carbon Tetrachloride	5.694	117	2106	0.69	ug/L	95
26) Tetrahydrofuran	5.742	42	1387	1.02	ug/L	93
27) 1,1,1-Trichloroethane	5.767	97	2963	0.82	ug/L	96
29) 1,1-Dichloropropene	5.888	75	2926	1.01	ug/L	98
30) 2-Butanone (MEK)	5.894	43	3883	1.85	ug/L	92
31) Benzene	6.150	78	8968	0.99	ug/L	99
32) 1,2-Dichloroethane (EDC)	6.369	62	2961	0.82	ug/L	94
33) iso-Butyl Alcohol	6.405	43	5529	23.75	ug/L	94
35) Trichloroethene (TCE)	6.770	130	2367	1.06	ug/L	96
36) Dibromomethane	7.227	93	1355	0.79	ug/L	85
37) 1,2-Dichloropropane	7.342	63	2298	0.94	ug/L	91
38) Bromodichloromethane	7.409	83	2451	0.74	ug/L	96
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
41) c-1,3-Dichloropropene	8.121	75	2641	1.03	ug/L	93
43) Toluene	8.382	91	9750	1.03	ug/L	98
44) Tetrachloroethene (PCE)	8.820	166	2170	1.01	ug/L	91
45) 4-Methyl-2-Pentanone (...	8.833	43	6887	2.00	ug/L	96
46) t-1,3-Dichloropropene	8.869	75	1942	1.06	ug/L	97
47) 1,1,2-Trichloroethane	9.033	97	2192	0.98	ug/L	89
48) Dibromochloromethane	9.216	129	1394	0.61	ug/L	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:19:47 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	3735	1.06	ug/L		97
50) 1,2-Dibromoethane (EDB)	9.453	107	2036	0.96	ug/L		94
51) 2-Hexanone	9.684	43	4847	1.88	ug/L		90
52) Chlorobenzene	9.952	112	6088	1.02	ug/L		82
53) Ethylbenzene	9.976	91	10411m	1.09	ug/L		
54) 1,1,1,2-Tetrachloroethane	10.013	131	1569	0.79	ug/L		87
55) m,p-Xylenes (2)	10.110	91	14538	2.27	ug/L		99
56) o-Xylene	10.487	91	7608	1.27	ug/L		98
57) Styrene	10.536	104	4958	1.29	ug/L		93
58) Bromoform	10.560	173	823	0.49	ug/L		89
59) Isopropylbenzene	10.755	105	8722	1.39	ug/L		99
62) Bromobenzene	11.078	156	2175	1.02	ug/L	#	67
63) n-Propylbenzene	11.096	91	10156	1.12	ug/L		98
64) 1,1,2,2-Tetrachloroethane	11.157	85	2028	0.93	ug/L		90
65) 2-Chlorotoluene	11.230	126	1989	1.13	ug/L		95
66) 1,3,5-Trimethylbenzene	11.248	105	6397	1.28	ug/L		94
67) 1,2,3-Trichloropropane	11.272	110	1037	1.00	ug/L		91
68) t-1,4-Dichloro-2-butene	11.303	53	584	0.81	ug/L	#	56
69) 4-Chlorotoluene	11.357	91	6322	1.12	ug/L		89
70) tert-Butylbenzene	11.503	91	3993	1.41	ug/L		89
71) 1,2,4-Trimethylbenzene	11.558	105	6190	1.13	ug/L		98
72) sec-Butylbenzene	11.637	105	7997	1.36	ug/L		98
73) 4-Isopropyltoluene	11.747	119	6380	1.47	ug/L		96
74) 1,3-Dichlorobenzene	11.820	146	3828	1.06	ug/L		98
75) 1,4-Dichlorobenzene	11.881	146	4390	1.06	ug/L		82
76) n-Butylbenzene	12.063	91	5522	1.21	ug/L		91
77) 1,2-Dichlorobenzene	12.203	146	3765	1.07	ug/L		96
78) 1,2-Dibromo-3-Chloropr...	12.817	157	424	0.68	ug/L	#	49
79) Hexachlorobutadiene	13.328	223	406	0.92	ug/L		93
80) 1,2,4-Trichlorobenzene	13.365	180	1717	1.64	ug/L		98
81) Naphthalene	13.651	128	5137	0.96	ug/L		93
82) 1,2,3-Trichlorobenzene	13.809	180	1638	1.26	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:05 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.241	168	230252	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	332700	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	147052	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	119010	41.77	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.807	114	380852	46.79	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	453698	51.80	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	120544	52.80	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	2276	0.85	ug/L		97
3) Chloromethane	1.910	50	3093	0.99	ug/L		94
4) Vinyl Chloride	2.013	62	3117	1.03	ug/L		97
5) Bromomethane	2.378	96	2647	1.06	ug/L		92
6) Chloroethane	2.518	64	1969	1.34	ug/L		88
7) Trichlorofluoromethane	2.688	101	3254	0.62	ug/L		95
8) 1,1-Dichloroethene	3.254	61	2780	0.85	ug/L		99
9) Carbon Disulfide	3.272	76	5510	1.01	ug/L		95
10) Freon 113	3.303	101	2104	0.97	ug/L		85
11) Iodomethane	3.406	142	130	6.00	ug/L	#	47
12) Acrolein	0.000		0	N.D.			
13) Methylene Chloride	3.893	84	9679	Below Cal			96
14) Acetone	3.972	43	3132	2.24	ug/L		90
15) t-1,2-Dichloroethene	4.063	61	2772	0.91	ug/L		96
16) n-Hexane	4.142	86	452	1.23	ug/L	#	88
17) Methyl-tert-butyl-ether	4.203	73	6939	1.17	ug/L		90
18) 1,1-Dichloroethane	4.714	63	3947	0.88	ug/L		92
19) Acrylonitrile	4.781	53	1112	0.77	ug/L		88
20) Vinyl Acetate	0.000		0	N.D.			
21) c-1,2-Dichloroethene	5.274	61	3000	1.00	ug/L		94
22) 2,2-Dichloropropane	5.377	77	2765	1.19	ug/L		95
23) Bromochloromethane	5.468	130	1305	0.84	ug/L		92
24) Chloroform	5.554	83	4074	0.89	ug/L		95
25) Carbon Tetrachloride	5.694	117	2106	0.69	ug/L		95
26) Tetrahydrofuran	5.742	42	1387	1.02	ug/L		93
27) 1,1,1-Trichloroethane	5.767	97	2963	0.82	ug/L		96
29) 1,1-Dichloropropene	5.888	75	2926	1.01	ug/L		98
30) 2-Butanone (MEK)	5.894	43	3883	1.85	ug/L		92
31) Benzene	6.150	78	8968	0.99	ug/L		99
32) 1,2-Dichloroethane (EDC)	6.369	62	2961	0.82	ug/L		94
33) iso-Butyl Alcohol	6.405	43	5529	23.75	ug/L		94
35) Trichloroethene (TCE)	6.770	130	2367	1.06	ug/L		96
36) Dibromomethane	7.227	93	1355	0.79	ug/L		85
37) 1,2-Dichloropropane	7.342	63	2298	0.94	ug/L		91
38) Bromodichloromethane	7.409	83	2451	0.74	ug/L		96
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.			
41) c-1,3-Dichloropropene	8.121	75	2641	1.03	ug/L		93
43) Toluene	8.382	91	9750	1.03	ug/L		98
44) Tetrachloroethene (PCE)	8.820	166	2170	1.01	ug/L		91
45) 4-Methyl-2-Pentanone (...	8.833	43	6887	2.00	ug/L		96
46) t-1,3-Dichloropropene	8.869	75	1942	1.06	ug/L		97
47) 1,1,2-Trichloroethane	9.033	97	2192	0.98	ug/L		89
48) Dibromochloromethane	9.216	129	1394	0.61	ug/L		83

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:05 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

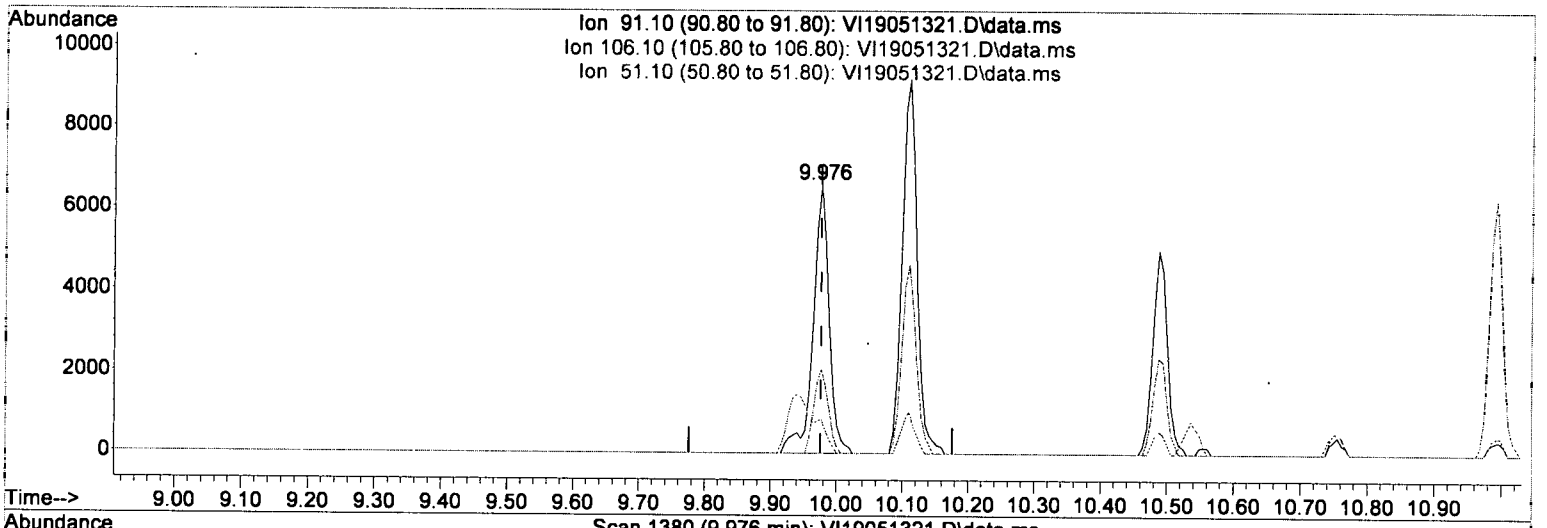
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	3735	1.06	ug/L		97
50) 1,2-Dibromoethane (EDB)	9.453	107	2036	0.96	ug/L		94
51) 2-Hexanone	9.684	43	4847	1.88	ug/L		90
52) Chlorobenzene	9.952	112	6088	1.02	ug/L		82
53) Ethylbenzene	9.976	91	11114	1.17	ug/L		98
54) 1,1,1,2-Tetrachloroethane	10.013	131	1569	0.79	ug/L		87
55) m,p-Xylenes (2)	10.110	91	14538	2.27	ug/L		99
56) o-Xylene	10.487	91	7608	1.27	ug/L		98
57) Styrene	10.536	104	4958	1.29	ug/L		93
58) Bromoform	10.560	173	823	0.49	ug/L		89
59) Isopropylbenzene	10.755	105	8722	1.39	ug/L		99
62) Bromobenzene	11.078	156	2175	1.02	ug/L	#	67
63) n-Propylbenzene	11.096	91	10156	1.12	ug/L		98
64) 1,1,2,2-Tetrachloroethane	11.157	85	2028	0.93	ug/L		90
65) 2-Chlorotoluene	11.230	126	1989	1.13	ug/L		95
66) 1,3,5-Trimethylbenzene	11.248	105	6397	1.28	ug/L		94
67) 1,2,3-Trichloropropane	11.272	110	1037	1.00	ug/L		91
68) t-1,4-Dichloro-2-butene	11.303	53	584	0.81	ug/L	#	56
69) 4-Chlorotoluene	11.357	91	6322	1.12	ug/L		89
70) tert-Butylbenzene	11.503	91	3993	1.41	ug/L		89
71) 1,2,4-Trimethylbenzene	11.558	105	6190	1.18	ug/L		98
72) sec-Butylbenzene	11.637	105	7997	1.36	ug/L		98
73) 4-Isopropyltoluene	11.747	119	6380	1.47	ug/L		96
74) 1,3-Dichlorobenzene	11.820	146	3828	1.06	ug/L		98
75) 1,4-Dichlorobenzene	11.881	146	4390	1.06	ug/L		82
76) n-Butylbenzene	12.063	91	5522	1.21	ug/L		91
77) 1,2-Dichlorobenzene	12.203	146	3765	1.07	ug/L		96
78) 1,2-Dibromo-3-Chloropr...	12.817	157	424	0.68	ug/L	#	49
79) Hexachlorobutadiene	13.328	223	406	0.92	ug/L		93
80) 1,2,4-Trichlorobenzene	13.365	180	1717	1.64	ug/L		98
81) Naphthalene	13.651	128	5137	0.96	ug/L		93
82) 1,2,3-Trichlorobenzene	13.809	180	1638	1.26	ug/L		96

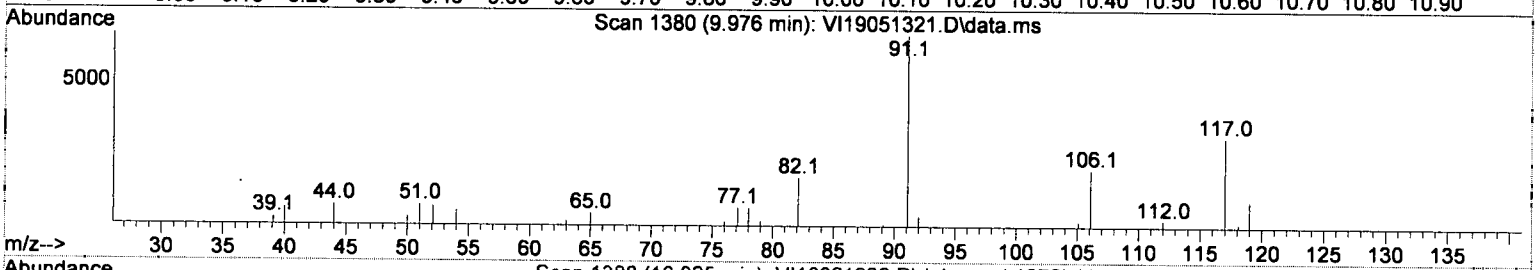
(#) = qualifier out of range (m) = manual integration (+) = signals summed

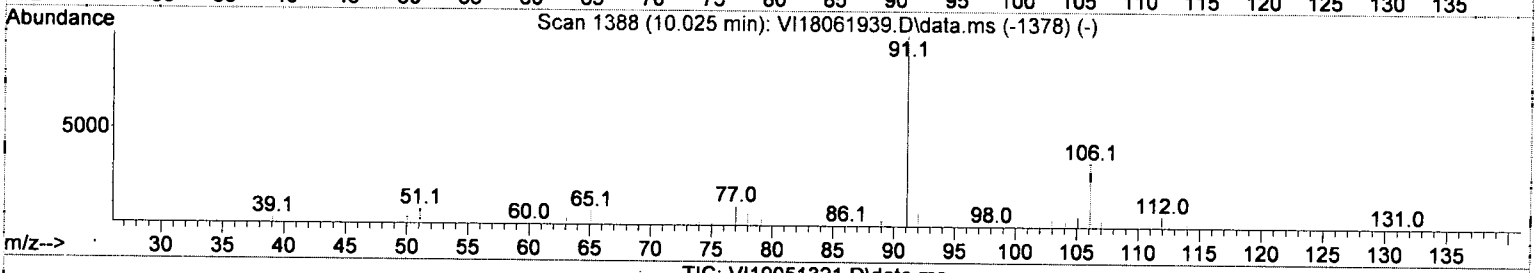
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:05 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration







TIC: VI19051321.D\data.ms

(53) Ethylbenzene (C)

9.976min (0.000) 1.17 ug/L

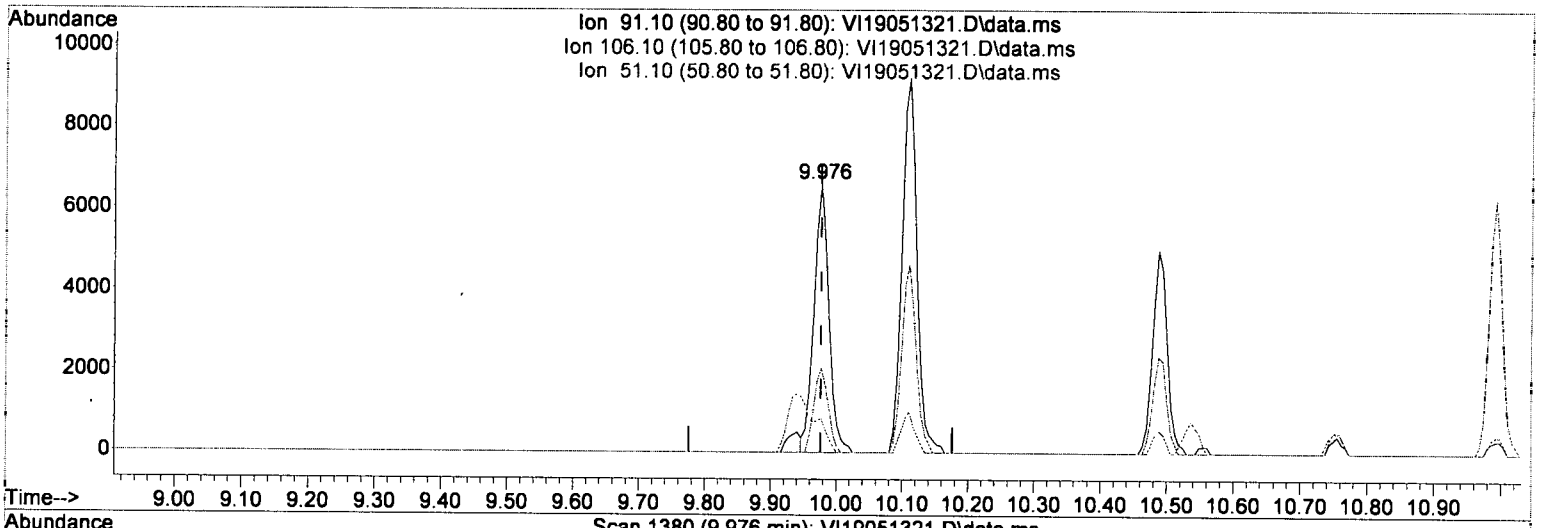
response 11114

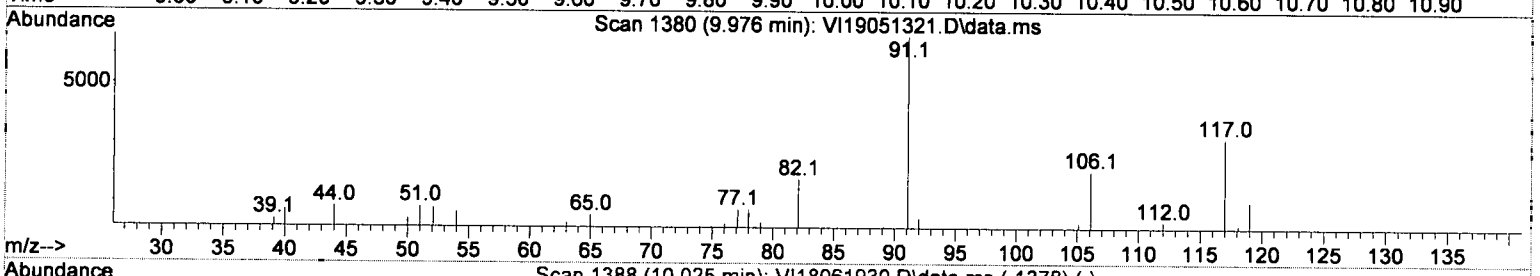
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.49
51.10	10.40	12.68
0.00	0.00	0.00

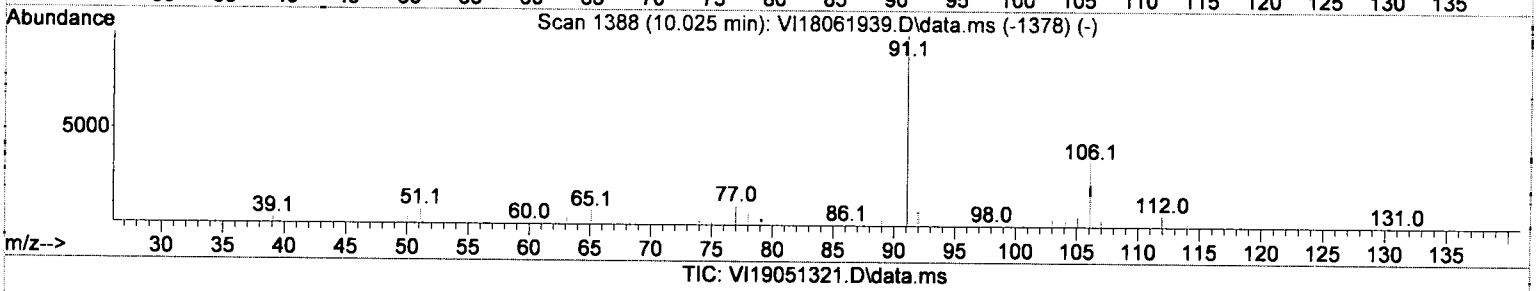
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:05 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration







TIC: VI19051321.D\data.ms

(53) Ethylbenzene (C)

9.976min (0.000) 1.09 ug/L m

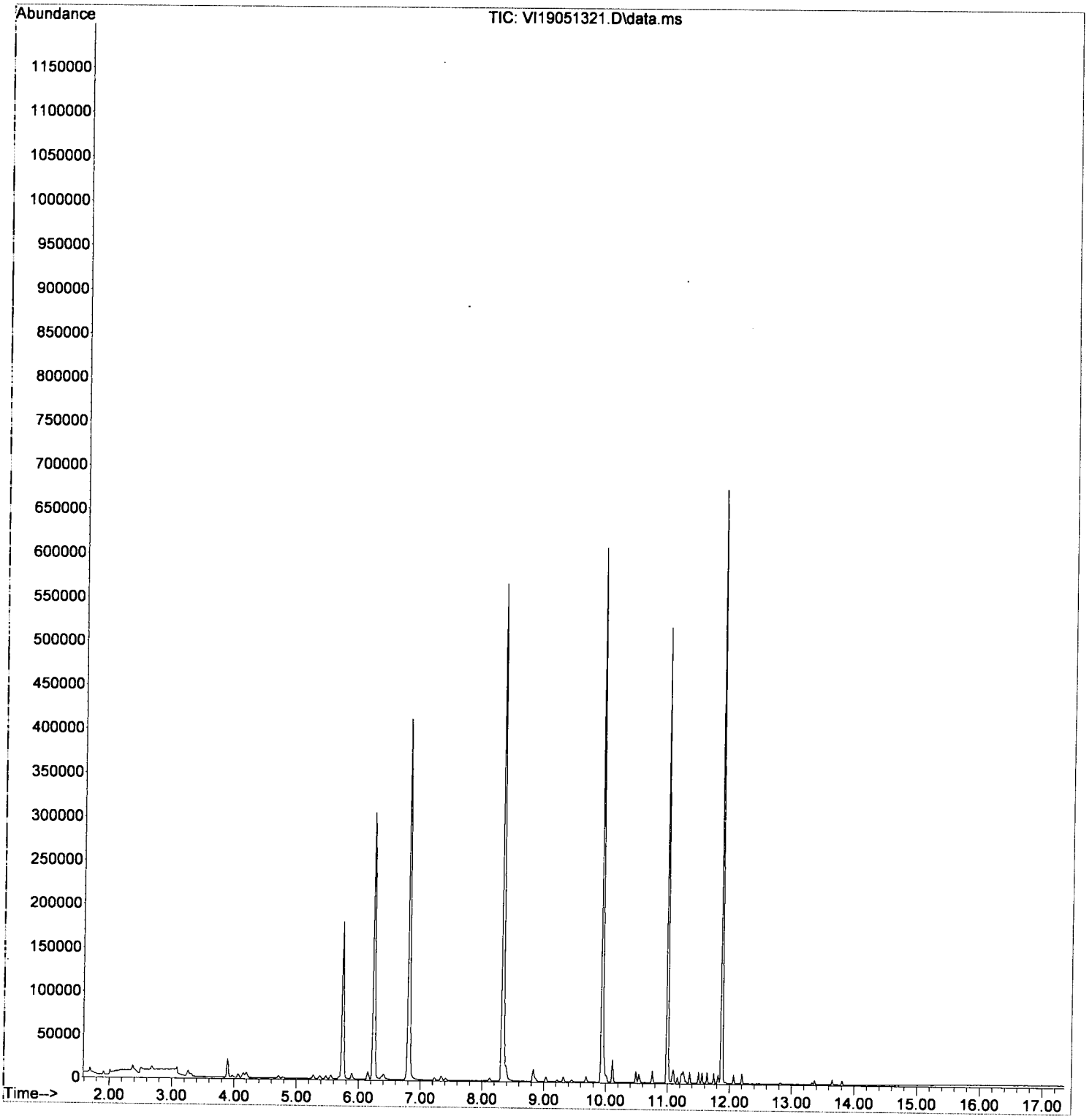
response 10411

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.49
51.10	10.40	12.68
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051321.D
Acq On : 13 May 2019 6:54 pm
Operator : MM
Sample : 9E13041-CAL4
Misc : 1X 5mL 1/2PPB VOC
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:05 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051322.D
Acq On : 13 May 2019 7:21 pm
Operator : MM
Sample : 9E13041-CAL5
Misc : 1X 5mL 2/4PPB VOC
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:21:16 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.247	168	229864	50.00	ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	330884	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	142592	50.00	ug/L	0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.742	111	119098	41.87	ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	380962	46.88	ug/L	0.00
42) Toluene-d8 (S)	8.328	98	452395	51.93	ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	117934	53.27	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.697	85	4991	1.87	ug/L	99
3) Chloromethane	1.916	50	5586	1.79	ug/L	98
4) Vinyl Chloride	2.019	62	6627	2.19	ug/L	97
5) Bromomethane	2.378	96	4405	1.76	ug/L	94
6) Chloroethane	2.530	64	3640	2.49	ug/L	88
7) Trichlorofluoromethane	2.688	101	6222	1.19	ug/L	97
8) 1,1-Dichloroethene	3.254	61	5477	1.67	ug/L	99
9) Carbon Disulfide	3.272	76	10569	1.93	ug/L	99
10) Freon 113	3.309	101	4294	1.98	ug/L	91
11) Iodomethane	0.000		0	N.D. d		
12) Acrolein	0.000		0	N.D.		
13) Methylene Chloride	3.899	84	11818	Below Cal		94
14) Acetone	3.972	43	5566	3.99	ug/L	96
15) t-1,2-Dichloroethene	4.069	61	5463	1.79	ug/L	98
16) n-Hexane	4.148	86	861	2.85	ug/L	98
17) Methyl-tert-butyl-ether	4.203	73	13492	2.27	ug/L	89
18) 1,1-Dichloroethane	4.714	63	7416	1.66	ug/L	97
19) Acrylonitrile	4.781	53	2509	1.74	ug/L	98
20) Vinyl Acetate	0.000		0	N.D.		
21) c-1,2-Dichloroethene	5.274	61	5971	2.00	ug/L	92
22) 2,2-Dichloropropane	5.383	77	5434	2.34	ug/L	98
23) Bromochloromethane	5.475	130	2697	1.73	ug/L	92
24) Chloroform	5.560	83	8040	1.75	ug/L	99
25) Carbon Tetrachloride	5.687	117	4244	1.40	ug/L	97
26) Tetrahydrofuran	5.736	42	2814	2.08	ug/L	86
27) 1,1,1-Trichloroethane	5.760	97	5809	1.61	ug/L	94
29) 1,1-Dichloropropene	5.894	75	5918	2.05	ug/L	97
30) 2-Butanone (MEK)	5.894	43	7674	3.67	ug/L	93
31) Benzene	6.156	78	17757	1.96	ug/L	97
32) 1,2-Dichloroethane (EDC)	6.375	62	6131	1.71	ug/L	94
33) iso-Butyl Alcohol	6.399	43	10817	46.55	ug/L	91
35) Trichloroethene (TCE)	6.770	130	4454	1.99	ug/L	90
36) Dibromomethane	7.233	93	2884	1.68	ug/L	90
37) 1,2-Dichloropropane	7.342	63	4678	1.91	ug/L	90
38) Bromodichloromethane	7.409	83	4912	1.49	ug/L	97
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
41) c-1,3-Dichloropropene	8.121	75	5212	2.04	ug/L	90
43) Toluene	8.389	91	18509	1.97	ug/L	96
44) Tetrachloroethene (PCE)	8.827	166	4184	1.96	ug/L	85
45) 4-Methyl-2-Pentanone (...	8.833	43	13047	3.81	ug/L	97
46) t-1,3-Dichloropropene	8.863	75	4168	1.91	ug/L	94
47) 1,1,2-Trichloroethane	9.033	97	4144	1.87	ug/L	96
48) Dibromochloromethane	9.216	129	2906	1.28	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051322.D
Acq On : 13 May 2019 7:21 pm
Operator : MM
Sample : 9E13041-CAL5
Misc : 1X 5mL 2/4PPB VOC
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:21:16 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	7255	2.07	ug/L		96
50) 1,2-Dibromoethane (EDB)	9.453	107	3947	1.86	ug/L		94
51) 2-Hexanone	9.678	43	8880	3.46	ug/L		95
52) Chlorobenzene	9.952	112	11755	1.98	ug/L		90
53) Ethylbenzene	9.976	91	19952m	2.11	ug/L		
54) 1,1,1,2-Tetrachloroethane	10.013	131	3181	1.61	ug/L		89
55) m,p-Xylenes (2)	10.110	91	28674	4.17	ug/L		99
56) o-Xylene	10.487	91	14280	2.22	ug/L		97
57) Styrene	10.536	104	10047	2.17	ug/L		94
58) Bromoform	10.560	173	1735	1.04	ug/L		87
59) Isopropylbenzene	10.755	105	16568	2.29	ug/L		99
62) Bromobenzene	11.078	156	4353	2.11	ug/L	#	75
63) n-Propylbenzene	11.096	91	19757	2.25	ug/L		97
64) 1,1,2,2-Tetrachloroethane	11.157	85	3977	1.87	ug/L		90
65) 2-Chlorotoluene	11.224	126	4118	2.42	ug/L		90
66) 1,3,5-Trimethylbenzene	11.248	105	12545	2.31	ug/L		96
67) 1,2,3-Trichloropropane	11.272	110	2081	2.07	ug/L		84
68) t-1,4-Dichloro-2-butene	11.303	53	1150	1.64	ug/L	#	58
69) 4-Chlorotoluene	11.357	91	12121	2.22	ug/L		95
70) tert-Butylbenzene	11.503	91	7437	2.47	ug/L		94
71) 1,2,4-Trimethylbenzene	11.558	105	12337	2.22	ug/L		92
72) sec-Butylbenzene	11.637	105	15887	2.46	ug/L		99
73) 4-Isopropyltoluene	11.747	119	11752	2.43	ug/L		98
74) 1,3-Dichlorobenzene	11.820	146	7669	2.18	ug/L		96
75) 1,4-Dichlorobenzene	11.887	146	8094	2.02	ug/L		96
76) n-Butylbenzene	12.063	91	9743	2.06	ug/L		96
77) 1,2-Dichlorobenzene	12.203	146	7358	2.15	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.817	157	829	1.37	ug/L	#	46
79) Hexachlorobutadiene	13.328	223	832	1.95	ug/L		79
80) 1,2,4-Trichlorobenzene	13.371	180	3509	2.80	ug/L		96
81) Naphthalene	13.651	128	10440	2.01	ug/L		96
82) 1,2,3-Trichlorobenzene	13.809	180	3348	2.32	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051322.D
Acq On : 13 May 2019 7:21 pm
Operator : MM
Sample : 9E13041-CAL5
Misc : 1X 5mL 2/4PPB VOC
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:08 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	229864	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	330884	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	142592	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	119098	41.87	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.807	114	380962	46.88	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	452395	51.93	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	117934	53.27	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.697	85	4991	1.87	ug/L		99
3) Chloromethane	1.916	50	5586	1.79	ug/L		98
4) Vinyl Chloride	2.019	62	6627	2.19	ug/L		97
5) Bromomethane	2.378	96	4405	1.76	ug/L		94
6) Chloroethane	2.530	64	3640	2.49	ug/L		88
7) Trichlorofluoromethane	2.688	101	6222	1.19	ug/L		97
8) 1,1-Dichloroethene	3.254	61	5477	1.67	ug/L		99
9) Carbon Disulfide	3.272	76	10569	1.93	ug/L		99
10) Freon 113	3.309	101	4294	1.98	ug/L		91
11) Iodomethane	3.412	142	376	6.20	ug/L	#	47
12) Acrolein	0.000		0	N.D.			
13) Methylene Chloride	3.899	84	11818	Below Cal			94
14) Acetone	3.972	43	5566	3.99	ug/L		96
15) t-1,2-Dichloroethene	4.069	61	5463	1.79	ug/L		98
16) n-Hexane	4.148	86	861	2.35	ug/L		98
17) Methyl-tert-butyl-ether	4.203	73	13492	2.27	ug/L		89
18) 1,1-Dichloroethane	4.714	63	7416	1.66	ug/L		97
19) Acrylonitrile	4.781	53	2509	1.74	ug/L		98
20) Vinyl Acetate	0.000		0	N.D.			
21) c-1,2-Dichloroethene	5.274	61	5971	2.00	ug/L		92
22) 2,2-Dichloropropane	5.383	77	5434	2.34	ug/L		98
23) Bromochloromethane	5.475	130	2697	1.73	ug/L		92
24) Chloroform	5.560	83	8040	1.75	ug/L		99
25) Carbon Tetrachloride	5.687	117	4244	1.40	ug/L		97
26) Tetrahydrofuran	5.736	42	2814	2.08	ug/L		86
27) 1,1,1-Trichloroethane	5.760	97	5809	1.61	ug/L		94
29) 1,1-Dichloropropene	5.894	75	5918	2.05	ug/L		97
30) 2-Butanone (MEK)	5.894	43	7674	3.67	ug/L		93
31) Benzene	6.156	78	17757	1.96	ug/L		97
32) 1,2-Dichloroethane (EDC)	6.375	62	6131	1.71	ug/L		94
33) iso-Butyl Alcohol	6.399	43	10817	46.55	ug/L		91
35) Trichloroethene (TCE)	6.770	130	4454	1.99	ug/L		90
36) Dibromomethane	7.233	93	2884	1.68	ug/L		90
37) 1,2-Dichloropropane	7.342	63	4678	1.91	ug/L		90
38) Bromodichloromethane	7.409	83	4912	1.49	ug/L		97
40) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.			
41) c-1,3-Dichloropropene	8.121	75	5212	2.04	ug/L		90
43) Toluene	8.389	91	18509	1.97	ug/L		96
44) Tetrachloroethene (PCE)	8.827	166	4184	1.96	ug/L		85
45) 4-Methyl-2-Pentanone (...	8.833	43	13047	3.81	ug/L		97
46) t-1,3-Dichloropropene	8.863	75	4168	1.91	ug/L		94
47) 1,1,2-Trichloroethane	9.033	97	4144	1.87	ug/L		96
48) Dibromochloromethane	9.216	129	2906	1.28	ug/L		92

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051322.D
Acq On : 13 May 2019 7:21 pm
Operator : MM
Sample : 9E13041-CAL5
Misc : 1X 5mL 2/4PPB VOC
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:08 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

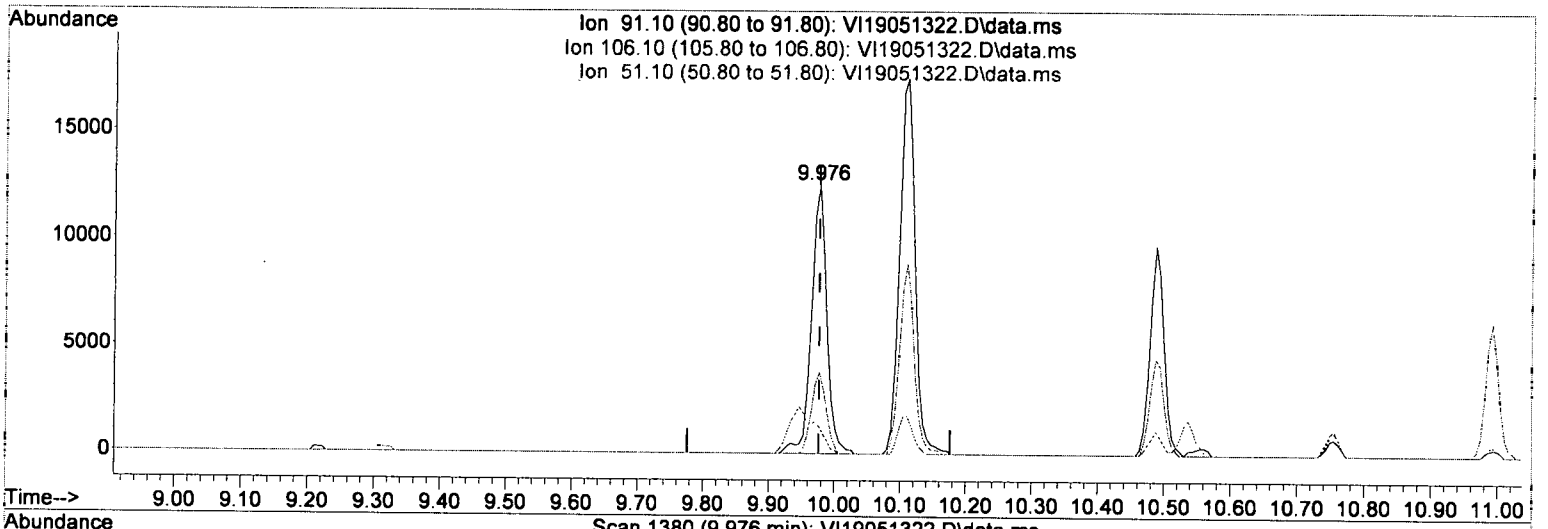
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49)	1,3-Dichloropropane	9.313	76	7255	2.07	ug/L		96
50)	1,2-Dibromoethane (EDB)	9.453	107	3947	1.86	ug/L		94
51)	2-Hexanone	9.678	43	8880	3.46	ug/L		95
52)	Chlorobenzene	9.952	112	11755	1.98	ug/L		90
53)	Ethylbenzene	9.976	91	20455	2.16	ug/L		99
54)	1,1,1,2-Tetrachloroethane	10.013	131	3181	1.61	ug/L		89
55)	m,p-Xylenes (2)	10.110	91	28674	4.17	ug/L		99
56)	o-Xylene	10.487	91	14280	2.22	ug/L		97
57)	Styrene	10.536	104	10047	2.17	ug/L		94
58)	Bromoform	10.560	173	1735	1.04	ug/L		87
59)	Isopropylbenzene	10.755	105	16568	2.29	ug/L		99
62)	Bromobenzene	11.078	156	4353	2.11	ug/L	#	75
63)	n-Propylbenzene	11.096	91	19757	2.25	ug/L		97
64)	1,1,2,2-Tetrachloroethane	11.157	85	3977	1.87	ug/L		90
65)	2-Chlorotoluene	11.224	126	4118	2.42	ug/L		90
66)	1,3,5-Trimethylbenzene	11.248	105	12545	2.31	ug/L		96
67)	1,2,3-Trichloropropane	11.272	110	2081	2.07	ug/L		84
68)	t-1,4-Dichloro-2-butene	11.303	53	1150	1.64	ug/L	#	58
69)	4-Chlorotoluene	11.357	91	12121	2.22	ug/L		95
70)	tert-Butylbenzene	11.503	91	7437	2.47	ug/L		94
71)	1,2,4-Trimethylbenzene	11.558	105	12337	2.22	ug/L		92
72)	sec-Butylbenzene	11.637	105	15887	2.46	ug/L		99
73)	4-Isopropyltoluene	11.747	119	11752	2.43	ug/L		98
74)	1,3-Dichlorobenzene	11.820	146	7669	2.18	ug/L		96
75)	1,4-Dichlorobenzene	11.887	146	8094	2.02	ug/L		96
76)	n-Butylbenzene	12.063	91	9743	2.06	ug/L		96
77)	1,2-Dichlorobenzene	12.203	146	7358	2.15	ug/L		98
78)	1,2-Dibromo-3-Chloropr...	12.817	157	829	1.37	ug/L	#	46
79)	Hexachlorobutadiene	13.328	223	832	1.95	ug/L		79
80)	1,2,4-Trichlorobenzene	13.371	180	3509	2.80	ug/L		96
81)	Naphthalene	13.651	128	10440	2.01	ug/L		96
82)	1,2,3-Trichlorobenzene	13.809	180	3348	2.32	ug/L		96

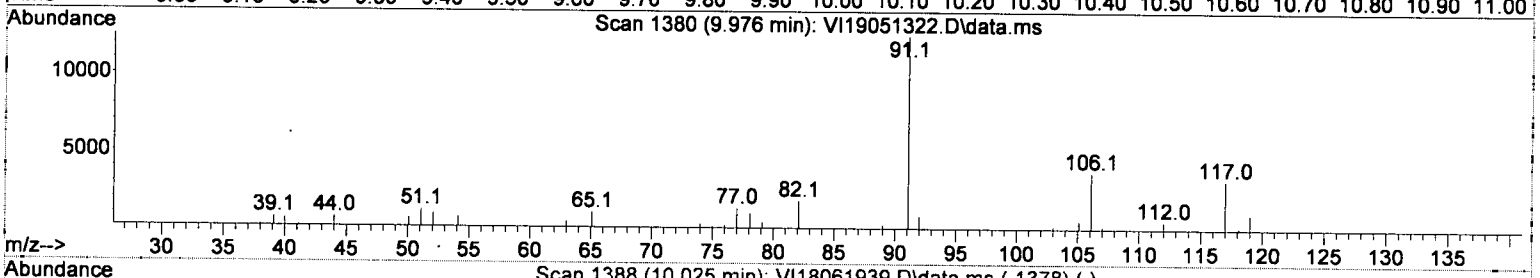
(#) = qualifier out of range (m) = manual integration (+) = signals summed

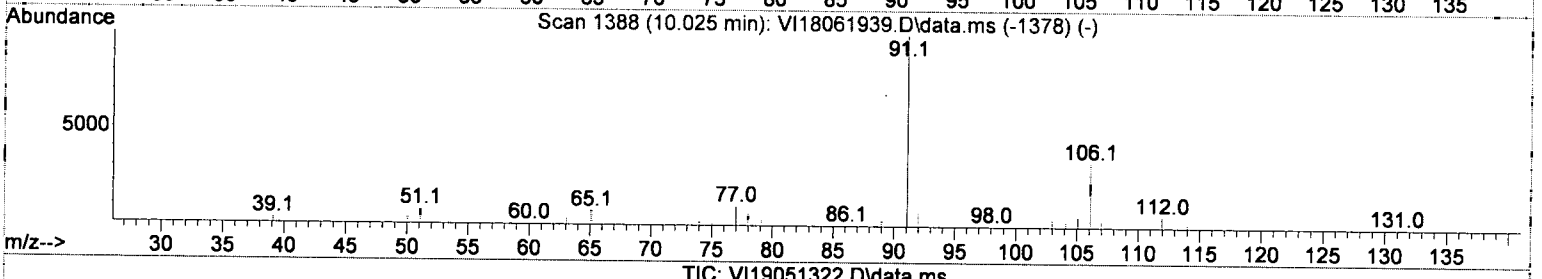
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051322.D
Acq On : 13 May 2019 7:21 pm
Operator : MM
Sample : 9E13041-CAL5
Misc : 1X 5mL 2/4PPB VOC
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:08 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration







TIC: VI19051322.D\data.ms

(53) Ethylbenzene (C)

9.976min (0.000) 2.16 ug/L

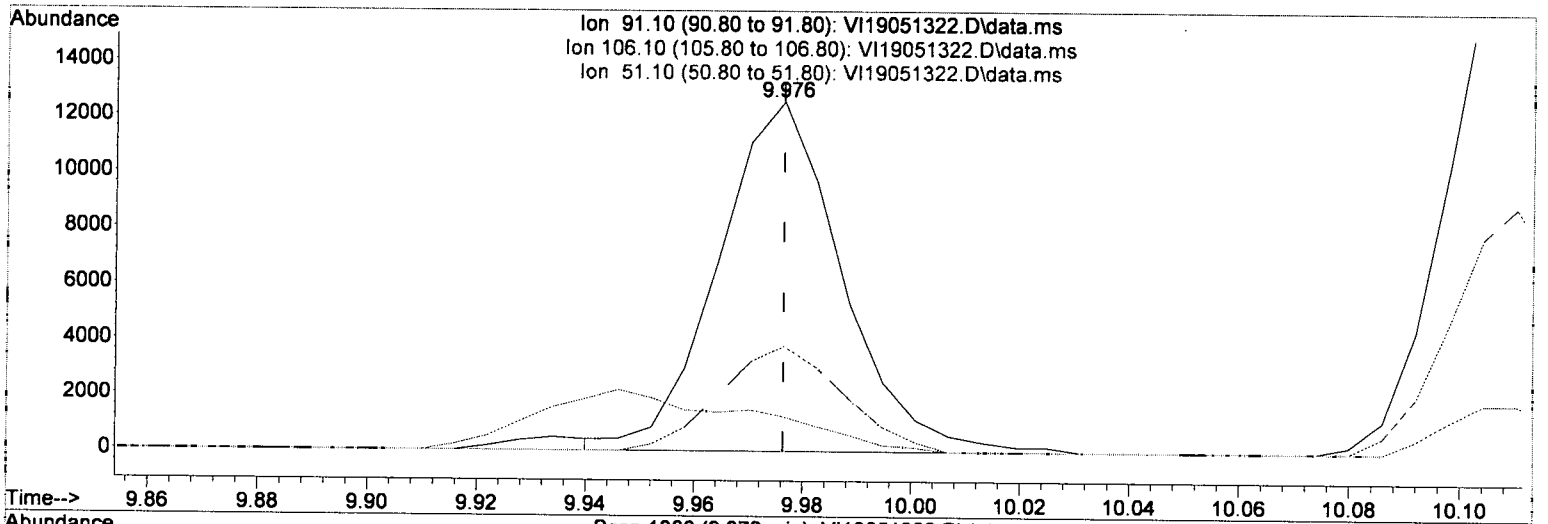
response 20455

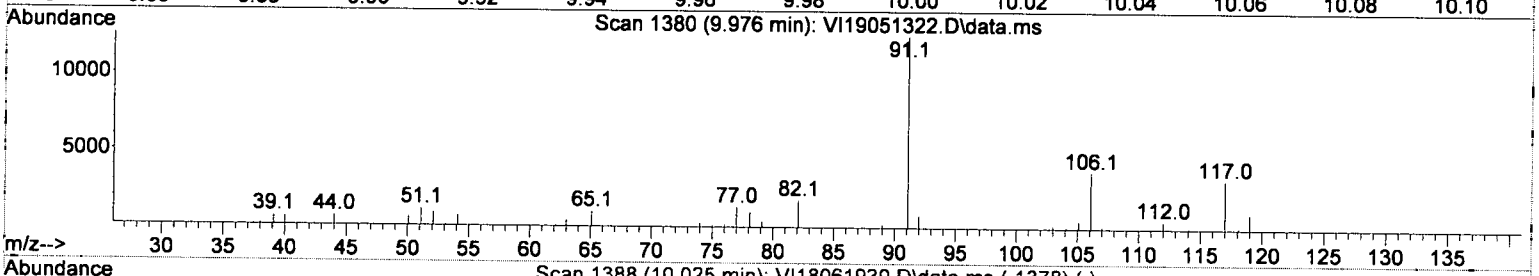
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	30.18
51.10	10.40	9.93
0.00	0.00	0.00

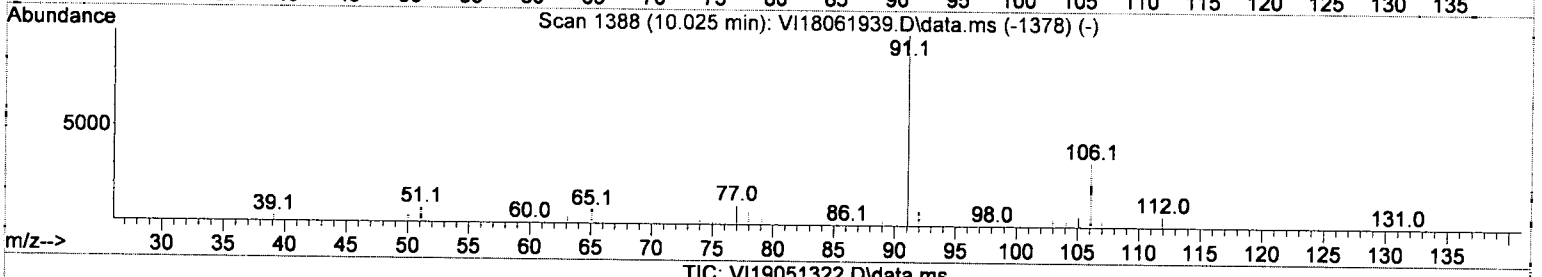
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051322.D
Acq On : 13 May 2019 7:21 pm
Operator : MM
Sample : 9E13041-CAL5
Misc : 1X 5mL 2/4PPB VOC
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:08 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration







TIC: VI19051322.D\data.ms

(53) Ethylbenzene (C)

9.976min (0.000) 2.11 ug/L m

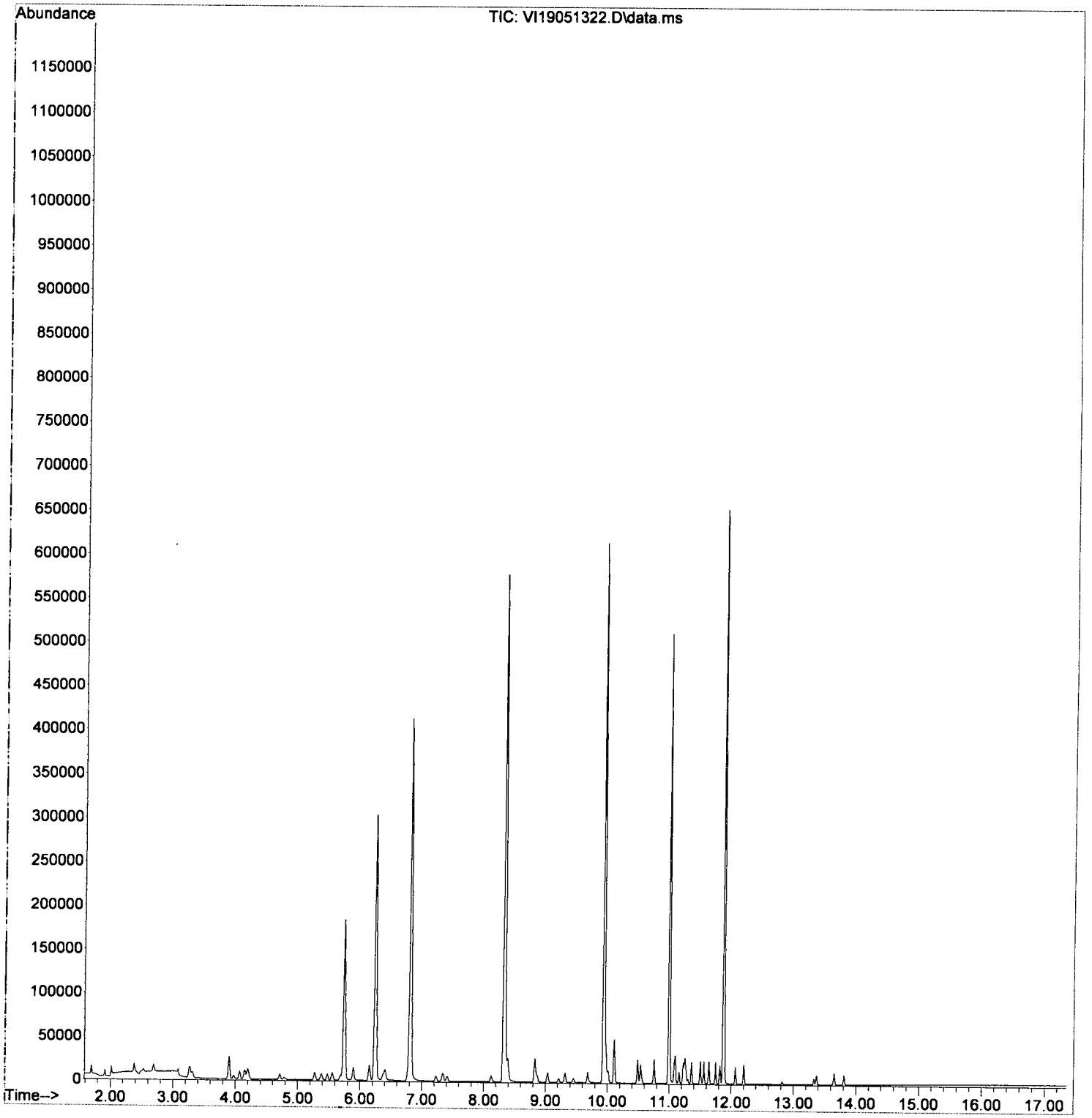
response 19952

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	30.18
51.10	10.40	9.93
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051322.D
Acq On : 13 May 2019 7:21 pm
Operator : MM
Sample : 9E13041-CAL5
Misc : 1X 5mL 2/4PPB VOC
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:08 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051323.D
Acq On : 13 May 2019 7:48 pm
Operator : MM
Sample : 9E13041-CAL6
Misc : 1X 5mL 5/10PPB VOC
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:11 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	234867	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	338675	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	151207	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	120550	41.48	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.813	114	386851	46.59	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	461181	51.72	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.993	174	123359	52.54	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.697	85	12494	4.57	ug/L		98
3) Chloromethane	1.916	50	14055	4.41	ug/L		95
4) Vinyl Chloride	2.019	62	16740	5.41	ug/L		93
5) Bromomethane	2.384	96	10639	4.17	ug/L		99
6) Chloroethane	2.530	64	7556	5.05	ug/L		86
7) Trichlorofluoromethane	2.688	101	16143	3.02	ug/L		99
8) 1,1-Dichloroethene	3.260	61	13939	4.17	ug/L		98
9) Carbon Disulfide	3.273	76	27026	4.84	ug/L		99
10) Freon 113	3.315	101	10335	4.65	ug/L		98
11) Iodomethane	3.412	142	1189	6.82	ug/L	#	68
12) Acrolein	0.000		0	N.D.			
13) Methylene Chloride	3.899	84	17722	Below Cal			93
14) Acetone	3.972	43	12918	9.07	ug/L		95
15) t-1,2-Dichloroethene	4.069	61	13936	4.47	ug/L		96
16) n-Hexane	4.149	86	2278	6.08	ug/L		95
17) Methyl-tert-butyl-ether	4.197	73	35574	5.86	ug/L		90
18) 1,1-Dichloroethane	4.714	63	19524	4.28	ug/L		93
19) Acrylonitrile	4.781	53	6917	4.69	ug/L		98
20) Vinyl Acetate	0.000		0	N.D.			
21) c-1,2-Dichloroethene	5.274	61	15449	5.06	ug/L		97
22) 2,2-Dichloropropane	5.384	77	14125	5.95	ug/L		98
23) Bromochloromethane	5.475	130	7470	4.69	ug/L		87
24) Chloroform	5.554	83	19975	4.26	ug/L		98
25) Carbon Tetrachloride	5.694	117	11440	3.69	ug/L		93
26) Tetrahydrofuran	5.736	42	6880	4.97	ug/L		91
27) 1,1,1-Trichloroethane	5.767	97	15422	4.18	ug/L		98
29) 1,1-Dichloropropene	5.895	75	15281	5.17	ug/L		94
30) 2-Butanone (MEK)	5.888	43	19892	9.31	ug/L		97
31) Benzene	6.150	78	45883	4.96	ug/L		97
32) 1,2-Dichloroethane (EDC)	6.369	62	16098	4.39	ug/L		96
33) iso-Butyl Alcohol	6.406	43	30097	126.75	ug/L		95
35) Trichloroethene (TCE)	6.771	130	11665	5.10	ug/L		94
36) Dibromomethane	7.227	93	7741	4.41	ug/L		91
37) 1,2-Dichloropropane	7.342	63	12167	4.86	ug/L		92
38) Bromodichloromethane	7.409	83	13110	3.89	ug/L		92
40) 2-Chloroethyl Vinyl Ether	~~7.951~~	~~63~~	~~115~~	1.91	ug/L		100
41) c-1,3-Dichloropropene	8.121	75	14338	5.49	ug/L		91
43) Toluene	8.389	91	48457	5.05	ug/L		99
44) Tetrachloroethene (PCE)	8.821	166	11044	5.05	ug/L		85
45) 4-Methyl-2-Pentanone (...	8.827	43	35965	10.25	ug/L		92
46) t-1,3-Dichloropropene	8.863	75	12117	4.80	ug/L		93
47) 1,1,2-Trichloroethane	9.034	97	11278	4.96	ug/L		97
48) Dibromochloromethane	9.216	129	8724	3.75	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051323.D
Acq On : 13 May 2019 7:48 pm
Operator : MM
Sample : 9E13041-CAL6
Misc : 1X 5mL 5/10PPB VOC
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:11 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

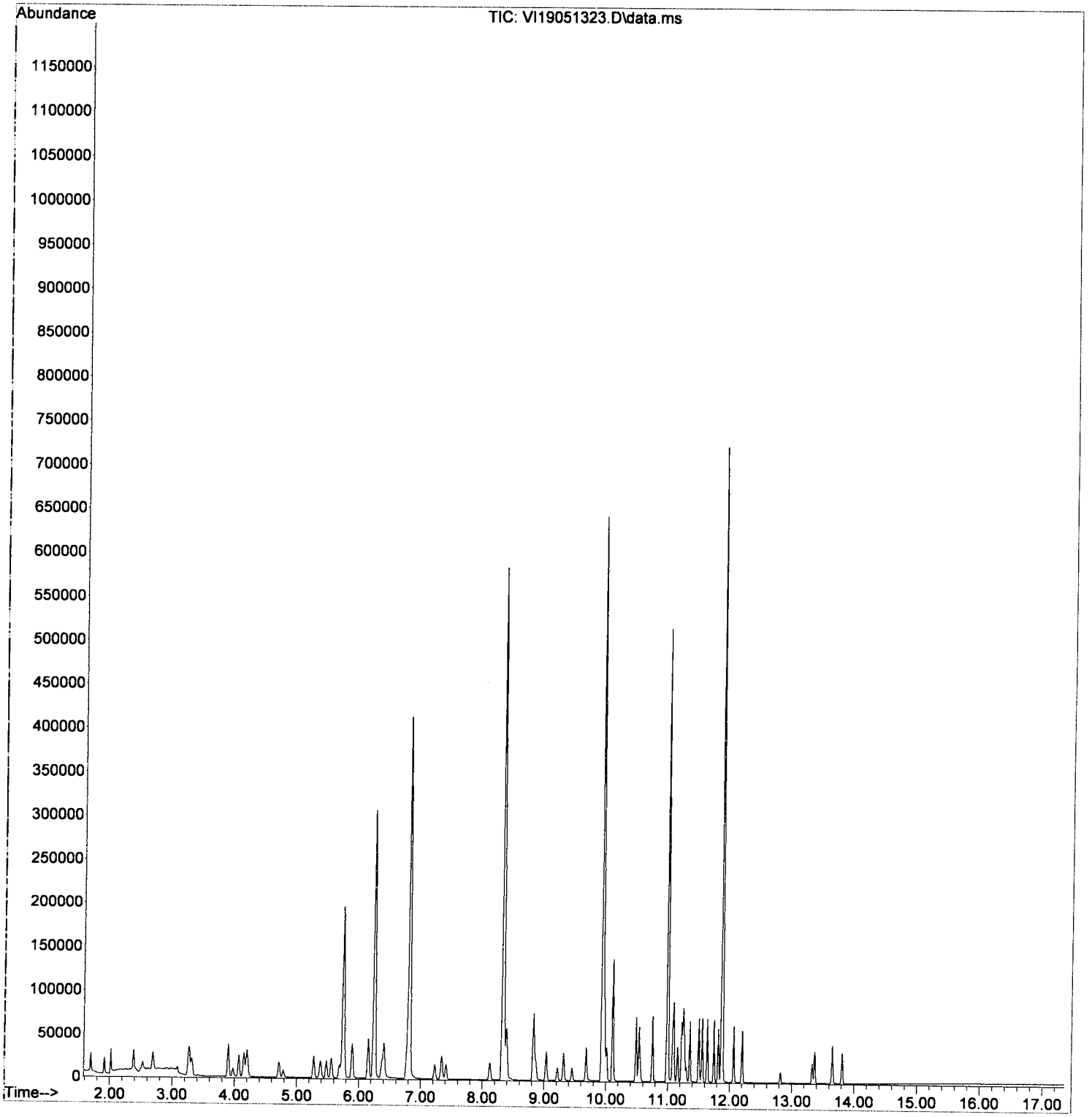
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	19721	5.50	ug/L		95
50) 1,2-Dibromoethane (EDB)	9.453	107	11018	5.08	ug/L		91
51) 2-Hexanone	9.679	43	25717	9.79	ug/L		92
52) Chlorobenzene	9.952	112	32594	5.36	ug/L		96
53) Ethylbenzene	9.977	91	52970	5.46	ug/L		98
54) 1,1,1,2-Tetrachloroethane	10.013	131	9011	4.45	ug/L		94
55) m,p-Xylenes (2)	10.110	91	77604	10.48	ug/L		98
56) o-Xylene	10.488	91	39502	5.64	ug/L		99
57) Styrene	10.536	104	29055	5.31	ug/L		92
58) Bromoform	10.561	173	5240	3.07	ug/L		94
59) Isopropylbenzene	10.755	105	46461	5.58	ug/L		99
62) Bromobenzene	11.078	156	12298	5.62	ug/L	#	73
63) n-Propylbenzene	11.096	91	54521	5.86	ug/L		99
64) 1,1,2,2-Tetrachloroethane	11.157	85	11438	5.08	ug/L		94
65) 2-Chlorotoluene	11.224	126	11289	6.26	ug/L		88
66) 1,3,5-Trimethylbenzene	11.248	105	36019	5.78	ug/L		95
67) 1,2,3-Trichloropropane	11.266	110	5567	5.22	ug/L		95
68) t-1,4-Dichloro-2-butene	11.297	53	3539	4.76	ug/L	#	56
69) 4-Chlorotoluene	11.358	91	34341	5.94	ug/L		94
70) tert-Butylbenzene	11.504	91	21142	6.15	ug/L		94
71) 1,2,4-Trimethylbenzene	11.558	105	36077	5.74	ug/L		98
72) sec-Butylbenzene	11.637	105	44610	5.96	ug/L		99
73) 4-Isopropyltoluene	11.747	119	34470	6.00	ug/L		99
74) 1,3-Dichlorobenzene	11.814	146	21604	5.80	ug/L		95
75) 1,4-Dichlorobenzene	11.881	146	22880	5.37	ug/L		93
76) n-Butylbenzene	12.063	91	30169	5.64	ug/L		97
77) 1,2-Dichlorobenzene	12.203	146	20812	5.74	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.818	157	2965	4.63	ug/L		64
79) Hexachlorobutadiene	13.329	223	2701	5.97	ug/L		93
80) 1,2,4-Trichlorobenzene	13.365	180	10624	6.86	ug/L		95
81) Naphthalene	13.651	128	32829	5.90	ug/L		97
82) 1,2,3-Trichlorobenzene	13.809	180	10219	6.07	ug/L		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051323.D
Acq On : 13 May 2019 7:48 pm
Operator : MM
Sample : 9E13041-CAL6
Misc : 1X 5mL 5/10PPB VOC
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:11 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051324.D
Acq On : 13 May 2019 8:15 pm
Operator : MM
Sample : 9E13041-CAL7
Misc : 1X 5mL 10/20PPB VOC
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:14 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.247	168	232644	50.00 ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	338803	50.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	156081	50.00 ug/L	0.00
System Monitoring Compounds					
28) Dibromofluoromethane (S)	5.742	111	120537	41.87 ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.813	114	386626	47.01 ug/L	0.00
42) Toluene-d8 (S)	8.328	98	457030	51.24 ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	125513	51.79 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.691	85	24928	9.21 ug/L	98
3) Chloromethane	1.910	50	27622	8.74 ug/L	97
4) Vinyl Chloride	2.013	62	33676	10.98 ug/L	96
5) Bromomethane	2.378	96	20274	8.02 ug/L	98
6) Chloroethane	2.518	64	13509	9.12 ug/L	84
7) Trichlorofluoromethane	2.682	101	31730	5.99 ug/L	96
8) 1,1-Dichloroethene	3.254	61	27340	8.25 ug/L	96
9) Carbon Disulfide	3.272	76	55204	9.98 ug/L	98
10) Freon 113	3.309	101	20964	9.55 ug/L	97
11) Iodomethane	3.412	142	3200	8.41 ug/L	93
12) Acrolein	~~3.656~~	~~56~~	~~117~~	~~0.19~~ ug/L #	41
13) Methylene Chloride	3.893	84	28397	3.69 ug/L	93
14) Acetone	3.972	43	25786	18.28 ug/L	96
15) t-1,2-Dichloroethene	4.063	61	28575	9.26 ug/L	98
16) n-Hexane	4.148	86	4544	12.25 ug/L	95
17) Methyl-tert-butyl-ether	4.197	73	72369	12.03 ug/L	94
18) 1,1-Dichloroethane	4.714	63	38784	8.58 ug/L	97
19) Acrylonitrile	4.775	53	14188	9.70 ug/L	99
20) Vinyl Acetate	0.000		0	N.D.	
21) c-1,2-Dichloroethene	5.268	61	31766	10.51 ug/L	96
22) 2,2-Dichloropropane	5.377	77	27884	11.86 ug/L	99
23) Bromochloromethane	5.475	130	15271	9.68 ug/L	92
24) Chloroform	5.554	83	40653	8.75 ug/L	96
25) Carbon Tetrachloride	5.688	117	23477	7.65 ug/L	94
26) Tetrahydrofuran	5.730	42	13855	10.10 ug/L	88
27) 1,1,1-Trichloroethane	5.761	97	31265	8.55 ug/L	97
29) 1,1-Dichloropropene	5.894	75	30540	10.43 ug/L	97
30) 2-Butanone (MEK)	5.888	43	40145	18.98 ug/L	98
31) Benzene	6.150	78	93393	10.20 ug/L	98
32) 1,2-Dichloroethane (EDC)	6.369	62	31922	8.80 ug/L	92
33) iso-Butyl Alcohol	6.399	43	60752	258.29 ug/L	95
35) Trichloroethene (TCE)	6.770	130	23159	10.22 ug/L	91
36) Dibromomethane	7.227	93	15518	8.93 ug/L	88
37) 1,2-Dichloropropane	7.342	63	24538	9.89 ug/L	93
38) Bromodichloromethane	7.409	83	26653	7.98 ug/L	94
40) 2-Chloroethyl Vinyl Ether	~~7.951~~	~~63~~	~~461~~	~~2.21~~ ug/L	100
41) c-1,3-Dichloropropene	8.121	75	30652	11.72 ug/L	89
43) Toluene	8.389	91	97687	10.17 ug/L	97
44) Tetrachloroethene (PCE)	8.827	166	22333	10.22 ug/L	88
45) 4-Methyl-2-Pentanone (...	8.827	43	73002	20.79 ug/L	97
46) t-1,3-Dichloropropene	8.863	75	25782	9.75 ug/L	94
47) 1,1,2-Trichloroethane	9.034	97	22740	10.01 ug/L	96
48) Dibromochloromethane	9.216	129	18193	7.82 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051324.D
Acq On : 13 May 2019 8:15 pm
Operator : MM
Sample : 9E13041-CAL7
Misc : 1X 5mL 10/20PPB VOC
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

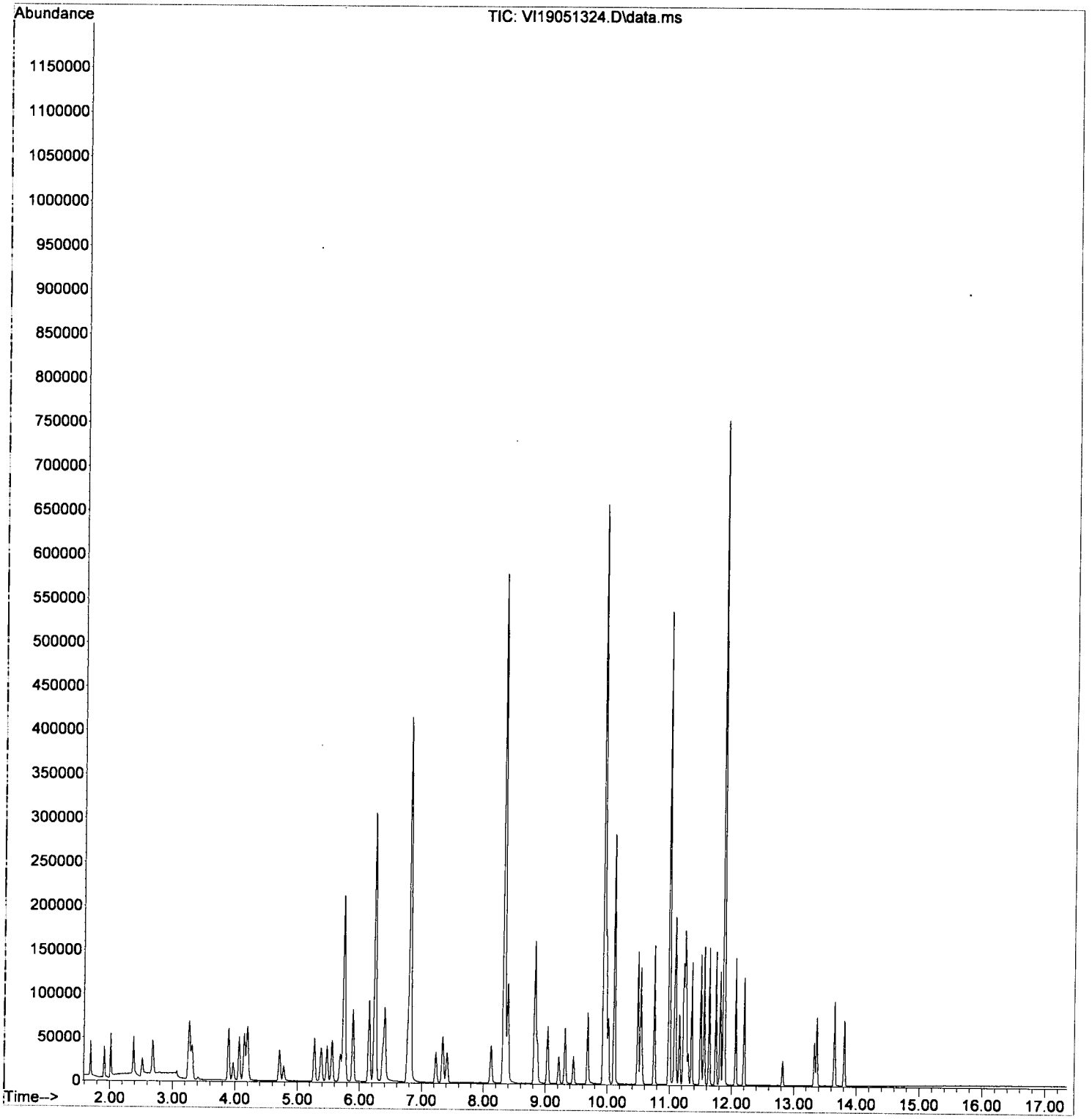
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	39507	11.01	ug/L		94
50) 1,2-Dibromoethane (EDB)	9.453	107	22669	10.44	ug/L		93
51) 2-Hexanone	9.678	43	52691	20.04	ug/L		92
52) Chlorobenzene	9.952	112	63842	10.50	ug/L		95
53) Ethylbenzene	9.977	91	106682	10.99	ug/L		99
54) 1,1,1,2-Tetrachloroethane	10.013	131	18376	9.08	ug/L		95
55) m,p-Xylenes (2)	10.104	91	160310	21.20	ug/L		97
56) o-Xylene	10.488	91	80820	11.27	ug/L		98
57) Styrene	10.536	104	60588	10.54	ug/L		94
58) Bromoform	10.561	173	11172	6.55	ug/L		97
59) Isopropylbenzene	10.755	105	95633	11.02	ug/L		99
62) Bromobenzene	11.078	156	24556	10.87	ug/L	#	78
63) n-Propylbenzene	11.096	91	112532	11.72	ug/L		99
64) 1,1,2,2-Tetrachloroethane	11.157	85	22440	9.65	ug/L		92
65) 2-Chlorotoluene	11.224	126	22885	12.30	ug/L		96
66) 1,3,5-Trimethylbenzene	11.248	105	75689	11.43	ug/L		97
67) 1,2,3-Trichloropropane	11.266	110	11100	10.08	ug/L		97
68) t-1,4-Dichloro-2-butene	11.303	53	7147	9.31	ug/L	#	62
69) 4-Chlorotoluene	11.357	91	69695	11.67	ug/L		95
70) tert-Butylbenzene	11.504	91	43225	11.87	ug/L		94
71) 1,2,4-Trimethylbenzene	11.558	105	75733	11.41	ug/L		96
72) sec-Butylbenzene	11.637	105	92595	11.60	ug/L		98
73) 4-Isopropyltoluene	11.747	119	73885	11.96	ug/L		99
74) 1,3-Dichlorobenzene	11.814	146	43251	11.25	ug/L		97
75) 1,4-Dichlorobenzene	11.881	146	44825	10.20	ug/L		92
76) n-Butylbenzene	12.063	91	65197	11.54	ug/L		97
77) 1,2-Dichlorobenzene	12.203	146	42245	11.28	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.818	157	6229	9.42	ug/L	#	59
79) Hexachlorobutadiene	13.329	223	5579	11.94	ug/L		94
80) 1,2,4-Trichlorobenzene	13.365	180	22804	13.45	ug/L		97
81) Naphthalene	13.651	128	71371	12.18	ug/L		97
82) 1,2,3-Trichlorobenzene	13.809	180	21652	12.03	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051324.D
Acq On : 13 May 2019 8:15 pm
Operator : MM
Sample : 9E13041-CAL7
Misc : 1X 5mL 10/20PPB VOC
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:14 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051325.D
Acq On : 13 May 2019 8:42 pm
Operator : MM
Sample : 9E13041-CAL8
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:17 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.247	168	219527	50.00	ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	322615	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	153786	50.00	ug/L	0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.742	111	115679	42.58	ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	365426	47.08	ug/L	0.00
42) Toluene-d8 (S)	8.328	98	434842	51.20	ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	120001	50.26	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.697	85	48393	18.95	ug/L	99
3) Chloromethane	1.910	50	54416	18.25	ug/L	96
4) Vinyl Chloride	2.019	62	64698	22.35	ug/L	97
5) Bromomethane	2.378	96	36561	15.33	ug/L	97
6) Chloroethane	2.518	64	17132	12.25	ug/L	81
7) Trichlorofluoromethane	2.682	101	60726	12.15	ug/L	99
8) 1,1-Dichloroethene	3.254	61	54124	17.31	ug/L	98
9) Carbon Disulfide	3.272	76	108849	20.85	ug/L	99
10) Freon 113	3.309	101	40582	19.59	ug/L	98
11) Iodomethane	3.412	142	10694	14.68	ug/L	88
12) Acrolein	~~3.662~~	~~56~~	~~503~~	~~0.88~~	ug/L	70
13) Methylene Chloride	3.899	84	48710	13.32	ug/L	92
14) Acetone	3.972	43	46729	35.11	ug/L	93
15) t-1,2-Dichloroethene	4.063	61	55942	19.21	ug/L	99
16) n-Hexane	4.148	86	9157	26.16	ug/L	96
17) Methyl-tert-butyl-ether	4.197	73	140539	24.75	ug/L	95
18) 1,1-Dichloroethane	4.714	63	76044	17.83	ug/L	95
19) Acrylonitrile	4.775	53	27531	19.95	ug/L	98
20) Vinyl Acetate	0.000		0	N.D.		
21) c-1,2-Dichloroethene	5.274	61	61835	21.68	ug/L	96
22) 2,2-Dichloropropane	5.383	77	54385	24.51	ug/L	97
23) Bromochloromethane	5.475	130	29657	19.92	ug/L	91
24) Chloroform	5.554	83	78701	17.95	ug/L	96
25) Carbon Tetrachloride	5.687	117	47184	16.28	ug/L	94
26) Tetrahydrofuran	5.730	42	25840	19.95	ug/L	88
27) 1,1,1-Trichloroethane	5.767	97	61392	17.78	ug/L	98
29) 1,1-Dichloropropene	5.894	75	60349	21.84	ug/L	97
30) 2-Butanone (MEK)	5.888	43	76037	38.09	ug/L	97
31) Benzene	6.150	78	181075	20.96	ug/L	97
32) 1,2-Dichloroethane (EDC)	6.369	62	62475	18.24	ug/L	93
33) iso-Butyl Alcohol	6.399	43	112947	508.90	ug/L	94
35) Trichloroethene (TCE)	6.770	130	45873	21.46	ug/L	95
36) Dibromomethane	7.227	93	30236	18.45	ug/L	89
37) 1,2-Dichloropropane	7.342	63	47875	20.44	ug/L	93
38) Bromodichloromethane	7.409	83	53694	17.03	ug/L	92
40) 2-Chloroethyl Vinyl Ether	~~7.944~~	~~63~~	~~911~~	~~2.64~~	ug/L	100
41) c-1,3-Dichloropropene	8.121	75	61544	24.72	ug/L	89
43) Toluene	8.389	91	190049	20.78	ug/L	98
44) Tetrachloroethene (PCE)	8.821	166	43045	20.68	ug/L	83
45) 4-Methyl-2-Pentanone (...	8.827	43	140869	42.14	ug/L	96
46) t-1,3-Dichloropropene	8.863	75	53747	20.56	ug/L	96
47) 1,1,2-Trichloroethane	9.033	97	44178	20.41	ug/L	97
48) Dibromochloromethane	9.216	129	37884	17.10	ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051325.D
Acq On : 13 May 2019 8:42 pm
Operator : MM
Sample : 9E13041-CAL8
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:17 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

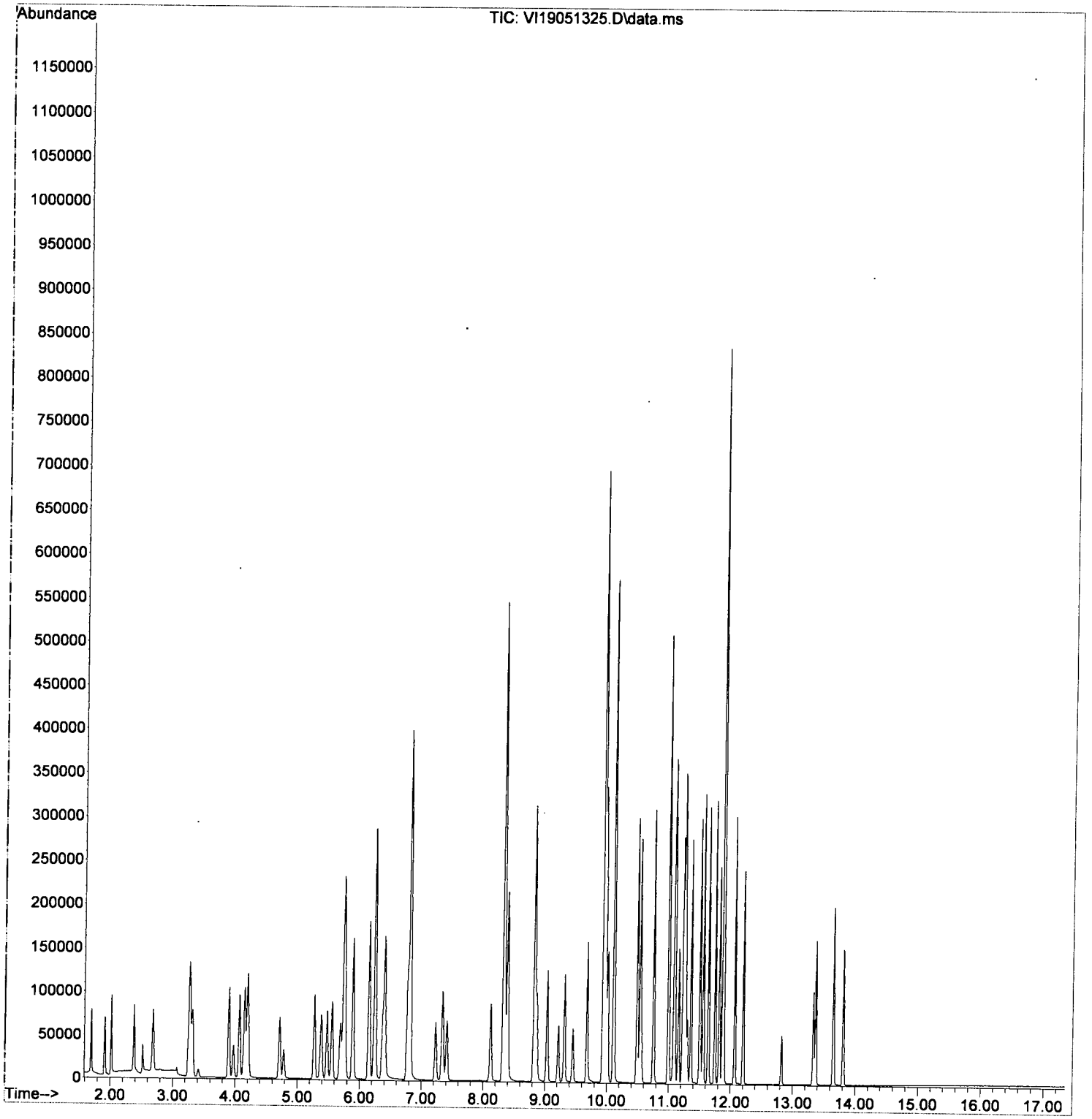
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49)	1,3-Dichloropropane	9.313	76	77353	22.63	ug/L	94
50)	1,2-Dibromoethane (EDB)	9.447	107	44644	21.60	ug/L	98
51)	2-Hexanone	9.678	43	101198	40.42	ug/L	91
52)	Chlorobenzene	9.952	112	122138	21.09	ug/L	94
53)	Ethylbenzene	9.976	91	207553	22.46	ug/L	98
54)	1,1,1,2-Tetrachloroethane	10.013	131	37245	19.32	ug/L	96
55)	m,p-Xylenes (2)	10.110	91	315670	43.12	ug/L	98
56)	o-Xylene	10.487	91	159256	22.83	ug/L	98
57)	Styrene	10.536	104	122271	21.65	ug/L	96
58)	Bromoform	10.560	173	23776	14.63	ug/L	98
59)	Isopropylbenzene	10.755	105	190588	22.42	ug/L	100
62)	Bromobenzene	11.078	156	47950	21.54	ug/L #	75
63)	n-Propylbenzene	11.096	91	225723	23.86	ug/L	99
64)	1,1,2,2-Tetrachloroethane	11.157	85	44197	19.30	ug/L	93
65)	2-Chlorotoluene	11.224	126	45574	24.86	ug/L	91
66)	1,3,5-Trimethylbenzene	11.248	105	154226	23.14	ug/L	96
67)	1,2,3-Trichloropropane	11.272	110	21485	19.79	ug/L	91
68)	t-1,4-Dichloro-2-butene	11.297	53	14123	18.67	ug/L #	66
69)	4-Chlorotoluene	11.357	91	138653	23.57	ug/L	95
70)	tert-Butylbenzene	11.503	91	87898	23.95	ug/L	93
71)	1,2,4-Trimethylbenzene	11.558	105	154286	23.14	ug/L	96
72)	sec-Butylbenzene	11.637	105	186769	23.21	ug/L	99
73)	4-Isopropyltoluene	11.747	119	153054	24.37	ug/L	99
74)	1,3-Dichlorobenzene	11.814	146	85345	22.54	ug/L	96
75)	1,4-Dichlorobenzene	11.881	146	88540	20.44	ug/L	94
76)	n-Butylbenzene	12.063	91	137043	24.06	ug/L	96
77)	1,2-Dichlorobenzene	12.203	146	83556	22.65	ug/L	98
78)	1,2-Dibromo-3-Chloropr...	12.817	157	12829	19.69	ug/L	68
79)	Hexachlorobutadiene	13.328	223	11710	25.43	ug/L	93
80)	1,2,4-Trichlorobenzene	13.365	180	46601	26.55	ug/L	94
81)	Naphthalene	13.651	128	149237	24.87	ug/L	96
82)	1,2,3-Trichlorobenzene	13.809	180	44563	24.26	ug/L	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051325.D
Acq On : 13 May 2019 8:42 pm
Operator : MM
Sample : 9E13041-CAL8
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:17 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051326.D
Acq On : 13 May 2019 9:09 pm
Operator : MM
Sample : 9E13041-CAL9
Misc : 1X 5mL 50/100PPB VOC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:20 2019
Quant Method : C:\msdchem\1\methods\~~VI190514W.~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	229746	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	333564	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	157275	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	122138	42.96	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.813	114	381879	47.02	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	448405	51.06	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.993	174	123362	50.52	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.697	85	136952	51.26	ug/L		99
3) Chloromethane	1.916	50	130990	41.97	ug/L		96
4) Vinyl Chloride	2.019	62	163332	53.92	ug/L		97
5) Bromomethane	2.384	96	82438	33.02	ug/L		97
6) Chloroethane	2.524	64	60291	41.21	ug/L		81
7) Trichlorofluoromethane	2.688	101	147423	28.19	ug/L		98
8) 1,1-Dichloroethene	3.260	61	136114	41.59	ug/L		99
9) Carbon Disulfide	3.279	76	279033	51.08	ug/L		99
10) Freon 113	3.315	101	100289	46.26	ug/L		99
11) Iodomethane	3.412	142	56363	47.72	ug/L		89
12) Acrolein	~~3.662~~	~~56~~	~~1461~~	2.43	ug/L		74
13) Methylene Chloride	3.899	84	113604	39.63	ug/L		94
14) Acetone	3.972	43	121870	87.49	ug/L		95
15) t-1,2-Dichloroethene	4.069	61	140409	46.08	ug/L		99
16) n-Hexane	4.149	86	22883	62.46	ug/L	#	90
17) Methyl-tert-butyl-ether	4.197	73	365801	61.56	ug/L		93
18) 1,1-Dichloroethane	4.714	63	191406	42.89	ug/L		97
19) Acrylonitrile	4.781	53	73845	51.14	ug/L		99
20) Vinyl Acetate	0.000		0	N.D.			
21) c-1,2-Dichloroethene	5.274	61	156579	52.45	ug/L		97
22) 2,2-Dichloropropane	5.383	77	140568	60.52	ug/L		95
23) Bromochloromethane	5.475	130	76361	49.01	ug/L		88
24) Chloroform	5.560	83	199012	43.36	ug/L		98
25) Carbon Tetrachloride	5.694	117	124452	41.04	ug/L		95
26) Tetrahydrofuran	5.730	42	69920	51.59	ug/L		87
27) 1,1,1-Trichloroethane	5.767	97	155174	42.95	ug/L		96
29) 1,1-Dichloropropene	5.894	75	153463	53.06	ug/L		97
30) 2-Butanone (MEK)	5.888	43	205371	98.31	ug/L		97
31) Benzene	6.150	78	457394	50.60	ug/L		98
32) 1,2-Dichloroethane (EDC)	6.369	62	158514	44.23	ug/L		92
33) iso-Butyl Alcohol	6.399	43	320954	1381.78	ug/L		92
35) Trichloroethene (TCE)	6.771	130	115242	51.51	ug/L		97
36) Dibromomethane	7.227	93	80374	46.85	ug/L		89
37) 1,2-Dichloropropane	7.342	63	122510	49.98	ug/L		91
38) Bromodichloromethane	7.409	83	145265	44.03	ug/L		95
40) 2-Chloroethyl Vinyl Ether	~~7.951~~	~~63~~	~~1876~~	3.46	ug/L		100
41) c-1,3-Dichloropropene	8.121	75	170286	66.15	ug/L		89
43) Toluene	8.389	91	473581	50.09	ug/L		99
44) Tetrachloroethene (PCE)	8.821	166	109302	50.79	ug/L		84
45) 4-Methyl-2-Pentanone (...	8.827	43	378445	109.49	ug/L		94
46) t-1,3-Dichloropropene	8.863	75	155338	53.75	ug/L		96
47) 1,1,2-Trichloroethane	9.034	97	114217	51.04	ug/L		96
48) Dibromochloromethane	9.216	129	109312	47.72	ug/L		99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051326.D
Acq On : 13 May 2019 9:09 pm
Operator : MM
Sample : 9E13041-CAL9
Misc : 1X 5mL 50/100PPB VOC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:20 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

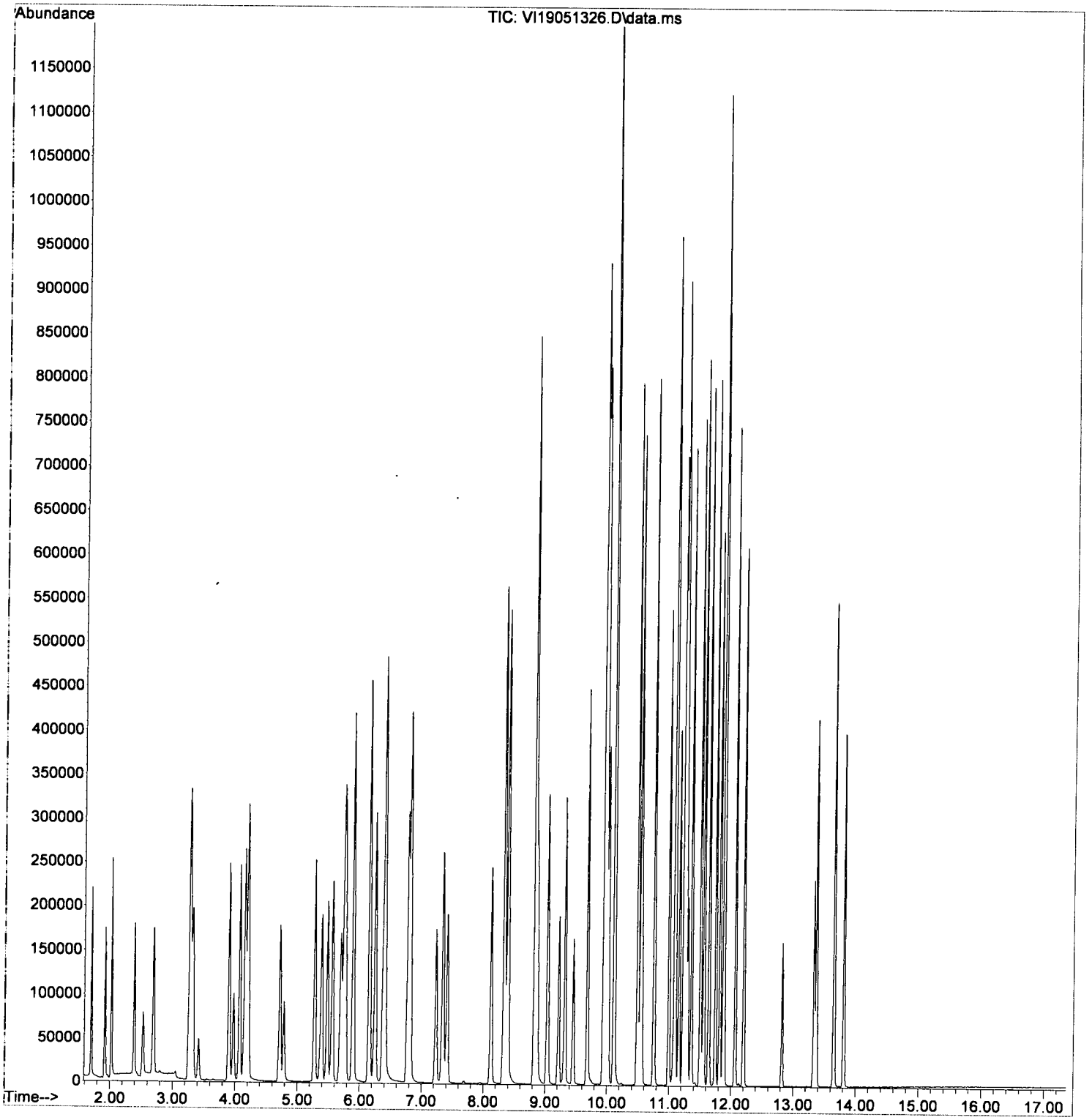
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	201354	56.98	ug/L		93
50) 1,2-Dibromoethane (EDB)	9.447	107	118187	55.31	ug/L		96
51) 2-Hexanone	9.678	43	275357	106.38	ug/L		90
52) Chlorobenzene	9.952	112	309625	51.70	ug/L		96
53) Ethylbenzene	9.977	91	523821	54.83	ug/L		98
54) 1,1,1,2-Tetrachloroethane	10.013	131	99888	50.11	ug/L		96
55) m,p-Xylenes (2)	10.110	91	810888	104.11	ug/L		98
56) o-Xylene	10.488	91	413022	55.04	ug/L		98
57) Styrene	10.536	104	320799	52.89	ug/L		97
58) Bromoform	10.561	173	73039	43.47	ug/L		97
59) Isopropylbenzene	10.755	105	485397	53.25	ug/L		99
62) Bromobenzene	11.078	156	123228	54.13	ug/L	#	77
63) n-Propylbenzene	11.096	91	569978	58.91	ug/L		99
64) 1,1,2,2-Tetrachloroethane	11.157	85	115201	49.18	ug/L		94
65) 2-Chlorotoluene	11.224	126	116421	62.10	ug/L		91
66) 1,3,5-Trimethylbenzene	11.248	105	391276	55.56	ug/L		97
67) 1,2,3-Trichloropropane	11.266	110	56138	50.57	ug/L		97
68) t-1,4-Dichloro-2-butene	11.297	53	37807	48.87	ug/L		80
69) 4-Chlorotoluene	11.358	91	350719	58.29	ug/L		95
70) tert-Butylbenzene	11.504	91	217723	55.95	ug/L		95
71) 1,2,4-Trimethylbenzene	11.558	105	391053	55.45	ug/L		96
72) sec-Butylbenzene	11.637	105	466263	54.86	ug/L		99
73) 4-Isopropyltoluene	11.747	119	381897	56.76	ug/L		99
74) 1,3-Dichlorobenzene	11.814	146	217251	56.09	ug/L		97
75) 1,4-Dichlorobenzene	11.881	146	223897	50.55	ug/L		96
76) n-Butylbenzene	12.063	91	337143	55.58	ug/L		97
77) 1,2-Dichlorobenzene	12.203	146	211065	55.95	ug/L		97
78) 1,2-Dibromo-3-Chloropr...	12.818	157	37794	56.73	ug/L		78
79) Hexachlorobutadiene	13.329	223	25849	54.89	ug/L		89
80) 1,2,4-Trichlorobenzene	13.365	180	116239	59.84	ug/L		95
81) Naphthalene	13.651	128	411643	60.58	ug/L		97
82) 1,2,3-Trichlorobenzene	13.809	180	112979	56.50	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051326.D
Acq On : 13 May 2019 9:09 pm
Operator : MM
Sample : 9E13041-CAL9
Misc : 1X 5mL 50/100PPB VOC
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:20 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051327.D
Acq On : 13 May 2019 9:37 pm
Operator : MM
Sample : 9E13041-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:19 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

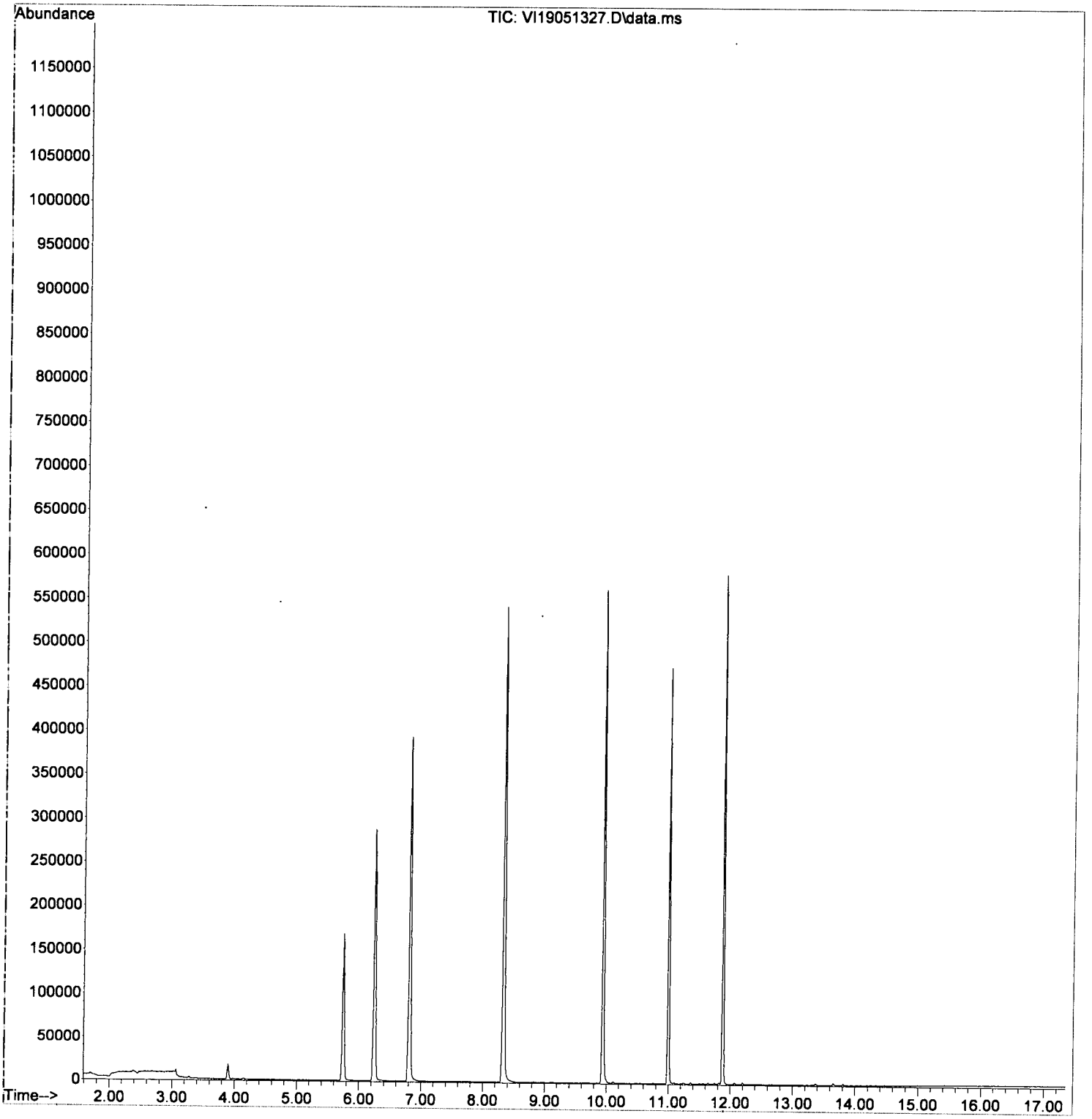
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	218098	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	308675	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	129127	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	114381	50.11	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.813	114	361516	49.91	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	427478	51.22	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	107832	51.82	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.697	85	320	0.13	ug/L	#	49
3) Chloromethane	1.910	50	434	0.16	ug/L	#	47
5) Bromomethane	2.384	96	431	0.24	ug/L	#	66
6) Chloroethane	2.518	64	295	Below Cal		#	36
7) Trichlorofluoromethane	2.682	101	428	0.14	ug/L	#	12
9) Carbon Disulfide	3.272	76	2067	0.39	ug/L		93
10) Freon 113	3.303	101	130	0.07	ug/L	#	19
13) Methylene Chloride	3.899	84	7561	0.27	ug/L		94
14) Acetone	3.972	43	1115	0.91	ug/L	#	44
15) t-1,2-Dichloroethene	4.069	61	295	0.11	ug/L	#	69
44) Tetrachloroethene (PCE)	8.827	166	339	0.17	ug/L	#	69
52) Chlorobenzene	9.952	112	434	0.07	ug/L	#	1
53) Ethylbenzene	9.976	91	905	0.09	ug/L		88
55) m,p-Xylenes (2)	10.110	91	1289	0.17	ug/L		89
57) Styrene	10.548	104	366	0.07	ug/L	#	42
59) Isopropylbenzene	10.755	105	681	0.08	ug/L		54
63) n-Propylbenzene	11.096	91	1533	0.16	ug/L		91
66) 1,3,5-Trimethylbenzene	11.254	105	807	0.13	ug/L		93
69) 4-Chlorotoluene	11.357	91	999	0.17	ug/L		78
70) tert-Butylbenzene	11.503	91	441	0.12	ug/L	#	65
71) 1,2,4-Trimethylbenzene	11.558	105	783	0.13	ug/L		89
72) sec-Butylbenzene	11.643	105	1326	0.17	ug/L		96
73) 4-Isopropyltoluene	11.747	119	1084	0.18	ug/L		93
74) 1,3-Dichlorobenzene	11.820	146	684	0.19	ug/L		86
75) 1,4-Dichlorobenzene	11.887	146	899	0.24	ug/L	#	68
76) n-Butylbenzene	12.069	91	1437	0.27	ug/L		98
77) 1,2-Dichlorobenzene	12.209	146	489	0.14	ug/L	#	25
79) Hexachlorobutadiene	13.329	223	110	0.25	ug/L	#	65
80) 1,2,4-Trichlorobenzene	13.371	180	881	0.48	ug/L		90
81) Naphthalene	13.651	128	2902	0.94	ug/L		89
82) 1,2,3-Trichlorobenzene	13.803	180	833	0.48	ug/L		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051327.D
Acq On : 13 May 2019 9:37 pm
Operator : MM
Sample : 9E13041-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:19 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051328.D
Acq On : 13 May 2019 10:04 pm
Operator : MM
Sample : 9E13041-CALA
Misc : 1X 5mL 100/200PPB VOC
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:23 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	229946	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	338491	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	160638	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	123645	43.45	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.813	114	386280	47.52	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	453182	50.85	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	124117	49.76	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.697	85	288867	108.02	ug/L		99
3) Chloromethane	1.916	50	274306	87.81	ug/L		96
4) Vinyl Chloride	2.019	62	343827	113.40	ug/L		97
5) Bromomethane	2.384	96	162653	65.09	ug/L		97
6) Chloroethane	2.518	64	112052	76.52	ug/L		82
7) Trichlorofluoromethane	2.688	101	307365	58.72	ug/L		98
8) 1,1-Dichloroethene	3.260	61	284593	86.89	ug/L		97
9) Carbon Disulfide	3.278	76	595514	108.92	ug/L		98
10) Freon 113	3.315	101	211945	97.68	ug/L		99
11) Iodomethane	3.412	142	159925	112.89	ug/L		88
12) Acrolein	3.656	56	1787	2.97	ug/L		72
13) Methylene Chloride	3.899	84	225143	86.40	ug/L		93
14) Acetone	3.972	43	240695	172.64	ug/L		95
15) t-1,2-Dichloroethene	4.069	61	292445	95.89	ug/L		97
16) n-Hexane	4.148	86	50068	136.56	ug/L	#	91
17) Methyl-tert-butyl-ether	4.197	73	744823	125.28	ug/L		94
18) 1,1-Dichloroethane	4.714	63	393700	88.15	ug/L		96
19) Acrylonitrile	4.775	53	149538	103.46	ug/L		99
20) Vinyl Acetate	0.000		0	N.D.			
21) c-1,2-Dichloroethene	5.274	61	321721	107.67	ug/L		95
22) 2,2-Dichloropropane	5.383	77	290811	125.11	ug/L		93
23) Bromochloromethane	5.475	130	153192	98.24	ug/L		89
24) Chloroform	5.554	83	409736	89.19	ug/L		97
25) Carbon Tetrachloride	5.687	117	274863	90.56	ug/L		95
26) Tetrahydrofuran	5.724	42	139372	102.74	ug/L		88
27) 1,1,1-Trichloroethane	5.761	97	329979	91.26	ug/L		98
29) 1,1-Dichloropropene	5.894	75	324438	112.08	ug/L		97
30) 2-Butanone (MEK)	5.882	43	412470	197.27	ug/L		98
31) Benzene	6.150	78	946643	104.63	ug/L		97
32) 1,2-Dichloroethane (EDC)	6.369	62	322981	90.05	ug/L		93
33) iso-Butyl Alcohol	6.399	43	665403	2862.22	ug/L		91
35) Trichloroethene (TCE)	6.770	130	241711	107.94	ug/L		95
36) Dibromomethane	7.227	93	165522	96.40	ug/L		91
37) 1,2-Dichloropropane	7.336	63	252599	102.97	ug/L		91
38) Bromodichloromethane	7.409	83	304930	92.35	ug/L		93
40) 2-Chloroethyl Vinyl Ether	7.944	63	3014	4.41	ug/L		100
41) c-1,3-Dichloropropene	8.121	75	370081	141.67	ug/L		88
43) Toluene	8.389	91	992388	103.44	ug/L		100
44) Tetrachloroethene (PCE)	8.827	166	234986	107.61	ug/L		86
45) 4-Methyl-2-Pentanone (...	8.827	43	775650	221.13	ug/L		92
46) t-1,3-Dichloropropene	8.863	75	340262	106.29	ug/L		96
47) 1,1,2-Trichloroethane	9.033	97	234496	103.27	ug/L		95
48) Dibromochloromethane	9.216	129	238965	102.79	ug/L		99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051328.D
Acq On : 13 May 2019 10:04 pm
Operator : MM
Sample : 9E13041-CALA
Misc : 1X 5mL 100/200PPB VOC
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:23 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

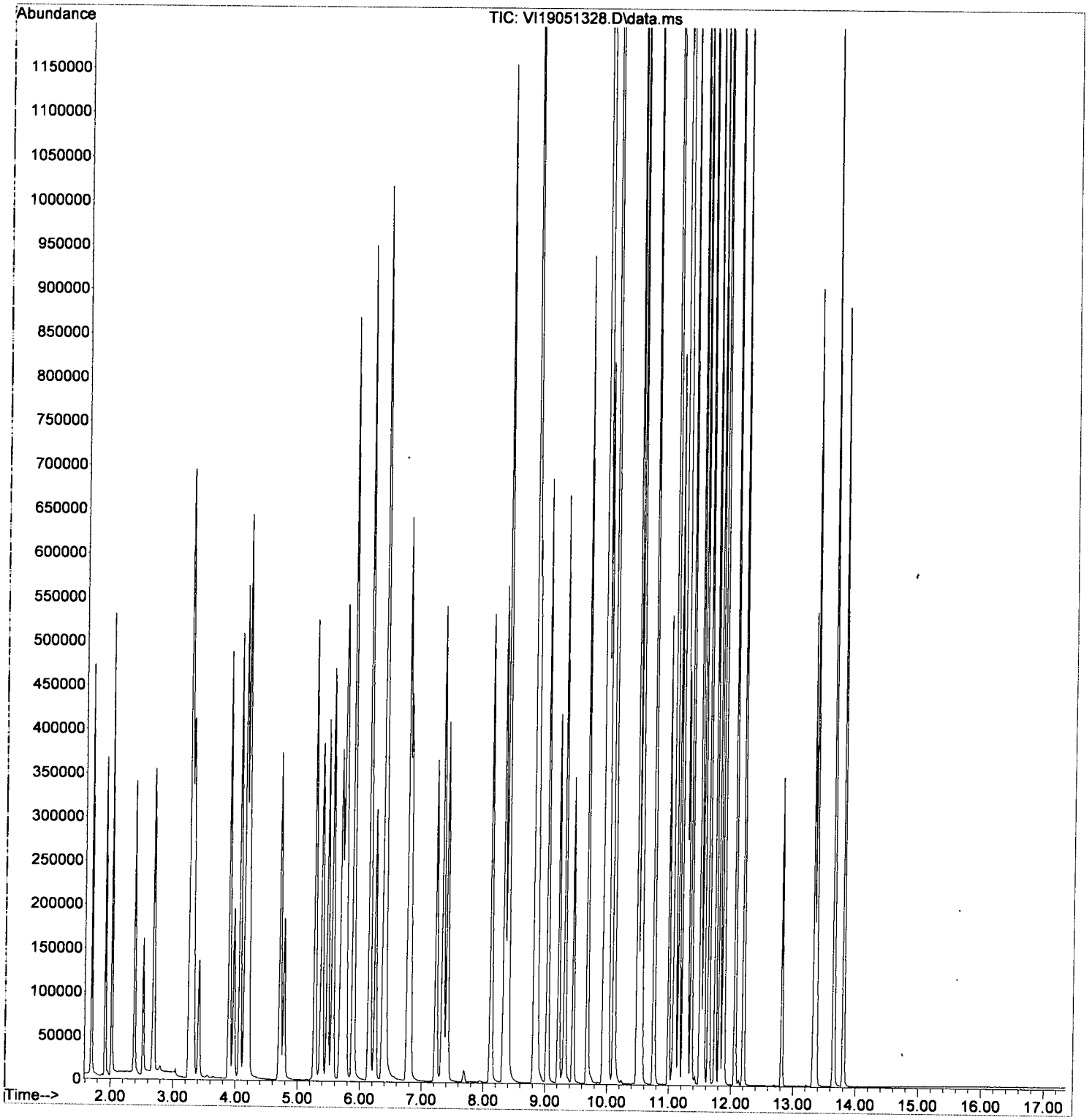
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	410573	114.49	ug/L		92
50) 1,2-Dibromoethane (EDB)	9.447	107	247645	114.20	ug/L		96
51) 2-Hexanone	9.678	43	572477	217.95	ug/L		90
52) Chlorobenzene	9.952	112	650727	107.03	ug/L		97
53) Ethylbenzene	9.976	91	1124941	116.04	ug/L		98
54) 1,1,1,2-Tetrachloroethane	10.013	131	215249	106.41	ug/L		96
55) m,p-Xylenes (2)	10.110	91	1760528	213.26	ug/L		99
56) o-Xylene	10.487	91	875842	108.63	ug/L		99
57) Styrene	10.536	104	691572	107.20	ug/L		97
58) Bromoform	10.560	173	168589	98.87	ug/L		98
59) Isopropylbenzene	10.755	105	1034763	106.72	ug/L		99
62) Bromobenzene	11.078	156	262375	112.85	ug/L	#	78
63) n-Propylbenzene	11.096	91	1233347	124.81	ug/L		99
64) 1,1,2,2-Tetrachloroethane	11.157	85	240330	100.46	ug/L		95
65) 2-Chlorotoluene	11.224	126	248618	129.83	ug/L		95
66) 1,3,5-Trimethylbenzene	11.248	105	852022	113.07	ug/L		98
67) 1,2,3-Trichloropropane	11.266	110	115501	101.87	ug/L		96
68) t-1,4-Dichloro-2-butene	11.297	53	79558	100.68	ug/L		86
69) 4-Chlorotoluene	11.357	91	739713	120.38	ug/L		96
70) tert-Butylbenzene	11.503	91	472382	112.71	ug/L		94
71) 1,2,4-Trimethylbenzene	11.558	105	841804	111.24	ug/L		97
72) sec-Butylbenzene	11.637	105	1012539	111.54	ug/L		99
73) 4-Isopropyltoluene	11.747	119	837873	114.11	ug/L		100
74) 1,3-Dichlorobenzene	11.814	146	458828	115.99	ug/L		97
75) 1,4-Dichlorobenzene	11.881	146	472942	104.55	ug/L		96
76) n-Butylbenzene	12.063	91	738001	111.83	ug/L		97
77) 1,2-Dichlorobenzene	12.203	146	445214	115.55	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.817	157	83189	122.25	ug/L		82
79) Hexachlorobutadiene	13.328	223	58685	122.02	ug/L		94
80) 1,2,4-Trichlorobenzene	13.365	180	255056	115.55	ug/L		96
81) Naphthalene	13.651	128	898058	113.24	ug/L		97
82) 1,2,3-Trichlorobenzene	13.809	180	249092	111.40	ug/L		95

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051328.D
Acq On : 13 May 2019 10:04 pm
Operator : MM
Sample : 9E13041-CALA
Misc : 1X 5mL 100/200PPB VOC
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:23 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051329.D
Acq On : 13 May 2019 10:31 pm
Operator : MM
Sample : 9E13041-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:22 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	233591	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	334144	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	143369	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.749	111	120601	49.33	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.813	114	386948	49.88	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	456431	50.52	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.993	174	119667	51.79	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.703	85	685	0.26	ug/L		89
3) Chloromethane	1.916	50	541	0.19	ug/L		87
4) Vinyl Chloride	2.019	62	421	0.12	ug/L	#	45
5) Bromomethane	2.384	96	670	0.35	ug/L		75
6) Chloroethane	2.518	64	765	0.23	ug/L	#	36
7) Trichlorofluoromethane	2.695	101	657	0.21	ug/L		87
8) 1,1-Dichloroethene	3.260	61	447	0.16	ug/L	#	68
9) Carbon Disulfide	3.279	76	4063	0.71	ug/L		93
10) Freon 113	3.327	101	500	0.24	ug/L	#	65
11) Iodomethane	3.419	142	193	6.08	ug/L	#	47
14) Acetone	3.972	43	1337	1.02	ug/L	#	44
15) t-1,2-Dichloroethene	4.069	61	715	0.26	ug/L		91
21) c-1,2-Dichloroethene	5.280	61	267	0.09	ug/L	#	61
29) 1,1-Dichloropropene	5.895	75	582	0.19	ug/L	#	43
35) Trichloroethene (TCE)	6.777	130	315	0.14	ug/L		81
43) Toluene	8.389	91	1004	0.10	ug/L		93
44) Tetrachloroethene (PCE)	8.821	166	682	0.31	ug/L		82
45) 4-Methyl-2-Pentanone (...	8.833	43	376	0.11	ug/L	#	43
51) 2-Hexanone	9.685	43	289	0.11	ug/L	#	35
52) Chlorobenzene	9.952	112	841	0.13	ug/L	#	1
53) Ethylbenzene	9.977	91	1501	0.14	ug/L		95
55) m,p-Xylenes (2)	10.110	91	2627	0.32	ug/L		93
56) o-Xylene	10.494	91	845	0.10	ug/L		94
57) Styrene	10.542	104	657	0.11	ug/L		71
59) Isopropylbenzene	10.755	105	1495	0.16	ug/L		94
62) Bromobenzene	11.078	156	268	0.13	ug/L	#	71
63) n-Propylbenzene	11.096	91	3061	0.29	ug/L		97
65) 2-Chlorotoluene	11.224	126	338	0.16	ug/L		92
66) 1,3,5-Trimethylbenzene	11.248	105	1479	0.21	ug/L		92
69) 4-Chlorotoluene	11.358	91	1842	0.29	ug/L		94
70) tert-Butylbenzene	11.504	91	902	0.22	ug/L		96
71) 1,2,4-Trimethylbenzene	11.558	105	1597	0.23	ug/L		84
72) sec-Butylbenzene	11.637	105	2699	0.32	ug/L		95
73) 4-Isopropyltoluene	11.747	119	2203	0.33	ug/L		97
74) 1,3-Dichlorobenzene	11.820	146	1450	0.37	ug/L		97
75) 1,4-Dichlorobenzene	11.881	146	1690	0.40	ug/L	#	65
76) n-Butylbenzene	12.069	91	2915	0.50	ug/L		91
77) 1,2-Dichlorobenzene	12.203	146	819	0.22	ug/L		92
79) Hexachlorobutadiene	13.329	223	412	0.84	ug/L		91
80) 1,2,4-Trichlorobenzene	13.365	180	1801	0.88	ug/L		92
81) Naphthalene	13.651	128	5257	1.21	ug/L		94
82) 1,2,3-Trichlorobenzene	13.809	180	1632	0.85	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051329.D
Acq On : 13 May 2019 10:31 pm
Operator : MM
Sample : 9E13041-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:22 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

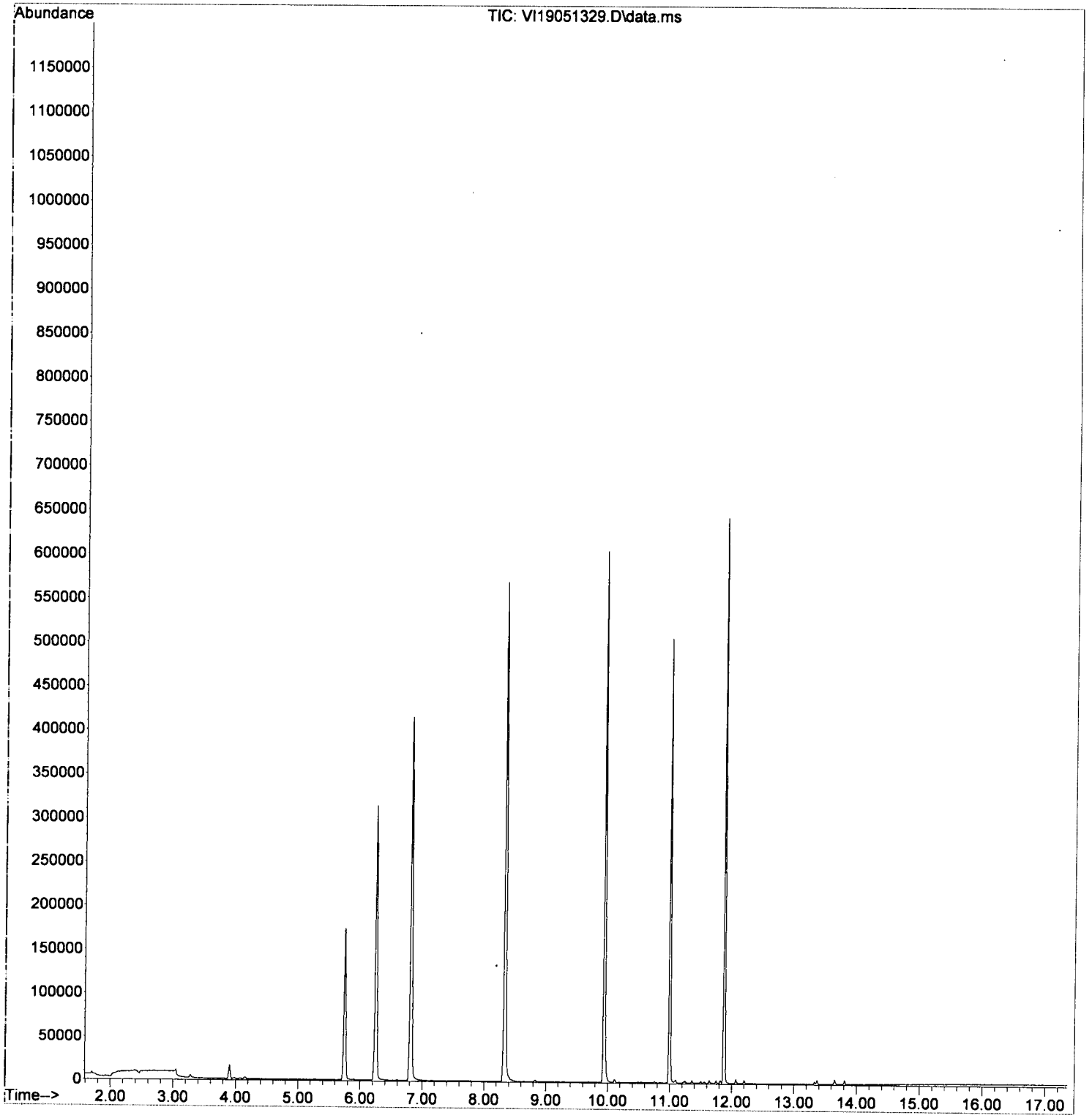
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051329.D
Acq On : 13 May 2019 10:31 pm
Operator : MM
Sample : 9E13041-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:22 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051330.D
Acq On : 13 May 2019 10:58 pm
Operator : MM
Sample : 9E13041-CALB
Misc : 1X 5mL 200/400PPB VOC
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:26 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.247	168	232177	50.00	ug/L	0.00
39) Chlorobenzene-d5 (I)	9.940	117	354175	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	167132	50.00	ug/L	0.00
System Monitoring Compounds						
28) Dibromofluoromethane (S)	5.742	111	127620	44.42	ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.807	114	390714	47.60	ug/L	0.00
42) Toluene-d8 (S)	8.328	98	460064	49.34	ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.992	174	126885	48.90	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.697	85	588294	217.87	ug/L	99
3) Chloromethane	1.910	50	559435	177.37	ug/L	97
4) Vinyl Chloride	2.013	62	697351	227.80	ug/L	97
5) Bromomethane	2.378	96	315134	124.91	ug/L	96
6) Chloroethane	2.512	64	53556	36.22	ug/L	88
7) Trichlorofluoromethane	2.676	101	602175	113.94	ug/L	98
8) 1,1-Dichloroethene	3.254	61	585731	177.11	ug/L	97
9) Carbon Disulfide	3.272	76	1235990	223.89	ug/L	98
10) Freon 113	3.309	101	432176	197.27	ug/L	100
11) Iodomethane	3.406	142	356656	211.74	ug/L	88
12) Acrolein	3.656	56	3222	5.31	ug/L	77
13) Methylene Chloride	3.899	84	451305	179.51	ug/L	90
14) Acetone	3.966	43	478638	340.02	ug/L	93
15) t-1,2-Dichloroethene	4.063	61	594115	192.94	ug/L	97
16) n-Hexane	4.148	86	102203	276.06	ug/L	94
17) Methyl-tert-butyl-ether	4.197	73	1534372	255.50	ug/L	94
18) 1,1-Dichloroethane	4.714	63	799678	177.33	ug/L	97
19) Acrylonitrile	4.775	53	301125	206.34	ug/L	98
20) Vinyl Acetate	4.872	43	480	0.11	ug/L	74
21) c-1,2-Dichloroethene	5.268	61	659466	218.59	ug/L	98
22) 2,2-Dichloropropane	5.377	77	588101	250.57	ug/L	94
23) Bromochloromethane	5.475	130	296640	188.40	ug/L	92
24) Chloroform	5.554	83	834920	180.00	ug/L	98
25) Carbon Tetrachloride	5.688	117	577246	188.37	ug/L	94
26) Tetrahydrofuran	5.724	42	282630	206.35	ug/L	87
27) 1,1,1-Trichloroethane	5.761	97	675270	184.96	ug/L	97
29) 1,1-Dichloropropene	5.888	75	665972	227.85	ug/L	97
30) 2-Butanone (MEK)	5.882	43	840405	398.08	ug/L	96
31) Benzene	6.150	78	1939385	212.29	ug/L	97
32) 1,2-Dichloroethane (EDC)	6.369	62	656567	181.29	ug/L	92
33) iso-Butyl Alcohol	6.399	43	1312196	5590.15	ug/L	90
35) Trichloroethene (TCE)	6.770	130	492659	217.90	ug/L	96
36) Dibromomethane	7.227	93	338301	195.13	ug/L	90
37) 1,2-Dichloropropane	7.336	63	516835	208.66	ug/L	92
38) Bromodichloromethane	7.409	83	636835	191.02	ug/L	94
40) 2-Chloroethyl Vinyl Ether	7.945	63	5330	6.19	ug/L	100
41) c-1,3-Dichloropropene	8.121	75	781806	286.04	ug/L	87
43) Toluene	8.389	91	2046373	203.86	ug/L	99
44) Tetrachloroethene (PCE)	8.821	166	494225	216.30	ug/L	84
45) 4-Methyl-2-Pentanone (...	8.827	43	1544779	420.91	ug/L	90
46) t-1,3-Dichloropropene	8.863	75	731463	192.49	ug/L	97
47) 1,1,2-Trichloroethane	9.034	97	481843	202.81	ug/L	96
48) Dibromochloromethane	9.216	129	512123	210.54	ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051330.D
Acq On : 13 May 2019 10:58 pm
Operator : MM
Sample : 9E13041-CALB
Misc : 1X 5mL 200/400PPB VOC
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:26 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration

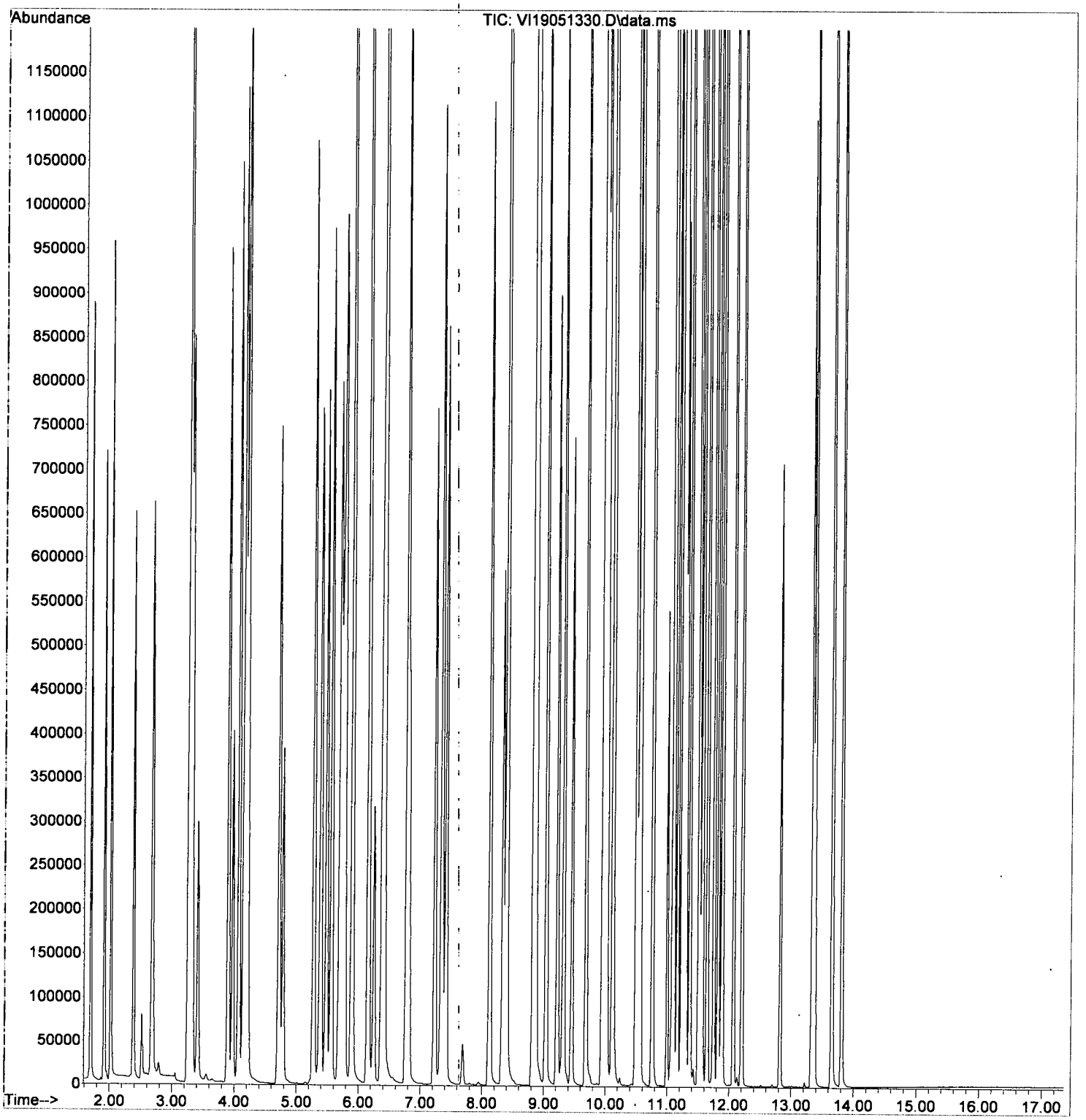
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) 1,3-Dichloropropane	9.313	76	845046	225.20	ug/L		91
50) 1,2-Dibromoethane (EDB)	9.447	107	513036	226.11	ug/L		95
51) 2-Hexanone	9.678	43	1133575	412.45	ug/L		88
52) Chlorobenzene	9.952	112	1359758	213.85	ug/L		97
53) Ethylbenzene	9.977	91	2338918	230.59	ug/L		97
54) 1,1,1,2-Tetrachloroethane	10.013	131	458067	216.42	ug/L		96
55) m,p-Xylenes (2)	10.110	91	3697595	399.71	ug/L		99
56) o-Xylene	10.488	91	1809534	196.85	ug/L		98
57) Styrene	10.536	104	1449426	200.02	ug/L		97
58) Bromoform	10.561	173	371937	208.47	ug/L		97
59) Isopropylbenzene	10.755	105	2154940	197.73	ug/L		99
62) Bromobenzene	11.078	156	543291	224.59	ug/L	#	80
63) n-Propylbenzene	11.096	91	2567034	249.68	ug/L		100
64) 1,1,2,2-Tetrachloroethane	11.157	85	474315	190.56	ug/L		96
65) 2-Chlorotoluene	11.224	126	512692	257.33	ug/L		93
66) 1,3,5-Trimethylbenzene	11.248	105	1774344	210.70	ug/L		97
67) 1,2,3-Trichloropropane	11.266	110	231633	196.36	ug/L		97
68) t-1,4-Dichloro-2-butene	11.297	53	162249	197.35	ug/L		92
69) 4-Chlorotoluene	11.358	91	1515683	237.07	ug/L		95
70) tert-Butylbenzene	11.504	91	964538	204.57	ug/L		94
71) 1,2,4-Trimethylbenzene	11.558	105	1732601	204.11	ug/L		97
72) sec-Butylbenzene	11.637	105	2063274	204.44	ug/L		99
73) 4-Isopropyltoluene	11.747	119	1715693	204.60	ug/L		99
74) 1,3-Dichlorobenzene	11.814	146	930398	226.06	ug/L		97
75) 1,4-Dichlorobenzene	11.881	146	947491	201.31	ug/L		95
76) n-Butylbenzene	12.063	91	1506161	200.41	ug/L		98
77) 1,2-Dichlorobenzene	12.203	146	892396	222.62	ug/L		98
78) 1,2-Dibromo-3-Chloropr...	12.818	157	171743	242.58	ug/L		83
79) Hexachlorobutadiene	13.329	223	121639	243.09	ug/L		94
80) 1,2,4-Trichlorobenzene	13.365	180	534941	202.03	ug/L		95
81) Naphthalene	13.651	128	1906386	193.92	ug/L		97
82) 1,2,3-Trichlorobenzene	13.809	180	523145	198.19	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051330.D
Acq On : 13 May 2019 10:58 pm
Operator : MM
Sample : 9E13041-CALB
Misc : 1X 5mL 200/400PPB VOC
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:06:26 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:05:34 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051331.D
Acq On : 13 May 2019 11:25 pm
Operator : MM
Sample : 9E13041-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:25 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	226583	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.940	117	323918	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.875	152	139759	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	118101	49.80	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.813	114	374241	49.73	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	442167	50.49	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	115463	51.26	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.697	85	1509	0.60	ug/L		95
3) Chloromethane	1.916	50	866	0.31	ug/L		84
4) Vinyl Chloride	2.019	62	831	0.25	ug/L		76
5) Bromomethane	2.384	96	717	0.39	ug/L	#	62
6) Chloroethane	2.506	64	242	Below Cal		#	36
7) Trichlorofluoromethane	2.694	101	1239	0.40	ug/L		82
8) 1,1-Dichloroethene	3.260	61	940	0.34	ug/L		88
9) Carbon Disulfide	3.278	76	7481	1.35	ug/L		99
10) Freon 113	3.315	101	1194	0.58	ug/L		93
11) Iodomethane	3.412	142	156	6.05	ug/L	#	47
13) Methylene Chloride	3.899	84	15114	3.65	ug/L		93
14) Acetone	3.978	43	2388	1.88	ug/L		95
15) t-1,2-Dichloroethene	4.069	61	1515	0.56	ug/L		96
19) Acrylonitrile	4.799	53	114	0.08	ug/L	#	15
21) c-1,2-Dichloroethene	5.280	61	675	0.23	ug/L		97
24) Chloroform	5.566	83	268	0.07	ug/L	#	28
25) Carbon Tetrachloride	5.688	117	189	0.08	ug/L	#	14
26) Tetrahydrofuran	5.748	42	324	0.24	ug/L	#	66
29) 1,1-Dichloropropene	5.894	75	1261	0.42	ug/L		84
30) 2-Butanone (MEK)	5.907	43	386	0.20	ug/L		52
31) Benzene	6.156	78	1089	0.12	ug/L		55
33) iso-Butyl Alcohol	6.418	43	293	1.23	ug/L		84
35) Trichloroethene (TCE)	6.776	130	788	0.35	ug/L		88
41) c-1,3-Dichloropropene	8.127	75	259	0.09	ug/L	#	31
43) Toluene	8.389	91	1972	0.20	ug/L		90
44) Tetrachloroethene (PCE)	8.821	166	1232	0.58	ug/L		85
45) 4-Methyl-2-Pentanone (...	8.833	43	677	0.20	ug/L	#	43
46) t-1,3-Dichloropropene	8.869	75	311	0.44	ug/L	#	45
51) 2-Hexanone	9.691	43	808	0.33	ug/L		78
52) Chlorobenzene	9.952	112	1674	0.28	ug/L	#	49
53) Ethylbenzene	9.976	91	2927	0.28	ug/L		97
55) m,p-Xylenes (2)	10.110	91	4823	0.62	ug/L		96
56) o-Xylene	10.487	91	1614	0.21	ug/L		90
57) Styrene	10.536	104	1250	0.22	ug/L		82
59) Isopropylbenzene	10.755	105	2771	0.30	ug/L		94
62) Bromobenzene	11.084	156	603	0.29	ug/L	#	72
63) n-Propylbenzene	11.096	91	5418	0.52	ug/L		97
65) 2-Chlorotoluene	11.230	126	741	0.37	ug/L		99
66) 1,3,5-Trimethylbenzene	11.248	105	2785	0.41	ug/L		94
69) 4-Chlorotoluene	11.357	91	3451	0.55	ug/L		93
70) tert-Butylbenzene	11.503	91	1851	0.47	ug/L		92
71) 1,2,4-Trimethylbenzene	11.558	105	3086	0.46	ug/L		92
72) sec-Butylbenzene	11.637	105	5090	0.62	ug/L		99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051331.D
Acq On : 13 May 2019 11:25 pm
Operator : MM
Sample : 9E13041-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:25 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

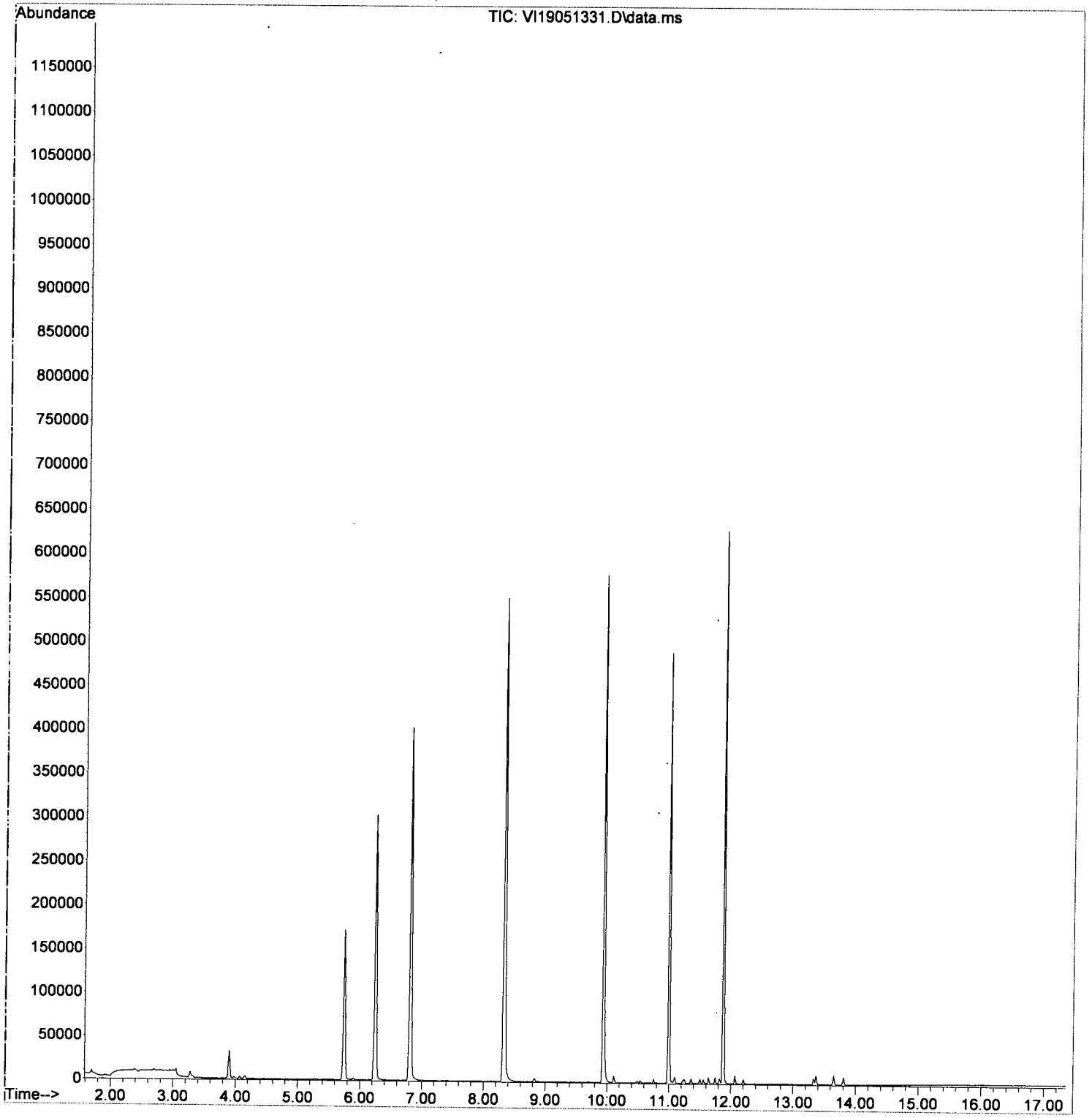
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
73) 4-Isopropyltoluene	11.747	119	4151	0.64 ug/L	97
74) 1,3-Dichlorobenzene	11.820	146	2605	0.68 ug/L	93
75) 1,4-Dichlorobenzene	11.881	146	3025	0.73 ug/L #	74
76) n-Butylbenzene	12.063	91	5390	0.95 ug/L	95
77) 1,2-Dichlorobenzene	12.203	146	1615	0.44 ug/L	95
79) Hexachlorobutadiene	13.328	223	937	1.97 ug/L	91
80) 1,2,4-Trichlorobenzene	13.365	180	3358	1.68 ug/L	95
81) Naphthalene	13.651	128	9738	1.86 ug/L	97
82) 1,2,3-Trichlorobenzene	13.809	180	3276	1.75 ug/L	93

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051331.D
Acq On : 13 May 2019 11:25 pm
Operator : MM
Sample : 9E13041-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:25 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051332.D
Acq On : 13 May 2019 11:52 pm
Operator : MM
Sample : 9E13041-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:28 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

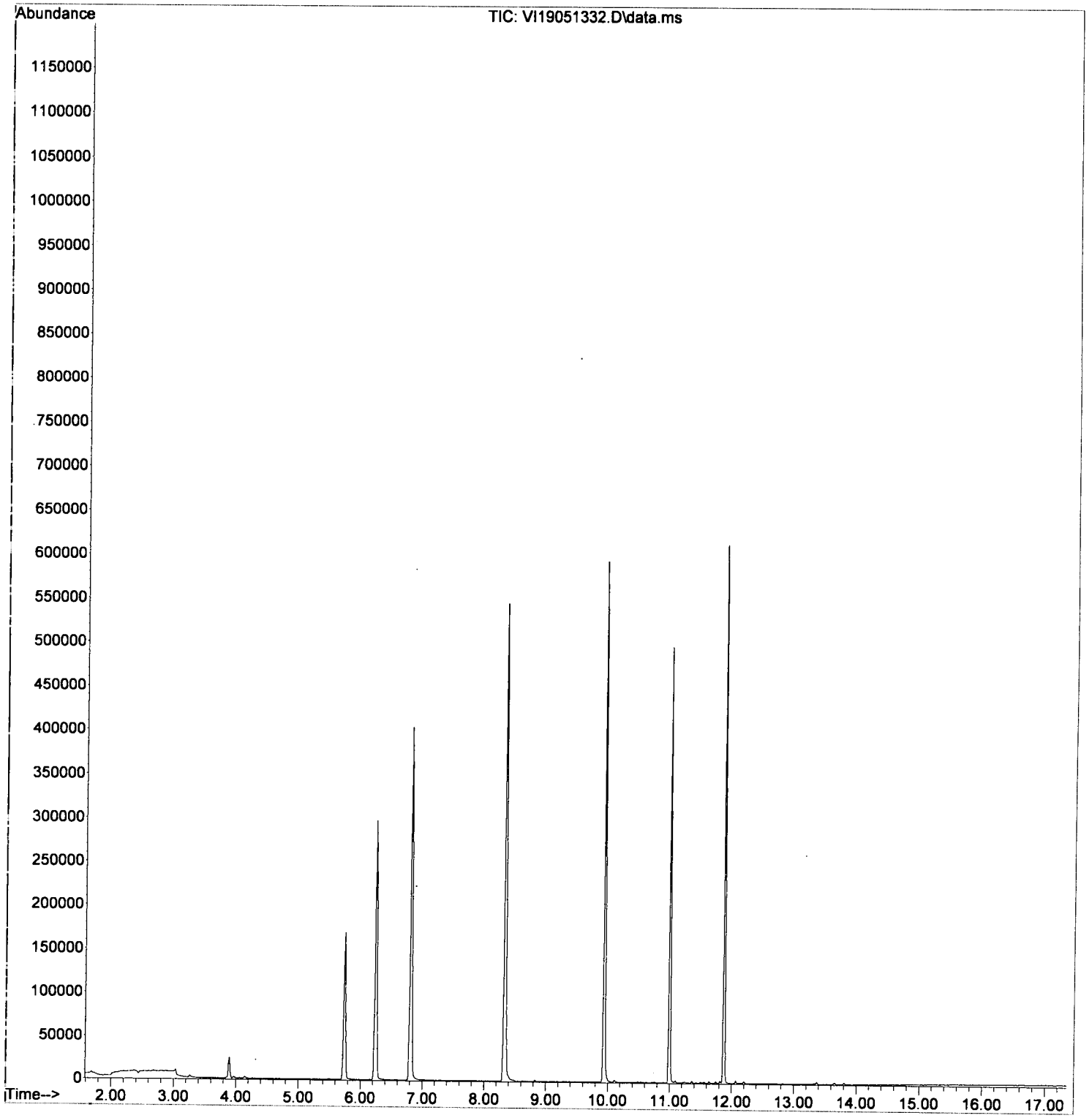
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.241	168	222244	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.934	117	318292	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	135979	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.742	111	115008	49.44	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.807	114	367993	49.86	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	434030	50.44	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	114048	52.04	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	621	0.25	ug/L		87
3) Chloromethane	1.904	50	510	0.18	ug/L		87
4) Vinyl Chloride	2.007	62	251	0.08	ug/L	#	42
5) Bromomethane	2.372	96	534	0.30	ug/L	#	60
7) Trichlorofluoromethane	2.682	101	442	0.15	ug/L	#	77
8) 1,1-Dichloroethene	3.254	61	208	0.08	ug/L	#	28
9) Carbon Disulfide	3.266	76	3111	0.57	ug/L		94
10) Freon 113	3.309	101	437	0.22	ug/L	#	69
13) Methylene Chloride	3.893	84	11120	1.89	ug/L		92
14) Acetone	3.972	43	2321	1.86	ug/L		94
15) t-1,2-Dichloroethene	4.057	61	403	0.15	ug/L	#	67
29) 1,1-Dichloropropene	5.894	75	403	0.14	ug/L	#	43
35) Trichloroethene (TCE)	6.770	130	222	0.10	ug/L	#	73
43) Toluene	8.389	91	863	0.09	ug/L		91
44) Tetrachloroethene (PCE)	8.827	166	514	0.25	ug/L		77
52) Chlorobenzene	9.952	112	578	0.10	ug/L	#	1
53) Ethylbenzene	9.976	91	1085	0.10	ug/L		90
55) m,p-Xylenes (2)	10.110	91	1856	0.24	ug/L		90
56) o-Xylene	10.494	91	499	0.07	ug/L		88
57) Styrene	10.542	104	442	0.08	ug/L		78
59) Isopropylbenzene	10.755	105	929	0.10	ug/L		79
62) Bromobenzene	11.084	156	122	0.06	ug/L	#	64
63) n-Propylbenzene	11.096	91	2048	0.20	ug/L		90
65) 2-Chlorotoluene	11.230	126	193	0.10	ug/L	#	90
66) 1,3,5-Trimethylbenzene	11.248	105	1003	0.15	ug/L		80
69) 4-Chlorotoluene	11.363	91	1257	0.21	ug/L		90
70) tert-Butylbenzene	11.503	91	515	0.13	ug/L	#	66
71) 1,2,4-Trimethylbenzene	11.558	105	1077	0.17	ug/L		85
72) sec-Butylbenzene	11.637	105	1641	0.20	ug/L		99
73) 4-Isopropyltoluene	11.747	119	1378	0.22	ug/L		98
74) 1,3-Dichlorobenzene	11.820	146	894	0.24	ug/L		88
75) 1,4-Dichlorobenzene	11.881	146	1174	0.29	ug/L	#	19
76) n-Butylbenzene	12.069	91	1971	0.36	ug/L		90
77) 1,2-Dichlorobenzene	12.203	146	475	0.13	ug/L		83
79) Hexachlorobutadiene	13.322	223	154	0.33	ug/L	#	72
80) 1,2,4-Trichlorobenzene	13.365	180	1032	0.53	ug/L		98
81) Naphthalene	13.651	128	2413	0.85	ug/L		89
82) 1,2,3-Trichlorobenzene	13.803	180	916	0.50	ug/L		84

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051332.D
Acq On : 13 May 2019 11:52 pm
Operator : MM
Sample : 9E13041-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:28 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051333.D
Acq On : 14 May 2019 12:19 am
Operator : MM
Sample : 9E13041-ICV1
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:31 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.247	168	234607	50.00 ug/L	0.00
39) Chlorobenzene-d5 (I)	9.934	117	340094	50.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4...	11.869	152	162488	50.00 ug/L	0.00
System Monitoring Compounds					
28) Dibromofluoromethane (S)	5.742	111	121808	49.61 ug/L	0.00
34) 1,4-Difluorobenzene (S)	6.813	114	386624	49.62 ug/L	0.00
42) Toluene-d8 (S)	8.328	98	457953	49.81 ug/L	0.00
61) 4-Bromofluorobenzene (S)	10.993	174	127554	48.71 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.697	85	47420	18.14 ug/L	98
3) Chloromethane	1.916	50	58668	20.00 ug/L	96
4) Vinyl Chloride	2.019	62	65198	18.63 ug/L	97
5) Bromomethane	2.384	96	33879	17.82 ug/L	95
6) Chloroethane	2.524	64	17620	14.54 ug/L	86
7) Trichlorofluoromethane	2.682	101	61999	19.42 ug/L	95
8) 1,1-Dichloroethene	3.260	61	64847	22.98 ug/L	97
9) Carbon Disulfide	3.272	76	99856	17.46 ug/L	98
10) Freon 113	3.315	101	41457	19.55 ug/L	99
11) Iodomethane	3.412	142	11165	14.70 ug/L	87
13) Methylene Chloride	3.899	84	53719	20.79 ug/L	92
14) Acetone	3.972	43	48148	36.56 ug/L	96
15) t-1,2-Dichloroethene	4.069	61	64567	22.99 ug/L	97
16) n-Hexane	4.149	86	9263	19.52 ug/L	99
17) Methyl-tert-butyl-ether	4.197	73	140479	19.31 ug/L	95
18) 1,1-Dichloroethane	4.714	63	86541	22.03 ug/L	97
19) Acrylonitrile	4.781	53	28691	20.40 ug/L	97
21) c-1,2-Dichloroethene	5.274	61	64567	20.85 ug/L	98
22) 2,2-Dichloropropane	5.383	77	51972	18.19 ug/L	98
23) Bromochloromethane	5.475	130	31497	21.88 ug/L	91
24) Chloroform	5.560	83	81945	20.05 ug/L	98
25) Carbon Tetrachloride	5.688	117	50411	21.05 ug/L	92
26) Tetrahydrofuran	5.730	42	26355	18.69 ug/L	87
27) 1,1,1-Trichloroethane	5.761	97	67573	21.45 ug/L	97
29) 1,1-Dichloropropene	5.894	75	64286	20.65 ug/L	97
30) 2-Butanone (MEK)	5.888	43	77076	37.82 ug/L	96
31) Benzene	6.150	78	191759	20.03 ug/L	97
32) 1,2-Dichloroethane (EDC)	6.369	62	66211	21.27 ug/L	94
33) iso-Butyl Alcohol	6.399	43	123422	500.68 ug/L	94
35) Trichloroethene (TCE)	6.771	130	48308	20.90 ug/L	95
36) Dibromomethane	7.227	93	31403	20.42 ug/L	90
37) 1,2-Dichloropropane	7.336	63	49148	20.22 ug/L	93
38) Bromodichloromethane	7.409	83	55858	20.27 ug/L	94
41) c-1,3-Dichloropropene	8.121	75	63528	19.91 ug/L	89
43) Toluene	8.389	91	196705	19.36 ug/L	99
44) Tetrachloroethene (PCE)	8.821	166	45227	20.37 ug/L	86
45) 4-Methyl-2-Pentanone (...	8.827	43	143624	39.71 ug/L	97
46) t-1,3-Dichloropropene	8.863	75	55665	18.51 ug/L	97
47) 1,1,2-Trichloroethane	9.034	97	45663	20.52 ug/L	96
48) Dibromochloromethane	9.216	129	39551	18.64 ug/L	97
49) 1,3-Dichloropropane	9.313	76	78505	20.23 ug/L	93
50) 1,2-Dibromoethane (EDB)	9.453	107	46127	20.84 ug/L	96
51) 2-Hexanone	9.678	43	105702	41.31 ug/L	91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051333.D
Acq On : 14 May 2019 12:19 am
Operator : MM
Sample : 9E13041-ICV1
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:31 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

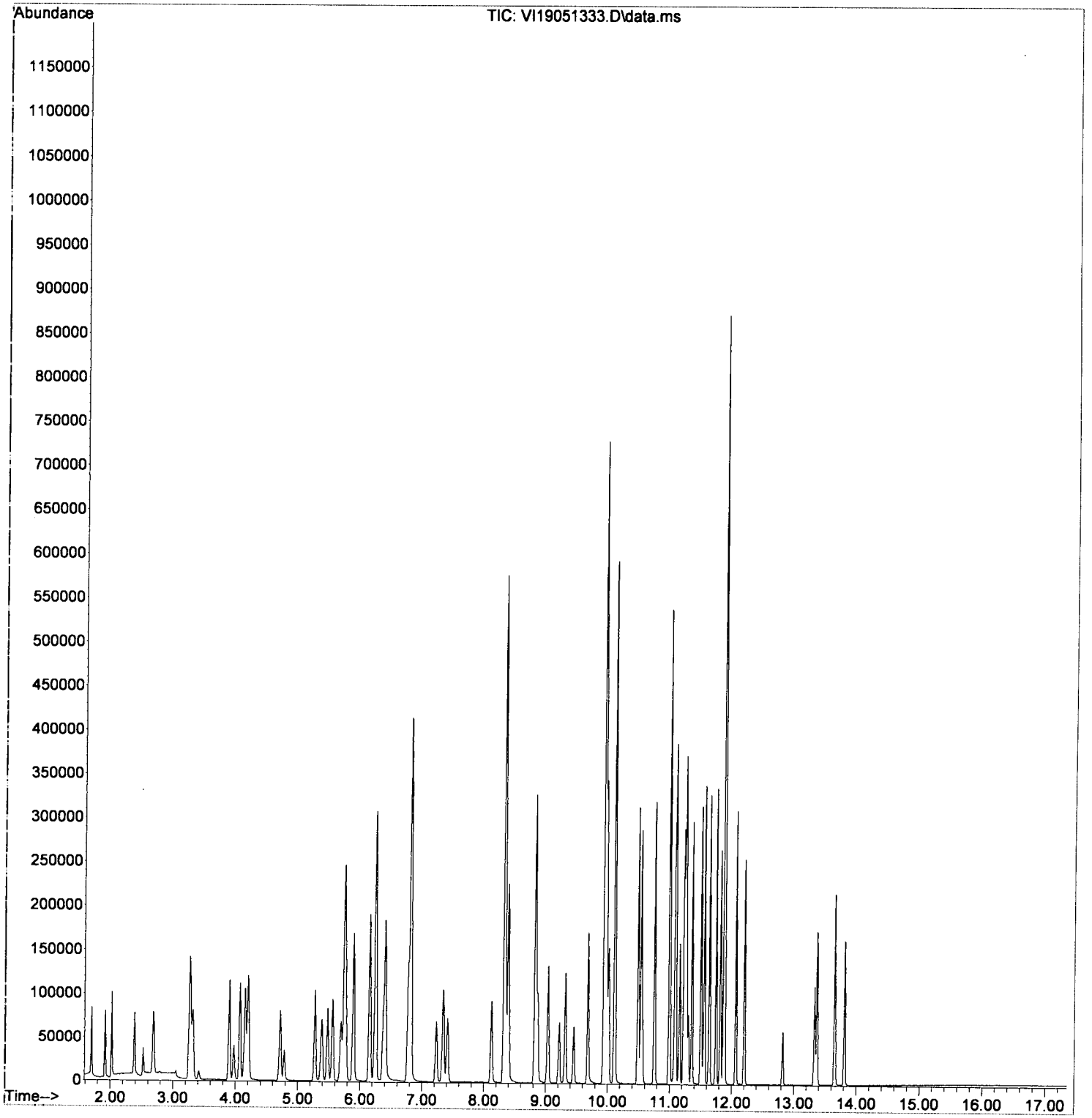
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) Chlorobenzene	9.952	112	128080	20.08	ug/L		96
53) Ethylbenzene	9.977	91	214192	19.23	ug/L		99
54) 1,1,1,2-Tetrachloroethane	10.013	131	38639	19.34	ug/L		97
55) m,p-Xylenes (2)	10.110	91	327509	39.79	ug/L		99
56) o-Xylene	10.488	91	165909	20.23	ug/L		98
57) Styrene	10.536	104	128754	21.53	ug/L		95
58) Bromoform	10.561	173	25780	20.61	ug/L		97
59) Isopropylbenzene	10.755	105	195674	20.27	ug/L		100
62) Bromobenzene	11.078	156	50578	20.88	ug/L	#	78
63) n-Propylbenzene	11.096	91	231209	19.10	ug/L		99
64) 1,1,2,2-Tetrachloroethane	11.157	85	46175	20.20	ug/L		95
65) 2-Chlorotoluene	11.224	126	47977	20.65	ug/L		91
66) 1,3,5-Trimethylbenzene	11.248	105	159885	20.34	ug/L		98
67) 1,2,3-Trichloropropane	11.266	110	22361	19.56	ug/L		98
68) t-1,4-Dichloro-2-butene	11.297	53	14942	20.17	ug/L	#	68
69) 4-Chlorotoluene	11.358	91	144910	19.86	ug/L		96
70) tert-Butylbenzene	11.504	91	90647	19.80	ug/L		95
71) 1,2,4-Trimethylbenzene	11.558	105	159952	20.67	ug/L		96
72) sec-Butylbenzene	11.637	105	194357	20.22	ug/L		99
73) 4-Isopropyltoluene	11.747	119	159895	21.06	ug/L		99
74) 1,3-Dichlorobenzene	11.814	146	91307	20.41	ug/L		98
75) 1,4-Dichlorobenzene	11.881	146	94040	19.61	ug/L		95
76) n-Butylbenzene	12.063	91	139546	21.15	ug/L		97
77) 1,2-Dichlorobenzene	12.203	146	88488	20.72	ug/L		99
78) 1,2-Dibromo-3-Chloropr...	12.818	157	14166	19.23	ug/L		73
79) Hexachlorobutadiene	13.329	223	12366	22.37	ug/L		91
80) 1,2,4-Trichlorobenzene	13.365	180	49773	21.41	ug/L		95
81) Naphthalene	13.651	128	159695	19.39	ug/L		97
82) 1,2,3-Trichlorobenzene	13.809	180	48023	22.13	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051333.D
Acq On : 14 May 2019 12:19 am
Operator : MM
Sample : 9E13041-ICV1
Misc : 1X 5mL 20/40PPB VOC
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:31 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051334.D
Acq On : 14 May 2019 12:46 am
Operator : MM
Sample : 9E13041-IBL6
Misc : 1X 5mL DI
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:34 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

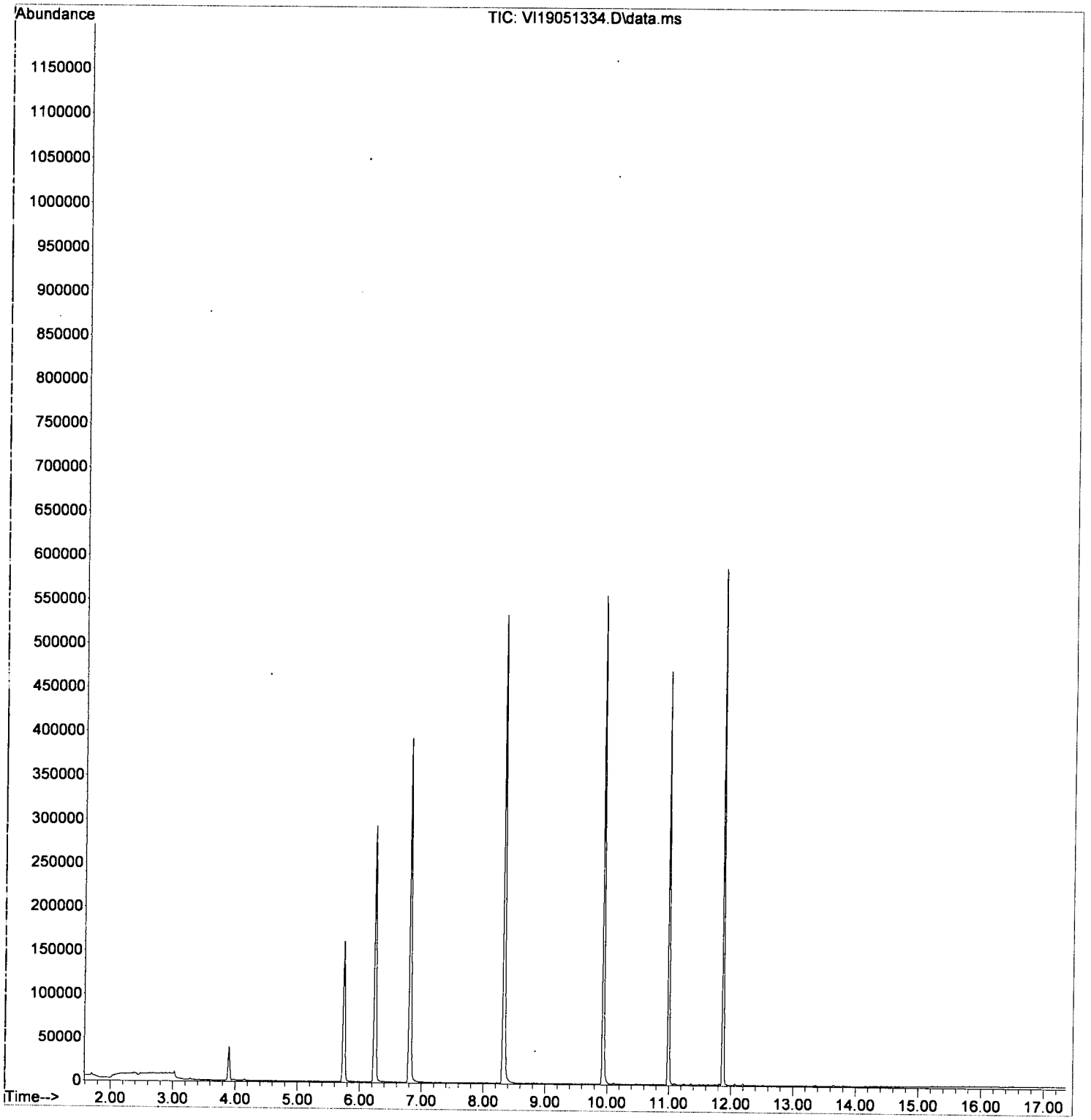
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.247	168	220783	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	9.940	117	309323	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	11.874	152	132826	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.748	111	111859	48.41	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.813	114	361397	49.29	ug/L		0.00
42) Toluene-d8 (S)	8.328	98	425186	50.84	ug/L		0.00
61) 4-Bromofluorobenzene (S)	10.992	174	110974	51.84	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.703	85	319	0.13	ug/L	#	49
3) Chloromethane	1.916	50	388	0.14	ug/L	#	47
5) Bromomethane	2.390	96	483	0.27	ug/L		72
6) Chloroethane	2.530	64	711	0.22	ug/L	#	36
7) Trichlorofluoromethane	2.700	101	207	0.07	ug/L		77
9) Carbon Disulfide	3.278	76	1906	0.35	ug/L		89
10) Freon 113	3.315	101	267	0.13	ug/L	#	19
13) Methylene Chloride	3.899	84	18191	5.31	ug/L		94
14) Acetone	3.978	43	2200	1.78	ug/L		95
15) t-1,2-Dichloroethene	4.069	61	258	0.10	ug/L	#	23
43) Toluene	8.395	91	591	0.06	ug/L		90
44) Tetrachloroethene (PCE)	8.827	166	279	0.14	ug/L	#	64
52) Chlorobenzene	9.952	112	509	0.09	ug/L	#	1
53) Ethylbenzene	9.976	91	794	0.08	ug/L		92
55) m,p-Xylenes (2)	10.116	91	1342	0.18	ug/L		93
59) Isopropylbenzene	10.755	105	647	0.07	ug/L		54
63) n-Propylbenzene	11.096	91	1442	0.15	ug/L		85
66) 1,3,5-Trimethylbenzene	11.248	105	618	0.10	ug/L		87
69) 4-Chlorotoluene	11.357	91	800	0.13	ug/L		81
70) tert-Butylbenzene	11.503	91	314	0.08	ug/L	#	57
71) 1,2,4-Trimethylbenzene	11.558	105	649	0.10	ug/L		82
72) sec-Butylbenzene	11.637	105	1149	0.15	ug/L		59
73) 4-Isopropyltoluene	11.747	119	990	0.16	ug/L		96
74) 1,3-Dichlorobenzene	11.820	146	630	0.17	ug/L		97
75) 1,4-Dichlorobenzene	11.887	146	784	0.20	ug/L	#	48
76) n-Butylbenzene	12.069	91	1207	0.22	ug/L		95
77) 1,2-Dichlorobenzene	12.203	146	388	0.11	ug/L	#	71
80) 1,2,4-Trichlorobenzene	13.371	180	638	0.34	ug/L		80
81) Naphthalene	13.651	128	2016	0.80	ug/L		81
82) 1,2,3-Trichlorobenzene	13.815	180	603	0.34	ug/L	#	62

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051334.D
Acq On : 14 May 2019 12:46 am
Operator : MM
Sample : 9E13041-IBL6
Misc : 1X 5mL DI
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:53:34 2019
Quant Method : C:\msdchem\1\methods\VI190514W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue May 14 09:28:30 2019
Response via : Initial Calibration

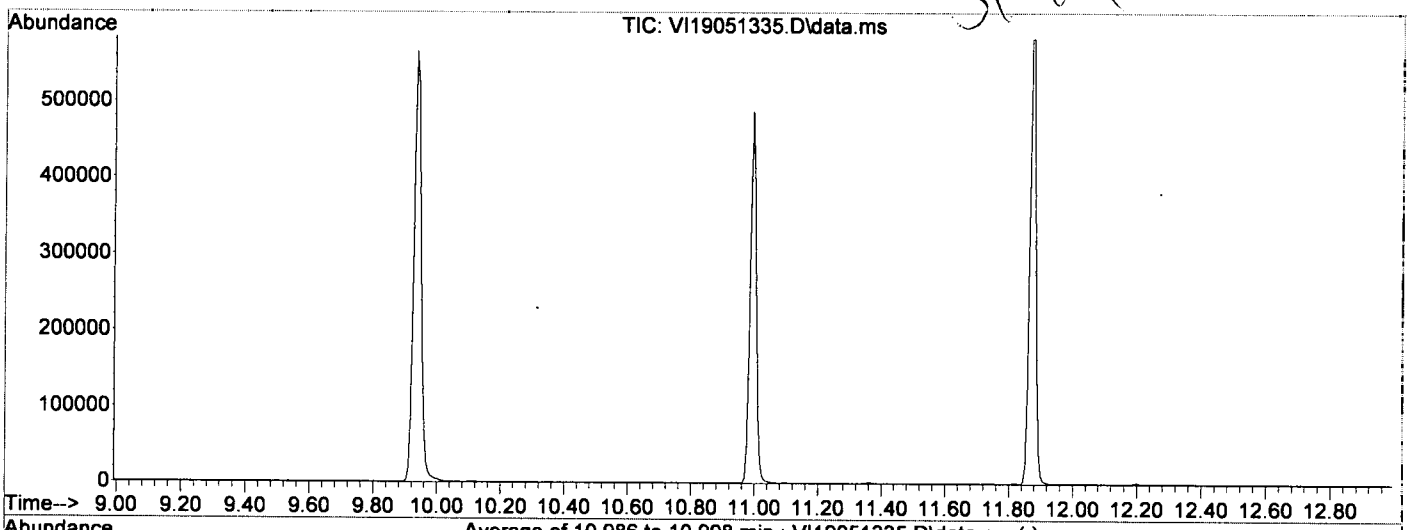


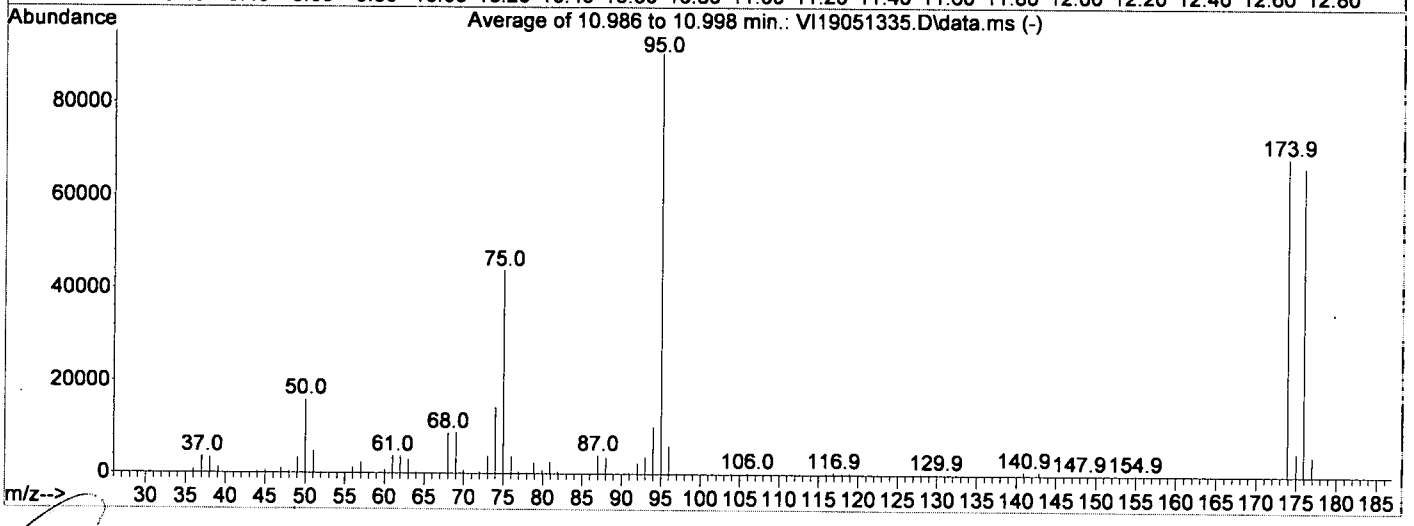
BFB

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051335.D
Acq On : 14 May 2019 1:13 am
Operator : MM
Sample : 9E13041-TUN2
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1

Integration File: APEXG.P

Method : C:\msdchem\1\methods\VI190514G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue May 14 10:07:28 2019





AutoFind: Scans 1546, 1547, 1548; Background Corrected with Scan 1539

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.6	15964	PASS
75	95	30	60	48.4	43915	PASS
95	95	100	100	100.0	90749	PASS
96	95	5	9	6.7	6122	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	75.6	68568	PASS
175	174	5	9	7.2	4955	PASS
176	174	95	101	97.1	66573	PASS
177	176	5	9	6.5	4324	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051335.D
Acq On : 14 May 2019 1:13 am
Operator : MM
Sample : 9E13041-TUN2
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:12:26 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

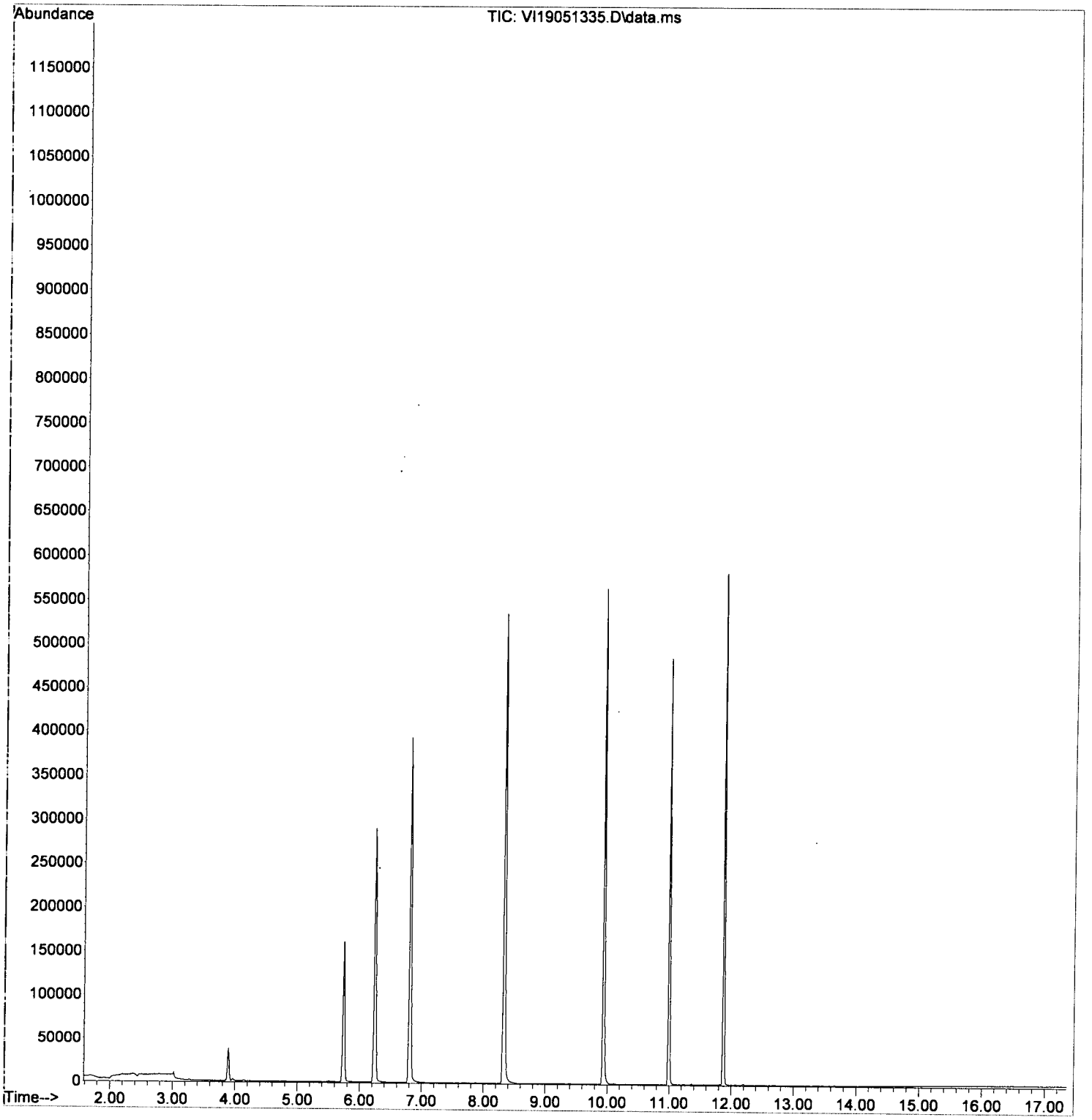
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.241	168	218317	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	359661	49.37	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	111030	47.80	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	423095	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	310382	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.875	150	208261	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	-19174m	32.78	ug/L	
5) TPHg (C5-C9)	9.910	TIC	423815m	28.38	ug/L	
6) TPHg (C6-C10)	9.910	TIC	316768m	25.21	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	433370m	30.04	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051335.D
Acq On : 14 May 2019 1:13 am
Operator : MM
Sample : 9E13041-TUN2
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

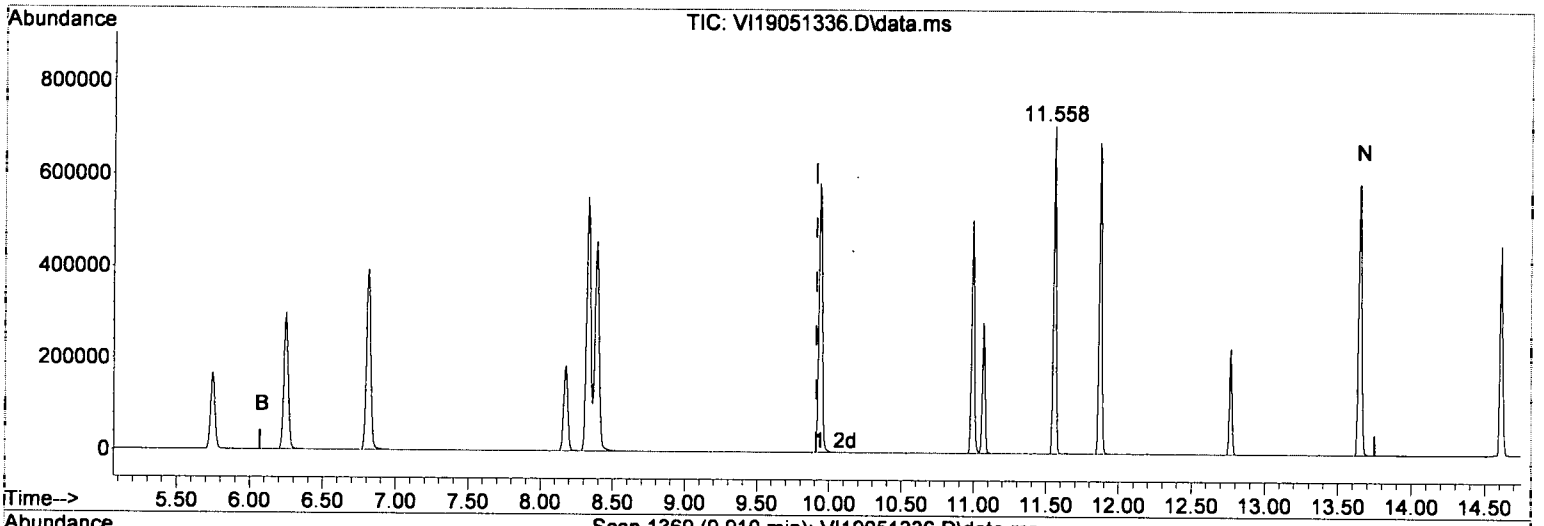
Quant Time: May 14 10:12:26 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

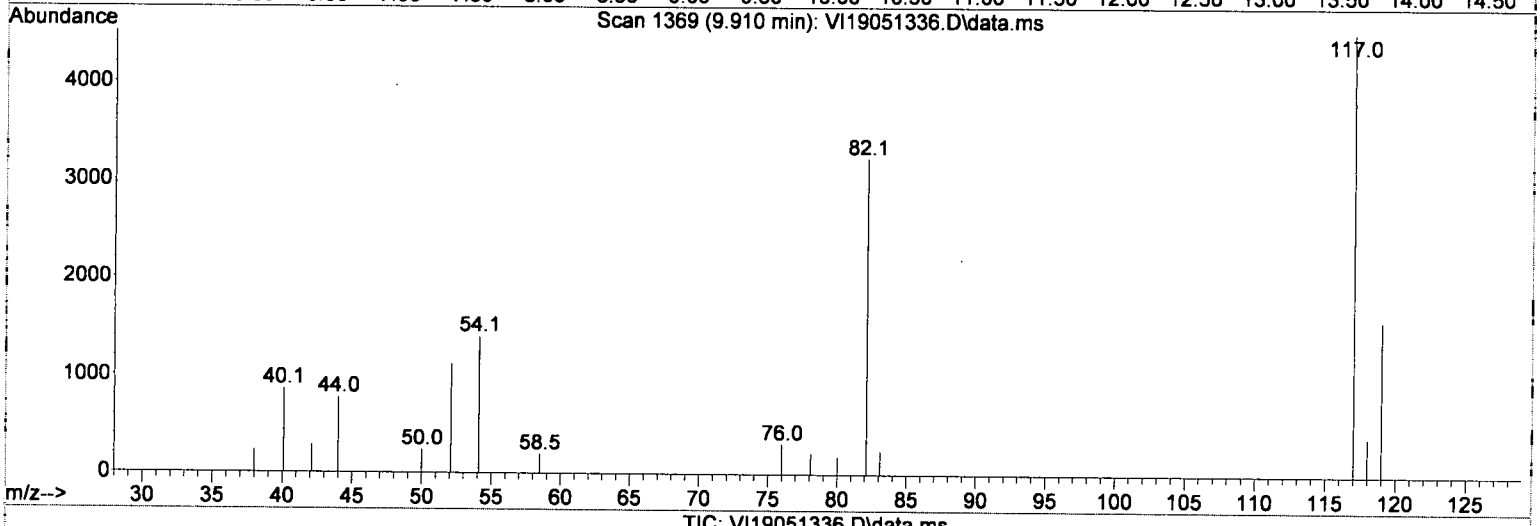


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051336.D
Acq On : 14 May 2019 1:40 am
Operator : MM
Sample : 9E13041-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:12:43 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





TIC: VI19051336.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.910min (0.000) 565.25 ug/L m

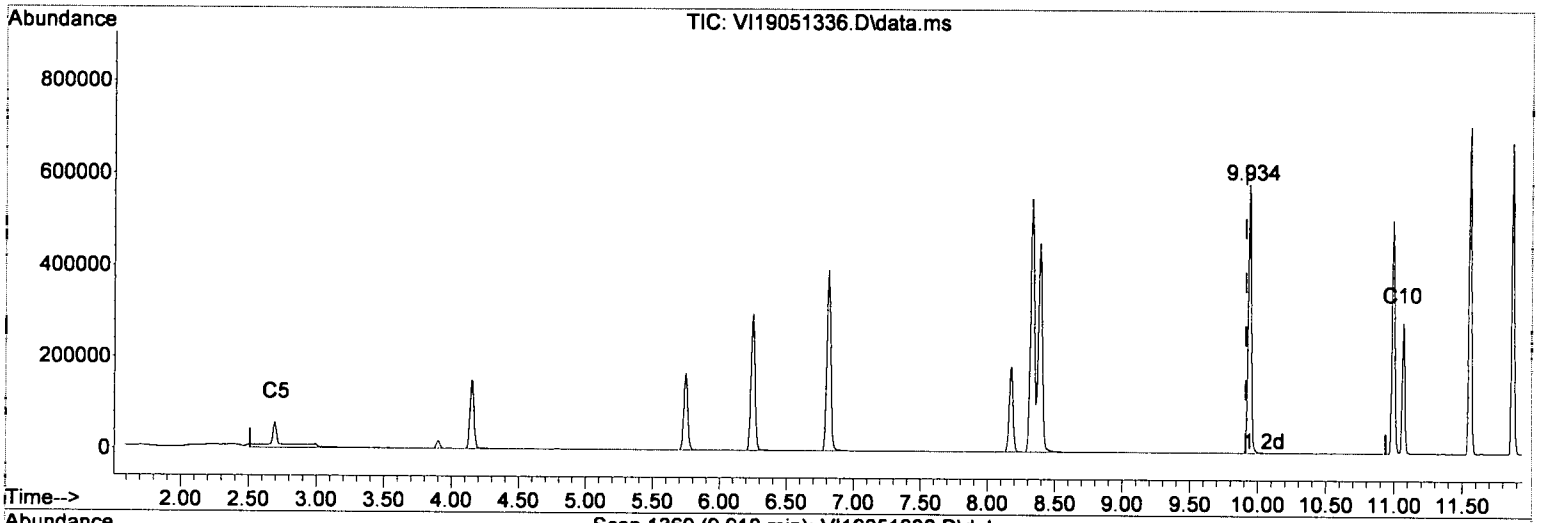
response 3695874

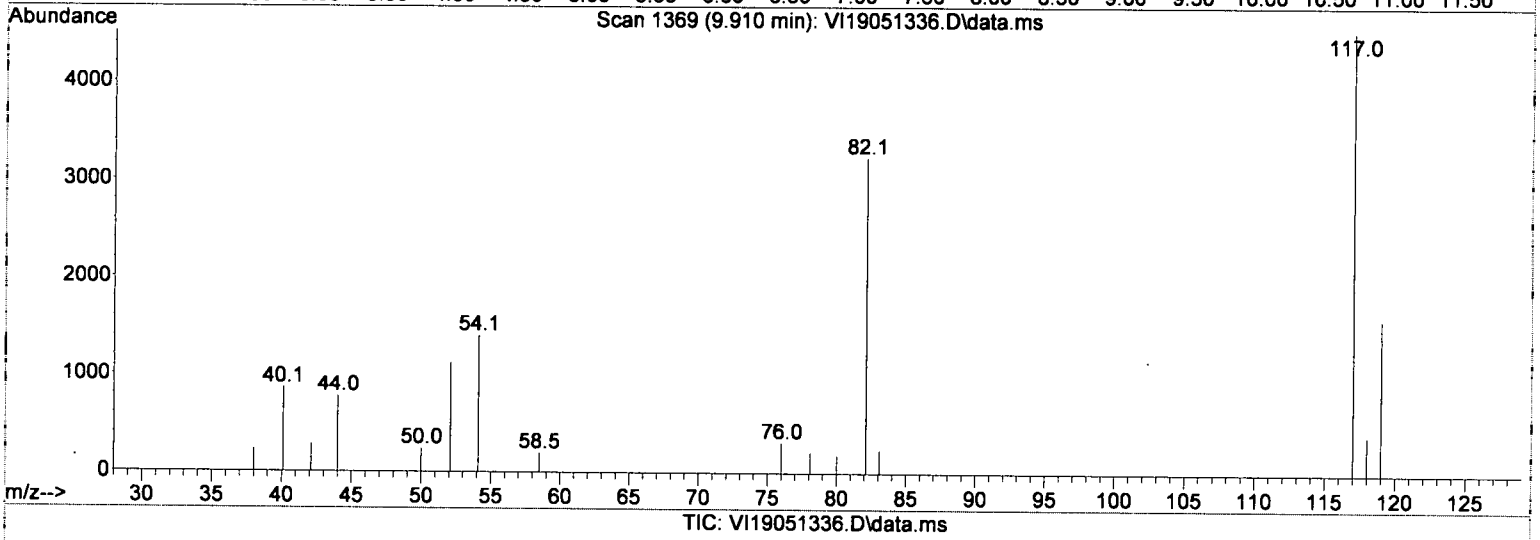
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.00#
0.00	0.00	0.76#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051336.D
Acq On : 14 May 2019 1:40 am
Operator : MM
Sample : 9E13041-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:12:43 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





TIC: VI19051336.D\data.ms

(5) TPHg (C5-C9) (H)

9.910min (0.000) 216.20 ug/L m

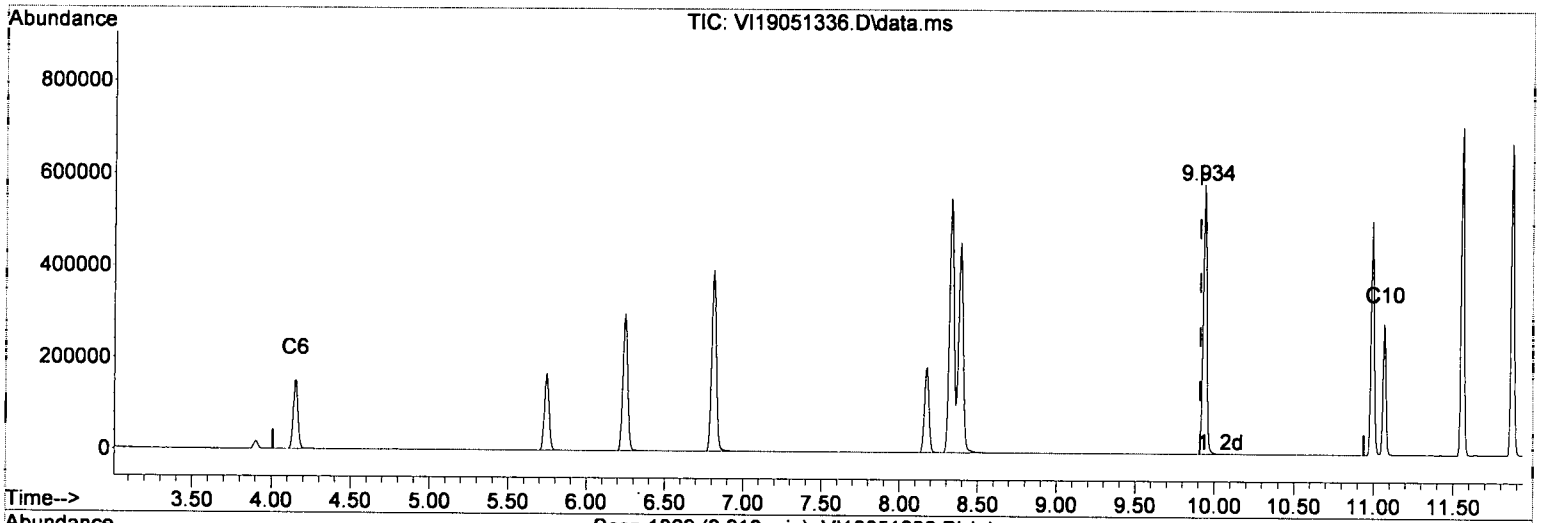
response 2105852

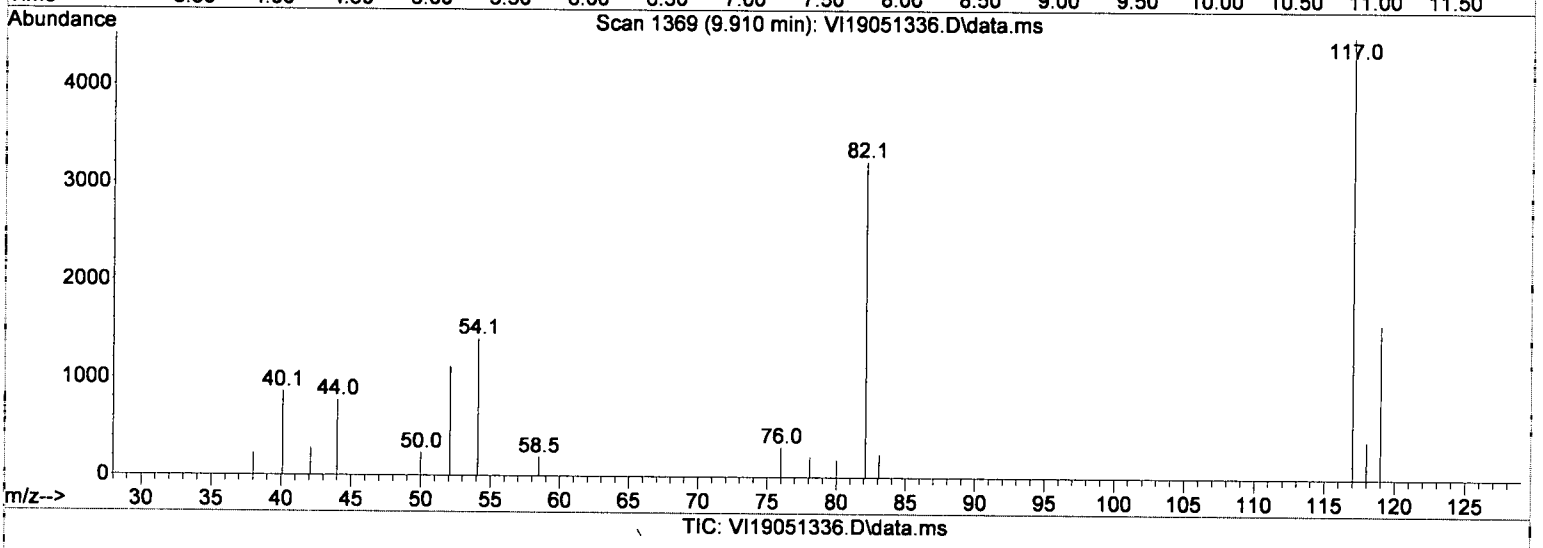
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.76#
0.00	0.00	1.34#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051336.D
Acq On : 14 May 2019 1:40 am
Operator : MM
Sample : 9E13041-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:12:43 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





TIC: VI19051336.D\data.ms

(6) TPHg (C6-C10) (H)

9.910min (0.000) 241.74 ug/L m

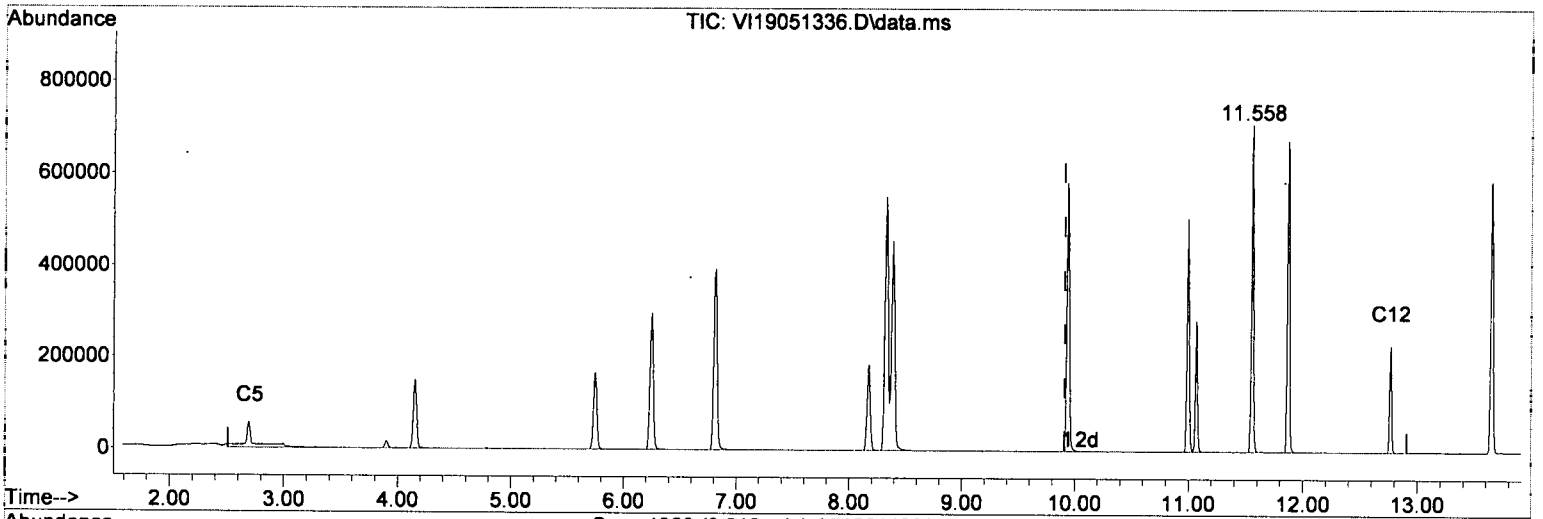
response 1954002

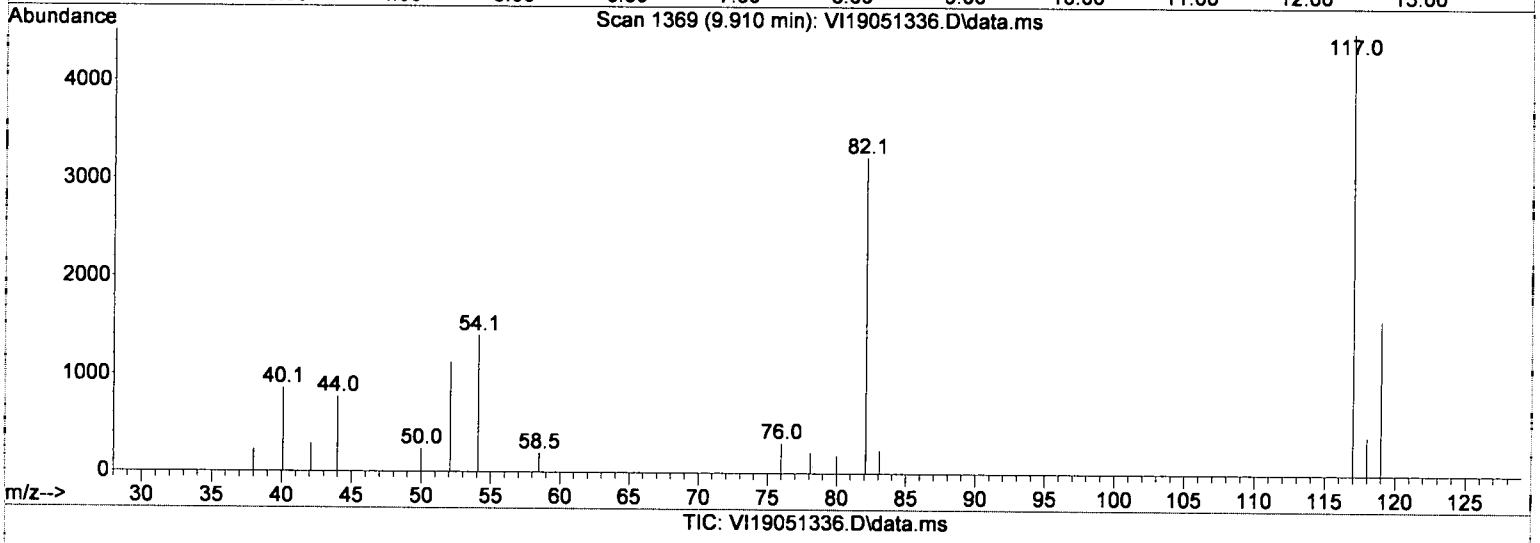
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.89#
0.00	0.00	1.44#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051336.D
Acq On : 14 May 2019 1:40 am
Operator : MM
Sample : 9E13041-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:12:43 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





TIC: VI19051336.D\data.ms

(7) CA-LUFT (C5-C12) (H)

9.910min (0.000) 330.33 ug/L m

response 3647573

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.01#
0.00	0.00	0.77#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051336.D
Acq On : 14 May 2019 1:40 am
Operator : MM
Sample : 9E13041-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:12:43 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

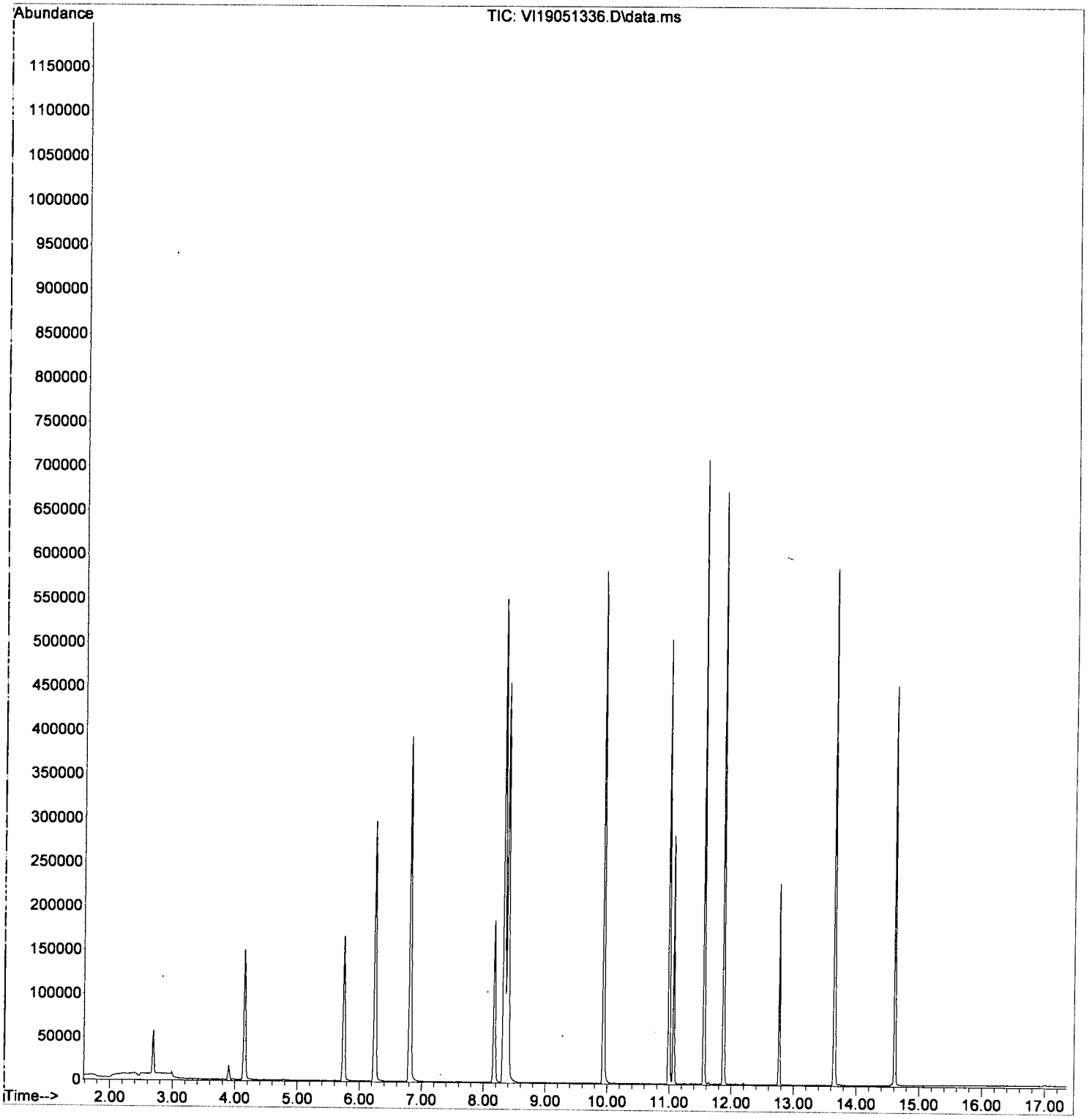
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	221995	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.813	114	366195	49.43	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	117241	49.64	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	440279	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	322496	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.869	150	233103	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	3695874m	565.25	ug/L	
5) TPHg (C5-C9)	9.910	TIC	2105852m	216.20	ug/L	
6) TPHg (C6-C10)	9.910	TIC	1954002m	241.74	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	3647573m	330.33	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051336.D
Acq On : 14 May 2019 1:40 am
Operator : MM
Sample : 9E13041-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:12:43 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051337.D
Acq On : 14 May 2019 2:07 am
Operator : MM
Sample : 9E13041-IBL7
Misc : 1X 5mL DI
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:37 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

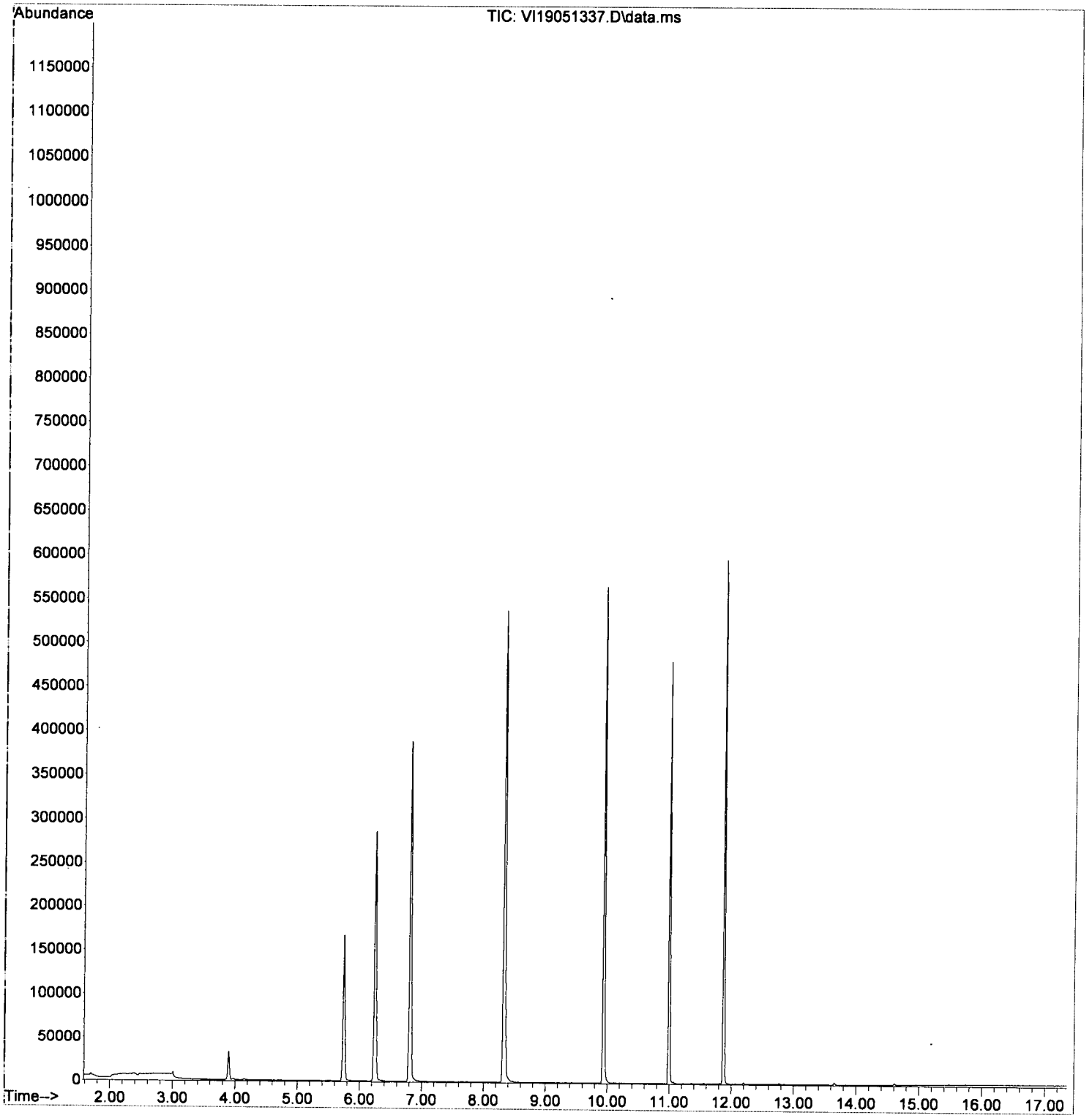
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	218861	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.813	114	363866	49.82	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.993	174	111609	47.93	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	426835	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	311627	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.875	150	209215	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	1382m	35.80	ug/L	
5) TPHg (C5-C9)	9.910	TIC	427994m	28.74	ug/L	
6) TPHg (C6-C10)	9.910	TIC	333165m	27.31	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	444992m	31.05	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051337.D
Acq On : 14 May 2019 2:07 am
Operator : MM
Sample : 9E13041-IBL7
Misc : 1X 5mL DI
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:37 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051338.D
Acq On : 14 May 2019 2:33 am
Operator : MM
Sample : 9E13041-ICB2
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:40 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

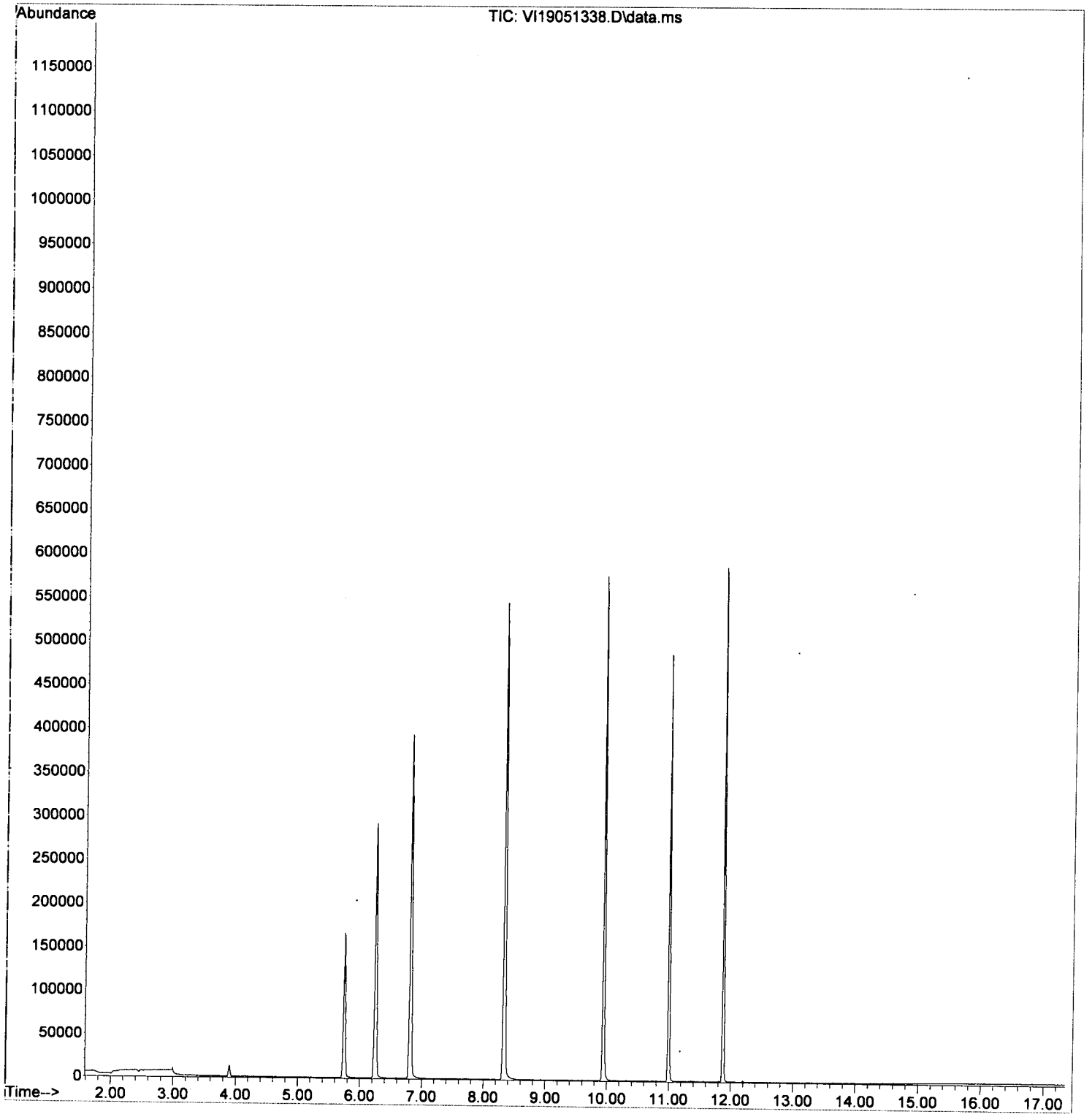
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.247	168	222193	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.813	114	367533	49.57 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.993	174	111905	47.33 ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	431640	0.00 ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.940	117	313862	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.875	150	207972	0.00 ug/L	0.00
Target Compounds					Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	18356m	38.24 ug/L	
5) TPHg (C5-C9)	9.910	TIC	394178m	24.22 ug/L	
6) TPHg (C6-C10)	9.910	TIC	367098m	31.14 ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	400571m	26.24 ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051338.D
Acq On : 14 May 2019 2:33 am
Operator : MM
Sample : 9E13041-ICB2
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:40 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051339.D
Acq On : 14 May 2019 3:00 am
Operator : MM
Sample : 9E13041-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:44 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.241	168	213252	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	354850	50.26	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	109779	49.84	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	421849	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	306762	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.874	150	208054	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	116410m	20.43	ug/L	
5) TPHg (C5-C9)	9.910	TIC	600141m	28.57	ug/L	
6) TPHg (C6-C10)	9.910	TIC	486444m	23.72	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	654959m	29.90	ug/L	
8) Benzene (NR)	6.150	78	3060	No Calib		
10) Toluene (NR)	8.389	91	27098	No Calib		
13) Naphthalene (NR)	13.651	128	875	No Calib	#	

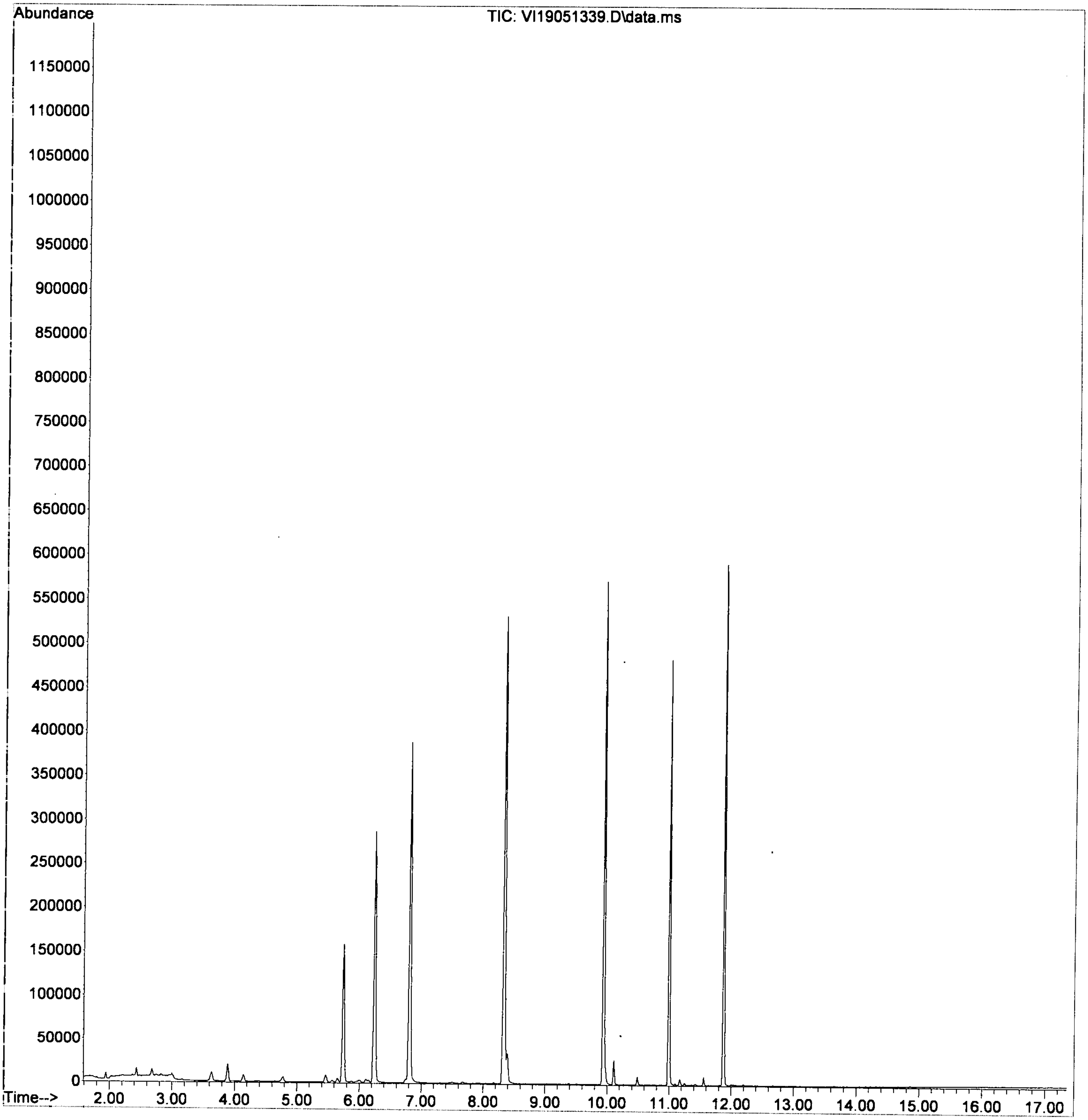
(#) = qualifier out of range (m) = manual integration (+) = signals summed

MM 5/14/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051339.D
Acq On : 14 May 2019 3:00 am
Operator : MM
Sample : 9E13041-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:44 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051340.D
Acq On : 14 May 2019 3:27 am
Operator : MM
Sample : 9E13041-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:46 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

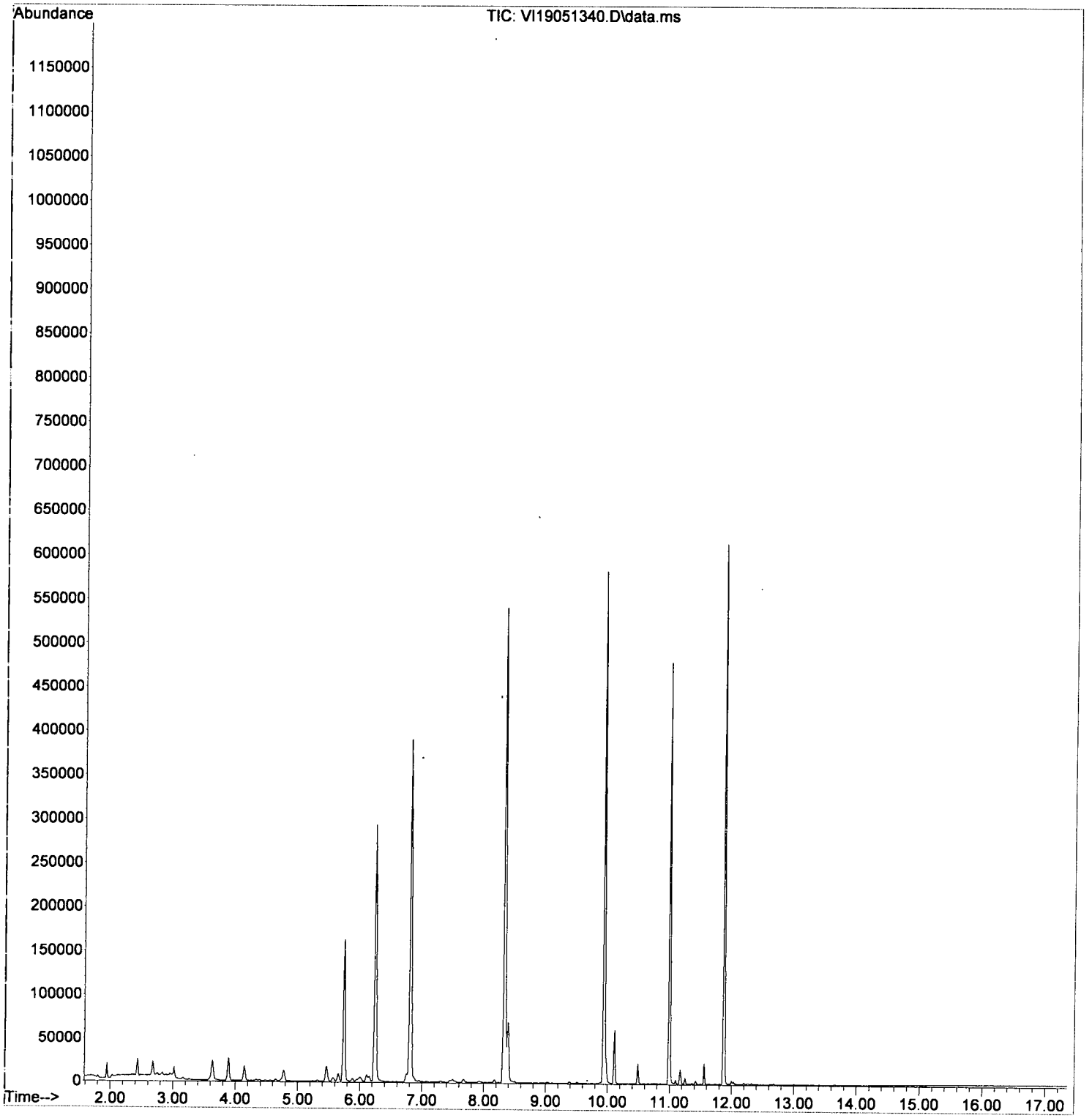
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.241	168	218202	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	360935	49.96	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	112129	49.75	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	427125	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	312242	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.875	150	215376	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	462241m	70.62	ug/L	
5) TPHg (C5-C9)	9.910	TIC	1087817m	82.79	ug/L	
6) TPHg (C6-C10)	9.910	TIC	906257m	80.08	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	1194352m	79.60	ug/L	
8) Benzene (NR)	6.150	78	6467	No Calib		
10) Toluene (NR)	8.389	91	58638	No Calib		
13) Naphthalene (NR)	13.651	128	1186	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051340.D
Acq On : 14 May 2019 3:27 am
Operator : MM
Sample : 9E13041-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:46 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051341.D
Acq On : 14 May 2019 3:54 am
Operator : MM
Sample : 9E13041-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:49 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

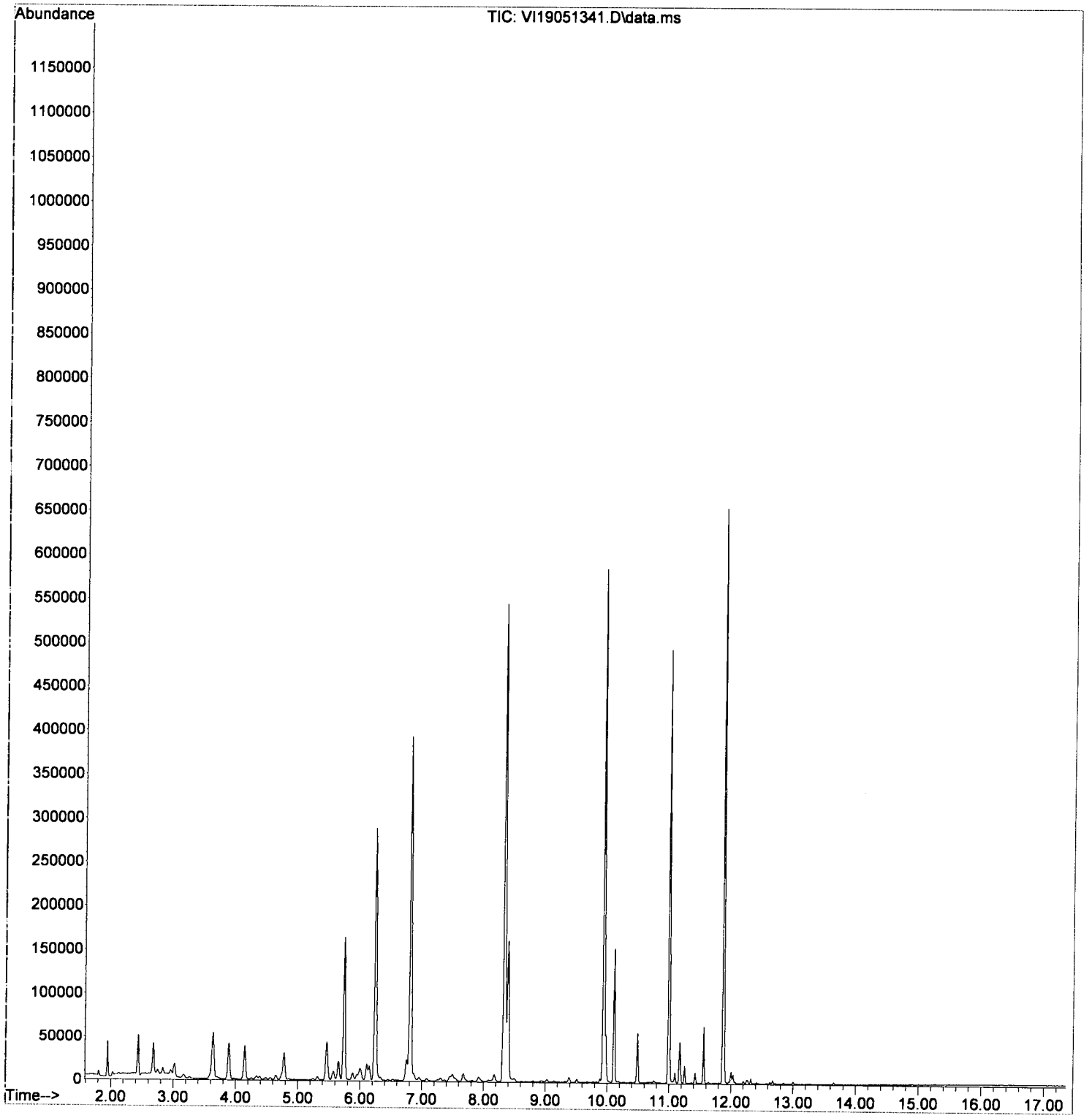
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.241	168	215486	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	360856	50.58	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	116230	52.22	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	430391	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	315148	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.868	150	224204	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	1307051m	196.35	ug/L	
5) TPHg (C5-C9)	9.910	TIC	2245546m	218.40	ug/L	
6) TPHg (C6-C10)	9.910	TIC	1868315m	215.84	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	2534619m	209.53	ug/L	
8) Benzene (NR)	6.150	78	15534	No Calib		
10) Toluene (NR)	8.389	91	141561	No Calib		
13) Naphthalene (NR)	13.651	128	2333	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051341.D
Acq On : 14 May 2019 3:54 am
Operator : MM
Sample : 9E13041-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:49 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051342.D
Acq On : 14 May 2019 4:21 am
Operator : MM
Sample : 9E13041-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:52 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

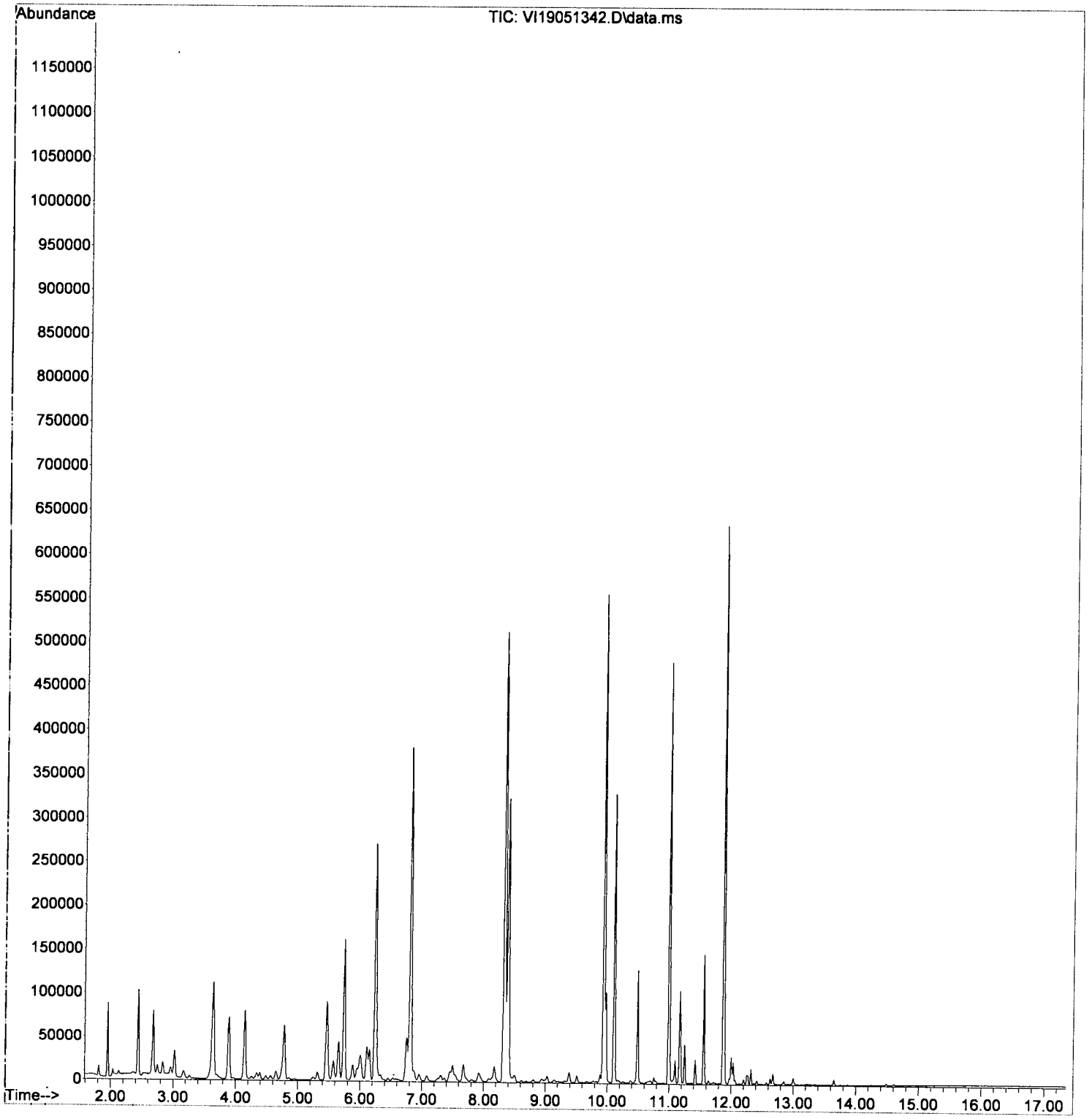
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	206716	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	345537	50.49	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	110148	51.59	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	409792	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	301792	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.874	150	218146	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	3055141m	472.58	ug/L	
5) TPHg (C5-C9)	9.910	TIC	4378941m	486.34	ug/L	
6) TPHg (C6-C10)	9.910	TIC	3711174m	493.99	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	5122974m	477.82	ug/L	
8) Benzene (NR)	6.150	78	32060	No Calib		
10) Toluene (NR)	8.389	91	287418	No Calib		
13) Naphthalene (NR)	13.651	128	5126	No Calib		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051342.D
Acq On : 14 May 2019 4:21 am
Operator : MM
Sample : 9E13041-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:52 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051343.D
Acq On : 14 May 2019 4:48 am
Operator : MM
Sample : 9E13041-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:55 2019
Quant Method : C:\msdchem\1\methods\~~VI190514G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

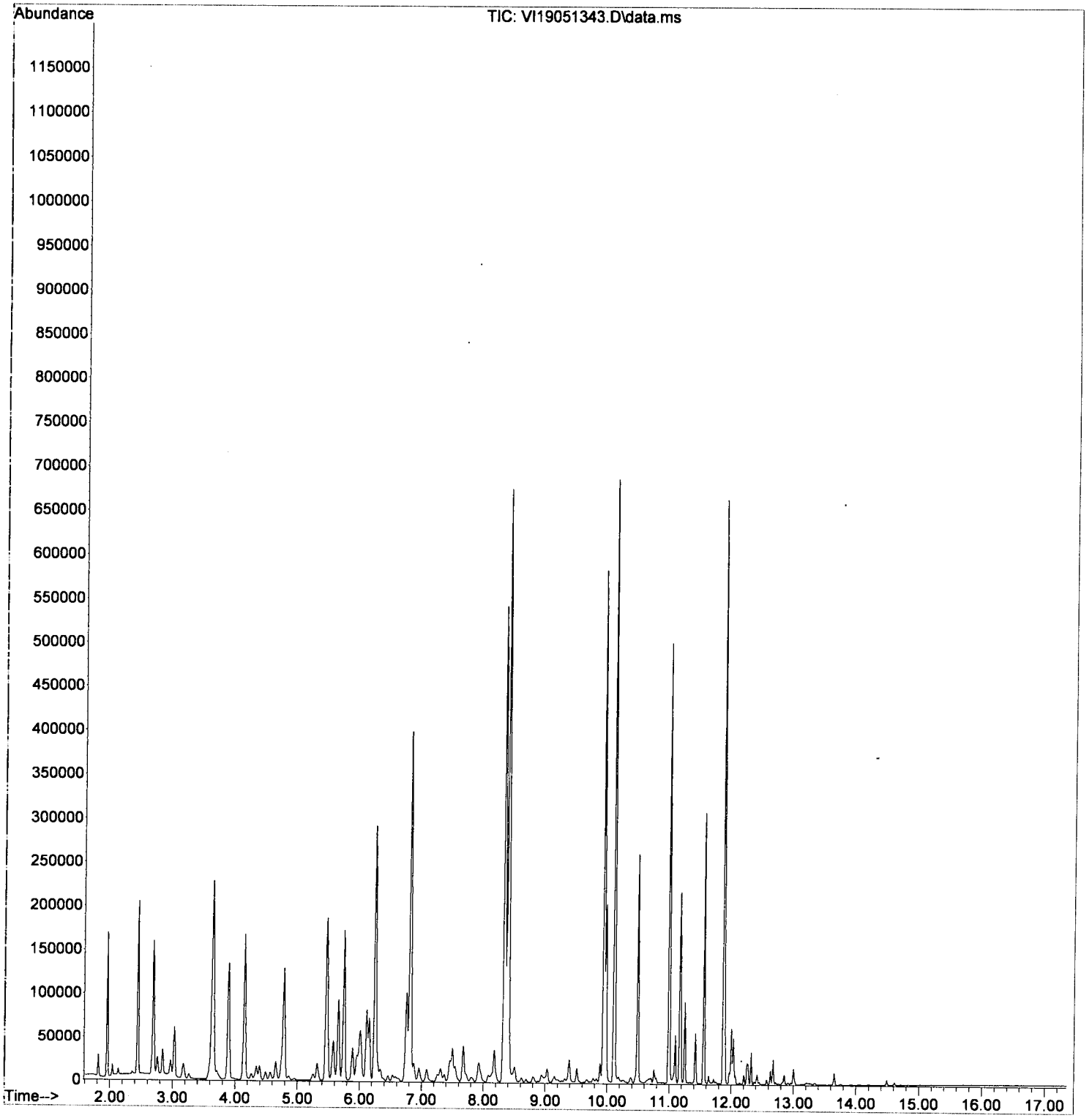
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	219634	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.813	114	364781	50.16	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.993	174	115923	51.10	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	433076	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	316583	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.869	150	225513	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	6352338m	917.08	ug/L	
5) TPHg (C5-C9)	9.910	TIC	8757972m	949.98	ug/L	
6) TPHg (C6-C10)	9.910	TIC	7402612m	963.32	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	10277511m	929.15	ug/L	
8) Benzene (NR)	6.150	78	64716	No Calib		
10) Toluene (NR)	8.389	91	588271	No Calib		
13) Naphthalene (NR)	13.651	128	10887	No Calib		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051343.D
Acq On : 14 May 2019 4:48 am
Operator : MM
Sample : 9E13041-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:55 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051344.D
Acq On : 14 May 2019 5:15 am
Operator : MM
Sample : 9E13041-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:58 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

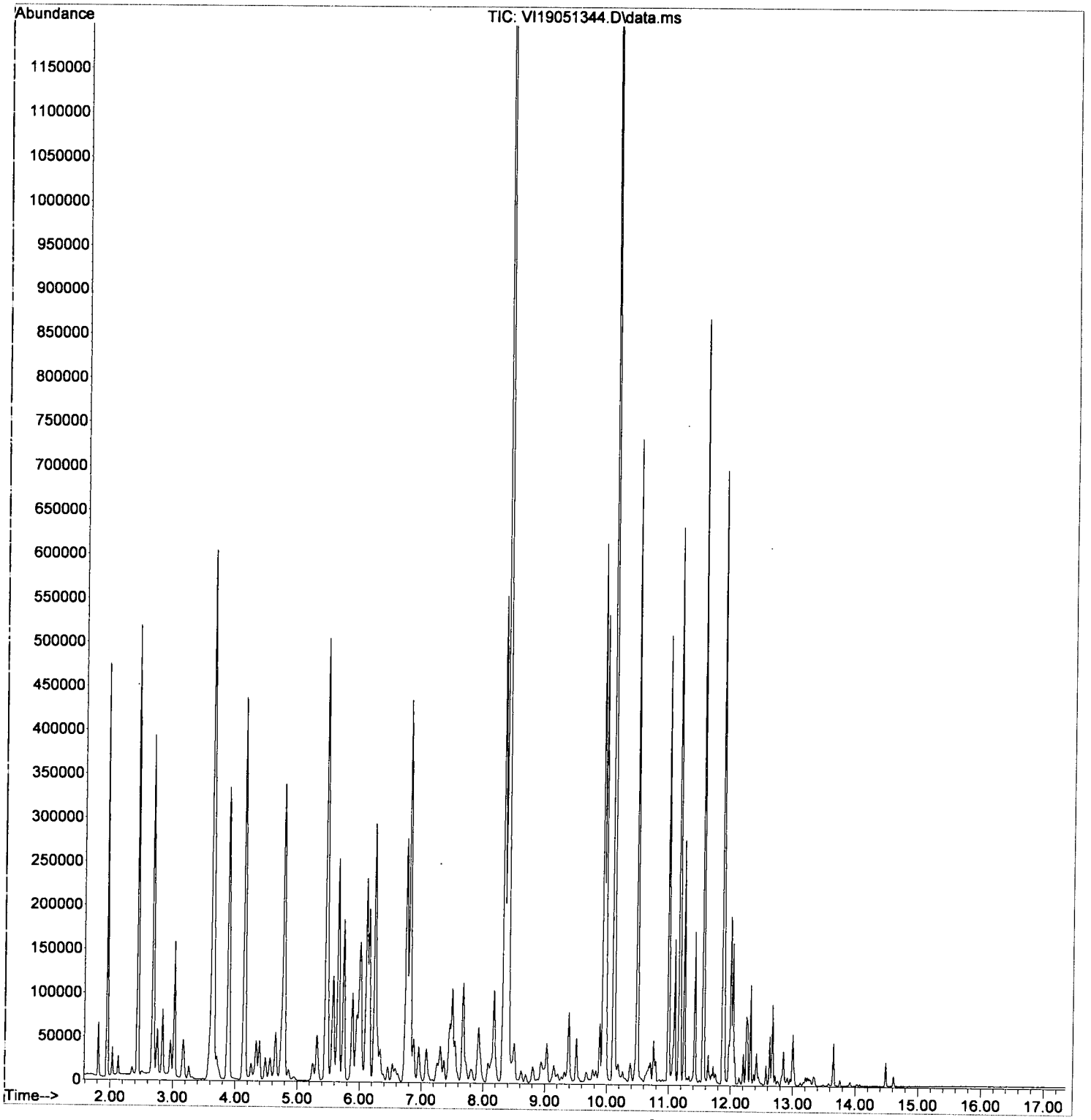
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.241	168	221987	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	369760	50.31	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	120217	52.43	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	438768	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	323728	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.868	150	240003	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	18028984m	2521.68	ug/L	
5) TPHg (C5-C9)	9.910	TIC	23272022m	2544.58	ug/L	
6) TPHg (C6-C10)	9.910	TIC	19673472m	2574.70	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	28001100m	2533.59	ug/L	
8) Benzene (NR)	6.150	78	173523	No Calib		
10) Toluene (NR)	8.389	91	1593131	No Calib		
13) Naphthalene (NR)	13.651	128	34072	No Calib		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051344.D
Acq On : 14 May 2019 5:15 am
Operator : MM
Sample : 9E13041-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:55:58 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051345.D
Acq On : 14 May 2019 5:42 am
Operator : MM
Sample : 9E13041-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:56:01 2019
Quant Method : C:\msdchem\1\methods\~~VI190514G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

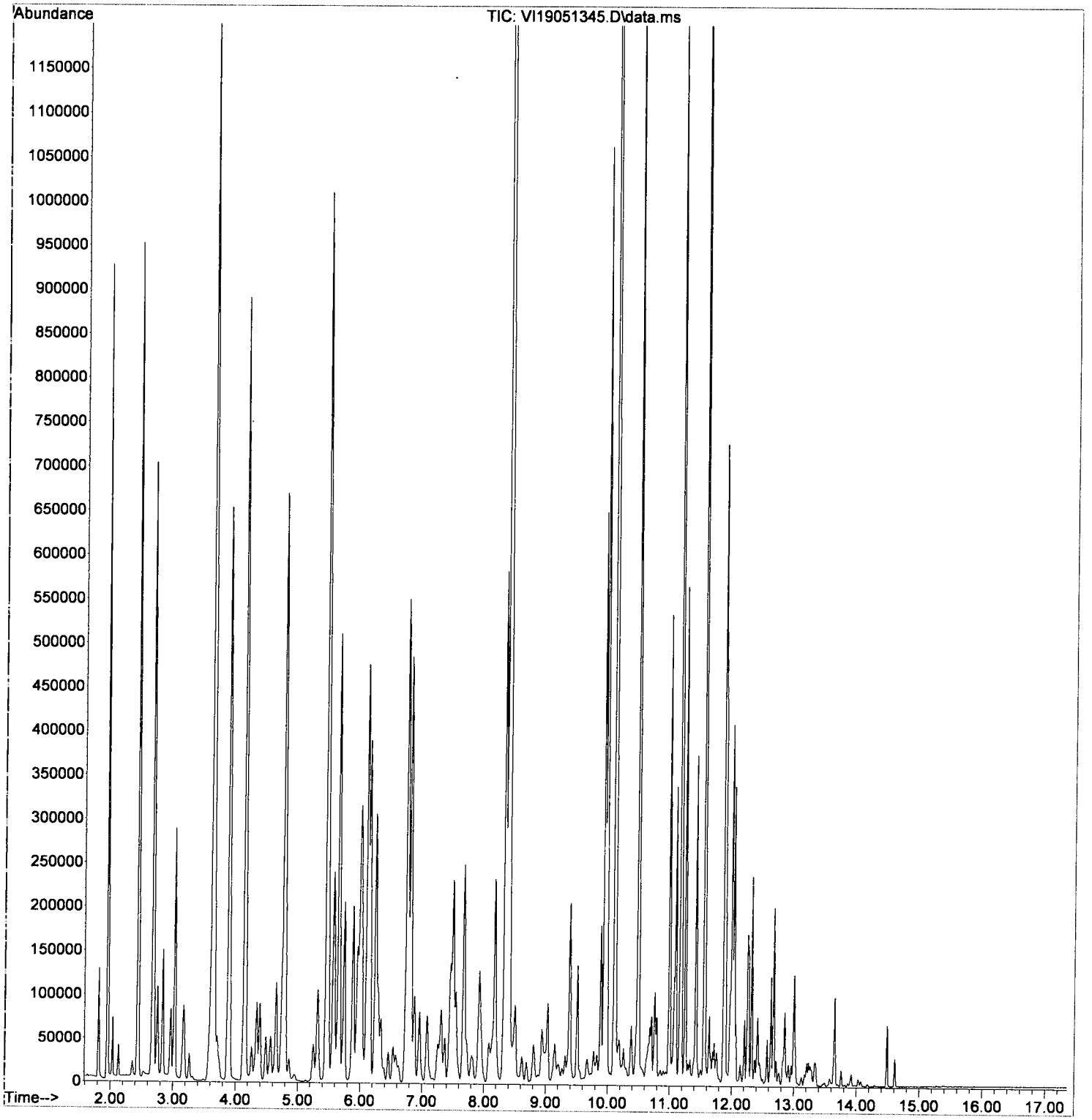
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	227151	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.813	114	380473	50.59	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	121963	51.99	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	449143	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	330788	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.868	150	246786	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	37794656m	5016.74	ug/L	
5) TPHg (C5-C9)	9.910	TIC	47087380m	5009.47	ug/L	
6) TPHg (C6-C10)	9.910	TIC	39846322m	5047.03	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	57228709m	5009.60	ug/L	
8) Benzene (NR)	6.150	78	343295	No Calib		
10) Toluene (NR)	8.389	91	3237632	No Calib		
13) Naphthalene (NR)	13.651	128	74630	No Calib		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051345.D
Acq On : 14 May 2019 5:42 am
Operator : MM
Sample : 9E13041-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:56:01 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051346.D
Acq On : 14 May 2019 6:09 am
Operator : MM
Sample : 9E13041-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:56:04 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration

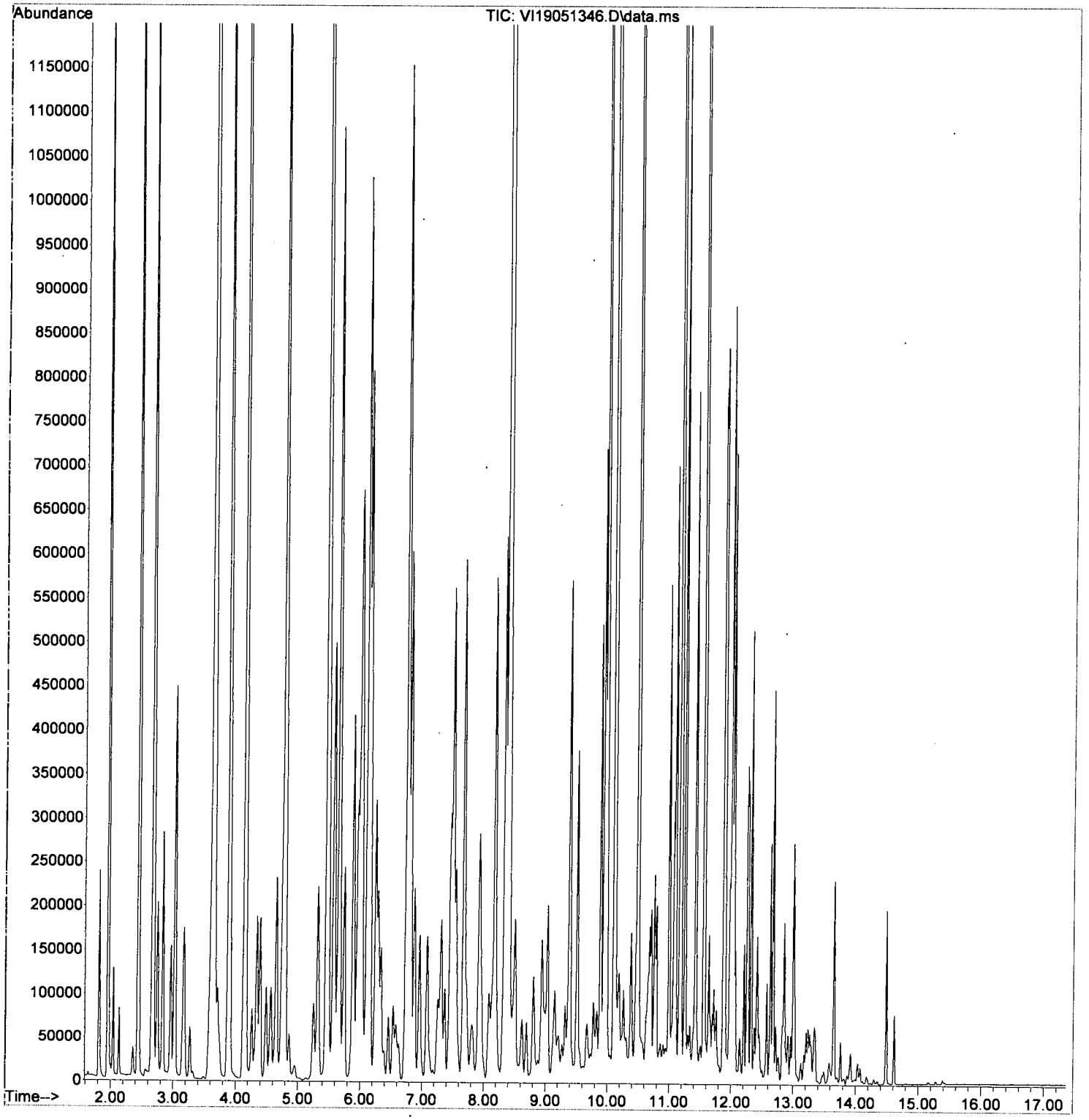
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	233524	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	392928	50.82	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	128168	53.14	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	467475	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	343189	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.868	150	256817	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	82513870m	10072.24	ug/L	
5) TPHg (C5-C9)	9.910	TIC	100156173m	10148.01	ug/L	
6) TPHg (C6-C10)	9.910	TIC	85217330m	10167.47	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	122581103m	10128.09	ug/L	
8) Benzene (NR)	6.150	78	702329	No Calib		
10) Toluene (NR)	8.389	91	6812696	No Calib		
13) Naphthalene (NR)	13.651	128	163750	No Calib		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051346.D
Acq On : 14 May 2019 6:09 am
Operator : MM
Sample : 9E13041-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 09:56:04 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Mar 12 12:00:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051347.D
Acq On : 14 May 2019 6:36 am
Operator : MM
Sample : 9E13041-IBL8
Misc : 1X 5mL DI
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:57 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

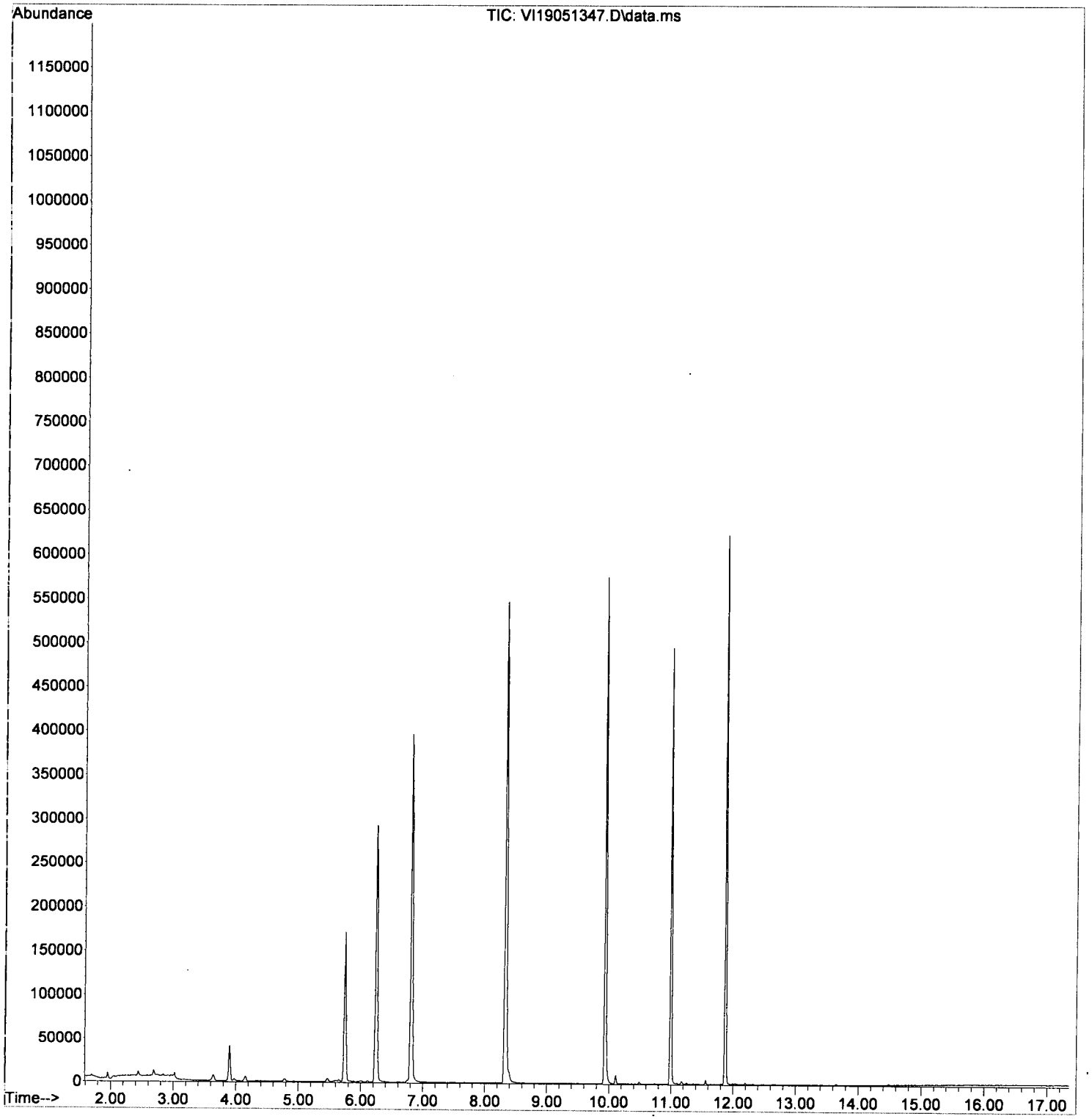
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	229717	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	374633	48.87	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	117227	47.96	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	435731	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	319724	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.874	150	220483	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	53076m	43.00	ug/L	
5) TPHg (C5-C9)	9.910	TIC	560335m	40.79	ug/L	
6) TPHg (C6-C10)	9.910	TIC	415579m	35.77	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	596829m	42.82	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051347.D
Acq On : 14 May 2019 6:36 am
Operator : MM
Sample : 9E13041-IBL8
Misc : 1X 5mL DI
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:57 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051348.D
Acq On : 14 May 2019 7:03 am
Operator : MM
Sample : 9E13041-IBL9
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:59 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

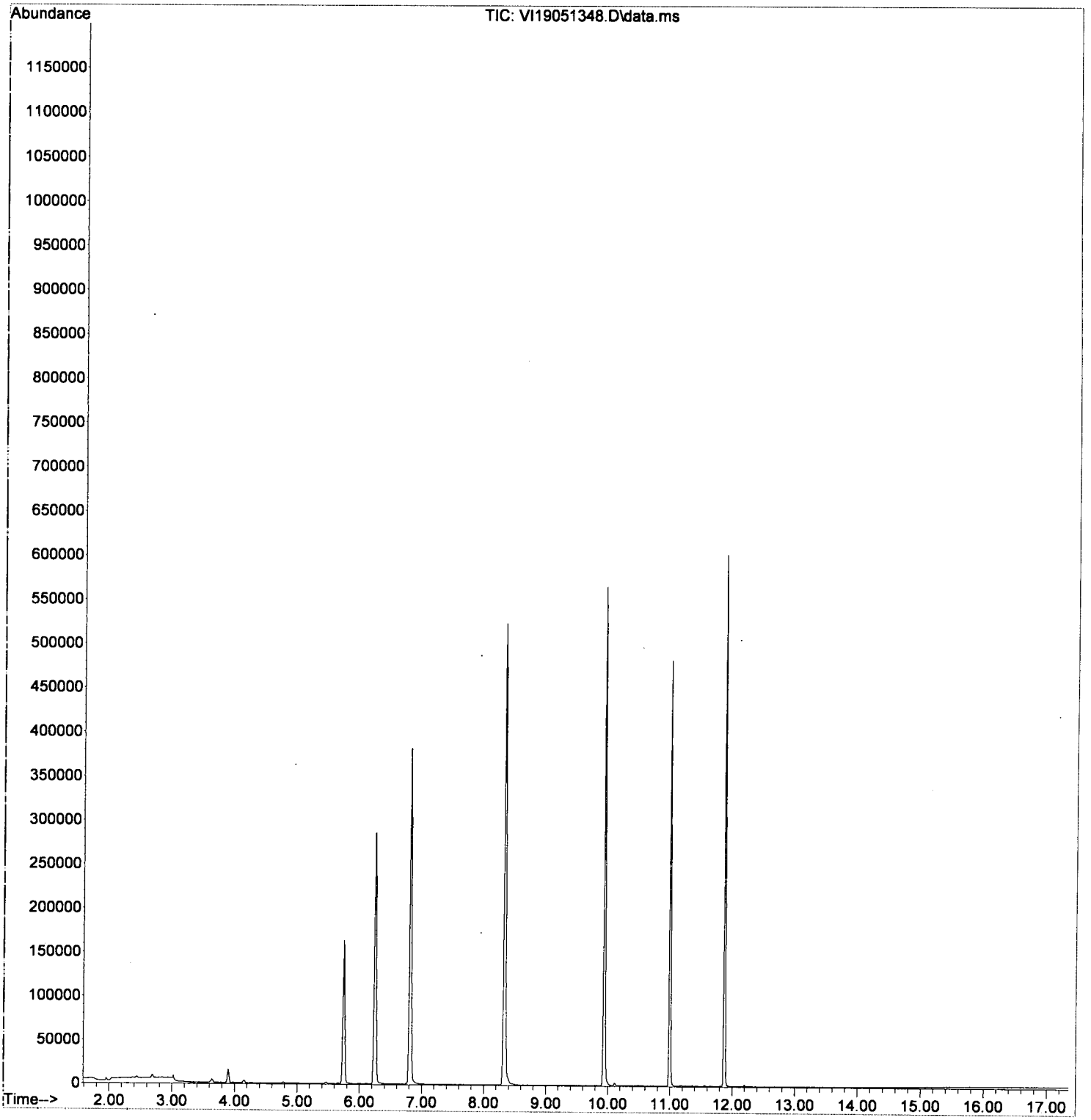
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	221817	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.813	114	362334	48.95	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	113938	48.28	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	422684	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	311049	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.869	150	211991	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	-23134m	32.25	ug/L	
5) TPHg (C5-C9)	9.910	TIC	429804m	28.29	ug/L	
6) TPHg (C6-C10)	9.910	TIC	355790m	29.72	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	411693m	27.35	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051348.D
Acq On : 14 May 2019 7:03 am
Operator : MM
Sample : 9E13041-IBL9
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:13:59 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051349.D
Acq On : 14 May 2019 7:30 am
Operator : MM
Sample : 9E13041-ICV2
Misc : 1X 5mL 500PPB GX
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:14:02 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

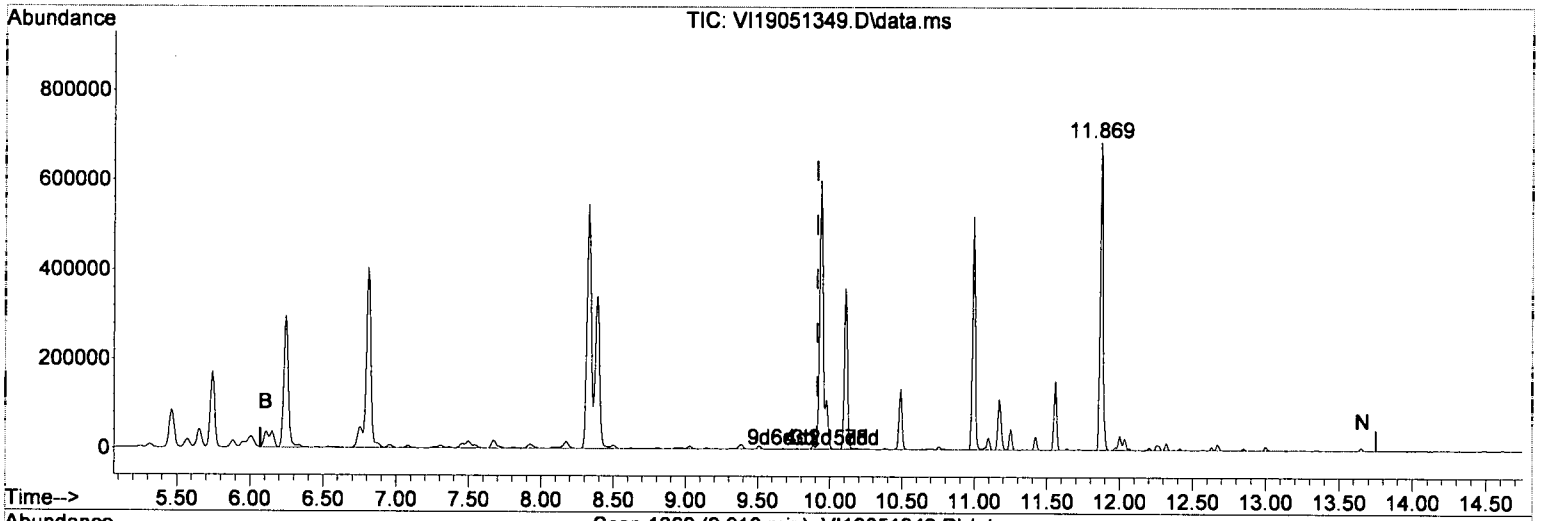
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.241	168	223309	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	369823	49.63	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	120504	50.72	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	439493	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	323718	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.868	150	235997	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	3091200m	476.52	ug/L	
5) TPHg (C5-C9)	9.910	TIC	4260006m	454.27	ug/L	
6) TPHg (C6-C10)	9.910	TIC	3680617m	467.22	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	5011931m	454.82	ug/L	

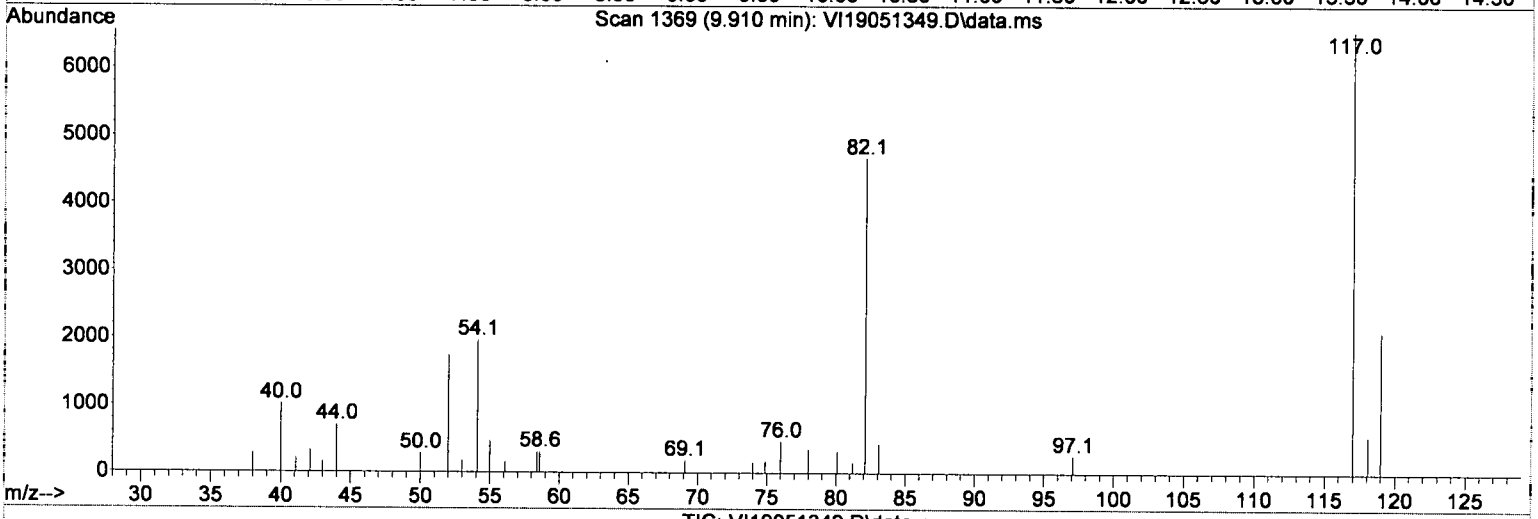
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051349.D
Acq On : 14 May 2019 7:30 am
Operator : MM
Sample : 9E13041-ICV2
Misc : 1X 5mL 500PPB GX
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:14:02 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration





(4) NWTPH-Gx (TPH) (H)

9.910min (0.000) 476.52 ug/L m

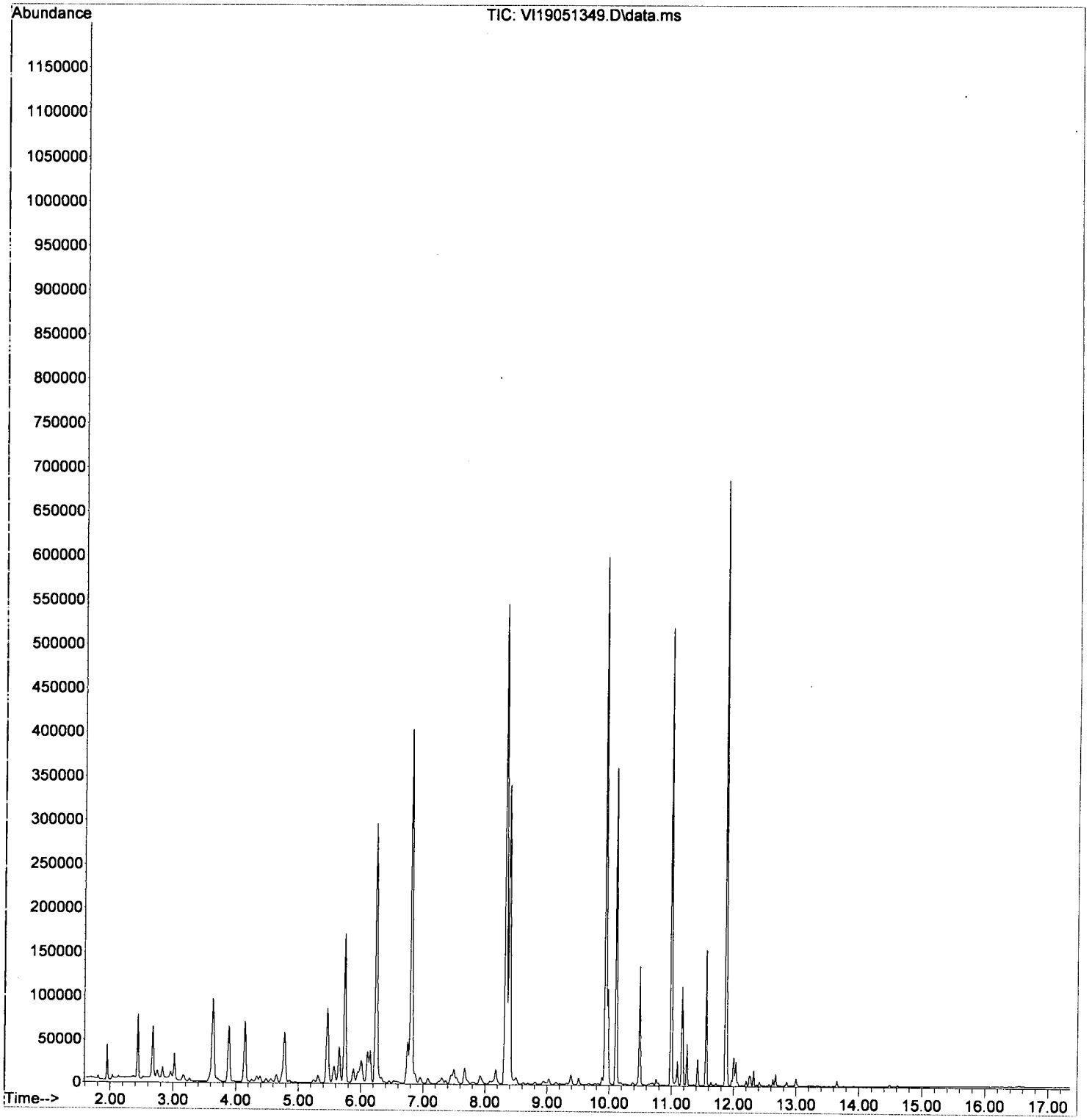
response 3091200

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051349.D
Acq On : 14 May 2019 7:30 am
Operator : MM
Sample : 9E13041-ICV2
Misc : 1X 5mL 500PPB GX
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:14:02 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051350.D
Acq On : 14 May 2019 7:57 am
Operator : MM
Sample : 9E13041-IBLA
Misc : 1X 5mL DI
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:14:05 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

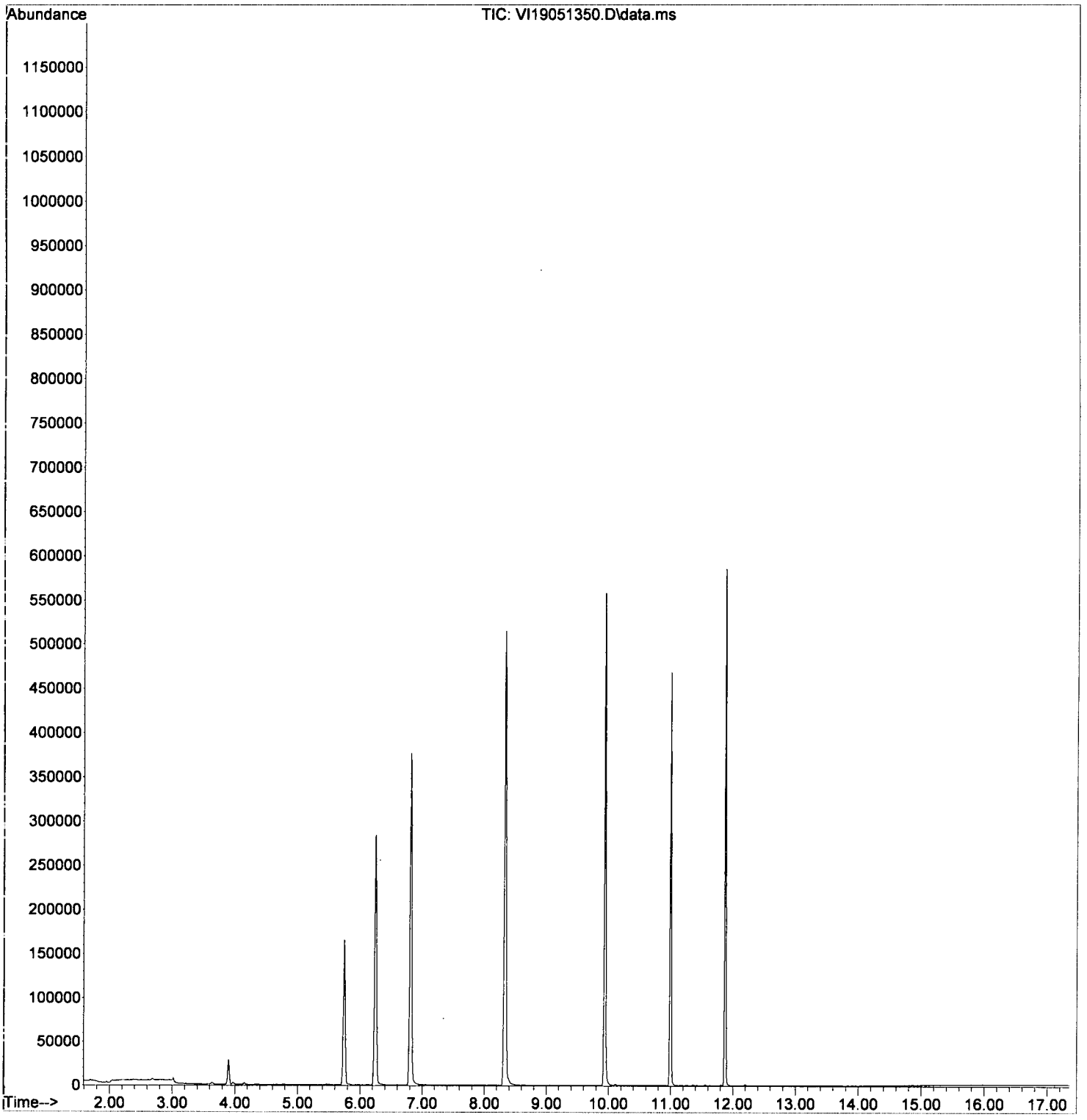
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.247	168	218040	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.807	114	357955	49.20	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.992	174	110193	47.50	ug/L	0.00
9) Toluene-d8 (NR)	8.328	98	417465	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.934	117	305560	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.868	150	202474	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.910	TIC	-42218m	29.39	ug/L	
5) TPHg (C5-C9)	9.910	TIC	413661m	27.28	ug/L	
6) TPHg (C6-C10)	9.910	TIC	328001m	26.78	ug/L	
7) CA-LUFT (C5-C12)	9.910	TIC	391866m	26.13	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-05\9E13041\
Data File : VI19051350.D
Acq On : 14 May 2019 7:57 am
Operator : MM
Sample : 9E13041-IBLA
Misc : 1X 5mL DI
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: May 14 10:14:05 2019
Quant Method : C:\msdchem\1\methods\VI190514G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Benchsheet & Analysis Sequence Data

Batch 9060490

Sequence 9F04031 (A9E0785-01)

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060490 (Solid)

Prep Method: EPA 3546

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9060490-BLK1		QC	06/03/19 10:10	15	2				100					
	9060490-BLK2		QC	06/03/19 10:10	15	2				100		Added 6/4/2019 by ams			
	9060490-BS1		QC	06/03/19 10:10	15	2	A19D326		100	100					
	9060490-BS2		QC	06/03/19 10:10	15	2	A19D326		100	100		Added 6/4/2019 by ams			
	A9E0723-01	A	8270D LL Full List	06/03/19 12:46	1.06	5				100	2708-190521-007	added 5-31-19 lad			
	A9E0723-01RE1	A	8270D LL Full List	06/03/19 12:46	1.06	5				100	2708-190521-007	Added 6/4/2019 by ams			
	A9E0785-01	A	8270 SIM PAH	06/03/19 10:10	1.14	5				100	2708-190522-011				
	A9E0785-01	A	8270D LL Full List	06/03/19 12:42	1.14	5				100	2708-190522-011	Added for BatchQC in: 9060490			
	9060490-DUP1		QC	06/03/19 10:10	1.11	5		A9E0785-01		100					
	A9E0785-01RE1	A	8270D LL Full List	06/03/19 12:42	1.14	5				100	2708-190522-011	Added 6/4/2019 by ams			
	9060490-DUP2		QC	06/03/19 10:10	1.11	5		A9E0785-01RE1		100		Added 6/4/2019 by ams			
	A9E0832-02	A	8270 SIM PAH	06/03/19 10:10	1.16	5				100	2708-190523-013	added 5-31-19 lad			
	A9E0832-02	A	8270D LL Full List	06/03/19 12:42	1.16	5				100	2708-190523-013	Added for BatchQC in: 9060490			
	9060490-MS1		QC	06/03/19 10:10	1.07	5	A19D326	A9E0832-02	100	100					

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19D007	09/30/20	DCM CHEM PROD. 186806
A19D260	10/15/19	Sodium Sulfate Lot # Q098001

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D326	10/21/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19E304	11/24/19	PAH Soil and Water Surr. (50ppm)

Method 3546 digestion time and temperture achieved.
Initial:

Witness:_____

Prepared By: Date

Reviewed By: DH 6/5/19 Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060490 (Solid)

Prep Method: EPA 3546

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9060490-BLK1		QC	06/03/19 10:10	15	2				100					
	9060490-BS1		QC	06/03/19 10:10	15	2	A19D326		100	100					
18	A9E0723-01	A	8270D LL Full List	06/03/19 12:46	1.06	2.5				100	2708-190521-007	added 5-31-19 lad Tar Odor			
	A9E0785-01	A	8270 SIM PAH	06/03/19 10:10	1.14	5				100	2708-190522-011				
	A9E0785-01	A	8270D LL Full List	06/03/19 12:42	1.14	5				100	2708-190522-011	Added for BatchQC in: 9060490			
	9060490-DUP1		QC	06/03/19 10:10	1.11	5		A9E0785-01		100					
	A9E0832-02	A	8270 SIM PAH	06/03/19 10:10	1.16	5				100	2708-190523-013	added 5-31-19 lad			
	A9E0832-02	A	8270D LL Full List	06/03/19 12:42	1.16	5				100	2708-190523-013	Added for BatchQC in: 9060490			
	9060490-MS1		QC	06/03/19 10:10	1.07	5	A19D326	A9E0832-02	100	100					

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19D007	09/30/20	DCM CHEM PROD. 186806
A19D260	10/15/19	Sodium Sulfate Lot # Q098001

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D326	10/21/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19E304	11/24/19	PAH Soil and Water Surr. (50ppm)

Method 3546 digestion time and temperture achieved.
Initial:

Witness:_____

Prepared By: Date 6/3/19

Reviewed By: JRA Date 06/06/19

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060490 (Solid)

Prep Method: EPA 3546

Cwutt 6/3/19

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
15	9060490-BLK1		QC	06/03/19 10:10	~~10~~ 15	~~5~~ 2				100					
16	9060490-BS1		QC	06/03/19 10:10	~~10~~ 15	~~5~~ 2	A19D326		100	100					
17	A9E0785-01	A	8270 SIM PAH 10.00	06/03/19 10:10	~~10~~ 1,14	5 ✓				100	2708-190522-011	Tar Odor #			
18	9060490-DUP1		QC	06/03/19 10:10	~~10~~ 1,11	5 ✓		A9E0785-01		100		#			
19	A9E0832-02	A	8270 SIM PAH ↓	06/03/19 10:10	~~10~~ 1,16	5 ✓				100	2708-190523-013	add ~~Tech~~ -19 lad Odor #			
20	9060490-MS1		QC	06/03/19 10:10	~~10~~ 1,07	5 ✓	A19D326	A9E0832-02	100	100		#			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19D007	09/30/20	DCM CHEM PROD. 186806
A19D260	10/15/19	Sodium Sulfate Lot # Q098001

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D326	10/21/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

JAG

Surrogate(s)

Std ID	Exp. Date	Description
~~A19E036~~ A19E304	~~10/30/19~~ 11/24/19	PAH Soil and Water Surr. (50ppm)

JAG 6/3/19

Method 3546 digestion time and temperture achieved.
Initial: Cwutt

Witness: Cwutt 6/3/19

stained TurboVap

6/3/19

Cwutt — Prepared By: JAG

6/3/19 — Date

JRA — Reviewed By: JRA

06/06/19 — Date

Cwutt 6/3/19

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9F04031**	Instrument:	**SV-GCMS4**
Date:	**06/04/19 08:43**	Calibration:	**A9E0902**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F04031-TUN1	Soil	QC	QC			A19D031	A19E333
2	9F04031-CCV1	Soil	QC	QC			A19B027	A19C237
3	9F04031-CCB1	Soil	QC	QC			A19D031	
4	A9F0026-05	Soil	8270 SIM PAH		06/05/19	9060489	A19D031	
5	A9F0045-01	Soil	8270 SIM PAH		06/04/19	9060489	A19D031	
6	A9F0045-02	Soil	8270 SIM PAH		06/04/19	9060489	A19D031	
7	A9F0006-01	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
8	A9F0006-02	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
9	A9F0006-03	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
10	A9F0006-04	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
11	A9F0006-05	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
12	A9F0006-06	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
13	9060490-BLK1	Solid	QC	QC		9060490	A19D031	
14	9060490-BS1	Solid	QC	QC		9060490	A19D031	
15	A9E0785-01	Solid	8270 SIM PAH	Hahn and Associates	06/14/19	9060490	A19D031	
16	9060490-DUP1	Solid	QC	QC		9060490	A19D031	
17	A9E0832-02	Solid	8270 SIM PAH	Hahn and Associates	06/14/19	9060490	A19D031	
18	9041187-BLK2	Soil	QC	QC		9041187	A19D031	
19	A9D0797-02	Soil	8270 SIM PAH (16)		06/05/19	9041187	A19D031	
20	9050975-BLK2	Soil	QC	QC		9050975	A19D031	
21	A9E0562-01	Soil	8270 SIM PAH (16)		06/06/19	9050975	A19D031	
22	9050795-BLK2	Soil	QC	QC		9050795	A19D031	
23	A9E0342-04	Soil	8270 SIM PAH		06/10/19	9050795	A19D031	
24	A9E0342-14	Soil	8270 SIM PAH		06/10/19	9050795	A19D031	
25	A9E0912-05	Water	8270 SIM PAH (16)		06/06/19	9051421	A19D031	
26	A9F0006-01RE1	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
27	A9F0006-04RE1	Soil	8270 SIM PAH		06/10/19	9060489	A19D031	
28	9F04031-IBL1	Soil	QC	QC			A19D031	

Data Entered By: BGJ 6-05-19

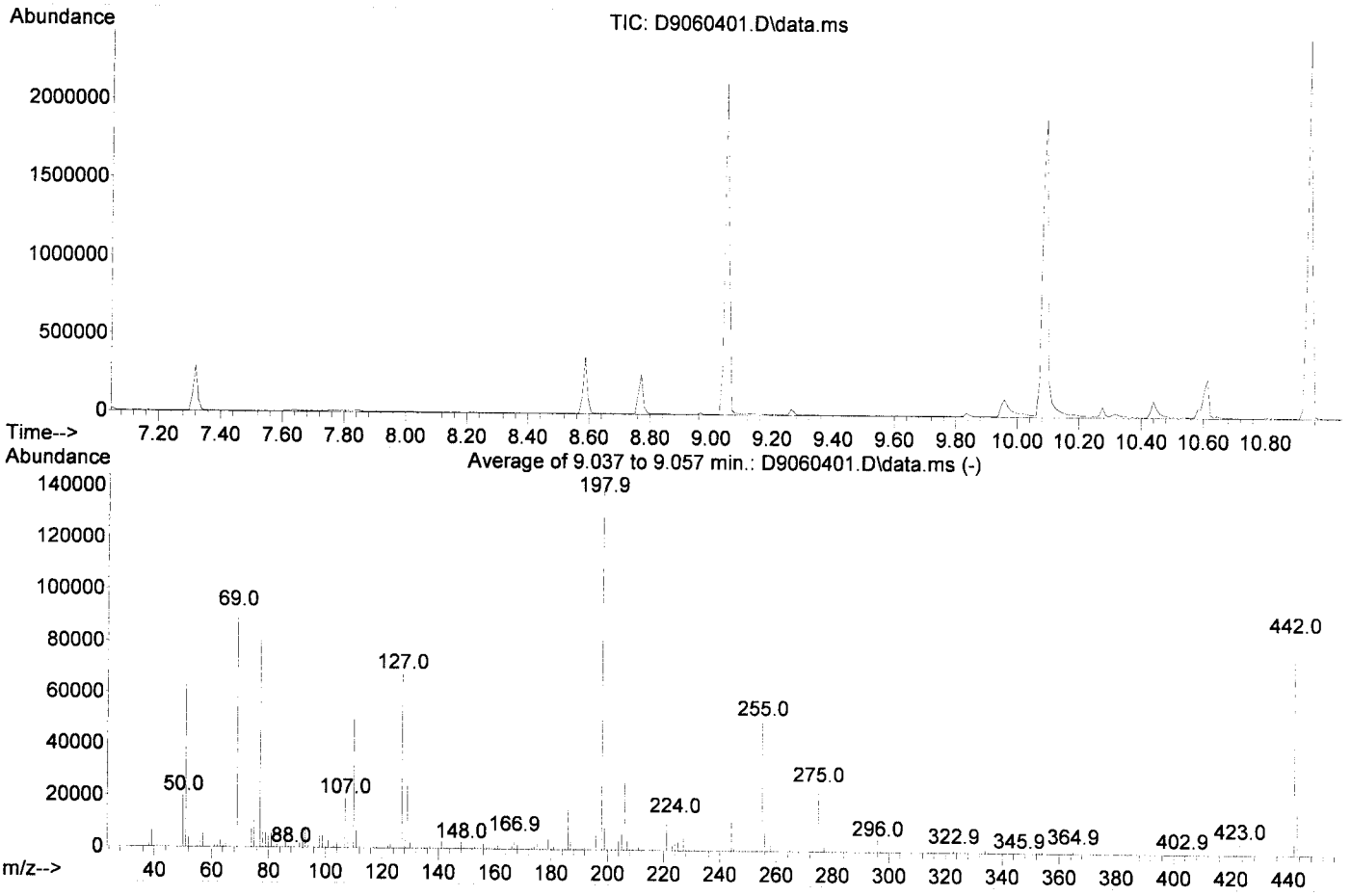
Data Reviewed By: GL 6/5/19

Comments:

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060401.D
Acq On : 4 Jun 2019 8:49 am
Operator : bsj
Sample : 9F04031-TUN1
Misc : 1x A19E333 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\DFTPP-8270.M
Title : EPA 8270 SIM PAH
Last Update : Wed Dec 05 14:43:36 2018



AutoFind: Scans 542, 543, 544; Background Corrected with Scan 540

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	49.1	68179	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	66.0	91728	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	48.8	67875	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	138976	PASS
199	198	5	9	6.7	9266	PASS
275	198	10	60	18.2	25313	PASS
365	198	1	100	1.5	2033	PASS
441	442	0.01	24	14.3	12098	PASS
442	198	50	200	60.8	84479	PASS
443	442	15	24	19.2	16202	PASS

6-04-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060401.D
Acq On : 4 Jun 2019 8:49 am
Operator : bsj
Sample : 9F04031-TUN1
Misc : 1x A19E333 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 09:36:51 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.620	136	123403	2000.00	ng/ml	0.00
2) Acenaphthene-d10	7.318	162	57487	2000.00	ng/ml	0.00
3) Phenanthrene-d10	8.771	188	102414	2000.00	ng/ml	0.00
7) Chrysene-d12	11.523	240	72898	2000.00	ng/ml	0.00
8) Perylene-d12	14.019	264	57228	2000.00	ng/ml	-0.01
9) Dibenz(ah)anthracene-d14	16.362	292	49767	2000.00	ng/mL	0.00
Target Compounds						Qvalue
4) Pentachlorophenol (PCP)	8.587	266	38568	12.91	ng/mL	97
5) DFTPP	9.047	198	258269	35.24	ng/mL	82
6) DDT	10.940	TIC	2554716	27580.25	ng/mL#	1

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

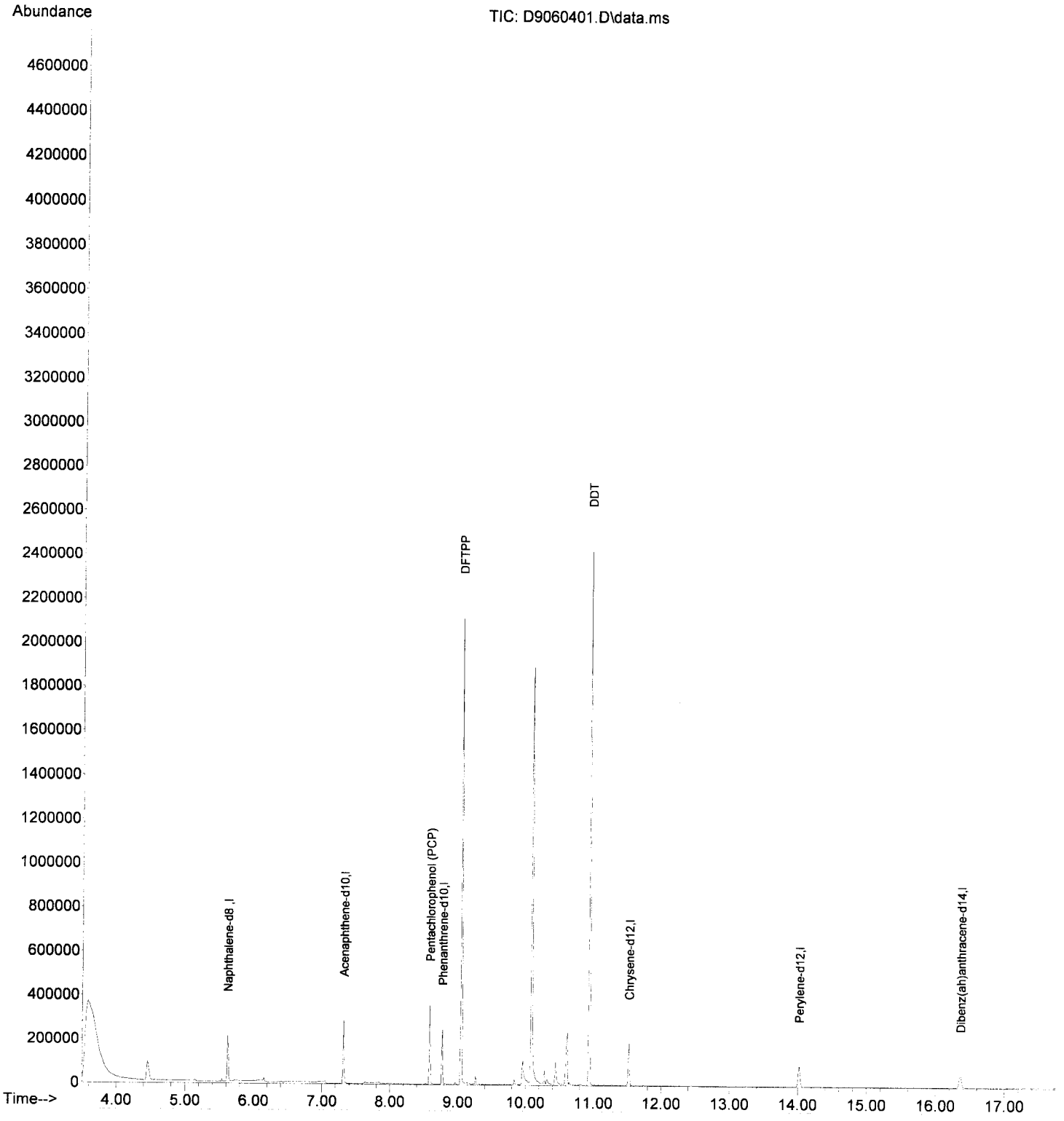
6-04-19

J

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060401.D
Acq On : 4 Jun 2019 8:49 am
Operator : bsj
Sample : 9F04031-TUN1
Misc : 1x A19E333 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 09:36:51 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4



Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060402.D
Acq On : 4 Jun 2019 9:13 am
Operator : bsj
Sample : 9F04031-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 09:34:04 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	66	0.00
2	T	Naphthlene	1000.000	1028.061	-2.8	68	0.00
3	T	2-Methylnaphthalene	1000.000	1040.176	-4.0	68	0.00
4	T	1-Methylnaphthalene	1000.000	1057.305	-5.7	69	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	67	0.00
6	S	2-Fluorobiphenyl(Surr)	1000.000	1059.845	-6.0	71	0.00
7	T	Acenaphthylene	1000.000	1071.527	-7.2	72	0.00
8	T	Acenaphthene	1000.000	1044.589	-4.5	70	0.00
9		Dibenzofuran	1000.000	1087.214	-8.7	73	0.00
10	T	Fluorene	1000.000	1086.724	-8.7	74	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	75	0.00
12	T	Phenanthrene	1000.000	1019.218	-1.9	78	0.00
13	T	Anthracene	1000.000	1059.716	-6.0	82	0.00
14		Carbazole	1000.000	1183.076	-18.3	88	0.00
15	T	Fluoranthene	1000.000	1096.023	-9.6	85	0.00
16	T	Pyrene	1000.000	1130.375	-13.0	89	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	106	0.00
18	S	Terphenyl-d14(Surr)	1000.000	865.711	13.4	91	0.00
19	T	Benz(a)Anthracene	1000.000	998.187	0.2	110	0.00
20	T	Chrysene	1000.000	1078.894	-7.9	115	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	133	0.00
22	T	Benzo(b)Fluoranthene	1000.000	958.904	4.1	127	0.00
23	T	Benzo(k)Fluoranthene	1000.000	1025.474	-2.5	135	0.00
24	T	Benzo(b+k)Fluoranthene	2000.000	1984.944	0.8	132	0.00
25		Benzo(e) Pyrene	1000.000	960.270	4.0	126	0.00
26	T	Benzo(a)Pyrene	1000.000	1064.531	-6.5	138	0.00
27		Perylene	1000.000	1180.619	-18.1	155	0.00
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	158	0.00
29	T	Indeno(1,2,3-cd)Pyrene	1000.000	1003.025	-0.3	157	0.00
30	T	Dibenz(a,h)Anthracene	1000.000	1065.124	-6.5	167	0.00
31	T	Benzo (g,h,i) Perylene	1000.000	951.197	4.9	148	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

6-04-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060402.D
Acq On : 4 Jun 2019 9:13 am
Operator : bsj
Sample : 9F04031-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 09:34:04 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.626	136	334708	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.324	164	168570	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.772	188	264633	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.518	240	176938	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.016	264	154619	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.354	292	123024	2000.00 ng/mL	0.00
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.662	172	132415	1059.84 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.326	244	81056	865.71 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.646	128	178357	1028.06 ng/ml	99
3) 2-Methylnaphthalene	6.310	142	116674	1040.18 ng/ml	99
4) 1-Methylnaphthalene	6.403	142	115010	1057.30 ng/ml	99
7) Acenaphthylene	7.183	152	163124	1071.53 ng/ml	99
8) Acenaphthene	7.348	153	106483	1044.59 ng/ml	95
9) Dibenzofuran	7.520	168	147782	1087.21 ng/mL	88
10) Fluorene	7.855	166	114950	1086.72 ng/ml	100
12) Phenanthrene	8.793	178	155298	1019.22 ng/ml	98
13) Anthracene	8.841	178	163055	1059.72 ng/ml	99
14) Carbazole	8.995	167	140764	1183.08 ng/mL	99
15) Fluoranthene	9.958	202	142309	1096.02 ng/ml	99
16) Pyrene	10.181	202	146054	1130.38 ng/ml	99
19) Benz(a)Anthracene	11.504	228	106567	998.19 ng/ml	96
20) Chrysene	11.554	228	112330	1078.89 ng/ml	95
22) Benzo(b)Fluoranthene	13.263	252	95724	958.90 ng/ml	59
23) Benzo(k)Fluoranthene	13.315	252	101449	1025.47 ng/ml	61
24) Benzo(b+k)Fluoranthene	13.315	252	198065	1984.94 ng/ml	60
25) Benzo(e) Pyrene	13.798	252	95395	960.27 ng/mL	88
26) Benzo(a)Pyrene	13.895	252	91334	1064.53 ng/ml	61
27) Perylene	14.068	252	97964	1180.62 ng/mL	88
29) Indeno(1,2,3-cd)Pyrene	16.365	276	77577	1003.03 ng/ml	60
30) Dibenz(a,h)Anthracene	16.432	278	75216	1065.12 ng/ml	60
31) Benzo (g,h,i) Perylene	16.961	276	79123	951.20 ng/ml	79

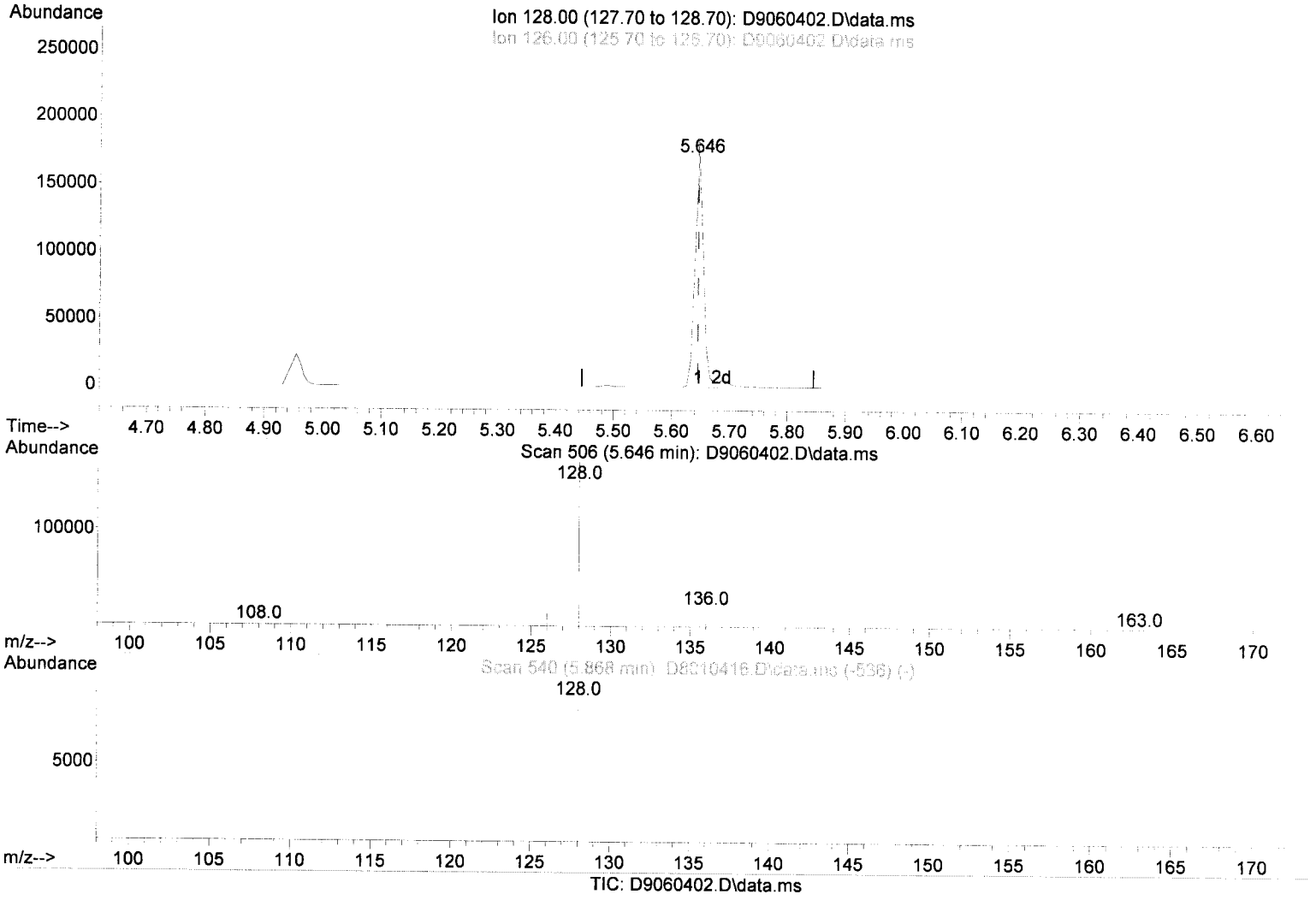
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-04-19

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060402.D
Acq On : 4 Jun 2019 9:13 am
Operator : bsj
Sample : 9F04031-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 09:34:04 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(2) Naphthlene (T)

5.646min (+ 0.001) 1028.06 ng/ml

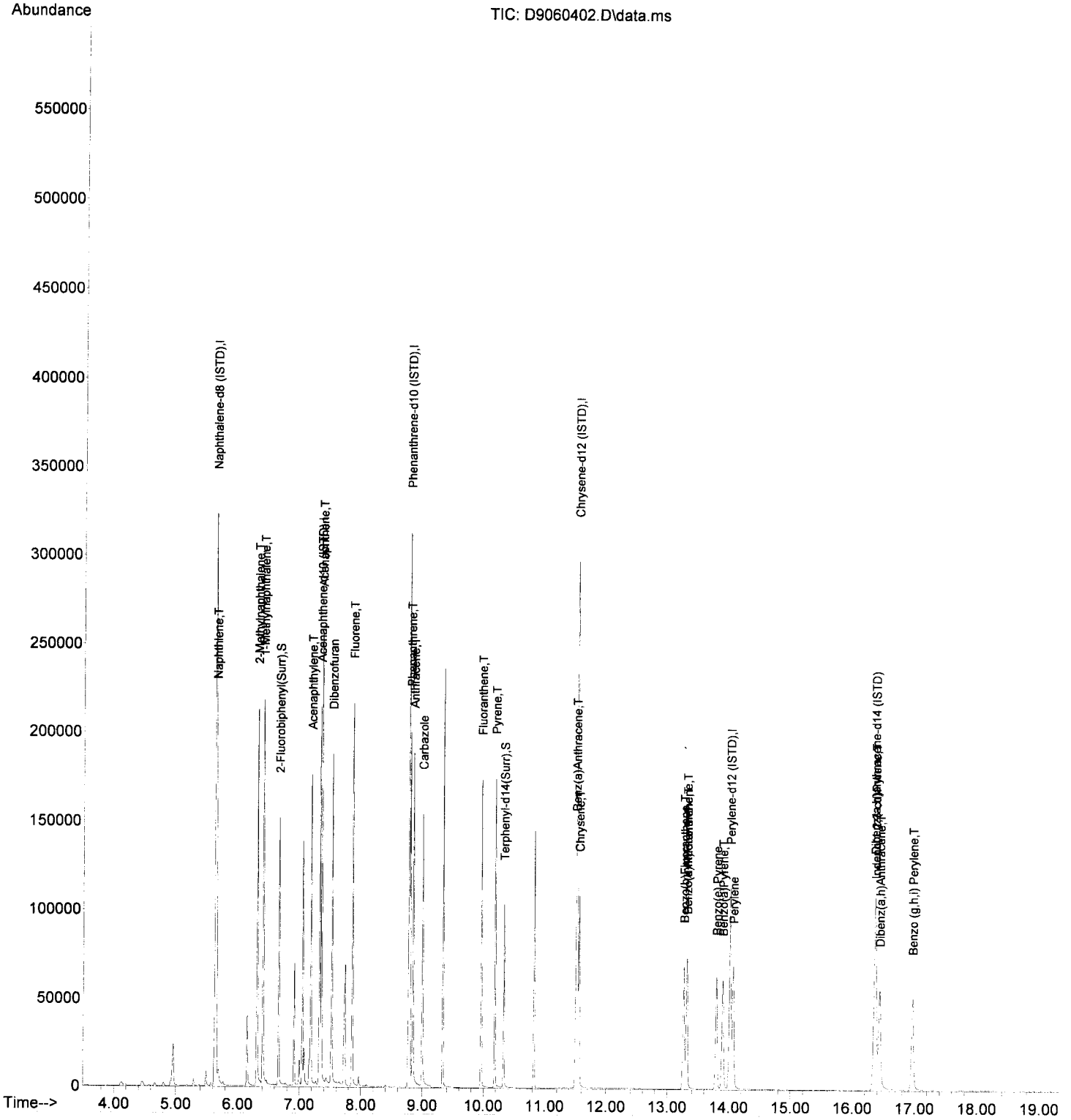
response 178357

Ion	Exp%	Act%
128.00	100.00	100.00
126.00	7.50	7.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060402.D
Acq On : 4 Jun 2019 9:13 am
Operator : bsj
Sample : 9F04031-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 09:34:04 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060403.D
Acq On : 4 Jun 2019 9:39 am
Operator : bsj
Sample : 9F04031-CCB1
Misc : 1x DCM+ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 11:43:45 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.626	136	311649	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.325	164	153193	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.771	188	255561	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.518	240	166626	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.015	264	135807	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.349	292	101441	2000.00 ng/mL	-0.01
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00 ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00 ng/ml	
Target Compounds					Qvalue
2) Naphthlene	0.000		0	N.D.	
3) 2-Methylnaphthalene	0.000		0	N.D.	
4) 1-Methylnaphthalene	0.000		0	N.D.	
7) Acenaphthylene	0.000		0	N.D.	
8) Acenaphthene	0.000		0	N.D.	
9) Dibenzofuran	0.000		0	N.D.	
10) Fluorene	0.000		0	N.D.	
12) Phenanthrene	0.000		0	N.D.	
13) Anthracene	0.000		0	N.D.	
14) Carbazole	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	0.000		0	N.D.	
19) Benz(a)Anthracene	11.518	228	400	3.98 ng/ml#	55
20) Chrysene	11.518	228	400	4.08 ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.	
23) Benzo(k)Fluoranthene	0.000		0	N.D.	
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	0.000		0	N.D.	
27) Perylene	14.015	252	412	5.65 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.	
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

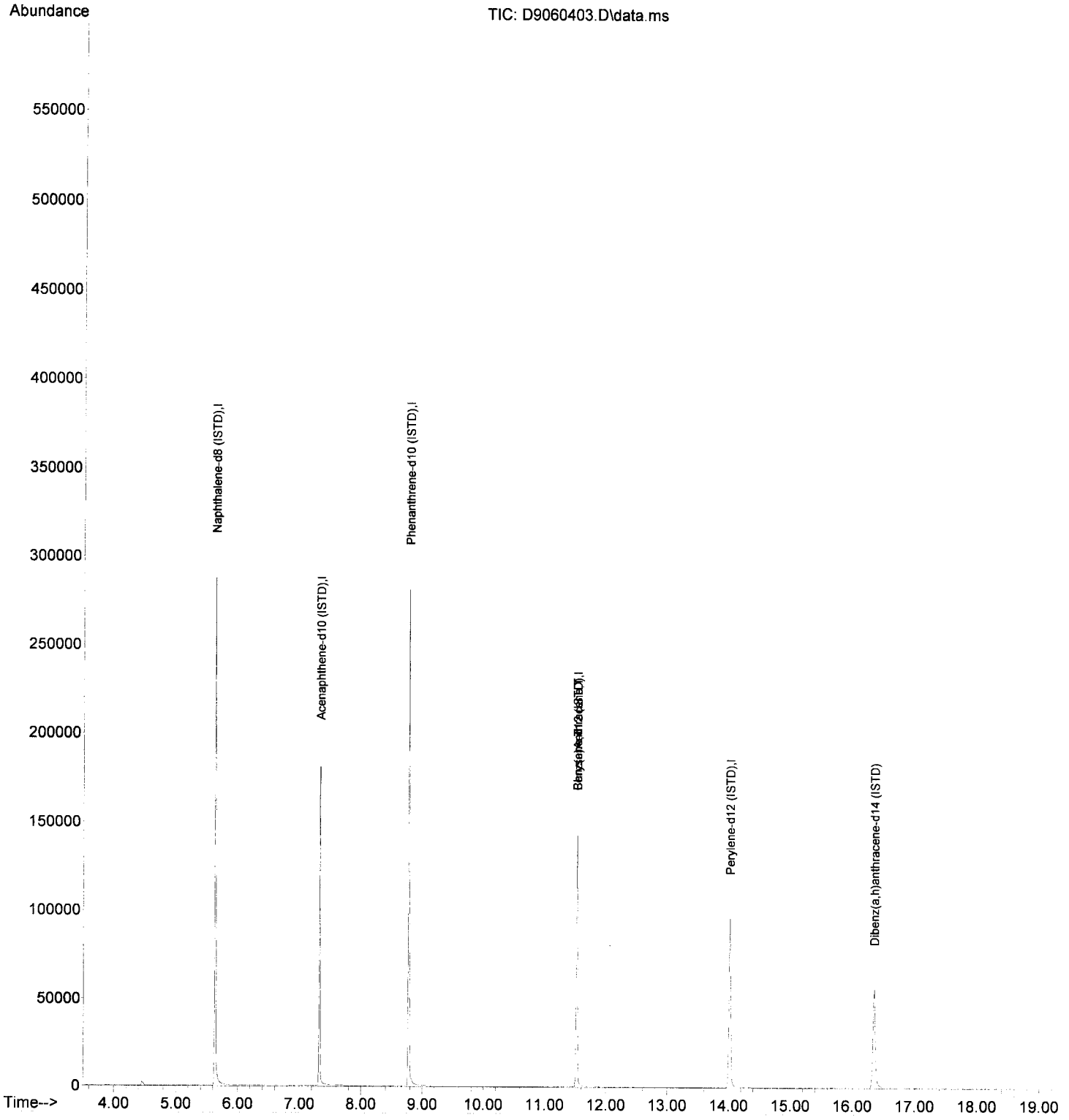
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-04-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060403.D
Acq On : 4 Jun 2019 9:39 am
Operator : bsj
Sample : 9F04031-CCB1
Misc : 1x DCM+ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 11:43:45 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060413.D
Acq On : 4 Jun 2019 2:03 pm
Operator : bsj
Sample : 9060490-BLK1
Misc : 1x Solid 16.00g/2mL SIM PAH
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 05 08:52:15 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.631	136	389347	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.324	164	202443	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.770	188	336030	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.518	240	228865	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.016	264	195055	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.355	292	159836	2000.00 ng/mL	0.00
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.661	172	246488	1642.78 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.327	244	210726	1739.99 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.644	128	1624	8.05 ng/ml#	78
3) 2-Methylnaphthalene	6.309	142	266	2.04 ng/ml	100
4) 1-Methylnaphthalene	6.309	142	266	2.10 ng/ml	98
7) Acenaphthylene	0.000		0	N.D.	
8) Acenaphthene	0.000		0	N.D.	
9) Dibenzofuran	0.000		0	N.D.	
10) Fluorene	0.000		0	N.D.	
12) Phenanthrene	8.792	178	513	2.65 ng/ml#	59
13) Anthracene	8.792	178	513	2.63 ng/ml#	60
14) Carbazole	0.000		0	N.D.	
15) Fluoranthene	9.959	202	521	3.16 ng/ml#	59
16) Pyrene	10.182	202	520	3.17 ng/ml#	59
19) Benz(a)Anthracene	11.518	228	735	5.32 ng/ml#	55
20) Chrysene	11.518	228	735	5.46 ng/ml#	55
22) Benzo(b)Fluoranthene	13.264	252	279	2.22 ng/ml#	59
23) Benzo(k)Fluoranthene	13.264	252	279	2.24 ng/ml#	56
24) Benzo(b+k)Fluoranthene	13.264	252	473	3.76 ng/ml#	30
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	13.895	252	209	1.93 ng/ml#	57
27) Perylene	14.016	252	585	5.59 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	16.360	276	253	2.52 ng/ml#	1
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

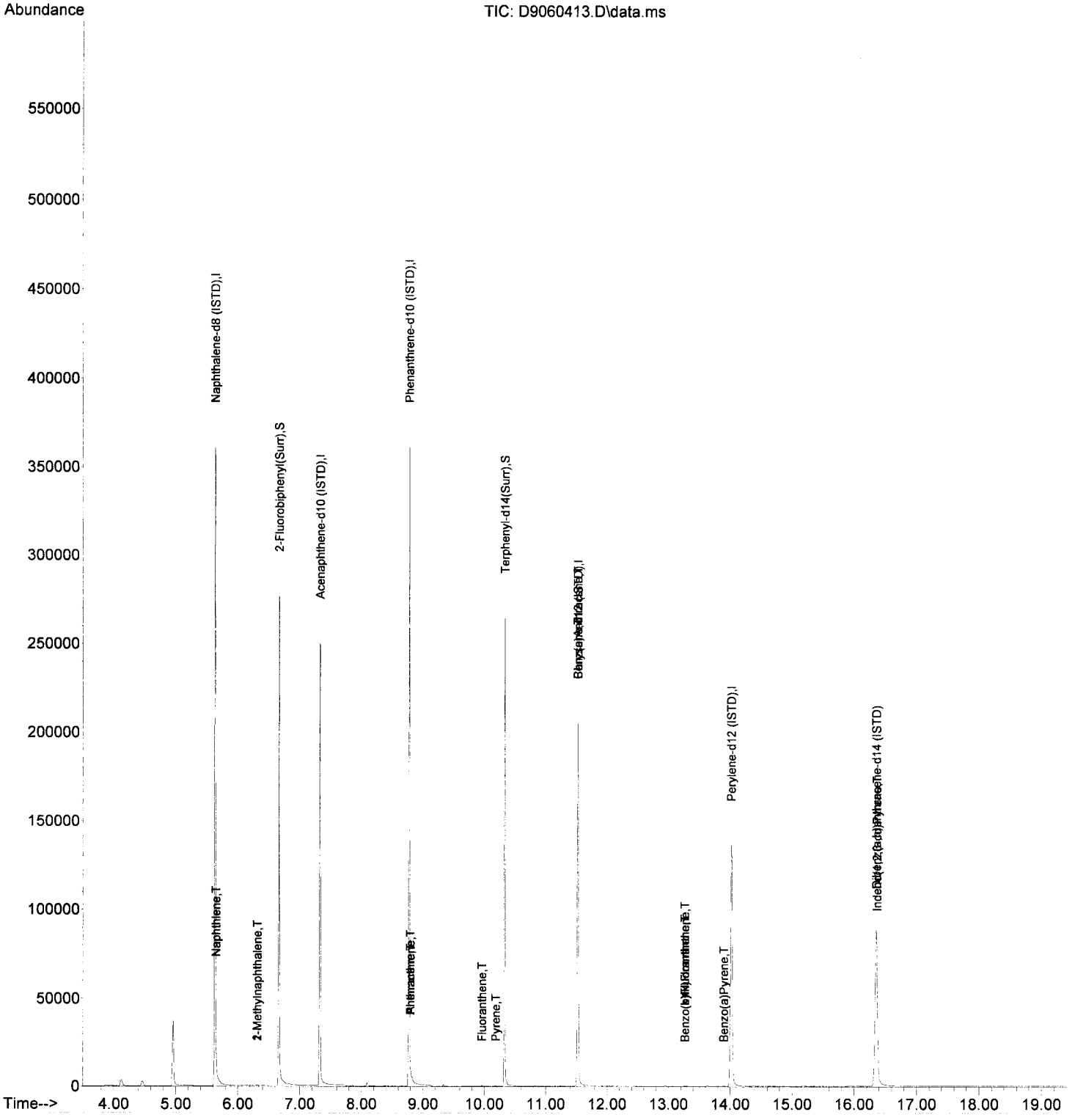
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-05-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060413.D
Acq On : 4 Jun 2019 2:03 pm
Operator : bsj
Sample : 9060490-BLK1
Misc : 1x Solid 16.00g/2mL SIM PAH
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 05 08:52:15 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060414.D
Acq On : 4 Jun 2019 2:30 pm
Operator : bsj
Sample : 9060490-BS1
Misc : 1x Solid 15.00g/2mL SIM PAH
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 05 08:52:18 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.633	136	393896	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.325	164	202305	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.771	188	331444	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.526	240	241782	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.022	264	206779	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.365	292	176968	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.662	172	277028	1847.58	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.326	244	208842	1632.31	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.646	128	1228580	(6017.51)	ng/ml	99
3) 2-Methylnaphthalene	6.310	142	535251	4054.85	ng/ml	99
4) 1-Methylnaphthalene	6.407	142	475786	3716.73	ng/ml	99
7) Acenaphthylene	7.184	152	660506	3615.23	ng/ml	99
8) Acenaphthene	7.355	153	457736	3741.57	ng/ml	97
9) Dibenzofuran	7.521	168	612573	3755.13	ng/mL	87
10) Fluorene	7.856	166	478328	3767.99	ng/ml	99
12) Phenanthrene	8.793	178	653103	3422.29	ng/ml	98
13) Anthracene	8.846	178	685923	3559.30	ng/ml	99
14) Carbazole	8.995	167	555838	3729.95	ng/mL	99
15) Fluoranthene	9.959	202	614743	3780.20	ng/ml	99
16) Pyrene	10.181	202	618839	3824.03	ng/ml	98
19) Benz(a)Anthracene	11.504	228	495470	3396.28	ng/ml	96
20) Chrysene	11.561	228	490044	3444.41	ng/ml	96
22) Benzo(b)Fluoranthene	13.269	252	464299	3477.83	ng/ml	68
23) Benzo(k)Fluoranthene	13.321	252	452941	3423.54	ng/ml	64
24) Benzo(b+k)Fluoranthene	13.321	252	920082	6894.83	ng/ml	66
25) Benzo(e) Pyrene	13.792	252	271	2.04	ng/mL#	49
26) Benzo(a)Pyrene	13.907	252	433464	3777.77	ng/ml	66
27) Perylene	0.000		0	N.D.		
29) Indeno(1,2,3-cd)Pyrene	16.382	276	358787	3224.86	ng/ml	64
30) Dibenz(a,h)Anthracene	16.449	278	372722	3669.19	ng/ml	67
31) Benzo (g,h,i) Perylene	16.978	276	357789	2990.13	ng/ml	82

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

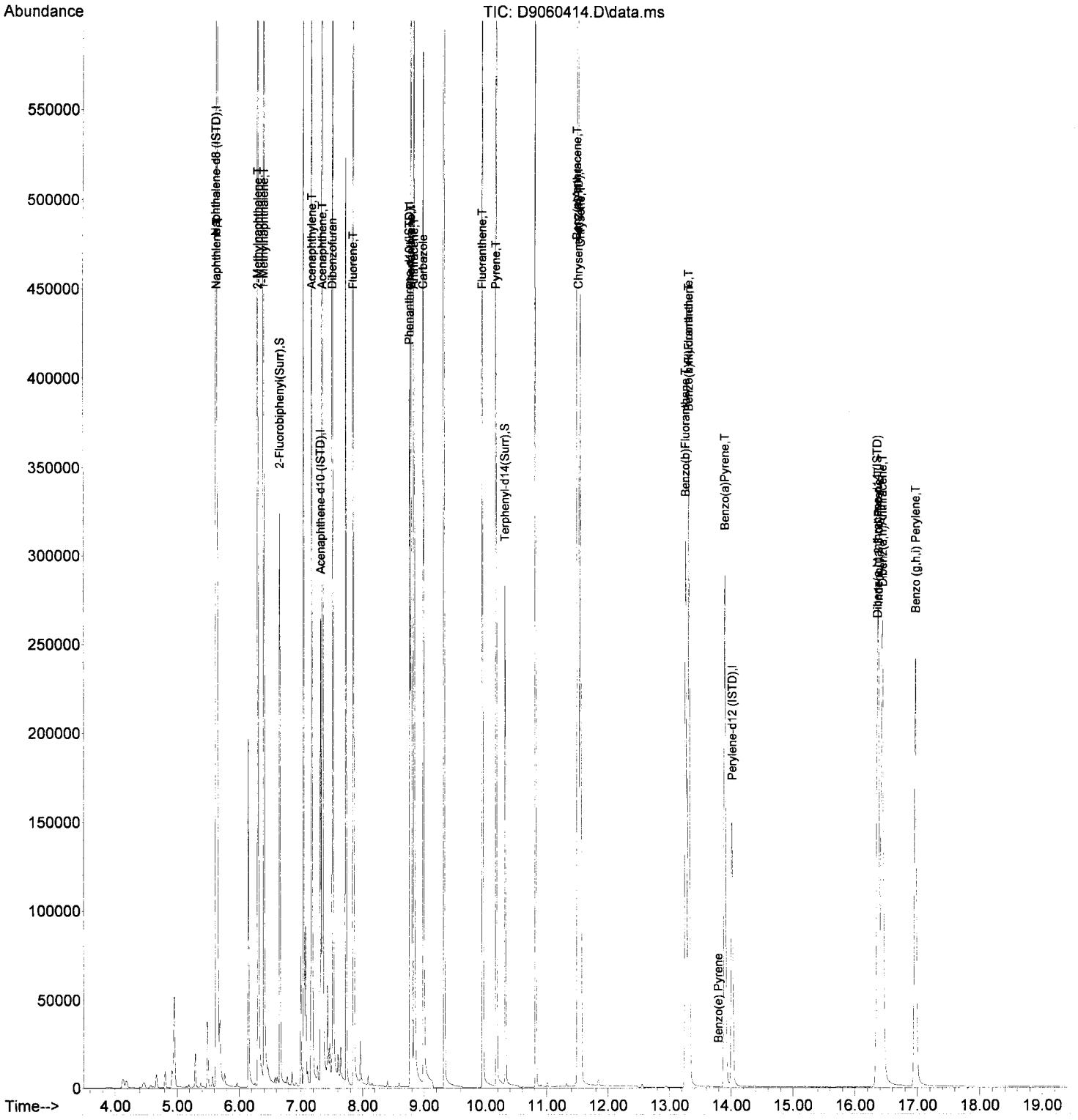
Q-29

6-05-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060414.D
Acq On : 4 Jun 2019 2:30 pm
Operator : bsj
Sample : 9060490-BS1
Misc : 1x Solid 15.00g/2mL SIM PAH
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 05 08:52:18 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

M-25

Quant Time: Jun 05 08:52:21 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.632	136	335121	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.324	164	166627	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.771	188	264760	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.518	240	170831	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.016	264	150679	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.354	292	124001	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	5.646	128	64145	369.28	ng/ml	99
3) 2-Methylnaphthalene	6.309	142	14478	128.92	ng/ml	99
4) 1-Methylnaphthalene	6.406	142	7356	67.54	ng/ml	97
7) Acenaphthylene	7.177	152	762	5.06	ng/ml#	66
8) Acenaphthene	7.349	153	21403	212.41	ng/ml	99
9) Dibenzofuran	7.521	168	17133	127.52	ng/mL	88
10) Fluorene	7.856	166	12485	119.41	ng/ml	100
12) Phenanthrene	8.792	178	71506	469.07	ng/ml	98
13) Anthracene	8.840	178	21882	142.15	ng/ml	96
14) Carbazole	9.000	167	9409	79.04	ng/mL	100
15) Fluoranthene	9.958	202	57182	440.19	ng/ml	99
16) Pyrene	10.181	202	53473	413.65	ng/ml	98
19) Benz(a)Anthracene	11.504	228	13524	131.20	ng/ml	99
20) Chrysene	11.553	228	13697	136.26	ng/ml	94
22) Benzo(b)Fluoranthene	13.269	252	15580	160.15	ng/ml	61
23) Benzo(k)Fluoranthene	13.315	252	6238	64.70	ng/ml	70
24) Benzo(b+k)Fluoranthene	13.269	252	21901	225.22	ng/ml	65
25) Benzo(e) Pyrene	13.797	252	7736	79.91	ng/mL	85
26) Benzo(a)Pyrene	13.895	252	13014	155.65	ng/ml	63
27) Perylene	14.067	252	4057	50.17	ng/mL	85
29) Indeno(1,2,3-cd)Pyrene	16.359	276	8293	106.38	ng/ml#	42
30) Dibenz(a,h)Anthracene	16.426	278	1468	20.62	ng/ml	73
31) Benzo (g,h,i) Perylene	16.961	276	8117	96.81	ng/ml	84

S-01

M-25

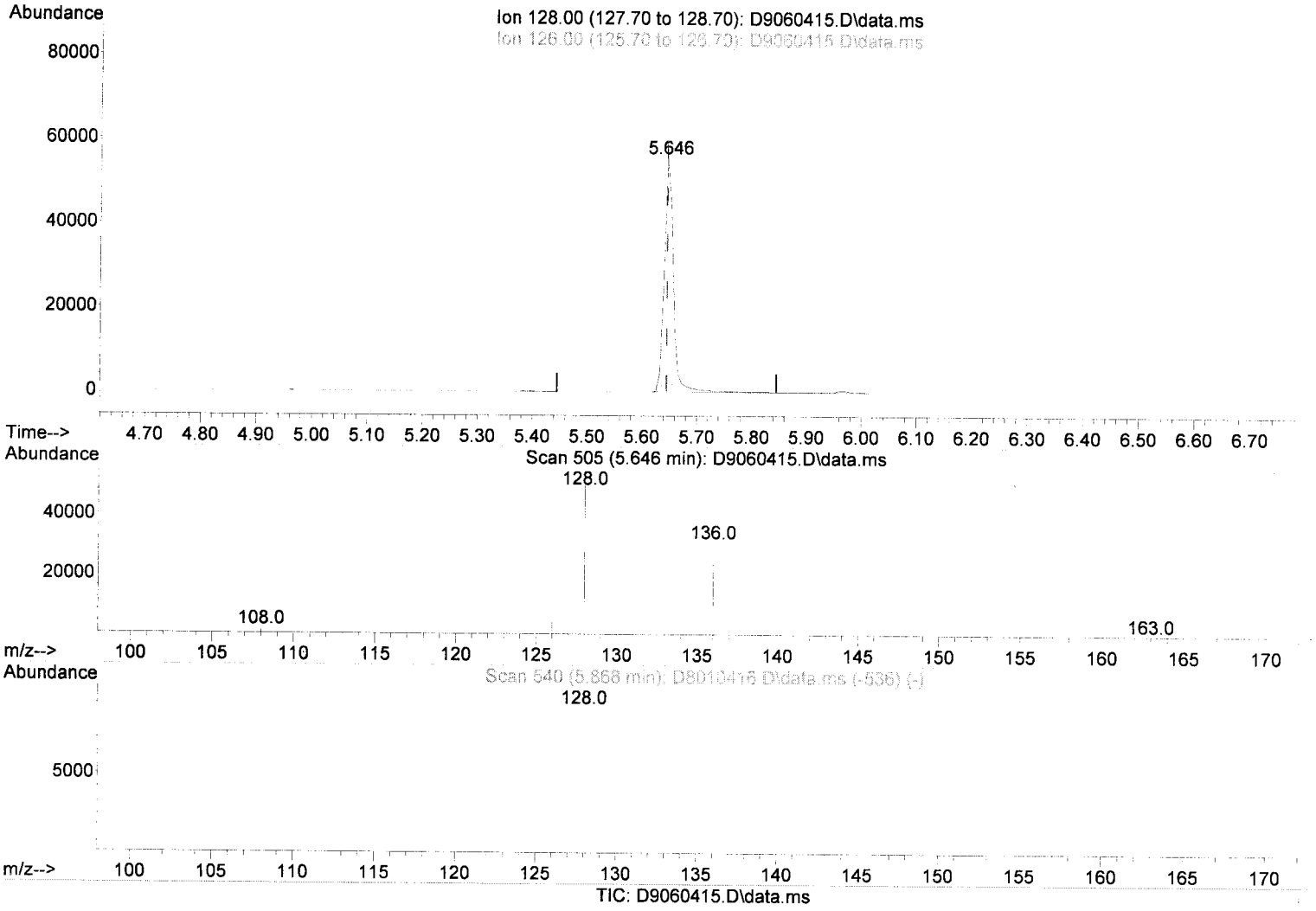
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-05-19

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(2) Naphthlene (T)

5.646min (+ 0.000) 369.28 ng/ml

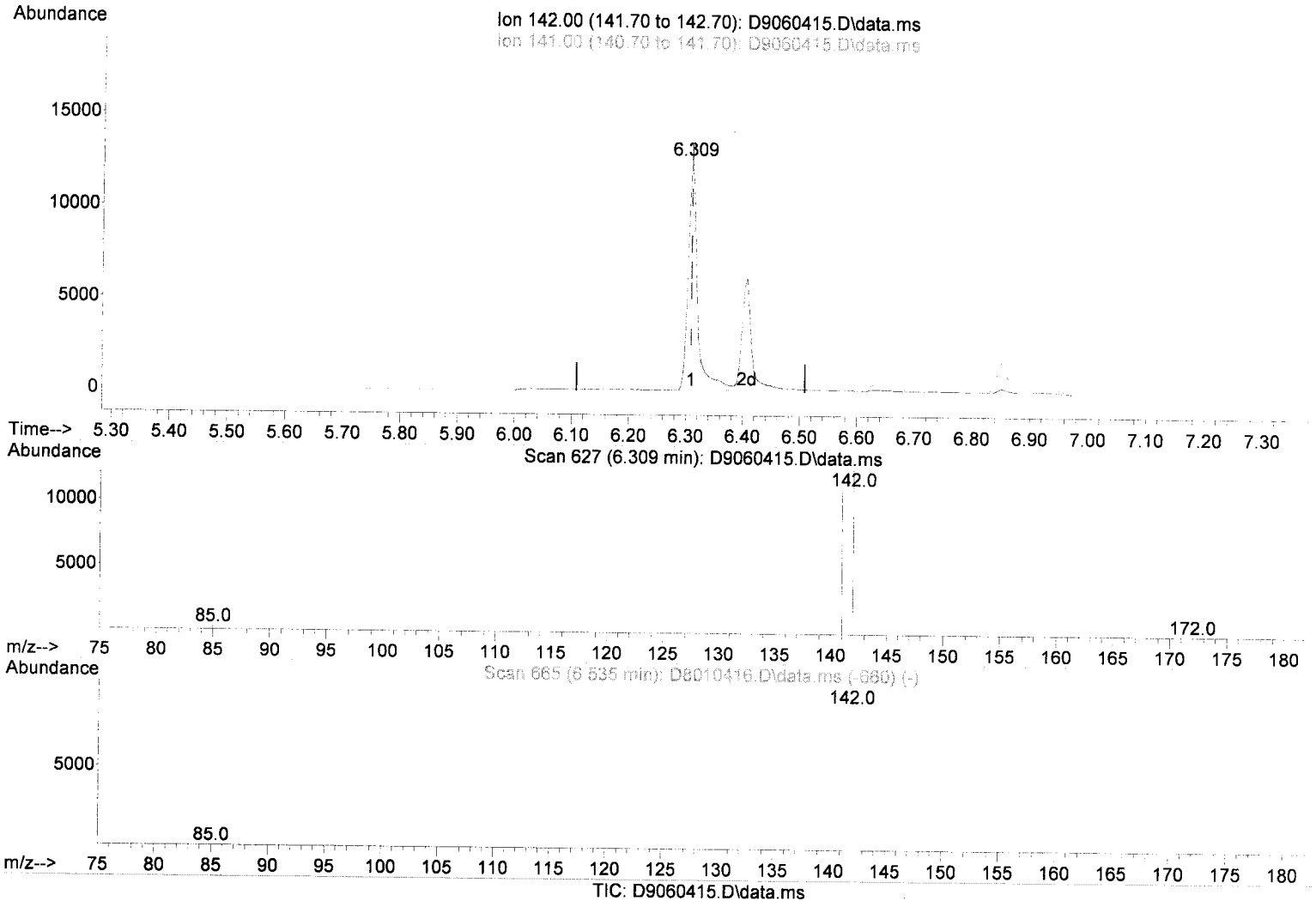
response 64145

Ion	Exp%	Act%
128.00	100.00	100.00
126.00	7.50	7.04
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(3) 2-Methylnaphthalene (T)

6.309min (+ 0.000) 128.92 ng/ml

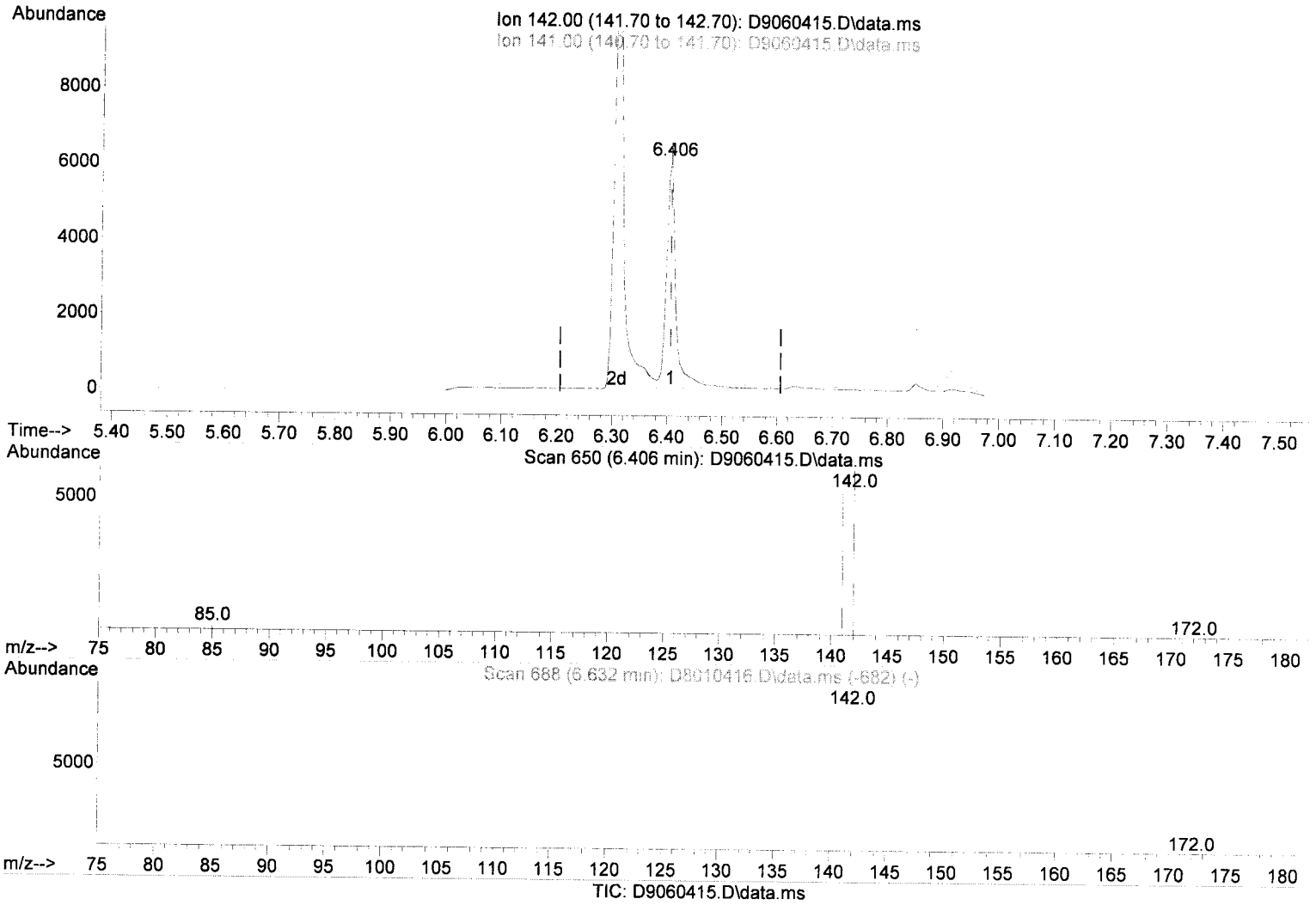
response 14478

Ion	Exp%	Act%
142.00	100.00	100.00
141.00	86.80	85.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(4) 1-Methylnaphthalene (T)

6.406min (+ 0.000) 67.54 ng/ml

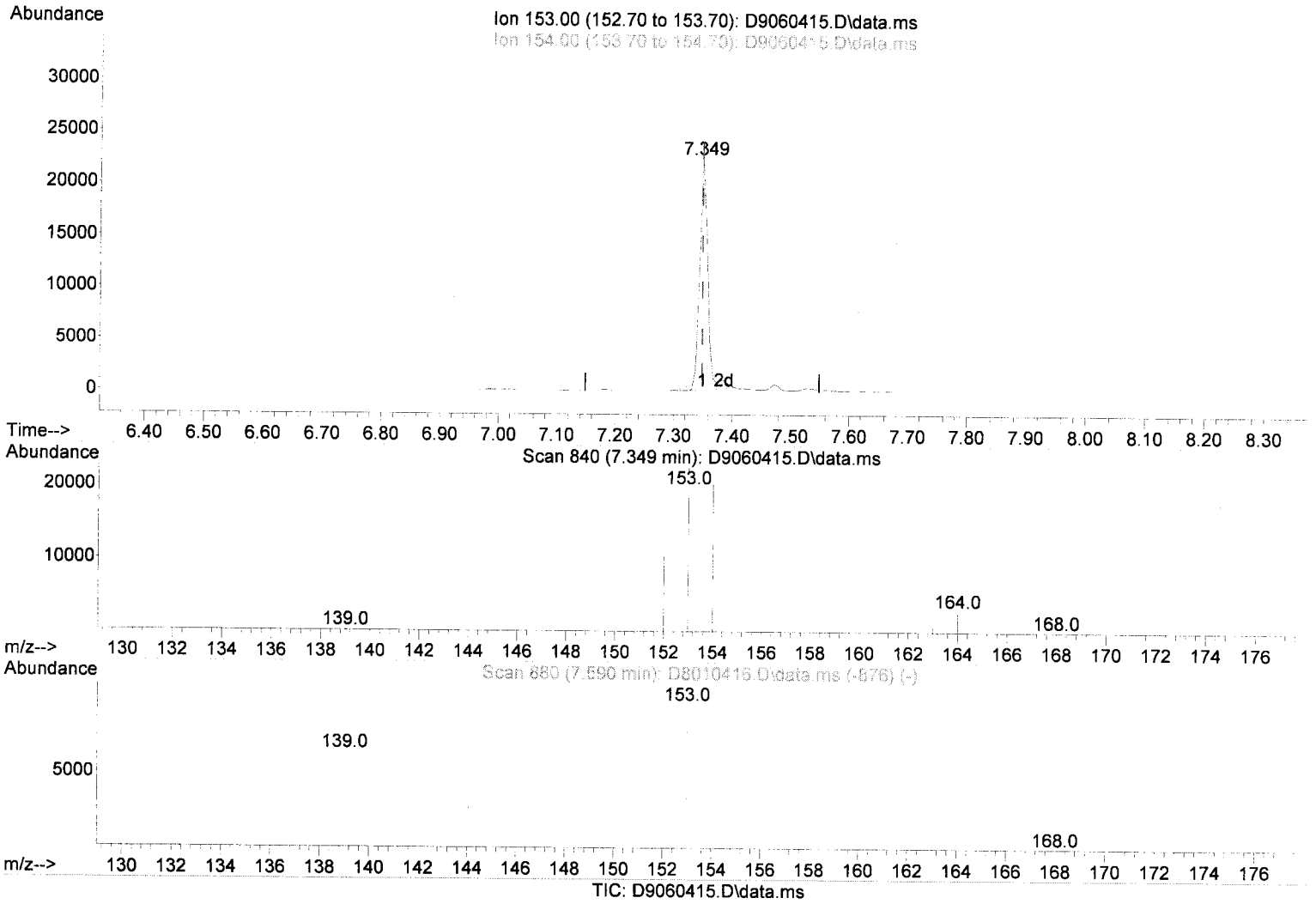
response 7356

Ion	Exp%	Act%
142.00	100.00	100.00
141.00	88.50	85.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(8) Acenaphthene (T)

7.349min (+ 0.000) 212.41 ng/ml

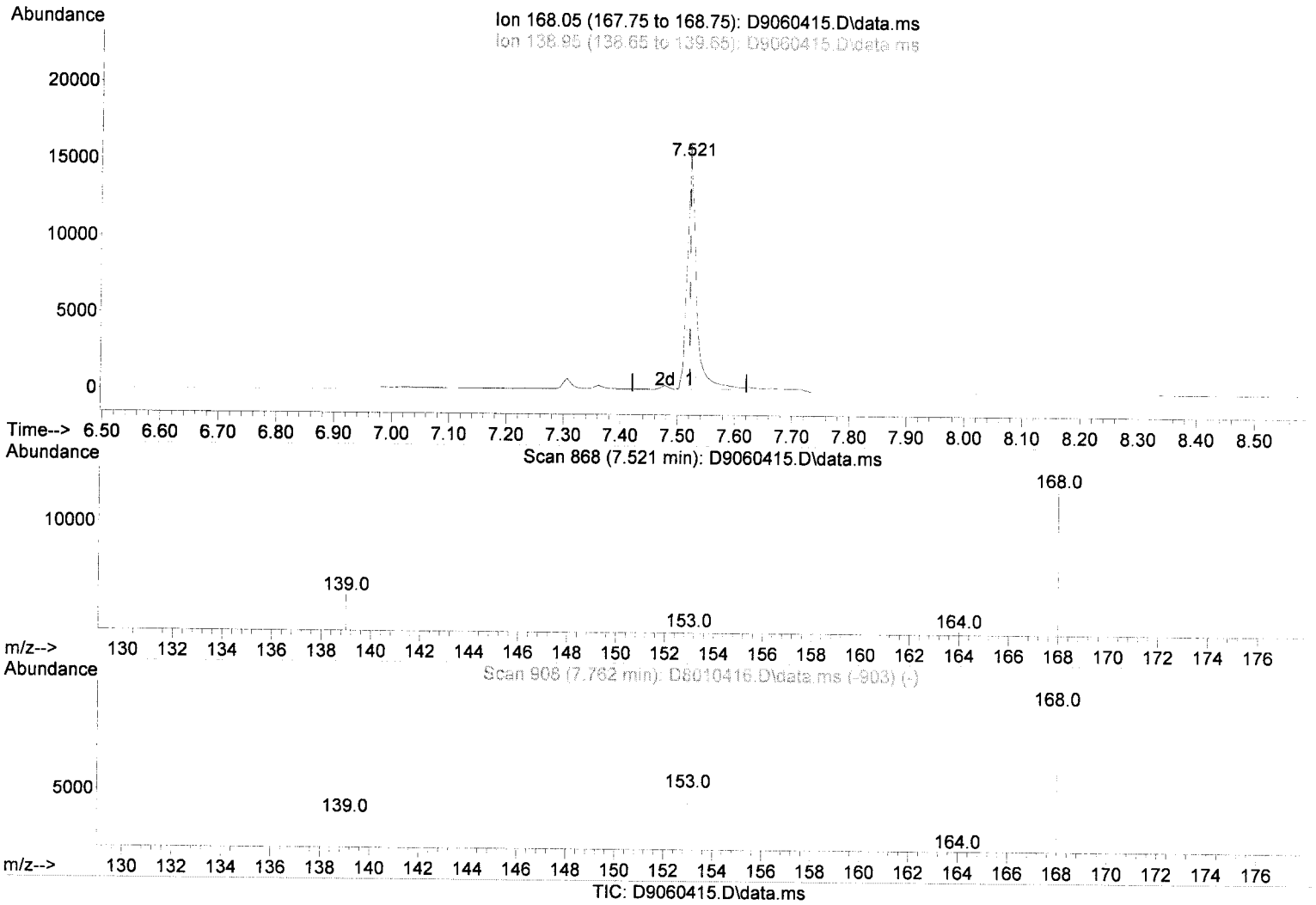
response 21403

Ion	Exp%	Act%
153.00	100.00	100.00
154.00	97.00	95.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



TIC: D9060415.D\data.ms

(9) Dibenzofuran

7.521min (+ 0.000) 127.52 ng/mL

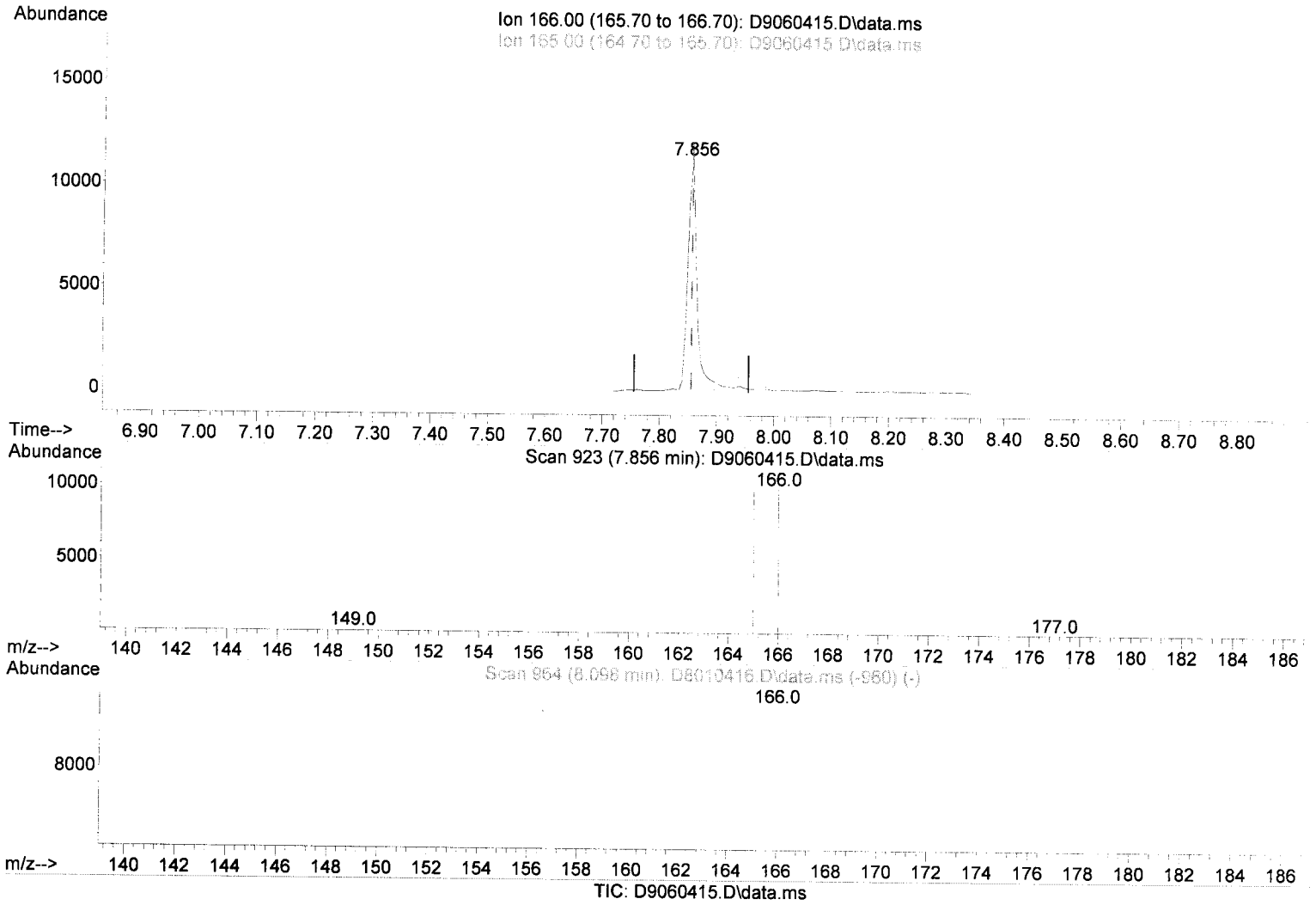
response 17133

Ion	Exp%	Act%
168.05	100.00	100.00
138.95	34.20	27.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(10) Fluorene (T)

7.856min (+ 0.000) 119.41 ng/ml

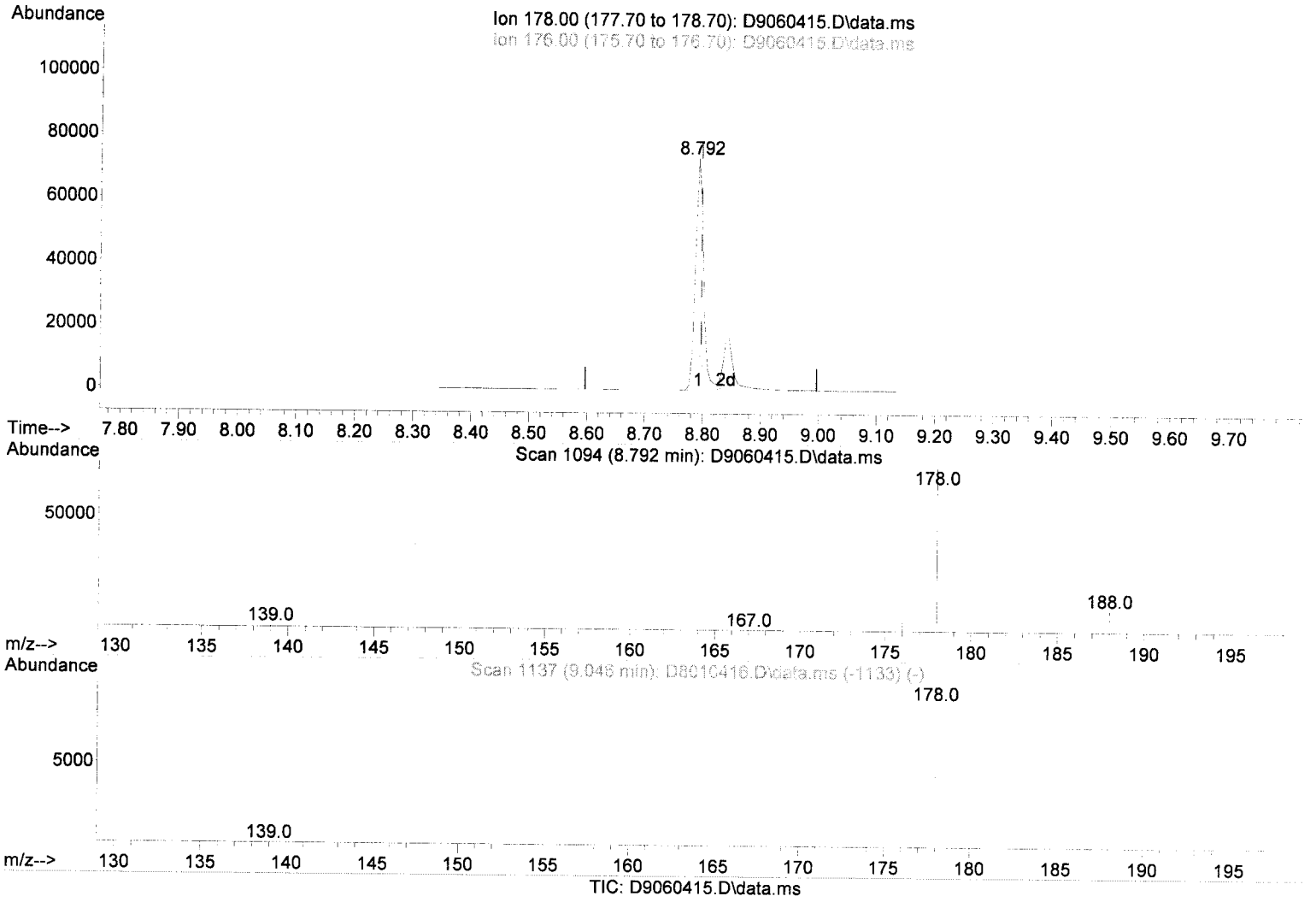
response 12485

Ion	Exp%	Act%
166.00	100.00	100.00
165.00	91.50	91.34
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



TIC: D9060415.D\data.ms

(12) Phenanthrene (T)

8.792min (-0.005) 469.07 ng/ml

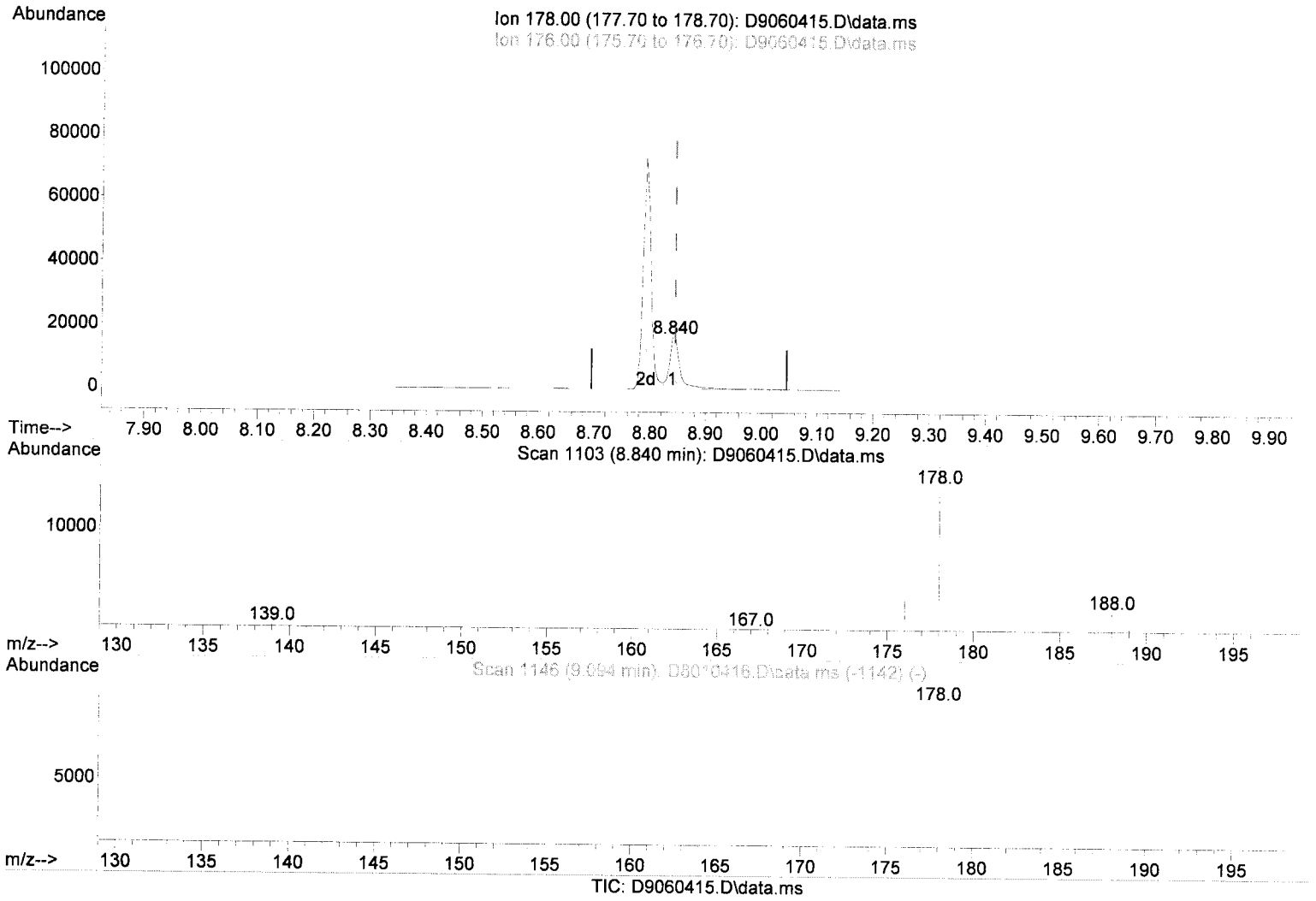
response 71506

Ion	Exp%	Act%
178.00	100.00	100.00
176.00	18.50	17.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(13) Anthracene (T)

8.840min (-0.005) 142.15 ng/ml

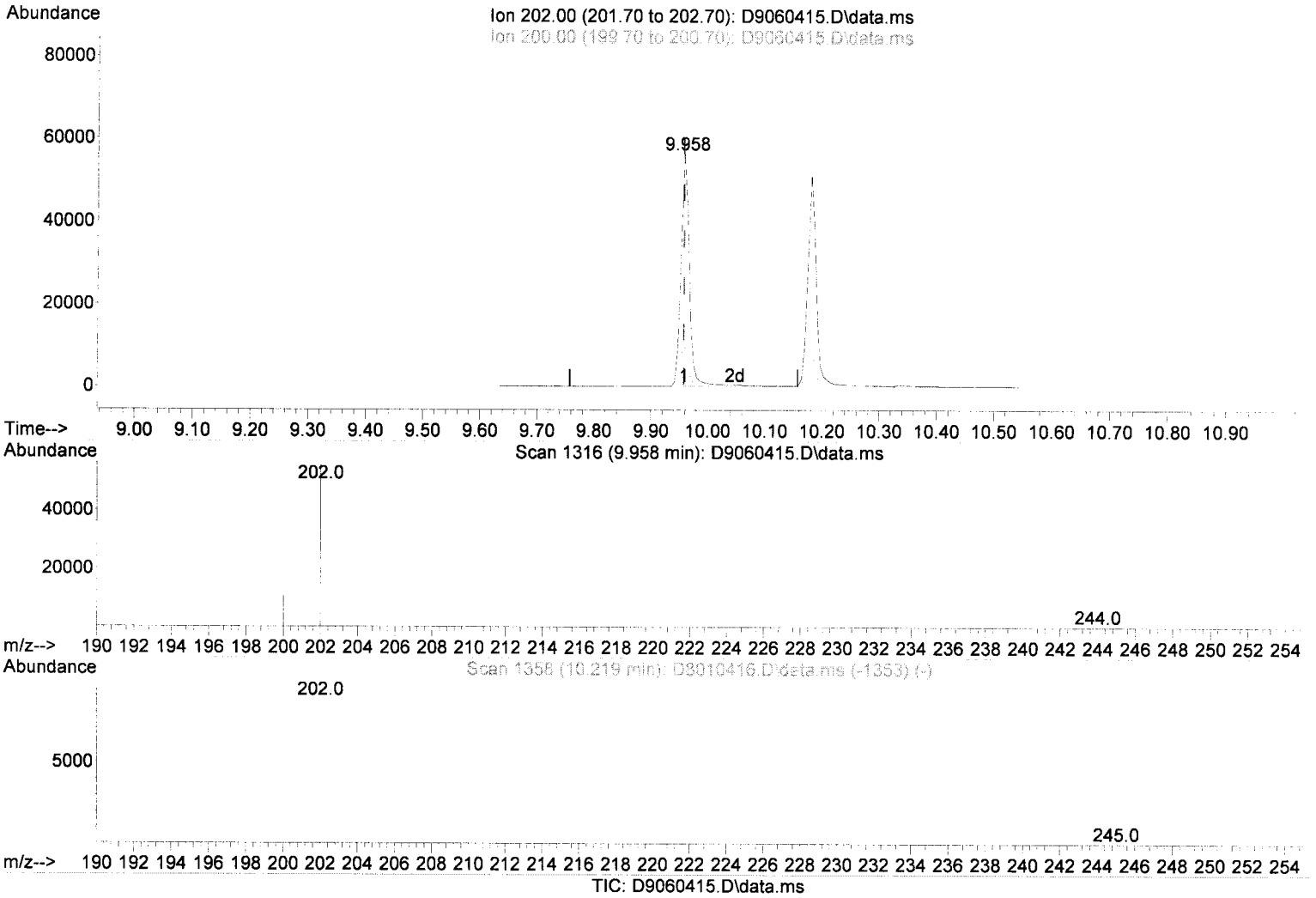
response 21882

Ion	Exp%	Act%
178.00	100.00	100.00
176.00	17.80	16.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(15) Fluoranthene (T)

9.958min (+ 0.000) 440.19 ng/ml

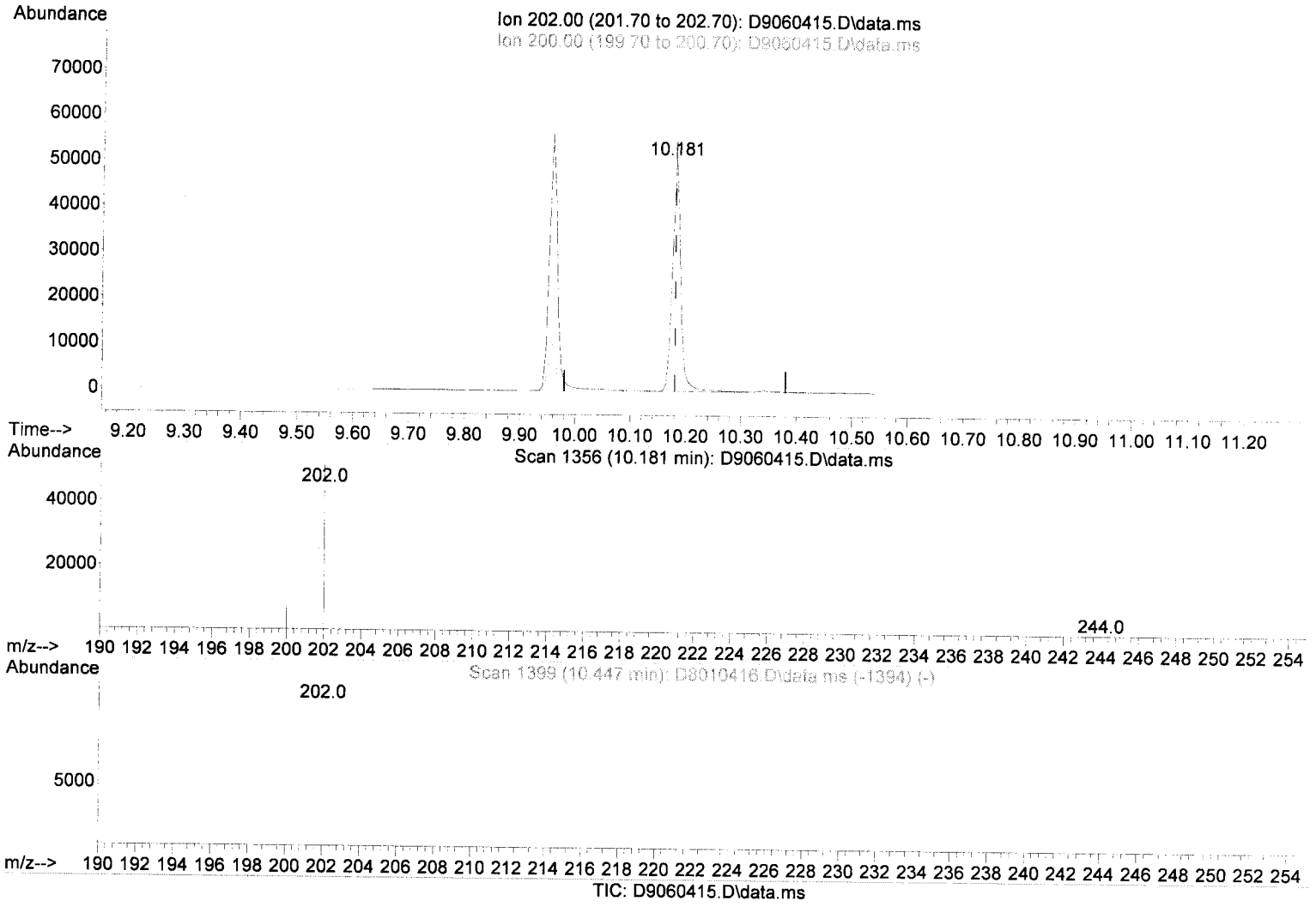
response 57182

Ion	Exp%	Act%
202.00	100.00	100.00
200.00	18.10	18.60
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(16) Pyrene (T)

10.181min (+ 0.000) 413.65 ng/ml

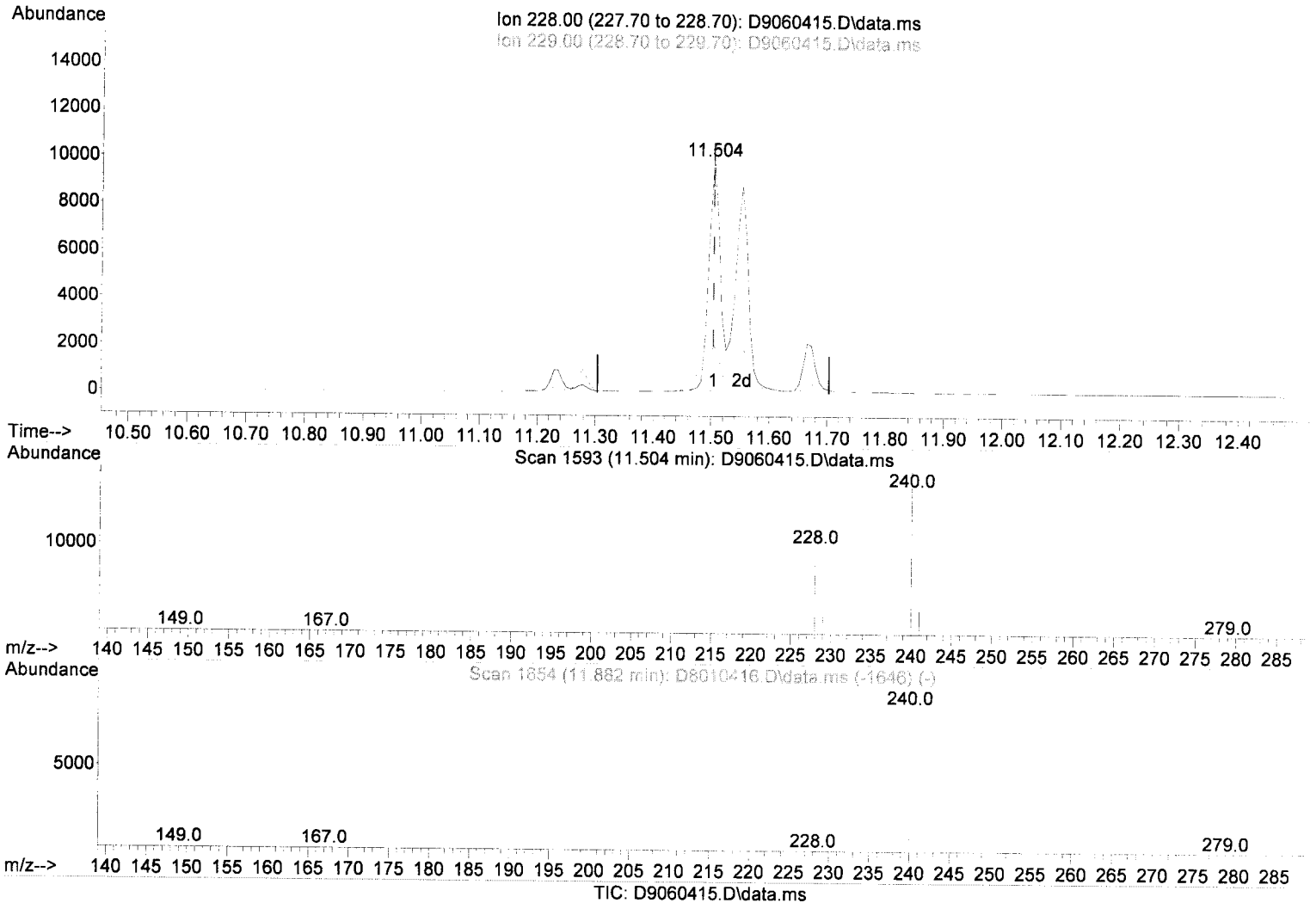
response 53473

Ion	Exp%	Act%
202.00	100.00	100.00
200.00	18.40	19.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(19) Benz(a)Anthracene (T)

11.504min (+ 0.000) 131.20 ng/ml

response 13524

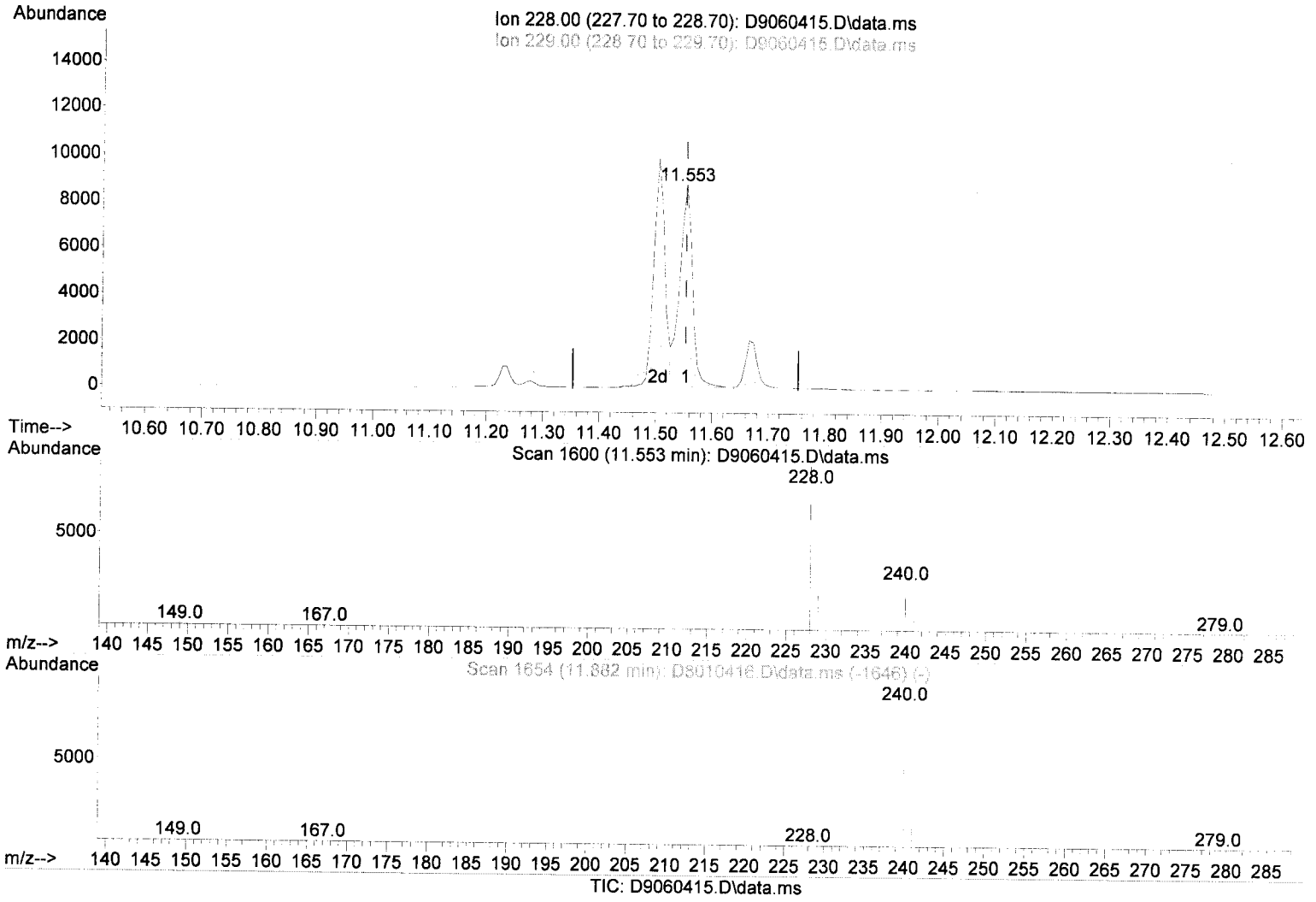
M-05

Ion	Exp%	Act%
228.00	100.00	100.00
229.00	21.40	21.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(20) Chrysene (T)

11.553min (+ 0.000) 136.26 ng/ml

response 13697

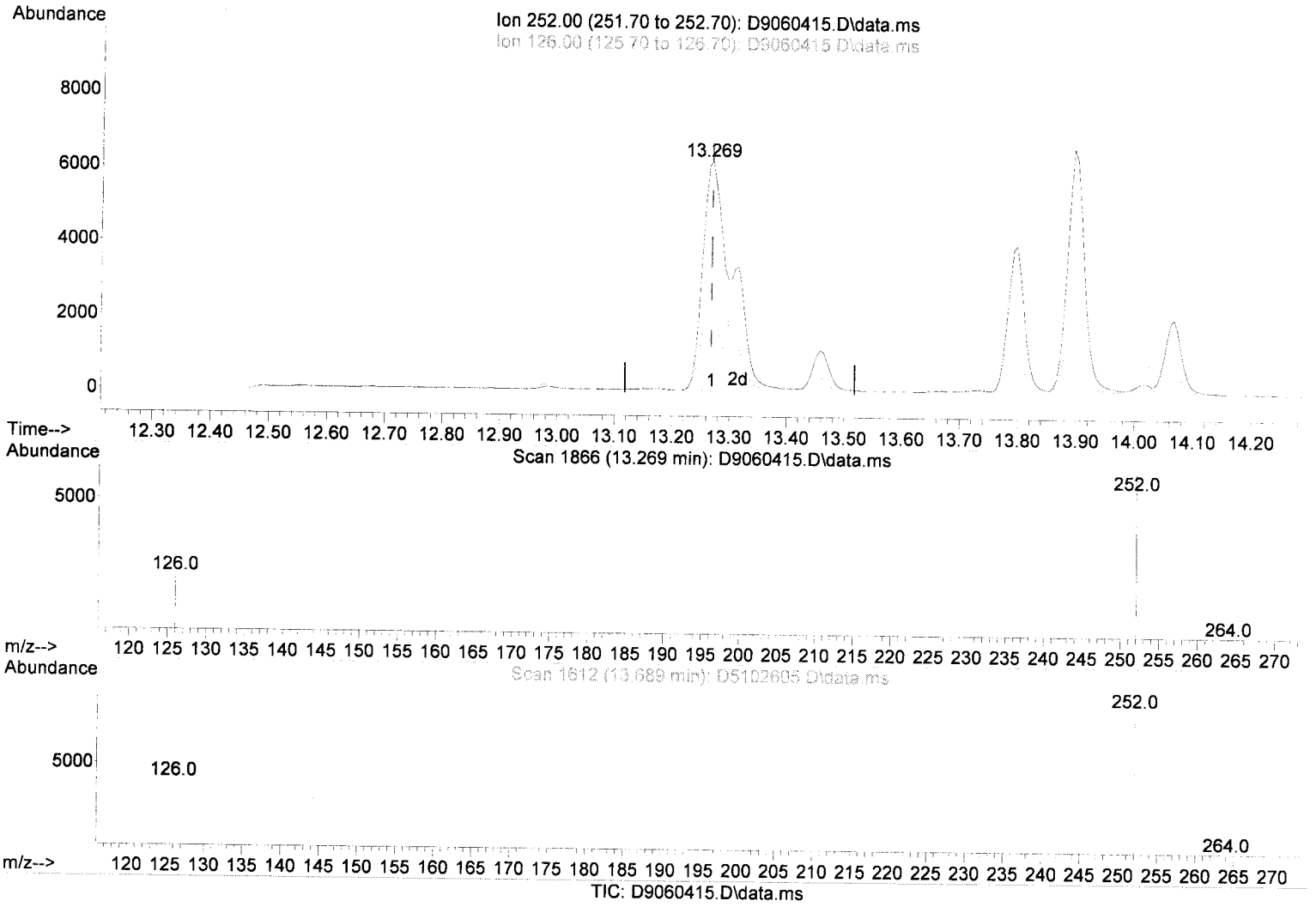
Ion	Exp%	Act%
228.00	100.00	100.00
229.00	21.20	23.96
0.00	0.00	0.00
0.00	0.00	0.00

M-05

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(22) Benzo(b)Fluoranthene (T)

13.269min (+ 0.000) 160.15 ng/ml

response 15580

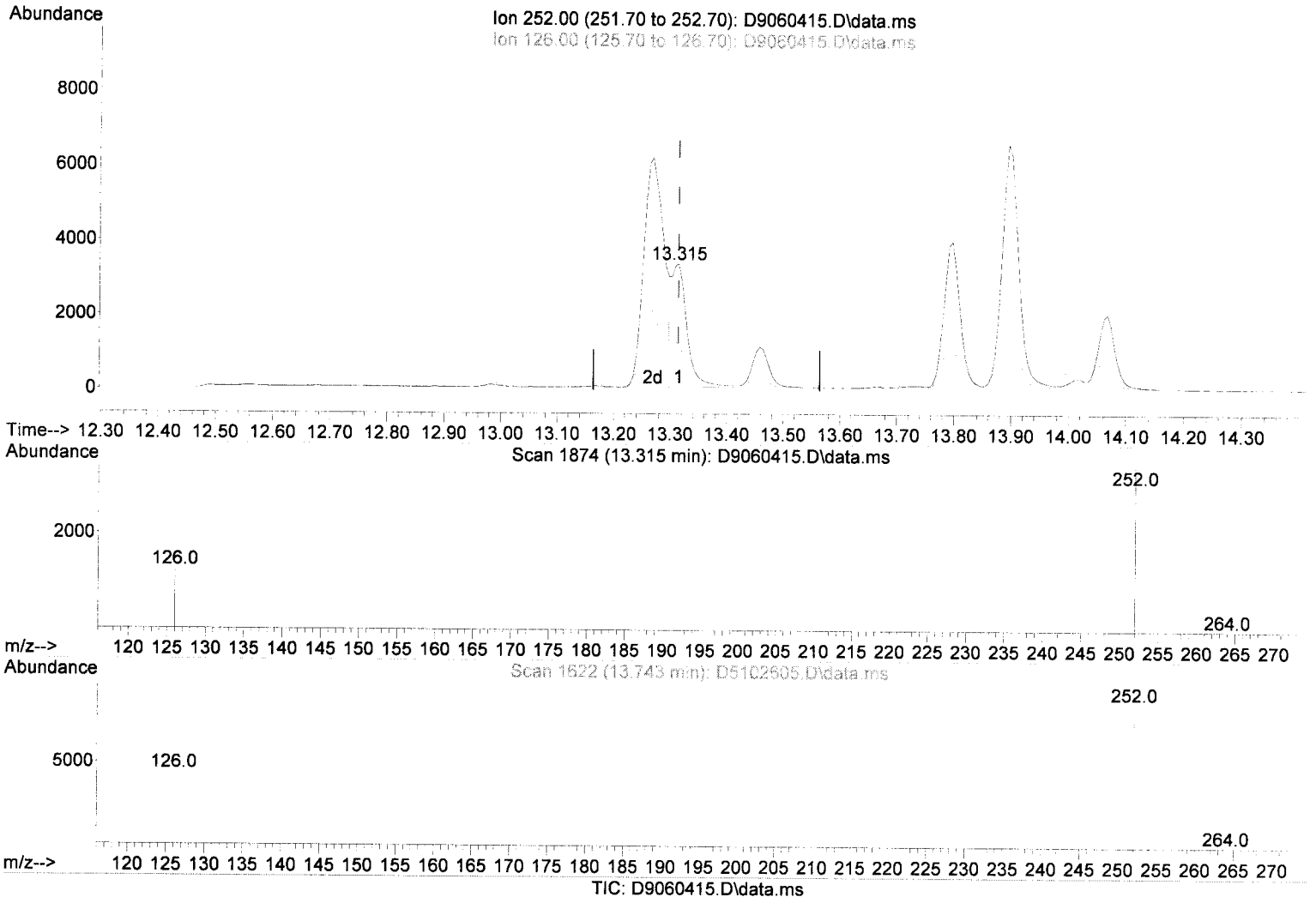
Ion	Exp%	Act%
252.00	100.00	100.00
126.00	17.90	34.93
0.00	0.00	0.00
0.00	0.00	0.00

M-05

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(23) Benzo(k)Fluoranthene (T)

13.315min (+ 0.000) 64.70 ng/ml

response 6238

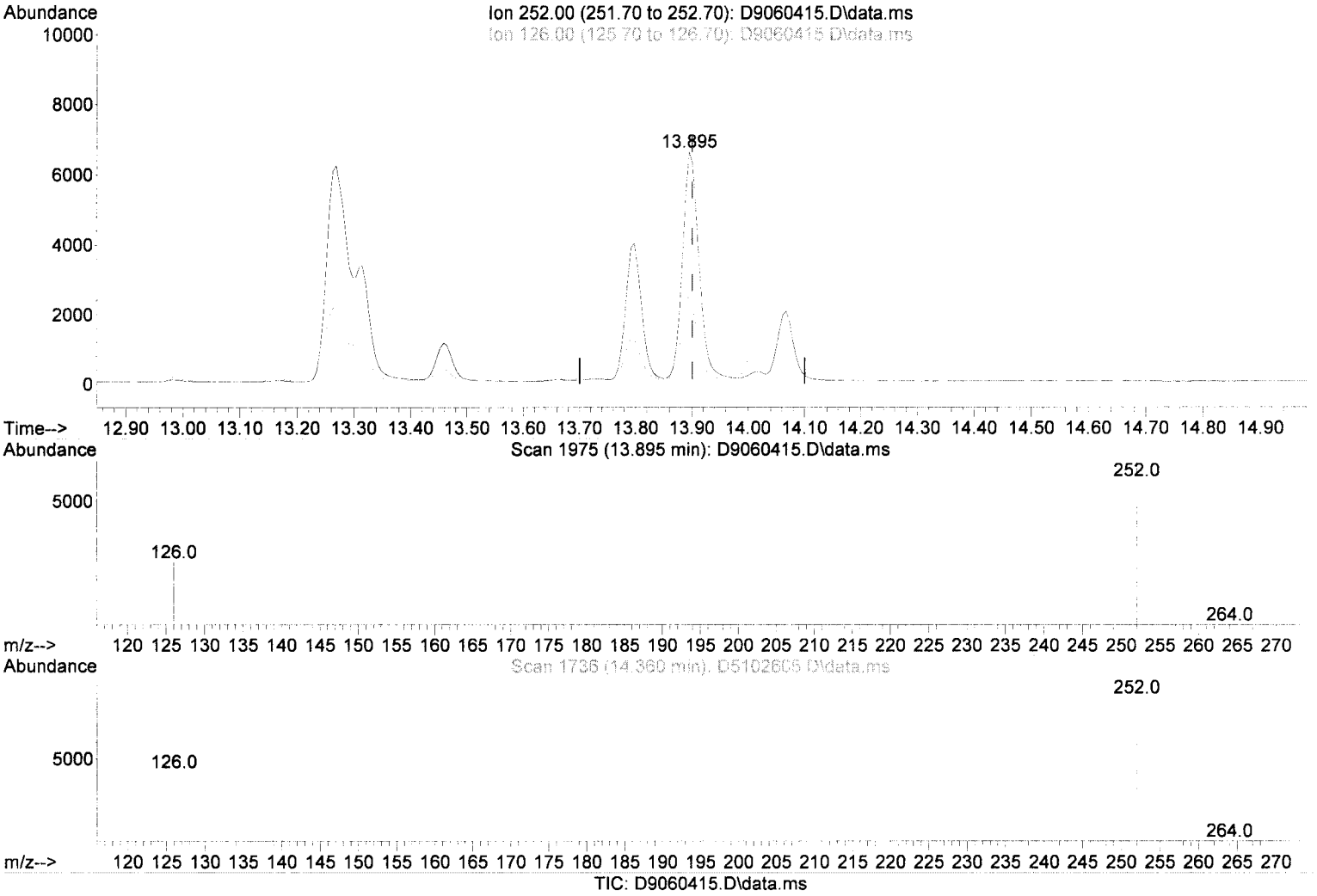
M-05

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	20.10	33.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



TIC: D9060415.D\data.ms

(26) Benzo(a)Pyrene (T)

13.895min (-0.005) 155.65 ng/ml

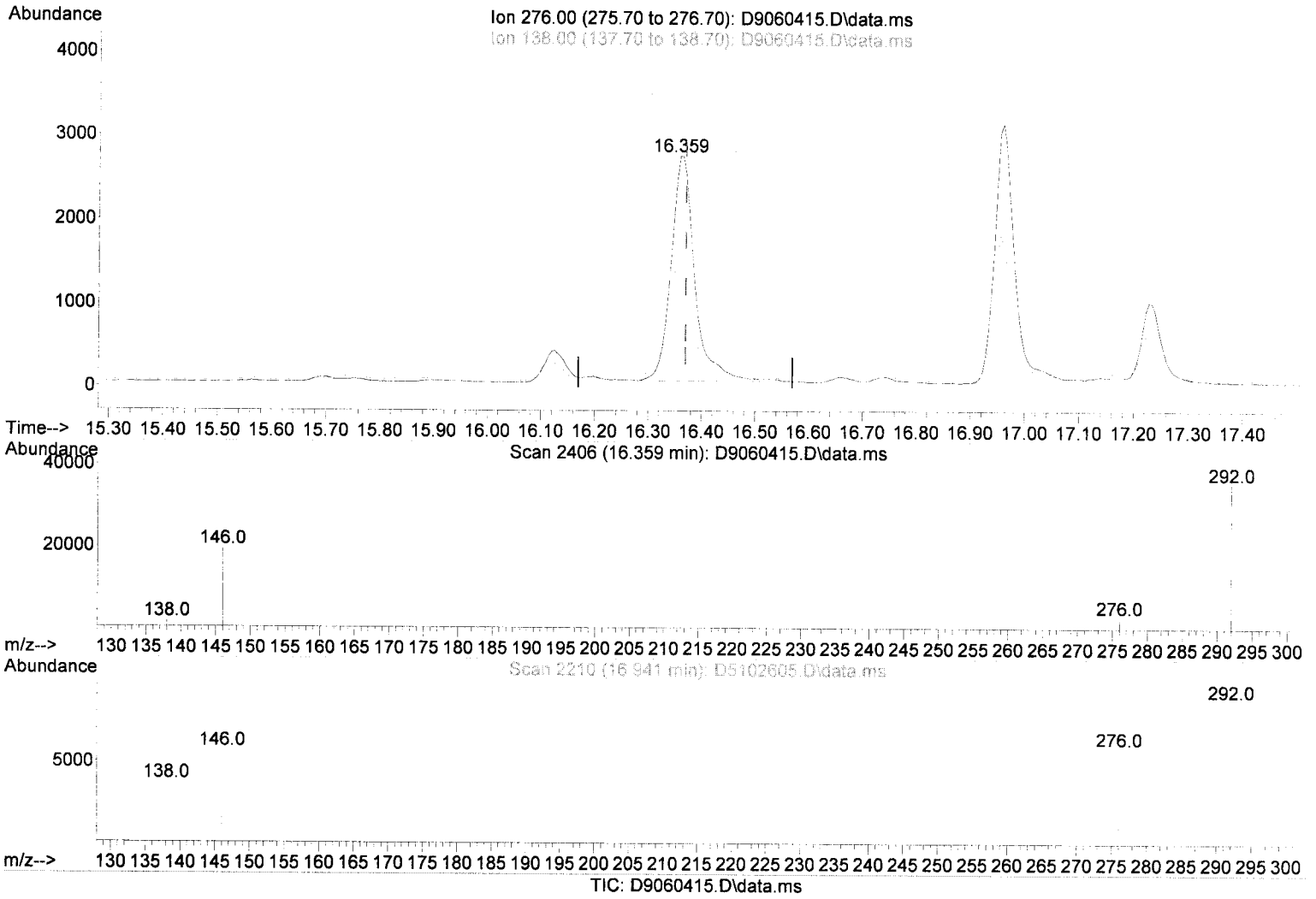
response 13014

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.30	36.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(29) Indeno(1,2,3-cd)Pyrene (T)

16.359min (-0.011) 106.38 ng/ml

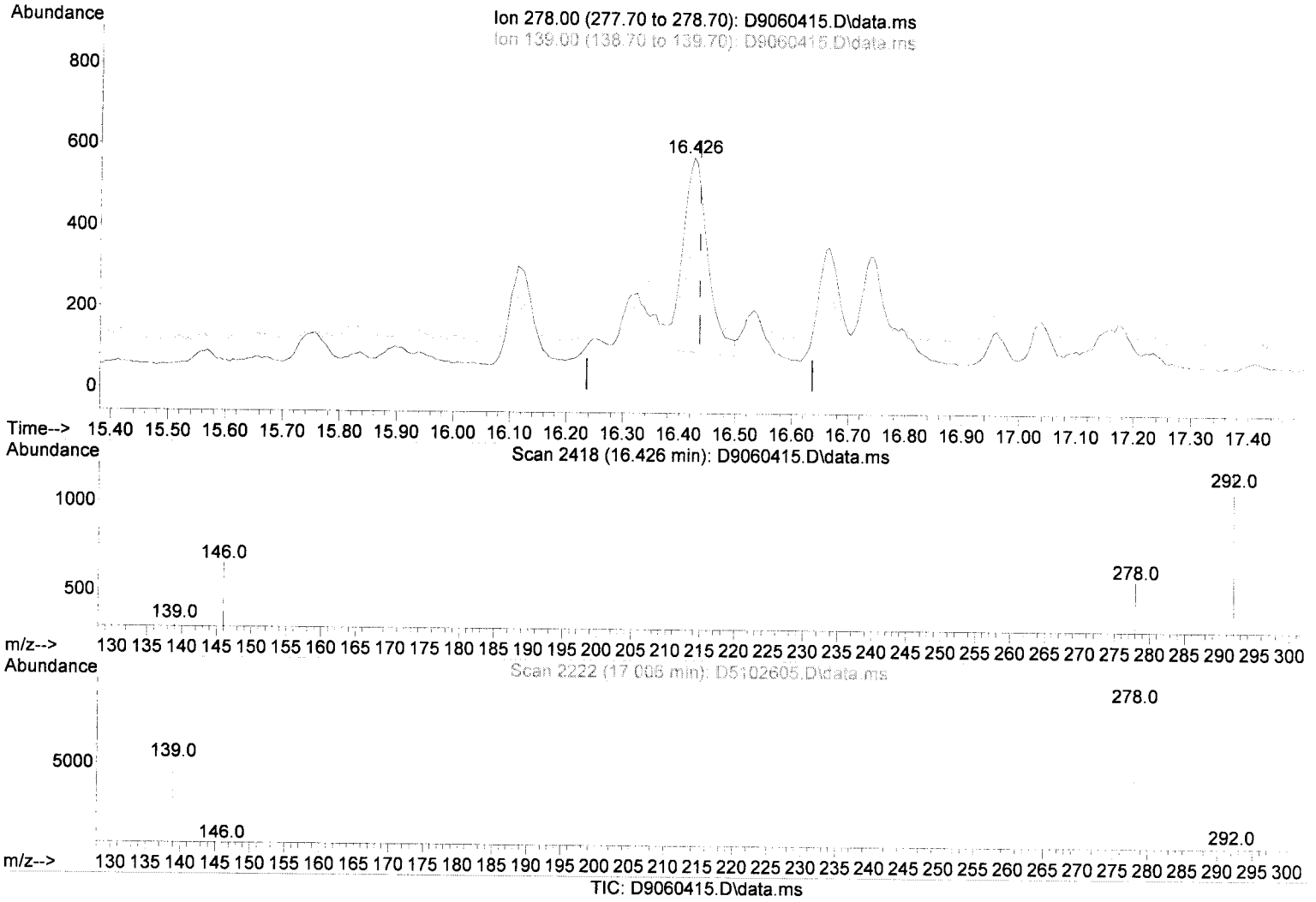
response 8293

Ion	Exp%	Act%
276.00	100.00	100.00
138.00	29.30	60.47#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(30) Dibenz(a,h)Anthracene (T)

16.426min (-0.011) 20.62 ng/ml

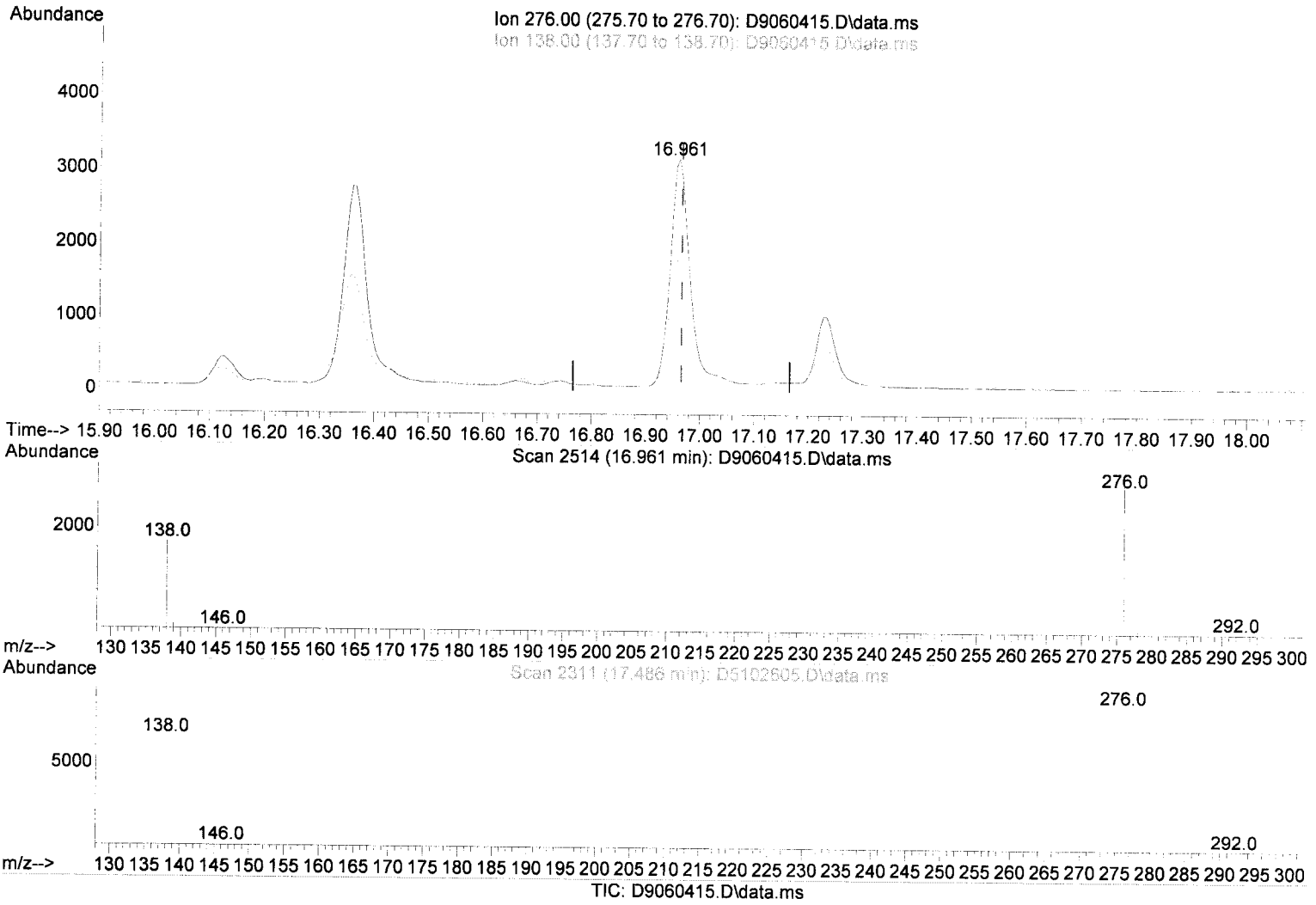
response 1468

Ion	Exp%	Act%
278.00	100.00	100.00
139.00	22.70	35.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:55:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(31) Benzo (g,h,i) Perylene (T)

16.961min (-0.005) 96.81 ng/ml

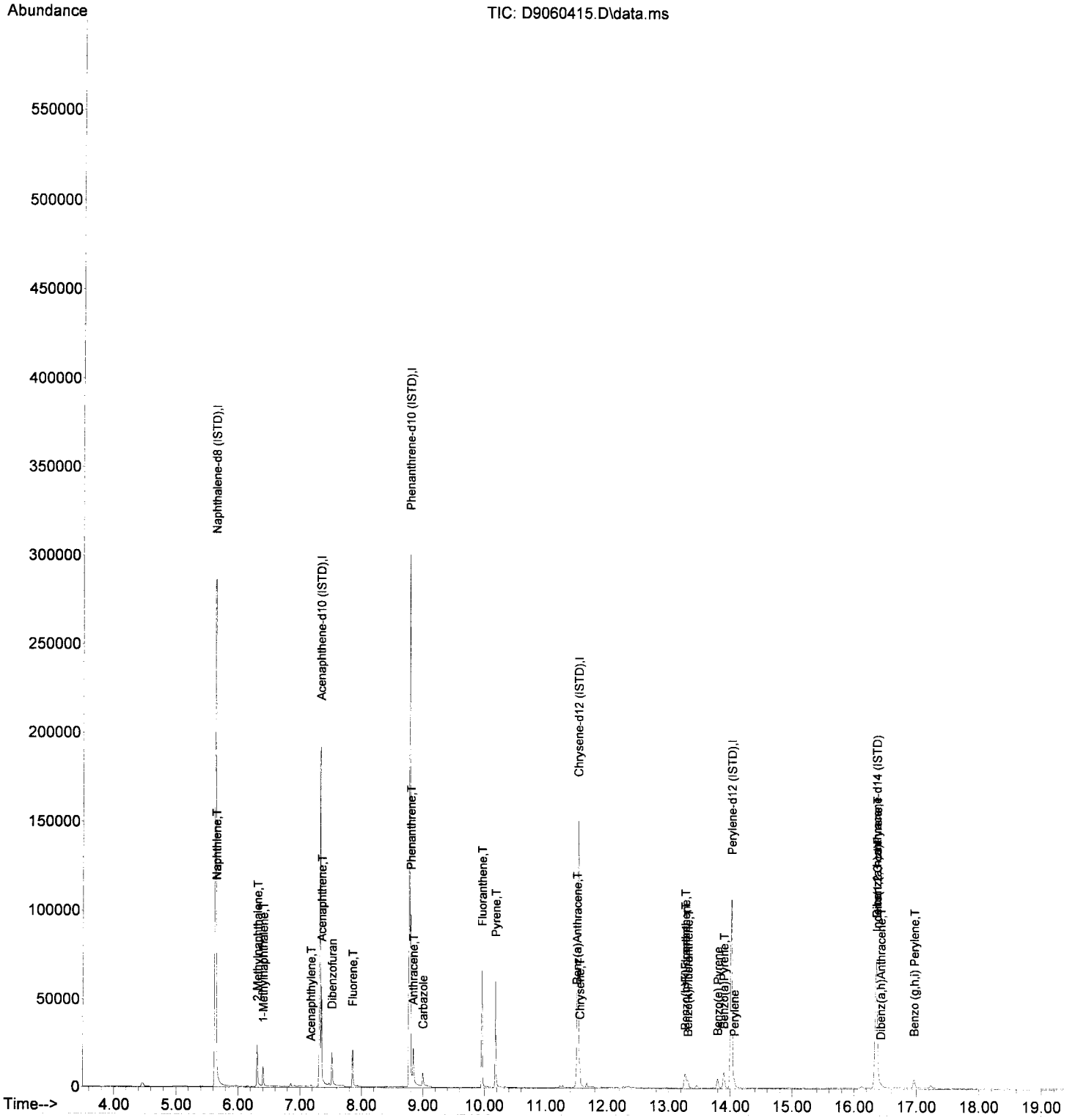
response 8117

Ion	Exp%	Act%
276.00	100.00	100.00
138.00	42.30	52.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060415.D
Acq On : 4 Jun 2019 2:56 pm
Operator : bsj
Sample : A9E0785-01@10000
Misc : 10000x Solid 1.14g/5mL SIM PAH
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 05 08:52:21 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060416.D
Acq On : 4 Jun 2019 3:23 pm
Operator : bsj
Sample : 9060490-DUP1@10000
Misc : 1000x Solid 1.11g/5mL SIM PAH (785-01)
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 05 08:52:24 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

M-05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.626	136	381493	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.325	164	189811	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.771	188	310597	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.518	240	203061	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.015	264	173802	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.354	292	139489	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	5.646	128	70361	355.83	ng/ml	99
3) 2-Methylnaphthalene	6.309	142	16166	126.45	ng/ml	99
4) 1-Methylnaphthalene	6.407	142	8268	66.69	ng/ml	97
7) Acenaphthylene	7.184	152	826	4.82	ng/ml#	66
8) Acenaphthene	7.350	153	24549	213.87	ng/ml	99
9) Dibenzofuran	7.521	168	19799	129.36	ng/mL	88
10) Fluorene	7.856	166	14329	120.31	ng/ml	99
12) Phenanthrene	8.792	178	78986	441.67	ng/ml	98
13) Anthracene	8.845	178	24426	135.26	ng/ml	97
14) Carbazole	8.999	167	10471	74.98	ng/mL	98
15) Fluoranthene	9.958	202	60237	395.27	ng/ml	99
16) Pyrene	10.181	202	55493	365.93	ng/ml	98
19) Benz(a)Anthracene	11.504	228	13929	113.69	ng/ml	99
20) Chrysene	11.553	228	13917	116.47	ng/ml	94
22) Benzo(b)Fluoranthene	13.269	252	15107	134.63	ng/ml	61
23) Benzo(k)Fluoranthene	13.309	252	6102	54.87	ng/ml	68
24) Benzo(b+k)Fluoranthene	13.269	252	21315	190.04	ng/ml	64
25) Benzo(e) Pyrene	13.797	252	7550	67.61	ng/mL	85
26) Benzo(a)Pyrene	13.901	252	12573	130.37	ng/ml	62
27) Perylene	14.067	252	4048	43.40	ng/mL	86
29) Indeno(1,2,3-cd)Pyrene	16.365	276	7547	86.06	ng/ml#	42
30) Dibenz(a,h)Anthracene	16.426	278	1146	14.31	ng/ml J	78
31) Benzo (g,h,i) Perylene	16.961	276	7604	80.62	ng/ml	86

S-01

M-05

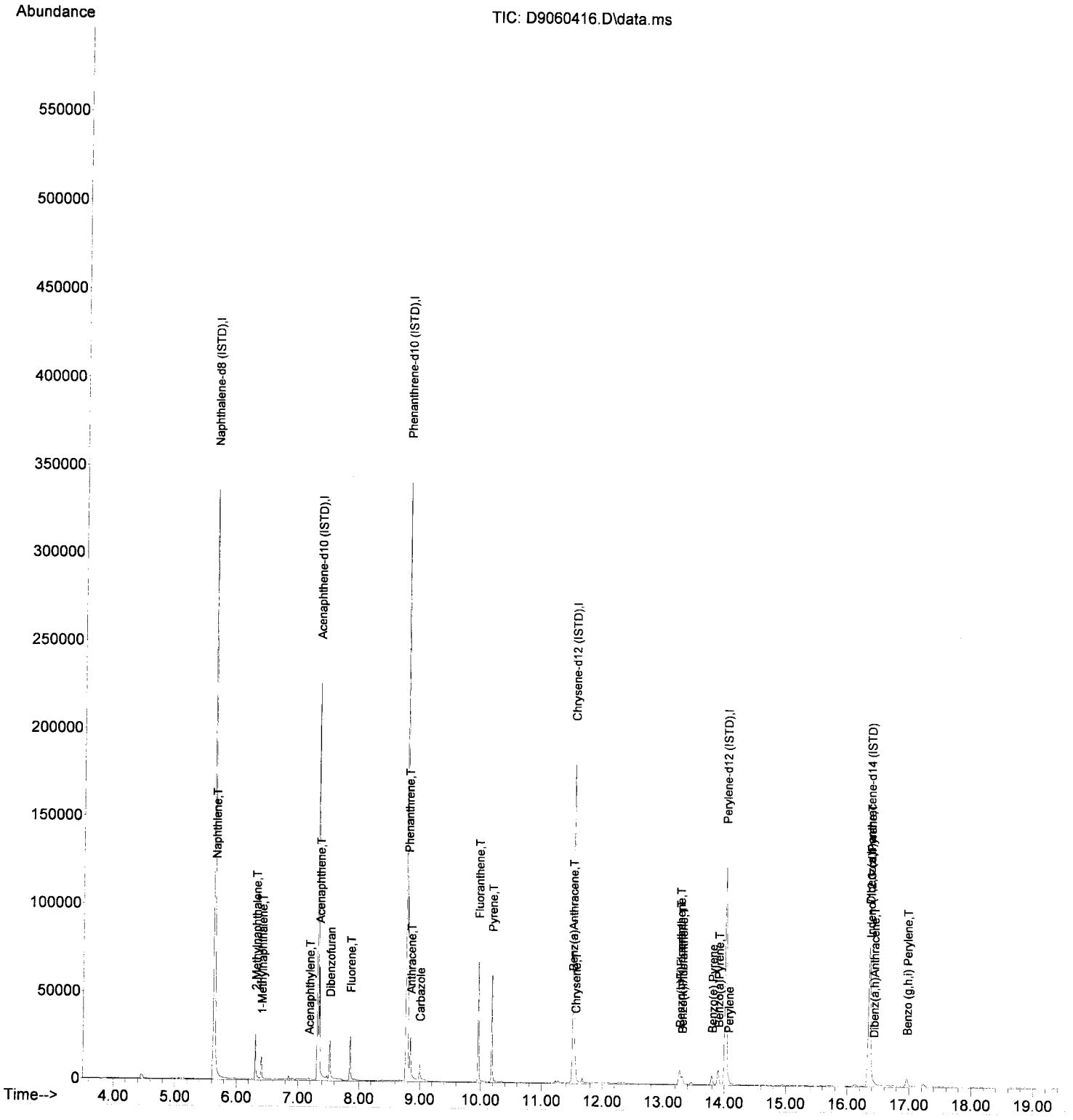
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-05-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F04031\
Data File : D9060416.D
Acq On : 4 Jun 2019 3:23 pm
Operator : bsj
Sample : 9060490-DUP1@10000
Misc : 1000x Solid 1.11g/5mL SIM PAH (785-01)
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 05 08:52:24 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Calibration Data

Sequence 9E08049 (Cal ID A9E0902) SV-GCMS4

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9E08049**	Instrument:	**SV-GCMS4**
Date:	**05/08/19 14:06**	Calibration:	**A9E0902**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E08049-TUN1	Water	QC	QC			A19D031	A19D323
2	9E08049-ICB1	Water	QC	QC			A19D031	
3	9E08049-CAL1	Water	QC	QC			A19D031	A19D053
4	9E08049-CAL2	Water	QC	QC			A19D031	A19D054
5	9E08049-CAL3	Water	QC	QC			A19D031	A19D055
6	9E08049-CAL4	Water	QC	QC			A19D031	A19D056
7	9E08049-CAL5	Water	QC	QC			A19D031	A19D057
8	9E08049-CAL6	Water	QC	QC			A19D031	A19D058
9	9E08049-CAL7	Water	QC	QC			A19D031	A19D059
10	9E08049-CAL8	Water	QC	QC			A19D031	A19D060
11	9E08049-CAL9	Water	QC	QC			A19D031	A19D061
12	9E08049-CALA	Water	QC	QC			A19D031	A19D062
13	9E08049-IBL1	Water	QC	QC			A19B027	
14	9E08049-ICV1	Water	QC	QC			A19B027	A19C239
15	9E08049-IBL2	Water	QC	QC			A19B027	

Data Entered By: BGS 5-09-19

Data Reviewed By: GJL 5/9/19

Comments:

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E08049

Analysis Included

8270 SIM PAH
8270 SIM PAH (16)
8270 SIM Naphthalene
8270 SIM PAH (1-2mL FV)

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9E08049-TUN1	MS Tune	Water	A19D323	A19D031	5/8/2019 2:14:00PM
9E08049-ICB1	Initial Cal Blank	Water		A19D031	5/8/2019 2:39:00PM
9E08049-CAL1	Cal Standard	Water	A19D053	"	5/8/2019 3:06:00PM
9E08049-CAL2	Cal Standard	Water	A19D054	"	5/8/2019 3:33:00PM
9E08049-CAL3	Cal Standard	Water	A19D055	"	5/8/2019 4:00:00PM
9E08049-CAL4	Cal Standard	Water	A19D056	"	5/8/2019 4:27:00PM
9E08049-CAL5	Cal Standard	Water	A19D057	"	5/8/2019 4:53:00PM
9E08049-CAL6	Cal Standard	Water	A19D058	"	5/8/2019 5:20:00PM
9E08049-CAL7	Cal Standard	Water	A19D059	"	5/8/2019 5:47:00PM
9E08049-CAL8	Cal Standard	Water	A19D060	"	5/8/2019 6:14:00PM
9E08049-CAL9	Cal Standard	Water	A19D061	"	5/8/2019 6:40:00PM
9E08049-CALA	Cal Standard	Water	A19D062	"	5/8/2019 7:07:00PM
9E08049-ICV1	Initial Cal Check	Water	A19C239	"	5/8/2019 8:01:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: A9E0902 Instrument: SV-GCMS4

8270 SIM PAH Sequence: 9E08049 Matrix: Water

9E08049-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E08049

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E0902** Instrument: **SV-GCMS4**

8270 SIM PAH Sequence: **9E08049** Matrix: **Water**

9E08049-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Calibration Status Report SV-GCMS4

Method Path : C:\msdchem\1\methods\
Method File : SV4_050919.M
Title : EPA 8270 SIM PAH/PCP/PTH
Last Update : Thu May 09 08:52:03 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	20	20	2000	P:\DATA\2019-05\9E08049\D9050803.D
2	50	50	2000	P:\DATA\2019-05\9E08049\D9050804.D
3	100	100	2000	P:\DATA\2019-05\9E08049\D9050805.D
4	200	200	2000	P:\DATA\2019-05\9E08049\D9050806.D
5	500	500	2000	P:\DATA\2019-05\9E08049\D9050807.D
6	1000	1000	2000	P:\DATA\2019-05\9E08049\D9050808.D
7	2000	2000	2000	P:\DATA\2019-05\9E08049\D9050809.D
8	4000	4000	2000	P:\DATA\2019-05\9E08049\D9050810.D
9	6000	6000	2000	P:\DATA\2019-05\9E08049\D9050811.D
10	8000	8000	2000	P:\DATA\2019-05\9E08049\D9050812.D

#	ID	Update Time	Quant Time	Acquisition Time
1	20	May 09 08:50 2019	May 08 15:33 2019	8 May 2019 3:06 pm
2	50	May 09 08:50 2019	May 08 16:05 2019	8 May 2019 3:33 pm
3	100	May 09 08:50 2019	May 08 16:20 2019	8 May 2019 4:00 pm
4	200	May 09 08:51 2019	May 08 16:46 2019	8 May 2019 4:27 pm
5	500	May 09 08:51 2019	May 09 08:45 2019	8 May 2019 4:53 pm
6	1000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 5:20 pm
7	2000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 5:47 pm
8	4000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 6:14 pm
9	6000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 6:40 pm
10	8000	May 09 08:52 2019	May 09 08:46 2019	8 May 2019 7:07 pm

SV4_050919.M Thu May 09 08:56:22 2019

5-09-19
BSS

Compound List Report SV-GCMS4

Method Path : C:\msdchem\1\methods\
Method File : SV4_050919.M
Title : EPA 8270 SIM PAH/PCP/PTH
Last Update : Thu May 09 08:52:03 2019
Response Via : Initial Calibration

Total Cpnds : 31

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Naphthalene-d8 (ISTD)	136	5.756	1.000	A	1	A	R
2	T	Naphthlene	128	5.769	1.002	A	1	A	R
3	T	2-Methylnaphthalene	142	6.434	1.118	A	1	A	R
4	T	1-Methylnaphthalene	142	6.532	1.135	A	1	A	R
5	I	Acenaphthene-d10 (ISTD)	164	7.452	1.000	A	1	A	R
6	S	2-Fluorobiphenyl(Surr)	172	6.791	0.911	A	1	A	R
7	T	Acenaphthylene	152	7.317	0.982	A	1	A	R
8	T	Acenaphthene	153	7.483	1.004	A	1	A	R
9		Dibenzofuran	168	7.654	1.027	A	1	A	R
10	T	Fluorene	166	7.989	1.072	A	1	A	R
11	I	Phenanthrene-d10 (ISTD)	188	8.910	1.000	A	1	A	R
12	T	Phenanthrene	178	8.931	1.002	A	1	A	R
13	T	Anthracene	178	8.985	1.008	A	1	A	R
14		Carbazole	167	9.133	1.025	A	1	A	R
15	T	Fluoranthene	202	10.103	1.134	A	1	A	R
16	T	Pyrene	202	10.326	1.159	A	1	A	R
17	I	Chrysene-d12 (ISTD)	240	11.720	1.000	A	1	A	R
18	S	Terphenyl-d14(Surr)	244	10.465	0.893	A	1	A	R
19	T	Benz(a)Anthracene	228	11.699	0.998	A	1	A	R
20	T	Chrysene	228	11.756	1.003	A	1	A	R
21	I	Perylene-d12 (ISTD)	264	14.313	1.000	A	1	A	R
22	T	Benzo(b)Fluoranthene	252	13.543	0.946	A	1	A	R
23	T	Benzo(k)Fluoranthene	252	13.595	0.950	A	1	A	R
24	T	Benzo(b+k)Fluoranthene	252	13.595	0.950	A	1	A	R
25		Benzo(e) Pyrene	252	14.095	0.985	A	1	A	R
26	T	Benzo(a)Pyrene	252	14.198	0.992	A	1	A	R
27		Perylene	252	14.370	1.004	A	1	A	R
28	I	Dibenz(a,h)anthracene-d14 (...	292	16.727	1.000	A	1	A	R
29	T	Indeno(1,2,3-cd)Pyrene	276	16.738	1.001	A	1	A	R
30	T	Dibenz(a,h)Anthracene	278	16.800	1.004	A	1	A	R
31	T	Benzo (g,h,i) Perylene	276	17.290	1.034	A	1	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

SV4_050919.M Thu May 09 08:56:05 2019

5-9-19

Response Factor Report SV-GCMS4

Method Path : C:\msdchem\1\methods\
Method File : SV4_050919.M
Title : EPA 8270 SIM PAH/PCP/PTH
Last Update : Thu May 09 08:52:03 2019
Response Via : Initial Calibration

Calibration Files
20 =D9050803.D 50 =D9050804.D 100 =D9050805.D 200 =D9050806.D 500 =D9050807.D 1000=D9050808.D 2000=D9050809.D
4000=D9050810.D 6000=D9050811.D 8000=D9050812.D

		Compound	20	50	100	200	500	1000	2000	4000	6000	8000	Avg	%RSD
														4.52
1)	I	Naphthalene-d8 (ISTD)	----------ISTD----------											
2)	T	Naphthlene	1.006	1.024	1.060	1.059	1.048	1.022	1.036	1.041	1.033	1.037	1.037	1.61
3)	T	2-Methylnaphth...	0.629	0.660	0.668	0.675	0.674	0.669	0.673	0.687	0.674	0.693	0.670	2.56
4)	T	1-Methylnaphth...	0.601	0.632	0.652	0.663	0.659	0.650	0.657	0.671	0.651	0.664	0.650	3.08
														5.61
5)	I	Acenaphthene-d10 (...	----------ISTD----------											
6)	S	2-Fluorobiphen...	1.387	1.446	1.535	1.459	1.520	1.478	1.492	1.549	1.439	1.518	1.482	3.39
7)	T	Acenaphthylene	1.721	1.762	1.799	1.766	1.858	1.799	1.837	1.847	1.814	1.858	1.806	2.55
8)	T	Acenaphthene	1.150	1.177	1.225	1.217	1.234	1.219	1.216	1.211	1.222	1.224	1.209	2.13
9)		Dibenzofuran	1.483	1.572	1.632	1.622	1.668	1.611	1.634	1.646	1.622	1.638	1.613	3.21
10)	T	Fluorene	1.155	1.207	1.255	1.262	1.295	1.246	1.245	1.290	1.298	1.297	1.255	3.65
														7.65
11)	I	Phenanthrene-d10 (...	----------ISTD----------											
12)	T	Phenanthrene	1.178	1.159	1.153	1.150	1.167	1.133	1.132	1.155	1.142	1.148	1.152	1.25
13)	T	Anthracene	1.127	1.118	1.144	1.142	1.184	1.136	1.163	1.212	1.193	1.208	1.163	2.96
14)		Carbazole	0.907	0.905	0.924	0.944	0.971	0.917	0.887	0.739			0.899	7.75
15)	T	Fluoranthene	0.945	0.948	0.984	0.977	1.007	0.954	0.977	1.006	0.992	1.022	0.981	2.69
16)	T	Pyrene	0.944	0.959	0.972	0.980	0.991	0.938	0.961	1.006	1.000	1.014	0.977	2.69
														11.64
17)	I	Chrysene-d12 (ISTD)	----------ISTD----------											
18)	S	Terphenyl-d14(...	1.035	1.077	1.070	1.027	1.081	1.062	1.055	1.095	1.045	1.037	1.058	2.11
19)	T	Benz(a)Anthracene	1.402	1.228	1.212	1.181	1.205	1.160	1.163	1.172	1.168	1.178	1.207	5.97
20)	T	Chrysene	1.154	1.160	1.204	1.192	1.211	1.171	1.166	1.191	1.145	1.174	1.177	1.87
														6.72
21)	I	Perylene-d12 (ISTD)	----------ISTD----------											
22)	T	Benzo(b)Fluora...	1.192	1.210	1.240	1.283	1.301	1.291	1.274	1.381	1.356	1.385	1.291	5.19
23)	T	Benzo(k)Fluora...	1.171	1.200	1.221	1.234	1.285	1.288	1.289	1.356	1.370	1.382	1.280	5.73
24)	T	Benzo(b+k)Fluo...	1.204	1.214	1.234	1.264	1.296	1.292	1.283	1.370	1.365	1.385	1.291	5.02
25)		Benzo(e) Pyrene	1.231	1.234	1.262	1.279	1.302	1.298	1.272	1.326	1.328	1.317	1.285	2.76
26)	T	Benzo(a)Pyrene	0.990	1.000	1.036	1.066	1.096	1.134	1.150	1.202	1.196	1.228	1.110	7.71
27)		Perylene	1.038	1.017	1.060	1.080	1.086	1.084	1.078	1.103	1.090	1.097	1.073	2.54
														6.80
28)		Dibenz(a,h)anthrac...	----------ISTD----------											
29)	T	Indeno(1,2,3-c...	1.268	1.236	1.271	1.259	1.303	1.265	1.238	1.255	1.241	1.238	1.257	1.65
30)	T	Dibenz(a,h)Ant...	1.014	1.058	1.119	1.132	1.166	1.154	1.158	1.195	1.236	1.249	1.148	6.34
31)	T	Benzo (g,h,i) ...	1.308	1.317	1.353	1.334	1.411	1.372	1.356	1.369	1.383	1.322	1.352	2.40

(#) = Out of Range

529.9

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050803.D
Acq On : 8 May 2019 3:06 pm
Operator : bsj
Sample : 9E08049-CAL1
Misc : 1x A19D053@20 .
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 09:38:48 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	20.000	19.401	3.0	100	0.00
3	T	2-Methylnaphthalene	20.000	18.770	6.2	100	0.00
4	T	1-Methylnaphthalene	20.000	18.504	7.5	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	20.000	18.731	6.3	100	0.00
7	T	Acenaphthylene	20.000	19.068	4.7	100	0.00
8	T	Acenaphthene	20.000	19.023	4.9	100	0.00
9		Dibenzofuran	20.000	18.406	8.0	100	0.00
10	T	Fluorene	20.000	18.423	7.9	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	20.000	20.465	-2.3	100	0.00
13	T	Anthracene	20.000	19.391	3.0	100	0.00
14		Carbazole	20.000	20.169	-0.8	100	0.00
15	T	Fluoranthene	20.000	19.251	3.7	100	0.00
16	T	Pyrene	20.000	19.326	3.4	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	20.000	19.561	2.2	100	0.00
19	T	Benz(a)Anthracene	20.000	23.235	-16.2	100	0.00
20	T	Chrysene	20.000	19.612	1.9	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	20.000	18.470	7.7	100	-0.02
23	T	Benzo(k)Fluoranthene	20.000	18.306	8.5	100	-0.01
24	T	Benzo(b+k)Fluoranthene	40.000	37.443	6.4	100	-0.01
25		Benzo(e) Pyrene	20.000	19.168	4.2	100	-0.01
26	T	Benzo(a)Pyrene	20.000	17.850	10.7	100	-0.02
27		Perylene	20.000	19.342	3.3	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	20.000	20.164	-0.8	100	-0.02
30	T	Dibenz(a,h)Anthracene	20.000	17.663	11.7	100	-0.01
31	T	Benzo (g,h,i) Perylene	20.000	19.341	3.3	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19 BSJ

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050804.D
Acq On : 8 May 2019 3:33 pm
Operator : bsj
Sample : 9E08049-CAL2
Misc : 1x A19D054@50
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 09:38:52 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	50.000	49.385	1.2	100	0.00
3	T	2-Methylnaphthalene	50.000	49.202	1.6	100	0.00
4	T	1-Methylnaphthalene	50.000	48.613	2.8	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	50.000	48.811	2.4	100	0.00
7	T	Acenaphthylene	50.000	48.822	2.4	100	0.00
8	T	Acenaphthene	50.000	48.714	2.6	100	0.00
9		Dibenzofuran	50.000	48.765	2.5	100	0.00
10	T	Fluorene	50.000	48.169	3.7	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	50.000	50.315	-0.6	100	0.00
13	T	Anthracene	50.000	48.079	3.8	100	0.00
14		Carbazole	50.000	50.331	-0.7	100	0.00
15	T	Fluoranthene	50.000	48.326	3.3	100	0.00
16	T	Pyrene	50.000	49.127	1.7	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	50.000	50.913	-1.8	100	0.00
19	T	Benz(a)Anthracene	50.000	50.903	-1.8	100	0.00
20	T	Chrysene	50.000	49.317	1.4	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	50.000	46.885	6.2	100	-0.01
23	T	Benzo(k)Fluoranthene	50.000	46.906	6.2	100	-0.01
24	T	Benzo(b+k)Fluoranthene	100.000	94.583	5.4	100	-0.01
25		Benzo(e) Pyrene	50.000	48.024	4.0	100	-0.02
26	T	Benzo(a)Pyrene	50.000	45.074	9.9	100	-0.01
27		Perylene	50.000	47.392	5.2	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.02
29	T	Indeno(1,2,3-cd)Pyrene	50.000	49.127	1.7	100	-0.02
30	T	Dibenz(a,h)Anthracene	50.000	46.034	7.9	100	-0.01
31	T	Benzo (g,h,i) Perylene	50.000	48.660	2.7	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050805.D
Acq On : 8 May 2019 4:00 pm
Operator : bsj
Sample : 9E08049-CAL3
Misc : 1x A19D055@100
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 09:38:55 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	100.000	102.189	-2.2	100	0.00
3	T	2-Methylnaphthalene	100.000	99.695	0.3	100	0.00
4	T	1-Methylnaphthalene	100.000	100.298	-0.3	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	100.000	103.629	-3.6	100	0.00
7	T	Acenaphthylene	100.000	99.690	0.3	100	0.00
8	T	Acenaphthene	100.000	101.318	-1.3	100	0.00
9		Dibenzofuran	100.000	101.237	-1.2	100	0.00
10	T	Fluorene	100.000	100.189	-0.2	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	100.000	100.132	-0.1	100	0.00
13	T	Anthracene	100.000	98.378	1.6	100	0.00
14		Carbazole	100.000	102.722	-2.7	100	0.00
15	T	Fluoranthene	100.000	100.300	-0.3	100	0.00
16	T	Pyrene	100.000	99.528	0.5	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	100.000	101.154	-1.2	100	0.00
19	T	Benz(a)Anthracene	100.000	100.436	-0.4	100	0.00
20	T	Chrysene	100.000	102.348	-2.3	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	100.000	96.056	3.9	100	-0.02
23	T	Benzo(k)Fluoranthene	100.000	95.436	4.6	100	-0.01
24	T	Benzo(b+k)Fluoranthene	200.000	191.995	4.0	100	-0.07
25		Benzo(e) Pyrene	100.000	98.238	1.8	100	-0.02
26	T	Benzo(a)Pyrene	100.000	93.428	6.6	100	-0.02
27		Perylene	100.000	98.831	1.2	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	100.000	100.958	-1.0	100	-0.02
30	T	Dibenz(a,h)Anthracene	100.000	97.398	2.6	100	-0.01
31	T	Benzo (g,h,i) Perylene	100.000	99.928	0.1	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-29-19
BBJ

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050806.D
Acq On : 8 May 2019 4:27 pm
Operator : bsj
Sample : 9E08049-CAL4
Misc : 1x A19D056@200
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 09:38:58 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	200.000	204.234	-2.1	100	0.00
3	T	2-Methylnaphthalene	200.000	201.294	-0.6	100	0.00
4	T	1-Methylnaphthalene	200.000	203.873	-1.9	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	200.000	196.897	1.6	100	0.00
7	T	Acenaphthylene	200.000	195.496	2.3	100	0.00
8	T	Acenaphthene	200.000	201.178	-0.6	100	0.00
9		Dibenzofuran	200.000	201.211	-0.6	100	0.00
10	T	Fluorene	200.000	201.127	-0.6	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	200.000	199.669	0.2	100	0.00
13	T	Anthracene	200.000	196.405	1.8	100	0.00
14		Carbazole	200.000	209.749	-4.9	100	0.00
15	T	Fluoranthene	200.000	199.149	0.4	100	0.00
16	T	Pyrene	200.000	200.736	-0.4	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	200.000	194.130	2.9	100	0.00
19	T	Benz(a)Anthracene	200.000	195.672	2.2	100	0.00
20	T	Chrysene	200.000	202.615	-1.3	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	200.000	198.770	0.6	100	-0.02
23	T	Benzo(k)Fluoranthene	200.000	193.009	3.5	100	-0.02
24	T	Benzo(b+k)Fluoranthene	400.000	392.699	1.8	100	-0.07
25		Benzo(e) Pyrene	200.000	199.145	0.4	100	-0.02
26	T	Benzo(a)Pyrene	200.000	192.166	3.9	100	-0.02
27		Perylene	200.000	201.306	-0.7	100	-0.02
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	200.000	200.182	-0.1	100	-0.01
30	T	Dibenz(a,h)Anthracene	200.000	197.277	1.4	100	-0.01
31	T	Benzo (g,h,i) Perylene	200.000	197.172	1.4	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050807.D
Acq On : 8 May 2019 4:53 pm
Operator : bsj
Sample : 9E08049-CAL5
Misc : 1x A19D057@500
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 09:39:01 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	500.000	505.315	-1.1	100	0.00
3	T	2-Methylnaphthalene	500.000	502.758	-0.6	100	0.00
4	T	1-Methylnaphthalene	500.000	506.657	-1.3	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	500.000	512.678	-2.5	100	0.00
7	T	Acenaphthylene	500.000	514.425	-2.9	100	0.00
8	T	Acenaphthene	500.000	510.151	-2.0	100	0.00
9		Dibenzofuran	500.000	517.019	-3.4	100	0.00
10	T	Fluorene	500.000	516.327	-3.3	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	500.000	506.538	-1.3	100	0.00
13	T	Anthracene	500.000	509.236	-1.8	100	0.00
14		Carbazole	500.000	539.638	-7.9	100	0.00
15	T	Fluoranthene	500.000	512.859	-2.6	100	0.00
16	T	Pyrene	500.000	507.453	-1.5	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	-0.01
18	S	Terphenyl-d14(Surr)	500.000	510.668	-2.1	100	0.00
19	T	Benz(a)Anthracene	500.000	499.212	0.2	100	0.00
20	T	Chrysene	500.000	514.685	-2.9	100	-0.01
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	500.000	504.021	-0.8	100	-0.02
23	T	Benzo(k)Fluoranthene	500.000	502.555	-0.5	100	-0.02
24	T	Benzo(b+k)Fluoranthene	1000.000	1005.849	-0.6	100	-0.07
25		Benzo(e) Pyrene	500.000	506.874	-1.4	100	-0.02
26	T	Benzo(a)Pyrene	500.000	493.134	1.4	100	-0.02
27		Perylene	500.000	509.720	-1.9	101	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.02
29	T	Indeno(1,2,3-cd)Pyrene	500.000	517.726	-3.5	100	-0.02
30	T	Dibenz(a,h)Anthracene	500.000	507.407	-1.5	100	-0.01
31	T	Benzo (g,h,i) Perylene	500.000	521.815	-4.4	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19 BST

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050808.D
Acq On : 8 May 2019 5:20 pm
Operator : bsj
Sample : 9E08049-CAL6
Misc : 1x A19D058@1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 09:39:04 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	1000.000	985.378	1.5	100	0.00
3	T	2-Methylnaphthalene	1000.000	998.049	0.2	100	0.00
4	T	1-Methylnaphthalene	1000.000	999.522	0.0	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	1000.000	996.430	0.4	100	0.00
7	T	Acenaphthylene	1000.000	996.036	0.4	100	0.00
8	T	Acenaphthene	1000.000	1008.200	-0.8	100	0.00
9		Dibenzofuran	1000.000	999.161	0.1	100	0.00
10	T	Fluorene	1000.000	994.567	0.5	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	1000.000	983.685	1.6	100	0.00
13	T	Anthracene	1000.000	977.380	2.3	100	0.00
14		Carbazole	1000.000	1019.379	-1.9	100	0.00
15	T	Fluoranthene	1000.000	972.455	2.8	100	0.00
16	T	Pyrene	1000.000	960.449	4.0	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	1000.000	1003.219	-0.3	100	0.00
19	T	Benz(a)Anthracene	1000.000	961.783	3.8	100	0.00
20	T	Chrysene	1000.000	994.872	0.5	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	1000.000	999.939	0.0	100	-0.01
23	T	Benzo(k)Fluoranthene	1000.000	1008.528	-0.9	100	-0.01
24	T	Benzo(b+k)Fluoranthene	2000.000	2005.845	-0.3	100	-0.06
25		Benzo(e) Pyrene	1000.000	1010.766	-1.1	100	-0.02
26	T	Benzo(a)Pyrene	1000.000	1015.327	-1.5	99	-0.01
27		Perylene	1000.000	1011.781	-1.2	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	1000.000	1005.780	-0.6	100	-0.02
30	T	Dibenz(a,h)Anthracene	1000.000	1005.056	-0.5	100	-0.01
31	T	Benzo (g,h,i) Perylene	1000.000	1014.667	-1.5	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

J

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050809.D
Acq On : 8 May 2019 5:47 pm
Operator : bsj
Sample : 9E08049-CAL7
Misc : 1x A19D059@2000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 09:39:07 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	2000.000	1999.086	0.0	100	0.00
3	T	2-Methylnaphthalene	2000.000	2008.329	-0.4	100	0.00
4	T	1-Methylnaphthalene	2000.000	2019.812	-1.0	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	2000.000	2013.539	-0.7	100	0.00
7	T	Acenaphthylene	2000.000	2034.657	-1.7	100	0.00
8	T	Acenaphthene	2000.000	2013.728	-0.7	100	0.00
9		Dibenzofuran	2000.000	2026.380	-1.3	100	0.00
10	T	Fluorene	2000.000	1987.676	0.6	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	2000.000	1965.804	1.7	100	0.00
13	T	Anthracene	2000.000	2002.318	-0.1	100	0.00
14		Carbazole	2000.000	1970.893	1.5	100	0.00
15	T	Fluoranthene	2000.000	1991.513	0.4	100	0.00
16	T	Pyrene	2000.000	1967.950	1.6	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	2000.000	1994.288	0.3	100	0.00
19	T	Benz(a)Anthracene	2000.000	1927.661	3.6	100	0.00
20	T	Chrysene	2000.000	1982.421	0.9	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	2000.000	1973.818	1.3	100	-0.01
23	T	Benzo(k)Fluoranthene	2000.000	2017.796	-0.9	100	-0.01
24	T	Benzo(b+k)Fluoranthene	4000.000	3984.999	0.4	100	-0.01
25		Benzo(e) Pyrene	2000.000	1981.098	0.9	100	-0.01
26	T	Benzo(a)Pyrene	2000.000	2060.553	-3.0	99	-0.01
27		Perylene	2000.000	2008.563	-0.4	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	2000.000	1968.263	1.6	100	-0.01
30	T	Dibenz(a,h)Anthracene	2000.000	2018.100	-0.9	100	-0.01
31	T	Benzo (g,h,i) Perylene	2000.000	2004.634	-0.2	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-29-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050810.D
Acq On : 8 May 2019 6:14 pm
Operator : bsj
Sample : 9E08049-CAL8
Misc : 1x A19D060@4000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 09:39:10 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	4000.000	4017.508	-0.4	100	0.00
3	T	2-Methylnaphthalene	4000.000	4098.876	-2.5	100	0.00
4	T	1-Methylnaphthalene	4000.000	4125.194	-3.1	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	4000.000	4179.091	-4.5	100	0.00
7	T	Acenaphthylene	4000.000	4090.217	-2.3	100	0.00
8	T	Acenaphthene	4000.000	4007.424	-0.2	100	0.00
9		Dibenzofuran	4000.000	4081.430	-2.0	100	0.00
10	T	Fluorene	4000.000	4114.948	-2.9	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	4000.000	4011.238	-0.3	100	0.00
13	T	Anthracene	4000.000	4171.775	-4.3	100	0.00
14		Carbazole	4000.000	3287.499	17.8	100	0.00
15	T	Fluoranthene	4000.000	4101.863	-2.5	100	0.00
16	T	Pyrene	4000.000	4119.489	-3.0	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	4000.000	4136.931	-3.4	100	0.00
19	T	Benz(a)Anthracene	4000.000	3884.221	2.9	100	0.00
20	T	Chrysene	4000.000	4049.535	-1.2	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	4000.000	4280.258	-7.0	100	-0.01
23	T	Benzo(k)Fluoranthene	4000.000	4242.185	-6.1	100	-0.01
24	T	Benzo(b+k)Fluoranthene	8000.000	8505.529	-6.3	100	-0.01
25		Benzo(e) Pyrene	4000.000	4128.422	-3.2	100	0.00
26	T	Benzo(a)Pyrene	4000.000	4313.024	-7.8	100	0.00
27		Perylene	4000.000	4115.140	-2.9	100	0.00
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	4000.000	3991.431	0.2	100	0.00
30	T	Dibenz(a,h)Anthracene	4000.000	4166.534	-4.2	100	-0.01
31	T	Benzo (g,h,i) Perylene	4000.000	4047.286	-1.2	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-29-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050811.D
Acq On : 8 May 2019 6:40 pm
Operator : bsj
Sample : 9E08049-CAL9
Misc : 1x A19D061@6000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 09:39:13 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	6000.000	5979.655	0.3	100	0.00
3	T	2-Methylnaphthalene	6000.000	6036.944	-0.6	100	0.00
4	T	1-Methylnaphthalene	6000.000	5995.961	0.1	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	6000.000	5823.605	2.9	100	0.00
7	T	Acenaphthylene	6000.000	6024.866	-0.4	100	0.00
8	T	Acenaphthene	6000.000	6064.123	-1.1	100	0.00
9		Dibenzofuran	6000.000	6033.664	-0.6	100	0.00
10	T	Fluorene	6000.000	6211.987	-3.5	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	6000.000	5947.620	0.9	100	0.00
13	T	Anthracene	6000.000	6162.422	-2.7	100	0.00
14		Carbazole	-1.000	3491.536	0.0	0	0.00
15	T	Fluoranthene	6000.000	6063.200	-1.1	100	0.00
16	T	Pyrene	6000.000	6147.280	-2.5	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	6000.000	5922.990	1.3	100	0.00
19	T	Benz(a)Anthracene	6000.000	5805.664	3.2	100	0.00
20	T	Chrysene	6000.000	5837.504	2.7	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	6000.000	6300.116	-5.0	100	0.00
23	T	Benzo(k)Fluoranthene	6000.000	6430.483	-7.2	100	0.00
24	T	Benzo(b+k)Fluoranthene	12000.000	12703.467	-5.9	100	0.00
25		Benzo(e) Pyrene	6000.000	6201.092	-3.4	100	0.00
26	T	Benzo(a)Pyrene	6000.000	6429.991	-7.2	99	0.00
27		Perylene	6000.000	6095.447	-1.6	100	0.00
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	0.00
29	T	Indeno(1,2,3-cd)Pyrene	6000.000	5918.545	1.4	100	0.00
30	T	Dibenz(a,h)Anthracene	6000.000	6459.691	-7.7	100	0.00
31	T	Benzo (g,h,i) Perylene	6000.000	6132.681	-2.2	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0 ✓

5-09-19 DS

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050812.D
Acq On : 8 May 2019 7:07 pm
Operator : bsj
Sample : 9E08049-CALA
Misc : 1x A19D062@8000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 09 09:39:16 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	8000.000	8002.496	-0.0	100	0.00
3	T	2-Methylnaphthalene	8000.000	8266.616	-3.3	100	0.00
4	T	1-Methylnaphthalene	8000.000	8165.606	-2.1	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	8000.000	8193.401	-2.4	100	0.00
7	T	Acenaphthylene	8000.000	8231.164	-2.9	100	0.00
8	T	Acenaphthene	8000.000	8098.877	-1.2	100	0.00
9		Dibenzofuran	8000.000	8125.270	-1.6	100	0.00
10	T	Fluorene	8000.000	8283.212	-3.5	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	8000.000	7975.676	0.3	100	0.00
13	T	Anthracene	8000.000	8321.163	-4.0	100	0.00
14		Carbazole	-1.000	3337.829	0.0	0	0.00
15	T	Fluoranthene	8000.000	8334.939	-4.2	100	0.00
16	T	Pyrene	8000.000	8307.521	-3.8	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	8000.000	7838.305	2.0	100	0.00
19	T	Benz(a)Anthracene	8000.000	7805.361	2.4	100	0.00
20	T	Chrysene	8000.000	7977.393	0.3	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	8000.000	8580.755	-7.3	100	0.00
23	T	Benzo(k)Fluoranthene	8000.000	8647.510	-8.1	100	0.00
24	T	Benzo(b+k)Fluoranthene	16000.000	17189.992	-7.4	100	0.00
25		Benzo(e) Pyrene	8000.000	8204.381	-2.6	100	0.00
26	T	Benzo(a)Pyrene	8000.000	8810.294	-10.1	100	0.00
27		Perylene	8000.000	8183.341	-2.3	100	0.00
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	0.00
29	T	Indeno(1,2,3-cd)Pyrene	8000.000	7874.013	1.6	100	0.00
30	T	Dibenz(a,h)Anthracene	8000.000	8703.460	-8.8	100	0.00
31	T	Benzo (g,h,i) Perylene	8000.000	7815.608	2.3	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:54:28 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	98	0.00
2	T	Naphthlene	1000.000	985.358	1.5	98	0.00
3	T	2-Methylnaphthalene	1000.000	988.696	1.1	97	0.00
4	T	1-Methylnaphthalene	1000.000	977.119	2.3	95	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	98	0.00
6	S	2-Fluorobiphenyl(Surr)	1000.000	1003.710	-0.4	98	0.00
7	T	Acenaphthylene	1000.000	1019.108	-1.9	100	0.00
8	T	Acenaphthene	1000.000	1000.206	-0.0	97	0.00
9		Dibenzofuran	1000.000	1010.082	-1.0	99	0.00
10	T	Fluorene	1000.000	1016.207	-1.6	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	98	0.00
12	T	Phenanthrene	1000.000	988.123	1.2	99	0.00
13	T	Anthracene	1000.000	996.855	0.3	100	0.00
14		Carbazole	1000.000	1041.877	-4.2	101	0.00
15	T	Fluoranthene	1000.000	999.448	0.1	101	0.00
16	T	Pyrene	1000.000	1002.920	-0.3	103	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	107	0.00
18	S	Terphenyl-d14(Surr)	1000.000	983.792	1.6	105	0.00
19	T	Benz(a)Anthracene	1000.000	975.006	2.5	108	0.00
20	T	Chrysene	1000.000	995.085	0.5	107	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	104	0.00
22	T	Benzo(b)Fluoranthene	1000.000	1007.192	-0.7	105	-0.02
23	T	Benzo(k)Fluoranthene	1000.000	1012.400	-1.2	105	-0.02
24	T	Benzo(b+k)Fluoranthene	2000.000	2016.921	-0.8	105	-0.07
25		Benzo(e) Pyrene	1000.000	991.973	0.8	102	-0.02
26	T	Benzo(a)Pyrene	1000.000	999.914	0.0	102	-0.01
27		Perylene	1000.000	1147.382	-14.7	118	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	98	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	1000.000	989.127	1.1	96	-0.01
30	T	Dibenz(a,h)Anthracene	1000.000	986.734	1.3	96	-0.01
31	T	Benzo (g,h,i) Perylene	1000.000	988.075	1.2	95	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-9-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:54:28 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.749	136	498732	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	245258	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	345376	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	179105	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	121300	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	76104	2000.00 ng/mL	-0.01
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.786	172	182451	1003.71 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	93240	983.79 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.769	128	254722	985.36 ng/ml	99
3) 2-Methylnaphthalene	6.434	142	165246	988.70 ng/ml	99
4) 1-Methylnaphthalene	6.532	142	158374	977.12 ng/ml	98
7) Acenaphthylene	7.311	152	225724	1019.11 ng/ml	98
8) Acenaphthene	7.482	153	148343	1000.21 ng/ml	97
9) Dibenzofuran	7.648	168	199759	1010.08 ng/mL	89
10) Fluorene	7.983	166	156392	1016.21 ng/ml	99
12) Phenanthrene	8.931	178	196498	988.12 ng/ml	98
13) Anthracene	8.979	178	200182	996.86 ng/ml	98
14) Carbazole	9.127	167	161787	1041.88 ng/mL	99
15) Fluoranthene	10.097	202	169364	999.45 ng/ml	99
16) Pyrene	10.319	202	169124	1002.92 ng/ml	98
19) Benz(a)Anthracene	11.692	228	105367	975.01 ng/ml	96
20) Chrysene	11.748	228	104873	995.08 ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	78878	1007.19 ng/ml	67
23) Benzo(k)Fluoranthene	13.577	252	78573	1012.40 ng/ml	70
24) Benzo(b+k)Fluoranthene	13.525	252	157887	2016.92 ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	77309	991.97 ng/mL	95
26) Benzo(a)Pyrene	14.186	252	67303	999.91 ng/ml	69
27) Perylene	14.358	252	74690	1147.38 ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.726	276	47325	989.13 ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	43105	986.73 ng/ml	69
31) Benzo (g,h,i) Perylene	17.278	276	50844	988.08 ng/ml	87

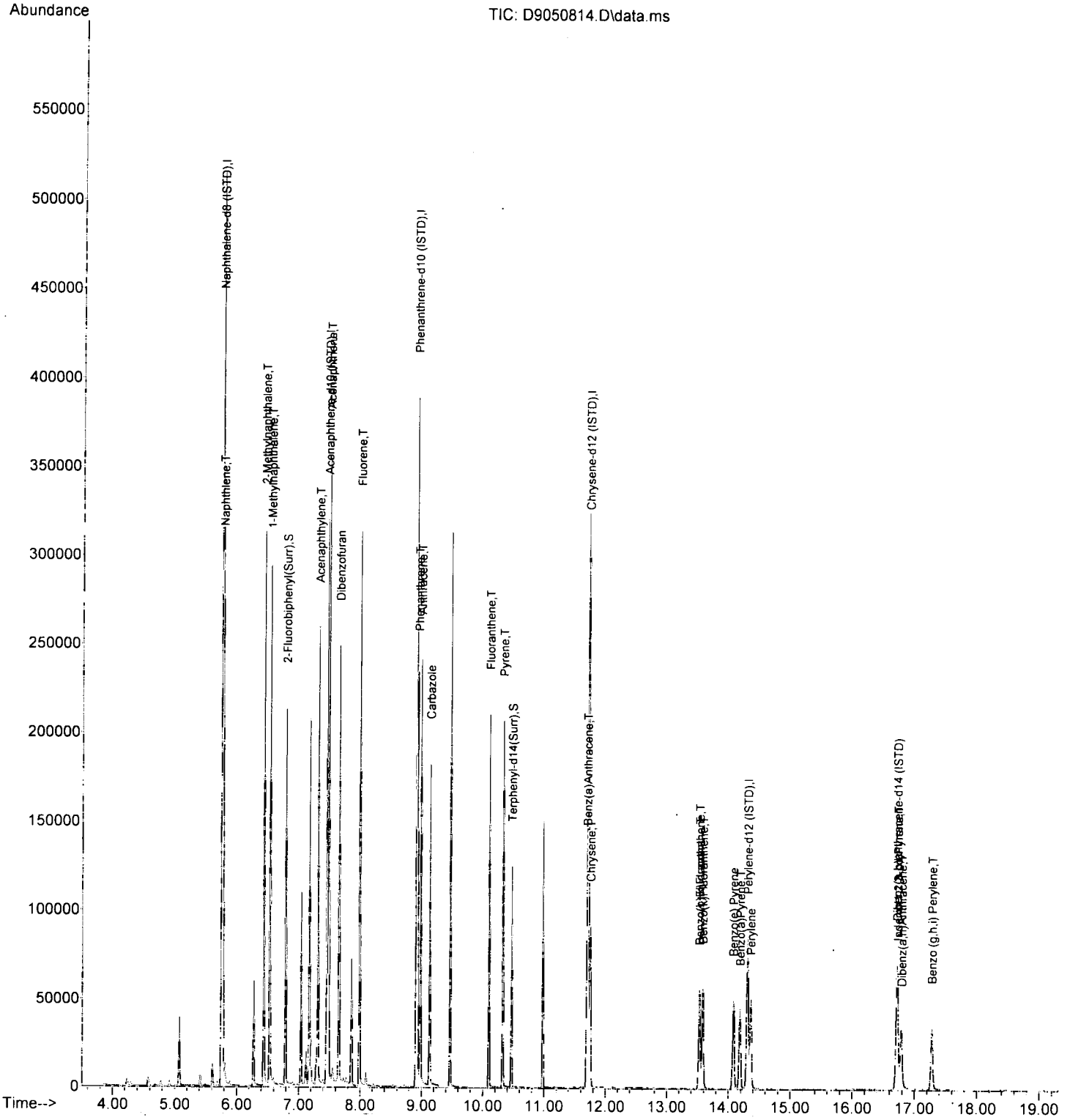
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:54:28 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



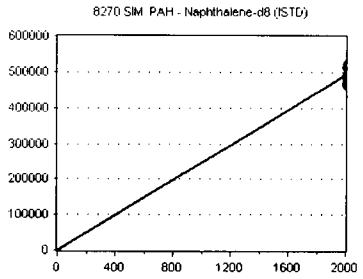
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Naphthalene-d8 (ISTD)

Curve Fit: **AVERAGE RF**

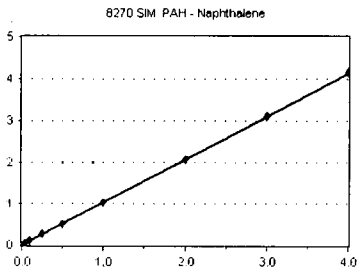


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	466187	233.093	5.75
9E08049-CAL2	2000	463733	231.867	5.75
9E08049-CAL3	2000	471590	235.795	5.75
9E08049-CAL4	2000	492717	246.358	5.75
9E08049-CAL5	2000	492814	246.407	5.75
9E08049-CAL6	2000	510967	255.483	5.75
9E08049-CAL7	2000	476839	238.420	5.75
9E08049-CAL8	2000	517036	258.518	5.75
9E08049-CAL9	2000	521237	260.618	5.75
9E08049-CALA	2000	514968	257.484	5.76

AVE RF **246.404** RF RSD **4.52** AVE RT **5.75**

Naphthalene

Curve Fit: **AVERAGE RF**

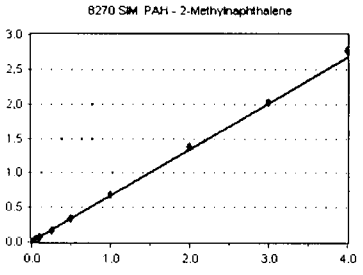


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	4689	1.006	5.77
9E08049-CAL2	50	11873	1.024	5.77
9E08049-CAL3	100	24984	1.060	5.77
9E08049-CAL4	200	52183	1.059	5.77
9E08049-CAL5	500	129108	1.048	5.77
9E08049-CAL6	1000	261032	1.022	5.77
9E08049-CAL7	2000	494185	1.036	5.77
9E08049-CAL8	4000	1076783	1.041	5.77
9E08049-CAL9	6000	1615843	1.033	5.77
9E08049-CALA	8000	2136745	1.037	5.77

AVE RF **1.037** RF RSD **1.61** AVE RT **5.77**

2-Methylnaphthalene

Curve Fit: **AVERAGE RF**

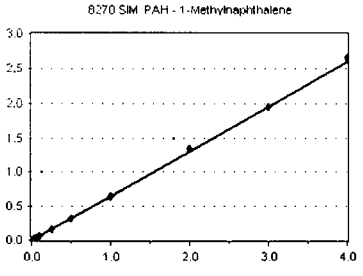


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2933	0.629	6.43
9E08049-CAL2	50	7648	0.660	6.43
9E08049-CAL3	100	15759	0.668	6.43
9E08049-CAL4	200	33247	0.675	6.43
9E08049-CAL5	500	83046	0.674	6.43
9E08049-CAL6	1000	170938	0.669	6.44
9E08049-CAL7	2000	320988	0.673	6.43
9E08049-CAL8	4000	710284	0.687	6.43
9E08049-CAL9	6000	1054717	0.674	6.43
9E08049-CALA	8000	1427088	0.693	6.43

AVE RF **0.670** RF RSD **2.56** AVE RT **6.43**

1-Methylnaphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2804	0.601	6.53
9E08049-CAL2	50	7328	0.632	6.53
9E08049-CAL3	100	15375	0.652	6.53
9E08049-CAL4	200	32655	0.663	6.53
9E08049-CAL5	500	81160	0.659	6.53
9E08049-CAL6	1000	166096	0.650	6.53
9E08049-CAL7	2000	313064	0.657	6.53
9E08049-CAL8	4000	693878	0.671	6.53
9E08049-CAL9	6000	1017377	0.651	6.53
9E08049-CALA	8000	1368536	0.664	6.53

AVE RF **0.650** RF RSD **3.08** AVE RT **6.53**

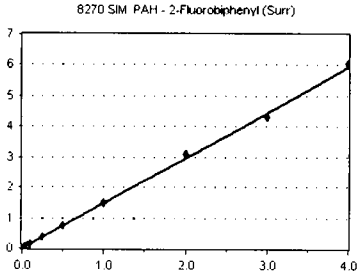
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

2-Fluorobiphenyl (Surr)

Curve Fit: **AVERAGE RF**

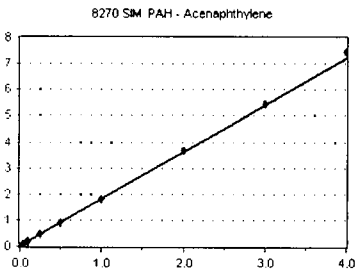


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3198	1.387	6.79
9E08049-CAL2	50	8018	1.446	6.79
9E08049-CAL3	100	17297	1.535	6.79
9E08049-CAL4	200	36441	1.459	6.79
9E08049-CAL5	500	90965	1.520	6.79
9E08049-CAL6	1000	185360	1.478	6.79
9E08049-CAL7	2000	347194	1.492	6.79
9E08049-CAL8	4000	774141	1.549	6.79
9E08049-CAL9	6000	1120425	1.439	6.79
9E08049-CALA	8000	1562167	1.518	6.79

AVE RF **1.482** RF RSD **3.39** AVE RT **6.79**

Acenaphthylene

Curve Fit: **AVERAGE RF**

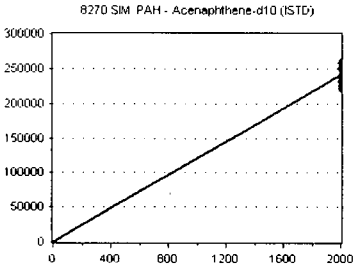


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3967	1.721	7.31
9E08049-CAL2	50	9772	1.762	7.31
9E08049-CAL3	100	20275	1.799	7.31
9E08049-CAL4	200	44087	1.766	7.31
9E08049-CAL5	500	111217	1.858	7.31
9E08049-CAL6	1000	225669	1.799	7.31
9E08049-CAL7	2000	427487	1.837	7.31
9E08049-CAL8	4000	923218	1.847	7.31
9E08049-CAL9	6000	1412401	1.814	7.32
9E08049-CALA	8000	1912248	1.858	7.32

AVE RF **1.806** RF RSD **2.55** AVE RT **7.31**

Acenaphthene-d10 (ISTD)

Curve Fit: **AVERAGE RF**

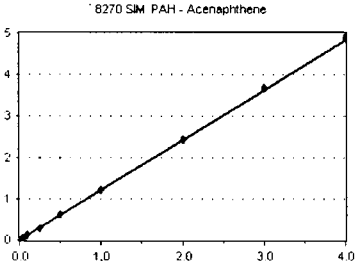


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	230511	115.255	7.45
9E08049-CAL2	2000	221804	110.902	7.45
9E08049-CAL3	2000	225358	112.679	7.45
9E08049-CAL4	2000	249711	124.855	7.45
9E08049-CAL5	2000	239395	119.698	7.45
9E08049-CAL6	2000	250878	125.439	7.45
9E08049-CAL7	2000	232647	116.324	7.45
9E08049-CAL8	2000	249933	124.966	7.45
9E08049-CAL9	2000	259583	129.791	7.45
9E08049-CALA	2000	257246	128.623	7.45

AVE RF **120.853** RF RSD **5.61** AVE RT **7.45**

Acenaphthene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2650	1.150	7.48
9E08049-CAL2	50	6529	1.177	7.48
9E08049-CAL3	100	13798	1.225	7.48
9E08049-CAL4	200	30379	1.217	7.48
9E08049-CAL5	500	73853	1.234	7.48
9E08049-CAL6	1000	152955	1.219	7.48
9E08049-CAL7	2000	282947	1.216	7.48
9E08049-CAL8	4000	605481	1.211	7.48
9E08049-CAL9	6000	951380	1.222	7.48
9E08049-CALA	8000	1259183	1.224	7.48

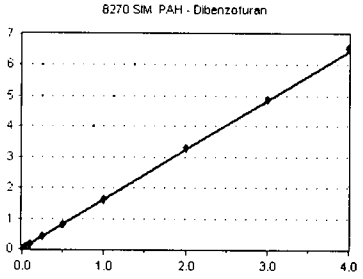
AVE RF **1.209** RF RSD **2.13** AVE RT **7.48**

Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Dibenzofuran

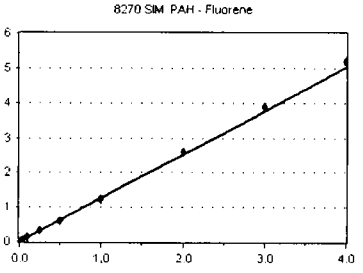


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3419	1.483	7.65
9E08049-CAL2	50	8715	1.572	7.65
9E08049-CAL3	100	18384	1.632	7.65
9E08049-CAL4	200	40515	1.622	7.65
9E08049-CAL5	500	99804	1.668	7.65
9E08049-CAL6	1000	202127	1.611	7.65
9E08049-CAL7	2000	380141	1.634	7.65
9E08049-CAL8	4000	822550	1.646	7.65
9E08049-CAL9	6000	1262943	1.622	7.65
9E08049-CALA	8000	1685438	1.638	7.65

AVE RF **1.613** RF RSD **3.21** AVE RT **7.65**

Fluorene

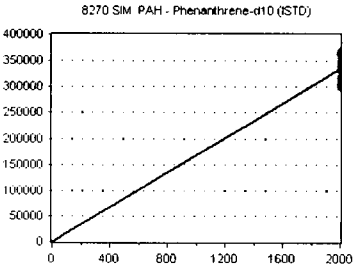


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2663	1.155	7.98
9E08049-CAL2	50	6694	1.207	7.98
9E08049-CAL3	100	14137	1.255	7.98
9E08049-CAL4	200	31515	1.262	7.98
9E08049-CAL5	500	77520	1.295	7.98
9E08049-CAL6	1000	156316	1.246	7.98
9E08049-CAL7	2000	289620	1.245	7.99
9E08049-CAL8	4000	644798	1.290	7.99
9E08049-CAL9	6000	1010699	1.298	7.99
9E08049-CALA	8000	1334221	1.297	7.99

AVE RF **1.255** RF RSD **3.65** AVE RT **7.99**

Phenanthrene-d10 (ISTD)

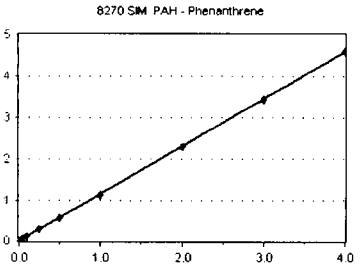


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	304584	152.292	8.91
9E08049-CAL2	2000	301378	150.689	8.90
9E08049-CAL3	2000	306553	153.276	8.90
9E08049-CAL4	2000	338434	169.217	8.90
9E08049-CAL5	2000	332652	166.326	8.90
9E08049-CAL6	2000	350771	175.385	8.91
9E08049-CAL7	2000	318049	159.025	8.90
9E08049-CAL8	2000	360425	180.213	8.91
9E08049-CAL9	2000	362274	181.137	8.91
9E08049-CALA	2000	368024	184.012	8.91

AVE RF **167.157** RF RSD **7.65** AVE RT **8.91**

Phenanthrene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3589	1.178	8.93
9E08049-CAL2	50	8731	1.159	8.93
9E08049-CAL3	100	17675	1.153	8.93
9E08049-CAL4	200	38909	1.150	8.93
9E08049-CAL5	500	97019	1.167	8.93
9E08049-CAL6	1000	198671	1.133	8.93
9E08049-CAL7	2000	359989	1.132	8.93
9E08049-CAL8	4000	832431	1.155	8.93
9E08049-CAL9	6000	1240610	1.142	8.93
9E08049-CALA	8000	1690046	1.148	8.93

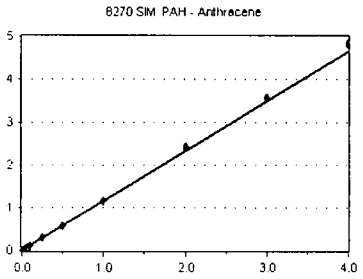
AVE RF **1.152** RF RSD **1.25** AVE RT **8.93**

Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Anthracene

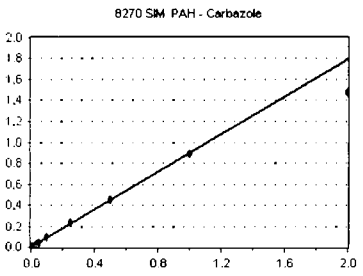


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3434	1.127	8.98
9E08049-CAL2	50	8425	1.118	8.98
9E08049-CAL3	100	17535	1.144	8.98
9E08049-CAL4	200	38648	1.142	8.98
9E08049-CAL5	500	98494	1.184	8.98
9E08049-CAL6	1000	199237	1.136	8.98
9E08049-CAL7	2000	369906	1.163	8.98
9E08049-CAL8	4000	873705	1.212	8.98
9E08049-CAL9	6000	1296799	1.193	8.98
9E08049-CALA	8000	1778933	1.208	8.99

AVE RF **1.163** RF RSD **2.96** AVE RT **8.98**

Carbazole

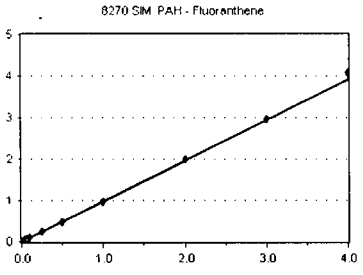


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2762	0.907	9.13
9E08049-CAL2	50	6820	0.905	9.13
9E08049-CAL3	100	14166	0.924	9.13
9E08049-CAL4	200	31934	0.944	9.13
9E08049-CAL5	500	80782	0.971	9.13
9E08049-CAL6	1000	160766	0.917	9.13
9E08049-CAL7	2000	282079	0.887	9.13
9E08049-CAL8	4000	532740	0.739	9.13
~~9E08049-CAL9~~	~~6000~~	~~573298~~	~~0.527~~	~~9.13~~
~~9E08049-CALA~~	~~8000~~	~~552300~~	~~0.375~~	~~9.13~~

AVE RF **0.899** RF RSD **7.75** AVE RT **9.13**

Fluoranthene

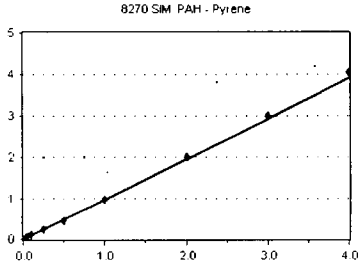


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2877	0.945	10.10
9E08049-CAL2	50	7146	0.948	10.10
9E08049-CAL3	100	15086	0.984	10.10
9E08049-CAL4	200	33069	0.977	10.10
9E08049-CAL5	500	83706	1.007	10.10
9E08049-CAL6	1000	167364	0.954	10.10
9E08049-CAL7	2000	310889	0.977	10.10
9E08049-CAL8	4000	725379	1.006	10.10
9E08049-CAL9	6000	1077725	0.992	10.10
9E08049-CALA	8000	1505038	1.022	10.10

AVE RF **0.981** RF RSD **2.69** AVE RT **10.10**

Pyrene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2874	0.944	10.32
9E08049-CAL2	50	7229	0.959	10.32
9E08049-CAL3	100	14897	0.972	10.32
9E08049-CAL4	200	33170	0.980	10.32
9E08049-CAL5	500	82420	0.991	10.32
9E08049-CAL6	1000	164492	0.938	10.32
9E08049-CAL7	2000	305607	0.961	10.32
9E08049-CAL8	4000	724953	1.006	10.33
9E08049-CAL9	6000	1087344	1.000	10.33
9E08049-CALA	8000	1492775	1.014	10.33

AVE RF **0.977** RF RSD **2.69** AVE RT **10.32**

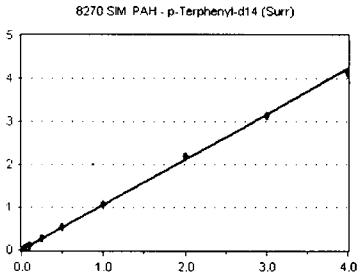
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

p-Terphenyl-d14 (Surr)

Curve Fit: **AVERAGE RF**

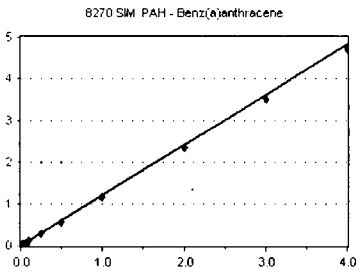


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1566	1.035	10.46
9E08049-CAL2	50	3785	1.077	10.47
9E08049-CAL3	100	7976	1.070	10.46
9E08049-CAL4	200	17883	1.027	10.47
9E08049-CAL5	500	45061	1.081	10.46
9E08049-CAL6	1000	88878	1.062	10.47
9E08049-CAL7	2000	168672	1.055	10.46
9E08049-CAL8	4000	404521	1.095	10.47
9E08049-CAL9	6000	610757	1.045	10.47
9E08049-CALA	8000	826441	1.037	10.47

AVE RF **1.058** RF RSD **2.11** AVE RT **10.46**

Benz(a)anthracene

Curve Fit: **AVERAGE RF**

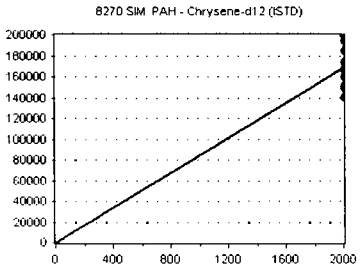


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2121	1.402	11.70
9E08049-CAL2	50	4315	1.228	11.69
9E08049-CAL3	100	9030	1.212	11.69
9E08049-CAL4	200	20553	1.181	11.69
9E08049-CAL5	500	50228	1.205	11.69
9E08049-CAL6	1000	97157	1.160	11.69
9E08049-CAL7	2000	185923	1.163	11.69
9E08049-CAL8	4000	433129	1.172	11.70
9E08049-CAL9	6000	682737	1.168	11.70
9E08049-CALA	8000	938499	1.178	11.70

AVE RF **1.207** RF RSD **5.97** AVE RT **11.69**

Chrysene-d12 (ISTD)

Curve Fit: **AVERAGE RF**

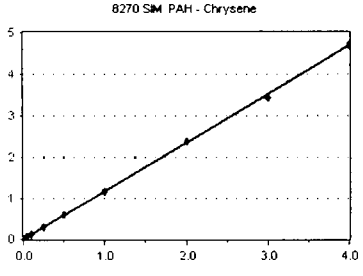


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	151327	75.664	11.71
9E08049-CAL2	2000	140551	70.276	11.71
9E08049-CAL3	2000	149032	74.516	11.71
9E08049-CAL4	2000	174083	87.041	11.71
9E08049-CAL5	2000	166780	83.390	11.71
9E08049-CAL6	2000	167448	83.724	11.71
9E08049-CAL7	2000	159832	79.916	11.71
9E08049-CAL8	2000	184787	92.394	11.71
9E08049-CAL9	2000	194906	97.453	11.71
9E08049-CALA	2000	199250	99.625	11.72

AVE RF **84.400** RF RSD **11.64** AVE RT **11.71**

Chrysene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1746	1.154	11.75
9E08049-CAL2	50	4077	1.160	11.75
9E08049-CAL3	100	8974	1.204	11.75
9E08049-CAL4	200	20755	1.192	11.75
9E08049-CAL5	500	50502	1.211	11.74
9E08049-CAL6	1000	98010	1.171	11.75
9E08049-CAL7	2000	186429	1.166	11.75
9E08049-CAL8	4000	440324	1.191	11.75
9E08049-CAL9	6000	669359	1.145	11.75
9E08049-CALA	8000	935309	1.174	11.76

AVE RF **1.177** RF RSD **1.87** AVE RT **11.75**

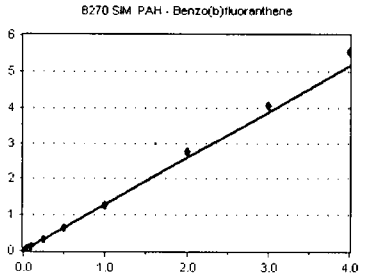
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Benzo(b)fluoranthene

Curve Fit: **AVERAGE RF**

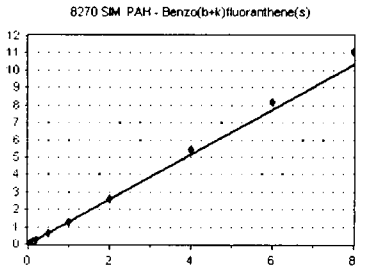


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1405	1.192	13.53
9E08049-CAL2	50	3160	1.210	13.53
9E08049-CAL3	100	7211	1.240	13.53
9E08049-CAL4	200	16784	1.283	13.53
9E08049-CAL5	500	41100	1.301	13.53
9E08049-CAL6	1000	75164	1.291	13.53
9E08049-CAL7	2000	142711	1.274	13.53
9E08049-CAL8	4000	333201	1.381	13.53
9E08049-CAL9	6000	505566	1.356	13.54
9E08049-CALA	8000	710929	1.385	13.54

AVE RF **1.291** RF RSD **5.19** AVE RT **13.53**

Benzo(b+k)fluoranthene(s)

Curve Fit: **AVERAGE RF**

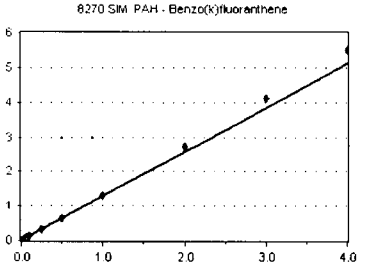


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	40	2839	1.204	13.58
9E08049-CAL2	100	6341	1.214	13.58
9E08049-CAL3	200	14356	1.234	13.53
9E08049-CAL4	400	33074	1.264	13.53
9E08049-CAL5	1000	81849	1.296	13.53
9E08049-CAL6	2000	150464	1.292	13.53
9E08049-CAL7	4000	287540	1.283	13.58
9E08049-CAL8	8000	660960	1.370	13.58
9E08049-CAL9	12000	1017771	1.365	13.59
9E08049-CALA	16000	1421874	1.385	13.60

AVE RF **1.291** RF RSD **5.02** AVE RT **13.56**

Benzo(k)fluoranthene

Curve Fit: **AVERAGE RF**

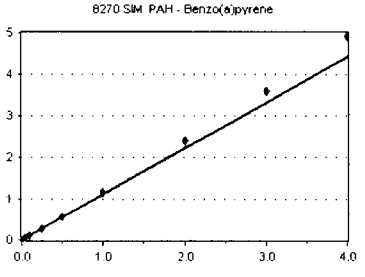


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1380	1.171	13.58
9E08049-CAL2	50	3133	1.200	13.58
9E08049-CAL3	100	7100	1.221	13.58
9E08049-CAL4	200	16151	1.234	13.58
9E08049-CAL5	500	40573	1.285	13.58
9E08049-CAL6	1000	75023	1.288	13.58
9E08049-CAL7	2000	144437	1.289	13.58
9E08049-CAL8	4000	327011	1.356	13.58
9E08049-CAL9	6000	511108	1.370	13.59
9E08049-CALA	8000	709605	1.382	13.60

AVE RF **1.280** RF RSD **5.73** AVE RT **13.58**

Benzo(a)pyrene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1167	0.990	14.18
9E08049-CAL2	50	2611	1.000	14.19
9E08049-CAL3	100	6028	1.036	14.18
9E08049-CAL4	200	13946	1.066	14.18
9E08049-CAL5	500	34623	1.096	14.18
9E08049-CAL6	1000	66021	1.134	14.19
9E08049-CAL7	2000	128808	1.150	14.19
9E08049-CAL8	4000	289898	1.202	14.19
9E08049-CAL9	6000	445993	1.196	14.19
9E08049-CALA	8000	630473	1.228	14.20

AVE RF **1.110** RF RSD **7.71** AVE RT **14.19**

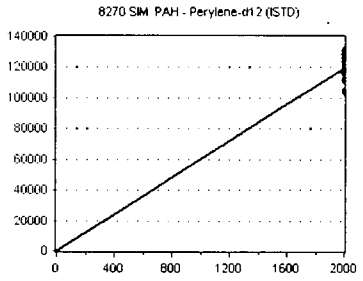
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Perylene-d12 (ISTD)

Curve Fit: **AVERAGE RF**

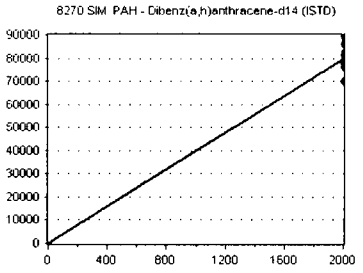


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	117866	58.933	14.31
9E08049-CAL2	2000	104431	52.216	14.31
9E08049-CAL3	2000	116316	58.158	14.31
9E08049-CAL4	2000	130840	65.420	14.31
9E08049-CAL5	2000	126329	63.164	14.31
9E08049-CAL6	2000	116473	58.236	14.31
9E08049-CAL7	2000	112021	56.011	14.31
9E08049-CAL8	2000	120610	60.305	14.31
9E08049-CAL9	2000	124314	62.157	14.31
9E08049-CALA	2000	128368	64.184	14.31

AVE RF **59.878** RF RSD **6.72** AVE RT **14.31**

Dibenz(a,h)anthracene-d14 (ISTD

Curve Fit: **AVERAGE RF**

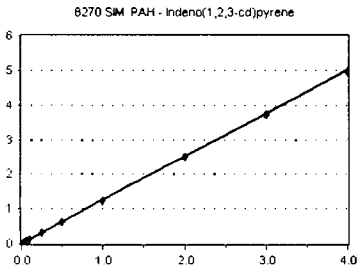


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	82315	41.158	16.72
9E08049-CAL2	2000	69899	34.949	16.71
9E08049-CAL3	2000	77795	38.898	16.72
9E08049-CAL4	2000	89555	44.778	16.72
9E08049-CAL5	2000	78494	39.247	16.71
9E08049-CAL6	2000	78010	39.005	16.72
9E08049-CAL7	2000	77875	38.938	16.72
9E08049-CAL8	2000	76553	38.277	16.72
9E08049-CAL9	2000	81338	40.669	16.72
9E08049-CALA	2000	86139	43.069	16.73

AVE RF **39.899** RF RSD **6.80** AVE RT **16.72**

Indeno(1,2,3-cd)pyrene

Curve Fit: **AVERAGE RF**

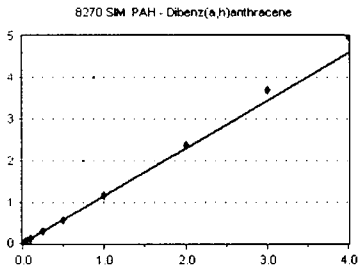


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1044	1.268	16.72
9E08049-CAL2	50	2160	1.236	16.72
9E08049-CAL3	100	4943	1.271	16.72
9E08049-CAL4	200	11276	1.259	16.73
9E08049-CAL5	500	25561	1.303	16.72
9E08049-CAL6	1000	49327	1.265	16.72
9E08049-CAL7	2000	96408	1.238	16.73
9E08049-CAL8	4000	192188	1.255	16.73
9E08049-CAL9	6000	302787	1.241	16.74
9E08049-CALA	8000	426588	1.238	16.74

AVE RF **1.257** RF RSD **1.65** AVE RT **16.73**

Dibenz(a,h)anthracene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	835	1.014	16.79
9E08049-CAL2	50	1848	1.058	16.79
9E08049-CAL3	100	4354	1.119	16.79
9E08049-CAL4	200	10135	1.132	16.79
9E08049-CAL5	500	22873	1.166	16.79
9E08049-CAL6	1000	45005	1.154	16.79
9E08049-CAL7	2000	90151	1.158	16.79
9E08049-CAL8	4000	182971	1.195	16.79
9E08049-CAL9	6000	301613	1.236	16.79
9E08049-CALA	8000	430375	1.249	16.80

AVE RF **1.148** RF RSD **6.34** AVE RT **16.79**

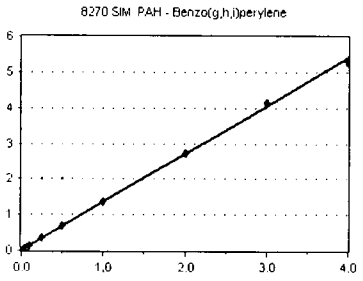
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Benzo(g,h,i)perylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1077	1.308	17.28
9E08049-CAL2	50	2301	1.317	17.28
9E08049-CAL3	100	5262	1.353	17.28
9E08049-CAL4	200	11945	1.334	17.28
9E08049-CAL5	500	27694	1.411	17.28
9E08049-CAL6	1000	53499	1.372	17.28
9E08049-CAL7	2000	105570	1.356	17.28
9E08049-CAL8	4000	209532	1.369	17.28
9E08049-CAL9	6000	337352	1.383	17.29
9E08049-CALA	8000	455393	1.322	17.29

AVE RF **1.352** RF RSD **2.40** AVE RT **17.28**

Sequence Name: C:\HPCHEM\1\SEQUENCE\9E08049.S
Comment: EPA 8270 SIM PAH
Operator: bsj
Data Path: C:\HPCHEM\1\DATA\2019-05\9E08049\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

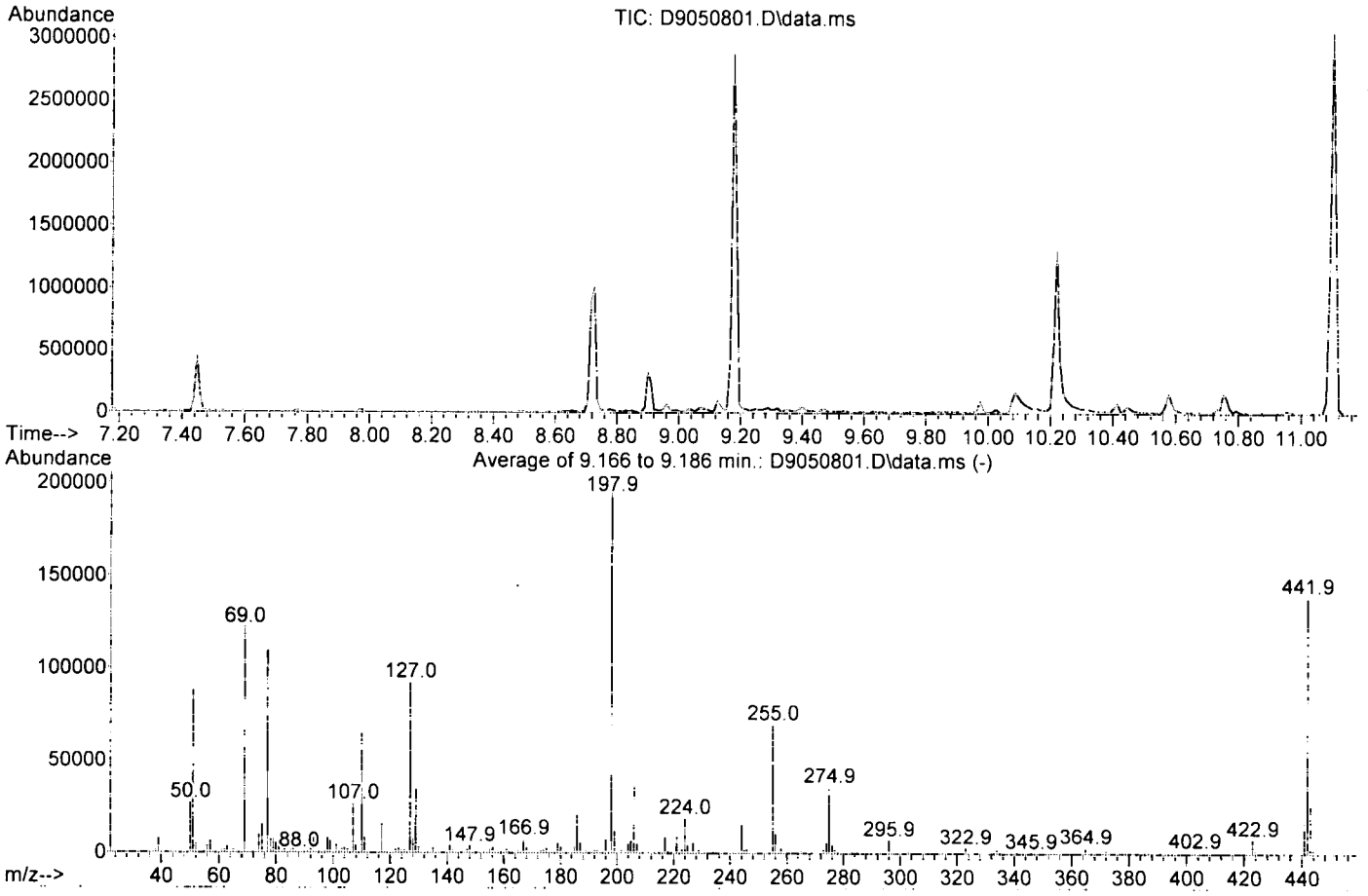
Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	D9050801	DAQ808DF	9E08049-TUN1
2	Sample	2	D9050802	DAQ81024	9E08049-ICB1
3	Sample	3	D9050803	DAQ81024	9E08049-CAL1
4	Sample	4	D9050804	DAQ81024	9E08049-CAL2
5	Sample	5	D9050805	DAQ81024	9E08049-CAL3
6	Sample	6	D9050806	DAQ81024	9E08049-CAL4
7	Sample	7	D9050807	DAQ81024	9E08049-CAL5
8	Sample	8	D9050808	DAQ81024	9E08049-CAL6
9	Sample	9	D9050809	DAQ81024	9E08049-CAL7
10	Sample	10	D9050810	DAQ81024	9E08049-CAL8
11	Sample	11	D9050811	DAQ81024	9E08049-CAL9
12	Sample	12	D9050812	DAQ81024	9E08049-CALA
13	Sample	2	D9050813	DAQ81024	9E08049-IBL1
14	Sample	13	D9050814	DAQ81024	9E08049-ICV1
15	Sample	2	D9050815	DAQ81024	9E08049-IBL2

5-09-19
BBS

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050801.D
Acq On : 8 May 2019 2:14 pm
Operator : bsj
Sample : 9E08049-TUN1
Misc : 1x A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\DFTPP-8270.M
Title : EPA 8270 SIM PAH
Last Update : Wed Dec 05 14:43:36 2018



AutoFind: Scans 554, 555, 556; Background Corrected with Scan 552

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	45.1	88601	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	62.2	122039	PASS
70	69	0.00	2	0.1	150	PASS
127	198	10	80	47.0	92267	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	196341	PASS
199	198	5	9	6.6	12872	PASS
275	198	10	60	18.3	35965	PASS
365	198	1	100	1.6	3135	PASS
441	442	0.01	24	14.3	19926	PASS
442	198	50	200	70.8	138970	PASS
443	442	15	24	19.4	26942	PASS

5-08-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050801.D
Acq On : 8 May 2019 2:14 pm
Operator : bsj
Sample : 9E08049-TUN1
Misc : 1x A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 14:47:14 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.749	136	199239	2000.00	ng/ml	0.00
2) Acenaphthene-d10	7.447	162	88247	2000.00	ng/ml	0.00
3) Phenanthrene-d10	8.900	188	132573	2000.00	ng/ml	-0.01
7) Chrysene-d12	11.713	240	67709	2000.00	ng/ml	0.00
8) Perylene-d12	14.311	264	43647	2000.00	ng/ml	0.01
9) Dibenz(ah)anthracene-d14	16.715	292	29722	2000.00	ng/mL	0.02
Target Compounds						Qvalue
4) Pentachlorophenol (PCP)	8.726	266	138799	35.88	ng/mL	98
5) DFTPP	9.176	198	365798	38.56	ng/mL	74
6) DDT	11.099	TIC	3527056	29415.22	ng/mL#	1

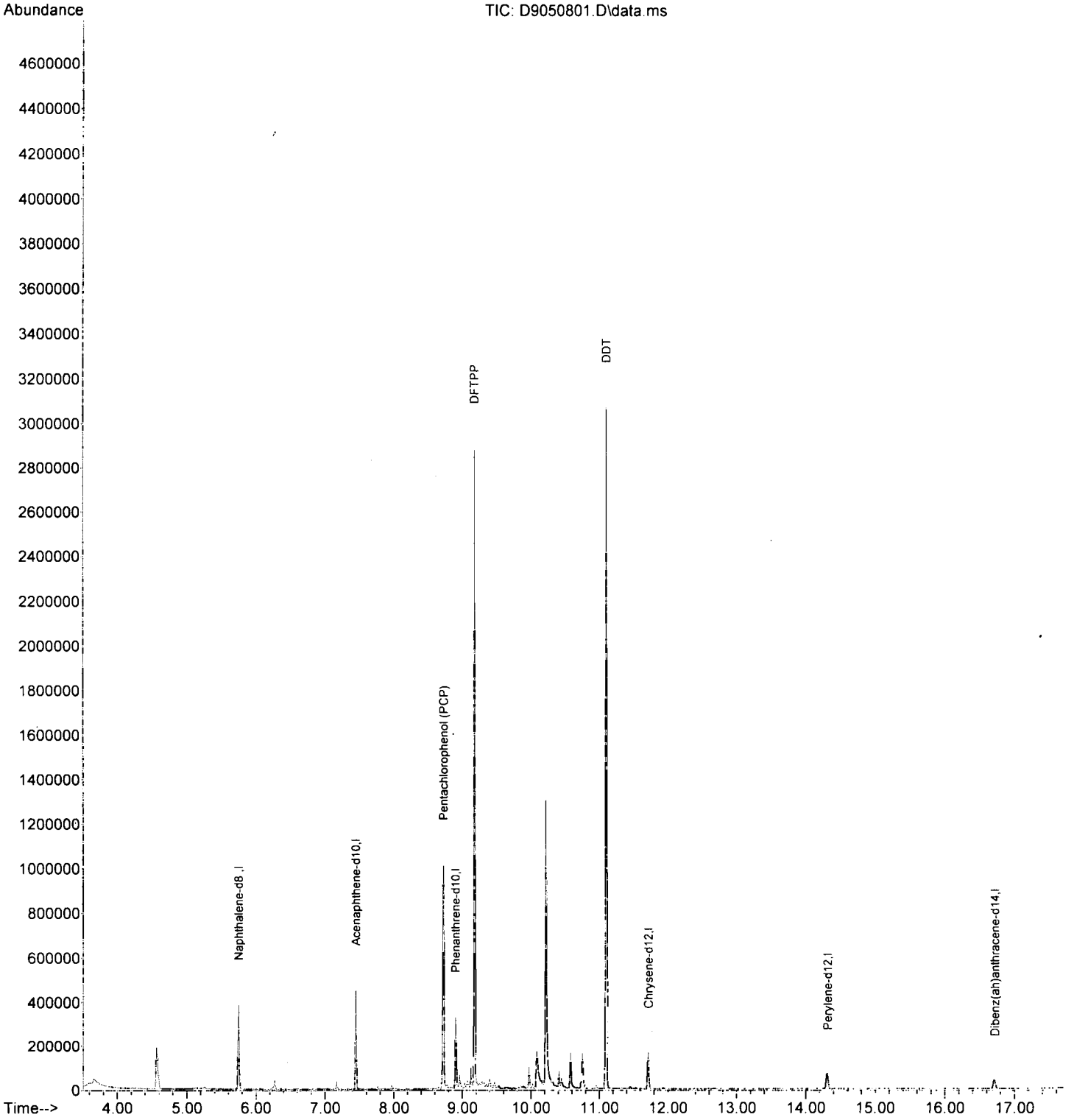
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-08-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050801.D
Acq On : 8 May 2019 2:14 pm
Operator : bsj
Sample : 9E08049-TUN1
Misc : 1x A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 14:47:14 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050802.D
Acq On : 8 May 2019 2:39 pm
Operator : bsj
Sample : 9E08049-ICB1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 15:03:26 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	502696	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	247403	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.905	188	344194	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	181302	2000.00	ng/ml	0.01
21) Perylene-d12 (ISTD)	14.307	264	143120	2000.00	ng/ml	0.02
28) Dibenz(a,h)anthracene-...	16.710	292	93997	2000.00	ng/mL	0.02
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	0.000		0	N.D.		
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
7) Acenaphthylene	0.000		0	N.D.		
8) Acenaphthene	0.000		0	N.D.		
9) Dibenzofuran	0.000		0	N.D.		
10) Fluorene	0.000		0	N.D.		
12) Phenanthrene	0.000		0	N.D.		
13) Anthracene	0.000		0	N.D.		
14) Carbazole	0.000		0	N.D.		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benz(a)Anthracene	11.706	228	428	3.60	ng/ml#	55
20) Chrysene	11.706	228	428	3.72	ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.		
23) Benzo(k)Fluoranthene	0.000		0	N.D.		
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	0.000		0	N.D.		
26) Benzo(a)Pyrene	0.000		0	N.D.		
27) Perylene	14.307	252	446	5.58	ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.		
30) Dibenz(a,h)Anthracene	0.000		0	N.D.		
31) Benzo (g,h,i) Perylene	0.000		0	N.D.		

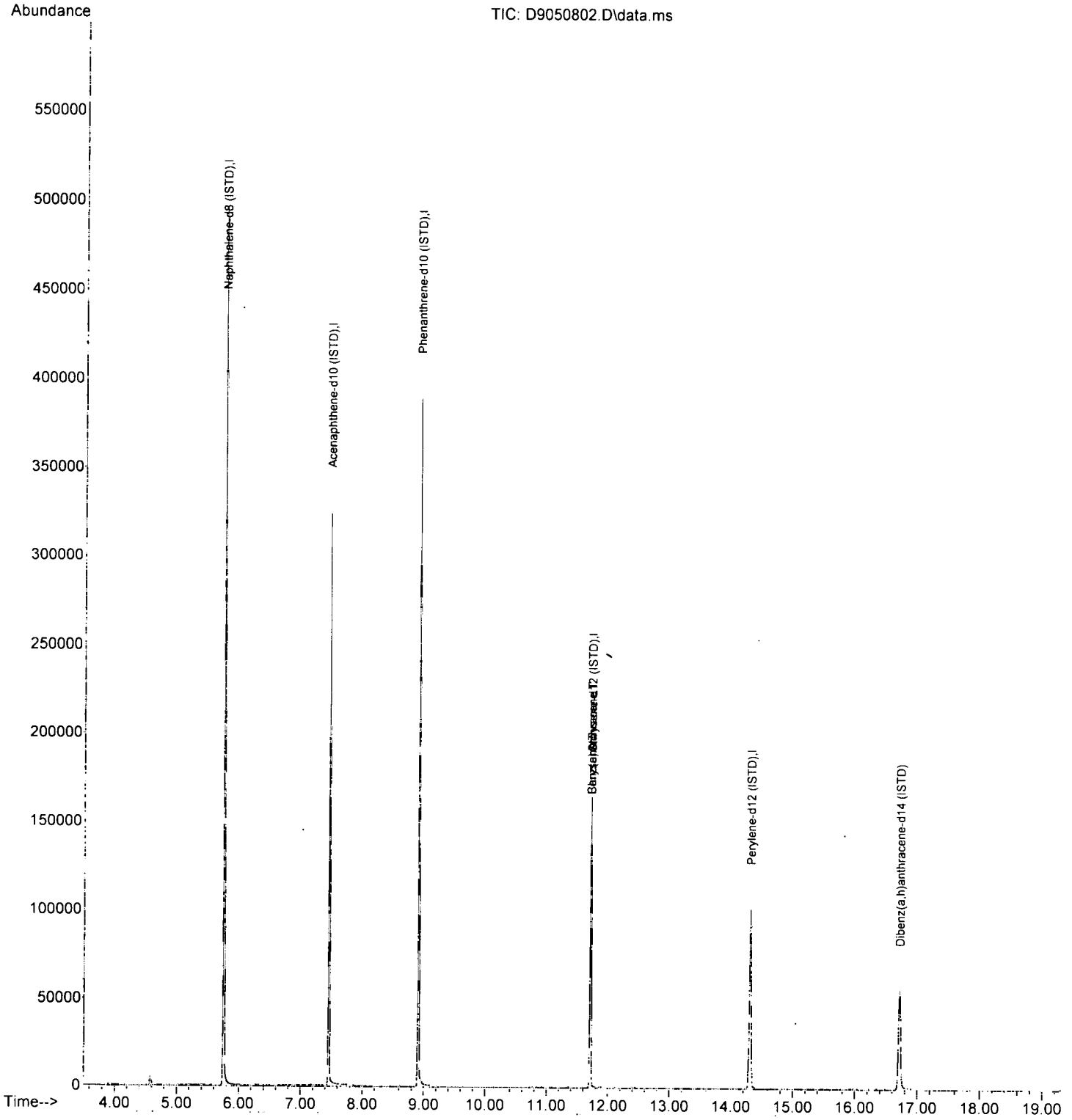
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-08-19
BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050802.D
Acq On : 8 May 2019 2:39 pm
Operator : bsj
Sample : 9E08049-ICB1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 15:03:26 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050803.D
Acq On : 8 May 2019 3:06 pm
Operator : bsj
Sample : 9E08049-CAL1
Misc : 1x A19D053@20
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 15:33:41 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	466187	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	230511	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.905	188	304584	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	151327	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.306	264	117866	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	82315	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	3198	18.45	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	1566	23.23	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	4689	19.42	ng/ml	96
3) 2-Methylnaphthalene	6.434	142	2933	18.12	ng/ml	97
4) 1-Methylnaphthalene	6.531	142	2804	17.88	ng/ml	99
7) Acenaphthylene	7.310	152	3967	18.73	ng/ml	98
8) Acenaphthene	7.482	153	2650	19.24	ng/ml	96
9) Dibenzofuran	7.654	168	3419	17.63	ng/mL	90
10) Fluorene	7.983	166	2663	17.56	ng/ml	98
12) Phenanthrene	8.926	178	3589	20.16	ng/ml	97
13) Anthracene	8.979	178	3434	18.53	ng/ml	98
14) Carbazole	9.128	167	2762	17.33	ng/mL	99
15) Fluoranthene	10.096	202	2877	16.75	ng/ml	99
16) Pyrene	10.319	202	2874	16.61	ng/ml	99
19) Benz(a)Anthracene	11.698	228	2121	21.40	ng/ml	99
20) Chrysene	11.748	228	1746	18.19	ng/ml	95
22) Benzo(b)Fluoranthene	13.525	252	1405	18.68	ng/ml	64
23) Benzo(k)Fluoranthene	13.582	252	1380	18.51	ng/ml	71
24) Benzo(b+k)Fluoranthene	13.582	252	2839	37.69	ng/ml	66
25) Benzo(e) Pyrene	14.082	252	1451	19.39	ng/mL	92
26) Benzo(a)Pyrene	14.180	252	1167	16.56	ng/ml	68
27) Perylene	14.358	252	1223	18.59	ng/mL	96
29) Indeno(1,2,3-cd)Pyrene	16.721	276	1044	18.36	ng/ml#	24
30) Dibenz(a,h)Anthracene	16.787	278	835	15.84	ng/ml	77
31) Benzo (g,h,i) Perylene	17.277	276	1077	18.05	ng/ml	88

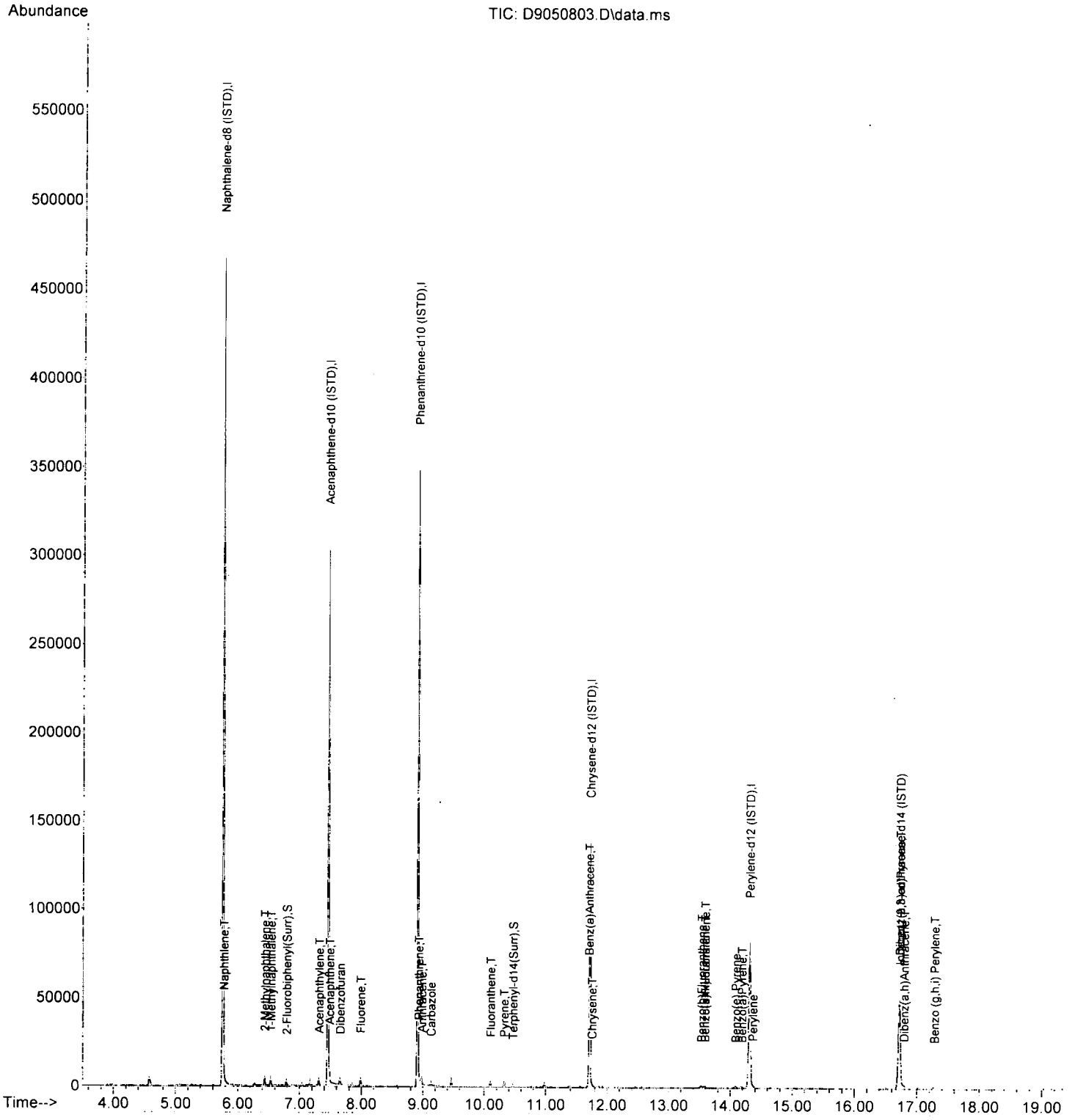
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-28-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050803.D
Acq On : 8 May 2019 3:06 pm
Operator : bsj
Sample : 9E08049-CAL1
Misc : 1x A19D053@20
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 15:33:41 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050804.D
Acq On : 8 May 2019 3:33 pm
Operator : bsj
Sample : 9E08049-CAL2
Misc : 1x A19D054@50
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 16:05:55 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	463733	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	221804	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	301378	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.712	240	140551	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.306	264	104431	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.709	292	69899	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.785	172	8018	48.06	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	3785	60.45	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	11873	49.44	ng/ml	99
3) 2-Methylnaphthalene	6.433	142	7648	47.49	ng/ml	98
4) 1-Methylnaphthalene	6.531	142	7328	46.97	ng/ml	97
7) Acenaphthylene	7.310	152	9772	47.95	ng/ml	98
8) Acenaphthene	7.482	153	6529	49.27	ng/ml	98
9) Dibenzofuran	7.653	168	8715	46.71	ng/mL	89
10) Fluorene	7.984	166	6694	45.86	ng/ml	99
12) Phenanthrene	8.930	178	8731	49.58	ng/ml	98
13) Anthracene	8.978	178	8425	45.94	ng/ml	97
14) Carbazole	9.127	167	6820	43.26	ng/mL	100
15) Fluoranthene	10.098	202	7146	42.06	ng/ml	99
16) Pyrene	10.320	202	7229	42.22	ng/ml	99
19) Benz(a)Anthracene	11.691	228	4315	46.87	ng/ml	99
20) Chrysene	11.748	228	4077	45.73	ng/ml	96
22) Benzo(b)Fluoranthene	13.530	252	3160	47.41	ng/ml	67
23) Benzo(k)Fluoranthene	13.582	252	3133	47.42	ng/ml	72
24) Benzo(b+k)Fluoranthene	13.582	252	6341	95.01	ng/ml	66
25) Benzo(e) Pyrene	14.076	252	3221	48.58	ng/mL	95
26) Benzo(a)Pyrene	14.185	252	2611	41.81	ng/ml	69
27) Perylene	14.358	252	2655	45.56	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.720	276	2160	44.73	ng/ml	51
30) Dibenz(a,h)Anthracene	16.787	278	1848	41.28	ng/ml	68
31) Benzo (g,h,i) Perylene	17.277	276	2301	45.43	ng/ml	89

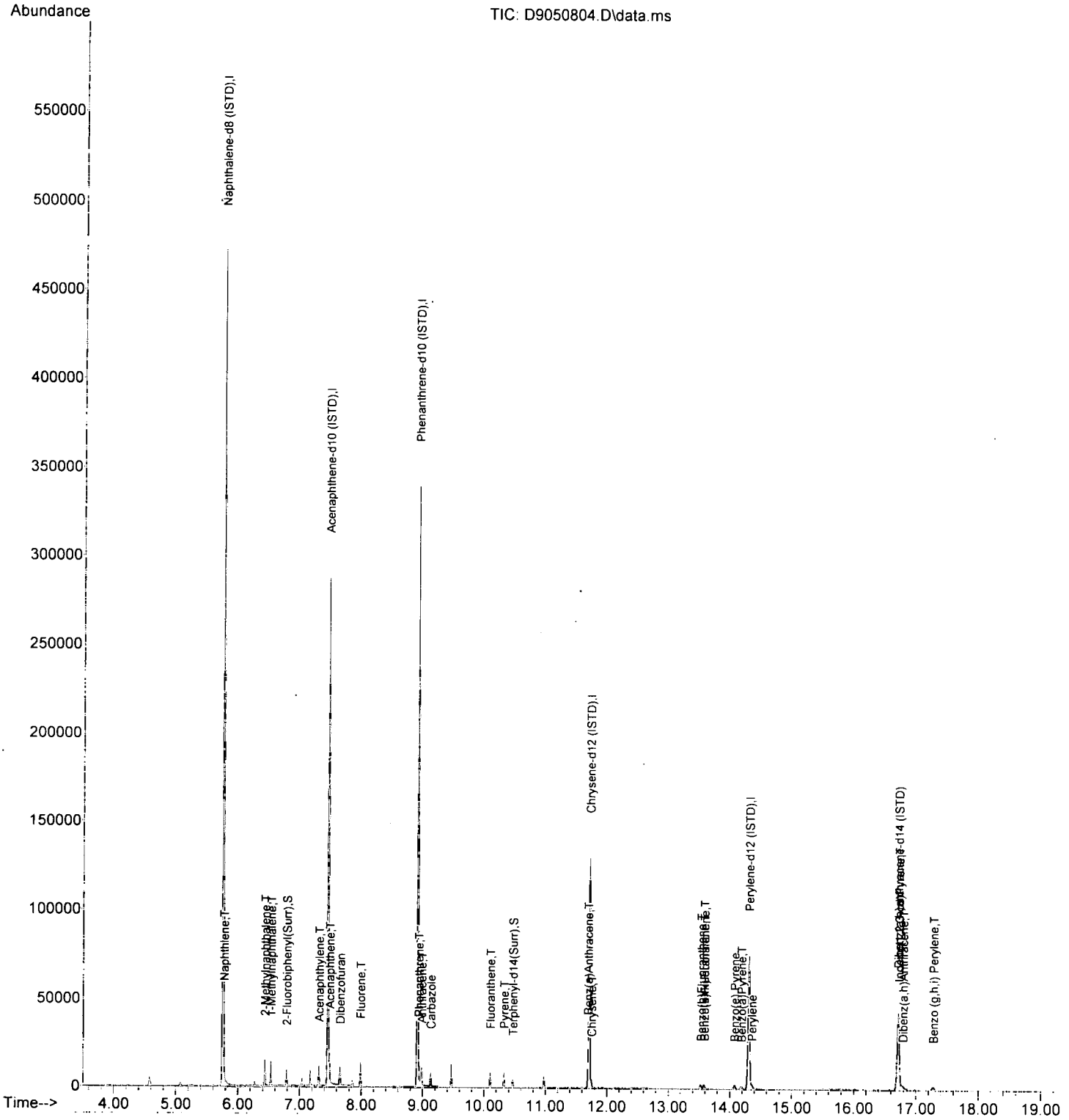
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-29-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050804.D
Acq On : 8 May 2019 3:33 pm
Operator : bsj
Sample : 9E08049-CAL2
Misc : 1x A19D054@50
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 16:05:55 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050805.D
Acq On : 8 May 2019 4:00 pm
Operator : bsj
Sample : 9E08049-CAL3
Misc : 1x A19D055@100
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 16:20:54 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.748	136	471590	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	225358	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	306553	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	149032	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	116316	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	77795	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	17297	102.05	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	7976	120.13	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.768	128	24984	102.30	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	15759	96.23	ng/ml	98
4) 1-Methylnaphthalene	6.531	142	15375	96.91	ng/ml	98
7) Acenaphthylene	7.310	152	20275	97.91	ng/ml	98
8) Acenaphthene	7.482	153	13798	102.49	ng/ml	97
9) Dibenzofuran	7.648	168	18384	96.99	ng/mL	89
10) Fluorene	7.983	166	14137	95.33	ng/ml	100
12) Phenanthrene	8.926	178	17675	98.67	ng/ml	99
13) Anthracene	8.979	178	17535	94.00	ng/ml	98
14) Carbazole	9.127	167	14166	88.34	ng/mL	100
15) Fluoranthene	10.096	202	15086	87.29	ng/ml	99
16) Pyrene	10.319	202	14897	85.54	ng/ml	99
19) Benz(a)Anthracene	11.691	228	9030	92.49	ng/ml	96
20) Chrysene	11.748	228	8974	94.92	ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	7211	97.13	ng/ml	71
23) Benzo(k)Fluoranthene	13.583	252	7100	96.48	ng/ml	71
24) Benzo(b+k)Fluoranthene	13.525	252	14356	193.13	ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	7339	99.37	ng/mL	96
26) Benzo(a)Pyrene	14.180	252	6028	86.65	ng/ml	71
27) Perylene	14.358	252	6167	95.00	ng/mL	93
29) Indeno(1,2,3-cd)Pyrene	16.721	276	4943	91.98	ng/ml	62
30) Dibenz(a,h)Anthracene	16.788	278	4354	87.38	ng/ml	75
31) Benzo (g,h,i) Perylene	17.278	276	5262	93.34	ng/ml	88

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

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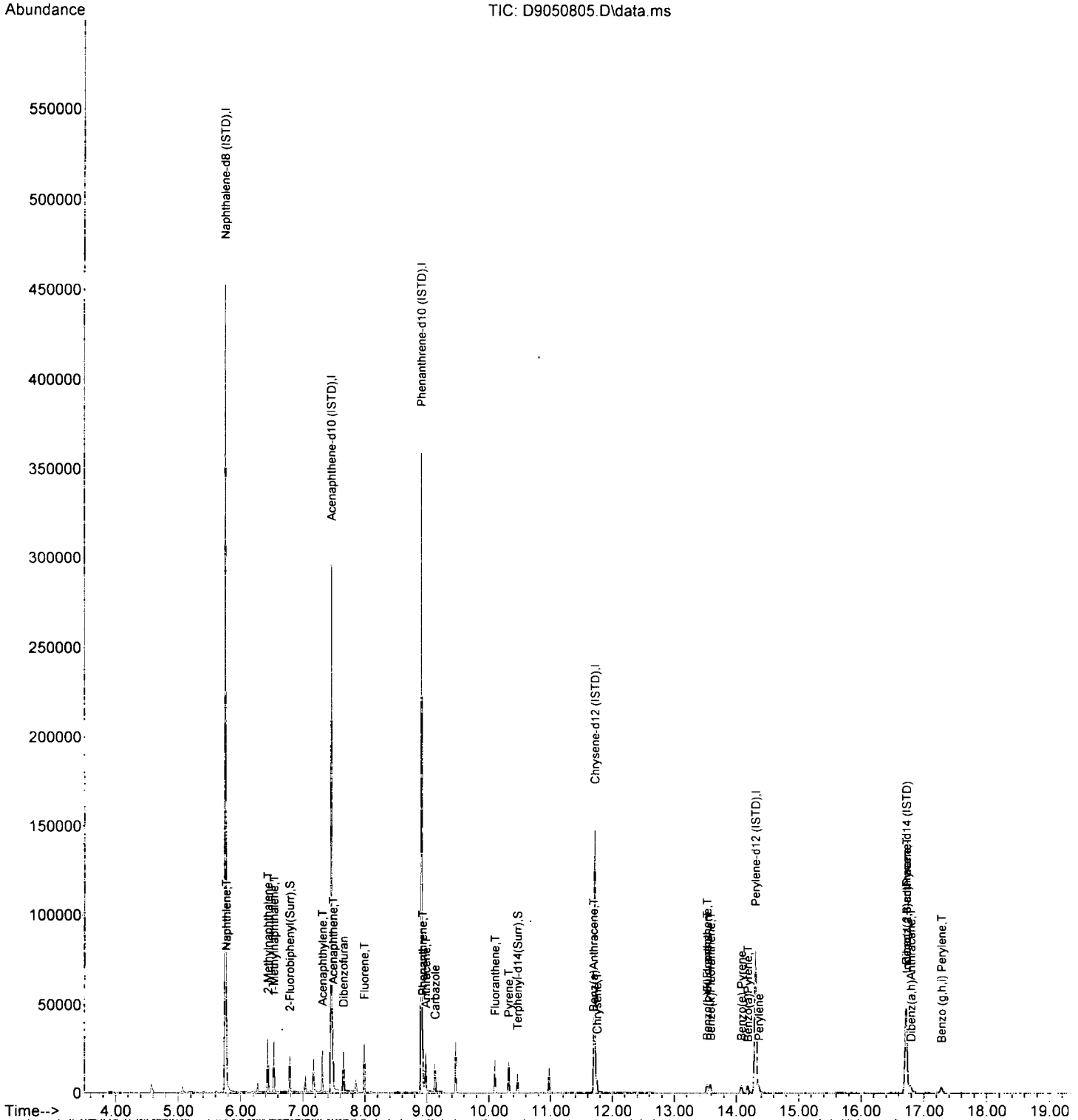
Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050805.D
Acq On : 8 May 2019 4:00 pm
Operator : bsj
Sample : 9E08049-CAL3
Misc : 1x A19D055@100
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 16:20:54 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050806.D
Acq On : 8 May 2019 4:27 pm
Operator : bsj
Sample : 9E08049-CAL4
Misc : 1x A19D056@200
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 16:46:38 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	492717	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	249711	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	338434	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	174083	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	130840	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	89555	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.785	172	36441	194.02	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	17883	230.58	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	52183	204.51	ng/ml	99
3) 2-Methylnaphthalene	6.433	142	33247	194.32	ng/ml	98
4) 1-Methylnaphthalene	6.530	142	32655	197.00	ng/ml	98
7) Acenaphthylene	7.310	152	44087	192.13	ng/ml	99
8) Acenaphthene	7.482	153	30379	203.65	ng/ml	97
9) Dibenzofuran	7.654	168	40515	192.90	ng/mL	89
10) Fluorene	7.984	166	31515	191.79	ng/ml	99
12) Phenanthrene	8.931	178	38909	196.74	ng/ml	99
13) Anthracene	8.978	178	38648	187.66	ng/ml	99
14) Carbazole	9.127	167	31934	180.38	ng/mL	99
15) Fluoranthene	10.098	202	33069	173.32	ng/ml	100
16) Pyrene	10.320	202	33170	172.53	ng/ml	99
19) Benz(a)Anthracene	11.691	228	20553	180.23	ng/ml	96
20) Chrysene	11.748	228	20755	187.95	ng/ml	96
22) Benzo(b)Fluoranthene	13.526	252	16784	200.98	ng/ml	70
23) Benzo(k)Fluoranthene	13.578	252	16151	195.12	ng/ml	67
24) Benzo(b+k)Fluoranthene	13.526	252	33074	395.55	ng/ml#	58
25) Benzo(e) Pyrene	14.078	252	16734	201.43	ng/mL	95
26) Benzo(a)Pyrene	14.181	252	13946	178.22	ng/ml	68
27) Perylene	14.353	252	14129	193.50	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.726	276	11276	182.27	ng/ml	67
30) Dibenz(a,h)Anthracene	16.787	278	10135	176.69	ng/ml	72
31) Benzo (g,h,i) Perylene	17.277	276	11945	184.06	ng/ml	87

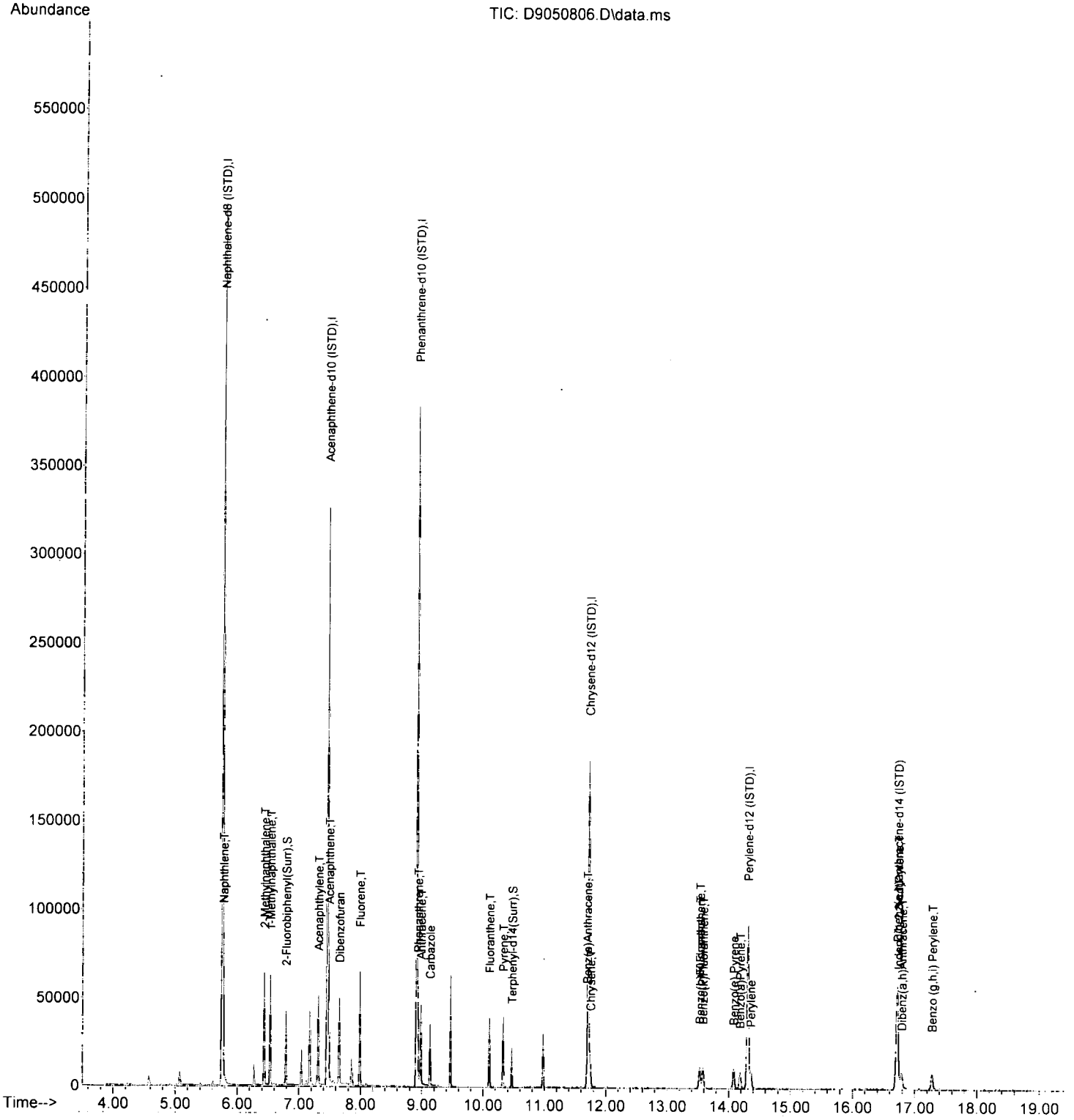
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050806.D
Acq On : 8 May 2019 4:27 pm
Operator : bsj
Sample : 9E08049-CAL4
Misc : 1x A19D056@200
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 16:46:38 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050807.D
Acq On : 8 May 2019 4:53 pm
Operator : bsj
Sample : 9E08049-CAL5
Misc : 1x A19D057@500
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 08:45:56 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	492814	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	239395	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	332652	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.706	240	166780	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	126329	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.709	292	78494	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	90965	505.19	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	45061	606.45	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	129108	505.88	ng/ml	99
3) 2-Methylnaphthalene	6.434	142	83046	485.29	ng/ml	98
4) 1-Methylnaphthalene	6.531	142	81160	489.53	ng/ml	98
7) Acenaphthylene	7.310	152	111217	505.58	ng/ml	98
8) Acenaphthene	7.482	153	73853	516.41	ng/ml	97
9) Dibenzofuran	7.648	168	99804	495.65	ng/mL	89
10) Fluorene	7.984	166	77520	492.09	ng/ml	99
12) Phenanthrene	8.925	178	97019	499.10	ng/ml	98
13) Anthracene	8.978	178	98494	486.56	ng/ml	98
14) Carbazole	9.127	167	80782	464.22	ng/mL	99
15) Fluoranthene	10.096	202	83706	446.33	ng/ml	99
16) Pyrene	10.319	202	82420	436.15	ng/ml	98
19) Benz(a)Anthracene	11.692	228	50228	459.73	ng/ml	96
20) Chrysene	11.741	228	50502	477.34	ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	41100	509.72	ng/ml	72
23) Benzo(k)Fluoranthene	13.577	252	40573	507.65	ng/ml	70
24) Benzo(b+k)Fluoranthene	13.525	252	81849	1013.82	ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	41132	512.80	ng/mL	96
26) Benzo(a)Pyrene	14.180	252	34623	458.26	ng/ml	71
27) Perylene	14.358	252	34311	486.67	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.721	276	25561	471.41	ng/ml	69
30) Dibenz(a,h)Anthracene	16.787	278	22873	454.94	ng/ml	70
31) Benzo (g,h,i) Perylene	17.277	276	27694	486.86	ng/ml	88

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

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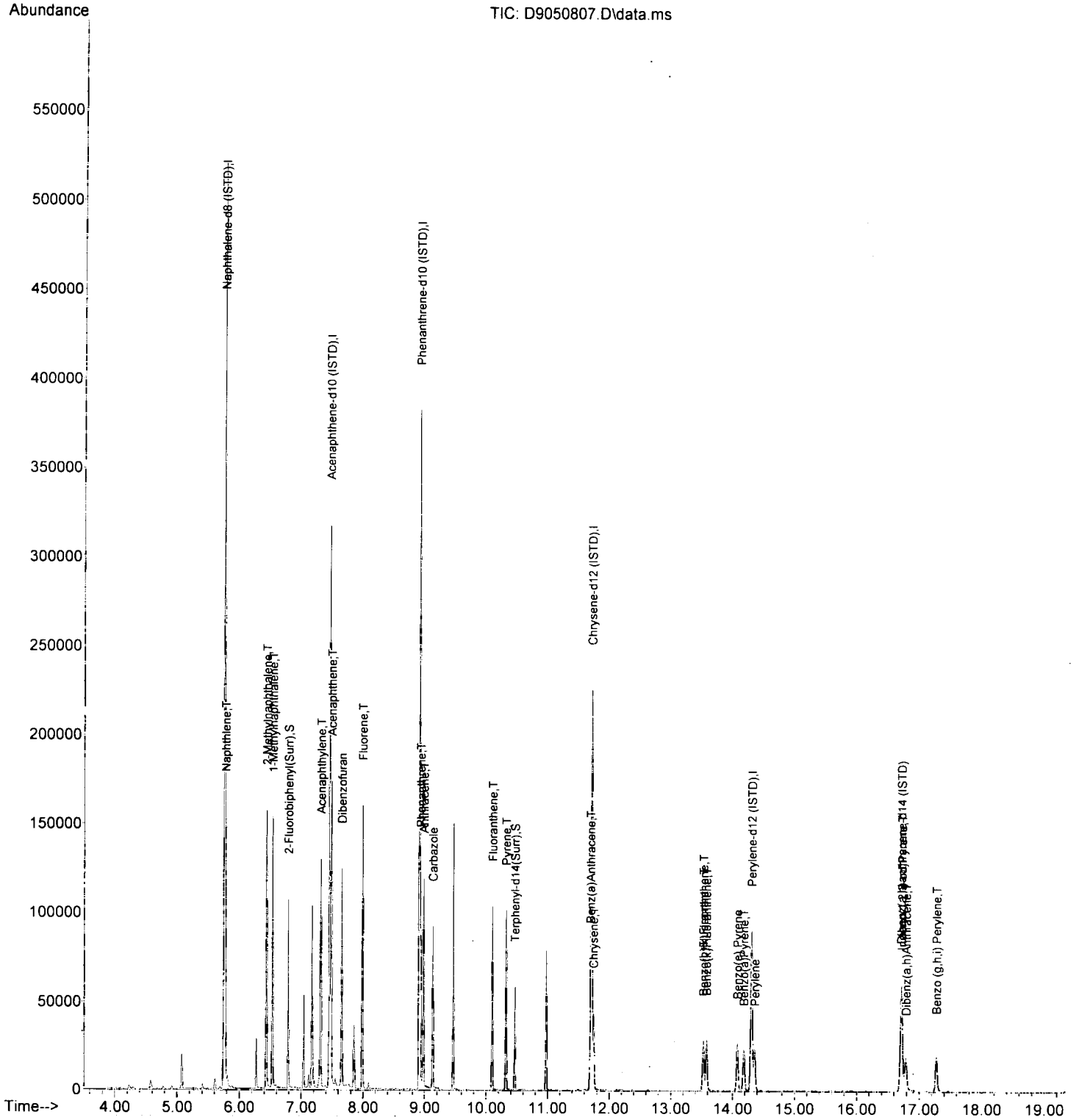
Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050807.D
Acq On : 8 May 2019 4:53 pm
Operator : bsj
Sample : 9E08049-CAL5
Misc : 1x A19D057@500
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 08:45:56 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050808.D
Acq On : 8 May 2019 5:20 pm
Operator : bsj
Sample : 9E08049-CAL6
Misc : 1x A19D058@1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 08:46:00 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.748	136	510967	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	250878	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.905	188	350771	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	167448	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	116473	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.716	292	78010	2000.00 ng/mL	0.00
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.786	172	185360	982.31 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	88878	1191.39 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.768	128	261032	986.46 ng/ml	99
3) 2-Methylnaphthalene	6.435	142	170938	963.41 ng/ml	99
4) 1-Methylnaphthalene	6.532	142	166096	966.24 ng/ml	98
7) Acenaphthylene	7.311	152	225669	978.90 ng/ml	99
8) Acenaphthene	7.483	153	152955	1020.57 ng/ml	96
9) Dibenzofuran	7.649	168	202127	957.87 ng/mL	88
10) Fluorene	7.984	166	156316	946.87 ng/ml	100
12) Phenanthrene	8.931	178	198671	969.24 ng/ml	98
13) Anthracene	8.979	178	199237	933.38 ng/ml	98
14) Carbazole	9.128	167	160766	876.13 ng/mL	99
15) Fluoranthene	10.097	202	167364	846.31 ng/ml	100
16) Pyrene	10.320	202	164492	825.50 ng/ml	98
19) Benz(a)Anthracene	11.692	228	97157	885.72 ng/ml	96
20) Chrysene	11.748	228	98010	922.69 ng/ml	96
22) Benzo(b)Fluoranthene	13.531	252	75164	1011.05 ng/ml	67
23) Benzo(k)Fluoranthene	13.583	252	75023	1018.13 ng/ml	70
24) Benzo(b+k)Fluoranthene	13.531	252	150464	2021.42 ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	75609	1022.40 ng/mL	95
26) Benzo(a)Pyrene	14.186	252	66021	947.79 ng/ml	70
27) Perylene	14.359	252	63145	971.45 ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.722	276	49327	915.36 ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	45005	900.70 ng/ml	69
31) Benzo (g,h,i) Perylene	17.278	276	53499	946.34 ng/ml	87

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

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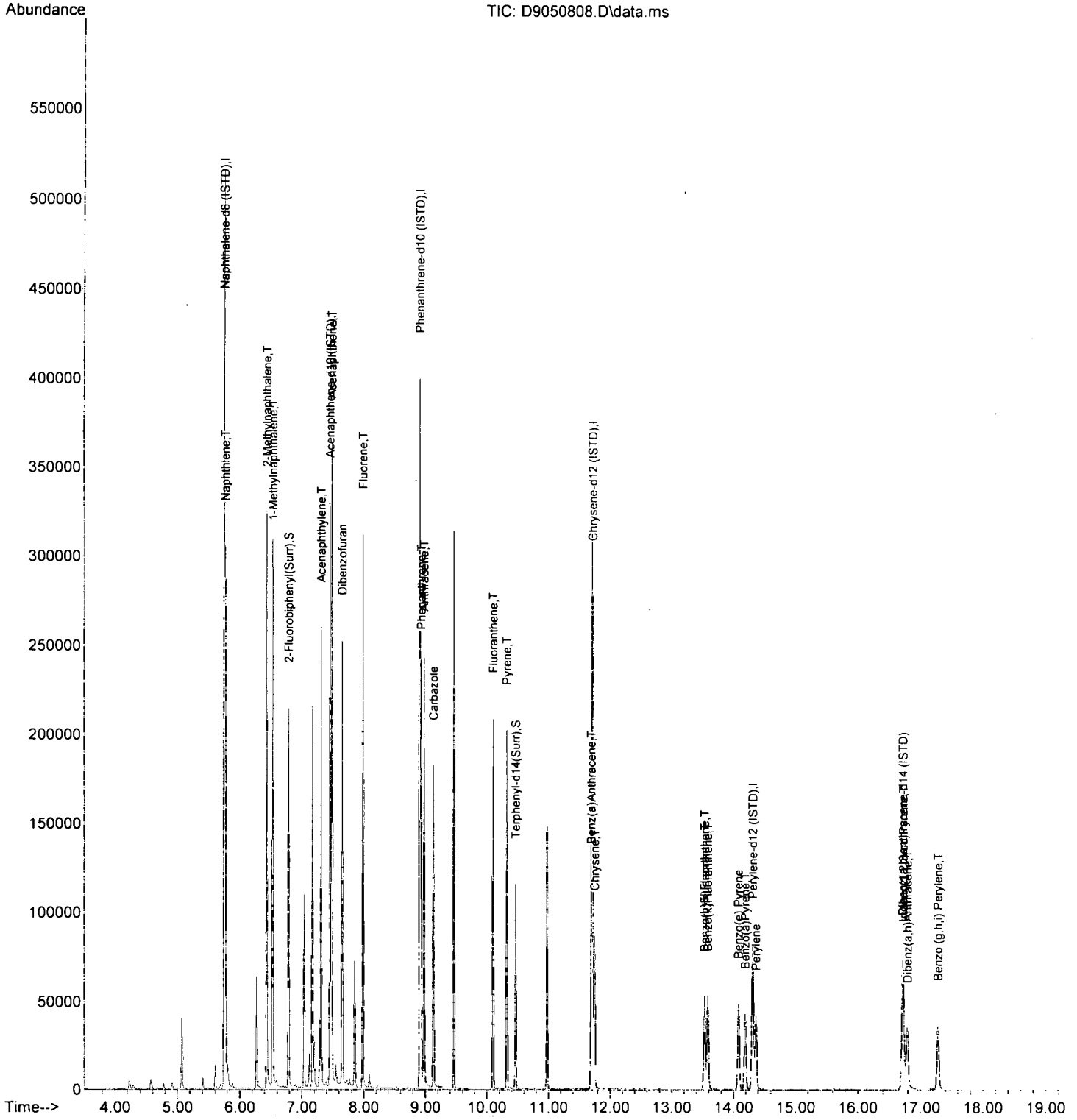
Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050808.D
Acq On : 8 May 2019 5:20 pm
Operator : bsj
Sample : 9E08049-CAL6
Misc : 1x A19D058@1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 08:46:00 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050809.D
Acq On : 8 May 2019 5:47 pm
Operator : bsj
Sample : 9E08049-CAL7
Misc : 1x A19D059@2000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 08:46:03 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	476839	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	232647	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	318049	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	159832	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	112021	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	77875	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	347194	1984.13	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	168672	2368.74	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	494185	2001.22	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	320988	1938.58	ng/ml	99
4) 1-Methylnaphthalene	6.532	142	313064	1951.56	ng/ml	98
7) Acenaphthylene	7.311	152	427487	1999.66	ng/ml	98
8) Acenaphthene	7.483	153	282947	2035.87	ng/ml	97
9) Dibenzofuran	7.654	168	380141	1942.64	ng/mL	88
10) Fluorene	7.989	166	289620	1891.82	ng/ml	100
12) Phenanthrene	8.931	178	359989	1936.93	ng/ml	98
13) Anthracene	8.979	178	369906	1911.22	ng/ml	99
14) Carbazole	9.127	167	282079	1695.41	ng/mL	99
15) Fluoranthene	10.097	202	310889	1733.82	ng/ml	99
16) Pyrene	10.320	202	305607	1691.47	ng/ml	99
19) Benz(a)Anthracene	11.692	228	185923	1775.72	ng/ml	96
20) Chrysene	11.749	228	186429	1838.72	ng/ml	96
22) Benzo(b)Fluoranthene	13.531	252	142711	1995.94	ng/ml	72
23) Benzo(k)Fluoranthene	13.583	252	144437	2038.03	ng/ml	74
24) Benzo(b+k)Fluoranthene	13.583	252	287540	4016.51	ng/ml	73
25) Benzo(e) Pyrene	14.083	252	142542	2004.09	ng/mL	98
26) Benzo(a)Pyrene	14.186	252	128808	1922.64	ng/ml	74
27) Perylene	14.358	252	120711	1930.87	ng/mL	98
29) Indeno(1,2,3-cd)Pyrene	16.727	276	96408	1792.15	ng/ml	74
30) Dibenz(a,h)Anthracene	16.788	278	90151	1807.35	ng/ml	73
31) Benzo (g,h,i) Perylene	17.278	276	105570	1870.66	ng/ml	92

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

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BSJ

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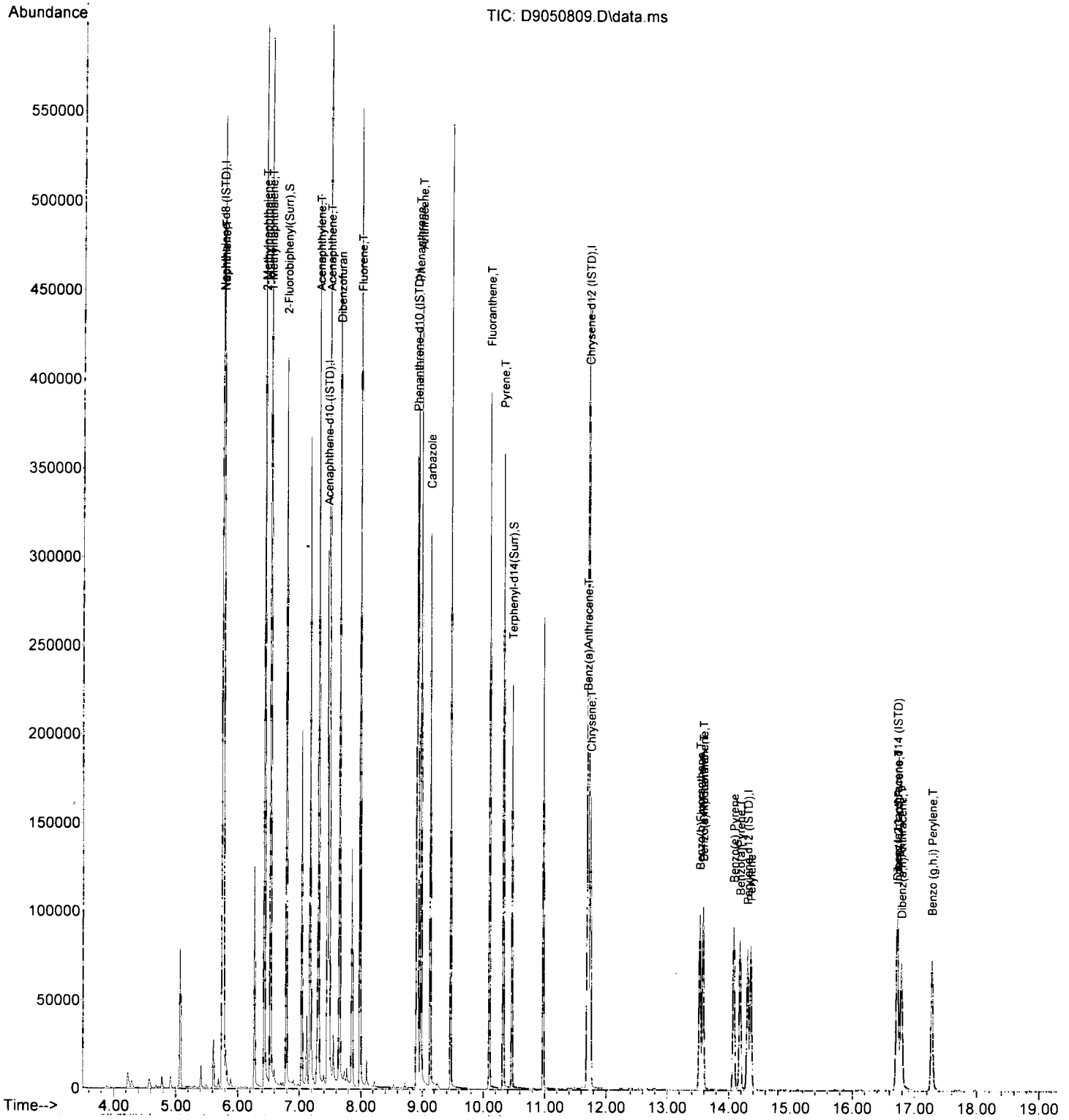
Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050809.D
Acq On : 8 May 2019 5:47 pm
Operator : bsj
Sample : 9E08049-CAL7
Misc : 1x A19D059@2000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 08:46:03 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050810.D
Acq On : 8 May 2019 6:14 pm
Operator : bsj
Sample : 9E08049-CAL8
Misc : 1x A19D060@4000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 08:46:06 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	517036	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	249933	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.906	188	360425	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	184787	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	120610	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.716	292	76553	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	774141	4118.05	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	404521	4913.69	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	1076783	4021.46	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	710284	3956.19	ng/ml	99
4) 1-Methylnaphthalene	6.532	142	693878	3989.17	ng/ml	98
7) Acenaphthylene	7.311	152	923218	4019.86	ng/ml	99
8) Acenaphthene	7.483	153	605481	4055.27	ng/ml	97
9) Dibenzofuran	7.654	168	822550	3912.77	ng/mL	89
10) Fluorene	7.989	166	644798	3920.56	ng/ml	100
12) Phenanthrene	8.932	178	832431	3952.32	ng/ml	98
13) Anthracene	8.980	178	873705	3983.48	ng/ml	99
14) Carbazole	9.129	167	532740	2825.53	ng/mL	99
15) Fluoranthene	10.097	202	725379	3569.79	ng/ml	99
16) Pyrene	10.326	202	724953	3540.71	ng/ml	99
19) Benz(a)Anthracene	11.699	228	433129	3578.08	ng/ml	96
20) Chrysene	11.749	228	440324	3756.36	ng/ml	96
22) Benzo(b)Fluoranthene	13.532	252	333201	4328.25	ng/ml	72
23) Benzo(k)Fluoranthene	13.583	252	327011	4285.60	ng/ml	69
24) Benzo(b+k)Fluoranthene	13.583	252	660960	8575.15	ng/ml	71
25) Benzo(e) Pyrene	14.089	252	319821	4176.36	ng/mL	97
26) Benzo(a)Pyrene	14.192	252	289898	4018.98	ng/ml	72
27) Perylene	14.365	252	266166	3954.34	ng/mL	96
29) Indeno(1,2,3-cd)Pyrene	16.733	276	192188	3634.31	ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	182971	3731.54	ng/ml	69
31) Benzo (g,h,i) Perylene	17.284	276	209532	3776.94	ng/ml	89

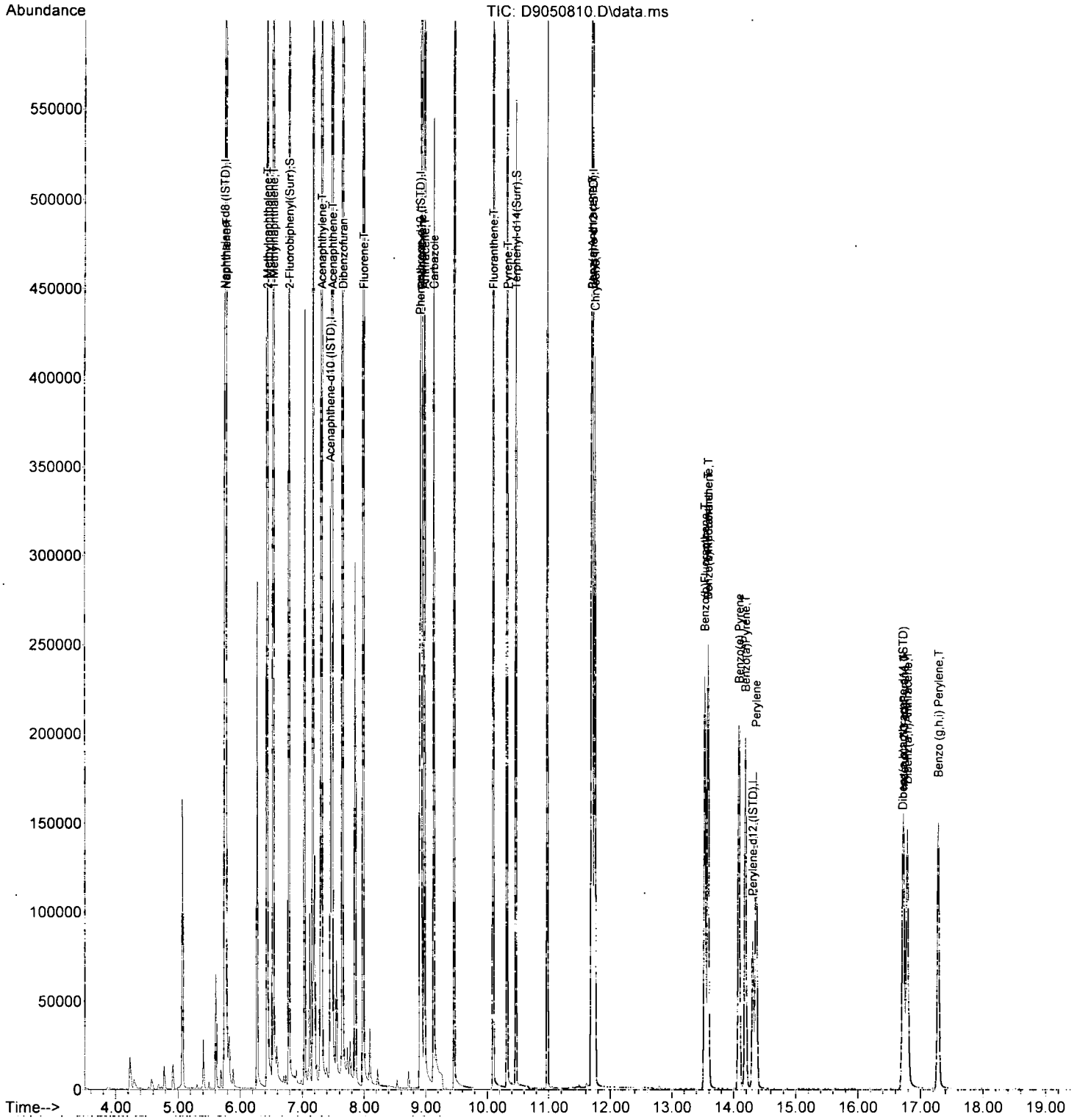
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050810.D
Acq On : 8 May 2019 6:14 pm
Operator : bsj
Sample : 9E08049-CAL8
Misc : 1x A19D060@4000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 08:46:06 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050811.D
Acq On : 8 May 2019 6:40 pm
Operator : bsj
Sample : 9E08049-CAL9
Misc : 1x A19D061@6000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 08:46:09 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	521237	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	259583	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.906	188	362274	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.714	240	194906	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.313	264	124314	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.721	292	81338	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.789	172	1120425	5738.54	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	610757	7033.66	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	1615843	5986.05	ng/ml	100
3) 2-Methylnaphthalene	6.433	142	1054717	5827.29	ng/ml	99
4) 1-Methylnaphthalene	6.531	142	1017377	5801.86	ng/ml	98
7) Acenaphthylene	7.316	152	1412401	5921.23	ng/ml	98
8) Acenaphthene	7.481	153	951380	6135.09	ng/ml	97
9) Dibenzofuran	7.653	168	1262943	5784.32	ng/mL	88
10) Fluorene	7.989	166	1010699	5916.90	ng/ml	100
12) Phenanthrene	8.932	178	1240610	5860.26	ng/ml	98
13) Anthracene	8.980	178	1296799	5882.32	ng/ml	99
14) Carbazole	9.129	167	573298	3025.12	ng/mL	99
15) Fluoranthene	10.098	202	1077725	5276.71	ng/ml	99
16) Pyrene	10.326	202	1087344	5283.54	ng/ml	99
19) Benz(a)Anthracene	11.700	228	682737	5347.28	ng/ml	95
20) Chrysene	11.749	228	669359	5413.78	ng/ml	96
22) Benzo(b)Fluoranthene	13.538	252	505566	6371.58	ng/ml	70
23) Benzo(k)Fluoranthene	13.589	252	511108	6498.68	ng/ml	73
24) Benzo(b+k)Fluoranthene	13.589	252	1017771	12810.91	ng/ml	72
25) Benzo(e) Pyrene	14.089	252	495204	6273.90	ng/mL	98
26) Benzo(a)Pyrene	14.193	252	445993	5998.77	ng/ml	72
27) Perylene	14.365	252	406431	5858.30	ng/mL	96
29) Indeno(1,2,3-cd)Pyrene	16.738	276	302787	5388.92	ng/ml	69
30) Dibenz(a,h)Anthracene	16.794	278	301613	5789.29	ng/ml	73
31) Benzo (g,h,i) Perylene	17.289	276	337352	5723.24	ng/ml	92

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

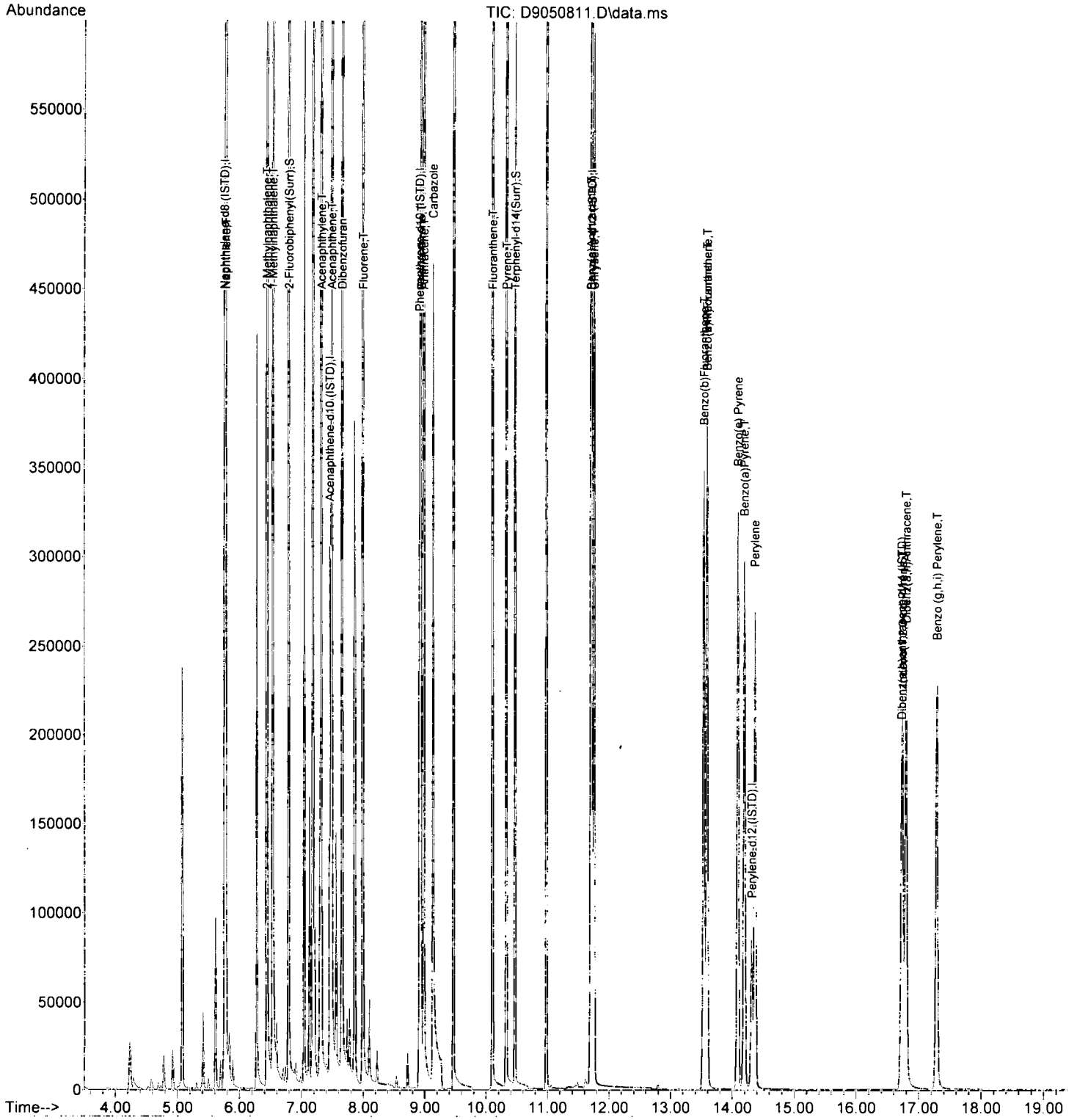
5-09-19

BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050811.D
Acq On : 8 May 2019 6:40 pm
Operator : bsj
Sample : 9E08049-CAL9
Misc : 1x A19D061@6000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 08:46:09 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050812.D
Acq On : 8 May 2019 7:07 pm
Operator : bsj
Sample : 9E08049-CALA
Misc : 1x A19D062@8000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 09 08:46:12 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.756	136	514968	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	257246	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.910	188	368024	2000.00	ng/ml	0.01
17) Chrysene-d12 (ISTD)	11.720	240	199250	2000.00	ng/ml	0.01
21) Perylene-d12 (ISTD)	14.313	264	128368	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.727	292	86139	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.791	172	1562167	8073.72	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	826441	9310.04	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	2136745	8012.15	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	1427088	7980.62	ng/ml	99
4) 1-Methylnaphthalene	6.532	142	1368536	7899.45	ng/ml	98
7) Acenaphthylene	7.317	152	1912248	8089.57	ng/ml	98
8) Acenaphthene	7.483	153	1259183	8193.76	ng/ml	97
9) Dibenzofuran	7.654	168	1685438	7789.49	ng/mL	88
10) Fluorene	7.989	166	1334221	7881.84	ng/ml	99
12) Phenanthrene	8.931	178	1690046	7858.53	ng/ml	98
13) Anthracene	8.985	178	1778933	7943.22	ng/ml	99
14) Carbazole	9.133	167	552300	2868.78	ng/mL	99
15) Fluoranthene	10.103	202	1505038	7253.76	ng/ml	99
16) Pyrene	10.326	202	1492775	7140.25	ng/ml	99
19) Benz(a)Anthracene	11.699	228	938499	7190.18	ng/ml	96
20) Chrysene	11.756	228	935309	7399.86	ng/ml	96
22) Benzo(b)Fluoranthene	13.543	252	710929	8676.78	ng/ml	73
23) Benzo(k)Fluoranthene	13.595	252	709605	8737.60	ng/ml	71
24) Benzo(b+k)Fluoranthene	13.595	252	1421874	17332.22	ng/ml	72
25) Benzo(e) Pyrene	14.095	252	676446	8299.47	ng/mL	98
26) Benzo(a)Pyrene	14.198	252	630473	8212.28	ng/ml	74
27) Perylene	14.370	252	563164	7861.09	ng/mL	97
29) Indeno(1,2,3-cd)Pyrene	16.738	276	426588	7169.14	ng/ml	73
30) Dibenz(a,h)Anthracene	16.800	278	430375	7800.38	ng/ml	76
31) Benzo (g,h,i) Perylene	17.290	276	455393	7295.23	ng/ml	93

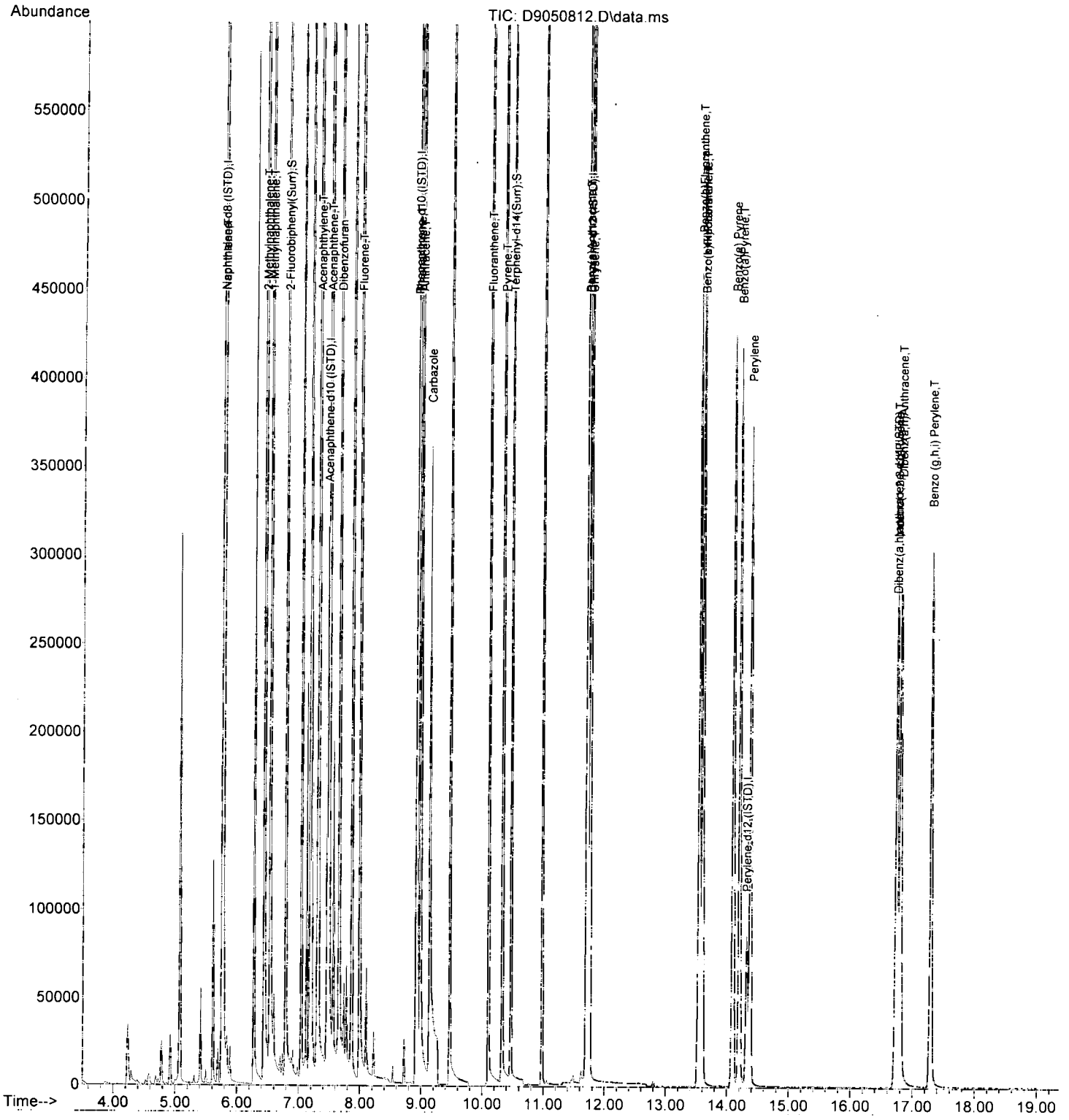
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050812.D
Acq On : 8 May 2019 7:07 pm
Operator : bsj
Sample : 9E08049-CALA
Misc : 1x A19D062@8000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 09 08:46:12 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050813.D
Acq On : 8 May 2019 7:34 pm
Operator : bsj
Sample : 9E08049-IBL1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:15 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	521171	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	259821	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	358888	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.712	240	186260	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.308	264	143394	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	94804	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	0.000		0	N.D.		
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
7) Acenaphthylene	0.000		0	N.D.		
8) Acenaphthene	0.000		0	N.D.		
9) Dibenzofuran	0.000		0	N.D.		
10) Fluorene	0.000		0	N.D.		
12) Phenanthrene	0.000		0	N.D.		
13) Anthracene	0.000		0	N.D.		
14) Carbazole	0.000		0	N.D.		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benz(a)Anthracene	11.712	228	462	3.79	ng/ml#	55
20) Chrysene	11.712	228	462	3.91	ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.		
23) Benzo(k)Fluoranthene	0.000		0	N.D.		
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	0.000		0	N.D.		
26) Benzo(a)Pyrene	0.000		0	N.D.		
27) Perylene	14.302	252	475	5.94	ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	16.720	276	594	9.07	ng/ml#	1
30) Dibenz(a,h)Anthracene	16.787	278	358	5.90	ng/ml#	53
31) Benzo (g,h,i) Perylene	17.277	276	451	6.56	ng/ml	80

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

NE

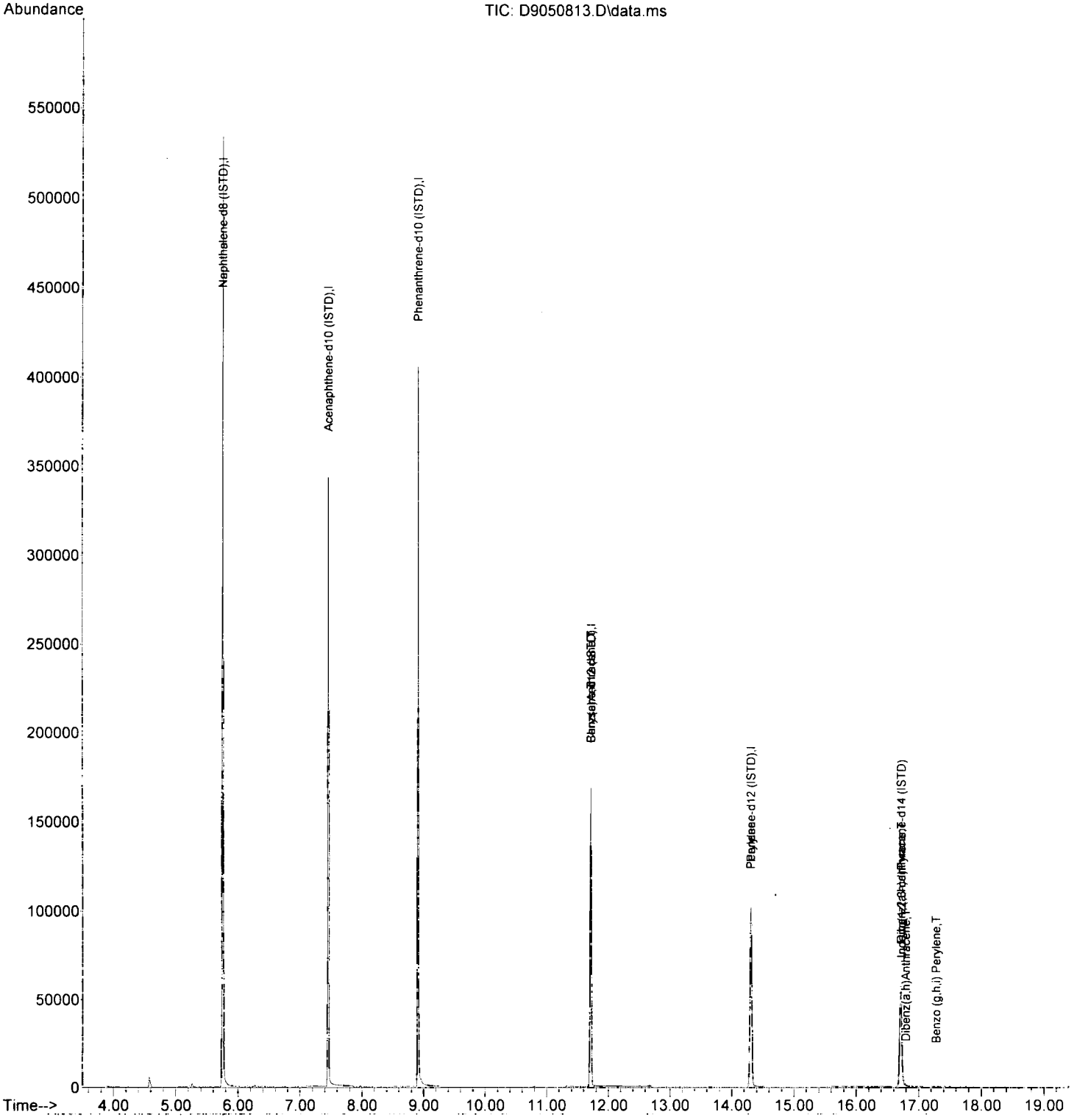
5-09-19

BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050813.D
Acq On : 8 May 2019 7:34 pm
Operator : bsj
Sample : 9E08049-IBL1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:15 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:46:18 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.749	136	498686	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	245258	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	345376	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	179105	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	121338	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	76066	2000.00 ng/mL	0.00
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.786	172	182451	989.05 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	93240	1168.51 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.769	128	254732	986.35 ng/ml	99
3) 2-Methylnaphthalene	6.434	142	165246	954.27 ng/ml	99
4) 1-Methylnaphthalene	6.532	142	158374	944.01 ng/ml	98
7) Acenaphthylene	7.311	152	225724	1001.58 ng/ml	98
8) Acenaphthene	7.482	153	148299	1012.18 ng/ml	97
9) Dibenzofuran	7.648	168	199759	968.34 ng/mL	89
10) Fluorene	7.983	166	156263	968.24 ng/ml	99
12) Phenanthrene	8.931	178	196498	973.61 ng/ml	98
13) Anthracene	8.979	178	200051	951.83 ng/ml	98
14) Carbazole	9.127	167	161933	896.28 ng/mL	99
15) Fluoranthene	10.097	202	169427	870.13 ng/ml	99
16) Pyrene	10.319	202	169126	862.01 ng/ml	98
19) Benz(a)Anthracene	11.692	228	105367	898.05 ng/ml	96
20) Chrysene	11.748	228	104873	923.04 ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	78878	1018.47 ng/ml	67
23) Benzo(k)Fluoranthene	13.577	252	78445	1021.88 ng/ml	70
24) Benzo(b+k)Fluoranthene	13.525	252	157602	2032.43 ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	77309	1003.48 ng/mL	95
26) Benzo(a)Pyrene	14.186	252	67770	933.89 ng/ml	69
27) Perylene	14.358	252	74623	1102.00 ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.726	276	47325	900.65 ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	43038	883.34 ng/ml	69
31) Benzo (g,h,i) Perylene	17.278	276	50844	922.36 ng/ml	87

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

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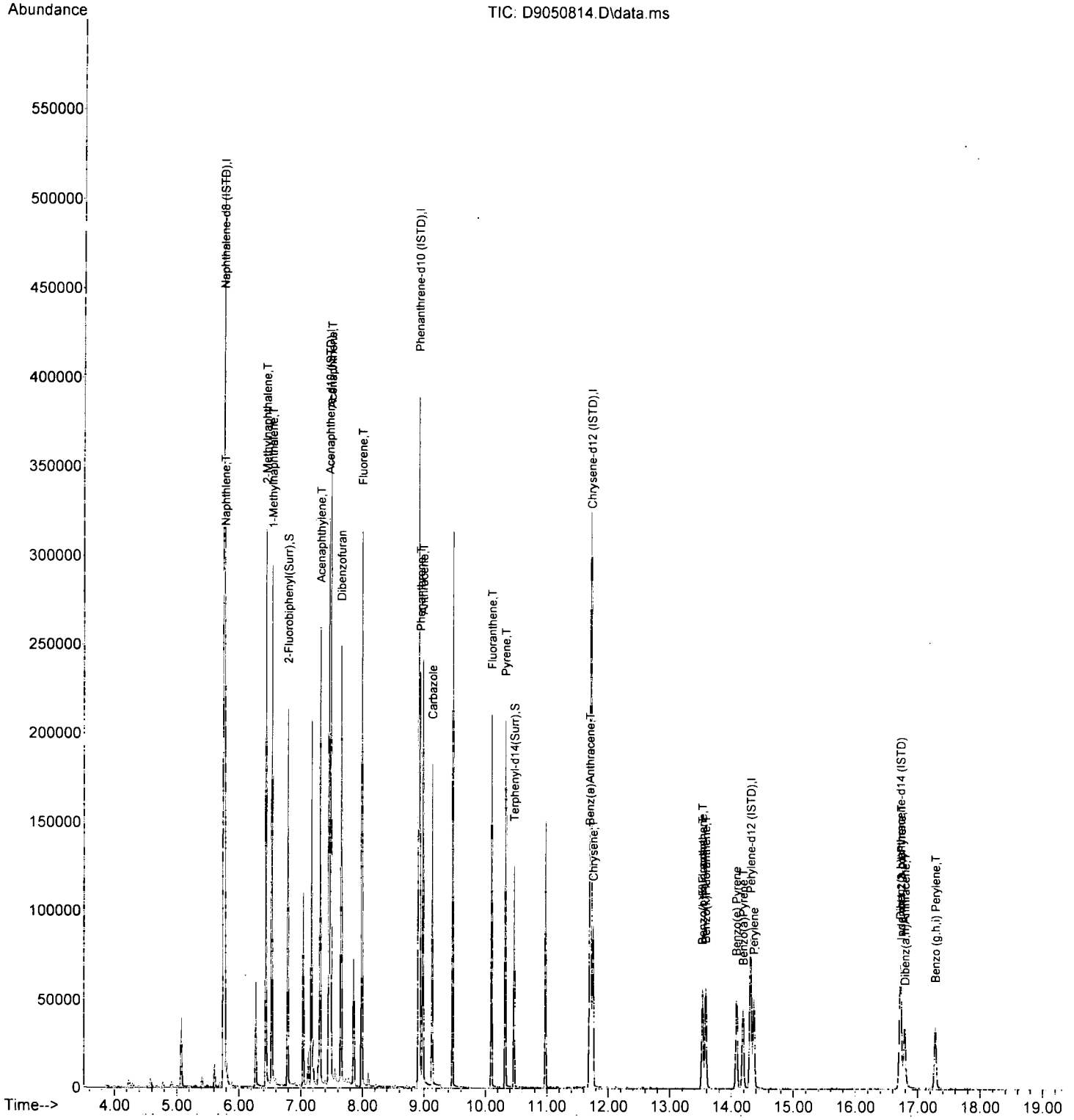
5-09-19

BS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:46:18 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050815.D
Acq On : 8 May 2019 8:28 pm
Operator : bsj
Sample : 9E08049-IBL2
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:21 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	564348	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.450	164	279660	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.903	188	376741	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.712	240	181672	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	131800	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.709	292	84383	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	0.000		0	N.D.		
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
7) Acenaphthylene	0.000		0	N.D.		
8) Acenaphthene	0.000		0	N.D.		
9) Dibenzofuran	0.000		0	N.D.		
10) Fluorene	0.000		0	N.D.		
12) Phenanthrene	0.000		0	N.D.		
13) Anthracene	0.000		0	N.D.		
14) Carbazole	0.000		0	N.D.		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benz(a)Anthracene	11.705	228	465	3.91	ng/ml#	55
20) Chrysene	11.705	228	465	4.03	ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.		
23) Benzo(k)Fluoranthene	0.000		0	N.D.		
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	0.000		0	N.D.		
26) Benzo(a)Pyrene	0.000		0	N.D.		
27) Perylene	14.301	252	425	5.78	ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.		
30) Dibenz(a,h)Anthracene	0.000		0	N.D.		
31) Benzo (g,h,i) Perylene	0.000		0	N.D.		

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

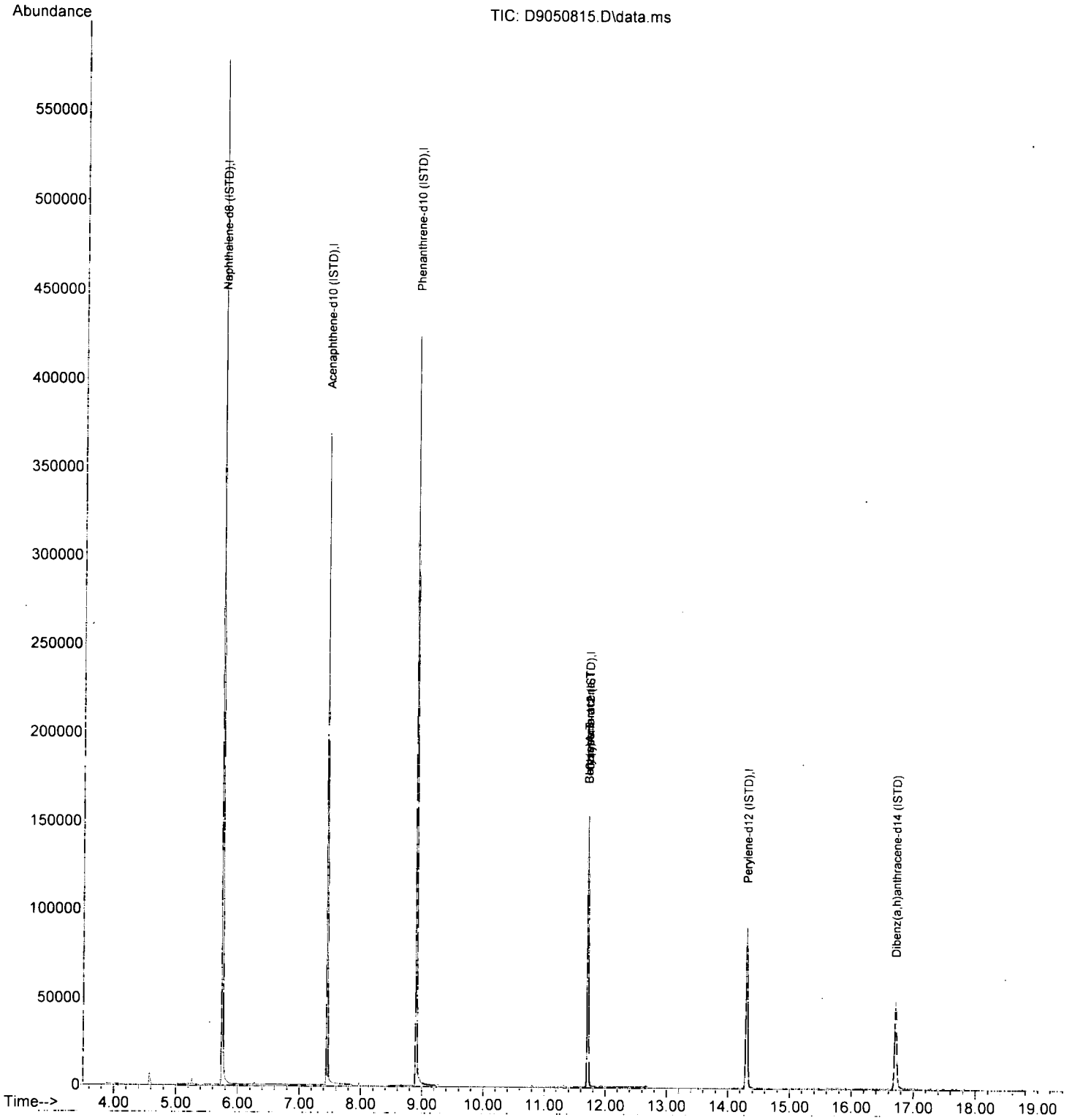
NR

5-09-19 BS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050815.D
Acq On : 8 May 2019 8:28 pm
Operator : bsj
Sample : 9E08049-IBL2
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:21 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

SPLP PAH by EPA 1312/8270D SIM

Benchsheet & Analysis Sequence Data

Batch 9060758

Sequence 9F11033 (A9E0785-01)

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060758 (Solid)

Prep Method: EPA 1312/3510C (Acid Ext.)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9060758-BLK1		QC	06/10/19 10:20	200	2				100					
	9060758-BSD1		QC	06/10/19 10:20	200	2	A19F006		100	100					
	9060758-BS1		QC	06/10/19 10:20	200	2	A19F006		100	100					
	A9E0785-01	A	1312/8270 SIM PAH (SPLP)	06/10/19 10:20	200	2				100	2708-190522-011	ok t run out of hold			
	A9E0832-02	A	1312/8270 SIM PAH (SPLP)	06/10/19 10:20	200	2				100	2708-190523-013	added 5-31-19 lad			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A18K311	12/31/20	Glass Wool
A19B083	08/10/19	Conc. HCl - Omnitrace
A19D007	09/30/20	DCM CHEM PROD. 186806
A19E280	09/30/20	Sodium Sulfate Lot # Q098006

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F006	11/30/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19E304	11/24/19	PAH Soil and Water Surr. (50ppm)

3x rinse

Witness: _____

Bottle Check: _____

Prepared By: _____ Date _____

Reviewed By: BSC Date 6-11-19

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060758 (Solid)

Prep Method: EPA 1312/3510C (Acid Ext.)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9060758-BLK1		QC	06/10/19 10:20	200	2				100					
	9060758-BSD1		QC	06/10/19 10:20	200	2	A19F006		100	100		*			
	9060758-BS1		QC	06/10/19 10:20	200	2	A19F006		100	100		*			
	A9E0785-01 1000X	A	1312/8270 SIM PAH (SPLP)	06/10/19 10:20	200	2				100	2708-190522-011	ok t run out of hold			
	A9E0832-02 1000X	A	1312/8270 SIM PAH (SPLP)	06/10/19 10:20	200	2				100	2708-190523-013	added 5-31-19 lad			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A18K311	12/31/20	Glass Wool
A19B083	08/10/19	Conc. HCl - Omnitrace
A19D007	09/30/20	DCM CHEM PROD. 186806
A19E280	09/30/20	Sodium Sulfate Lot # Q098006

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F006	11/30/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19E304	11/24/19	PAH Soil and Water Surr. (50ppm)

3x rinse ✓

Witness: ~~AJJ~~ 6-10-19

Bottle Check: ~~AJJ~~ 6-10-19

* = No BLank liquid added from 060621-BLK1

Prepared By: [signature] Date: 6/10/19

Reviewed By: VRA Date: 06/10/19

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F11033	Instrument:	SV-GCMS4
Date:	06/11/19 09:03	Calibration:	A9E0902

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F11033-TUN1	Solid	QC	QC			A19D031	A19E333
2	9F11033-CCV1	Solid	QC	QC			A19B027	A19C237
3	9F11033-CCB1	Solid	QC	QC			A19D031	
4	9060758-BLK1	Solid	QC	QC		9060758	A19D031	
5	9060758-BS1	Solid	QC	QC		9060758	A19D031	
6	9060758-BSD1	Solid	QC	QC		9060758	A19D031	
7	A9E0785-01	Solid	1312/8270 SIM PAH (SPLP)	Hahn and Associates	06/14/19	9060758	A19D031	
8	A9E0832-02	Solid	1312/8270 SIM PAH (SPLP)	Hahn and Associates	06/14/19	9060758	A19D031	
9	9060760-BLK1	Soil	QC	QC		9060760	A19D031	
10	9060760-BS1	Soil	QC	QC		9060760	A19D031	
11	A9E0936-02	Soil	8270 SIM PAH (16)		06/14/19	9060760	A19D031	
12	"	Soil	8270 SIM PAH	(QC Source)		9060760	A19D031	
13	9060760-DUP1	Soil	QC	QC		9060760	A19D031	
14	A9F0195-02	Soil	8270 SIM PAH (16)		06/11/19	9060760	A19D031	
15	A9F0253-01	Soil	8270 SIM PAH (16)	(QC Source)		9060760	A19D031	
16	"	Soil	8270 SIM PAH	"	06/11/19	9060760	A19D031	
17	9060760-MS1	Soil	QC	QC		9060760	A19D031	
18	9050880-BLK2	Soil	QC	QC		9050880	A19D031	
19	A9E0463-01	Soil	8270 SIM PAH (16)		06/13/19	9050880	A19D031	
20	9060794-BLK1	Soil	QC	QC		9060794	A19D031	
21	9060794-BS1	Soil	QC	QC		9060794	A19D031	
22	A9F0075-01	Soil	8270 SIM PAH (16)		06/13/19	9060794	A19D031	
23	"	Soil	8270 SIM PAH	(QC Source)		9060794	A19D031	
24	9060794-DUP1	Soil	QC	QC		9060794	A19D031	
25	A9F0327-03	Soil	8270 SIM PAH (16)	(QC Source)		9060794	A19D031	
26	"	Soil	8270 SIM PAH	"	06/14/19	9060794	A19D031	
27	9060794-MS1	Soil	QC	QC		9060794	A19D031	
28	9060813-BLK1	Water	QC	QC		9060813	A19D031	
29	9060813-BS1	Water	QC	QC		9060813	A19D031	
30	9060813-BSD1	Water	QC	QC		9060813	A19D031	
31	A9F0283-01	Water	8270 SIM PAH (16)		06/14/19	9060813	A19D031	
32	9F11033-IBL1	Solid	QC	QC			A19D031	

Data Entered By: BSS 6-12-19

Data Reviewed By: [signature] 6/12/19

Comments:

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence: **9F11033** Instrument: **SV-GCMS4**

Date: **06/11/19 09:03** Calibration: **A9E0902**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F11033-TUN1	Solid	QC	QC			A19D031	A19E333
2	9F11033-CCV1	Solid	QC	QC			A19B027	A19C237
3	9F11033-CCB1	Solid	QC	QC			A19D031	
4	9060758-BLK1	Solid	QC	QC		9060758	A19D031	
5	9060758-BS1	Solid	QC	QC		9060758	A19D031	
6	9060758-BSD1	Solid	QC	QC		9060758	A19D031	
7	A9E0785-01	Solid	1312/8270 SIM PAH (SPLP)	Hahn and Associates	06/14/19	9060758	A19D031	
8	A9E0832-02	Solid	1312/8270 SIM PAH (SPLP)	Hahn and Associates	06/14/19	9060758	A19D031	
9	9060760-BLK1	Soil	QC	QC		9060760	A19D031	
10	9060760-BS1	Soil	QC	QC		9060760	A19D031	
11	A9E0936-02	Soil	8270 SIM PAH (16)		06/14/19	9060760	A19D031	
12	"	Soil	8270 SIM PAH	(QC Source)		9060760	A19D031	
13	9060760-DUP1	Soil	QC	QC		9060760	A19D031	
14	A9F0195-02	Soil	8270 SIM PAH (16)		06/11/19	9060760	A19D031	
15	A9F0253-01	Soil	8270 SIM PAH (16)	(QC Source)		9060760	A19D031	
16	"	Soil	8270 SIM PAH	"	06/11/19	9060760	A19D031	
17	9060760-MS1	Soil	QC	QC		9060760	A19D031	
18	9050880-BLK2	Soil	QC	QC		9050880	A19D031	
19	A9E0463-01	Soil	8270 SIM PAH (16)		06/13/19	9050880	A19D031	

Data Entered By: BS 6-11-19

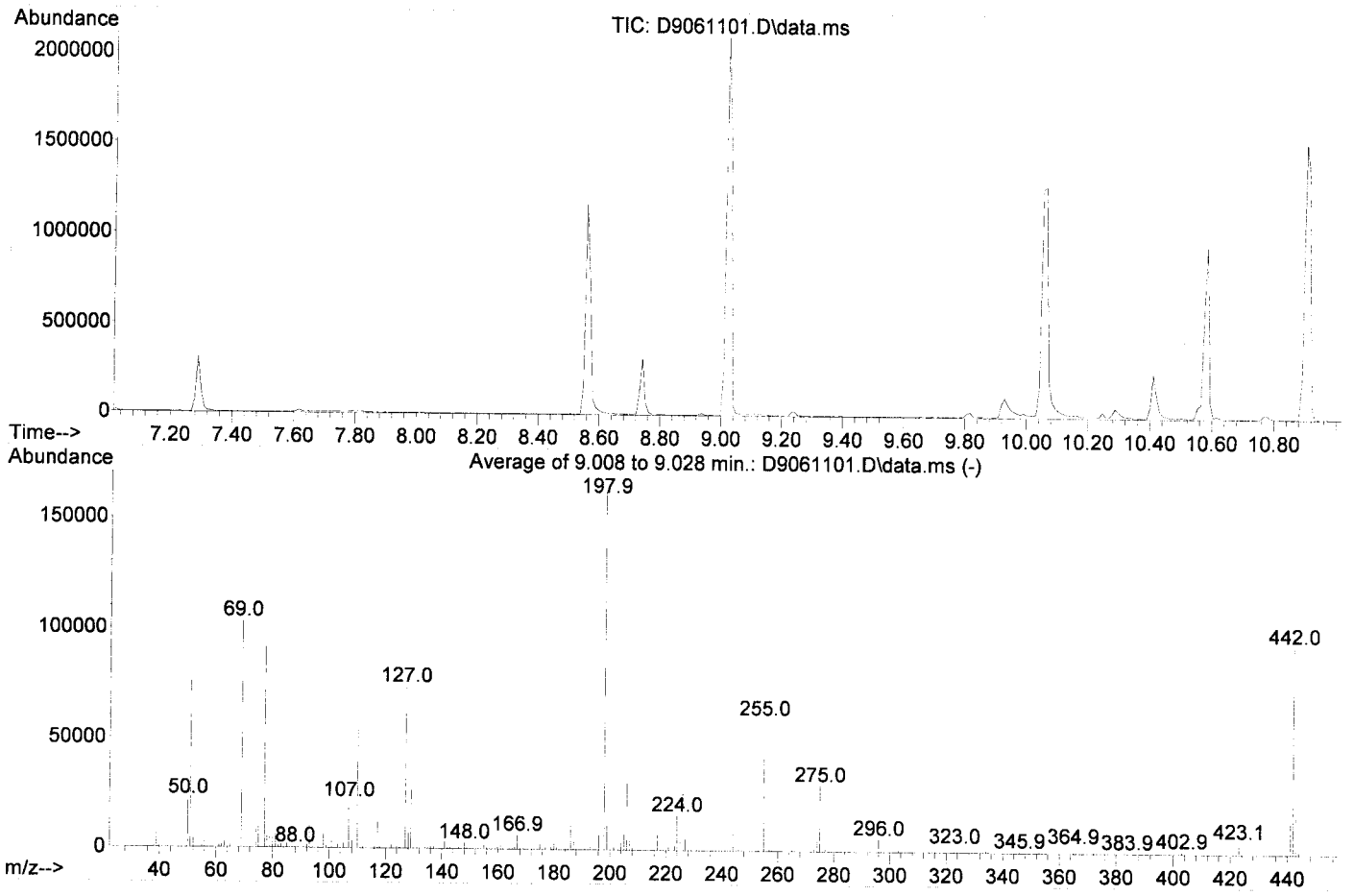
Data Reviewed By: MKA 6/11/19

Comments: Partial

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061101.D
Acq On : 11 Jun 2019 9:10 am
Operator : bsj
Sample : 9F11033-TUN1
Misc : 1x A19E333 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\DFTPP-8270.M
Title : EPA 8270 SIM PAH
Last Update : Wed Dec 05 14:43:36 2018



AutoFind: Scans 539, 540, 541; Background Corrected with Scan 537

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	46.6	75755	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	63.4	103072	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	45.3	73669	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	162587	PASS
199	198	5	9	6.6	10793	PASS
275	198	10	60	18.3	29798	PASS
365	198	1	100	1.6	2598	PASS
441	442	0.01	24	14.6	13714	PASS
442	198	50	200	58.0	94251	PASS
443	442	15	24	19.2	18083	PASS

6-11-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061101.D
Acq On : 11 Jun 2019 9:10 am
Operator : bsj
Sample : 9F11033-TUN1
Misc : 1x A19E333 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 11 11:53:10 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.601	136	144131	2000.00	ng/ml	0.00
2) Acenaphthene-d10	7.289	162	66918	2000.00	ng/ml	0.00
3) Phenanthrene-d10	8.742	188	118808	2000.00	ng/ml	0.00
7) Chrysene-d12	11.484	240	77585	2000.00	ng/ml	-0.02
8) Perylene-d12	13.970	264	60583	2000.00	ng/ml	-0.01
9) Dibenz(ah)anthracene-d14	16.282	292	55282	2000.00	ng/mL	-0.03
Target Compounds						Qvalue
4) Pentachlorophenol (PCP)	8.568	266	151720	43.77	ng/mL	95
5) DFTPP	9.018	198	303004	35.64	ng/mL	81
6) DDT	10.901	TIC	1986860	18489.98	ng/mL#	1

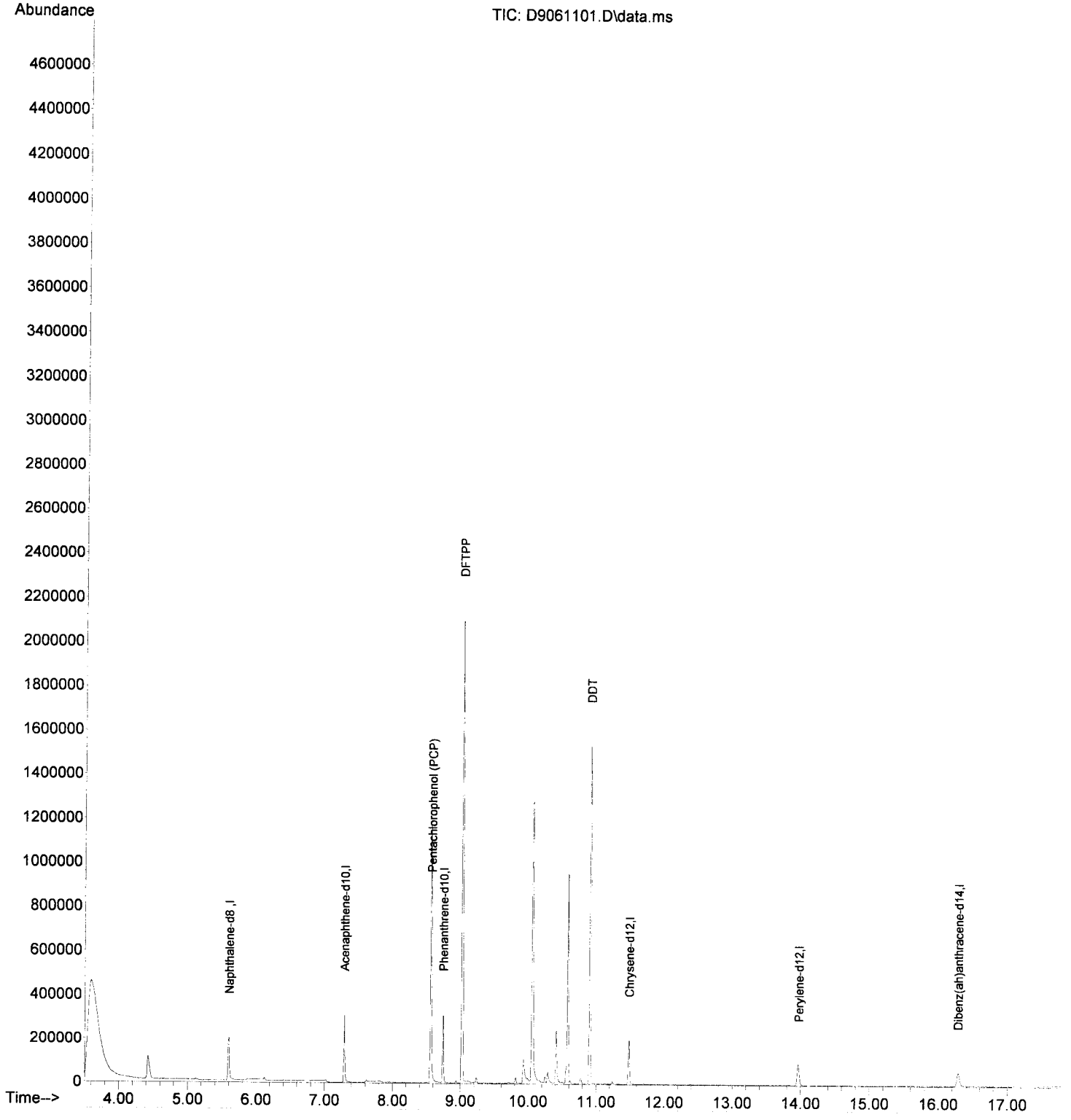
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061101.D
Acq On : 11 Jun 2019 9:10 am
Operator : bsj
Sample : 9F11033-TUN1
Misc : 1x A19E333 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 11 11:53:10 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4



Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061102.D
Acq On : 11 Jun 2019 9:35 am
Operator : bsj
Sample : 9F11033-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 11 09:57:10 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	74	-0.01
2	T	Naphthlene	1000.000	1023.434	-2.3	76	0.00
3	T	2-Methylnaphthalene	1000.000	997.471	0.3	74	0.00
4	T	1-Methylnaphthalene	1000.000	1016.462	-1.6	75	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	74	0.00
6	S	2-Fluorobiphenyl(Surr)	1000.000	1033.597	-3.4	77	0.00
7	T	Acenaphthylene	1000.000	1071.025	-7.1	79	0.00
8	T	Acenaphthene	1000.000	1041.190	-4.1	76	0.00
9		Dibenzofuran	1000.000	1067.918	-6.8	79	0.00
10	T	Fluorene	1000.000	1060.413	-6.0	79	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	80	0.00
12	T	Phenanthrene	1000.000	1016.496	-1.6	82	0.00
13	T	Anthracene	1000.000	1074.484	-7.4	87	0.00
14		Carbazole	1000.000	1155.022	-15.5	90	0.00
15	T	Fluoranthene	1000.000	1106.199	-10.6	90	0.00
16	T	Pyrene	1000.000	1138.485	-13.8	94	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	107	0.00
18	S	Terphenyl-d14(Surr)	1000.000	884.950	11.5	94	0.00
19	T	Benz(a)Anthracene	1000.000	995.794	0.4	111	-0.01
20	T	Chrysene	1000.000	1041.521	-4.2	112	-0.01
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	127	-0.02
22	T	Benzo(b)Fluoranthene	1000.000	982.630	1.7	125	0.00
23	T	Benzo(k)Fluoranthene	1000.000	1015.623	-1.6	128	-0.01
24	T	Benzo(b+k)Fluoranthene	2000.000	2001.097	-0.1	127	0.00
25		Benzo(e) Pyrene	1000.000	984.106	1.6	124	-0.02
26	T	Benzo(a)Pyrene	1000.000	1060.574	-6.1	132	0.00
27		Perylene	1000.000	1163.735	-16.4	146	-0.02
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	147	-0.02
29	T	Indeno(1,2,3-cd)Pyrene	1000.000	1024.468	-2.4	150	-0.02
30	T	Dibenz(a,h)Anthracene	1000.000	1062.874	-6.3	155	-0.02
31	T	Benzo (g,h,i) Perylene	1000.000	993.026	0.7	144	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

6-11-19 BSS

Quantitation Report (QT Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061102.D
Acq On : 11 Jun 2019 9:35 am
Operator : bsj
Sample : 9F11033-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 11 09:57:10 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.600	136	376010	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.293	164	185133	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	279000	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.482	240	178733	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.959	264	147801	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.282	292	114622	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.634	172	141824	1033.60 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	83698	884.95 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.620	128	199464	1023.43 ng/ml	99
3) 2-Methylnaphthalene	6.282	142	125690	997.47 ng/ml	100
4) 1-Methylnaphthalene	6.376	142	124211	1016.46 ng/ml	99
7) Acenaphthylene	7.152	152	179068	1071.03 ng/ml	98
8) Acenaphthene	7.323	153	116565	1041.19 ng/ml	95
9) Dibenzofuran	7.495	168	159422	1067.92 ng/mL	88
10) Fluorene	7.829	166	123188	1060.41 ng/ml	99
12) Phenanthrene	8.765	178	163292	1016.50 ng/ml	99
13) Anthracene	8.818	178	174303	1074.48 ng/ml	99
14) Carbazole	8.967	167	144887	1155.02 ng/mL	99
15) Fluoranthene	9.931	202	151428	1106.20 ng/ml	99
16) Pyrene	10.153	202	155088	1138.48 ng/ml	99
19) Benz(a)Anthracene	11.468	228	107390	995.79 ng/ml	96
20) Chrysene	11.518	228	109539	1041.52 ng/ml	96
22) Benzo(b)Fluoranthene	13.212	252	93767	982.63 ng/ml	60
23) Benzo(k)Fluoranthene	13.258	252	96044	1015.62 ng/ml	63
24) Benzo(b+k)Fluoranthene	13.212	252	190872m	2001.10 ng/ml	
25) Benzo(e) Pyrene	13.740	252	93452	984.11 ng/mL	90
26) Benzo(a)Pyrene	13.844	252	86982	1060.57 ng/ml	63
27) Perylene	14.010	252	92305	1163.73 ng/mL	88
29) Indeno(1,2,3-cd)Pyrene	16.293	276	73824	1024.47 ng/ml	62
30) Dibenz(a,h)Anthracene	16.360	278	69931	1062.87 ng/ml	58
31) Benzo (g,h,i) Perylene	16.900	276	76961	993.03 ng/ml	80

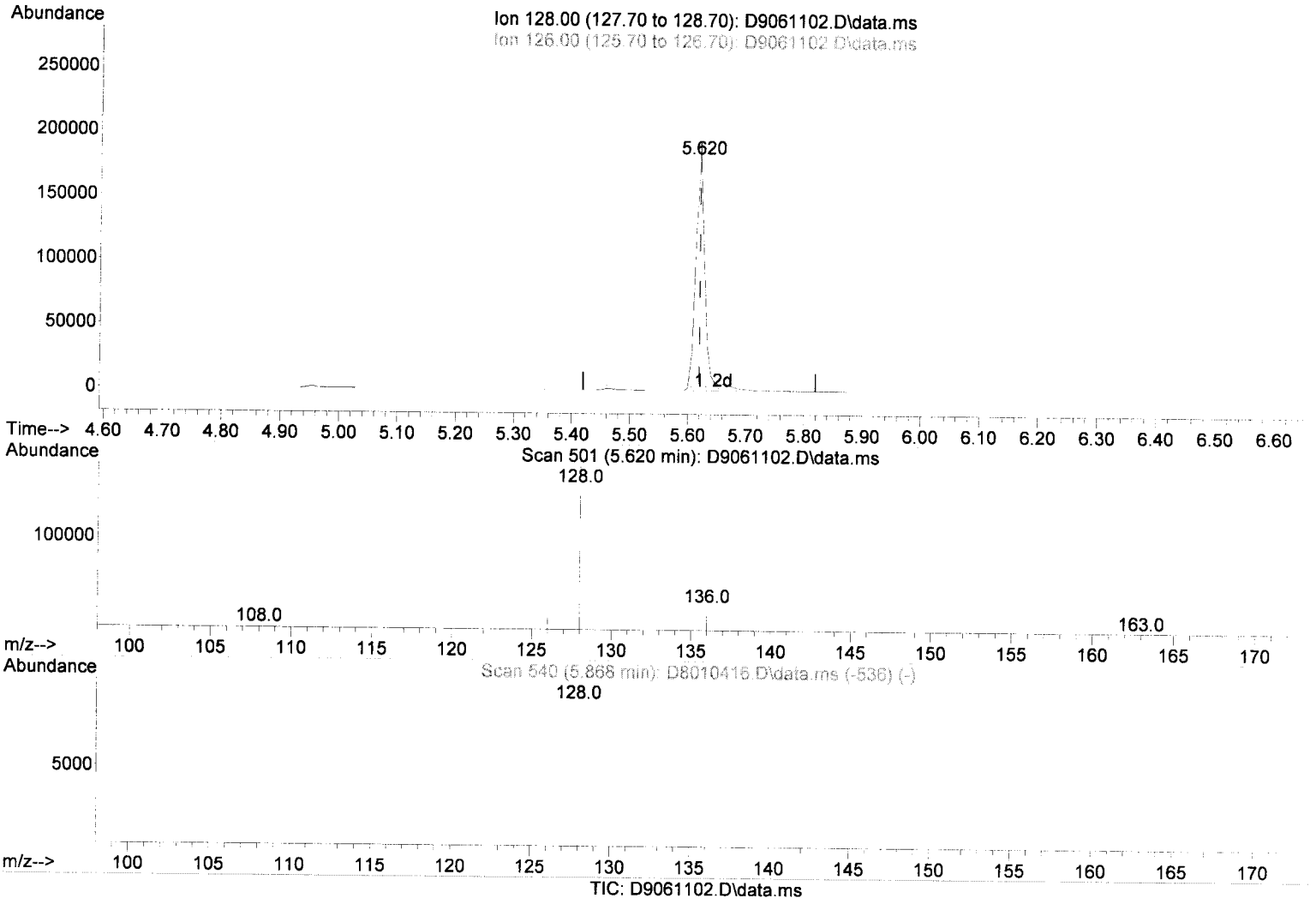
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19 BS

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061102.D
Acq On : 11 Jun 2019 9:35 am
Operator : bsj
Sample : 9F11033-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 11 09:56:43 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(2) Naphthlene (T)

5.620min (-0.000) 1023.43 ng/ml

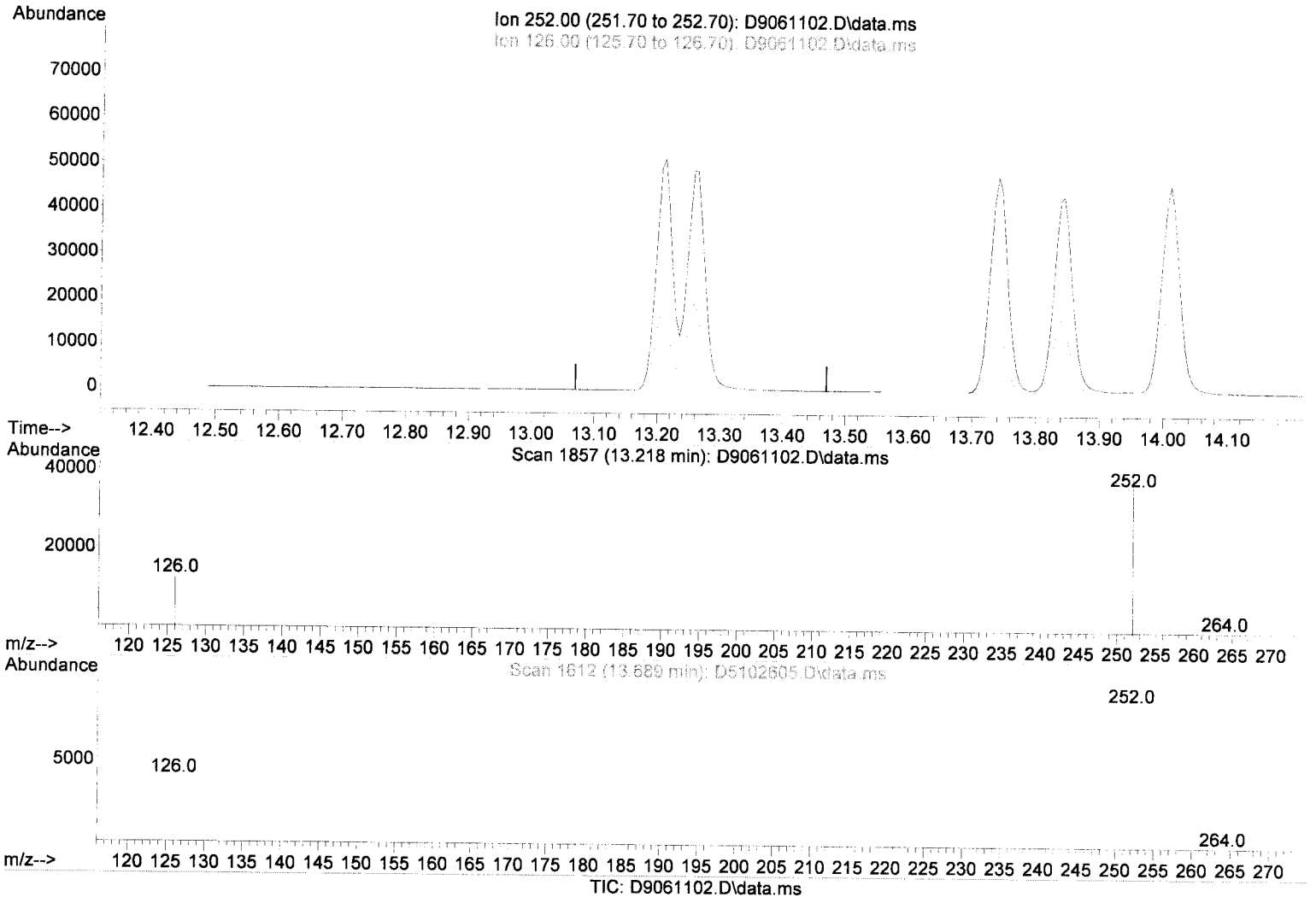
response 199464

Ion	Exp%	Act%
128.00	100.00	100.00
126.00	7.50	7.20
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061102.D
Acq On : 11 Jun 2019 9:35 am
Operator : bsj
Sample : 9F11033-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 11 09:56:43 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

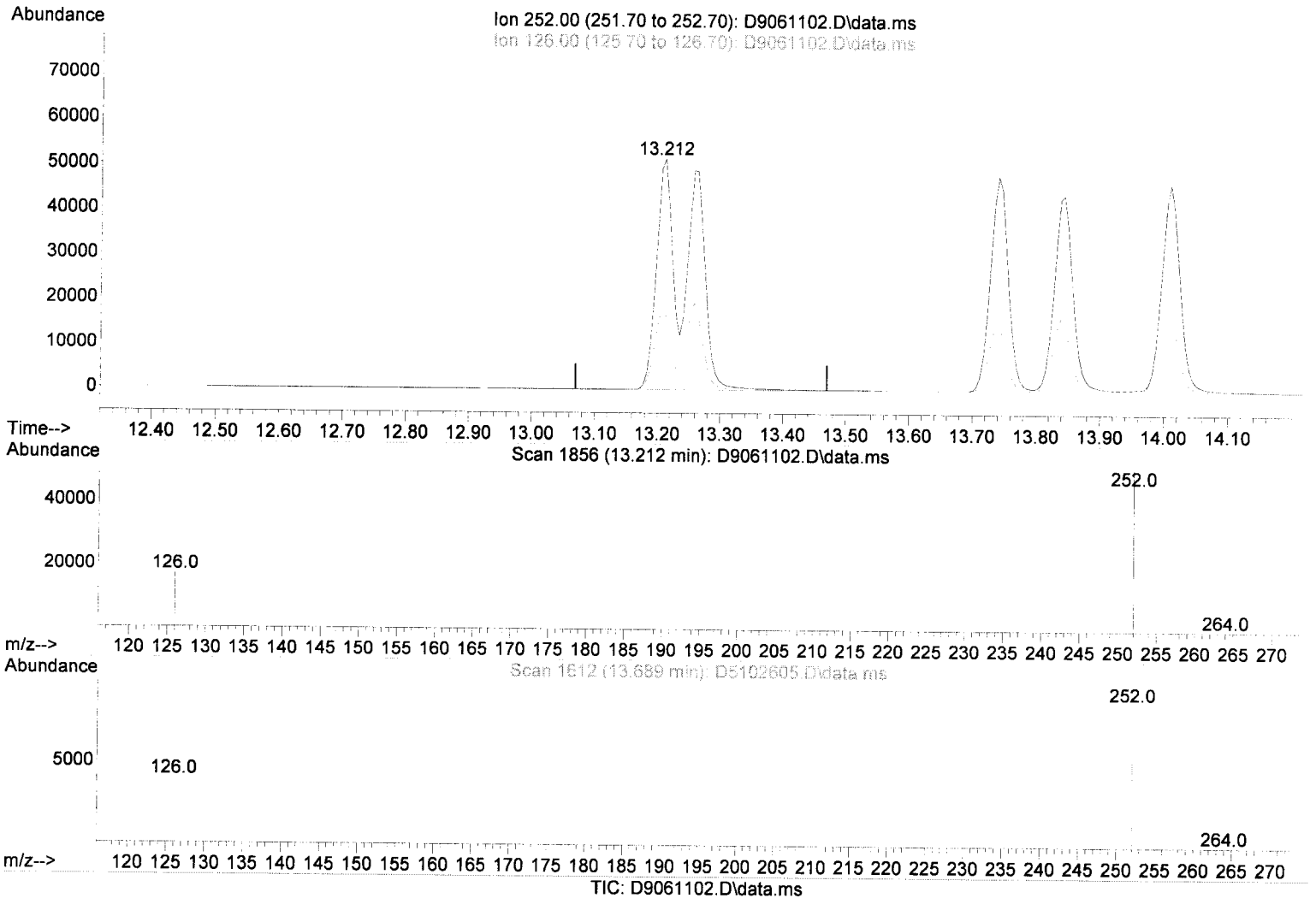
Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

BEFORE

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061102.D
Acq On : 11 Jun 2019 9:35 am
Operator : bsj
Sample : 9F11033-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 11 09:56:43 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



TIC: D9061102.D\data.ms

(24) Benzo(b+k)Fluoranthene (T)

13.212min (-0.008) 2001.10 ng/ml m

response 190872

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

AFTER
6-11-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061102.D
Acq On : 11 Jun 2019 9:35 am
Operator : bsj
Sample : 9F11033-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 11 09:56:43 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.600	136	376010	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.293	164	185133	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	279000	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.482	240	178733	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.959	264	147801	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.282	292	114622	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.634	172	141824	1033.60 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	83698	884.95 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.620	128	199464	1023.43 ng/ml	99
3) 2-Methylnaphthalene	6.282	142	125690	997.47 ng/ml	100
4) 1-Methylnaphthalene	6.376	142	124211	1016.46 ng/ml	99
7) Acenaphthylene	7.152	152	179068	1071.03 ng/ml	98
8) Acenaphthene	7.323	153	116565	1041.19 ng/ml	95
9) Dibenzofuran	7.495	168	159422	1067.92 ng/mL	88
10) Fluorene	7.829	166	123188	1060.41 ng/ml	99
12) Phenanthrene	8.765	178	163292	1016.50 ng/ml	99
13) Anthracene	8.818	178	174303	1074.48 ng/ml	99
14) Carbazole	8.967	167	144887	1155.02 ng/mL	99
15) Fluoranthene	9.931	202	151428	1106.20 ng/ml	99
16) Pyrene	10.153	202	155088	1138.48 ng/ml	99
19) Benz(a)Anthracene	11.468	228	107390	995.79 ng/ml	96
20) Chrysene	11.518	228	109539	1041.52 ng/ml	96
22) Benzo(b)Fluoranthene	13.212	252	93767	982.63 ng/ml	60
23) Benzo(k)Fluoranthene	13.258	252	96044	1015.62 ng/ml	63
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	13.740	252	93452	984.11 ng/mL	90
26) Benzo(a)Pyrene	13.844	252	86982	1060.57 ng/ml	63
27) Perylene	14.010	252	92305	1163.73 ng/mL	88
29) Indeno(1,2,3-cd)Pyrene	16.293	276	73824	1024.47 ng/ml	62
30) Dibenz(a,h)Anthracene	16.360	278	69931	1062.87 ng/ml	58
31) Benzo (g,h,i) Perylene	16.900	276	76961	993.03 ng/ml	80

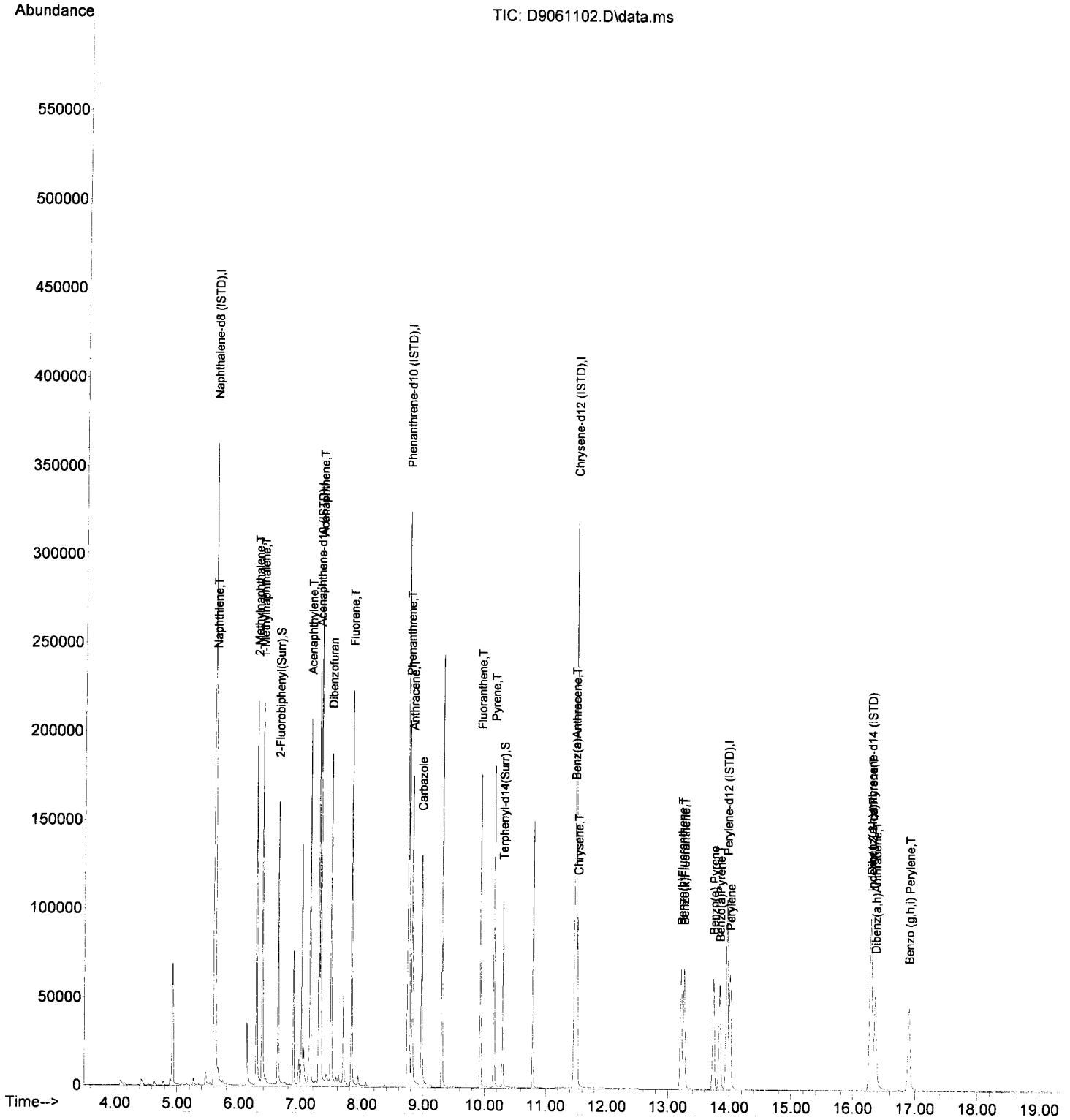
MT 6-11-19 BSJ

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

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061102.D
Acq On : 11 Jun 2019 9:35 am
Operator : bsj
Sample : 9F11033-CCV1
Misc : 1x A19C237@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 11 09:56:43 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061103.D
Acq On : 11 Jun 2019 10:01 am
Operator : bsj
Sample : 9F11033-CCB1
Misc : 1x DCM+ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 11 11:53:54 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.599	136	394534	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	196692	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.745	188	306334	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	184798	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.958	264	151572	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.281	292	122606	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00 ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00 ng/ml	
Target Compounds					Qvalue
2) Naphthlene	0.000		0	N.D.	
3) 2-Methylnaphthalene	0.000		0	N.D.	
4) 1-Methylnaphthalene	0.000		0	N.D.	
7) Acenaphthylene	0.000		0	N.D.	
8) Acenaphthene	0.000		0	N.D.	
9) Dibenzofuran	0.000		0	N.D.	
10) Fluorene	0.000		0	N.D.	
12) Phenanthrene	0.000		0	N.D.	
13) Anthracene	0.000		0	N.D.	
14) Carbazole	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	0.000		0	N.D.	
19) Benz(a)Anthracene	11.483	228	455	4.08 ng/ml#	55
20) Chrysene	11.483	228	455	4.18 ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.	
23) Benzo(k)Fluoranthene	0.000		0	N.D.	
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	0.000		0	N.D.	
27) Perylene	13.958	252	513	6.31 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.	
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

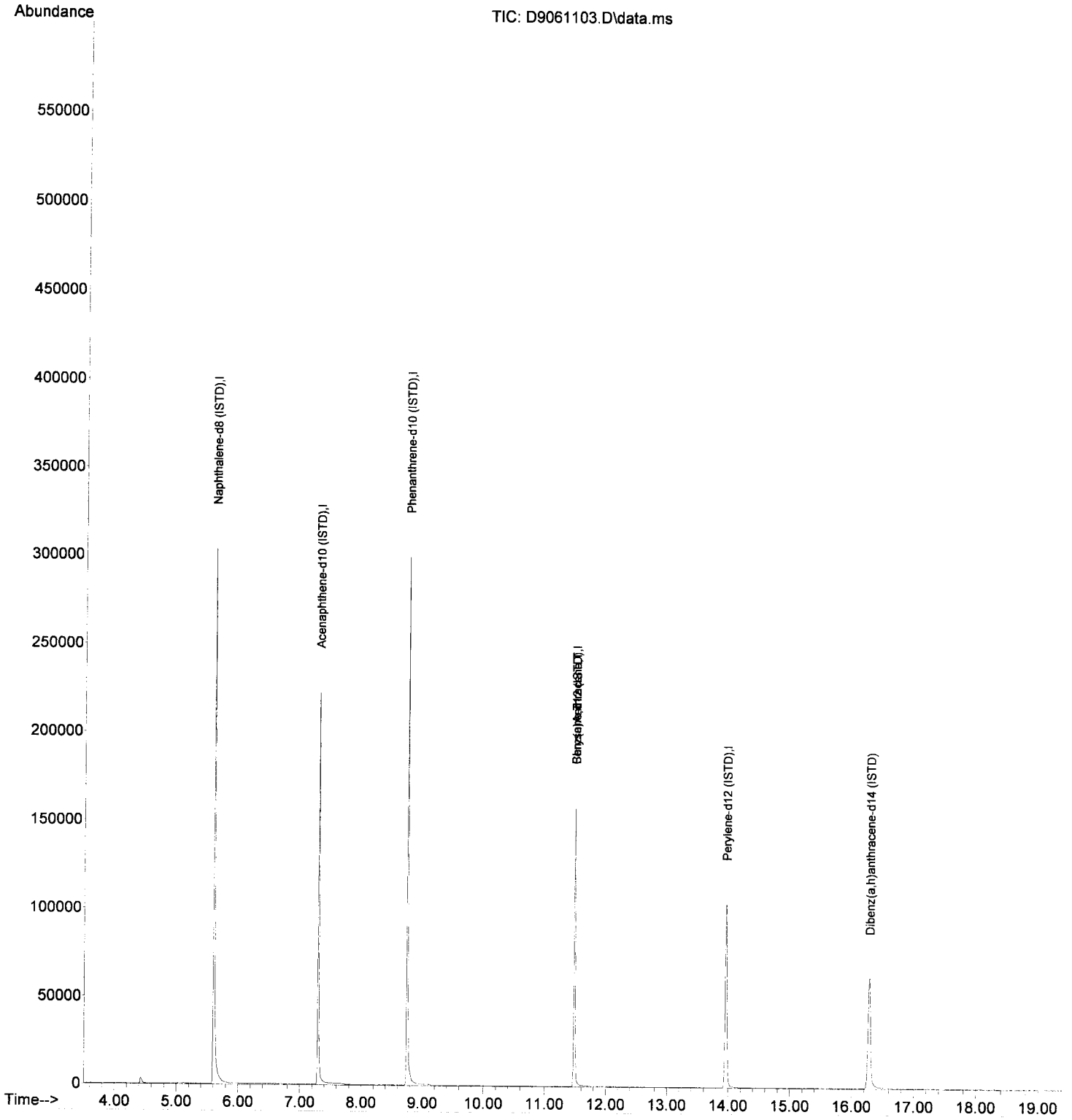
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061103.D
Acq On : 11 Jun 2019 10:01 am
Operator : bsj
Sample : 9F11033-CCB1
Misc : 1x DCM+ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 11 11:53:54 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061104.D
Acq On : 11 Jun 2019 10:28 am
Operator : bsj
Sample : 9060758-BLK1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 11 11:53:57 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.599	136	392495	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	186170	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	287118	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	173120	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.958	264	138659	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.281	292	103576	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.636	172	270874	1963.10 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	179503	1959.45 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.619	128	39517	194.24 ng/ml	B 99
3) 2-Methylnaphthalene	6.284	142	2060	15.66 ng/ml	94
4) 1-Methylnaphthalene	6.377	142	1003	7.86 ng/ml	100
7) Acenaphthylene	0.000		0	N.D.	
8) Acenaphthene	7.324	153	772	6.86 ng/ml	94
9) Dibenzofuran	7.496	168	566	3.77 ng/mL#	40
10) Fluorene	7.828	166	378	3.24 ng/ml	92
12) Phenanthrene	8.766	178	1089	6.59 ng/ml	92
13) Anthracene	8.766	178	1089	6.52 ng/ml	90
14) Carbazole	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	10.153	202	219	1.56 ng/ml#	59
19) Benz(a)Anthracene	11.476	228	507	4.85 ng/ml#	55
20) Chrysene	11.476	228	507	4.98 ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.	
23) Benzo(k)Fluoranthene	0.000		0	N.D.	
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	0.000		0	N.D.	
27) Perylene	13.958	252	452	6.07 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.	
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

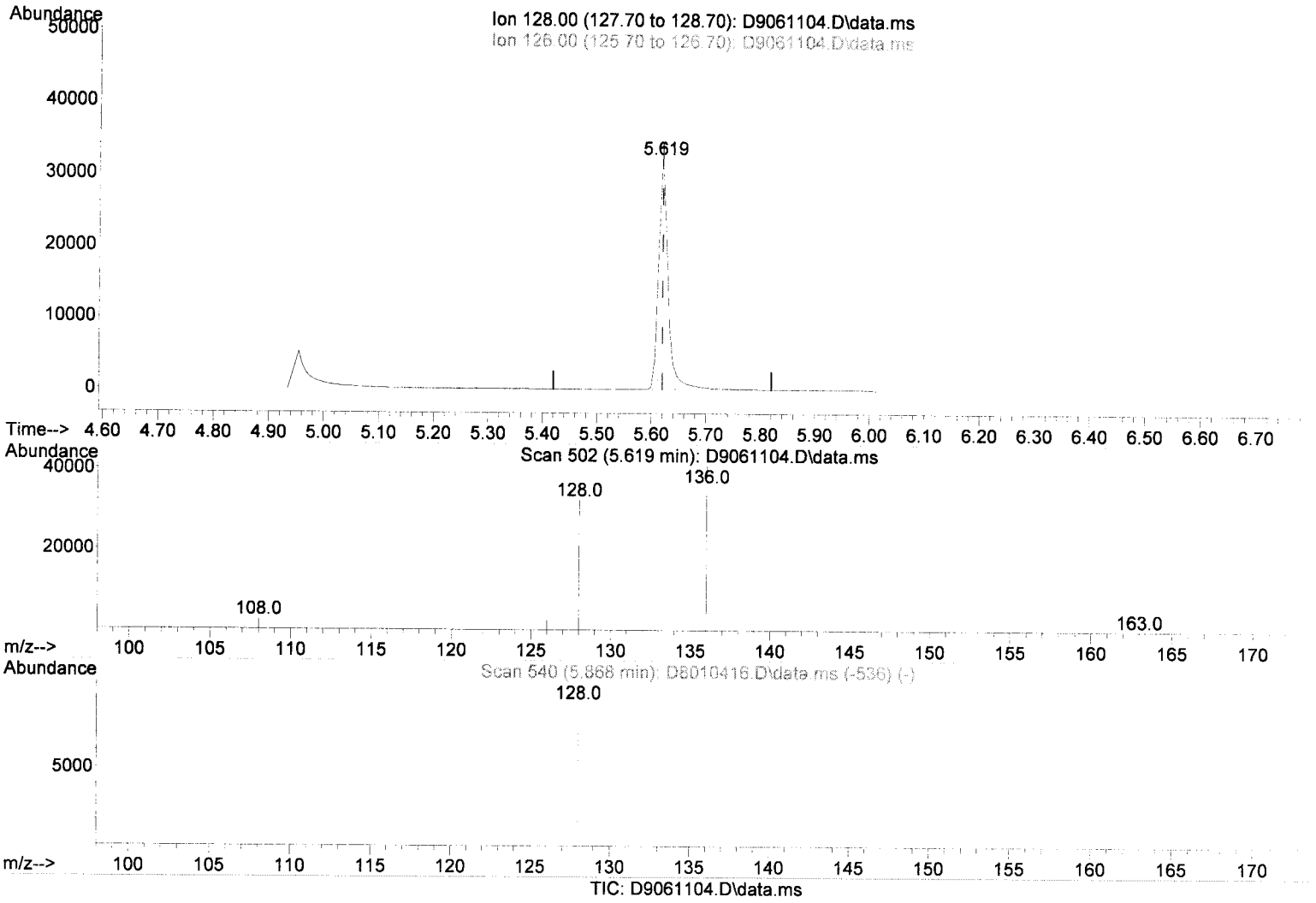
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19 BSJ

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061104.D
Acq On : 11 Jun 2019 10:28 am
Operator : bsj
Sample : 9060758-BLK1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 11 11:53:57 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(2) Naphthlene (T)

5.619min (-0.001) 194.24 ng/ml

response 39517

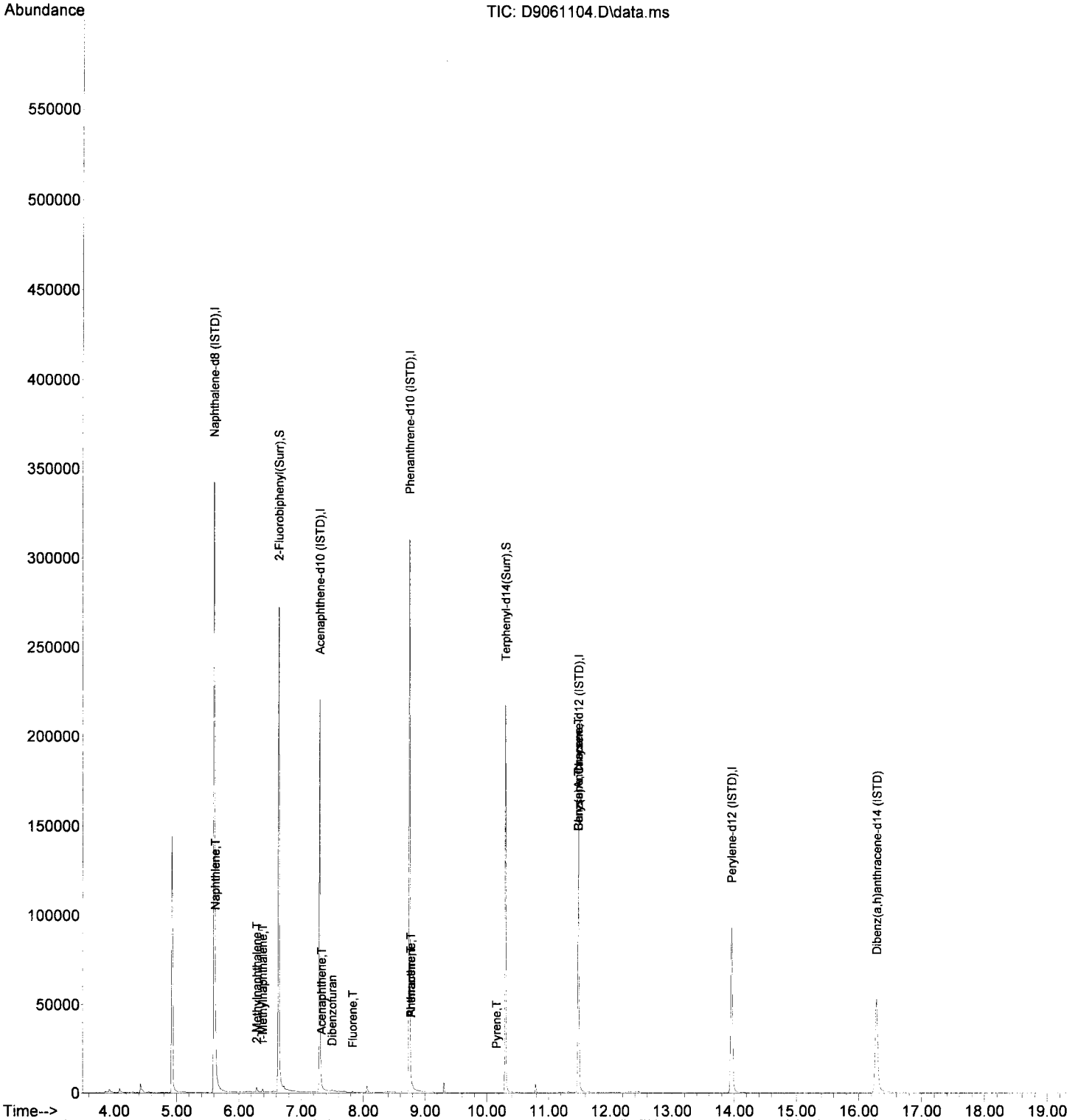
Ion	Exp%	Act%
128.00	100.00	100.00
126.00	7.50	7.01
0.00	0.00	0.00
0.00	0.00	0.00

B

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061104.D
Acq On : 11 Jun 2019 10:28 am
Operator : bsj
Sample : 9060758-BLK1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 11 11:53:57 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (QT Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061105.D
Acq On : 11 Jun 2019 10:54 am
Operator : bsj
Sample : 9060758-BS1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 11 12:17:37 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.605	136	397140	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.293	164	197423	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	312577	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	218280	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.963	264	174639	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.288	292	136779	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.635	172	308297	2106.96	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.297	244	214424	1856.39	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.618	128	731071	3551.49	ng/ml	99
3) 2-Methylnaphthalene	6.283	142	428293	3218.08	ng/ml	100
4) 1-Methylnaphthalene	6.380	142	409713	3174.44	ng/ml	99
7) Acenaphthylene	7.152	152	654799	3672.62	ng/ml	98
8) Acenaphthene	7.324	153	427036	3576.95	ng/ml	96
9) Dibenzofuran	7.496	168	591604	3716.27	ng/mL	87
10) Fluorene	7.828	166	473632	3823.26	ng/ml	99
12) Phenanthrene	8.765	178	657420	3652.84	ng/ml	98
13) Anthracene	8.818	178	681281	3748.59	ng/ml	99
14) Carbazole	8.967	167	598317	4257.35	ng/mL	99
15) Fluoranthene	9.929	202	626017	4081.88	ng/ml	99
16) Pyrene	10.152	202	638975	4186.78	ng/ml	99
19) Benz(a)Anthracene	11.468	228	496458	3769.46	ng/ml	96
20) Chrysene	11.518	228	479873	3736.08	ng/ml	96
22) Benzo(b)Fluoranthene	13.216	252	423677	3757.60	ng/ml	65
23) Benzo(k)Fluoranthene	13.262	252	436416	3905.70	ng/ml	68
24) Benzo(b+k)Fluoranthene	13.262	252	861721m	7645.90	ng/ml	
25) Benzo(e) Pyrene	13.750	252	410440	3657.96	ng/mL	93
26) Benzo(a)Pyrene	13.848	252	391576	4040.77	ng/ml	67
27) Perylene	14.015	252	375692	4008.64	ng/mL	91
29) Indeno(1,2,3-cd)Pyrene	16.305	276	313227	3642.58	ng/ml	65
30) Dibenz(a,h)Anthracene	16.366	278	318212	4053.00	ng/ml	68
31) Benzo (g,h,i) Perylene	16.912	276	318363	3442.40	ng/ml	84

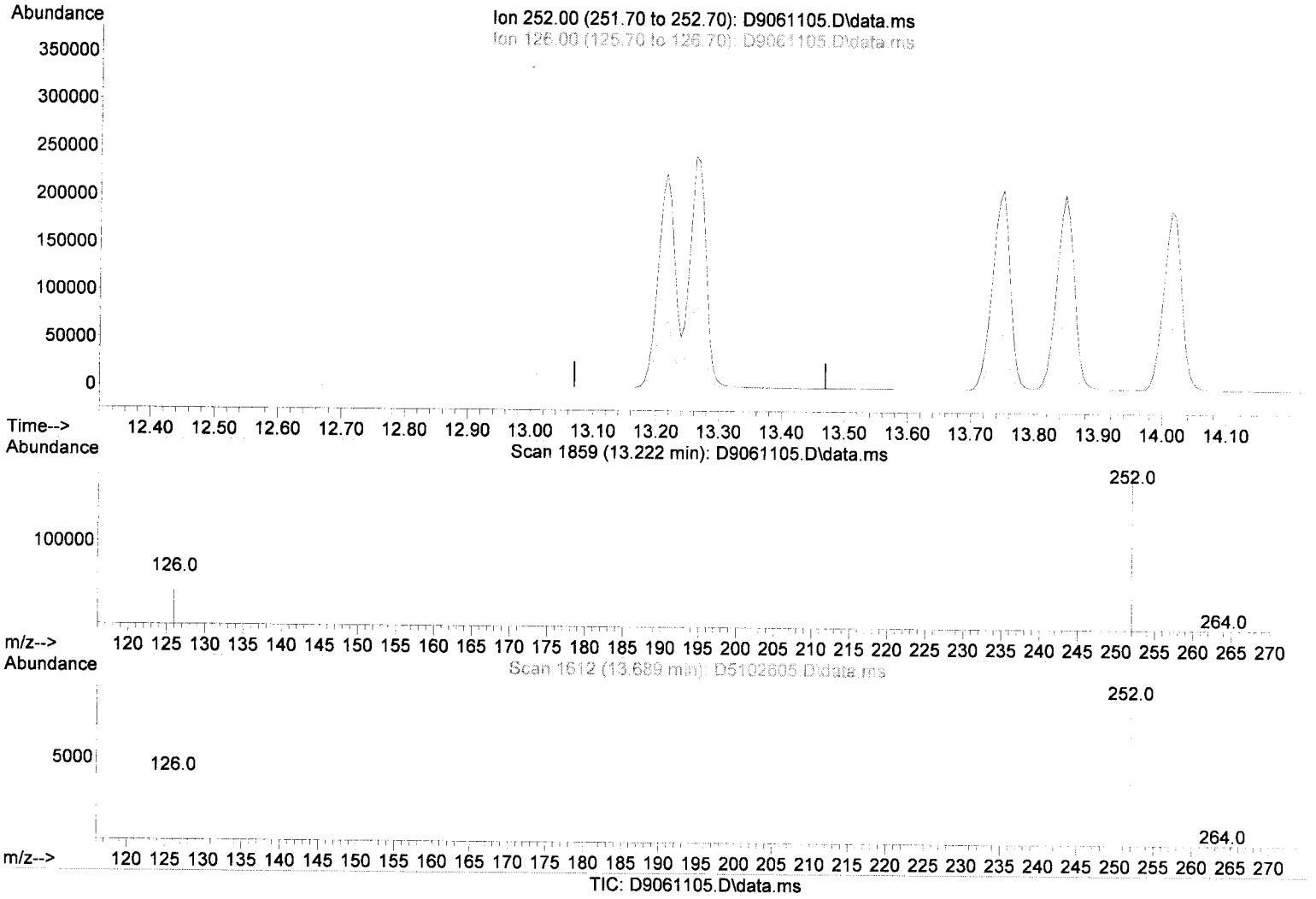
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19
BSS

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061105.D
Acq On : 11 Jun 2019 10:54 am
Operator : bsj
Sample : 9060758-BS1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 11 11:54:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

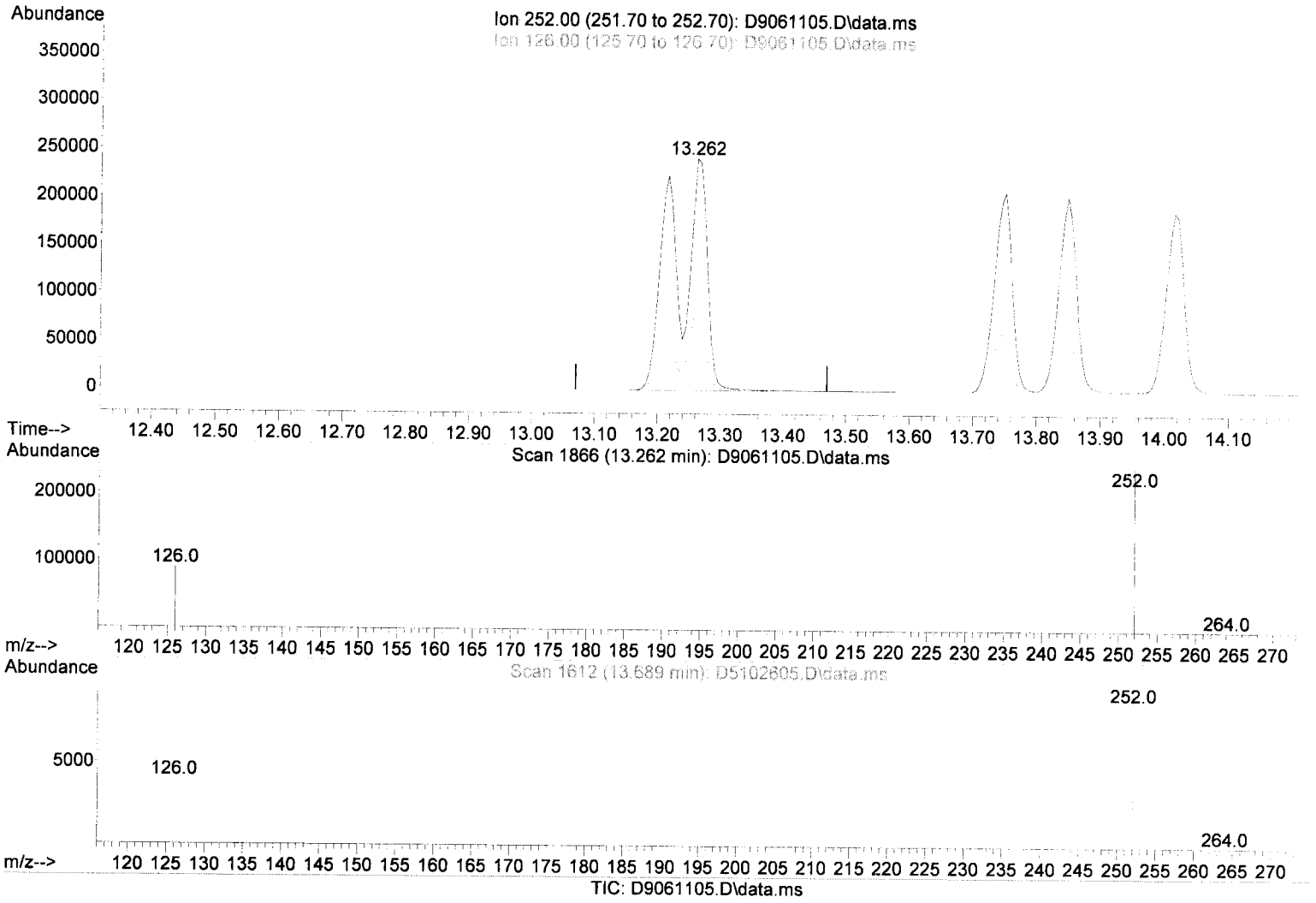
BEFORE

Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061105.D
Acq On : 11 Jun 2019 10:54 am
Operator : bsj
Sample : 9060758-BS1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 11 11:54:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.262min (+ 0.042) 7645.90 ng/ml m

response 861721

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

AFTER

6-11-19 BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061105.D
Acq On : 11 Jun 2019 10:54 am
Operator : bsj
Sample : 9060758-BS1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 11 11:54:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.605	136	397140	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.293	164	197423	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	312577	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	218280	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.963	264	174639	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.288	292	136779	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.635	172	308297	2106.96	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.297	244	214424	1856.39	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.618	128	731071	3551.49	ng/ml	99
3) 2-Methylnaphthalene	6.283	142	428293	3218.08	ng/ml	100
4) 1-Methylnaphthalene	6.380	142	409713	3174.44	ng/ml	99
7) Acenaphthylene	7.152	152	654799	3672.62	ng/ml	98
8) Acenaphthene	7.324	153	427036	3576.95	ng/ml	96
9) Dibenzofuran	7.496	168	591604	3716.27	ng/mL	87
10) Fluorene	7.828	166	473632	3823.26	ng/ml	99
12) Phenanthrene	8.765	178	657420	3652.84	ng/ml	98
13) Anthracene	8.818	178	681281	3748.59	ng/ml	99
14) Carbazole	8.967	167	598317	4257.35	ng/mL	99
15) Fluoranthene	9.929	202	626017	4081.88	ng/ml	99
16) Pyrene	10.152	202	638975	4186.78	ng/ml	99
19) Benz(a)Anthracene	11.468	228	496458	3769.46	ng/ml	96
20) Chrysene	11.518	228	479873	3736.08	ng/ml	96
22) Benzo(b)Fluoranthene	13.216	252	423677	3757.60	ng/ml	65
23) Benzo(k)Fluoranthene	13.262	252	436416	3905.70	ng/ml	68
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	13.750	252	410440	3657.96	ng/mL	93
26) Benzo(a)Pyrene	13.848	252	391576	4040.77	ng/ml	67
27) Perylene	14.015	252	375692	4008.64	ng/mL	91
29) Indeno(1,2,3-cd)Pyrene	16.305	276	313227	3642.58	ng/ml	65
30) Dibenz(a,h)Anthracene	16.366	278	318212	4053.00	ng/ml	68
31) Benzo (g,h,i) Perylene	16.912	276	318363	3442.40	ng/ml	84

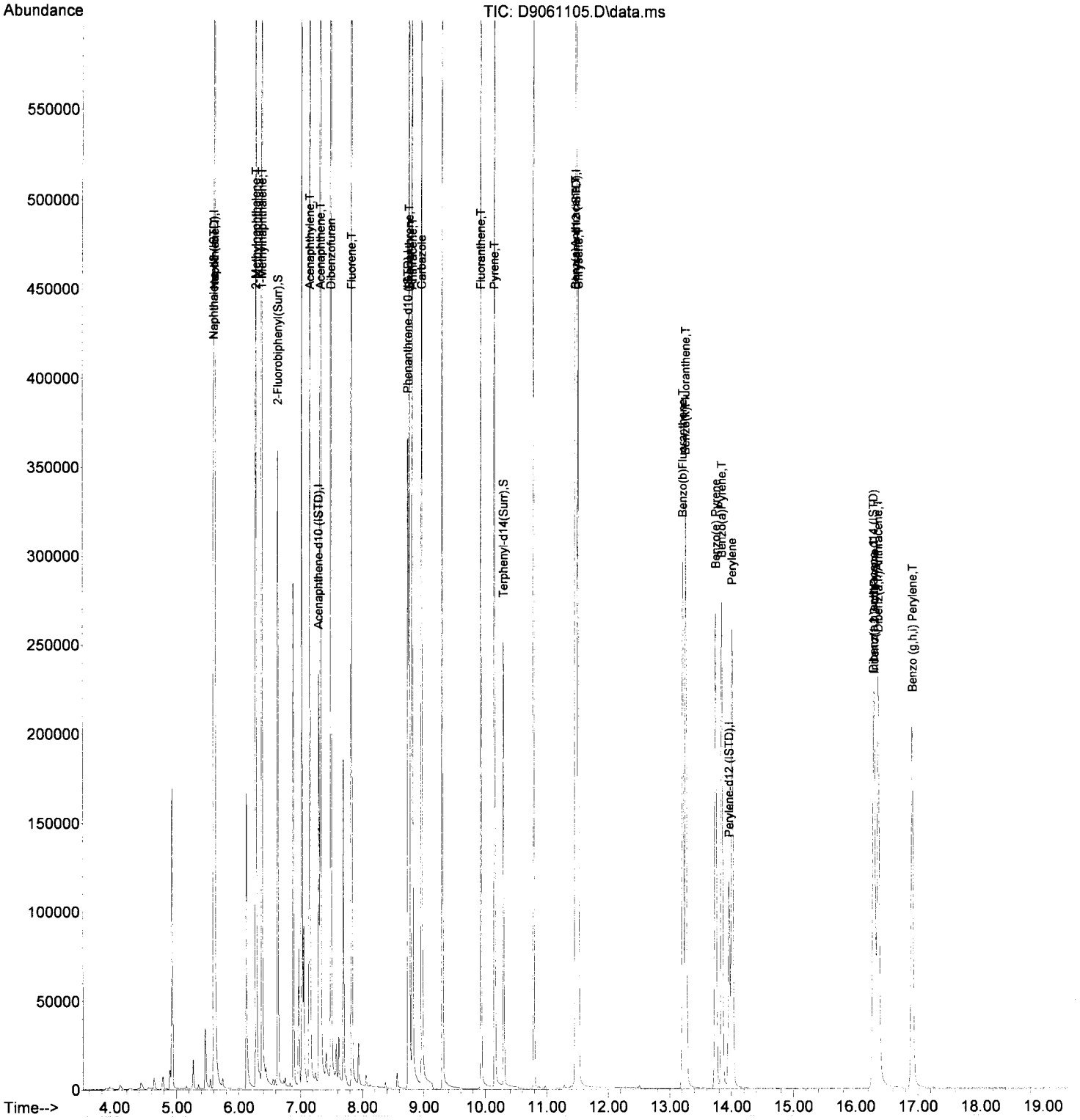
MJ 6-11-19

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

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061105.D
Acq On : 11 Jun 2019 10:54 am
Operator : bsj
Sample : 9060758-BS1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 11 11:54:00 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (QT Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061106.D
Acq On : 11 Jun 2019 11:21 am
Operator : bsj
Sample : 9060758-BSD1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 6 Sample Multiplier: 1

Q-19
B-02 BSJ 6-11-19

Quant Time: Jun 11 12:18:04 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.599	136	412081	2000.00	ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	206337	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	321745	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	220094	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	177944	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.293	292	143272	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.636	172	324715	2123.30	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	209675	1800.31	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.619	128	705085	3301.06	ng/ml	100
3) 2-Methylnaphthalene	6.284	142	433837	3141.54	ng/ml	100
4) 1-Methylnaphthalene	6.377	142	425662	3178.43	ng/ml	99
7) Acenaphthylene	7.153	152	692153	3714.42	ng/ml	98
8) Acenaphthene	7.325	153	447767	3588.56	ng/ml	96
9) Dibenzofuran	7.497	168	638079	3835.05	ng/mL	87
10) Fluorene	7.829	166	498824	3852.66	ng/ml	98
12) Phenanthrene	8.766	178	706272	3812.46	ng/ml	98
13) Anthracene	8.819	178	745241	3983.68	ng/ml	99
14) Carbazole	8.967	167	643718	4449.89	ng/mL	99
15) Fluoranthene	9.930	202	673136	4264.05	ng/ml	99
16) Pyrene	10.153	202	685614	4364.37	ng/ml	99
19) Benz(a)Anthracene	11.469	228	515377	3880.85	ng/ml	95
20) Chrysene	11.518	228	510389	3940.92	ng/ml	96
22) Benzo(b)Fluoranthene	13.217	252	447233	3892.85	ng/ml	65
23) Benzo(k)Fluoranthene	13.269	252	457531	4018.62	ng/ml	68
24) Benzo(b+k)Fluoranthene	13.269	252	904601m	7877.29	ng/ml	
25) Benzo(e) Pyrene	13.751	252	431827	3777.09	ng/mL	94
26) Benzo(a)Pyrene	13.849	252	416064	4213.72	ng/ml	68
27) Perylene	14.016	252	398666	4174.77	ng/mL	93
29) Indeno(1,2,3-cd)Pyrene	16.309	276	340391	3779.07	ng/ml	66
30) Dibenz(a,h)Anthracene	16.371	278	343793	4180.38	ng/ml	69
31) Benzo (g,h,i) Perylene	16.911	276	341858	3528.92	ng/ml	84

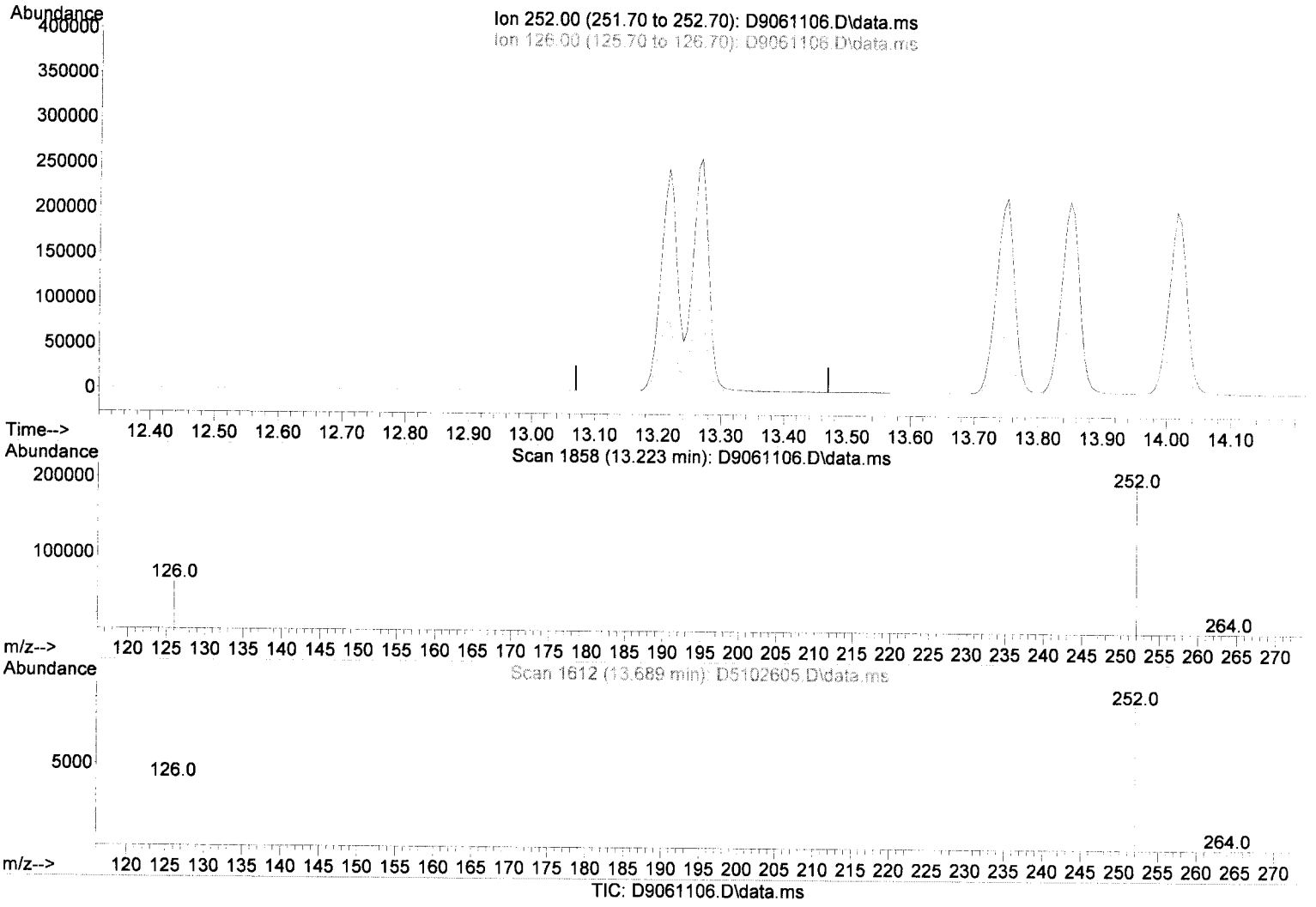
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19 BSJ

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061106.D
Acq On : 11 Jun 2019 11:21 am
Operator : bsj
Sample : 9060758-BSD1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 11 11:54:03 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

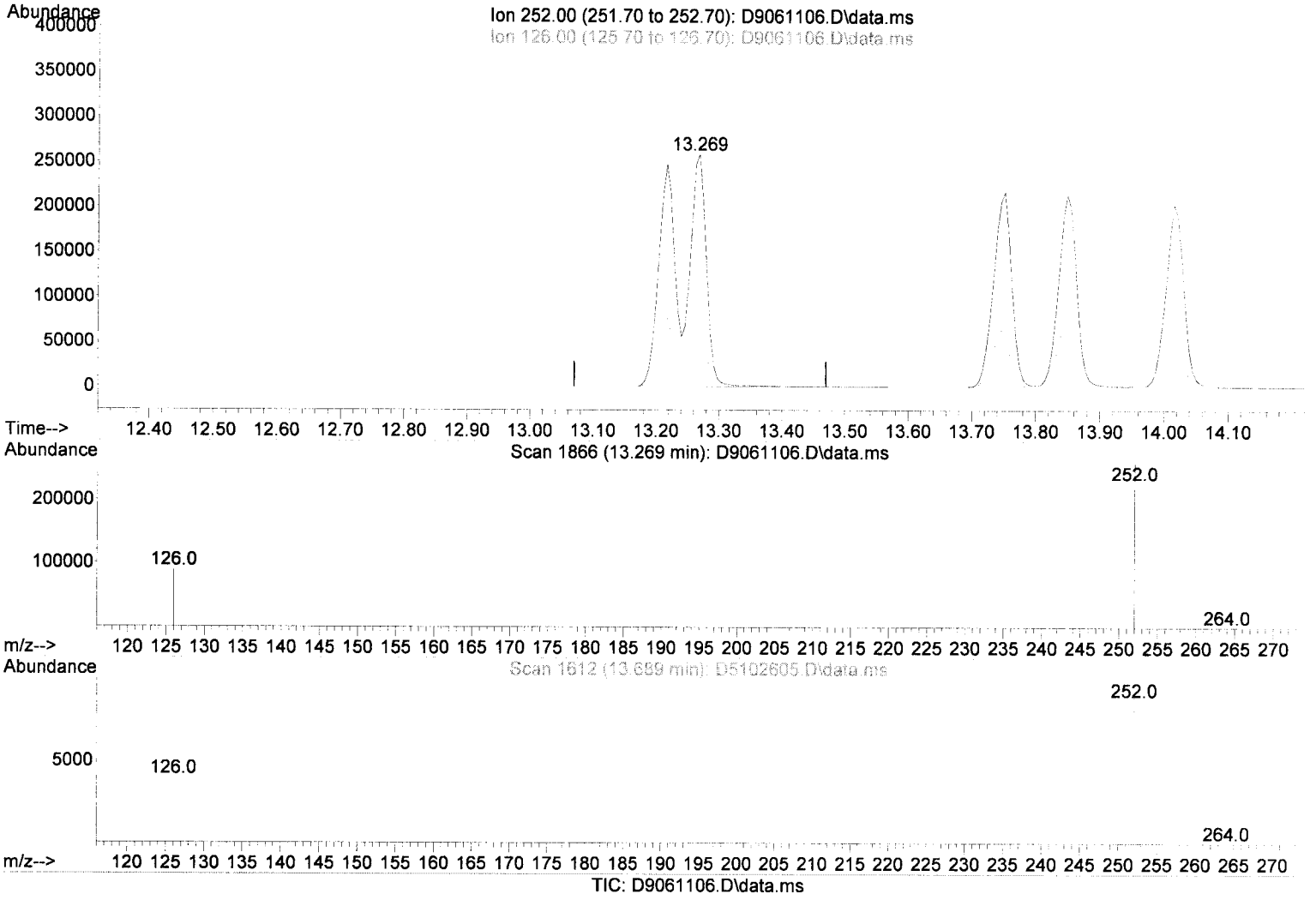
Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

BEFORE

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061106.D
Acq On : 11 Jun 2019 11:21 am
Operator : bsj
Sample : 9060758-BSD1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 11 11:54:03 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



TIC: D9061106.D\data.ms

(24) Benzo(b+k)Fluoranthene (T)

13.269min (+ 0.049) 7877.29 ng/ml m

response 904601

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

AFTER

6-11-19 BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061106.D
Acq On : 11 Jun 2019 11:21 am
Operator : bsj
Sample : 9060758-BSD1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 11 11:54:03 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.599	136	412081	2000.00	ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	206337	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	321745	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	220094	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	177944	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.293	292	143272	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.636	172	324715	2123.30	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	209675	1800.31	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.619	128	705085	3301.06	ng/ml	100
3) 2-Methylnaphthalene	6.284	142	433837	3141.54	ng/ml	100
4) 1-Methylnaphthalene	6.377	142	425662	3178.43	ng/ml	99
7) Acenaphthylene	7.153	152	692153	3714.42	ng/ml	98
8) Acenaphthene	7.325	153	447767	3588.56	ng/ml	96
9) Dibenzofuran	7.497	168	638079	3835.05	ng/mL	87
10) Fluorene	7.829	166	498824	3852.66	ng/ml	98
12) Phenanthrene	8.766	178	706272	3812.46	ng/ml	98
13) Anthracene	8.819	178	745241	3983.68	ng/ml	99
14) Carbazole	8.967	167	643718	4449.89	ng/mL	99
15) Fluoranthene	9.930	202	673136	4264.05	ng/ml	99
16) Pyrene	10.153	202	685614	4364.37	ng/ml	99
19) Benz(a)Anthracene	11.469	228	515377	3880.85	ng/ml	95
20) Chrysene	11.518	228	510389	3940.92	ng/ml	96
22) Benzo(b)Fluoranthene	13.217	252	447233	3892.85	ng/ml	65
23) Benzo(k)Fluoranthene	13.269	252	457531	4018.62	ng/ml	68
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	13.751	252	431827	3777.09	ng/mL	94
26) Benzo(a)Pyrene	13.849	252	416064	4213.72	ng/ml	68
27) Perylene	14.016	252	398666	4174.77	ng/mL	93
29) Indeno(1,2,3-cd)Pyrene	16.309	276	340391	3779.07	ng/ml	66
30) Dibenz(a,h)Anthracene	16.371	278	343793	4180.38	ng/ml	69
31) Benzo (g,h,i) Perylene	16.911	276	341858	3528.92	ng/ml	84

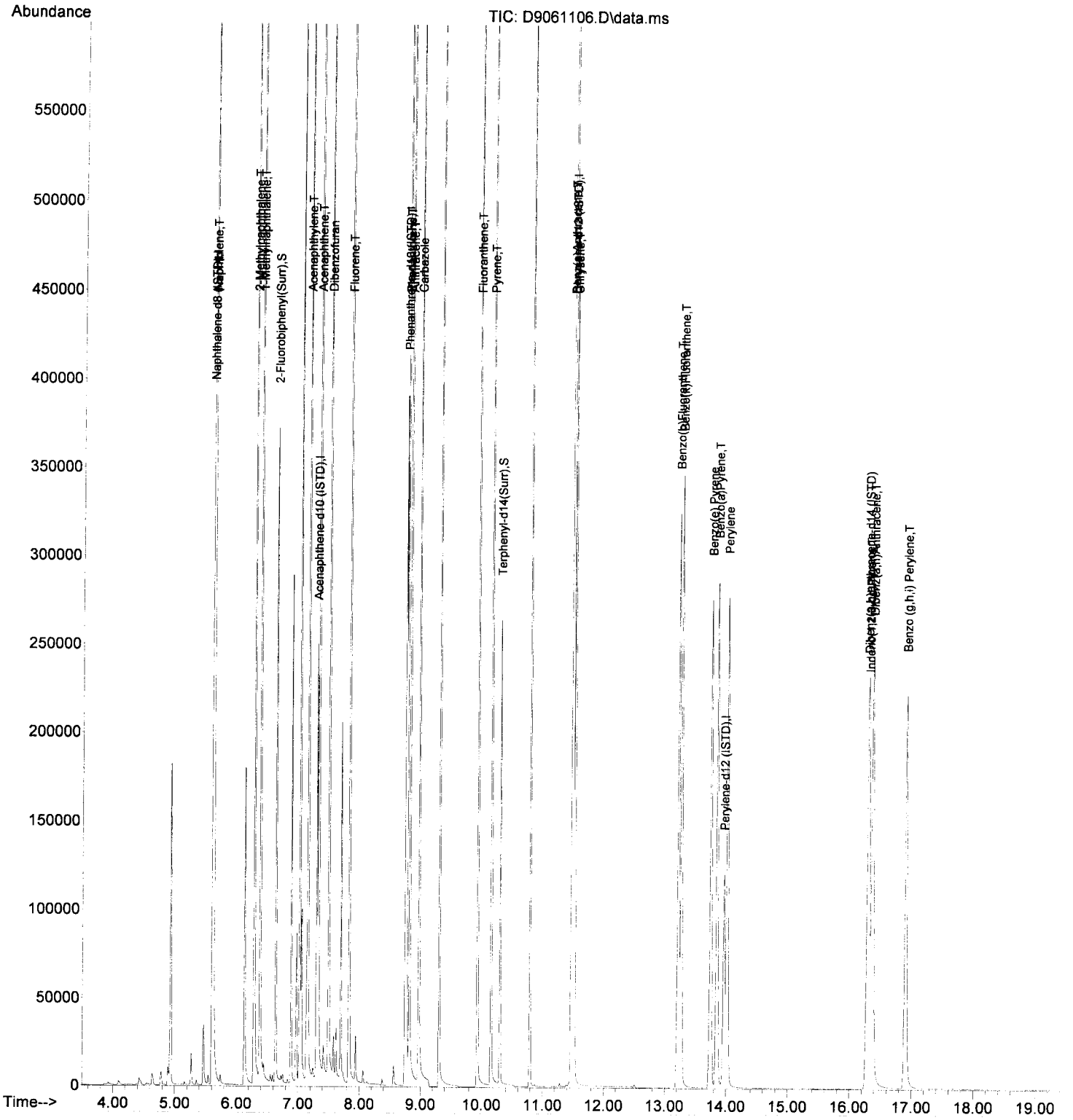
(#) = qualifier out of range (m) = manual integration (+) = signals summed

MT 6-11-19 BS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061106.D
Acq On : 11 Jun 2019 11:21 am
Operator : bsj
Sample : 9060758-BSD1
Misc : 1x Solid 200mL/2mL SIM PAH
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 11 11:54:03 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061107.D
Acq On : 11 Jun 2019 11:47 am
Operator : bsj
Sample : A9E0785-01@1000
Misc : 1000x Solid 200mL/2mL SIM PAH(SPLP)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 11 12:13:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.605	136	366853	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.294	164	180877	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	289857	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.482	240	175311	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.963	264	139164	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.281	292	109323	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.640	172	331	2.47 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.303	244	264	2.85 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.619	128	189252	995.27 ng/ml	99
3) 2-Methylnaphthalene	6.284	142	10755	87.48 ng/ml	99
4) 1-Methylnaphthalene	6.381	142	6233	52.28 ng/ml	96
7) Acenaphthylene	7.152	152	273	1.67 ng/ml#	66
8) Acenaphthene	7.324	153	8015	73.28 ng/ml	97
9) Dibenzofuran	7.502	168	5266	36.11 ng/mL	90
10) Fluorene	7.834	166	2583	22.76 ng/ml	96
12) Phenanthrene	8.765	178	4461	26.73 ng/ml	99
13) Anthracene	8.818	178	1437	8.53 ng/ml#	60
14) Carbazole	8.978	167	14708	112.86 ng/mL	96
15) Fluoranthene	9.935	202	696	4.89 ng/ml#	59
16) Pyrene	10.158	202	516	3.65 ng/ml#	59
19) Benz(a)Anthracene	11.482	228	498	4.71 ng/ml#	55
20) Chrysene	11.482	228	498	4.83 ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.	
23) Benzo(k)Fluoranthene	0.000		0	N.D.	
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	0.000		0	N.D.	
27) Perylene	13.958	252	440	5.89 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.	
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

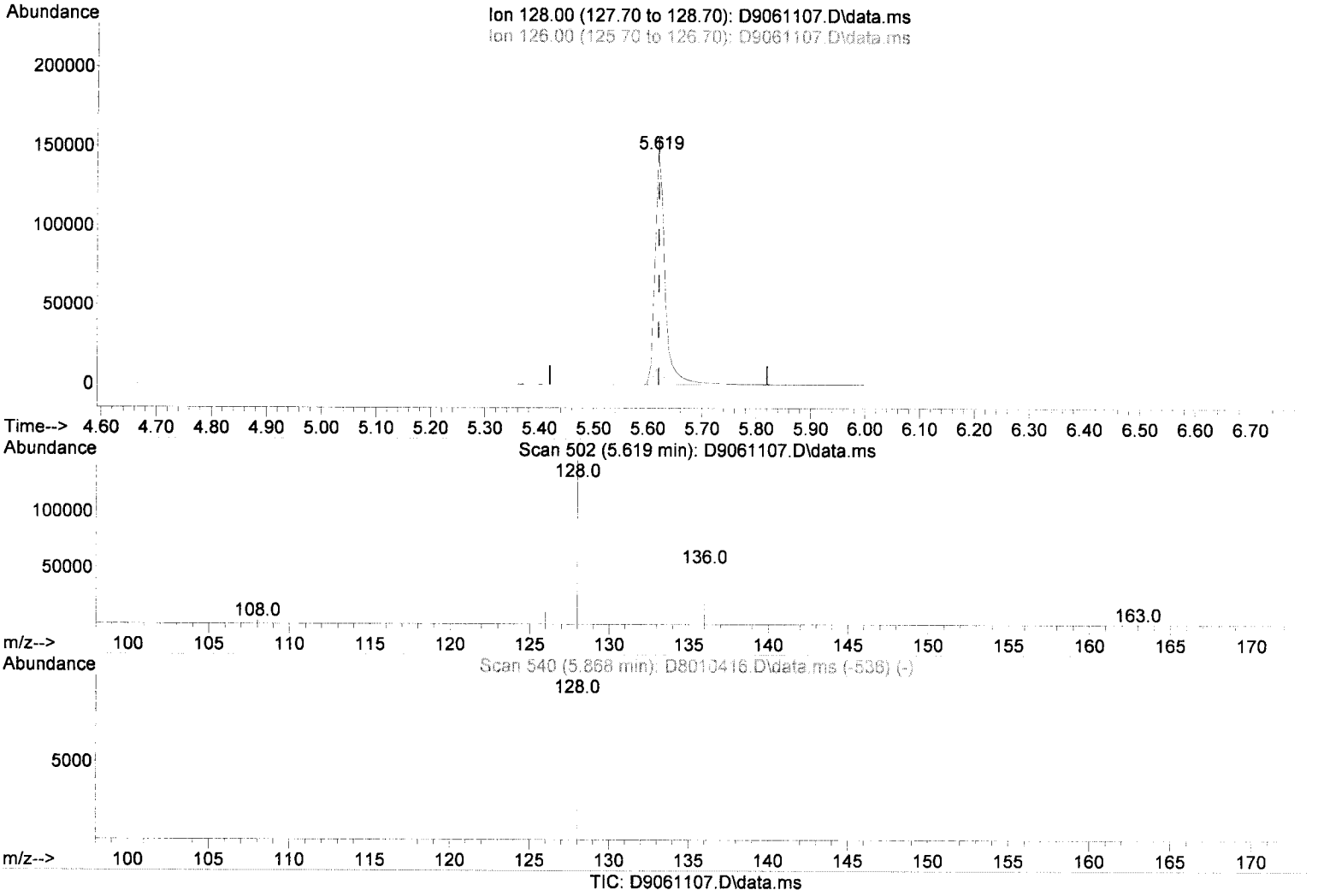
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19 BBS

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061107.D
Acq On : 11 Jun 2019 11:47 am
Operator : bsj
Sample : A9E0785-01@1000
Misc : 1000x Solid 200mL/2mL SIM PAH(SPLP)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 11 12:13:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(2) Naphthlene (T)

5.619min (-0.001) 995.27 ng/ml

response 189252

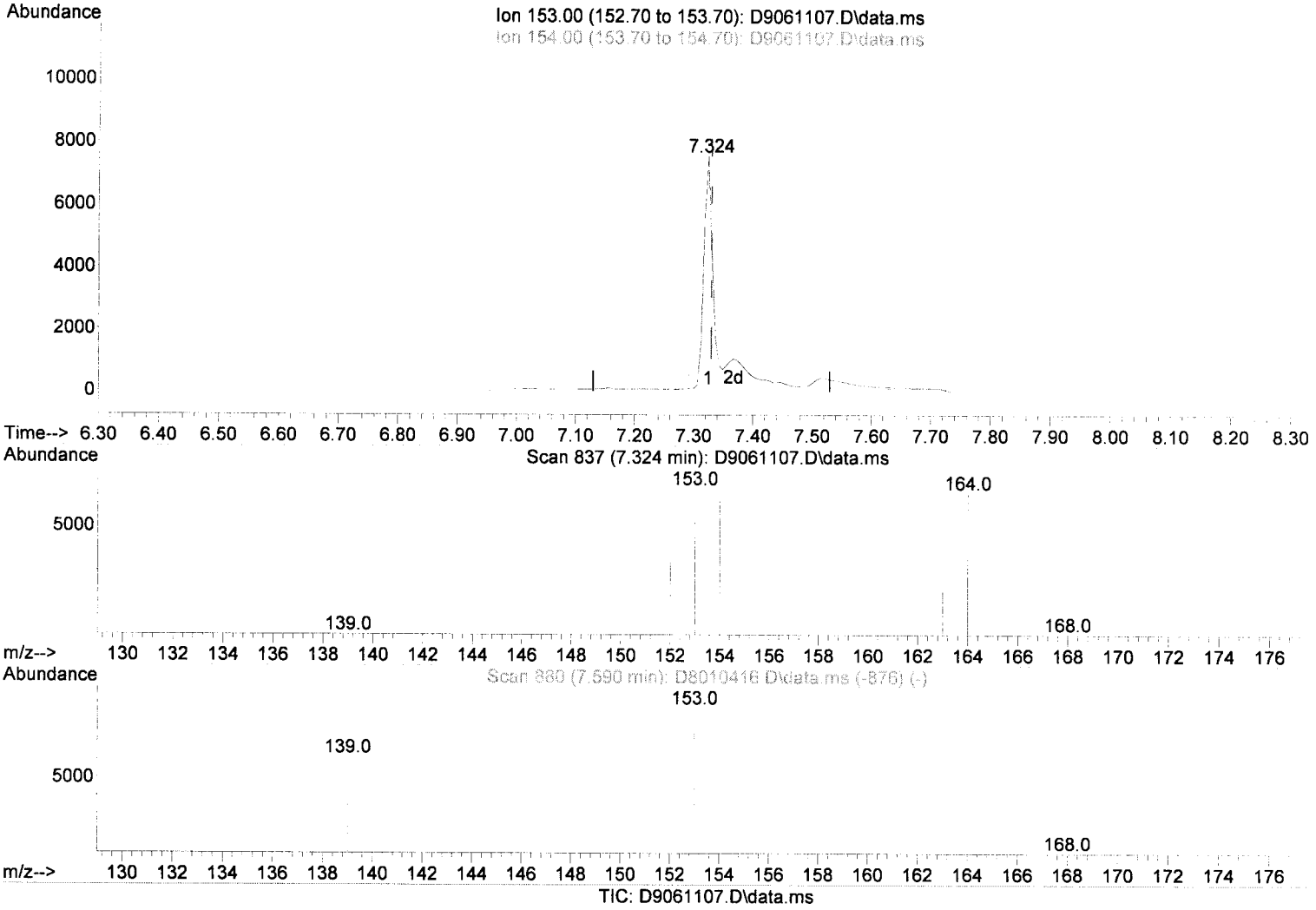
Ion	Exp%	Act%
128.00	100.00	100.00
126.00	7.50	7.22
0.00	0.00	0.00
0.00	0.00	0.00

B

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061107.D
Acq On : 11 Jun 2019 11:47 am
Operator : bsj
Sample : A9E0785-01@1000
Misc : 1000x Solid 200mL/2mL SIM PAH(SPLP)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 11 12:13:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(8) Acenaphthene (T)

7.324min (-0.006) 73.28 ng/ml

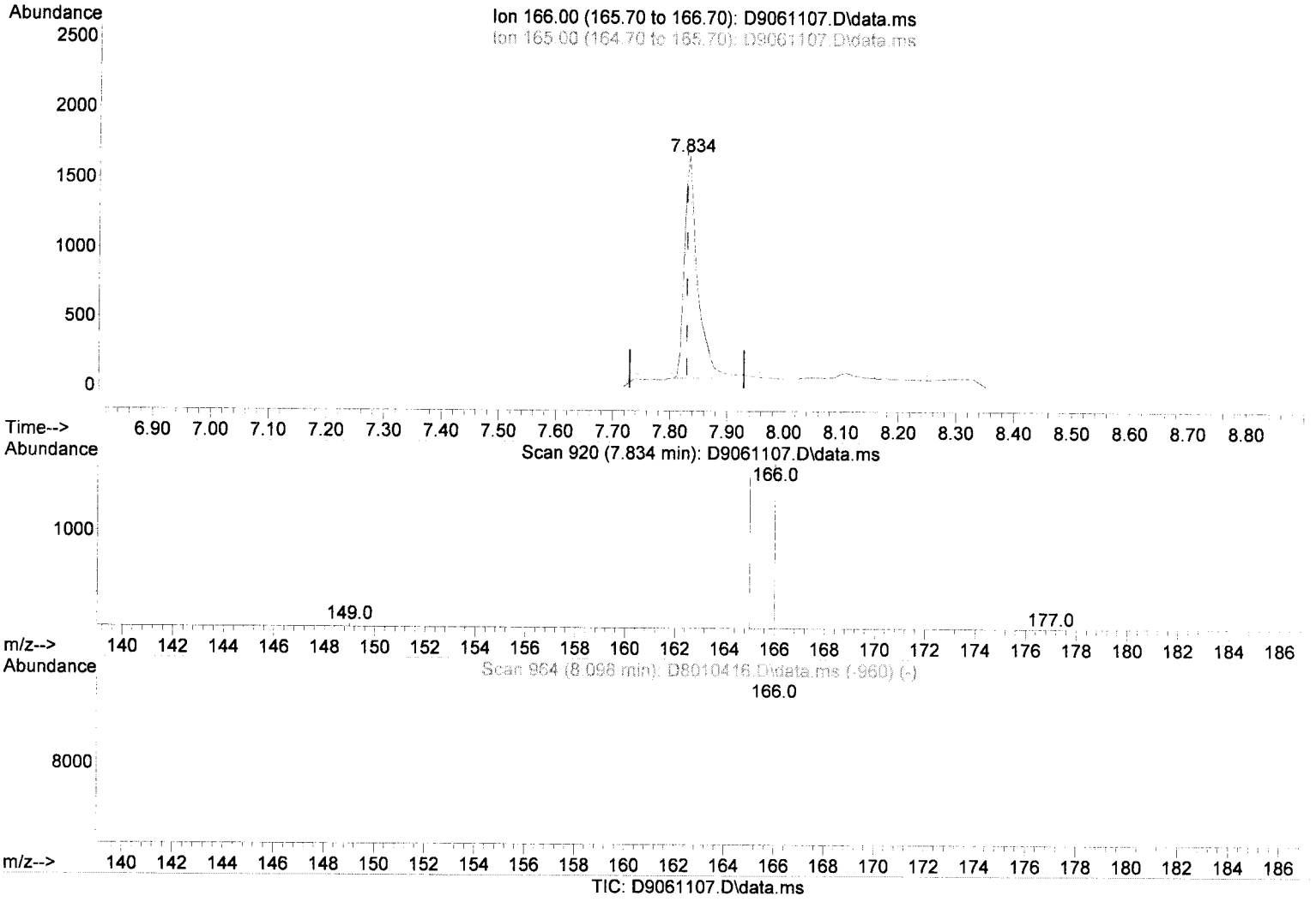
response 8015

Ion	Exp%	Act%
153.00	100.00	100.00
154.00	97.00	100.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061107.D
Acq On : 11 Jun 2019 11:47 am
Operator : bsj
Sample : A9E0785-01@1000
Misc : 1000x Solid 200mL/2mL SIM PAH(SPLP)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 11 12:13:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(10) Fluorene (T)

7.834min (+ 0.004) 22.76 ng/ml

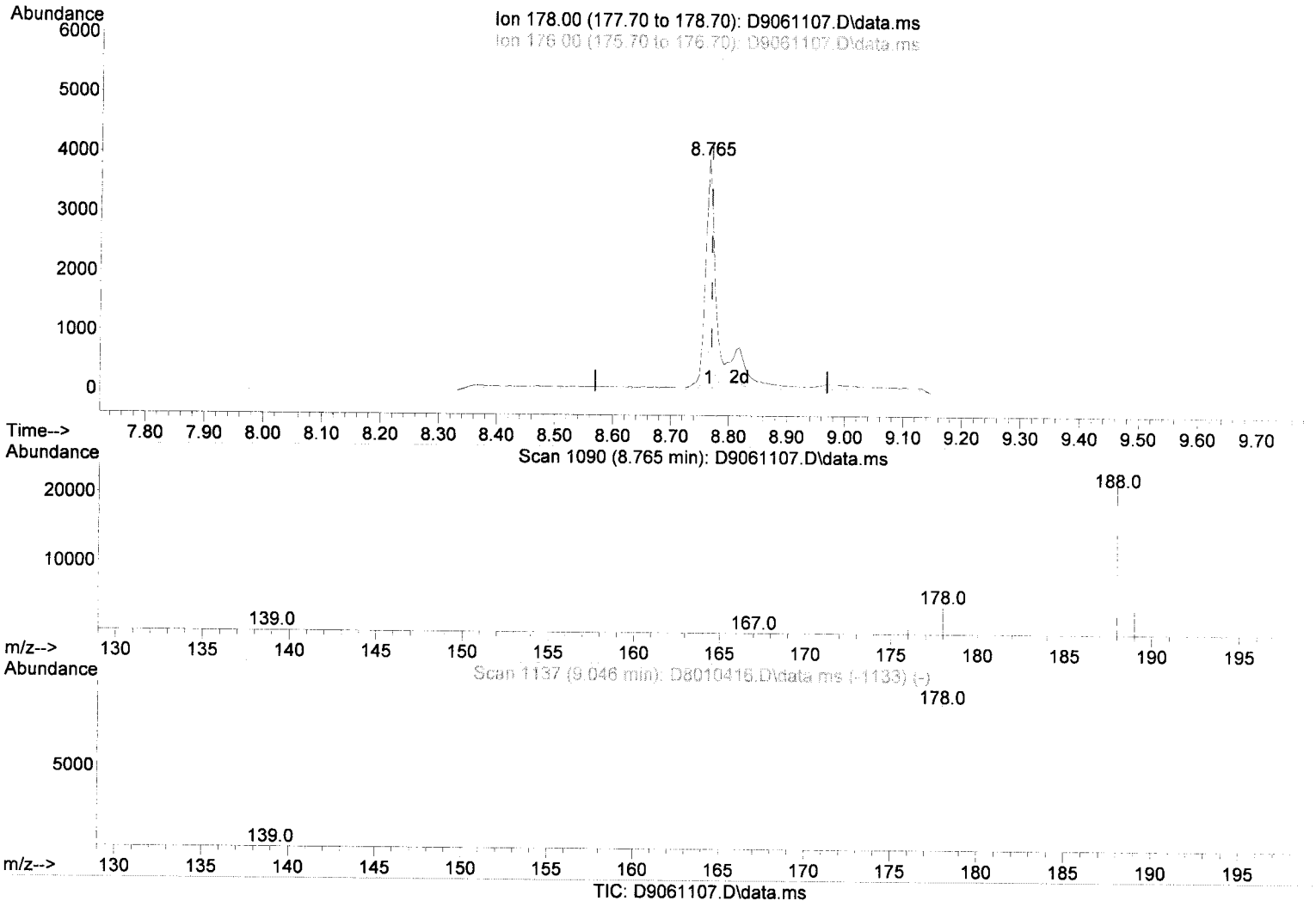
response 2583

Ion	Exp%	Act%
166.00	100.00	100.00
165.00	91.50	94.85
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061107.D
Acq On : 11 Jun 2019 11:47 am
Operator : bsj
Sample : A9E0785-01@1000
Misc : 1000x Solid 200mL/2mL SIM PAH(SPLP)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 11 12:13:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(12) Phenanthrene (T)

8.765min (-0.005) 26.73 ng/ml

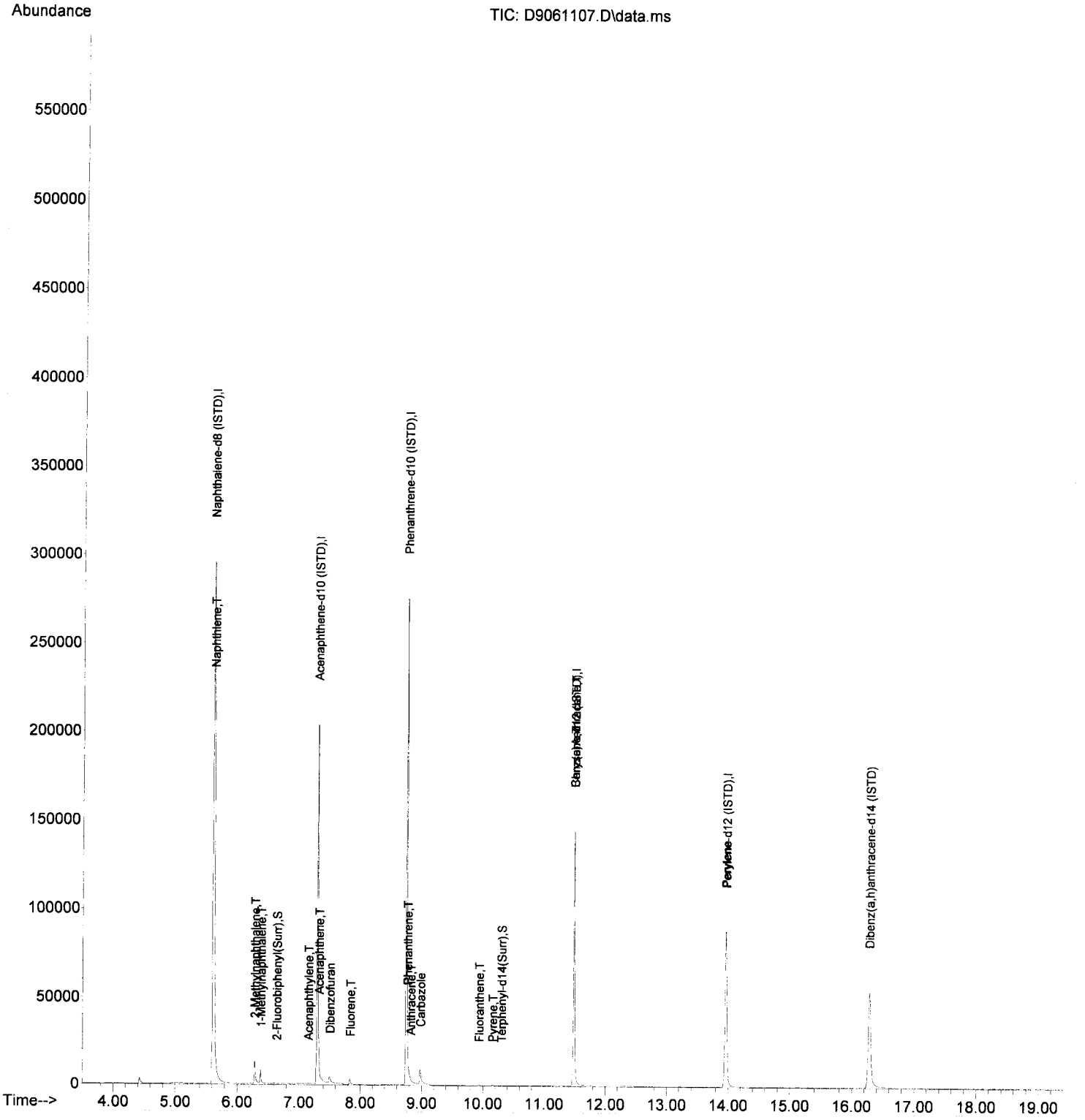
response 4461

Ion	Exp%	Act%
178.00	100.00	100.00
176.00	18.50	17.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061107.D
Acq On : 11 Jun 2019 11:47 am
Operator : bsj
Sample : A9E0785-01@1000
Misc : 1000x Solid 200mL/2mL SIM PAH(SPLP)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 11 12:13:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061109.D
Acq On : 11 Jun 2019 12:40 pm
Operator : bsj
Sample : 9060760-BLK1
Misc : 1x Soil 11.00g/5mL SIM PAH
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 11 13:43:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.600	136	386068	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.293	164	186136	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.745	188	289972	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	175890	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.959	264	142917	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.276	292	111799	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.635	172	121563	881.16 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	78491	843.31 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	0.000		0	N.D.	
3) 2-Methylnaphthalene	0.000		0	N.D.	
4) 1-Methylnaphthalene	0.000		0	N.D.	
7) Acenaphthylene	0.000		0	N.D.	
8) Acenaphthene	0.000		0	N.D.	
9) Dibenzofuran	0.000		0	N.D.	
10) Fluorene	0.000		0	N.D.	
12) Phenanthrene	0.000		0	N.D.	
13) Anthracene	0.000		0	N.D.	
14) Carbazole	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	0.000		0	N.D.	
19) Benz(a)Anthracene	11.483	228	440	4.15 ng/ml#	55
20) Chrysene	11.483	228	440	4.25 ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.	
23) Benzo(k)Fluoranthene	0.000		0	N.D.	
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	0.000		0	N.D.	
27) Perylene	13.959	252	461	6.01 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.	
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

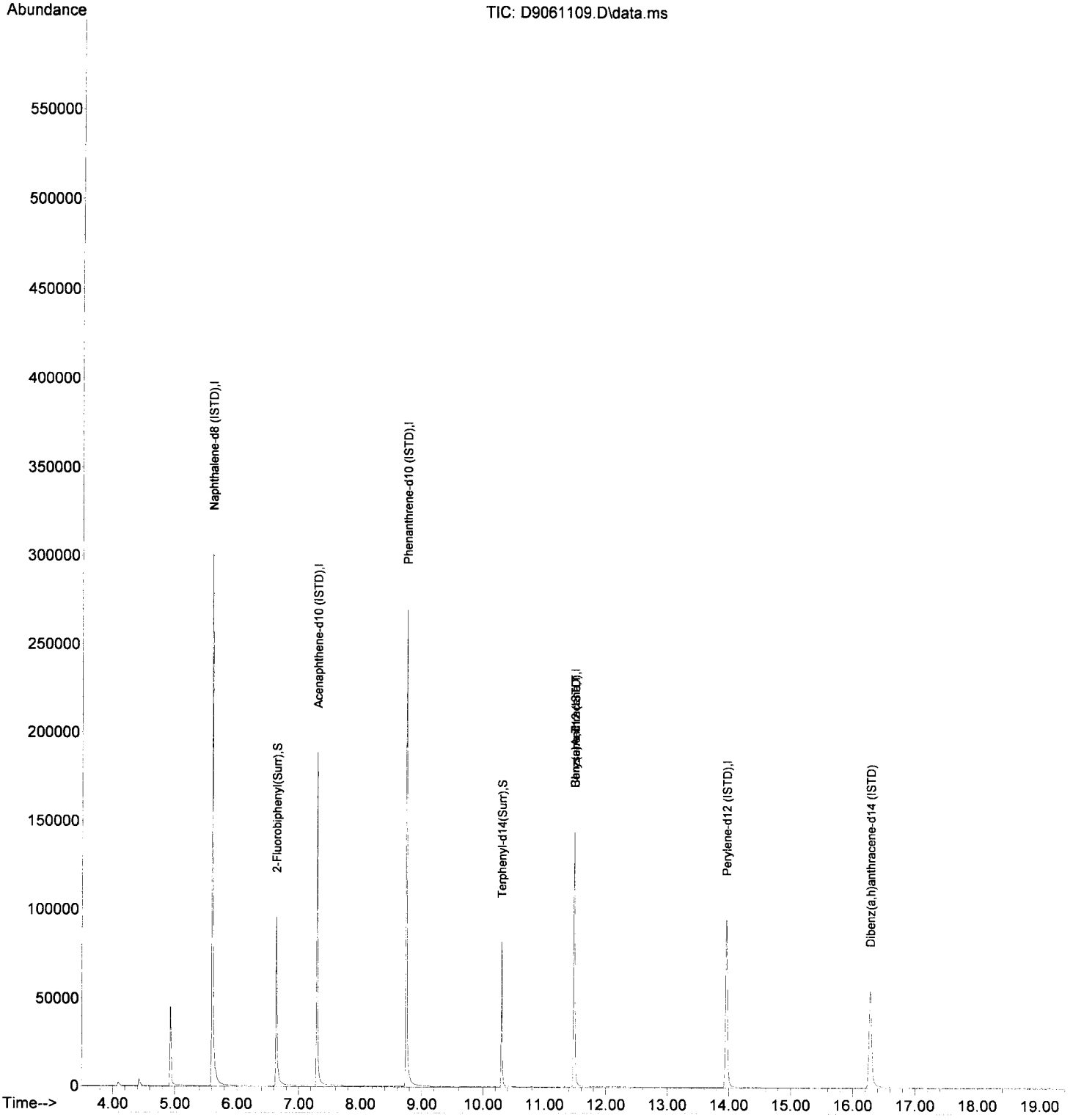
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-11-19 BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061109.D
Acq On : 11 Jun 2019 12:40 pm
Operator : bsj
Sample : 9060760-BLK1
Misc : 1x Soil 11.00g/5mL SIM PAH
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 11 13:43:08 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (QT Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061110.D
Acq On : 11 Jun 2019 1:07 pm
Operator : bsj
Sample : 9060760-BS1
Misc : 1x Soil 10.00g/5mL SIM PAH
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 11 13:43:51 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.599	136	408494	2000.00	ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	201513	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	308635	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	207267	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	168020	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.281	292	132296	2000.00	ng/mL	-0.02
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.635	172	135335	906.13	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.297	244	91145	831.02	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.619	128	318005	1501.91	ng/ml	99
3) 2-Methylnaphthalene	6.283	142	201319	1470.61	ng/ml	100
4) 1-Methylnaphthalene	6.376	142	197546	1488.04	ng/ml	99
7) Acenaphthylene	7.153	152	293865	1614.77	ng/ml	98
8) Acenaphthene	7.324	153	190874	1566.35	ng/ml	95
9) Dibenzofuran	7.496	168	257709	1585.99	ng/mL	88
10) Fluorene	7.828	166	207247	1638.99	ng/ml	99
12) Phenanthrene	8.766	178	276592	1556.47	ng/ml	98
13) Anthracene	8.819	178	291584	1624.87	ng/ml	99
14) Carbazole	8.967	167	245359	1768.16	ng/mL	99
15) Fluoranthene	9.929	202	257277	1698.97	ng/ml	98
16) Pyrene	10.152	202	262244	1740.26	ng/ml	98
19) Benz(a)Anthracene	11.469	228	188175	1504.67	ng/ml	96
20) Chrysene	11.518	228	192616	1579.31	ng/ml	96
22) Benzo(b)Fluoranthene	13.211	252	164009	1511.90	ng/ml	65
23) Benzo(k)Fluoranthene	13.263	252	175019	1628.04	ng/ml	67
24) Benzo(b+k)Fluoranthene	13.263	252	340161m	3137.09	ng/ml	
25) Benzo(e) Pyrene	13.739	252	163121	1511.05	ng/mL	93
26) Benzo(a)Pyrene	13.843	252	155590	1668.82	ng/ml	68
27) Perylene	14.009	252	156094	1731.14	ng/mL	92
29) Indeno(1,2,3-cd)Pyrene	16.297	276	120878	1453.35	ng/ml	66
30) Dibenz(a,h)Anthracene	16.359	278	125877	1657.60	ng/ml	68
31) Benzo (g,h,i) Perylene	16.899	276	126134	1410.08	ng/ml	84

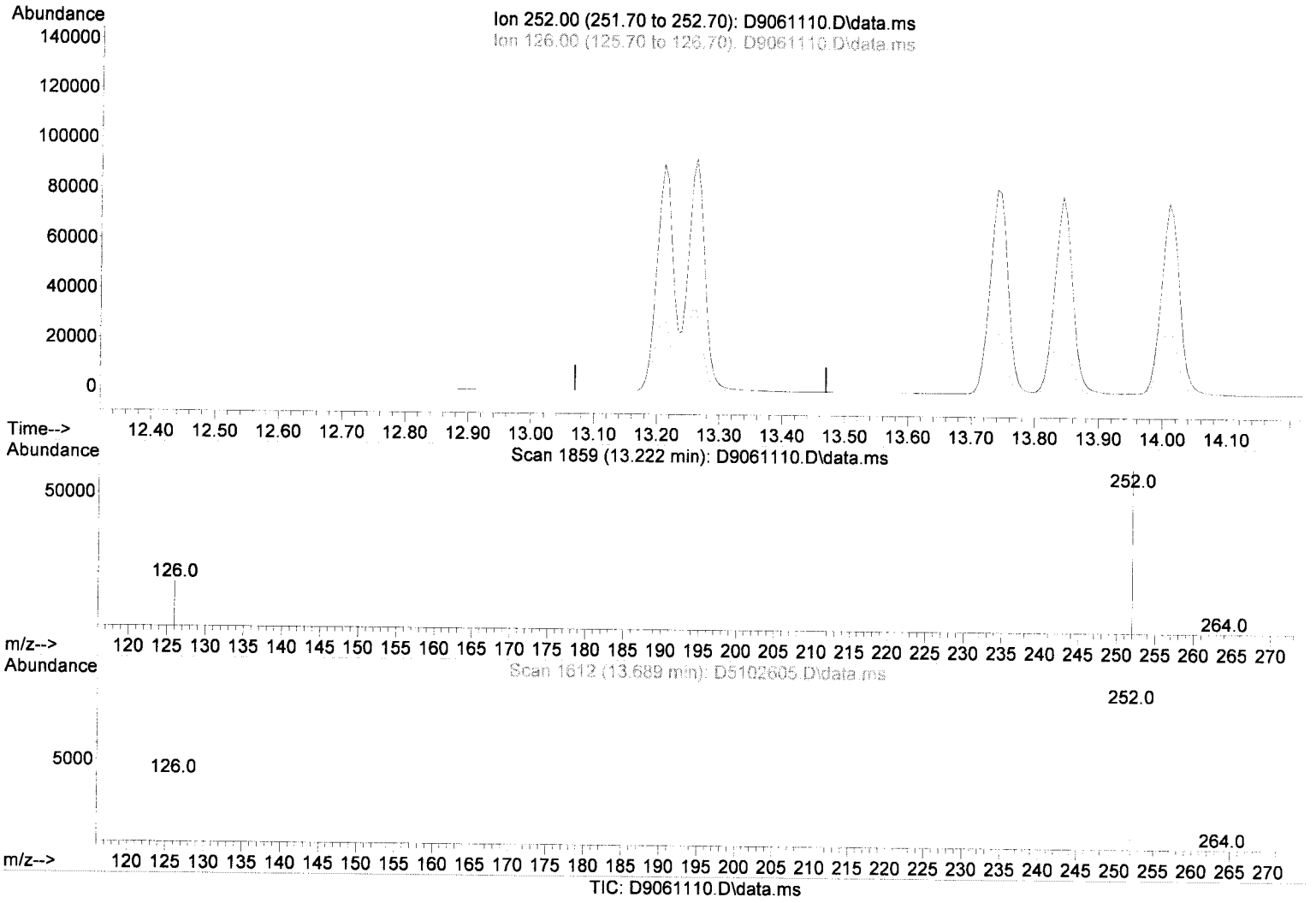
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6.11.19 BSS

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061110.D
Acq On : 11 Jun 2019 1:07 pm
Operator : bsj
Sample : 9060760-BS1
Misc : 1x Soil 10.00g/5mL SIM PAH
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 11 13:43:11 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

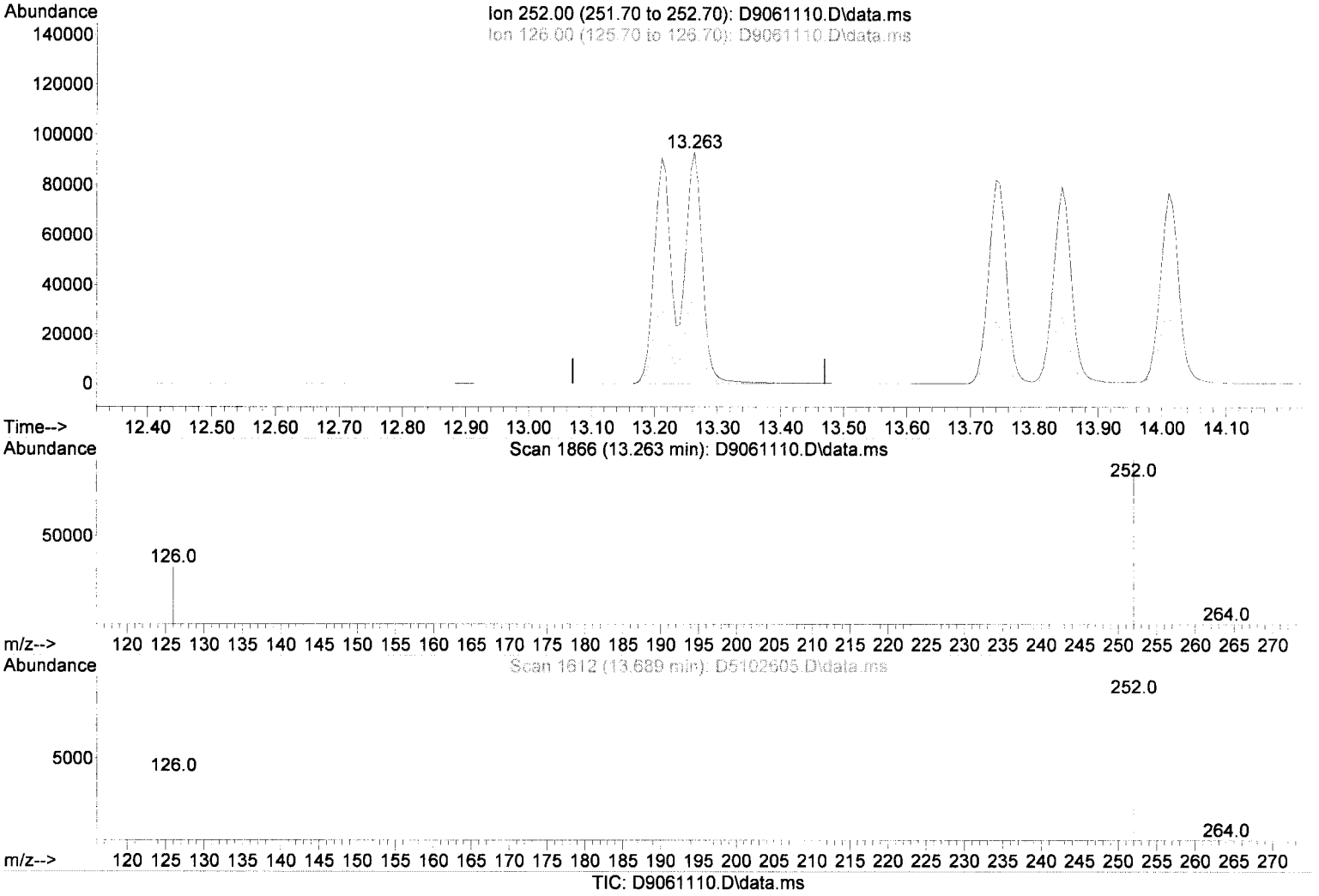
BEFORE

Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061110.D
Acq On : 11 Jun 2019 1:07 pm
Operator : bsj
Sample : 9060760-BS1
Misc : 1x Soil 10.00g/5mL SIM PAH
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 11 13:43:11 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.263min (+ 0.043) 3137.09 ng/ml m

response 340161

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

AFRM
6-11-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061110.D
Acq On : 11 Jun 2019 1:07 pm
Operator : bsj
Sample : 9060760-BS1
Misc : 1x Soil 10.00g/5mL SIM PAH
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 11 13:43:11 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.599	136	408494	2000.00	ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	201513	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	308635	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	207267	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	168020	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.281	292	132296	2000.00	ng/mL	-0.02
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.635	172	135335	906.13	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.297	244	91145	831.02	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.619	128	318005	1501.91	ng/ml	99
3) 2-Methylnaphthalene	6.283	142	201319	1470.61	ng/ml	100
4) 1-Methylnaphthalene	6.376	142	197546	1488.04	ng/ml	99
7) Acenaphthylene	7.153	152	293865	1614.77	ng/ml	98
8) Acenaphthene	7.324	153	190874	1566.35	ng/ml	95
9) Dibenzofuran	7.496	168	257709	1585.99	ng/mL	88
10) Fluorene	7.828	166	207247	1638.99	ng/ml	99
12) Phenanthrene	8.766	178	276592	1556.47	ng/ml	98
13) Anthracene	8.819	178	291584	1624.87	ng/ml	99
14) Carbazole	8.967	167	245359	1768.16	ng/mL	99
15) Fluoranthene	9.929	202	257277	1698.97	ng/ml	98
16) Pyrene	10.152	202	262244	1740.26	ng/ml	98
19) Benz(a)Anthracene	11.469	228	188175	1504.67	ng/ml	96
20) Chrysene	11.518	228	192616	1579.31	ng/ml	96
22) Benzo(b)Fluoranthene	13.211	252	164009	1511.90	ng/ml	65
23) Benzo(k)Fluoranthene	13.263	252	175019	1628.04	ng/ml	67
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	13.739	252	163121	1511.05	ng/mL	93
26) Benzo(a)Pyrene	13.843	252	155590	1668.82	ng/ml	68
27) Perylene	14.009	252	156094	1731.14	ng/mL	92
29) Indeno(1,2,3-cd)Pyrene	16.297	276	120878	1453.35	ng/ml	66
30) Dibenz(a,h)Anthracene	16.359	278	125877	1657.60	ng/ml	68
31) Benzo (g,h,i) Perylene	16.899	276	126134	1410.08	ng/ml	84

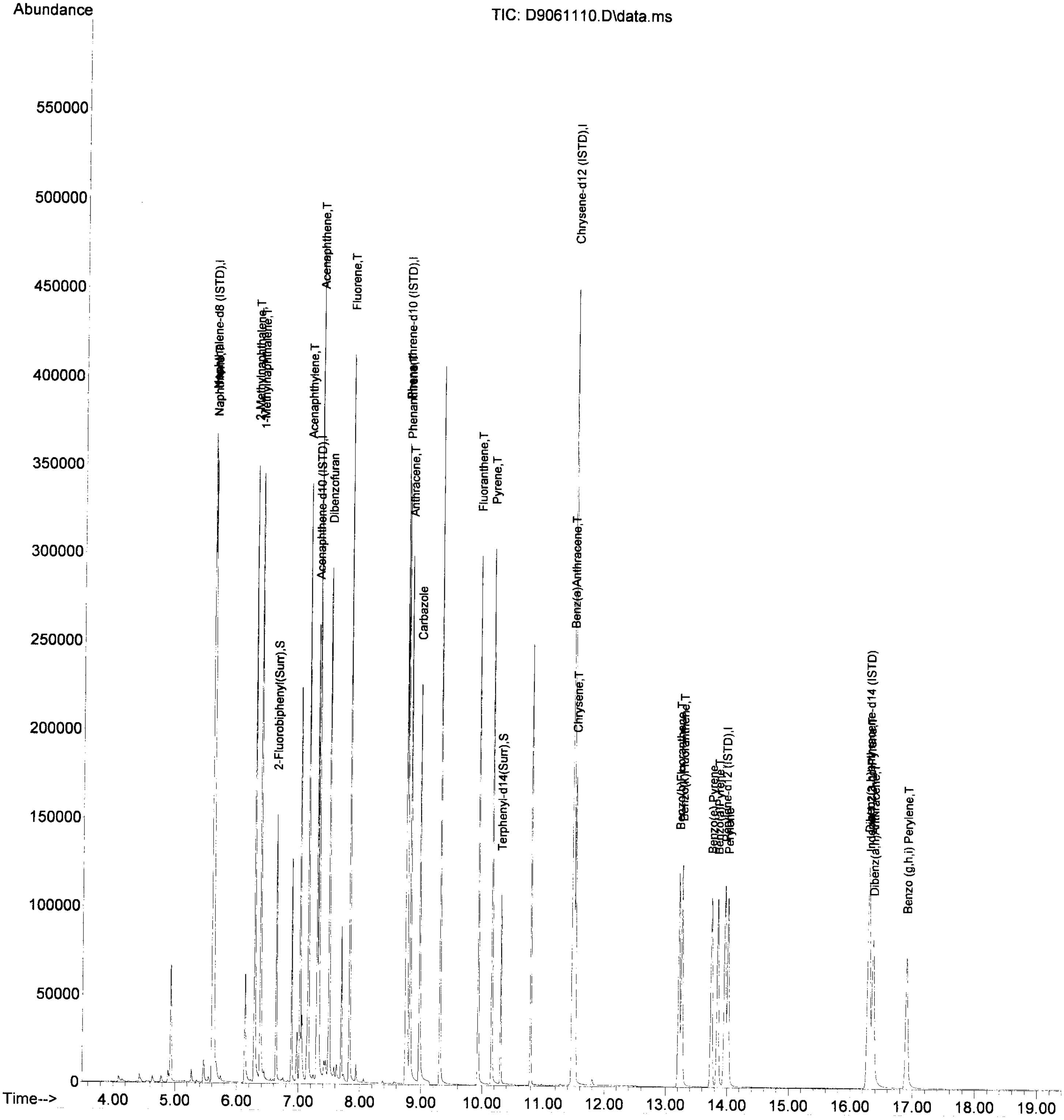
(#) = qualifier out of range (m) = manual integration (+) = signals summed

MI 6-11-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061110.D
Acq On : 11 Jun 2019 1:07 pm
Operator : bsj
Sample : 9060760-BS1
Misc : 1x Soil 10.00g/5mL SIM PAH
ALS Vial : 10 Sample Multiplier: 1

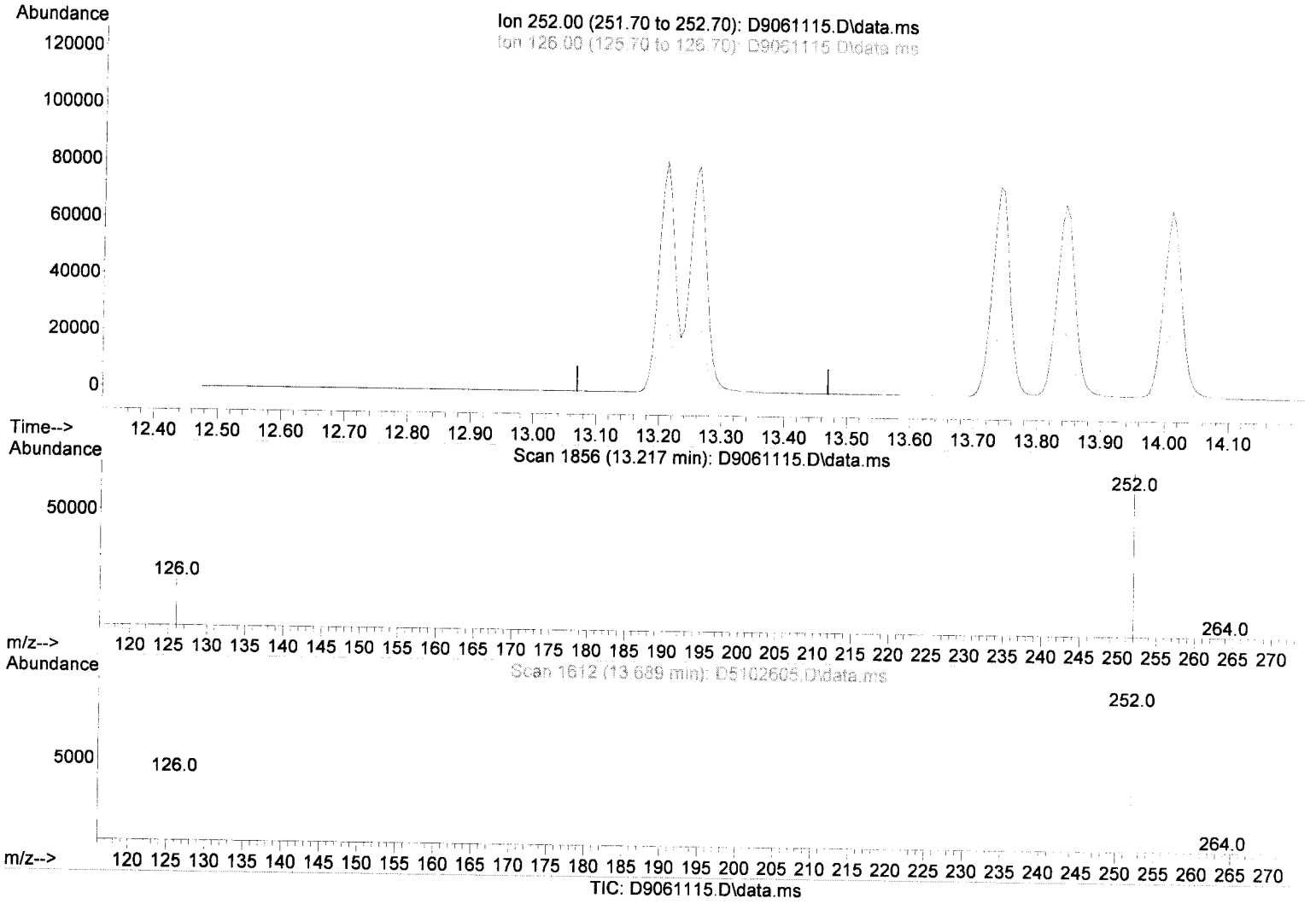
Quant Time: Jun 11 13:43:11 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061115.D
Acq On : 11 Jun 2019 3:21 pm
Operator : bsj
Sample : 9060760-MS1
Misc : 1x Soil 10.32g/5mL SIM PAH (253-01)
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 11 15:41:34 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

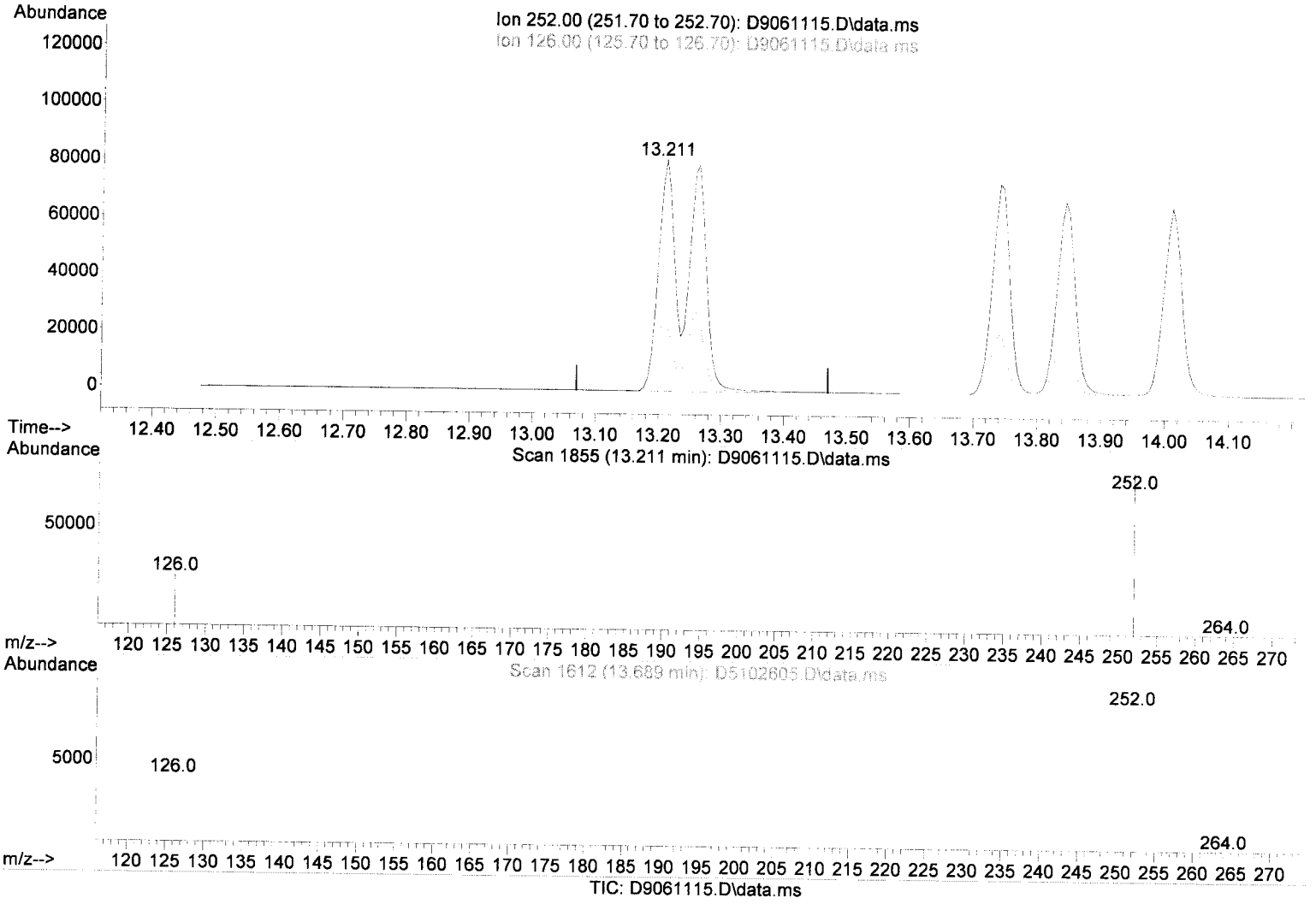
BEFORE

Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061115.D
Acq On : 11 Jun 2019 3:21 pm
Operator : bsj
Sample : 9060760-MS1
Misc : 1x Soil 10.32g/5mL SIM PAH (253-01)
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 11 15:41:34 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.211min (-0.009) 2950.38 ng/ml m

response 297446

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

AFTER
6-11-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061115.D
Acq On : 11 Jun 2019 3:21 pm
Operator : bsj
Sample : 9060760-MS1
Misc : 1x Soil 10.32g/5mL SIM PAH (253-01)
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 11 15:41:34 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.599	136	374025	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	190661	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.745	188	294212	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	196268	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.958	264	156219	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.282	292	124680	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.636	172	126881	897.88 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	84094	809.70 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.619	128	285871	1474.57 ng/ml	99
3) 2-Methylnaphthalene	6.284	142	184677	1473.37 ng/ml	100
4) 1-Methylnaphthalene	6.378	142	179112	1473.52 ng/ml	99
7) Acenaphthylene	7.153	152	268957	1562.02 ng/ml	98
8) Acenaphthene	7.325	153	176668	1532.29 ng/ml	95
9) Dibenzofuran	7.497	168	238822	1553.41 ng/mL	88
10) Fluorene	7.829	166	189113	1580.70 ng/ml	99
12) Phenanthrene	8.766	178	252478	1490.42 ng/ml	98
13) Anthracene	8.819	178	264843	1548.20 ng/ml	99
14) Carbazole	8.968	167	217977	1647.84 ng/mL	99
15) Fluoranthene	9.930	202	235463	1631.15 ng/ml	99
16) Pyrene	10.153	202	239090	1664.39 ng/ml	99
19) Benz(a)Anthracene	11.469	228	171176	1445.45 ng/ml	97
20) Chrysene	11.512	228	170319	1474.75 ng/ml	97
22) Benzo(b)Fluoranthene	13.211	252	145777	1445.35 ng/ml	67
23) Benzo(k)Fluoranthene	13.263	252	150260	1503.31 ng/ml	70
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	13.740	252	143832	1433.02 ng/mL	95
26) Benzo(a)Pyrene	13.843	252	135546	1563.66 ng/ml	70
27) Perylene	14.010	252	133645	1594.13 ng/mL	93
29) Indeno(1,2,3-cd)Pyrene	16.299	276	106186	1354.69 ng/ml	69
30) Dibenz(a,h)Anthracene	16.360	278	110801	1548.20 ng/ml	71
31) Benzo (g,h,i) Perylene	16.900	276	109407	1297.79 ng/ml	86

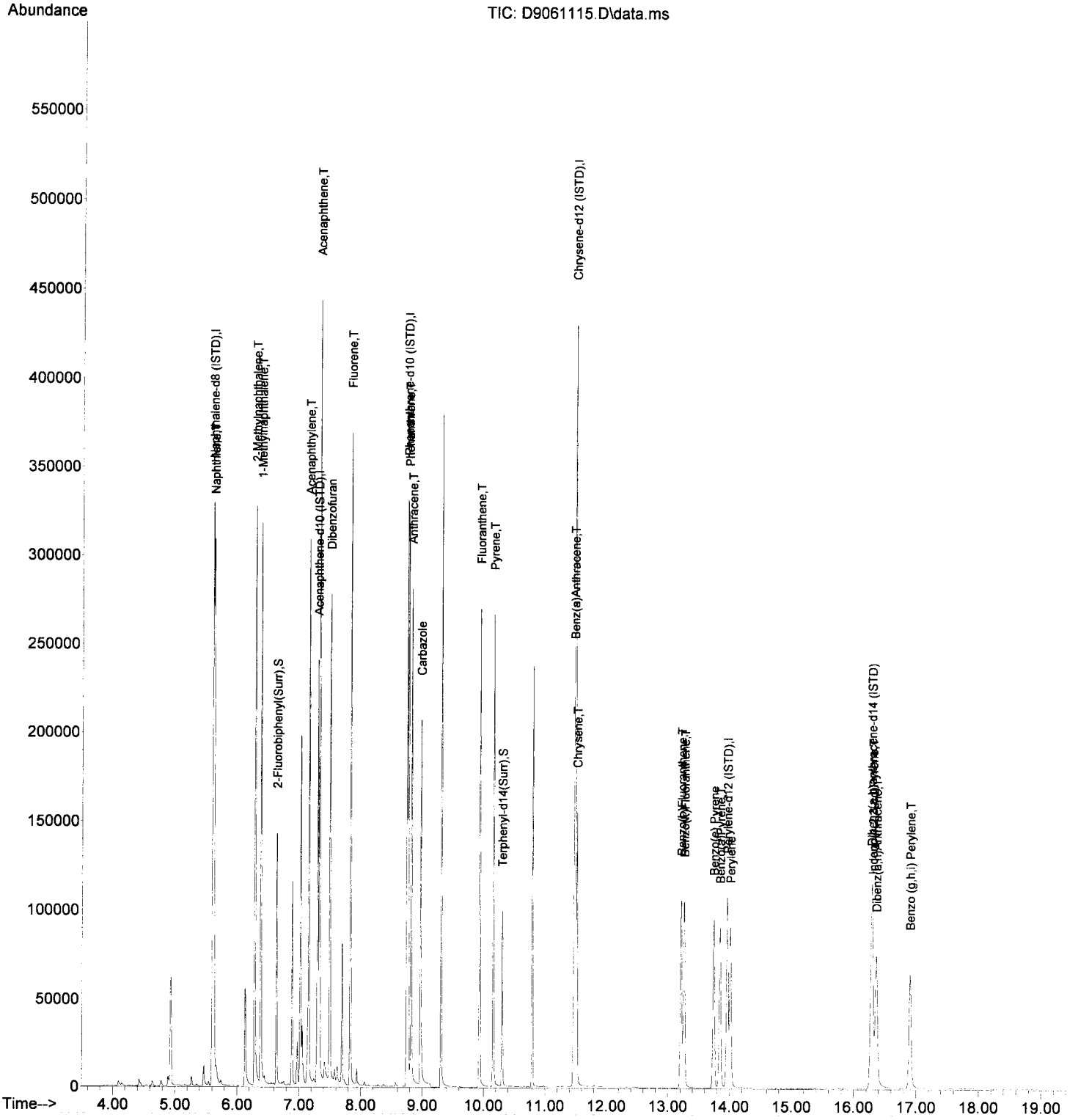
MI 6-11-19 BSS

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

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061115.D
Acq On : 11 Jun 2019 3:21 pm
Operator : bsj
Sample : 9060760-MS1
Misc : 1x Soil 10.32g/5mL SIM PAH (253-01)
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 11 15:41:34 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061116.D
Acq On : 11 Jun 2019 3:48 pm
Operator : bsj
Sample : 9050880-BLK2
Misc : 1x Soil 12.00g/5mL SIM PAH (Dx Ext)
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 11 16:26:39 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.606	136	336416	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.294	164	170913	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.745	188	267515	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	168523	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	138372	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.281	292	107708	2000.00	ng/mL	-0.02
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	5.619	128	342	1.96	ng/ml#	78
3) 2-Methylnaphthalene	6.288	142	582	5.16	ng/ml	93
4) 1-Methylnaphthalene	6.381	142	565	5.17	ng/ml	98
7) Acenaphthylene	0.000		0	N.D.		
8) Acenaphthene	0.000		0	N.D.		
9) Dibenzofuran	0.000		0	N.D.		
10) Fluorene	0.000		0	N.D.		
12) Phenanthrene	8.766	178	383	2.49	ng/ml#	59
13) Anthracene	8.766	178	383	2.46	ng/ml#	60
14) Carbazole	0.000		0	N.D.		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benz(a)Anthracene	11.483	228	430	4.23	ng/ml#	55
20) Chrysene	11.483	228	430	4.34	ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.		
23) Benzo(k)Fluoranthene	0.000		0	N.D.		
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	0.000		0	N.D.		
26) Benzo(a)Pyrene	0.000		0	N.D.		
27) Perylene	13.964	252	416	5.60	ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.		
30) Dibenz(a,h)Anthracene	0.000		0	N.D.		
31) Benzo (g,h,i) Perylene	0.000		0	N.D.		

Q-22

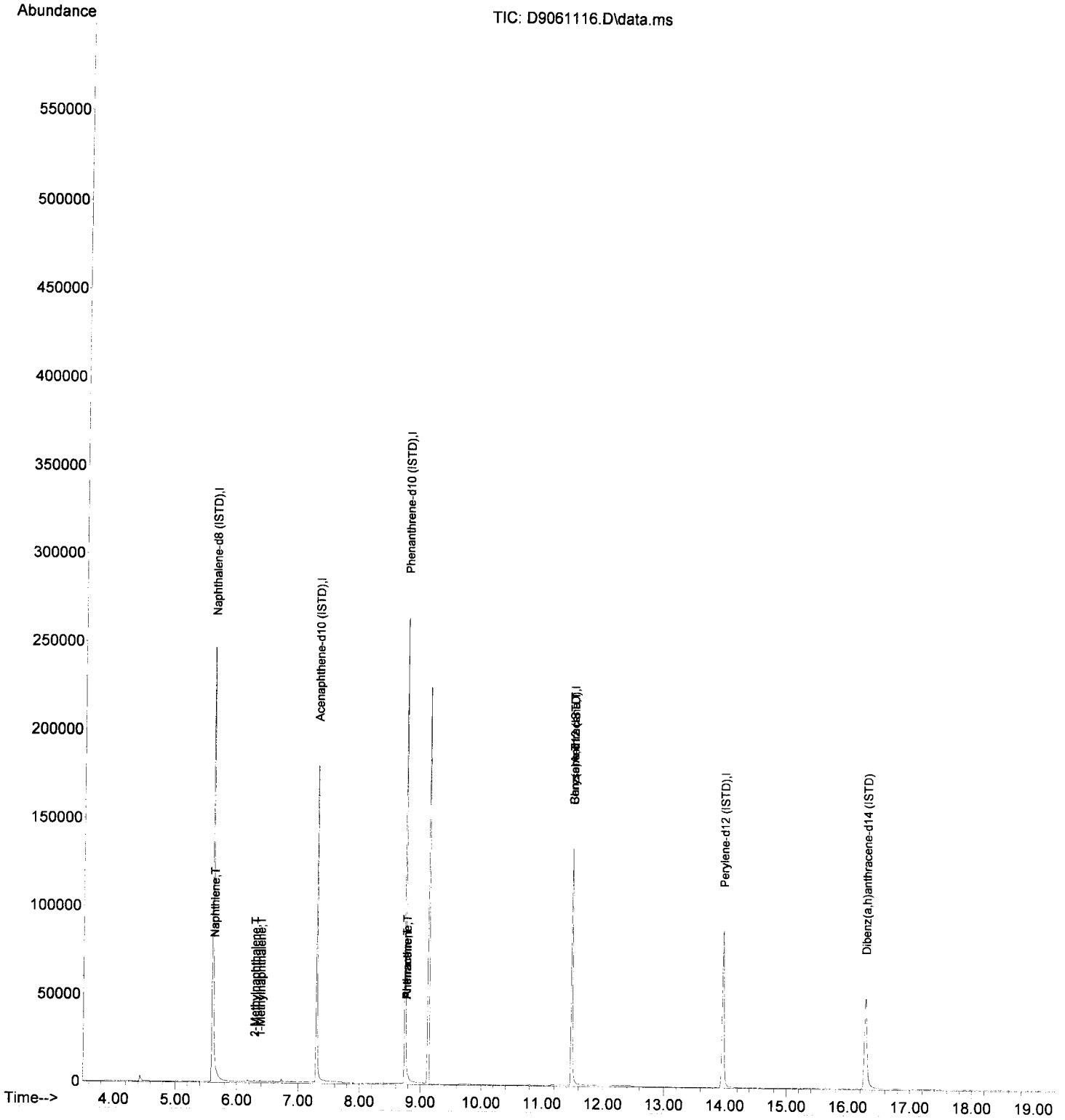
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-12-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061116.D
Acq On : 11 Jun 2019 3:48 pm
Operator : bsj
Sample : 9050880-BLK2
Misc : 1x Soil 12.00g/5mL SIM PAH (Dx Ext)
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 11 16:26:39 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (QT Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061123.D
Acq On : 11 Jun 2019 6:57 pm
Operator : bsj
Sample : 9060794-MS1
Misc : 1x Soil 10.22g/5mL SIM PAH (327-03)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jun 12 09:13:28 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.605	136	414293	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.293	164	216915	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	339987	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.482	240	227073	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.963	264	182701	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.283	292	144181	2000.00	ng/mL	-0.02
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.635	172	122535	762.18	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.297	244	93905	781.51	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.618	128	268707	1251.31	ng/ml	99
3) 2-Methylnaphthalene	6.283	142	181546	1307.61	ng/ml	100
4) 1-Methylnaphthalene	6.381	142	178351	1324.64	ng/ml	99
7) Acenaphthylene	7.152	152	279900	1428.82	ng/ml	98
8) Acenaphthene	7.324	153	181201	1381.39	ng/ml	95
9) Dibenzofuran	7.496	168	246619	1409.97	ng/mL	88
10) Fluorene	7.828	166	197332	1449.77	ng/ml	98
12) Phenanthrene	8.765	178	271837	1388.65	ng/ml	99
13) Anthracene	8.818	178	284475	1439.07	ng/ml	98
14) Carbazole	8.972	167	238350	1559.26	ng/mL	98
15) Fluoranthene	9.929	202	260368	1560.83	ng/ml	99
16) Pyrene	10.152	202	262551	1581.63	ng/ml	99
19) Benz(a)Anthracene	11.468	228	188344	1374.66	ng/ml	97
20) Chrysene	11.517	228	189011	1414.57	ng/ml	96
22) Benzo(b)Fluoranthene	13.216	252	168837	1431.34	ng/ml	71
23) Benzo(k)Fluoranthene	13.262	252	166163	1421.46	ng/ml	66
24) Benzo(b+k)Fluoranthene	13.262	252	335999m	2849.71	ng/ml	
25) Benzo(e) Pyrene	13.745	252	160674	1368.79	ng/mL	95
26) Benzo(a)Pyrene	13.842	252	152752	1506.73	ng/ml	70
27) Perylene	14.015	252	151690	1547.11	ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.299	276	116849	1289.10	ng/ml	69
30) Dibenz(a,h)Anthracene	16.361	278	122696	1482.53	ng/ml	70
31) Benzo (g,h,i) Perylene	16.901	276	119742	1228.28	ng/ml	86

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

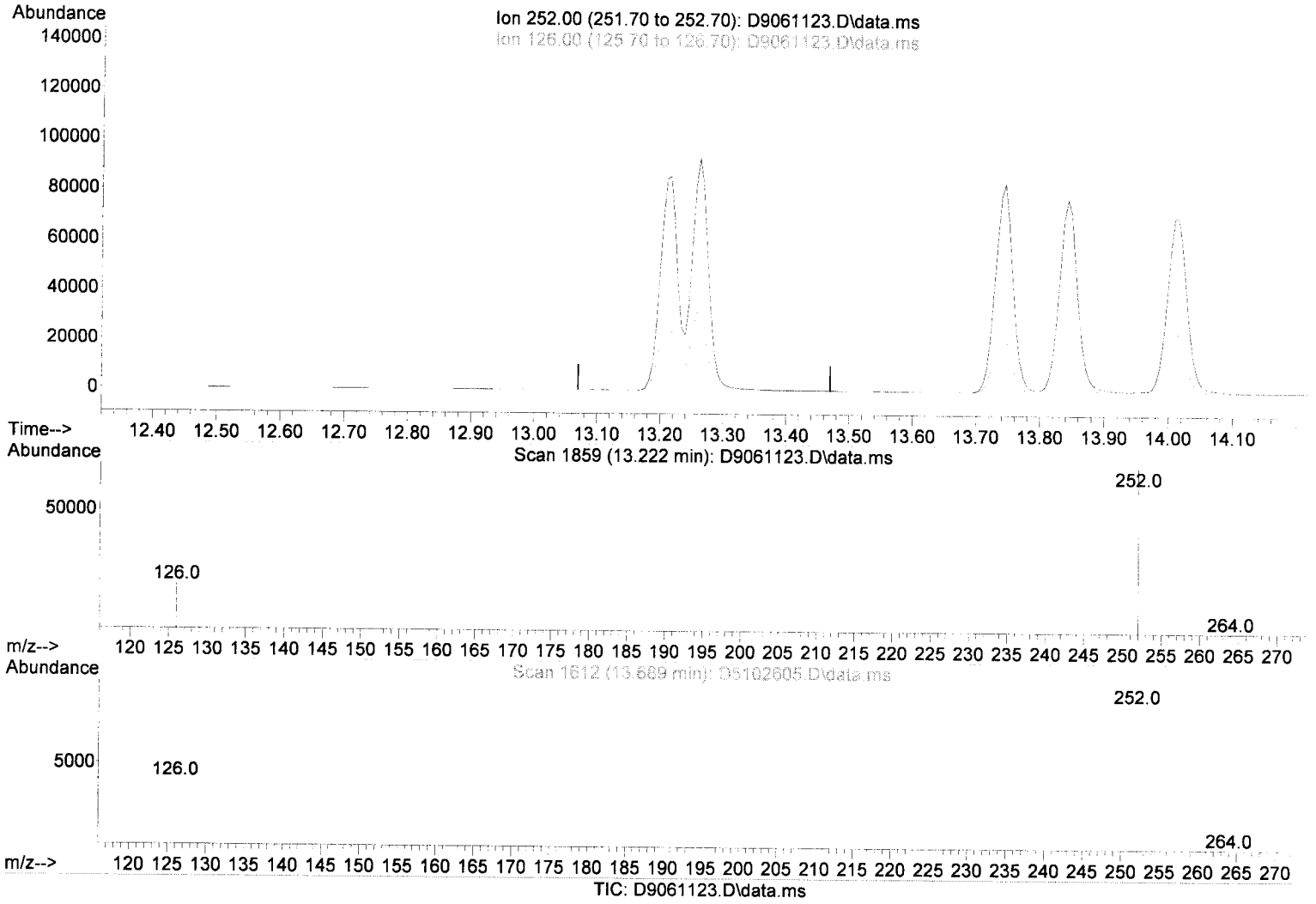
✓

6-12-19 JSS

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061123.D
Acq On : 11 Jun 2019 6:57 pm
Operator : bsj
Sample : 9060794-MS1
Misc : 1x Soil 10.22g/5mL SIM PAH (327-03)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jun 12 08:54:41 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

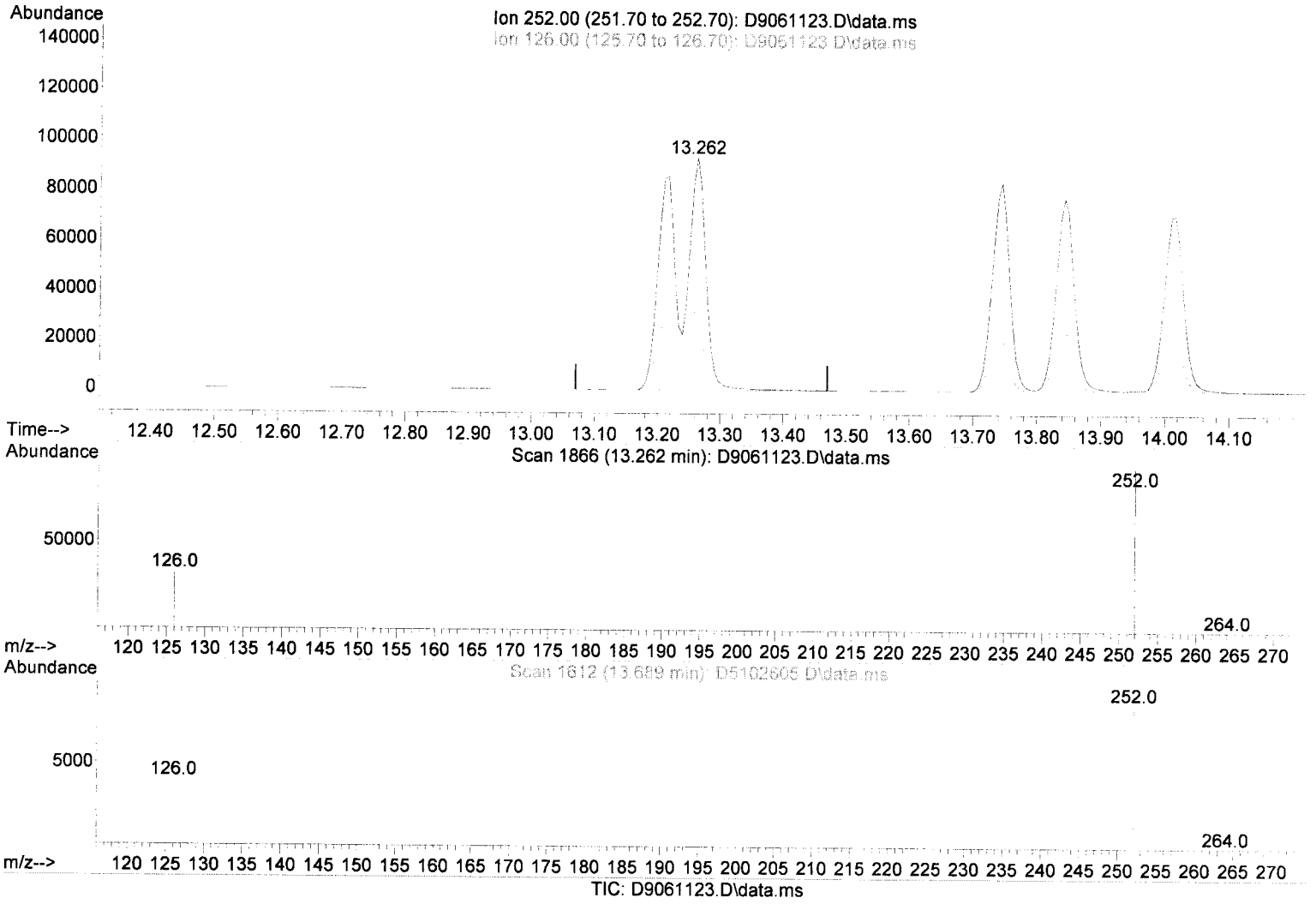
Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

BEFORE ✓

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061123.D
Acq On : 11 Jun 2019 6:57 pm
Operator : bsj
Sample : 9060794-MS1
Misc : 1x Soil 10.22g/5mL SIM PAH (327-03)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jun 12 08:54:41 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.262min (+ 0.042) 2849.71 ng/ml m

response 335999

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

After
6-12-19 BSJ ✓

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061123.D
Acq On : 11 Jun 2019 6:57 pm
Operator : bsj
Sample : 9060794-MS1
Misc : 1x Soil 10.22g/5mL SIM PAH (327-03)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jun 12 08:54:41 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.605	136	414293	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.293	164	216915	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.744	188	339987	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.482	240	227073	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.963	264	182701	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.283	292	144181	2000.00	ng/mL	-0.02
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.635	172	122535	762.18	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.297	244	93905	781.51	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.618	128	268707	1251.31	ng/ml	99
3) 2-Methylnaphthalene	6.283	142	181546	1307.61	ng/ml	100
4) 1-Methylnaphthalene	6.381	142	178351	1324.64	ng/ml	99
7) Acenaphthylene	7.152	152	279900	1428.82	ng/ml	98
8) Acenaphthene	7.324	153	181201	1381.39	ng/ml	95
9) Dibenzofuran	7.496	168	246619	1409.97	ng/mL	88
10) Fluorene	7.828	166	197332	1449.77	ng/ml	98
12) Phenanthrene	8.765	178	271837	1388.65	ng/ml	99
13) Anthracene	8.818	178	284475	1439.07	ng/ml	98
14) Carbazole	8.972	167	238350	1559.26	ng/mL	98
15) Fluoranthene	9.929	202	260368	1560.83	ng/ml	99
16) Pyrene	10.152	202	262551	1581.63	ng/ml	99
19) Benz(a)Anthracene	11.468	228	188344	1374.66	ng/ml	97
20) Chrysene	11.517	228	189011	1414.57	ng/ml	96
22) Benzo(b)Fluoranthene	13.216	252	168837	1431.34	ng/ml	71
23) Benzo(k)Fluoranthene	13.262	252	166163	1421.46	ng/ml	66
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	13.745	252	160674	1368.79	ng/mL	95
26) Benzo(a)Pyrene	13.842	252	152752	1506.73	ng/ml	70
27) Perylene	14.015	252	151690	1547.11	ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.299	276	116849	1289.10	ng/ml	69
30) Dibenz(a,h)Anthracene	16.361	278	122696	1482.53	ng/ml	70
31) Benzo (g,h,i) Perylene	16.901	276	119742	1228.28	ng/ml	86

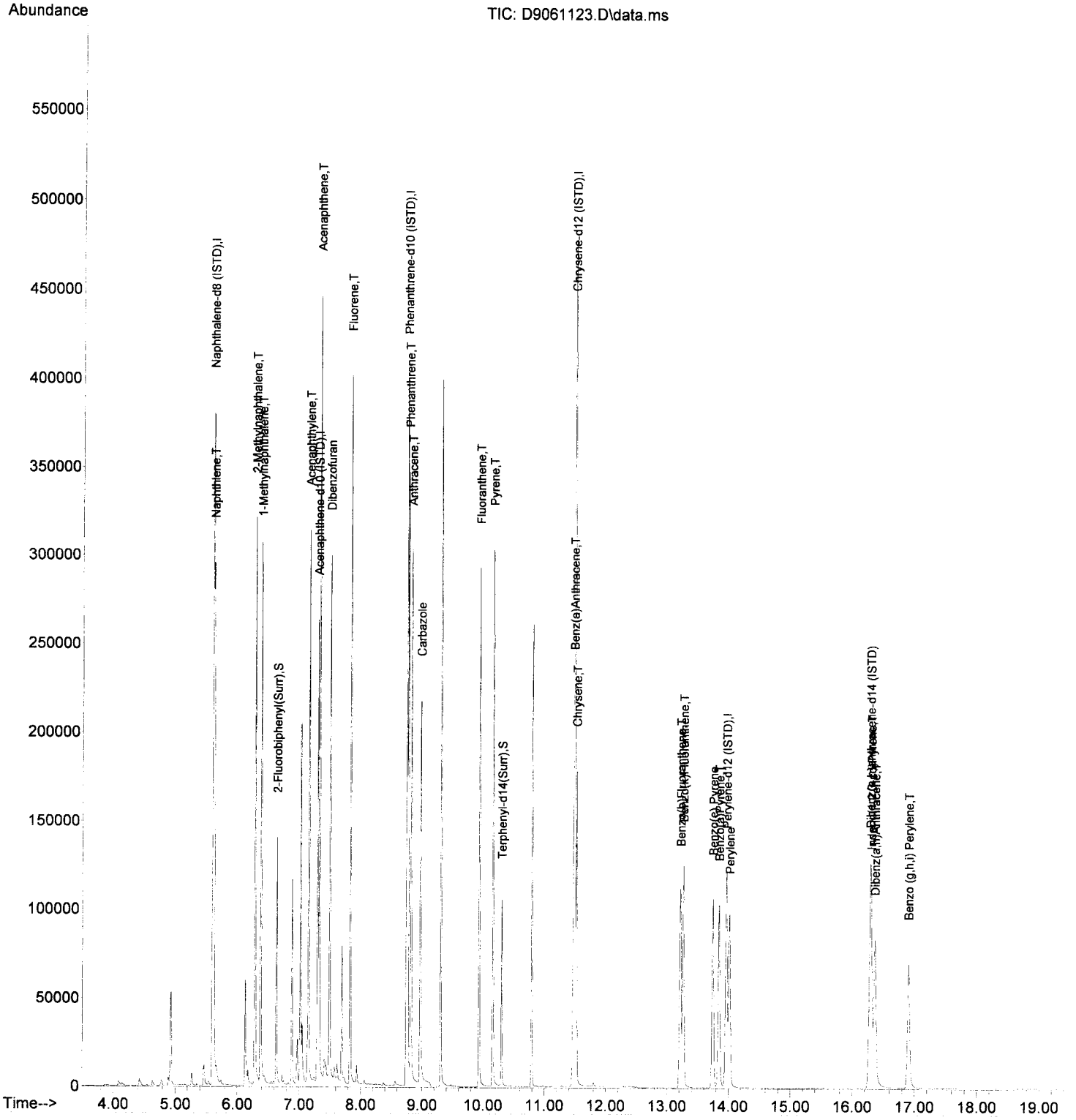
(#) = qualifier out of range (m) = manual integration (+) = signals summed

MI 6.12.19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061123.D
Acq On : 11 Jun 2019 6:57 pm
Operator : bsj
Sample : 9060794-MS1
Misc : 1x Soil 10.22g/5mL SIM PAH (327-03)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jun 12 08:54:41 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061124.D
Acq On : 11 Jun 2019 7:24 pm
Operator : bsj
Sample : 9060813-BLK1
Misc : 1x Water 1100mL/1mL SIM PAH
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jun 12 08:54:45 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.599	136	403896	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.294	164	205250	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.745	188	337943	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	222374	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	172235	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.282	292	145652	2000.00 ng/mL	-0.02
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.636	172	526817	3463.08 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.297	244	433250	3681.83 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.619	128	1540	7.36 ng/ml#	78
3) 2-Methylnaphthalene	6.288	142	521	3.85 ng/ml	88
4) 1-Methylnaphthalene	6.381	142	344	2.62 ng/ml	95
7) Acenaphthylene	0.000		0	N.D.	
8) Acenaphthene	7.325	153	244	1.97 ng/ml#	1
9) Dibenzofuran	7.502	168	285	1.72 ng/mL#	40
10) Fluorene	0.000		0	N.D.	
12) Phenanthrene	8.766	178	496	2.55 ng/ml#	1
13) Anthracene	8.766	178	496	2.52 ng/ml#	1
14) Carbazole	0.000		0	N.D.	
15) Fluoranthene	9.935	202	237	1.43 ng/ml#	59
16) Pyrene	0.000		0	N.D.	
19) Benz(a)Anthracene	11.483	228	547	4.08 ng/ml	68
20) Chrysene	11.483	228	547	4.18 ng/ml	67
22) Benzo(b)Fluoranthene	0.000		0	N.D.	
23) Benzo(k)Fluoranthene	0.000		0	N.D.	
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	0.000		0	N.D.	
27) Perylene	13.958	252	536	5.80 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.	
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

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

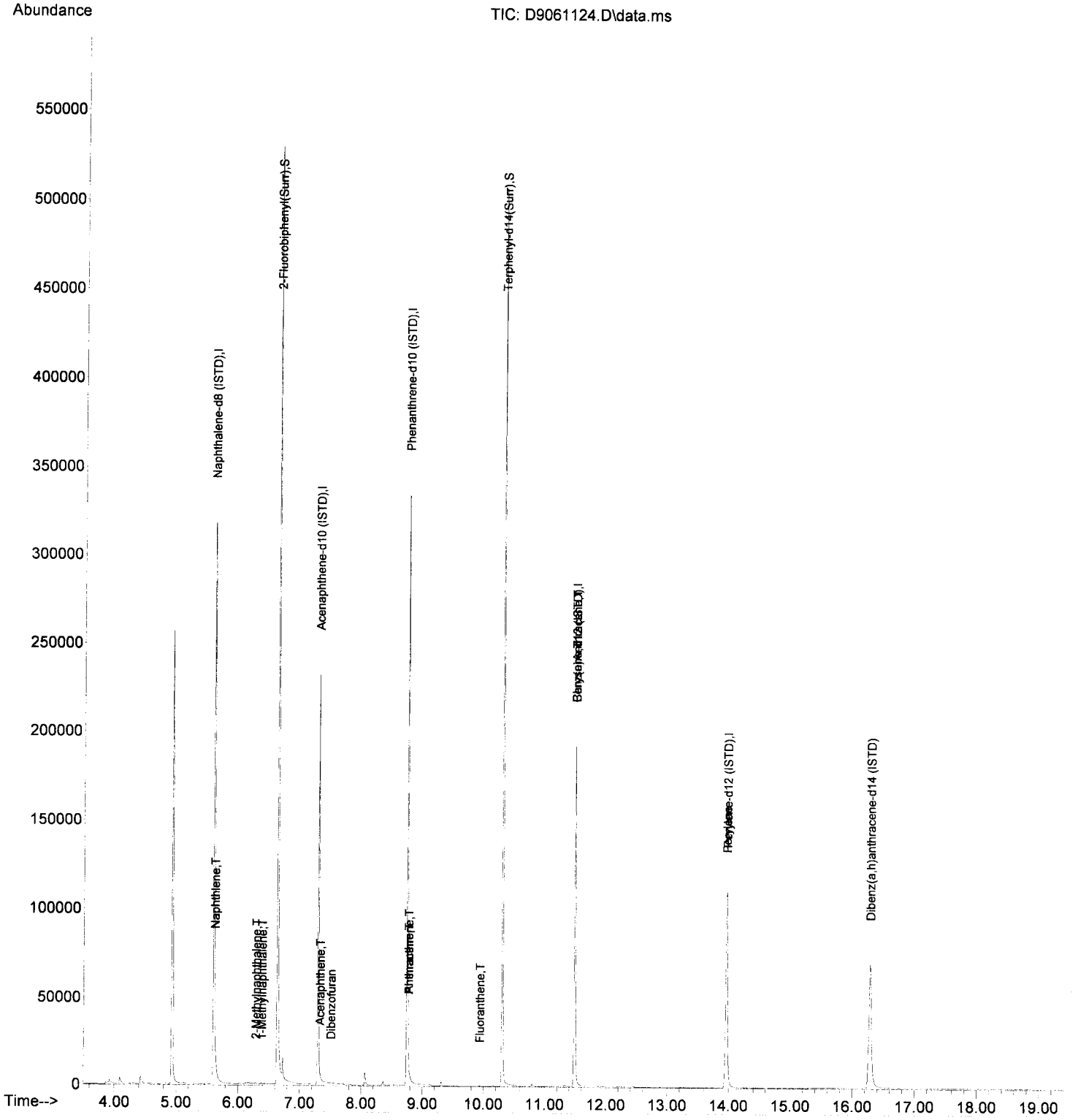
✓

6-12-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061124.D
Acq On : 11 Jun 2019 7:24 pm
Operator : bsj
Sample : 9060813-BLK1
Misc : 1x Water 1100mL/1mL SIM PAH
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jun 12 08:54:45 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (QT Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061125.D
Acq On : 11 Jun 2019 7:51 pm
Operator : bsj
Sample : 9060813-BS1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 12 09:17:54 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.599	136	427326	2000.00	ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.299	164	221051	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.745	188	351758	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.484	240	228233	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	175179	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.293	292	141864	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.636	172	607470	3707.81	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	468575	3879.80	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.619	128	595947	2690.56	ng/ml	99
3) 2-Methylnaphthalene	6.284	142	382535	2671.23	ng/ml	100
4) 1-Methylnaphthalene	6.377	142	384581	2769.23	ng/ml	99
7) Acenaphthylene	7.158	152	663554	3323.91	ng/ml	98
8) Acenaphthene	7.324	153	424366	3174.63	ng/ml	95
9) Dibenzofuran	7.495	168	605622	3397.68	ng/mL	87
10) Fluorene	7.828	166	488694	3523.18	ng/ml	99
12) Phenanthrene	8.766	178	697997	3446.31	ng/ml	98
13) Anthracene	8.814	178	718499	3513.03	ng/ml	98
14) Carbazole	8.968	167	642205	4060.64	ng/mL	99
15) Fluoranthene	9.931	202	677018	3922.72	ng/ml	99
16) Pyrene	10.153	202	680277	3960.91	ng/ml	98
19) Benz(a)Anthracene	11.470	228	497303	3611.21	ng/ml	96
20) Chrysene	11.519	228	512824	3818.51	ng/ml	95
22) Benzo(b)Fluoranthene	13.217	252	431152	3812.11	ng/ml	67
23) Benzo(k)Fluoranthene	13.269	252	438917	3915.98	ng/ml	70
24) Benzo(b+k)Fluoranthene	13.269	252	869544m	7691.53	ng/ml	
25) Benzo(e) Pyrene	13.746	252	417166	3706.45	ng/mL	95
26) Benzo(a)Pyrene	13.849	252	386332	3974.36	ng/ml	70
27) Perylene	14.016	252	372134	3958.44	ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.304	276	310849	3485.35	ng/ml	68
30) Dibenz(a,h)Anthracene	16.371	278	320336	3933.81	ng/ml	71
31) Benzo (g,h,i) Perylene	16.911	276	312906	3262.12	ng/ml	86

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

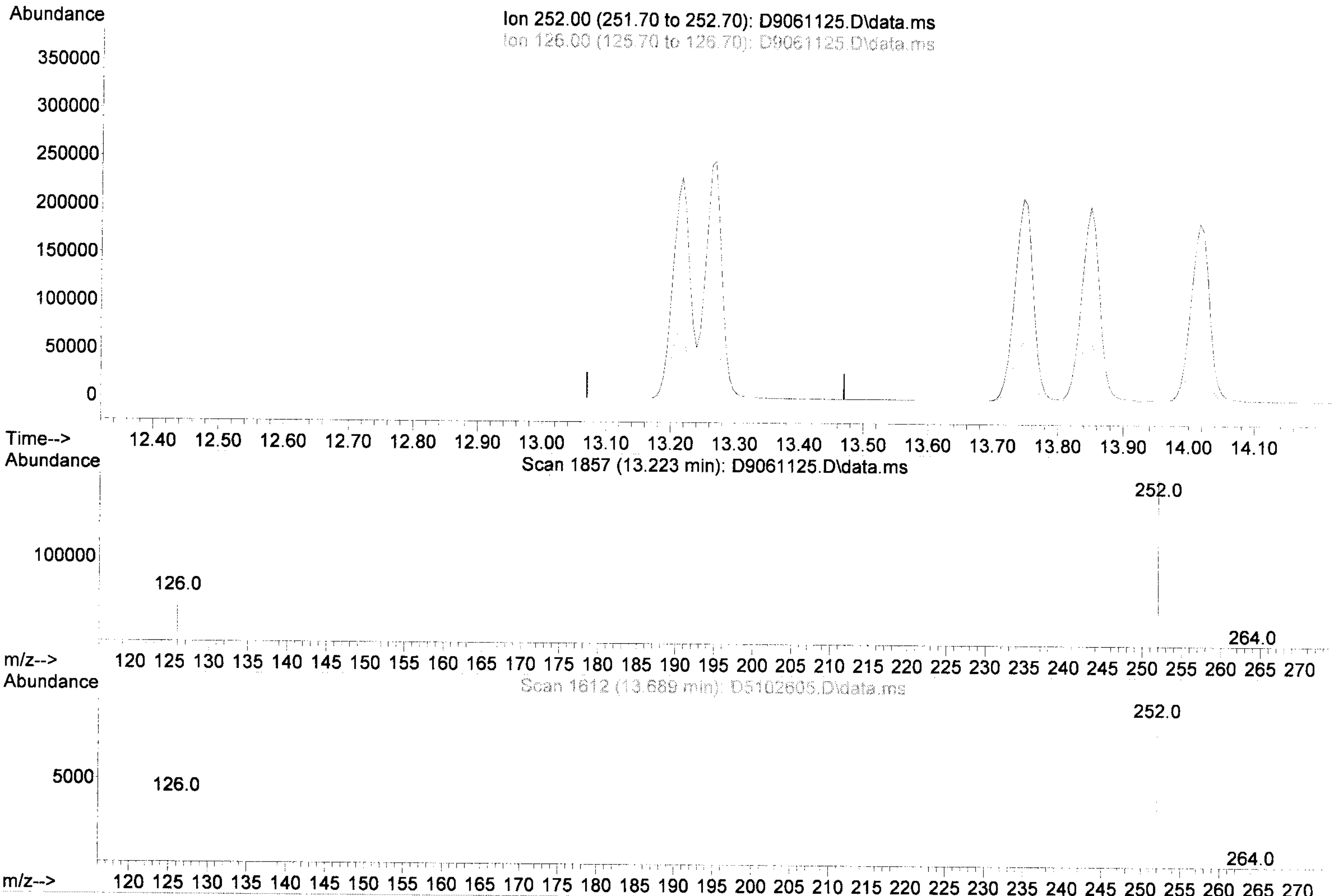
J

6-12-19 BSS

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061125.D
Acq On : 11 Jun 2019 7:51 pm
Operator : bsj
Sample : 9060813-BS1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 12 08:54:48 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



TIC: D9061125.D\data.ms

(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

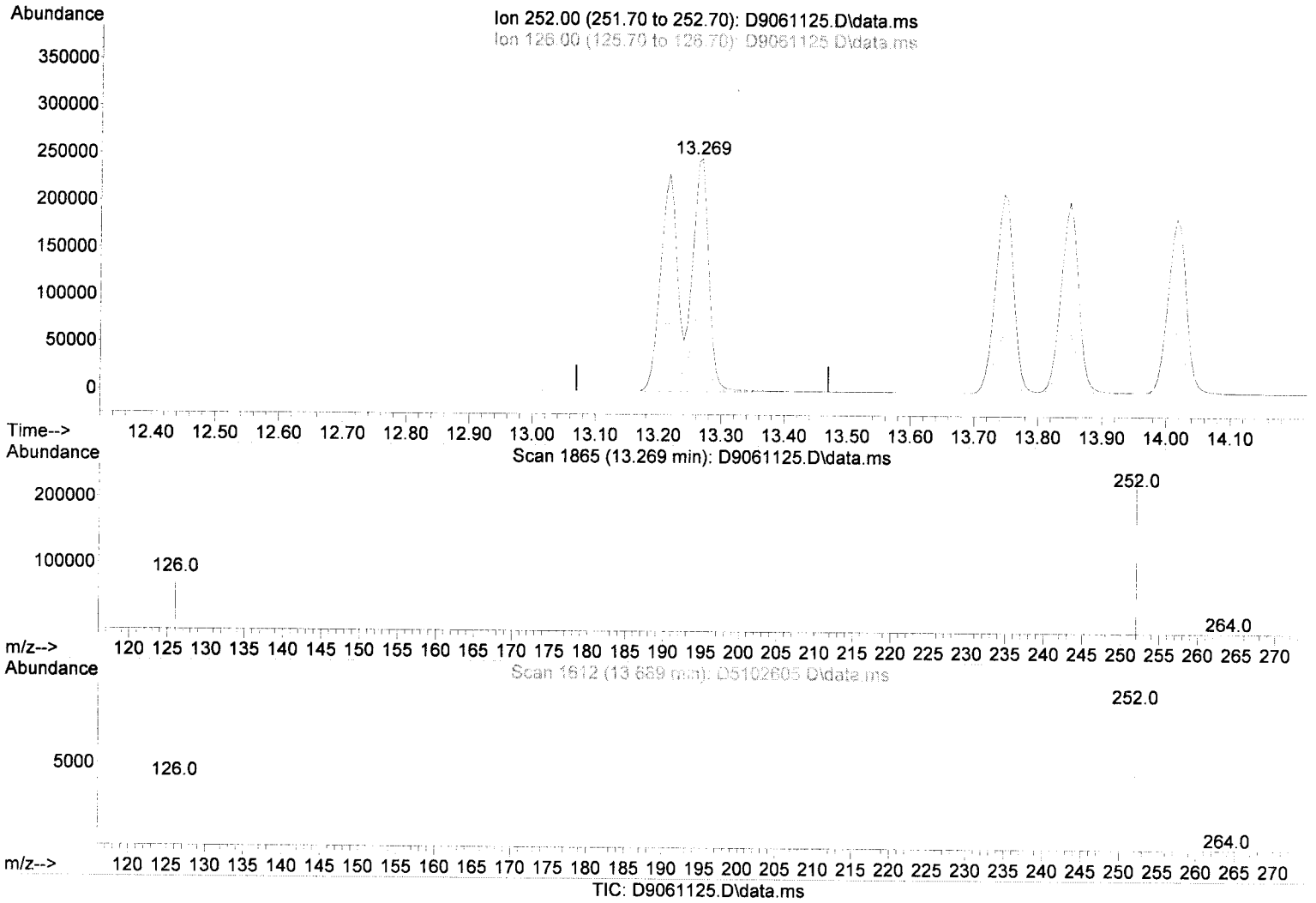
BEFORE ✓

Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061125.D
Acq On : 11 Jun 2019 7:51 pm
Operator : bsj
Sample : 9060813-BS1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 12 08:54:48 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.269min (+ 0.049) 7691.53 ng/ml m

response 869544

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

After 6-12-19 BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061125.D
Acq On : 11 Jun 2019 7:51 pm
Operator : bsj
Sample : 9060813-BS1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 12 08:54:48 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.599	136	427326	2000.00 ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.299	164	221051	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.745	188	351758	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.484	240	228233	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	175179	2000.00 ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.293	292	141864	2000.00 ng/mL	0.00
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.636	172	607470	3707.81 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	468575	3879.80 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.619	128	595947	2690.56 ng/ml	99
3) 2-Methylnaphthalene	6.284	142	382535	2671.23 ng/ml	100
4) 1-Methylnaphthalene	6.377	142	384581	2769.23 ng/ml	99
7) Acenaphthylene	7.158	152	663554	3323.91 ng/ml	98
8) Acenaphthene	7.324	153	424366	3174.63 ng/ml	95
9) Dibenzofuran	7.495	168	605622	3397.68 ng/mL	87
10) Fluorene	7.828	166	488694	3523.18 ng/ml	99
12) Phenanthrene	8.766	178	697997	3446.31 ng/ml	98
13) Anthracene	8.814	178	718499	3513.03 ng/ml	98
14) Carbazole	8.968	167	642205	4060.64 ng/mL	99
15) Fluoranthene	9.931	202	677018	3922.72 ng/ml	99
16) Pyrene	10.153	202	680277	3960.91 ng/ml	98
19) Benz(a)Anthracene	11.470	228	497303	3611.21 ng/ml	96
20) Chrysene	11.519	228	512824	3818.51 ng/ml	95
22) Benzo(b)Fluoranthene	13.217	252	431152	3812.11 ng/ml	67
23) Benzo(k)Fluoranthene	13.269	252	438917	3915.98 ng/ml	70
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	13.746	252	417166	3706.45 ng/mL	95
26) Benzo(a)Pyrene	13.849	252	386332	3974.36 ng/ml	70
27) Perylene	14.016	252	372134	3958.44 ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.304	276	310849	3485.35 ng/ml	68
30) Dibenz(a,h)Anthracene	16.371	278	320336	3933.81 ng/ml	71
31) Benzo (g,h,i) Perylene	16.911	276	312906	3262.12 ng/ml	86

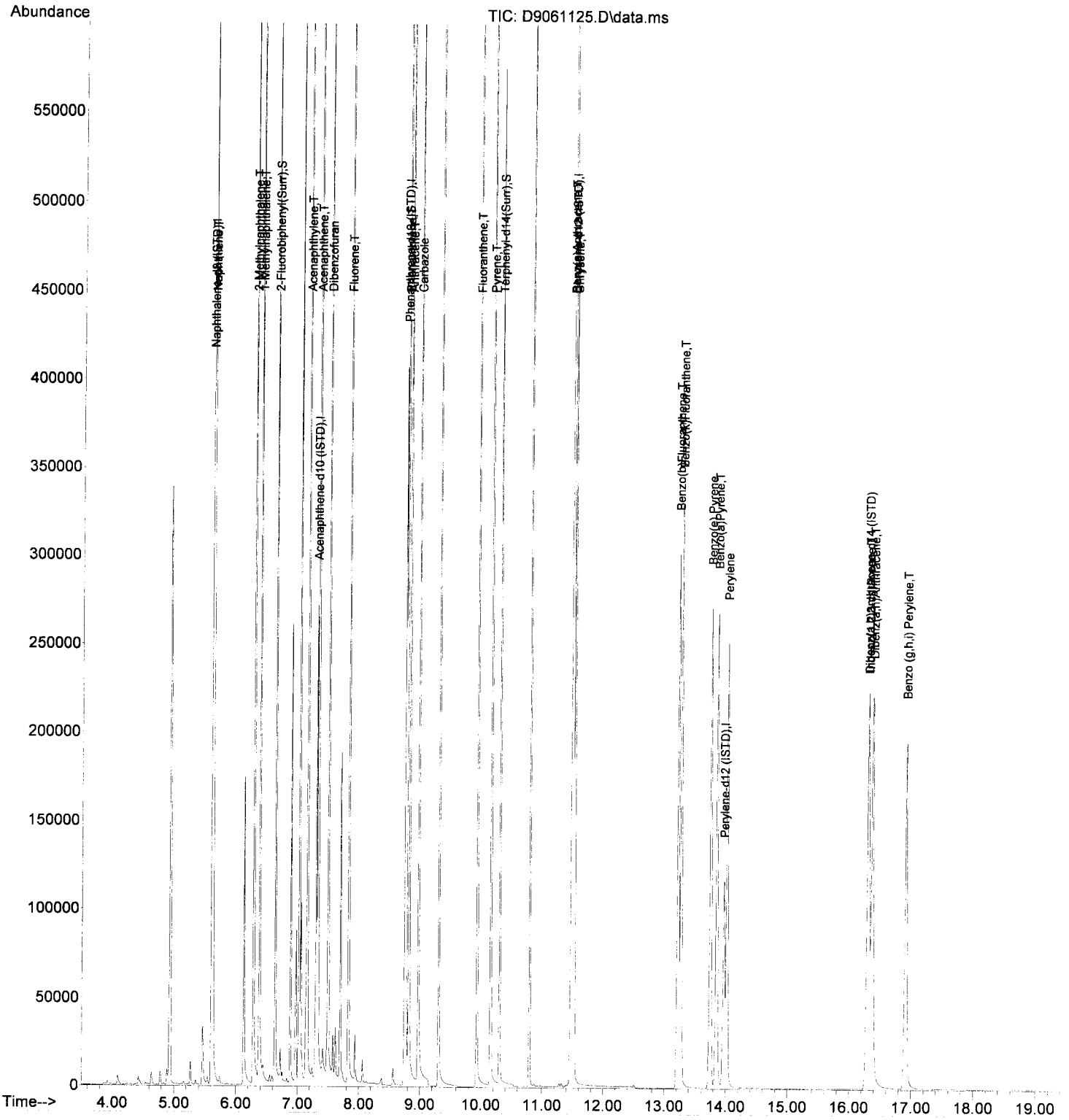
(#) = qualifier out of range (m) = manual integration (+) = signals summed

MTI 6.12.19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061125.D
Acq On : 11 Jun 2019 7:51 pm
Operator : bsj
Sample : 9060813-BS1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 12 08:54:48 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (QT Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061126.D
Acq On : 11 Jun 2019 8:17 pm
Operator : bsj
Sample : 9060813-BSD1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jun 12 09:18:32 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.599	136	454451	2000.00	ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.299	164	231659	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.743	188	371303	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	252694	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	192647	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.287	292	155719	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.634	172	621046	3617.10	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	481885	3603.77	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.619	128	648846	2754.54	ng/ml	99
3) 2-Methylnaphthalene	6.282	142	416741	2736.39	ng/ml	100
4) 1-Methylnaphthalene	6.379	142	406473	2752.17	ng/ml	99
7) Acenaphthylene	7.158	152	687217	3284.81	ng/ml	98
8) Acenaphthene	7.323	153	442471	3158.50	ng/ml	96
9) Dibenzofuran	7.495	168	621014	3324.50	ng/mL	87
10) Fluorene	7.828	166	499960	3439.35	ng/ml	98
12) Phenanthrene	8.770	178	720981	3372.41	ng/ml	98
13) Anthracene	8.818	178	735901	3408.71	ng/ml	99
14) Carbazole	8.972	167	654274	3919.19	ng/mL	99
15) Fluoranthene	9.931	202	700682	3846.13	ng/ml	99
16) Pyrene	10.153	202	706812	3898.78	ng/ml	99
19) Benz(a)Anthracene	11.469	228	536614	3519.47	ng/ml	96
20) Chrysene	11.519	228	523624	3521.51	ng/ml	96
22) Benzo(b)Fluoranthene	13.217	252	447957	3601.57	ng/ml	67
23) Benzo(k)Fluoranthene	13.269	252	463495	3760.30	ng/ml	71
24) Benzo(b+k)Fluoranthene	13.269	252	912016m	7335.73	ng/ml	
25) Benzo(e) Pyrene	13.751	252	432918	3497.63	ng/mL	95
26) Benzo(a)Pyrene	13.849	252	406328	3801.05	ng/ml	70
27) Perylene	14.016	252	393978	3810.80	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.304	276	319000	3258.50	ng/ml	66
30) Dibenz(a,h)Anthracene	16.371	278	335859	3757.47	ng/ml	71
31) Benzo (g,h,i) Perylene	16.911	276	323640	3073.82	ng/ml	86

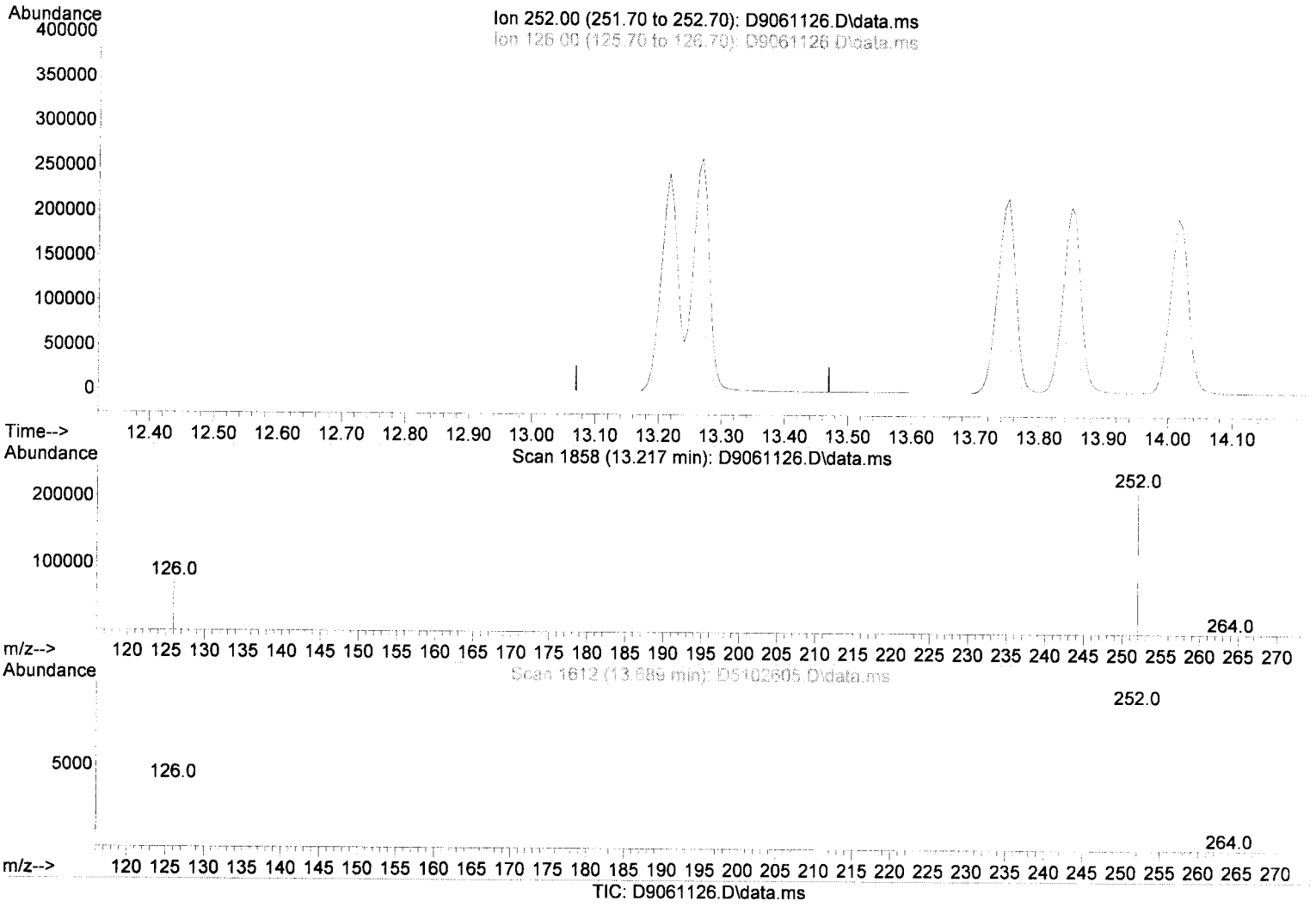
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6-1279 BSS

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061126.D
Acq On : 11 Jun 2019 8:17 pm
Operator : bsj
Sample : 9060813-BSD1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jun 12 08:54:52 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.220min (-13.220) 0.00 ng/ml

response 0

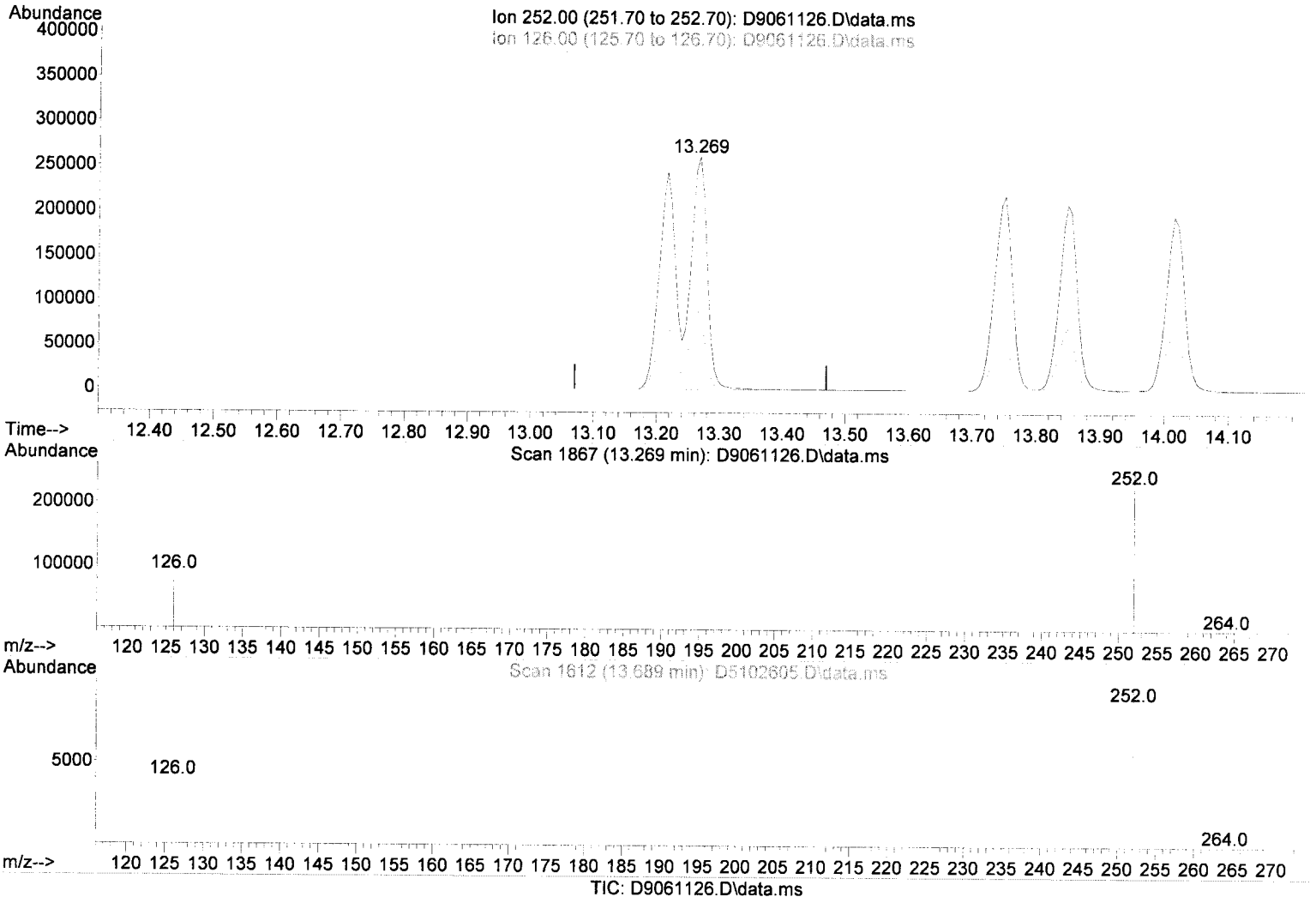
Ion	Exp%	Act%
252.00	100.00	0.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

BEFORE ✓

Quantitation Report (Qedit)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061126.D
Acq On : 11 Jun 2019 8:17 pm
Operator : bsj
Sample : 9060813-BSD1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jun 12 08:54:52 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



(24) Benzo(b+k)Fluoranthene (T)

13.269min (+ 0.049) 7335.73 ng/ml m

response 912016

Ion	Exp%	Act%
252.00	100.00	100.00
126.00	19.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

AFTER
6-12-19 BSS
✓

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061126.D
Acq On : 11 Jun 2019 8:17 pm
Operator : bsj
Sample : 9060813-BSD1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jun 12 08:54:52 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.599	136	454451	2000.00	ng/ml	-0.01
5) Acenaphthene-d10 (ISTD)	7.299	164	231659	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.743	188	371303	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.483	240	252694	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	13.964	264	192647	2000.00	ng/ml	-0.02
28) Dibenz(a,h)anthracene-...	16.287	292	155719	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.634	172	621046	3617.10	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.298	244	481885	3603.77	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.619	128	648846	2754.54	ng/ml	99
3) 2-Methylnaphthalene	6.282	142	416741	2736.39	ng/ml	100
4) 1-Methylnaphthalene	6.379	142	406473	2752.17	ng/ml	99
7) Acenaphthylene	7.158	152	687217	3284.81	ng/ml	98
8) Acenaphthene	7.323	153	442471	3158.50	ng/ml	96
9) Dibenzofuran	7.495	168	621014	3324.50	ng/mL	87
10) Fluorene	7.828	166	499960	3439.35	ng/ml	98
12) Phenanthrene	8.770	178	720981	3372.41	ng/ml	98
13) Anthracene	8.818	178	735901	3408.71	ng/ml	99
14) Carbazole	8.972	167	654274	3919.19	ng/mL	99
15) Fluoranthene	9.931	202	700682	3846.13	ng/ml	99
16) Pyrene	10.153	202	706812	3898.78	ng/ml	99
19) Benz(a)Anthracene	11.469	228	536614	3519.47	ng/ml	96
20) Chrysene	11.519	228	523624	3521.51	ng/ml	96
22) Benzo(b)Fluoranthene	13.217	252	447957	3601.57	ng/ml	67
23) Benzo(k)Fluoranthene	13.269	252	463495	3760.30	ng/ml	71
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	13.751	252	432918	3497.63	ng/mL	95
26) Benzo(a)Pyrene	13.849	252	406328	3801.05	ng/ml	70
27) Perylene	14.016	252	393978	3810.80	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.304	276	319000	3258.50	ng/ml	66
30) Dibenz(a,h)Anthracene	16.371	278	335859	3757.47	ng/ml	71
31) Benzo (g,h,i) Perylene	16.911	276	323640	3073.82	ng/ml	86

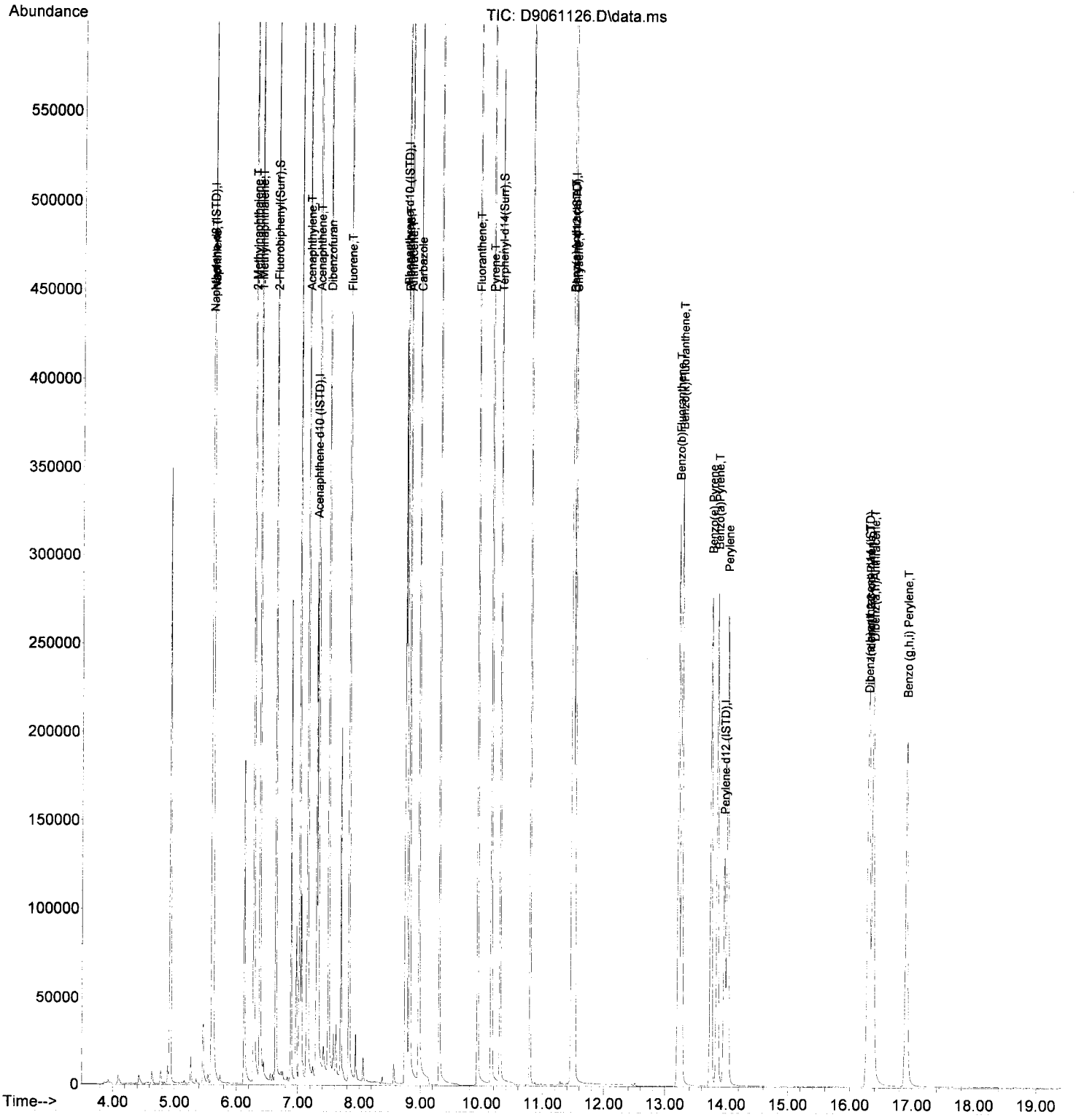
(#) = qualifier out of range (m) = manual integration (+) = signals summed

MJ 61219 BS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-06\9F11033\
Data File : D9061126.D
Acq On : 11 Jun 2019 8:17 pm
Operator : bsj
Sample : 9060813-BSD1
Misc : 1x Water 1000mL/1mL SIM PAH
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jun 12 08:54:52 2019
Quant Method : C:\msdchem\1\methods\SV4_050919R5.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Fri May 31 18:09:49 2019
Response via : Initial Calibration
InstName : SV-GCMS4



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

SPLP PAH by EPA 1312/8270D SIM

Calibration Data

Sequence 9E08049 (Cal ID A9E0902) SV-GCMS4

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9E08049**	Instrument:	**SV-GCMS4**
Date:	**05/08/19 14:06**	Calibration:	**A9E0902**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E08049-TUN1	Water	QC	QC			A19D031	A19D323
2	9E08049-ICB1	Water	QC	QC			A19D031	
3	9E08049-CAL1	Water	QC	QC			A19D031	A19D053
4	9E08049-CAL2	Water	QC	QC			A19D031	A19D054
5	9E08049-CAL3	Water	QC	QC			A19D031	A19D055
6	9E08049-CAL4	Water	QC	QC			A19D031	A19D056
7	9E08049-CAL5	Water	QC	QC			A19D031	A19D057
8	9E08049-CAL6	Water	QC	QC			A19D031	A19D058
9	9E08049-CAL7	Water	QC	QC			A19D031	A19D059
10	9E08049-CAL8	Water	QC	QC			A19D031	A19D060
11	9E08049-CAL9	Water	QC	QC			A19D031	A19D061
12	9E08049-CALA	Water	QC	QC			A19D031	A19D062
13	9E08049-IBL1	Water	QC	QC			A19B027	
14	9E08049-ICV1	Water	QC	QC			A19B027	A19C239
15	9E08049-IBL2	Water	QC	QC			A19B027	

Data Entered By: BGS 5-09-19

Data Reviewed By: GJL 5/9/19

Comments:

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E08049

Analysis Included

8270 SIM PAH
8270 SIM PAH (16)
8270 SIM Naphthalene
8270 SIM PAH (1-2mL FV)

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9E08049-TUN1	MS Tune	Water	A19D323	A19D031	5/8/2019 2:14:00PM
9E08049-ICB1	Initial Cal Blank	Water		A19D031	5/8/2019 2:39:00PM
9E08049-CAL1	Cal Standard	Water	A19D053	"	5/8/2019 3:06:00PM
9E08049-CAL2	Cal Standard	Water	A19D054	"	5/8/2019 3:33:00PM
9E08049-CAL3	Cal Standard	Water	A19D055	"	5/8/2019 4:00:00PM
9E08049-CAL4	Cal Standard	Water	A19D056	"	5/8/2019 4:27:00PM
9E08049-CAL5	Cal Standard	Water	A19D057	"	5/8/2019 4:53:00PM
9E08049-CAL6	Cal Standard	Water	A19D058	"	5/8/2019 5:20:00PM
9E08049-CAL7	Cal Standard	Water	A19D059	"	5/8/2019 5:47:00PM
9E08049-CAL8	Cal Standard	Water	A19D060	"	5/8/2019 6:14:00PM
9E08049-CAL9	Cal Standard	Water	A19D061	"	5/8/2019 6:40:00PM
9E08049-CALA	Cal Standard	Water	A19D062	"	5/8/2019 7:07:00PM
9E08049-ICV1	Initial Cal Check	Water	A19C239	"	5/8/2019 8:01:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: A9E0902 Instrument: SV-GCMS4

8270 SIM PAH Sequence: 9E08049 Matrix: Water

9E08049-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08049-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E08049

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9E0902** Instrument: **SV-GCMS4**

8270 SIM PAH Sequence: **9E08049** Matrix: **Water**

9E08049-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Calibration Status Report SV-GCMS4

Method Path : C:\msdchem\1\methods\
Method File : SV4_050919.M
Title : EPA 8270 SIM PAH/PCP/PTH
Last Update : Thu May 09 08:52:03 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	20	20	2000	P:\DATA\2019-05\9E08049\D9050803.D
2	50	50	2000	P:\DATA\2019-05\9E08049\D9050804.D
3	100	100	2000	P:\DATA\2019-05\9E08049\D9050805.D
4	200	200	2000	P:\DATA\2019-05\9E08049\D9050806.D
5	500	500	2000	P:\DATA\2019-05\9E08049\D9050807.D
6	1000	1000	2000	P:\DATA\2019-05\9E08049\D9050808.D
7	2000	2000	2000	P:\DATA\2019-05\9E08049\D9050809.D
8	4000	4000	2000	P:\DATA\2019-05\9E08049\D9050810.D
9	6000	6000	2000	P:\DATA\2019-05\9E08049\D9050811.D
10	8000	8000	2000	P:\DATA\2019-05\9E08049\D9050812.D

#	ID	Update Time	Quant Time	Acquisition Time
1	20	May 09 08:50 2019	May 08 15:33 2019	8 May 2019 3:06 pm
2	50	May 09 08:50 2019	May 08 16:05 2019	8 May 2019 3:33 pm
3	100	May 09 08:50 2019	May 08 16:20 2019	8 May 2019 4:00 pm
4	200	May 09 08:51 2019	May 08 16:46 2019	8 May 2019 4:27 pm
5	500	May 09 08:51 2019	May 09 08:45 2019	8 May 2019 4:53 pm
6	1000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 5:20 pm
7	2000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 5:47 pm
8	4000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 6:14 pm
9	6000	May 09 08:51 2019	May 09 08:46 2019	8 May 2019 6:40 pm
10	8000	May 09 08:52 2019	May 09 08:46 2019	8 May 2019 7:07 pm

SV4_050919.M Thu May 09 08:56:22 2019

5-09-19
BSS

Compound List Report SV-GCMS4

Method Path : C:\msdchem\1\methods\
Method File : SV4_050919.M
Title : EPA 8270 SIM PAH/PCP/PTH
Last Update : Thu May 09 08:52:03 2019
Response Via : Initial Calibration

Total Cpnds : 31

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Naphthalene-d8 (ISTD)	136	5.756	1.000	A	1	A	R
2	T	Naphthlene	128	5.769	1.002	A	1	A	R
3	T	2-Methylnaphthalene	142	6.434	1.118	A	1	A	R
4	T	1-Methylnaphthalene	142	6.532	1.135	A	1	A	R
5	I	Acenaphthene-d10 (ISTD)	164	7.452	1.000	A	1	A	R
6	S	2-Fluorobiphenyl(Surr)	172	6.791	0.911	A	1	A	R
7	T	Acenaphthylene	152	7.317	0.982	A	1	A	R
8	T	Acenaphthene	153	7.483	1.004	A	1	A	R
9		Dibenzofuran	168	7.654	1.027	A	1	A	R
10	T	Fluorene	166	7.989	1.072	A	1	A	R
11	I	Phenanthrene-d10 (ISTD)	188	8.910	1.000	A	1	A	R
12	T	Phenanthrene	178	8.931	1.002	A	1	A	R
13	T	Anthracene	178	8.985	1.008	A	1	A	R
14		Carbazole	167	9.133	1.025	A	1	A	R
15	T	Fluoranthene	202	10.103	1.134	A	1	A	R
16	T	Pyrene	202	10.326	1.159	A	1	A	R
17	I	Chrysene-d12 (ISTD)	240	11.720	1.000	A	1	A	R
18	S	Terphenyl-d14(Surr)	244	10.465	0.893	A	1	A	R
19	T	Benz(a)Anthracene	228	11.699	0.998	A	1	A	R
20	T	Chrysene	228	11.756	1.003	A	1	A	R
21	I	Perylene-d12 (ISTD)	264	14.313	1.000	A	1	A	R
22	T	Benzo(b)Fluoranthene	252	13.543	0.946	A	1	A	R
23	T	Benzo(k)Fluoranthene	252	13.595	0.950	A	1	A	R
24	T	Benzo(b+k)Fluoranthene	252	13.595	0.950	A	1	A	R
25		Benzo(e) Pyrene	252	14.095	0.985	A	1	A	R
26	T	Benzo(a)Pyrene	252	14.198	0.992	A	1	A	R
27		Perylene	252	14.370	1.004	A	1	A	R
28	I	Dibenz(a,h)anthracene-d14 (...	292	16.727	1.000	A	1	A	R
29	T	Indeno(1,2,3-cd)Pyrene	276	16.738	1.001	A	1	A	R
30	T	Dibenz(a,h)Anthracene	278	16.800	1.004	A	1	A	R
31	T	Benzo (g,h,i) Perylene	276	17.290	1.034	A	1	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

SV4_050919.M Thu May 09 08:56:05 2019

5-9-19

Response Factor Report SV-GCMS4

Method Path : C:\msdchem\1\methods\
Method File : SV4_050919.M
Title : EPA 8270 SIM PAH/PCP/PTH
Last Update : Thu May 09 08:52:03 2019
Response Via : Initial Calibration

Calibration Files
20 =D9050803.D 50 =D9050804.D 100 =D9050805.D 200 =D9050806.D 500 =D9050807.D 1000=D9050808.D 2000=D9050809.D
4000=D9050810.D 6000=D9050811.D 8000=D9050812.D

		Compound	20	50	100	200	500	1000	2000	4000	6000	8000	Avg	%RSD
														4.52
1)	I	Naphthalene-d8 (ISTD)	----------ISTD----------											
2)	T	Naphthlene	1.006	1.024	1.060	1.059	1.048	1.022	1.036	1.041	1.033	1.037	1.037	1.61
3)	T	2-Methylnaphth...	0.629	0.660	0.668	0.675	0.674	0.669	0.673	0.687	0.674	0.693	0.670	2.56
4)	T	1-Methylnaphth...	0.601	0.632	0.652	0.663	0.659	0.650	0.657	0.671	0.651	0.664	0.650	3.08
														5.61
5)	I	Acenaphthene-d10 (...	----------ISTD----------											
6)	S	2-Fluorobiphen...	1.387	1.446	1.535	1.459	1.520	1.478	1.492	1.549	1.439	1.518	1.482	3.39
7)	T	Acenaphthylene	1.721	1.762	1.799	1.766	1.858	1.799	1.837	1.847	1.814	1.858	1.806	2.55
8)	T	Acenaphthene	1.150	1.177	1.225	1.217	1.234	1.219	1.216	1.211	1.222	1.224	1.209	2.13
9)		Dibenzofuran	1.483	1.572	1.632	1.622	1.668	1.611	1.634	1.646	1.622	1.638	1.613	3.21
10)	T	Fluorene	1.155	1.207	1.255	1.262	1.295	1.246	1.245	1.290	1.298	1.297	1.255	3.65
														7.65
11)	I	Phenanthrene-d10 (...	----------ISTD----------											
12)	T	Phenanthrene	1.178	1.159	1.153	1.150	1.167	1.133	1.132	1.155	1.142	1.148	1.152	1.25
13)	T	Anthracene	1.127	1.118	1.144	1.142	1.184	1.136	1.163	1.212	1.193	1.208	1.163	2.96
14)		Carbazole	0.907	0.905	0.924	0.944	0.971	0.917	0.887	0.739			0.899	7.75
15)	T	Fluoranthene	0.945	0.948	0.984	0.977	1.007	0.954	0.977	1.006	0.992	1.022	0.981	2.69
16)	T	Pyrene	0.944	0.959	0.972	0.980	0.991	0.938	0.961	1.006	1.000	1.014	0.977	2.69
														11.64
17)	I	Chrysene-d12 (ISTD)	----------ISTD----------											
18)	S	Terphenyl-d14(...	1.035	1.077	1.070	1.027	1.081	1.062	1.055	1.095	1.045	1.037	1.058	2.11
19)	T	Benz(a)Anthracene	1.402	1.228	1.212	1.181	1.205	1.160	1.163	1.172	1.168	1.178	1.207	5.97
20)	T	Chrysene	1.154	1.160	1.204	1.192	1.211	1.171	1.166	1.191	1.145	1.174	1.177	1.87
														6.72
21)	I	Perylene-d12 (ISTD)	----------ISTD----------											
22)	T	Benzo(b)Fluora...	1.192	1.210	1.240	1.283	1.301	1.291	1.274	1.381	1.356	1.385	1.291	5.19
23)	T	Benzo(k)Fluora...	1.171	1.200	1.221	1.234	1.285	1.288	1.289	1.356	1.370	1.382	1.280	5.73
24)	T	Benzo(b+k)Fluo...	1.204	1.214	1.234	1.264	1.296	1.292	1.283	1.370	1.365	1.385	1.291	5.02
25)		Benzo(e) Pyrene	1.231	1.234	1.262	1.279	1.302	1.298	1.272	1.326	1.328	1.317	1.285	2.76
26)	T	Benzo(a)Pyrene	0.990	1.000	1.036	1.066	1.096	1.134	1.150	1.202	1.196	1.228	1.110	7.71
27)		Perylene	1.038	1.017	1.060	1.080	1.086	1.084	1.078	1.103	1.090	1.097	1.073	2.54
														6.80
28)		Dibenz(a,h)anthrac...	----------ISTD----------											
29)	T	Indeno(1,2,3-c...	1.268	1.236	1.271	1.259	1.303	1.265	1.238	1.255	1.241	1.238	1.257	1.65
30)	T	Dibenz(a,h)Ant...	1.014	1.058	1.119	1.132	1.166	1.154	1.158	1.195	1.236	1.249	1.148	6.34
31)	T	Benzo (g,h,i) ...	1.308	1.317	1.353	1.334	1.411	1.372	1.356	1.369	1.383	1.322	1.352	2.40

(#) = Out of Range

529.9

BDS

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050803.D
Acq On : 8 May 2019 3:06 pm
Operator : bsj
Sample : 9E08049-CAL1
Misc : 1x A19D053@20 .
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 09:38:48 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	20.000	19.401	3.0	100	0.00
3	T	2-Methylnaphthalene	20.000	18.770	6.2	100	0.00
4	T	1-Methylnaphthalene	20.000	18.504	7.5	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	20.000	18.731	6.3	100	0.00
7	T	Acenaphthylene	20.000	19.068	4.7	100	0.00
8	T	Acenaphthene	20.000	19.023	4.9	100	0.00
9		Dibenzofuran	20.000	18.406	8.0	100	0.00
10	T	Fluorene	20.000	18.423	7.9	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	20.000	20.465	-2.3	100	0.00
13	T	Anthracene	20.000	19.391	3.0	100	0.00
14		Carbazole	20.000	20.169	-0.8	100	0.00
15	T	Fluoranthene	20.000	19.251	3.7	100	0.00
16	T	Pyrene	20.000	19.326	3.4	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	20.000	19.561	2.2	100	0.00
19	T	Benz(a)Anthracene	20.000	23.235	-16.2	100	0.00
20	T	Chrysene	20.000	19.612	1.9	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	20.000	18.470	7.7	100	-0.02
23	T	Benzo(k)Fluoranthene	20.000	18.306	8.5	100	-0.01
24	T	Benzo(b+k)Fluoranthene	40.000	37.443	6.4	100	-0.01
25		Benzo(e) Pyrene	20.000	19.168	4.2	100	-0.01
26	T	Benzo(a)Pyrene	20.000	17.850	10.7	100	-0.02
27		Perylene	20.000	19.342	3.3	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	20.000	20.164	-0.8	100	-0.02
30	T	Dibenz(a,h)Anthracene	20.000	17.663	11.7	100	-0.01
31	T	Benzo (g,h,i) Perylene	20.000	19.341	3.3	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19 BSJ

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050804.D
Acq On : 8 May 2019 3:33 pm
Operator : bsj
Sample : 9E08049-CAL2
Misc : 1x A19D054@50
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 09:38:52 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	50.000	49.385	1.2	100	0.00
3	T	2-Methylnaphthalene	50.000	49.202	1.6	100	0.00
4	T	1-Methylnaphthalene	50.000	48.613	2.8	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	50.000	48.811	2.4	100	0.00
7	T	Acenaphthylene	50.000	48.822	2.4	100	0.00
8	T	Acenaphthene	50.000	48.714	2.6	100	0.00
9		Dibenzofuran	50.000	48.765	2.5	100	0.00
10	T	Fluorene	50.000	48.169	3.7	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	50.000	50.315	-0.6	100	0.00
13	T	Anthracene	50.000	48.079	3.8	100	0.00
14		Carbazole	50.000	50.331	-0.7	100	0.00
15	T	Fluoranthene	50.000	48.326	3.3	100	0.00
16	T	Pyrene	50.000	49.127	1.7	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	50.000	50.913	-1.8	100	0.00
19	T	Benz(a)Anthracene	50.000	50.903	-1.8	100	0.00
20	T	Chrysene	50.000	49.317	1.4	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	50.000	46.885	6.2	100	-0.01
23	T	Benzo(k)Fluoranthene	50.000	46.906	6.2	100	-0.01
24	T	Benzo(b+k)Fluoranthene	100.000	94.583	5.4	100	-0.01
25		Benzo(e) Pyrene	50.000	48.024	4.0	100	-0.02
26	T	Benzo(a)Pyrene	50.000	45.074	9.9	100	-0.01
27		Perylene	50.000	47.392	5.2	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.02
29	T	Indeno(1,2,3-cd)Pyrene	50.000	49.127	1.7	100	-0.02
30	T	Dibenz(a,h)Anthracene	50.000	46.034	7.9	100	-0.01
31	T	Benzo (g,h,i) Perylene	50.000	48.660	2.7	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050805.D
Acq On : 8 May 2019 4:00 pm
Operator : bsj
Sample : 9E08049-CAL3
Misc : 1x A19D055@100
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 09:38:55 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	100.000	102.189	-2.2	100	0.00
3	T	2-Methylnaphthalene	100.000	99.695	0.3	100	0.00
4	T	1-Methylnaphthalene	100.000	100.298	-0.3	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	100.000	103.629	-3.6	100	0.00
7	T	Acenaphthylene	100.000	99.690	0.3	100	0.00
8	T	Acenaphthene	100.000	101.318	-1.3	100	0.00
9		Dibenzofuran	100.000	101.237	-1.2	100	0.00
10	T	Fluorene	100.000	100.189	-0.2	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	100.000	100.132	-0.1	100	0.00
13	T	Anthracene	100.000	98.378	1.6	100	0.00
14		Carbazole	100.000	102.722	-2.7	100	0.00
15	T	Fluoranthene	100.000	100.300	-0.3	100	0.00
16	T	Pyrene	100.000	99.528	0.5	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	100.000	101.154	-1.2	100	0.00
19	T	Benz(a)Anthracene	100.000	100.436	-0.4	100	0.00
20	T	Chrysene	100.000	102.348	-2.3	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	100.000	96.056	3.9	100	-0.02
23	T	Benzo(k)Fluoranthene	100.000	95.436	4.6	100	-0.01
24	T	Benzo(b+k)Fluoranthene	200.000	191.995	4.0	100	-0.07
25		Benzo(e) Pyrene	100.000	98.238	1.8	100	-0.02
26	T	Benzo(a)Pyrene	100.000	93.428	6.6	100	-0.02
27		Perylene	100.000	98.831	1.2	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	100.000	100.958	-1.0	100	-0.02
30	T	Dibenz(a,h)Anthracene	100.000	97.398	2.6	100	-0.01
31	T	Benzo (g,h,i) Perylene	100.000	99.928	0.1	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-29-19 BBJ

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050806.D
Acq On : 8 May 2019 4:27 pm
Operator : bsj
Sample : 9E08049-CAL4
Misc : 1x A19D056@200
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 09:38:58 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	200.000	204.234	-2.1	100	0.00
3	T	2-Methylnaphthalene	200.000	201.294	-0.6	100	0.00
4	T	1-Methylnaphthalene	200.000	203.873	-1.9	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	200.000	196.897	1.6	100	0.00
7	T	Acenaphthylene	200.000	195.496	2.3	100	0.00
8	T	Acenaphthene	200.000	201.178	-0.6	100	0.00
9		Dibenzofuran	200.000	201.211	-0.6	100	0.00
10	T	Fluorene	200.000	201.127	-0.6	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	200.000	199.669	0.2	100	0.00
13	T	Anthracene	200.000	196.405	1.8	100	0.00
14		Carbazole	200.000	209.749	-4.9	100	0.00
15	T	Fluoranthene	200.000	199.149	0.4	100	0.00
16	T	Pyrene	200.000	200.736	-0.4	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	200.000	194.130	2.9	100	0.00
19	T	Benz(a)Anthracene	200.000	195.672	2.2	100	0.00
20	T	Chrysene	200.000	202.615	-1.3	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	200.000	198.770	0.6	100	-0.02
23	T	Benzo(k)Fluoranthene	200.000	193.009	3.5	100	-0.02
24	T	Benzo(b+k)Fluoranthene	400.000	392.699	1.8	100	-0.07
25		Benzo(e) Pyrene	200.000	199.145	0.4	100	-0.02
26	T	Benzo(a)Pyrene	200.000	192.166	3.9	100	-0.02
27		Perylene	200.000	201.306	-0.7	100	-0.02
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	200.000	200.182	-0.1	100	-0.01
30	T	Dibenz(a,h)Anthracene	200.000	197.277	1.4	100	-0.01
31	T	Benzo (g,h,i) Perylene	200.000	197.172	1.4	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050807.D
Acq On : 8 May 2019 4:53 pm
Operator : bsj
Sample : 9E08049-CAL5
Misc : 1x A19D057@500
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 09:39:01 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	500.000	505.315	-1.1	100	0.00
3	T	2-Methylnaphthalene	500.000	502.758	-0.6	100	0.00
4	T	1-Methylnaphthalene	500.000	506.657	-1.3	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	500.000	512.678	-2.5	100	0.00
7	T	Acenaphthylene	500.000	514.425	-2.9	100	0.00
8	T	Acenaphthene	500.000	510.151	-2.0	100	0.00
9		Dibenzofuran	500.000	517.019	-3.4	100	0.00
10	T	Fluorene	500.000	516.327	-3.3	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	500.000	506.538	-1.3	100	0.00
13	T	Anthracene	500.000	509.236	-1.8	100	0.00
14		Carbazole	500.000	539.638	-7.9	100	0.00
15	T	Fluoranthene	500.000	512.859	-2.6	100	0.00
16	T	Pyrene	500.000	507.453	-1.5	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	-0.01
18	S	Terphenyl-d14(Surr)	500.000	510.668	-2.1	100	0.00
19	T	Benz(a)Anthracene	500.000	499.212	0.2	100	0.00
20	T	Chrysene	500.000	514.685	-2.9	100	-0.01
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	500.000	504.021	-0.8	100	-0.02
23	T	Benzo(k)Fluoranthene	500.000	502.555	-0.5	100	-0.02
24	T	Benzo(b+k)Fluoranthene	1000.000	1005.849	-0.6	100	-0.07
25		Benzo(e) Pyrene	500.000	506.874	-1.4	100	-0.02
26	T	Benzo(a)Pyrene	500.000	493.134	1.4	100	-0.02
27		Perylene	500.000	509.720	-1.9	101	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.02
29	T	Indeno(1,2,3-cd)Pyrene	500.000	517.726	-3.5	100	-0.02
30	T	Dibenz(a,h)Anthracene	500.000	507.407	-1.5	100	-0.01
31	T	Benzo (g,h,i) Perylene	500.000	521.815	-4.4	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19 BST

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050808.D
Acq On : 8 May 2019 5:20 pm
Operator : bsj
Sample : 9E08049-CAL6
Misc : 1x A19D058@1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 09:39:04 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	1000.000	985.378	1.5	100	0.00
3	T	2-Methylnaphthalene	1000.000	998.049	0.2	100	0.00
4	T	1-Methylnaphthalene	1000.000	999.522	0.0	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	1000.000	996.430	0.4	100	0.00
7	T	Acenaphthylene	1000.000	996.036	0.4	100	0.00
8	T	Acenaphthene	1000.000	1008.200	-0.8	100	0.00
9		Dibenzofuran	1000.000	999.161	0.1	100	0.00
10	T	Fluorene	1000.000	994.567	0.5	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	1000.000	983.685	1.6	100	0.00
13	T	Anthracene	1000.000	977.380	2.3	100	0.00
14		Carbazole	1000.000	1019.379	-1.9	100	0.00
15	T	Fluoranthene	1000.000	972.455	2.8	100	0.00
16	T	Pyrene	1000.000	960.449	4.0	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	1000.000	1003.219	-0.3	100	0.00
19	T	Benz(a)Anthracene	1000.000	961.783	3.8	100	0.00
20	T	Chrysene	1000.000	994.872	0.5	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	1000.000	999.939	0.0	100	-0.01
23	T	Benzo(k)Fluoranthene	1000.000	1008.528	-0.9	100	-0.01
24	T	Benzo(b+k)Fluoranthene	2000.000	2005.845	-0.3	100	-0.06
25		Benzo(e) Pyrene	1000.000	1010.766	-1.1	100	-0.02
26	T	Benzo(a)Pyrene	1000.000	1015.327	-1.5	99	-0.01
27		Perylene	1000.000	1011.781	-1.2	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	1000.000	1005.780	-0.6	100	-0.02
30	T	Dibenz(a,h)Anthracene	1000.000	1005.056	-0.5	100	-0.01
31	T	Benzo (g,h,i) Perylene	1000.000	1014.667	-1.5	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050809.D
Acq On : 8 May 2019 5:47 pm
Operator : bsj
Sample : 9E08049-CAL7
Misc : 1x A19D059@2000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 09:39:07 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	2000.000	1999.086	0.0	100	0.00
3	T	2-Methylnaphthalene	2000.000	2008.329	-0.4	100	0.00
4	T	1-Methylnaphthalene	2000.000	2019.812	-1.0	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	2000.000	2013.539	-0.7	100	0.00
7	T	Acenaphthylene	2000.000	2034.657	-1.7	100	0.00
8	T	Acenaphthene	2000.000	2013.728	-0.7	100	0.00
9		Dibenzofuran	2000.000	2026.380	-1.3	100	0.00
10	T	Fluorene	2000.000	1987.676	0.6	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	2000.000	1965.804	1.7	100	0.00
13	T	Anthracene	2000.000	2002.318	-0.1	100	0.00
14		Carbazole	2000.000	1970.893	1.5	100	0.00
15	T	Fluoranthene	2000.000	1991.513	0.4	100	0.00
16	T	Pyrene	2000.000	1967.950	1.6	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	2000.000	1994.288	0.3	100	0.00
19	T	Benz(a)Anthracene	2000.000	1927.661	3.6	100	0.00
20	T	Chrysene	2000.000	1982.421	0.9	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	2000.000	1973.818	1.3	100	-0.01
23	T	Benzo(k)Fluoranthene	2000.000	2017.796	-0.9	100	-0.01
24	T	Benzo(b+k)Fluoranthene	4000.000	3984.999	0.4	100	-0.01
25		Benzo(e) Pyrene	2000.000	1981.098	0.9	100	-0.01
26	T	Benzo(a)Pyrene	2000.000	2060.553	-3.0	99	-0.01
27		Perylene	2000.000	2008.563	-0.4	100	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	2000.000	1968.263	1.6	100	-0.01
30	T	Dibenz(a,h)Anthracene	2000.000	2018.100	-0.9	100	-0.01
31	T	Benzo (g,h,i) Perylene	2000.000	2004.634	-0.2	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-29-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050810.D
Acq On : 8 May 2019 6:14 pm
Operator : bsj
Sample : 9E08049-CAL8
Misc : 1x A19D060@4000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 09:39:10 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	4000.000	4017.508	-0.4	100	0.00
3	T	2-Methylnaphthalene	4000.000	4098.876	-2.5	100	0.00
4	T	1-Methylnaphthalene	4000.000	4125.194	-3.1	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	4000.000	4179.091	-4.5	100	0.00
7	T	Acenaphthylene	4000.000	4090.217	-2.3	100	0.00
8	T	Acenaphthene	4000.000	4007.424	-0.2	100	0.00
9		Dibenzofuran	4000.000	4081.430	-2.0	100	0.00
10	T	Fluorene	4000.000	4114.948	-2.9	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	4000.000	4011.238	-0.3	100	0.00
13	T	Anthracene	4000.000	4171.775	-4.3	100	0.00
14		Carbazole	4000.000	3287.499	17.8	100	0.00
15	T	Fluoranthene	4000.000	4101.863	-2.5	100	0.00
16	T	Pyrene	4000.000	4119.489	-3.0	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	4000.000	4136.931	-3.4	100	0.00
19	T	Benz(a)Anthracene	4000.000	3884.221	2.9	100	0.00
20	T	Chrysene	4000.000	4049.535	-1.2	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	4000.000	4280.258	-7.0	100	-0.01
23	T	Benzo(k)Fluoranthene	4000.000	4242.185	-6.1	100	-0.01
24	T	Benzo(b+k)Fluoranthene	8000.000	8505.529	-6.3	100	-0.01
25		Benzo(e) Pyrene	4000.000	4128.422	-3.2	100	0.00
26	T	Benzo(a)Pyrene	4000.000	4313.024	-7.8	100	0.00
27		Perylene	4000.000	4115.140	-2.9	100	0.00
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	4000.000	3991.431	0.2	100	0.00
30	T	Dibenz(a,h)Anthracene	4000.000	4166.534	-4.2	100	-0.01
31	T	Benzo (g,h,i) Perylene	4000.000	4047.286	-1.2	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-29-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050811.D
Acq On : 8 May 2019 6:40 pm
Operator : bsj
Sample : 9E08049-CAL9
Misc : 1x A19D061@6000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 09:39:13 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	6000.000	5979.655	0.3	100	0.00
3	T	2-Methylnaphthalene	6000.000	6036.944	-0.6	100	0.00
4	T	1-Methylnaphthalene	6000.000	5995.961	0.1	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	6000.000	5823.605	2.9	100	0.00
7	T	Acenaphthylene	6000.000	6024.866	-0.4	100	0.00
8	T	Acenaphthene	6000.000	6064.123	-1.1	100	0.00
9		Dibenzofuran	6000.000	6033.664	-0.6	100	0.00
10	T	Fluorene	6000.000	6211.987	-3.5	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	6000.000	5947.620	0.9	100	0.00
13	T	Anthracene	6000.000	6162.422	-2.7	100	0.00
14		Carbazole	-1.000	3491.536	0.0	0	0.00
15	T	Fluoranthene	6000.000	6063.200	-1.1	100	0.00
16	T	Pyrene	6000.000	6147.280	-2.5	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	6000.000	5922.990	1.3	100	0.00
19	T	Benz(a)Anthracene	6000.000	5805.664	3.2	100	0.00
20	T	Chrysene	6000.000	5837.504	2.7	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	6000.000	6300.116	-5.0	100	0.00
23	T	Benzo(k)Fluoranthene	6000.000	6430.483	-7.2	100	0.00
24	T	Benzo(b+k)Fluoranthene	12000.000	12703.467	-5.9	100	0.00
25		Benzo(e) Pyrene	6000.000	6201.092	-3.4	100	0.00
26	T	Benzo(a)Pyrene	6000.000	6429.991	-7.2	99	0.00
27		Perylene	6000.000	6095.447	-1.6	100	0.00
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	0.00
29	T	Indeno(1,2,3-cd)Pyrene	6000.000	5918.545	1.4	100	0.00
30	T	Dibenz(a,h)Anthracene	6000.000	6459.691	-7.7	100	0.00
31	T	Benzo (g,h,i) Perylene	6000.000	6132.681	-2.2	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0 ✓

5-09-19 JS

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049_Requant\
Data File : D9050812.D
Acq On : 8 May 2019 7:07 pm
Operator : bsj
Sample : 9E08049-CALA
Misc : 1x A19D062@8000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 09 09:39:16 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	100	0.00
2	T	Naphthlene	8000.000	8002.496	-0.0	100	0.00
3	T	2-Methylnaphthalene	8000.000	8266.616	-3.3	100	0.00
4	T	1-Methylnaphthalene	8000.000	8165.606	-2.1	100	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
6	S	2-Fluorobiphenyl(Surr)	8000.000	8193.401	-2.4	100	0.00
7	T	Acenaphthylene	8000.000	8231.164	-2.9	100	0.00
8	T	Acenaphthene	8000.000	8098.877	-1.2	100	0.00
9		Dibenzofuran	8000.000	8125.270	-1.6	100	0.00
10	T	Fluorene	8000.000	8283.212	-3.5	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	100	0.00
12	T	Phenanthrene	8000.000	7975.676	0.3	100	0.00
13	T	Anthracene	8000.000	8321.163	-4.0	100	0.00
14		Carbazole	-1.000	3337.829	0.0	0	0.00
15	T	Fluoranthene	8000.000	8334.939	-4.2	100	0.00
16	T	Pyrene	8000.000	8307.521	-3.8	100	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
18	S	Terphenyl-d14(Surr)	8000.000	7838.305	2.0	100	0.00
19	T	Benz(a)Anthracene	8000.000	7805.361	2.4	100	0.00
20	T	Chrysene	8000.000	7977.393	0.3	100	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
22	T	Benzo(b)Fluoranthene	8000.000	8580.755	-7.3	100	0.00
23	T	Benzo(k)Fluoranthene	8000.000	8647.510	-8.1	100	0.00
24	T	Benzo(b+k)Fluoranthene	16000.000	17189.992	-7.4	100	0.00
25		Benzo(e) Pyrene	8000.000	8204.381	-2.6	100	0.00
26	T	Benzo(a)Pyrene	8000.000	8810.294	-10.1	100	0.00
27		Perylene	8000.000	8183.341	-2.3	100	0.00
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	100	0.00
29	T	Indeno(1,2,3-cd)Pyrene	8000.000	7874.013	1.6	100	0.00
30	T	Dibenz(a,h)Anthracene	8000.000	8703.460	-8.8	100	0.00
31	T	Benzo (g,h,i) Perylene	8000.000	7815.608	2.3	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-09-19

Evaluate Continuing Calibration Report

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:54:28 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	98	0.00
2	T	Naphthlene	1000.000	985.358	1.5	98	0.00
3	T	2-Methylnaphthalene	1000.000	988.696	1.1	97	0.00
4	T	1-Methylnaphthalene	1000.000	977.119	2.3	95	0.00
5	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	98	0.00
6	S	2-Fluorobiphenyl(Surr)	1000.000	1003.710	-0.4	98	0.00
7	T	Acenaphthylene	1000.000	1019.108	-1.9	100	0.00
8	T	Acenaphthene	1000.000	1000.206	-0.0	97	0.00
9		Dibenzofuran	1000.000	1010.082	-1.0	99	0.00
10	T	Fluorene	1000.000	1016.207	-1.6	100	0.00
11	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	98	0.00
12	T	Phenanthrene	1000.000	988.123	1.2	99	0.00
13	T	Anthracene	1000.000	996.855	0.3	100	0.00
14		Carbazole	1000.000	1041.877	-4.2	101	0.00
15	T	Fluoranthene	1000.000	999.448	0.1	101	0.00
16	T	Pyrene	1000.000	1002.920	-0.3	103	0.00
17	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	107	0.00
18	S	Terphenyl-d14(Surr)	1000.000	983.792	1.6	105	0.00
19	T	Benz(a)Anthracene	1000.000	975.006	2.5	108	0.00
20	T	Chrysene	1000.000	995.085	0.5	107	0.00
21	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	104	0.00
22	T	Benzo(b)Fluoranthene	1000.000	1007.192	-0.7	105	-0.02
23	T	Benzo(k)Fluoranthene	1000.000	1012.400	-1.2	105	-0.02
24	T	Benzo(b+k)Fluoranthene	2000.000	2016.921	-0.8	105	-0.07
25		Benzo(e) Pyrene	1000.000	991.973	0.8	102	-0.02
26	T	Benzo(a)Pyrene	1000.000	999.914	0.0	102	-0.01
27		Perylene	1000.000	1147.382	-14.7	118	-0.01
28		Dibenz(a,h)anthracene-d14 (	2000.000	2000.000	0.0	98	-0.01
29	T	Indeno(1,2,3-cd)Pyrene	1000.000	989.127	1.1	96	-0.01
30	T	Dibenz(a,h)Anthracene	1000.000	986.734	1.3	96	-0.01
31	T	Benzo (g,h,i) Perylene	1000.000	988.075	1.2	95	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5-9-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:54:28 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.749	136	498732	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	245258	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	345376	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	179105	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	121300	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	76104	2000.00 ng/mL	-0.01
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.786	172	182451	1003.71 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	93240	983.79 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.769	128	254722	985.36 ng/ml	99
3) 2-Methylnaphthalene	6.434	142	165246	988.70 ng/ml	99
4) 1-Methylnaphthalene	6.532	142	158374	977.12 ng/ml	98
7) Acenaphthylene	7.311	152	225724	1019.11 ng/ml	98
8) Acenaphthene	7.482	153	148343	1000.21 ng/ml	97
9) Dibenzofuran	7.648	168	199759	1010.08 ng/mL	89
10) Fluorene	7.983	166	156392	1016.21 ng/ml	99
12) Phenanthrene	8.931	178	196498	988.12 ng/ml	98
13) Anthracene	8.979	178	200182	996.86 ng/ml	98
14) Carbazole	9.127	167	161787	1041.88 ng/mL	99
15) Fluoranthene	10.097	202	169364	999.45 ng/ml	99
16) Pyrene	10.319	202	169124	1002.92 ng/ml	98
19) Benz(a)Anthracene	11.692	228	105367	975.01 ng/ml	96
20) Chrysene	11.748	228	104873	995.08 ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	78878	1007.19 ng/ml	67
23) Benzo(k)Fluoranthene	13.577	252	78573	1012.40 ng/ml	70
24) Benzo(b+k)Fluoranthene	13.525	252	157887	2016.92 ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	77309	991.97 ng/mL	95
26) Benzo(a)Pyrene	14.186	252	67303	999.91 ng/ml	69
27) Perylene	14.358	252	74690	1147.38 ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.726	276	47325	989.13 ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	43105	986.73 ng/ml	69
31) Benzo (g,h,i) Perylene	17.278	276	50844	988.08 ng/ml	87

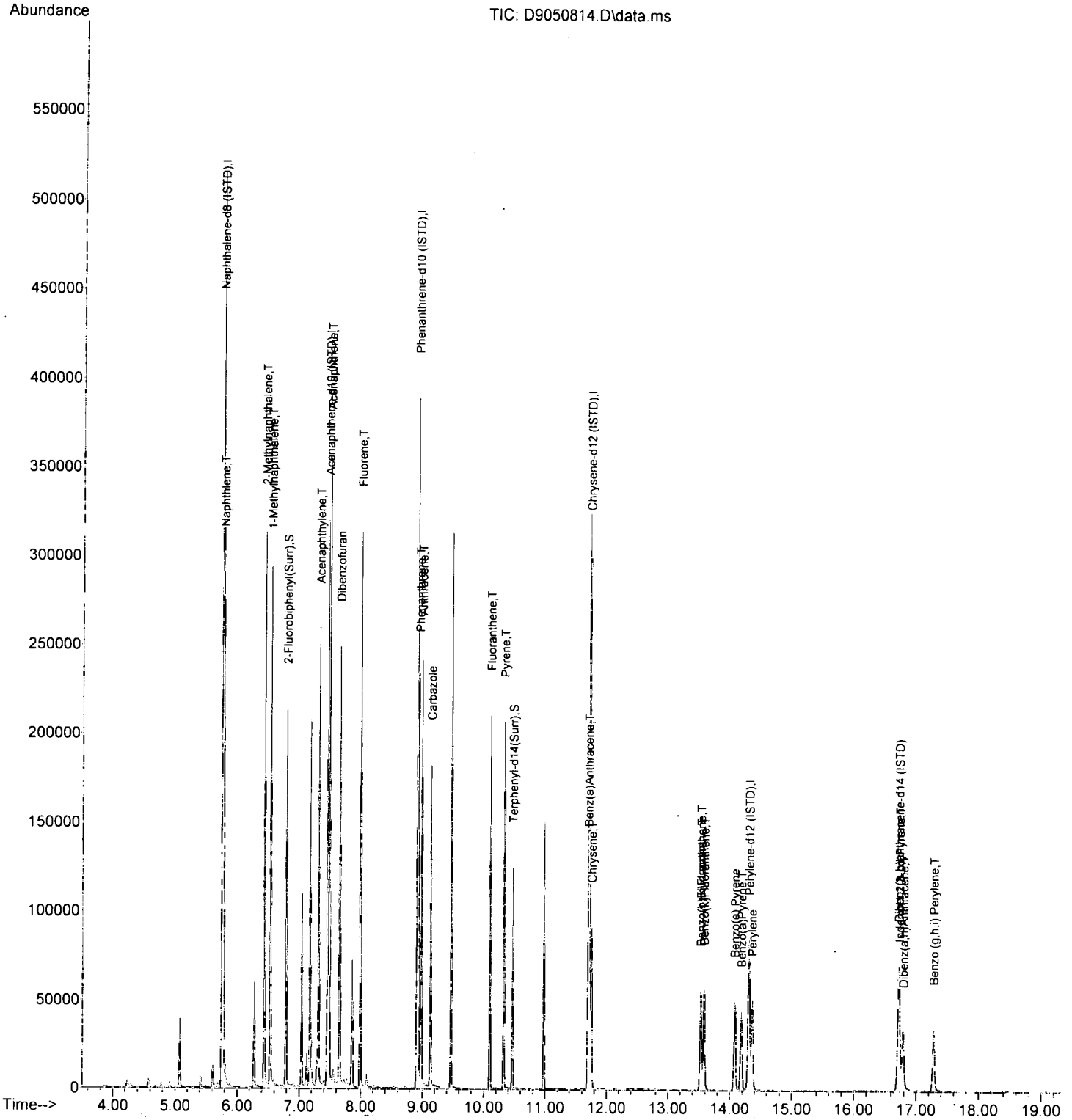
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:54:28 2019
Quant Method : C:\msdchem\1\methods\SV4_050919.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu May 09 08:52:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



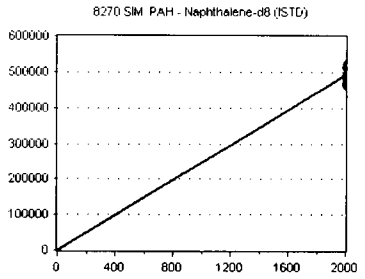
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Naphthalene-d8 (ISTD)

Curve Fit: **AVERAGE RF**

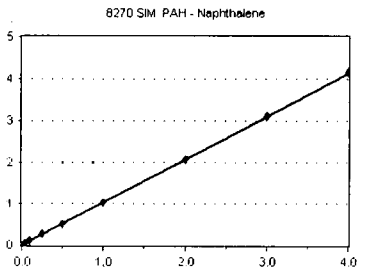


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	466187	233.093	5.75
9E08049-CAL2	2000	463733	231.867	5.75
9E08049-CAL3	2000	471590	235.795	5.75
9E08049-CAL4	2000	492717	246.358	5.75
9E08049-CAL5	2000	492814	246.407	5.75
9E08049-CAL6	2000	510967	255.483	5.75
9E08049-CAL7	2000	476839	238.420	5.75
9E08049-CAL8	2000	517036	258.518	5.75
9E08049-CAL9	2000	521237	260.618	5.75
9E08049-CALA	2000	514968	257.484	5.76

AVE RF **246.404** RF RSD **4.52** AVE RT **5.75**

Naphthalene

Curve Fit: **AVERAGE RF**

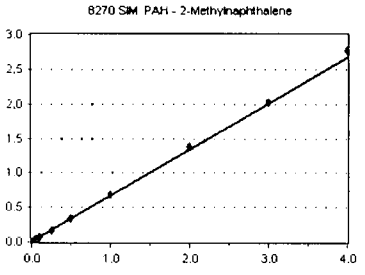


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	4689	1.006	5.77
9E08049-CAL2	50	11873	1.024	5.77
9E08049-CAL3	100	24984	1.060	5.77
9E08049-CAL4	200	52183	1.059	5.77
9E08049-CAL5	500	129108	1.048	5.77
9E08049-CAL6	1000	261032	1.022	5.77
9E08049-CAL7	2000	494185	1.036	5.77
9E08049-CAL8	4000	1076783	1.041	5.77
9E08049-CAL9	6000	1615843	1.033	5.77
9E08049-CALA	8000	2136745	1.037	5.77

AVE RF **1.037** RF RSD **1.61** AVE RT **5.77**

2-Methylnaphthalene

Curve Fit: **AVERAGE RF**

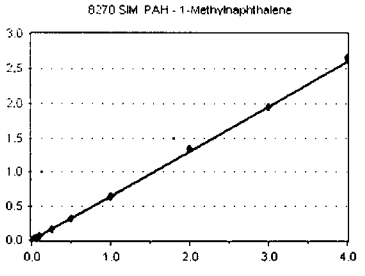


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2933	0.629	6.43
9E08049-CAL2	50	7648	0.660	6.43
9E08049-CAL3	100	15759	0.668	6.43
9E08049-CAL4	200	33247	0.675	6.43
9E08049-CAL5	500	83046	0.674	6.43
9E08049-CAL6	1000	170938	0.669	6.44
9E08049-CAL7	2000	320988	0.673	6.43
9E08049-CAL8	4000	710284	0.687	6.43
9E08049-CAL9	6000	1054717	0.674	6.43
9E08049-CALA	8000	1427088	0.693	6.43

AVE RF **0.670** RF RSD **2.56** AVE RT **6.43**

1-Methylnaphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2804	0.601	6.53
9E08049-CAL2	50	7328	0.632	6.53
9E08049-CAL3	100	15375	0.652	6.53
9E08049-CAL4	200	32655	0.663	6.53
9E08049-CAL5	500	81160	0.659	6.53
9E08049-CAL6	1000	166096	0.650	6.53
9E08049-CAL7	2000	313064	0.657	6.53
9E08049-CAL8	4000	693878	0.671	6.53
9E08049-CAL9	6000	1017377	0.651	6.53
9E08049-CALA	8000	1368536	0.664	6.53

AVE RF **0.650** RF RSD **3.08** AVE RT **6.53**

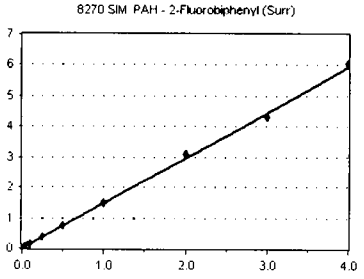
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

2-Fluorobiphenyl (Surr)

Curve Fit: **AVERAGE RF**

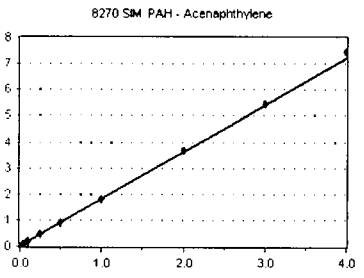


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3198	1.387	6.79
9E08049-CAL2	50	8018	1.446	6.79
9E08049-CAL3	100	17297	1.535	6.79
9E08049-CAL4	200	36441	1.459	6.79
9E08049-CAL5	500	90965	1.520	6.79
9E08049-CAL6	1000	185360	1.478	6.79
9E08049-CAL7	2000	347194	1.492	6.79
9E08049-CAL8	4000	774141	1.549	6.79
9E08049-CAL9	6000	1120425	1.439	6.79
9E08049-CALA	8000	1562167	1.518	6.79

AVE RF **1.482** RF RSD **3.39** AVE RT **6.79**

Acenaphthylene

Curve Fit: **AVERAGE RF**

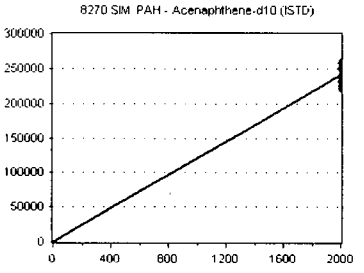


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3967	1.721	7.31
9E08049-CAL2	50	9772	1.762	7.31
9E08049-CAL3	100	20275	1.799	7.31
9E08049-CAL4	200	44087	1.766	7.31
9E08049-CAL5	500	111217	1.858	7.31
9E08049-CAL6	1000	225669	1.799	7.31
9E08049-CAL7	2000	427487	1.837	7.31
9E08049-CAL8	4000	923218	1.847	7.31
9E08049-CAL9	6000	1412401	1.814	7.32
9E08049-CALA	8000	1912248	1.858	7.32

AVE RF **1.806** RF RSD **2.55** AVE RT **7.31**

Acenaphthene-d10 (ISTD)

Curve Fit: **AVERAGE RF**

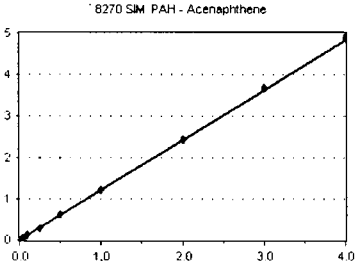


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	230511	115.255	7.45
9E08049-CAL2	2000	221804	110.902	7.45
9E08049-CAL3	2000	225358	112.679	7.45
9E08049-CAL4	2000	249711	124.855	7.45
9E08049-CAL5	2000	239395	119.698	7.45
9E08049-CAL6	2000	250878	125.439	7.45
9E08049-CAL7	2000	232647	116.324	7.45
9E08049-CAL8	2000	249933	124.966	7.45
9E08049-CAL9	2000	259583	129.791	7.45
9E08049-CALA	2000	257246	128.623	7.45

AVE RF **120.853** RF RSD **5.61** AVE RT **7.45**

Acenaphthene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2650	1.150	7.48
9E08049-CAL2	50	6529	1.177	7.48
9E08049-CAL3	100	13798	1.225	7.48
9E08049-CAL4	200	30379	1.217	7.48
9E08049-CAL5	500	73853	1.234	7.48
9E08049-CAL6	1000	152955	1.219	7.48
9E08049-CAL7	2000	282947	1.216	7.48
9E08049-CAL8	4000	605481	1.211	7.48
9E08049-CAL9	6000	951380	1.222	7.48
9E08049-CALA	8000	1259183	1.224	7.48

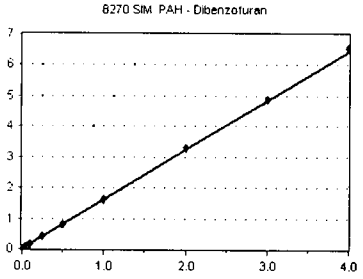
AVE RF **1.209** RF RSD **2.13** AVE RT **7.48**

Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Dibenzofuran

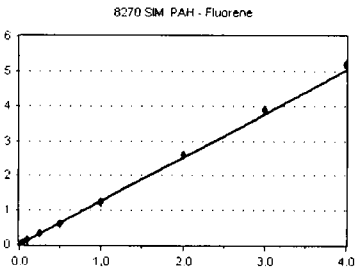


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3419	1.483	7.65
9E08049-CAL2	50	8715	1.572	7.65
9E08049-CAL3	100	18384	1.632	7.65
9E08049-CAL4	200	40515	1.622	7.65
9E08049-CAL5	500	99804	1.668	7.65
9E08049-CAL6	1000	202127	1.611	7.65
9E08049-CAL7	2000	380141	1.634	7.65
9E08049-CAL8	4000	822550	1.646	7.65
9E08049-CAL9	6000	1262943	1.622	7.65
9E08049-CALA	8000	1685438	1.638	7.65

AVE RF **1.613** RF RSD **3.21** AVE RT **7.65**

Fluorene

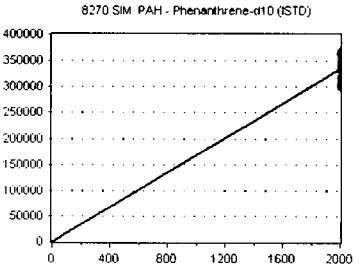


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2663	1.155	7.98
9E08049-CAL2	50	6694	1.207	7.98
9E08049-CAL3	100	14137	1.255	7.98
9E08049-CAL4	200	31515	1.262	7.98
9E08049-CAL5	500	77520	1.295	7.98
9E08049-CAL6	1000	156316	1.246	7.98
9E08049-CAL7	2000	289620	1.245	7.99
9E08049-CAL8	4000	644798	1.290	7.99
9E08049-CAL9	6000	1010699	1.298	7.99
9E08049-CALA	8000	1334221	1.297	7.99

AVE RF **1.255** RF RSD **3.65** AVE RT **7.99**

Phenanthrene-d10 (ISTD)

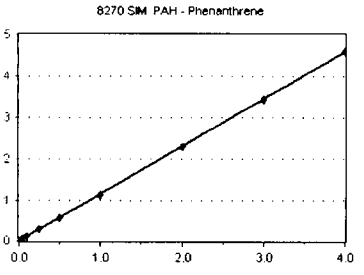


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	304584	152.292	8.91
9E08049-CAL2	2000	301378	150.689	8.90
9E08049-CAL3	2000	306553	153.276	8.90
9E08049-CAL4	2000	338434	169.217	8.90
9E08049-CAL5	2000	332652	166.326	8.90
9E08049-CAL6	2000	350771	175.385	8.91
9E08049-CAL7	2000	318049	159.025	8.90
9E08049-CAL8	2000	360425	180.213	8.91
9E08049-CAL9	2000	362274	181.137	8.91
9E08049-CALA	2000	368024	184.012	8.91

AVE RF **167.157** RF RSD **7.65** AVE RT **8.91**

Phenanthrene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3589	1.178	8.93
9E08049-CAL2	50	8731	1.159	8.93
9E08049-CAL3	100	17675	1.153	8.93
9E08049-CAL4	200	38909	1.150	8.93
9E08049-CAL5	500	97019	1.167	8.93
9E08049-CAL6	1000	198671	1.133	8.93
9E08049-CAL7	2000	359989	1.132	8.93
9E08049-CAL8	4000	832431	1.155	8.93
9E08049-CAL9	6000	1240610	1.142	8.93
9E08049-CALA	8000	1690046	1.148	8.93

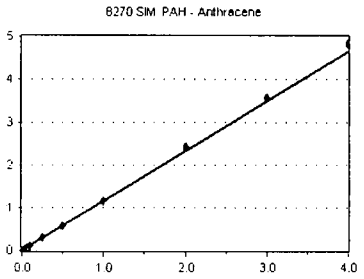
AVE RF **1.152** RF RSD **1.25** AVE RT **8.93**

Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Anthracene

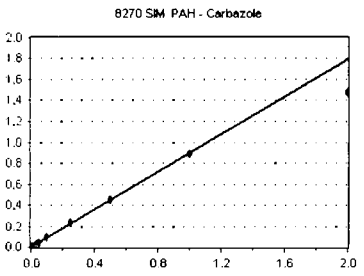


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	3434	1.127	8.98
9E08049-CAL2	50	8425	1.118	8.98
9E08049-CAL3	100	17535	1.144	8.98
9E08049-CAL4	200	38648	1.142	8.98
9E08049-CAL5	500	98494	1.184	8.98
9E08049-CAL6	1000	199237	1.136	8.98
9E08049-CAL7	2000	369906	1.163	8.98
9E08049-CAL8	4000	873705	1.212	8.98
9E08049-CAL9	6000	1296799	1.193	8.98
9E08049-CALA	8000	1778933	1.208	8.99

AVE RF **1.163** RF RSD **2.96** AVE RT **8.98**

Carbazole

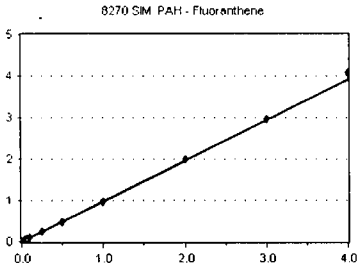


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2762	0.907	9.13
9E08049-CAL2	50	6820	0.905	9.13
9E08049-CAL3	100	14166	0.924	9.13
9E08049-CAL4	200	31934	0.944	9.13
9E08049-CAL5	500	80782	0.971	9.13
9E08049-CAL6	1000	160766	0.917	9.13
9E08049-CAL7	2000	282079	0.887	9.13
9E08049-CAL8	4000	532740	0.739	9.13
~~9E08049-CAL9~~	~~6000~~	~~573298~~	~~0.527~~	~~9.13~~
~~9E08049-CALA~~	~~8000~~	~~552300~~	~~0.375~~	~~9.13~~

AVE RF **0.899** RF RSD **7.75** AVE RT **9.13**

Fluoranthene

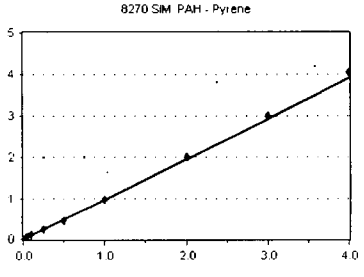


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2877	0.945	10.10
9E08049-CAL2	50	7146	0.948	10.10
9E08049-CAL3	100	15086	0.984	10.10
9E08049-CAL4	200	33069	0.977	10.10
9E08049-CAL5	500	83706	1.007	10.10
9E08049-CAL6	1000	167364	0.954	10.10
9E08049-CAL7	2000	310889	0.977	10.10
9E08049-CAL8	4000	725379	1.006	10.10
9E08049-CAL9	6000	1077725	0.992	10.10
9E08049-CALA	8000	1505038	1.022	10.10

AVE RF **0.981** RF RSD **2.69** AVE RT **10.10**

Pyrene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2874	0.944	10.32
9E08049-CAL2	50	7229	0.959	10.32
9E08049-CAL3	100	14897	0.972	10.32
9E08049-CAL4	200	33170	0.980	10.32
9E08049-CAL5	500	82420	0.991	10.32
9E08049-CAL6	1000	164492	0.938	10.32
9E08049-CAL7	2000	305607	0.961	10.32
9E08049-CAL8	4000	724953	1.006	10.33
9E08049-CAL9	6000	1087344	1.000	10.33
9E08049-CALA	8000	1492775	1.014	10.33

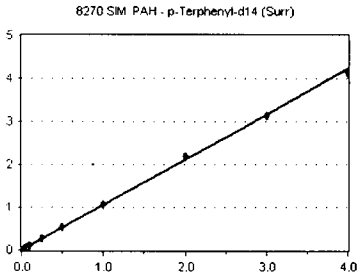
AVE RF **0.977** RF RSD **2.69** AVE RT **10.32**

Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

p-Terphenyl-d14 (Surr)

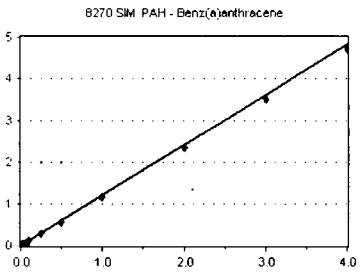


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1566	1.035	10.46
9E08049-CAL2	50	3785	1.077	10.47
9E08049-CAL3	100	7976	1.070	10.46
9E08049-CAL4	200	17883	1.027	10.47
9E08049-CAL5	500	45061	1.081	10.46
9E08049-CAL6	1000	88878	1.062	10.47
9E08049-CAL7	2000	168672	1.055	10.46
9E08049-CAL8	4000	404521	1.095	10.47
9E08049-CAL9	6000	610757	1.045	10.47
9E08049-CALA	8000	826441	1.037	10.47

AVE RF **1.058** RF RSD **2.11** AVE RT **10.46**

Benz(a)anthracene

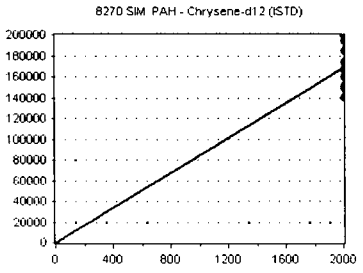


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	2121	1.402	11.70
9E08049-CAL2	50	4315	1.228	11.69
9E08049-CAL3	100	9030	1.212	11.69
9E08049-CAL4	200	20553	1.181	11.69
9E08049-CAL5	500	50228	1.205	11.69
9E08049-CAL6	1000	97157	1.160	11.69
9E08049-CAL7	2000	185923	1.163	11.69
9E08049-CAL8	4000	433129	1.172	11.70
9E08049-CAL9	6000	682737	1.168	11.70
9E08049-CALA	8000	938499	1.178	11.70

AVE RF **1.207** RF RSD **5.97** AVE RT **11.69**

Chrysene-d12 (ISTD)

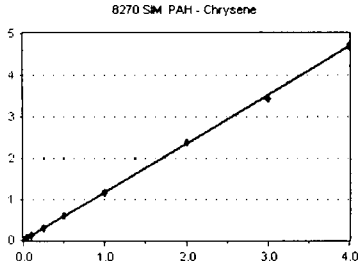


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	151327	75.664	11.71
9E08049-CAL2	2000	140551	70.276	11.71
9E08049-CAL3	2000	149032	74.516	11.71
9E08049-CAL4	2000	174083	87.041	11.71
9E08049-CAL5	2000	166780	83.390	11.71
9E08049-CAL6	2000	167448	83.724	11.71
9E08049-CAL7	2000	159832	79.916	11.71
9E08049-CAL8	2000	184787	92.394	11.71
9E08049-CAL9	2000	194906	97.453	11.71
9E08049-CALA	2000	199250	99.625	11.72

AVE RF **84.400** RF RSD **11.64** AVE RT **11.71**

Chrysene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1746	1.154	11.75
9E08049-CAL2	50	4077	1.160	11.75
9E08049-CAL3	100	8974	1.204	11.75
9E08049-CAL4	200	20755	1.192	11.75
9E08049-CAL5	500	50502	1.211	11.74
9E08049-CAL6	1000	98010	1.171	11.75
9E08049-CAL7	2000	186429	1.166	11.75
9E08049-CAL8	4000	440324	1.191	11.75
9E08049-CAL9	6000	669359	1.145	11.75
9E08049-CALA	8000	935309	1.174	11.76

AVE RF **1.177** RF RSD **1.87** AVE RT **11.75**

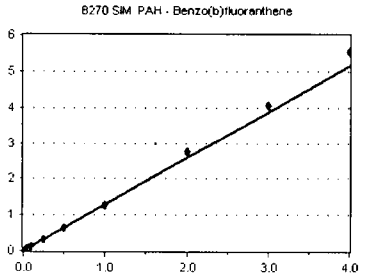
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Benzo(b)fluoranthene

Curve Fit: **AVERAGE RF**

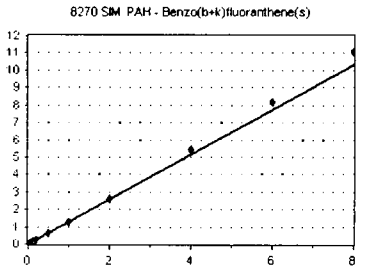


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1405	1.192	13.53
9E08049-CAL2	50	3160	1.210	13.53
9E08049-CAL3	100	7211	1.240	13.53
9E08049-CAL4	200	16784	1.283	13.53
9E08049-CAL5	500	41100	1.301	13.53
9E08049-CAL6	1000	75164	1.291	13.53
9E08049-CAL7	2000	142711	1.274	13.53
9E08049-CAL8	4000	333201	1.381	13.53
9E08049-CAL9	6000	505566	1.356	13.54
9E08049-CALA	8000	710929	1.385	13.54

AVE RF **1.291** RF RSD **5.19** AVE RT **13.53**

Benzo(b+k)fluoranthene(s)

Curve Fit: **AVERAGE RF**

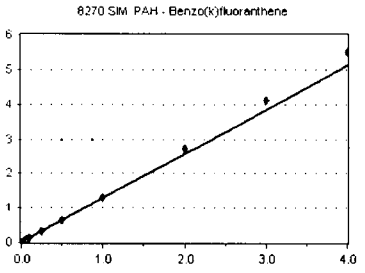


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	40	2839	1.204	13.58
9E08049-CAL2	100	6341	1.214	13.58
9E08049-CAL3	200	14356	1.234	13.53
9E08049-CAL4	400	33074	1.264	13.53
9E08049-CAL5	1000	81849	1.296	13.53
9E08049-CAL6	2000	150464	1.292	13.53
9E08049-CAL7	4000	287540	1.283	13.58
9E08049-CAL8	8000	660960	1.370	13.58
9E08049-CAL9	12000	1017771	1.365	13.59
9E08049-CALA	16000	1421874	1.385	13.60

AVE RF **1.291** RF RSD **5.02** AVE RT **13.56**

Benzo(k)fluoranthene

Curve Fit: **AVERAGE RF**

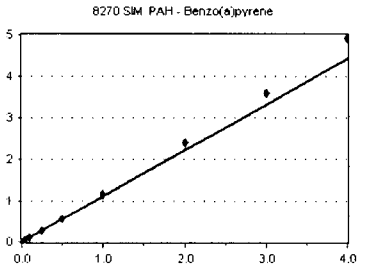


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1380	1.171	13.58
9E08049-CAL2	50	3133	1.200	13.58
9E08049-CAL3	100	7100	1.221	13.58
9E08049-CAL4	200	16151	1.234	13.58
9E08049-CAL5	500	40573	1.285	13.58
9E08049-CAL6	1000	75023	1.288	13.58
9E08049-CAL7	2000	144437	1.289	13.58
9E08049-CAL8	4000	327011	1.356	13.58
9E08049-CAL9	6000	511108	1.370	13.59
9E08049-CALA	8000	709605	1.382	13.60

AVE RF **1.280** RF RSD **5.73** AVE RT **13.58**

Benzo(a)pyrene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1167	0.990	14.18
9E08049-CAL2	50	2611	1.000	14.19
9E08049-CAL3	100	6028	1.036	14.18
9E08049-CAL4	200	13946	1.066	14.18
9E08049-CAL5	500	34623	1.096	14.18
9E08049-CAL6	1000	66021	1.134	14.19
9E08049-CAL7	2000	128808	1.150	14.19
9E08049-CAL8	4000	289898	1.202	14.19
9E08049-CAL9	6000	445993	1.196	14.19
9E08049-CALA	8000	630473	1.228	14.20

AVE RF **1.110** RF RSD **7.71** AVE RT **14.19**

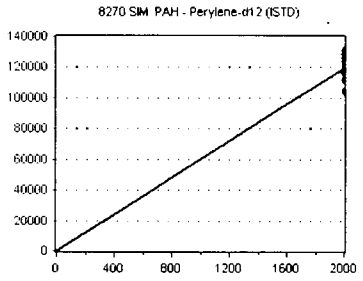
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Perylene-d12 (ISTD)

Curve Fit: **AVERAGE RF**

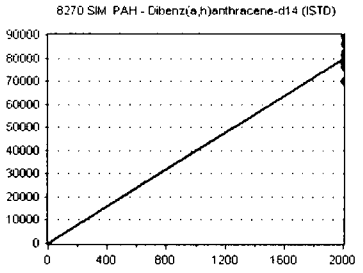


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	117866	58.933	14.31
9E08049-CAL2	2000	104431	52.216	14.31
9E08049-CAL3	2000	116316	58.158	14.31
9E08049-CAL4	2000	130840	65.420	14.31
9E08049-CAL5	2000	126329	63.164	14.31
9E08049-CAL6	2000	116473	58.236	14.31
9E08049-CAL7	2000	112021	56.011	14.31
9E08049-CAL8	2000	120610	60.305	14.31
9E08049-CAL9	2000	124314	62.157	14.31
9E08049-CALA	2000	128368	64.184	14.31

AVE RF **59.878** RF RSD **6.72** AVE RT **14.31**

Dibenz(a,h)anthracene-d14 (ISTD

Curve Fit: **AVERAGE RF**

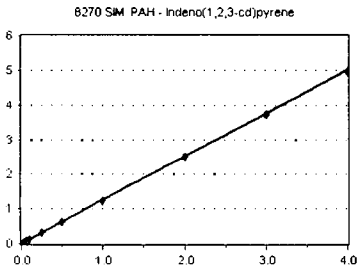


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	2000	82315	41.158	16.72
9E08049-CAL2	2000	69899	34.949	16.71
9E08049-CAL3	2000	77795	38.898	16.72
9E08049-CAL4	2000	89555	44.778	16.72
9E08049-CAL5	2000	78494	39.247	16.71
9E08049-CAL6	2000	78010	39.005	16.72
9E08049-CAL7	2000	77875	38.938	16.72
9E08049-CAL8	2000	76553	38.277	16.72
9E08049-CAL9	2000	81338	40.669	16.72
9E08049-CALA	2000	86139	43.069	16.73

AVE RF **39.899** RF RSD **6.80** AVE RT **16.72**

Indeno(1,2,3-cd)pyrene

Curve Fit: **AVERAGE RF**

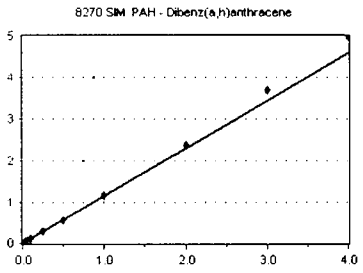


Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1044	1.268	16.72
9E08049-CAL2	50	2160	1.236	16.72
9E08049-CAL3	100	4943	1.271	16.72
9E08049-CAL4	200	11276	1.259	16.73
9E08049-CAL5	500	25561	1.303	16.72
9E08049-CAL6	1000	49327	1.265	16.72
9E08049-CAL7	2000	96408	1.238	16.73
9E08049-CAL8	4000	192188	1.255	16.73
9E08049-CAL9	6000	302787	1.241	16.74
9E08049-CALA	8000	426588	1.238	16.74

AVE RF **1.257** RF RSD **1.65** AVE RT **16.73**

Dibenz(a,h)anthracene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	835	1.014	16.79
9E08049-CAL2	50	1848	1.058	16.79
9E08049-CAL3	100	4354	1.119	16.79
9E08049-CAL4	200	10135	1.132	16.79
9E08049-CAL5	500	22873	1.166	16.79
9E08049-CAL6	1000	45005	1.154	16.79
9E08049-CAL7	2000	90151	1.158	16.79
9E08049-CAL8	4000	182971	1.195	16.79
9E08049-CAL9	6000	301613	1.236	16.79
9E08049-CALA	8000	430375	1.249	16.80

AVE RF **1.148** RF RSD **6.34** AVE RT **16.79**

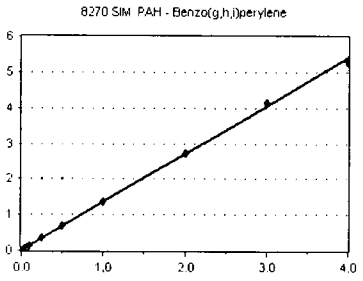
Element Calibration Review Sheet

Calibration ID: **A9E0902** Instrument: **SV-GCMS4** Calibration Date: **05/09/2019**

Analysis: **8270 SIM PAH** Instrument Cal ID: **A9E0902**

Benzo(g,h,i)perylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08049-CAL1	20	1077	1.308	17.28
9E08049-CAL2	50	2301	1.317	17.28
9E08049-CAL3	100	5262	1.353	17.28
9E08049-CAL4	200	11945	1.334	17.28
9E08049-CAL5	500	27694	1.411	17.28
9E08049-CAL6	1000	53499	1.372	17.28
9E08049-CAL7	2000	105570	1.356	17.28
9E08049-CAL8	4000	209532	1.369	17.28
9E08049-CAL9	6000	337352	1.383	17.29
9E08049-CALA	8000	455393	1.322	17.29

AVE RF **1.352** RF RSD **2.40** AVE RT **17.28**

Sequence Name: C:\HPCHEM\1\SEQUENCE\9E08049.S
Comment: EPA 8270 SIM PAH
Operator: bsj
Data Path: C:\HPCHEM\1\DATA\2019-05\9E08049\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	D9050801	DAQ808DF	9E08049-TUN1
2	Sample	2	D9050802	DAQ81024	9E08049-ICB1
3	Sample	3	D9050803	DAQ81024	9E08049-CAL1
4	Sample	4	D9050804	DAQ81024	9E08049-CAL2
5	Sample	5	D9050805	DAQ81024	9E08049-CAL3
6	Sample	6	D9050806	DAQ81024	9E08049-CAL4
7	Sample	7	D9050807	DAQ81024	9E08049-CAL5
8	Sample	8	D9050808	DAQ81024	9E08049-CAL6
9	Sample	9	D9050809	DAQ81024	9E08049-CAL7
10	Sample	10	D9050810	DAQ81024	9E08049-CAL8
11	Sample	11	D9050811	DAQ81024	9E08049-CAL9
12	Sample	12	D9050812	DAQ81024	9E08049-CALA
13	Sample	2	D9050813	DAQ81024	9E08049-IBL1
14	Sample	13	D9050814	DAQ81024	9E08049-ICV1
15	Sample	2	D9050815	DAQ81024	9E08049-IBL2

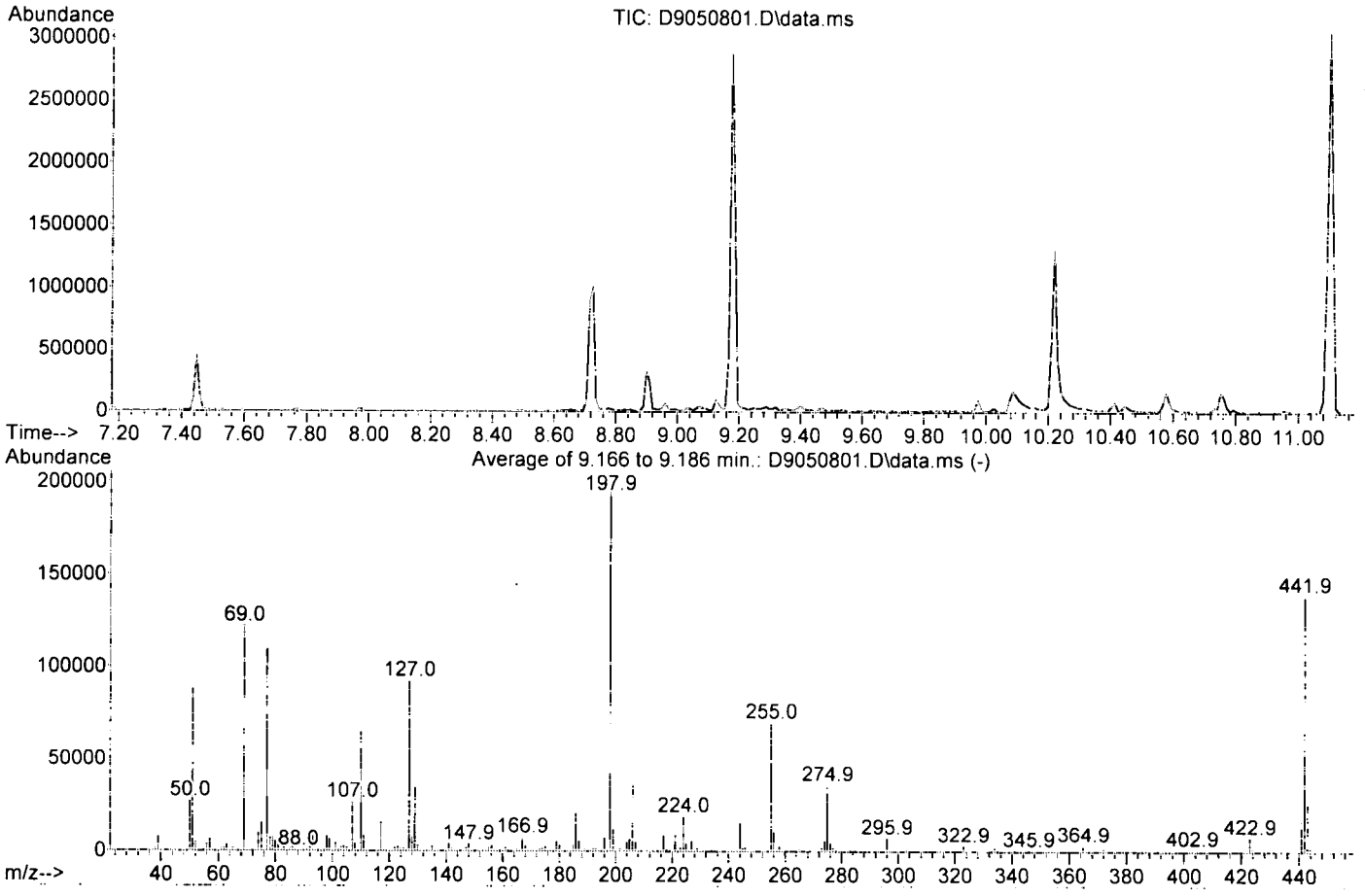
5-09-19
BBS

DFTP8270

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050801.D
Acq On : 8 May 2019 2:14 pm
Operator : bsj
Sample : 9E08049-TUN1
Misc : 1x A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\DFTPP-8270.M
Title : EPA 8270 SIM PAH
Last Update : Wed Dec 05 14:43:36 2018



AutoFind: Scans 554, 555, 556; Background Corrected with Scan 552

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	45.1	88601	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	62.2	122039	PASS
70	69	0.00	2	0.1	150	PASS
127	198	10	80	47.0	92267	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	196341	PASS
199	198	5	9	6.6	12872	PASS
275	198	10	60	18.3	35965	PASS
365	198	1	100	1.6	3135	PASS
441	442	0.01	24	14.3	19926	PASS
442	198	50	200	70.8	138970	PASS
443	442	15	24	19.4	26942	PASS

5-08-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050801.D
Acq On : 8 May 2019 2:14 pm
Operator : bsj
Sample : 9E08049-TUN1
Misc : 1x A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 14:47:14 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.749	136	199239	2000.00	ng/ml	0.00
2) Acenaphthene-d10	7.447	162	88247	2000.00	ng/ml	0.00
3) Phenanthrene-d10	8.900	188	132573	2000.00	ng/ml	-0.01
7) Chrysene-d12	11.713	240	67709	2000.00	ng/ml	0.00
8) Perylene-d12	14.311	264	43647	2000.00	ng/ml	0.01
9) Dibenz(ah)anthracene-d14	16.715	292	29722	2000.00	ng/mL	0.02
Target Compounds						Qvalue
4) Pentachlorophenol (PCP)	8.726	266	138799	35.88	ng/mL	98
5) DFTPP	9.176	198	365798	38.56	ng/mL	74
6) DDT	11.099	TIC	3527056	29415.22	ng/mL#	1

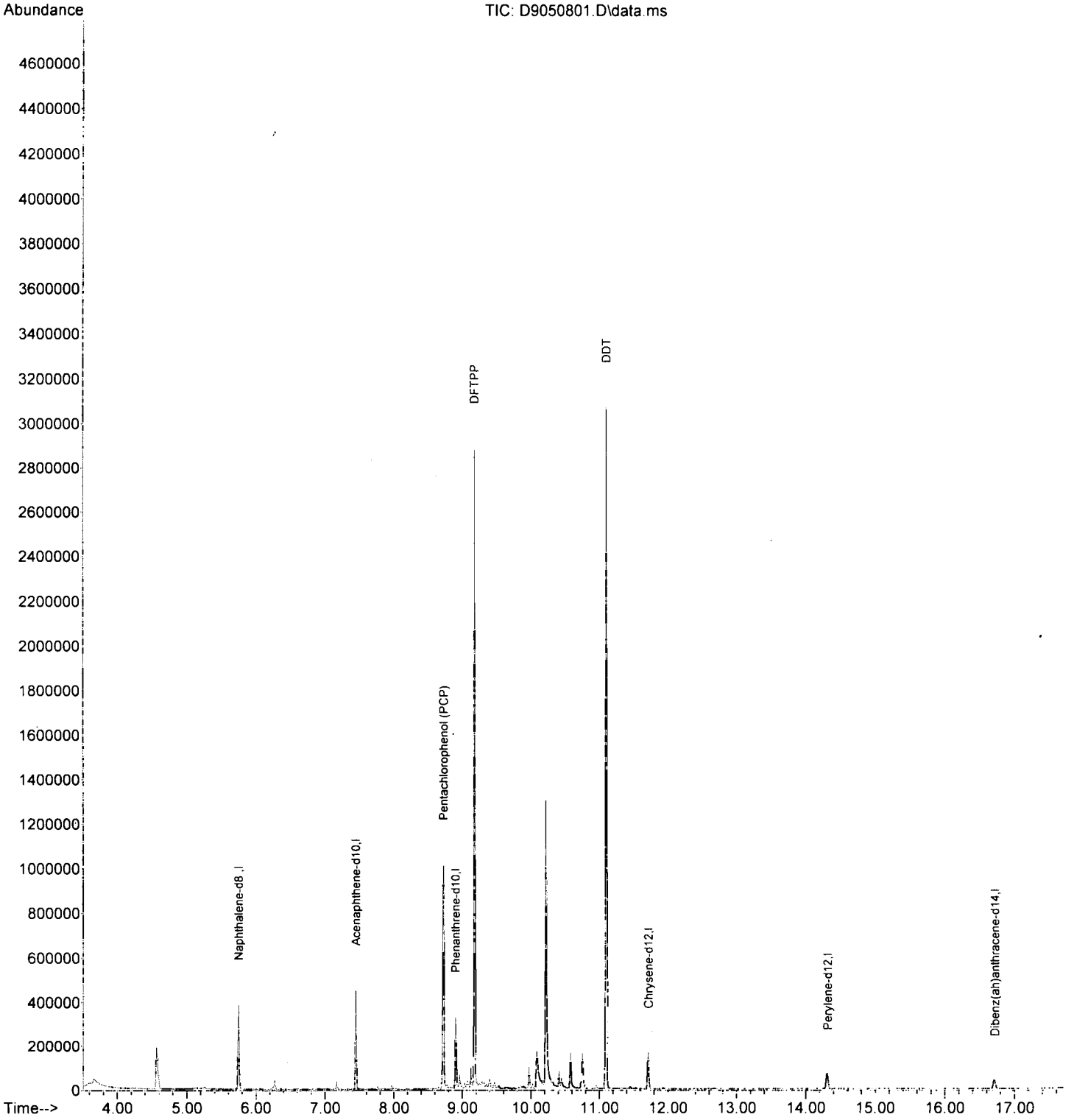
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-08-19 BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050801.D
Acq On : 8 May 2019 2:14 pm
Operator : bsj
Sample : 9E08049-TUN1
Misc : 1x A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 14:47:14 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : EPA 8270 SIM PAH
QLast Update : Wed Dec 05 14:43:36 2018
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050802.D
Acq On : 8 May 2019 2:39 pm
Operator : bsj
Sample : 9E08049-ICB1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 15:03:26 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	502696	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	247403	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.905	188	344194	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	181302	2000.00	ng/ml	0.01
21) Perylene-d12 (ISTD)	14.307	264	143120	2000.00	ng/ml	0.02
28) Dibenz(a,h)anthracene-...	16.710	292	93997	2000.00	ng/mL	0.02
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	0.000		0	N.D.		
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
7) Acenaphthylene	0.000		0	N.D.		
8) Acenaphthene	0.000		0	N.D.		
9) Dibenzofuran	0.000		0	N.D.		
10) Fluorene	0.000		0	N.D.		
12) Phenanthrene	0.000		0	N.D.		
13) Anthracene	0.000		0	N.D.		
14) Carbazole	0.000		0	N.D.		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benz(a)Anthracene	11.706	228	428	3.60	ng/ml#	55
20) Chrysene	11.706	228	428	3.72	ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.		
23) Benzo(k)Fluoranthene	0.000		0	N.D.		
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	0.000		0	N.D.		
26) Benzo(a)Pyrene	0.000		0	N.D.		
27) Perylene	14.307	252	446	5.58	ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.		
30) Dibenz(a,h)Anthracene	0.000		0	N.D.		
31) Benzo (g,h,i) Perylene	0.000		0	N.D.		

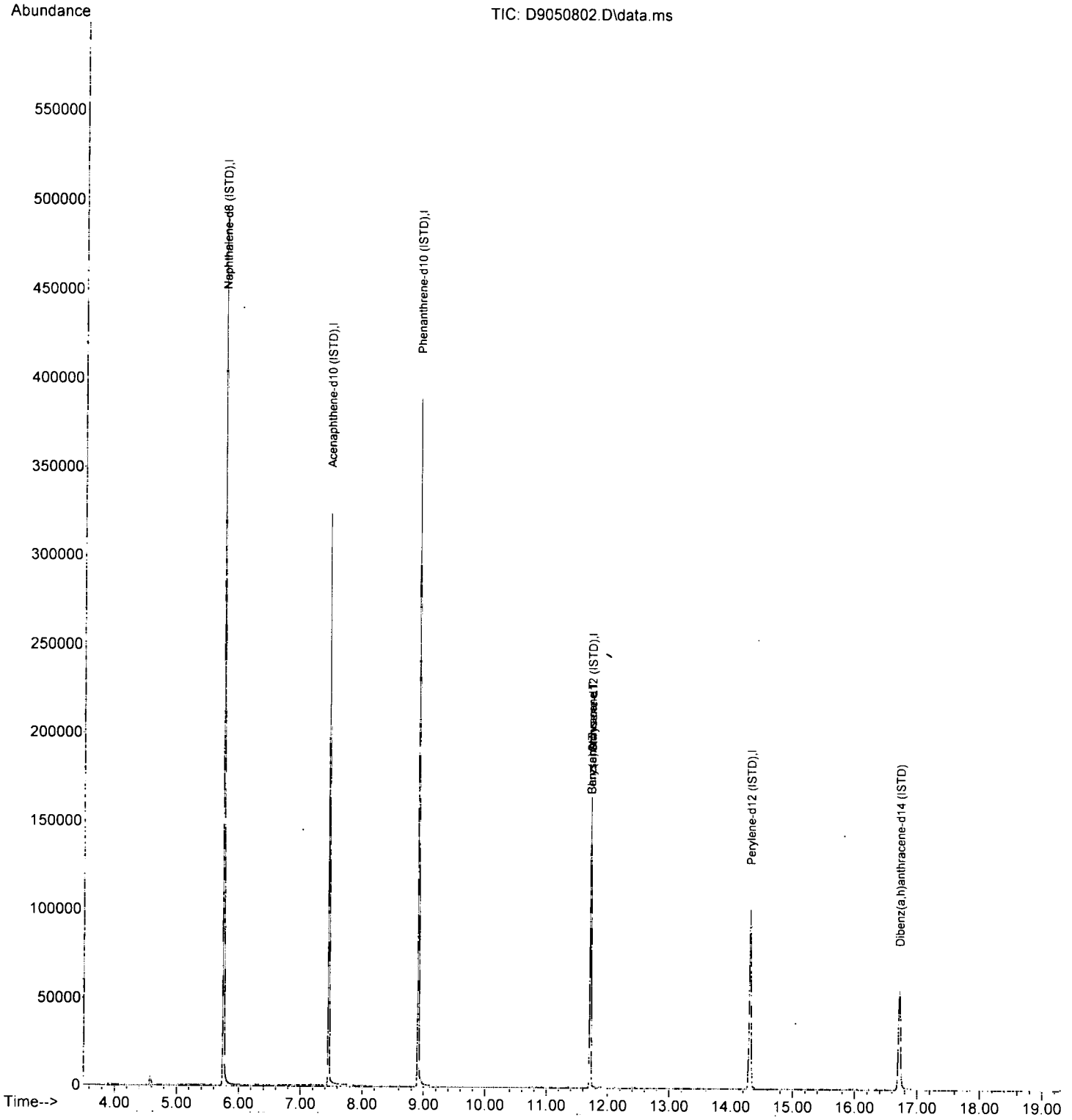
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-08-19
BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050802.D
Acq On : 8 May 2019 2:39 pm
Operator : bsj
Sample : 9E08049-ICB1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 15:03:26 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050803.D
Acq On : 8 May 2019 3:06 pm
Operator : bsj
Sample : 9E08049-CAL1
Misc : 1x A19D053@20
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 15:33:41 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	466187	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	230511	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.905	188	304584	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	151327	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.306	264	117866	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	82315	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	3198	18.45	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	1566	23.23	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	4689	19.42	ng/ml	96
3) 2-Methylnaphthalene	6.434	142	2933	18.12	ng/ml	97
4) 1-Methylnaphthalene	6.531	142	2804	17.88	ng/ml	99
7) Acenaphthylene	7.310	152	3967	18.73	ng/ml	98
8) Acenaphthene	7.482	153	2650	19.24	ng/ml	96
9) Dibenzofuran	7.654	168	3419	17.63	ng/mL	90
10) Fluorene	7.983	166	2663	17.56	ng/ml	98
12) Phenanthrene	8.926	178	3589	20.16	ng/ml	97
13) Anthracene	8.979	178	3434	18.53	ng/ml	98
14) Carbazole	9.128	167	2762	17.33	ng/mL	99
15) Fluoranthene	10.096	202	2877	16.75	ng/ml	99
16) Pyrene	10.319	202	2874	16.61	ng/ml	99
19) Benz(a)Anthracene	11.698	228	2121	21.40	ng/ml	99
20) Chrysene	11.748	228	1746	18.19	ng/ml	95
22) Benzo(b)Fluoranthene	13.525	252	1405	18.68	ng/ml	64
23) Benzo(k)Fluoranthene	13.582	252	1380	18.51	ng/ml	71
24) Benzo(b+k)Fluoranthene	13.582	252	2839	37.69	ng/ml	66
25) Benzo(e) Pyrene	14.082	252	1451	19.39	ng/mL	92
26) Benzo(a)Pyrene	14.180	252	1167	16.56	ng/ml	68
27) Perylene	14.358	252	1223	18.59	ng/mL	96
29) Indeno(1,2,3-cd)Pyrene	16.721	276	1044	18.36	ng/ml#	24
30) Dibenz(a,h)Anthracene	16.787	278	835	15.84	ng/ml	77
31) Benzo (g,h,i) Perylene	17.277	276	1077	18.05	ng/ml	88

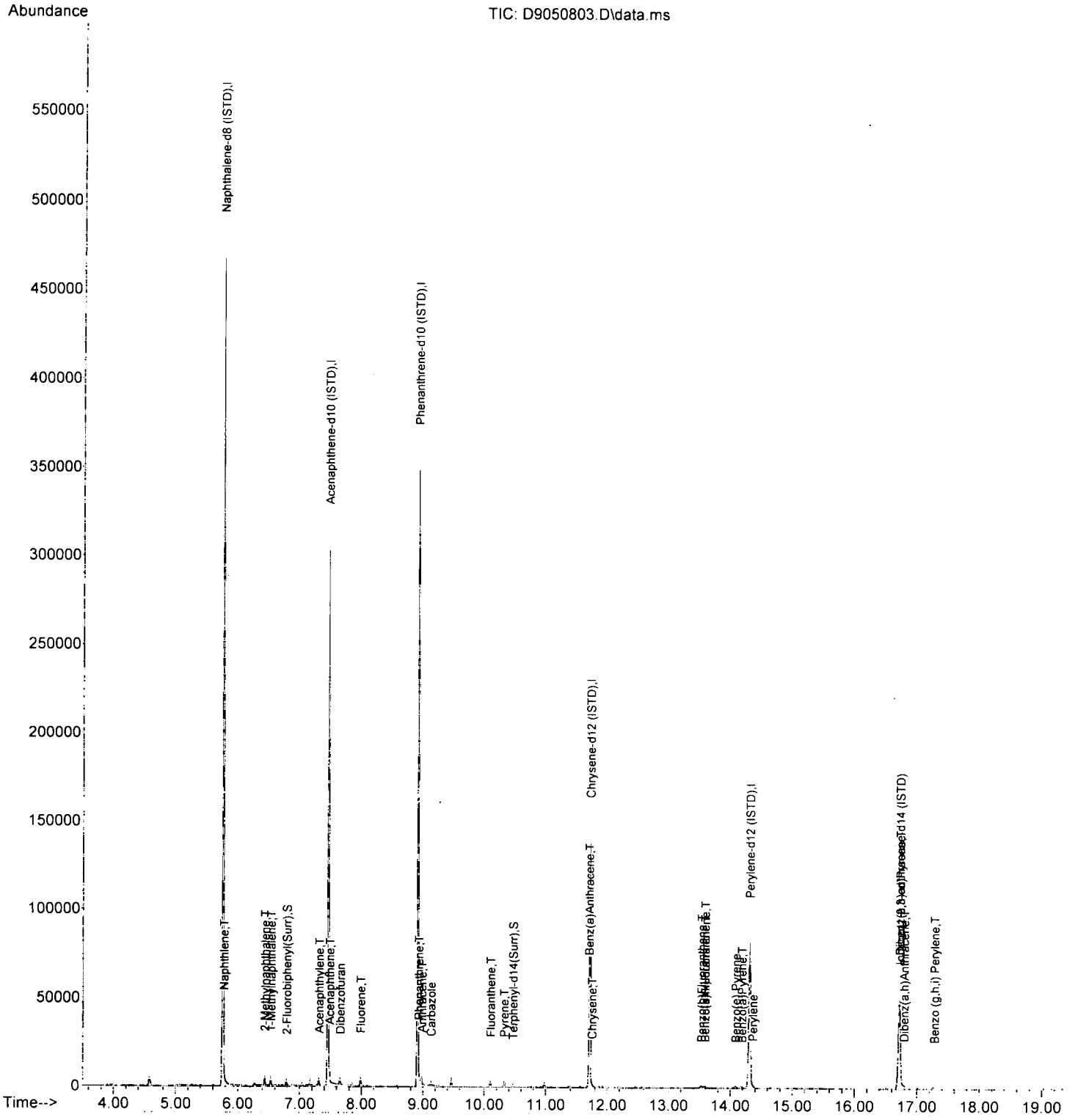
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-28-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050803.D
Acq On : 8 May 2019 3:06 pm
Operator : bsj
Sample : 9E08049-CAL1
Misc : 1x A19D053@20
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 15:33:41 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050804.D
Acq On : 8 May 2019 3:33 pm
Operator : bsj
Sample : 9E08049-CAL2
Misc : 1x A19D054@50
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 16:05:55 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	463733	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	221804	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	301378	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.712	240	140551	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.306	264	104431	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.709	292	69899	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.785	172	8018	48.06	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	3785	60.45	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	11873	49.44	ng/ml	99
3) 2-Methylnaphthalene	6.433	142	7648	47.49	ng/ml	98
4) 1-Methylnaphthalene	6.531	142	7328	46.97	ng/ml	97
7) Acenaphthylene	7.310	152	9772	47.95	ng/ml	98
8) Acenaphthene	7.482	153	6529	49.27	ng/ml	98
9) Dibenzofuran	7.653	168	8715	46.71	ng/mL	89
10) Fluorene	7.984	166	6694	45.86	ng/ml	99
12) Phenanthrene	8.930	178	8731	49.58	ng/ml	98
13) Anthracene	8.978	178	8425	45.94	ng/ml	97
14) Carbazole	9.127	167	6820	43.26	ng/mL	100
15) Fluoranthene	10.098	202	7146	42.06	ng/ml	99
16) Pyrene	10.320	202	7229	42.22	ng/ml	99
19) Benz(a)Anthracene	11.691	228	4315	46.87	ng/ml	99
20) Chrysene	11.748	228	4077	45.73	ng/ml	96
22) Benzo(b)Fluoranthene	13.530	252	3160	47.41	ng/ml	67
23) Benzo(k)Fluoranthene	13.582	252	3133	47.42	ng/ml	72
24) Benzo(b+k)Fluoranthene	13.582	252	6341	95.01	ng/ml	66
25) Benzo(e) Pyrene	14.076	252	3221	48.58	ng/mL	95
26) Benzo(a)Pyrene	14.185	252	2611	41.81	ng/ml	69
27) Perylene	14.358	252	2655	45.56	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.720	276	2160	44.73	ng/ml	51
30) Dibenz(a,h)Anthracene	16.787	278	1848	41.28	ng/ml	68
31) Benzo (g,h,i) Perylene	17.277	276	2301	45.43	ng/ml	89

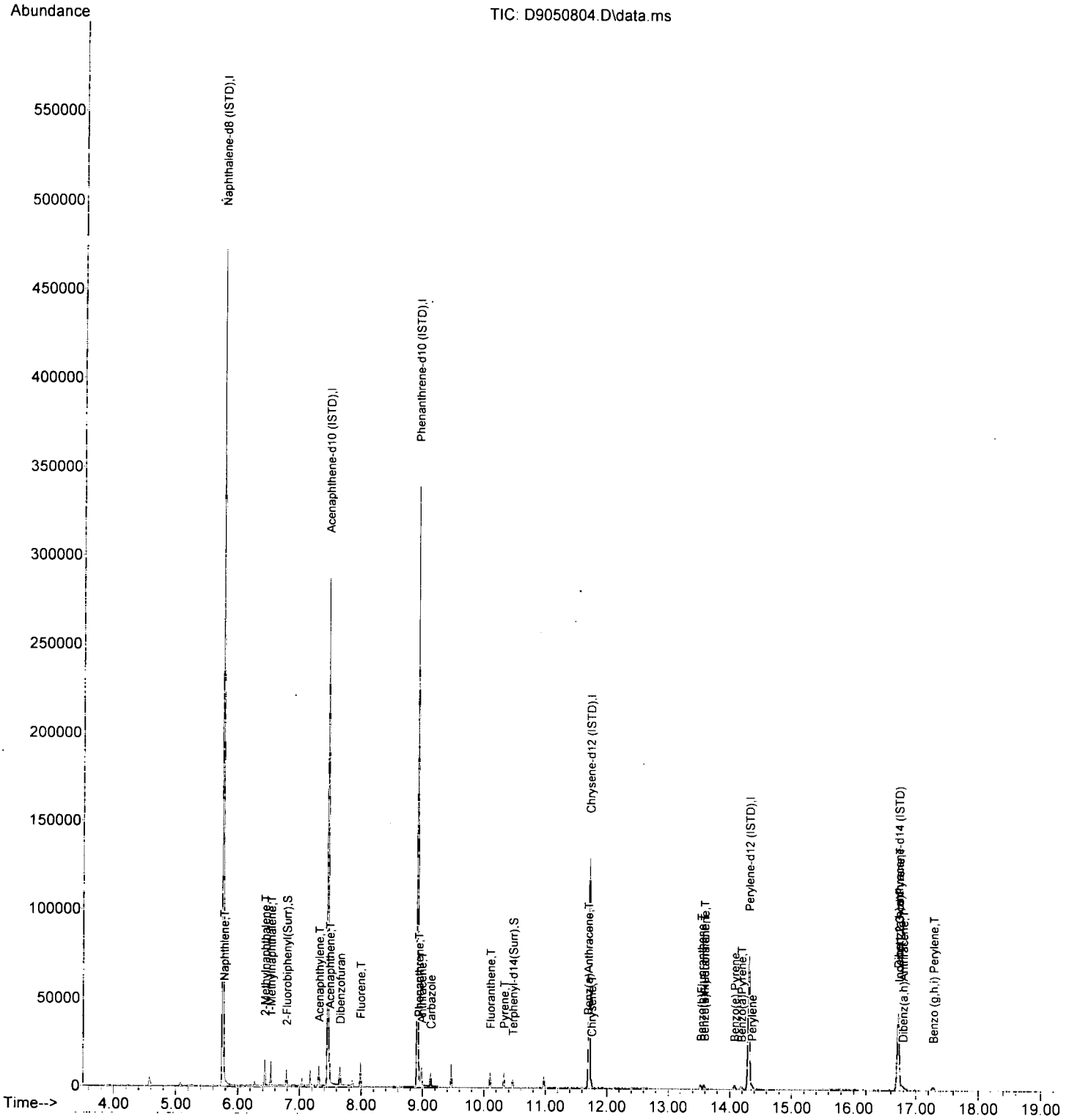
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-29-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050804.D
Acq On : 8 May 2019 3:33 pm
Operator : bsj
Sample : 9E08049-CAL2
Misc : 1x A19D054@50
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 16:05:55 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050805.D
Acq On : 8 May 2019 4:00 pm
Operator : bsj
Sample : 9E08049-CAL3
Misc : 1x A19D055@100
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 16:20:54 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.748	136	471590	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	225358	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	306553	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	149032	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	116316	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	77795	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	17297	102.05	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	7976	120.13	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.768	128	24984	102.30	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	15759	96.23	ng/ml	98
4) 1-Methylnaphthalene	6.531	142	15375	96.91	ng/ml	98
7) Acenaphthylene	7.310	152	20275	97.91	ng/ml	98
8) Acenaphthene	7.482	153	13798	102.49	ng/ml	97
9) Dibenzofuran	7.648	168	18384	96.99	ng/mL	89
10) Fluorene	7.983	166	14137	95.33	ng/ml	100
12) Phenanthrene	8.926	178	17675	98.67	ng/ml	99
13) Anthracene	8.979	178	17535	94.00	ng/ml	98
14) Carbazole	9.127	167	14166	88.34	ng/mL	100
15) Fluoranthene	10.096	202	15086	87.29	ng/ml	99
16) Pyrene	10.319	202	14897	85.54	ng/ml	99
19) Benz(a)Anthracene	11.691	228	9030	92.49	ng/ml	96
20) Chrysene	11.748	228	8974	94.92	ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	7211	97.13	ng/ml	71
23) Benzo(k)Fluoranthene	13.583	252	7100	96.48	ng/ml	71
24) Benzo(b+k)Fluoranthene	13.525	252	14356	193.13	ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	7339	99.37	ng/mL	96
26) Benzo(a)Pyrene	14.180	252	6028	86.65	ng/ml	71
27) Perylene	14.358	252	6167	95.00	ng/mL	93
29) Indeno(1,2,3-cd)Pyrene	16.721	276	4943	91.98	ng/ml	62
30) Dibenz(a,h)Anthracene	16.788	278	4354	87.38	ng/ml	75
31) Benzo (g,h,i) Perylene	17.278	276	5262	93.34	ng/ml	88

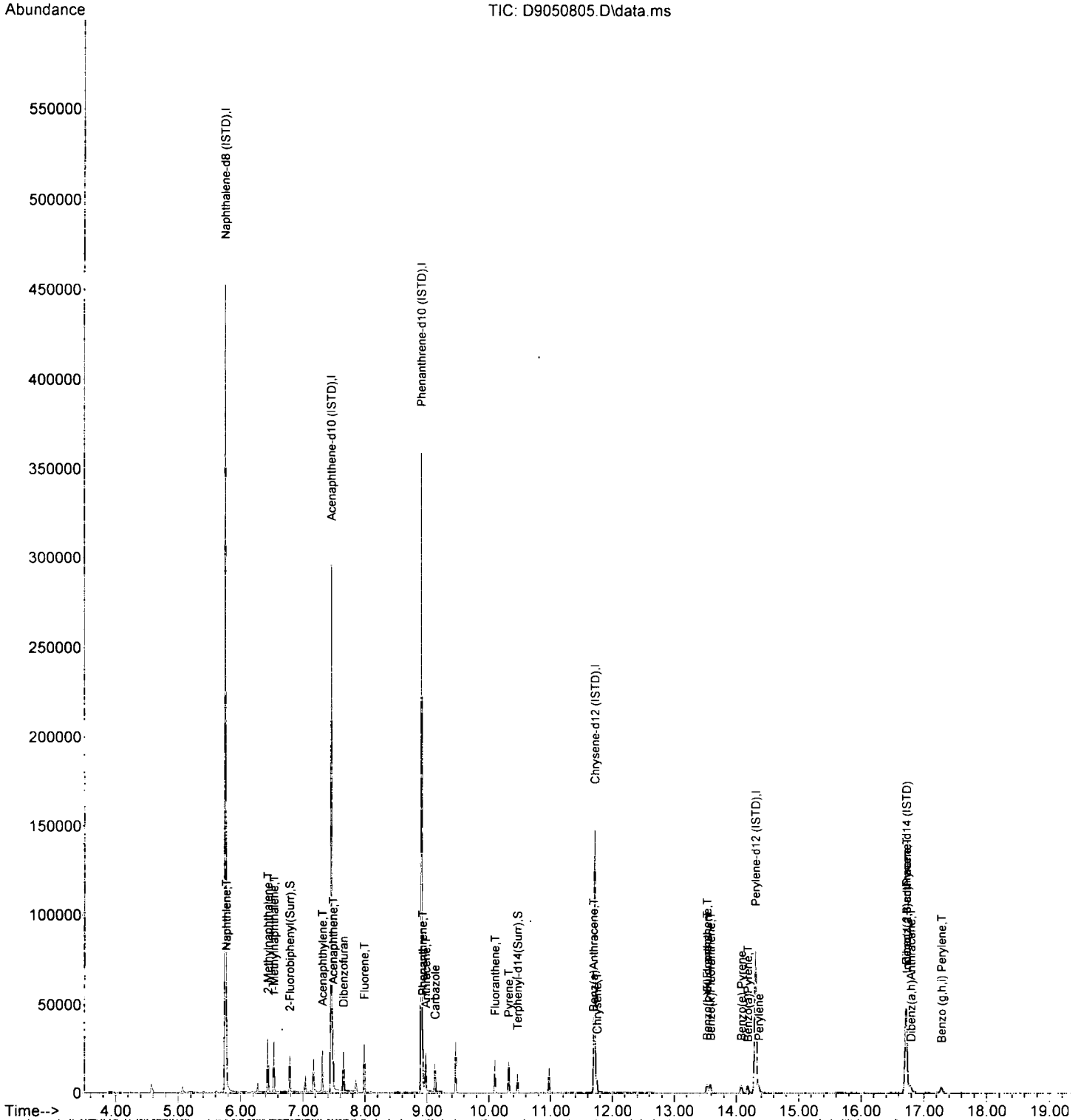
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050805.D
Acq On : 8 May 2019 4:00 pm
Operator : bsj
Sample : 9E08049-CAL3
Misc : 1x A19D055@100
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 16:20:54 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050806.D
Acq On : 8 May 2019 4:27 pm
Operator : bsj
Sample : 9E08049-CAL4
Misc : 1x A19D056@200
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 16:46:38 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	492717	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	249711	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	338434	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	174083	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	130840	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	89555	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.785	172	36441	194.02	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	17883	230.58	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	52183	204.51	ng/ml	99
3) 2-Methylnaphthalene	6.433	142	33247	194.32	ng/ml	98
4) 1-Methylnaphthalene	6.530	142	32655	197.00	ng/ml	98
7) Acenaphthylene	7.310	152	44087	192.13	ng/ml	99
8) Acenaphthene	7.482	153	30379	203.65	ng/ml	97
9) Dibenzofuran	7.654	168	40515	192.90	ng/mL	89
10) Fluorene	7.984	166	31515	191.79	ng/ml	99
12) Phenanthrene	8.931	178	38909	196.74	ng/ml	99
13) Anthracene	8.978	178	38648	187.66	ng/ml	99
14) Carbazole	9.127	167	31934	180.38	ng/mL	99
15) Fluoranthene	10.098	202	33069	173.32	ng/ml	100
16) Pyrene	10.320	202	33170	172.53	ng/ml	99
19) Benz(a)Anthracene	11.691	228	20553	180.23	ng/ml	96
20) Chrysene	11.748	228	20755	187.95	ng/ml	96
22) Benzo(b)Fluoranthene	13.526	252	16784	200.98	ng/ml	70
23) Benzo(k)Fluoranthene	13.578	252	16151	195.12	ng/ml	67
24) Benzo(b+k)Fluoranthene	13.526	252	33074	395.55	ng/ml#	58
25) Benzo(e) Pyrene	14.078	252	16734	201.43	ng/mL	95
26) Benzo(a)Pyrene	14.181	252	13946	178.22	ng/ml	68
27) Perylene	14.353	252	14129	193.50	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.726	276	11276	182.27	ng/ml	67
30) Dibenz(a,h)Anthracene	16.787	278	10135	176.69	ng/ml	72
31) Benzo (g,h,i) Perylene	17.277	276	11945	184.06	ng/ml	87

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

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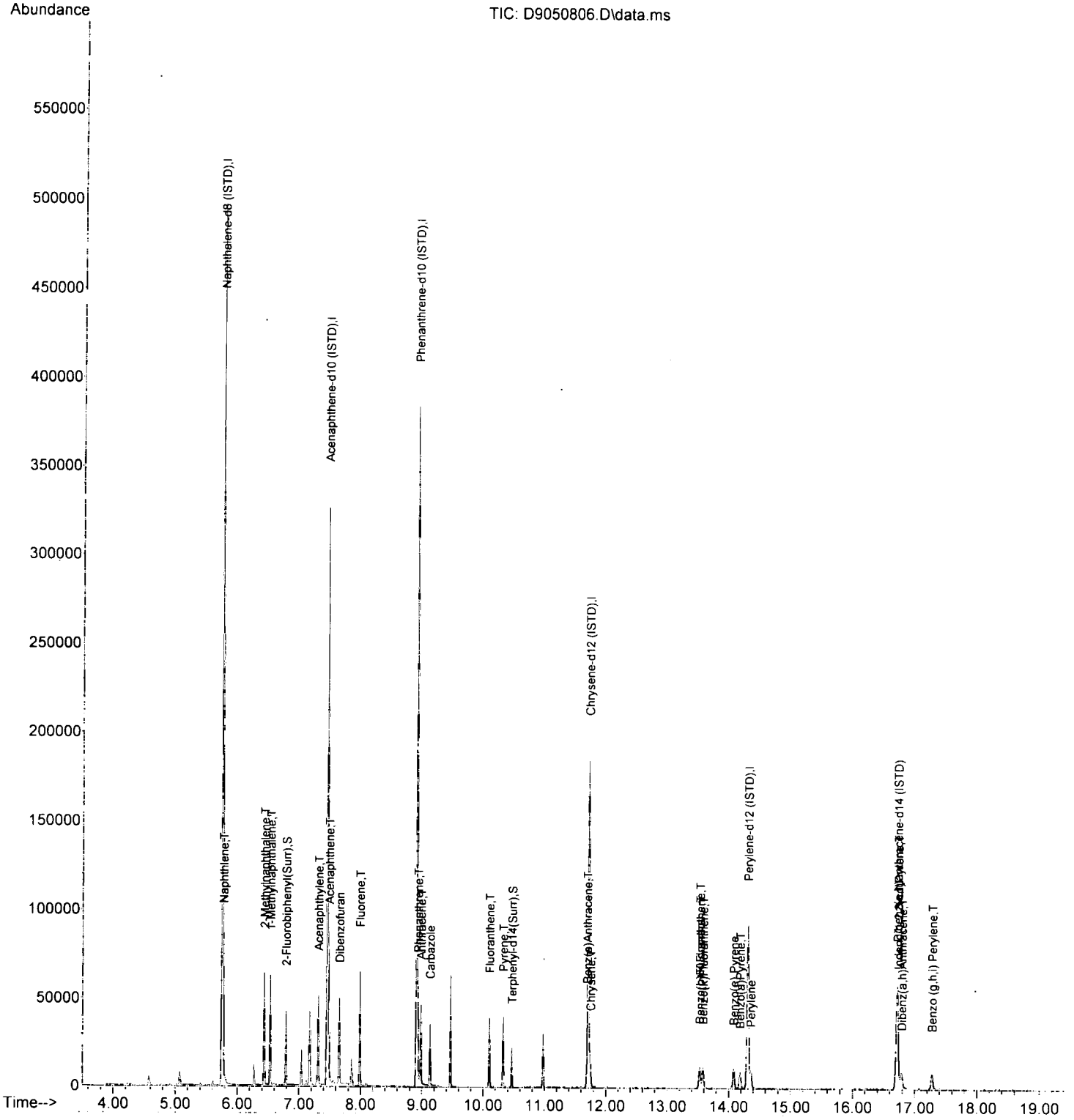
Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050806.D
Acq On : 8 May 2019 4:27 pm
Operator : bsj
Sample : 9E08049-CAL4
Misc : 1x A19D056@200
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 16:46:38 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050807.D
Acq On : 8 May 2019 4:53 pm
Operator : bsj
Sample : 9E08049-CAL5
Misc : 1x A19D057@500
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 08:45:56 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	492814	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	239395	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	332652	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.706	240	166780	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	126329	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.709	292	78494	2000.00	ng/mL	-0.01
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	90965	505.19	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	45061	606.45	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	129108	505.88	ng/ml	99
3) 2-Methylnaphthalene	6.434	142	83046	485.29	ng/ml	98
4) 1-Methylnaphthalene	6.531	142	81160	489.53	ng/ml	98
7) Acenaphthylene	7.310	152	111217	505.58	ng/ml	98
8) Acenaphthene	7.482	153	73853	516.41	ng/ml	97
9) Dibenzofuran	7.648	168	99804	495.65	ng/mL	89
10) Fluorene	7.984	166	77520	492.09	ng/ml	99
12) Phenanthrene	8.925	178	97019	499.10	ng/ml	98
13) Anthracene	8.978	178	98494	486.56	ng/ml	98
14) Carbazole	9.127	167	80782	464.22	ng/mL	99
15) Fluoranthene	10.096	202	83706	446.33	ng/ml	99
16) Pyrene	10.319	202	82420	436.15	ng/ml	98
19) Benz(a)Anthracene	11.692	228	50228	459.73	ng/ml	96
20) Chrysene	11.741	228	50502	477.34	ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	41100	509.72	ng/ml	72
23) Benzo(k)Fluoranthene	13.577	252	40573	507.65	ng/ml	70
24) Benzo(b+k)Fluoranthene	13.525	252	81849	1013.82	ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	41132	512.80	ng/mL	96
26) Benzo(a)Pyrene	14.180	252	34623	458.26	ng/ml	71
27) Perylene	14.358	252	34311	486.67	ng/mL	95
29) Indeno(1,2,3-cd)Pyrene	16.721	276	25561	471.41	ng/ml	69
30) Dibenz(a,h)Anthracene	16.787	278	22873	454.94	ng/ml	70
31) Benzo (g,h,i) Perylene	17.277	276	27694	486.86	ng/ml	88

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

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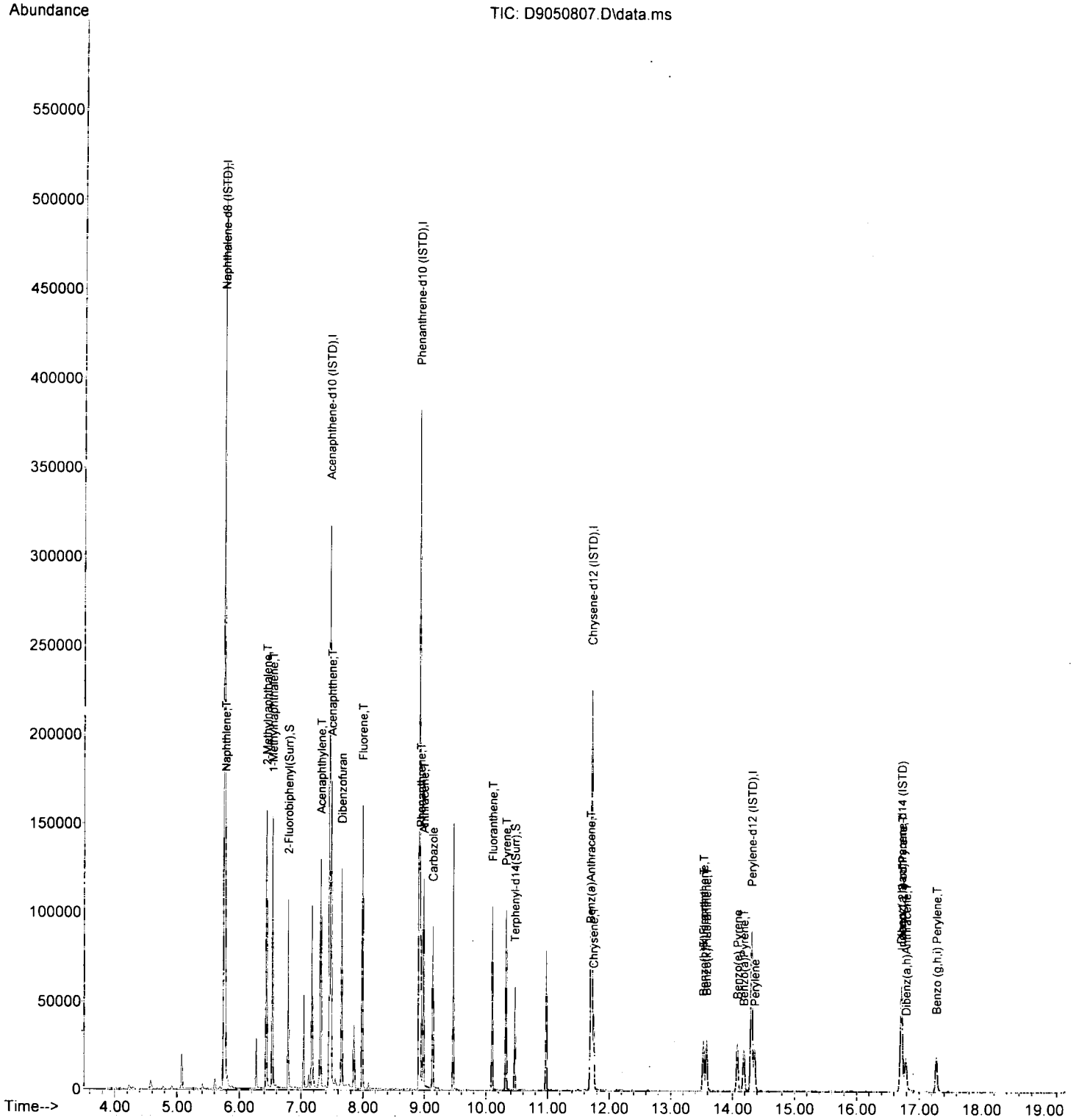
Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050807.D
Acq On : 8 May 2019 4:53 pm
Operator : bsj
Sample : 9E08049-CAL5
Misc : 1x A19D057@500
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 08:45:56 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050808.D
Acq On : 8 May 2019 5:20 pm
Operator : bsj
Sample : 9E08049-CAL6
Misc : 1x A19D058@1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 08:46:00 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.748	136	510967	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	250878	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.905	188	350771	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	167448	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	116473	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.716	292	78010	2000.00 ng/mL	0.00
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.786	172	185360	982.31 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	88878	1191.39 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.768	128	261032	986.46 ng/ml	99
3) 2-Methylnaphthalene	6.435	142	170938	963.41 ng/ml	99
4) 1-Methylnaphthalene	6.532	142	166096	966.24 ng/ml	98
7) Acenaphthylene	7.311	152	225669	978.90 ng/ml	99
8) Acenaphthene	7.483	153	152955	1020.57 ng/ml	96
9) Dibenzofuran	7.649	168	202127	957.87 ng/mL	88
10) Fluorene	7.984	166	156316	946.87 ng/ml	100
12) Phenanthrene	8.931	178	198671	969.24 ng/ml	98
13) Anthracene	8.979	178	199237	933.38 ng/ml	98
14) Carbazole	9.128	167	160766	876.13 ng/mL	99
15) Fluoranthene	10.097	202	167364	846.31 ng/ml	100
16) Pyrene	10.320	202	164492	825.50 ng/ml	98
19) Benz(a)Anthracene	11.692	228	97157	885.72 ng/ml	96
20) Chrysene	11.748	228	98010	922.69 ng/ml	96
22) Benzo(b)Fluoranthene	13.531	252	75164	1011.05 ng/ml	67
23) Benzo(k)Fluoranthene	13.583	252	75023	1018.13 ng/ml	70
24) Benzo(b+k)Fluoranthene	13.531	252	150464	2021.42 ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	75609	1022.40 ng/mL	95
26) Benzo(a)Pyrene	14.186	252	66021	947.79 ng/ml	70
27) Perylene	14.359	252	63145	971.45 ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.722	276	49327	915.36 ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	45005	900.70 ng/ml	69
31) Benzo (g,h,i) Perylene	17.278	276	53499	946.34 ng/ml	87

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

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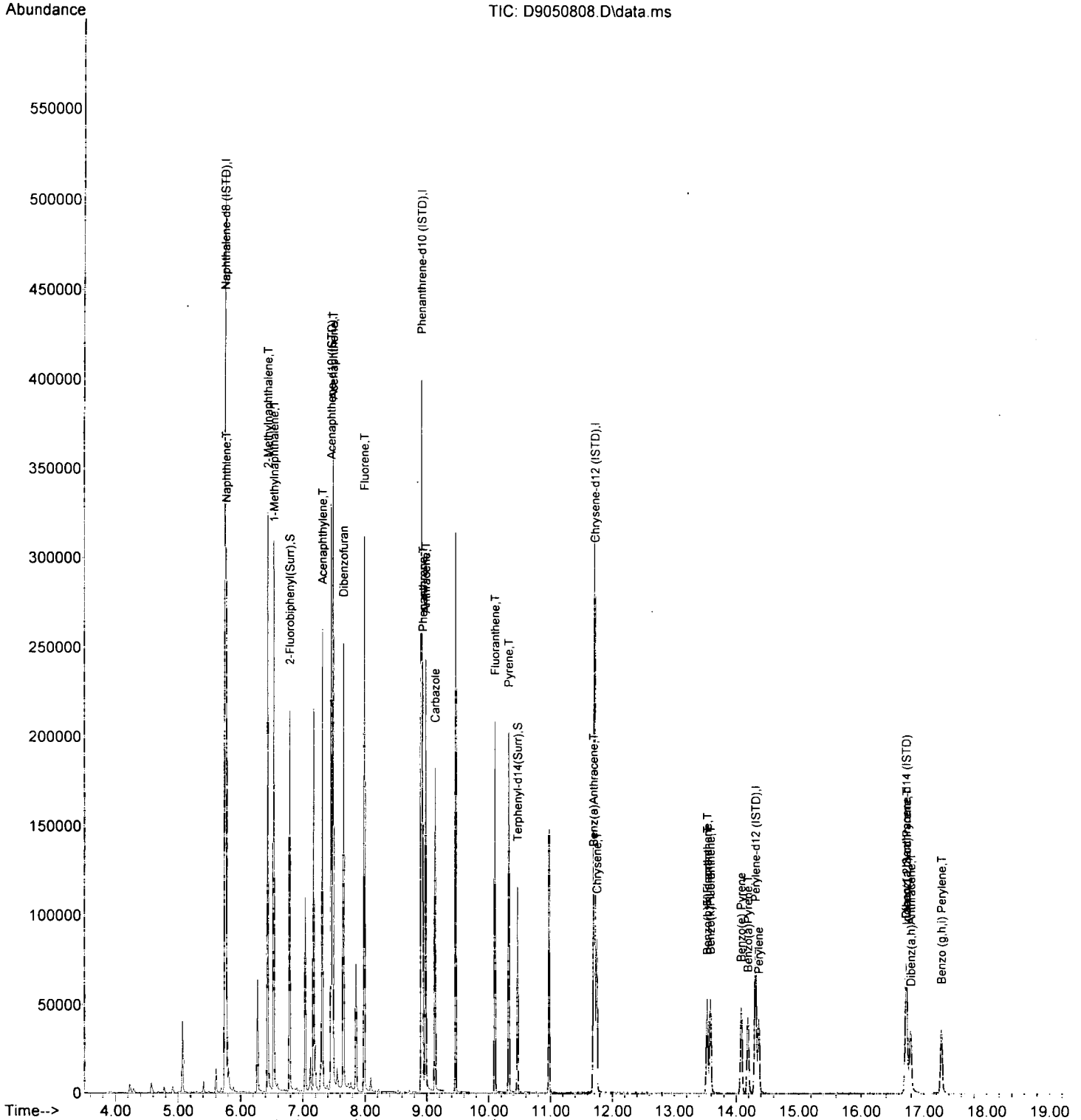
Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050808.D
Acq On : 8 May 2019 5:20 pm
Operator : bsj
Sample : 9E08049-CAL6
Misc : 1x A19D058@1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 08:46:00 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050809.D
Acq On : 8 May 2019 5:47 pm
Operator : bsj
Sample : 9E08049-CAL7
Misc : 1x A19D059@2000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 08:46:03 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	476839	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	232647	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	318049	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	159832	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	112021	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	77875	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	347194	1984.13	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	168672	2368.74	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	494185	2001.22	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	320988	1938.58	ng/ml	99
4) 1-Methylnaphthalene	6.532	142	313064	1951.56	ng/ml	98
7) Acenaphthylene	7.311	152	427487	1999.66	ng/ml	98
8) Acenaphthene	7.483	153	282947	2035.87	ng/ml	97
9) Dibenzofuran	7.654	168	380141	1942.64	ng/mL	88
10) Fluorene	7.989	166	289620	1891.82	ng/ml	100
12) Phenanthrene	8.931	178	359989	1936.93	ng/ml	98
13) Anthracene	8.979	178	369906	1911.22	ng/ml	99
14) Carbazole	9.127	167	282079	1695.41	ng/mL	99
15) Fluoranthene	10.097	202	310889	1733.82	ng/ml	99
16) Pyrene	10.320	202	305607	1691.47	ng/ml	99
19) Benz(a)Anthracene	11.692	228	185923	1775.72	ng/ml	96
20) Chrysene	11.749	228	186429	1838.72	ng/ml	96
22) Benzo(b)Fluoranthene	13.531	252	142711	1995.94	ng/ml	72
23) Benzo(k)Fluoranthene	13.583	252	144437	2038.03	ng/ml	74
24) Benzo(b+k)Fluoranthene	13.583	252	287540	4016.51	ng/ml	73
25) Benzo(e) Pyrene	14.083	252	142542	2004.09	ng/mL	98
26) Benzo(a)Pyrene	14.186	252	128808	1922.64	ng/ml	74
27) Perylene	14.358	252	120711	1930.87	ng/mL	98
29) Indeno(1,2,3-cd)Pyrene	16.727	276	96408	1792.15	ng/ml	74
30) Dibenz(a,h)Anthracene	16.788	278	90151	1807.35	ng/ml	73
31) Benzo (g,h,i) Perylene	17.278	276	105570	1870.66	ng/ml	92

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

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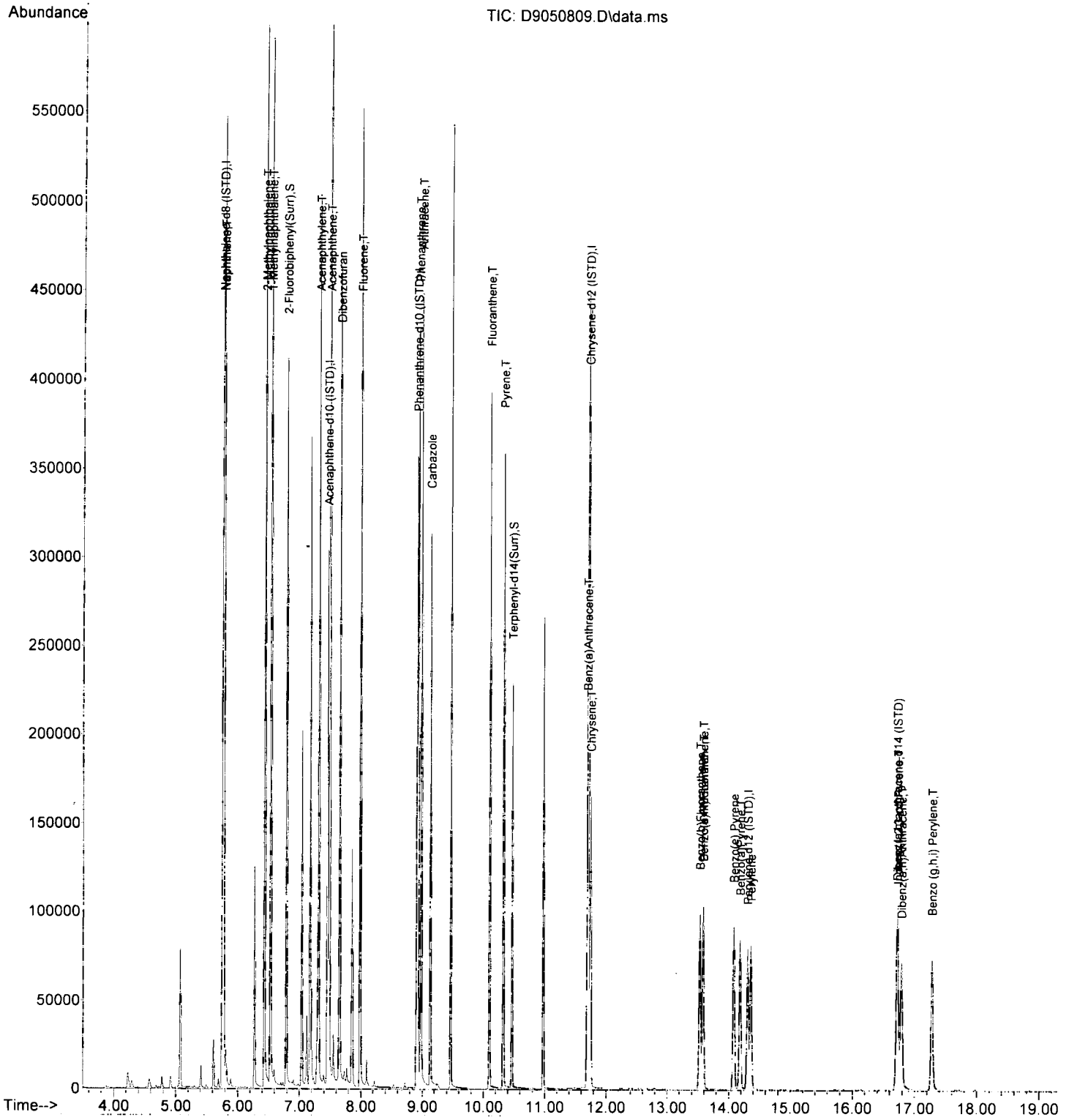
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050809.D
Acq On : 8 May 2019 5:47 pm
Operator : bsj
Sample : 9E08049-CAL7
Misc : 1x A19D059@2000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 08:46:03 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050810.D
Acq On : 8 May 2019 6:14 pm
Operator : bsj
Sample : 9E08049-CAL8
Misc : 1x A19D060@4000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 08:46:06 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	517036	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	249933	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.906	188	360425	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	184787	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	120610	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.716	292	76553	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.786	172	774141	4118.05	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	404521	4913.69	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	1076783	4021.46	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	710284	3956.19	ng/ml	99
4) 1-Methylnaphthalene	6.532	142	693878	3989.17	ng/ml	98
7) Acenaphthylene	7.311	152	923218	4019.86	ng/ml	99
8) Acenaphthene	7.483	153	605481	4055.27	ng/ml	97
9) Dibenzofuran	7.654	168	822550	3912.77	ng/mL	89
10) Fluorene	7.989	166	644798	3920.56	ng/ml	100
12) Phenanthrene	8.932	178	832431	3952.32	ng/ml	98
13) Anthracene	8.980	178	873705	3983.48	ng/ml	99
14) Carbazole	9.129	167	532740	2825.53	ng/mL	99
15) Fluoranthene	10.097	202	725379	3569.79	ng/ml	99
16) Pyrene	10.326	202	724953	3540.71	ng/ml	99
19) Benz(a)Anthracene	11.699	228	433129	3578.08	ng/ml	96
20) Chrysene	11.749	228	440324	3756.36	ng/ml	96
22) Benzo(b)Fluoranthene	13.532	252	333201	4328.25	ng/ml	72
23) Benzo(k)Fluoranthene	13.583	252	327011	4285.60	ng/ml	69
24) Benzo(b+k)Fluoranthene	13.583	252	660960	8575.15	ng/ml	71
25) Benzo(e) Pyrene	14.089	252	319821	4176.36	ng/mL	97
26) Benzo(a)Pyrene	14.192	252	289898	4018.98	ng/ml	72
27) Perylene	14.365	252	266166	3954.34	ng/mL	96
29) Indeno(1,2,3-cd)Pyrene	16.733	276	192188	3634.31	ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	182971	3731.54	ng/ml	69
31) Benzo (g,h,i) Perylene	17.284	276	209532	3776.94	ng/ml	89

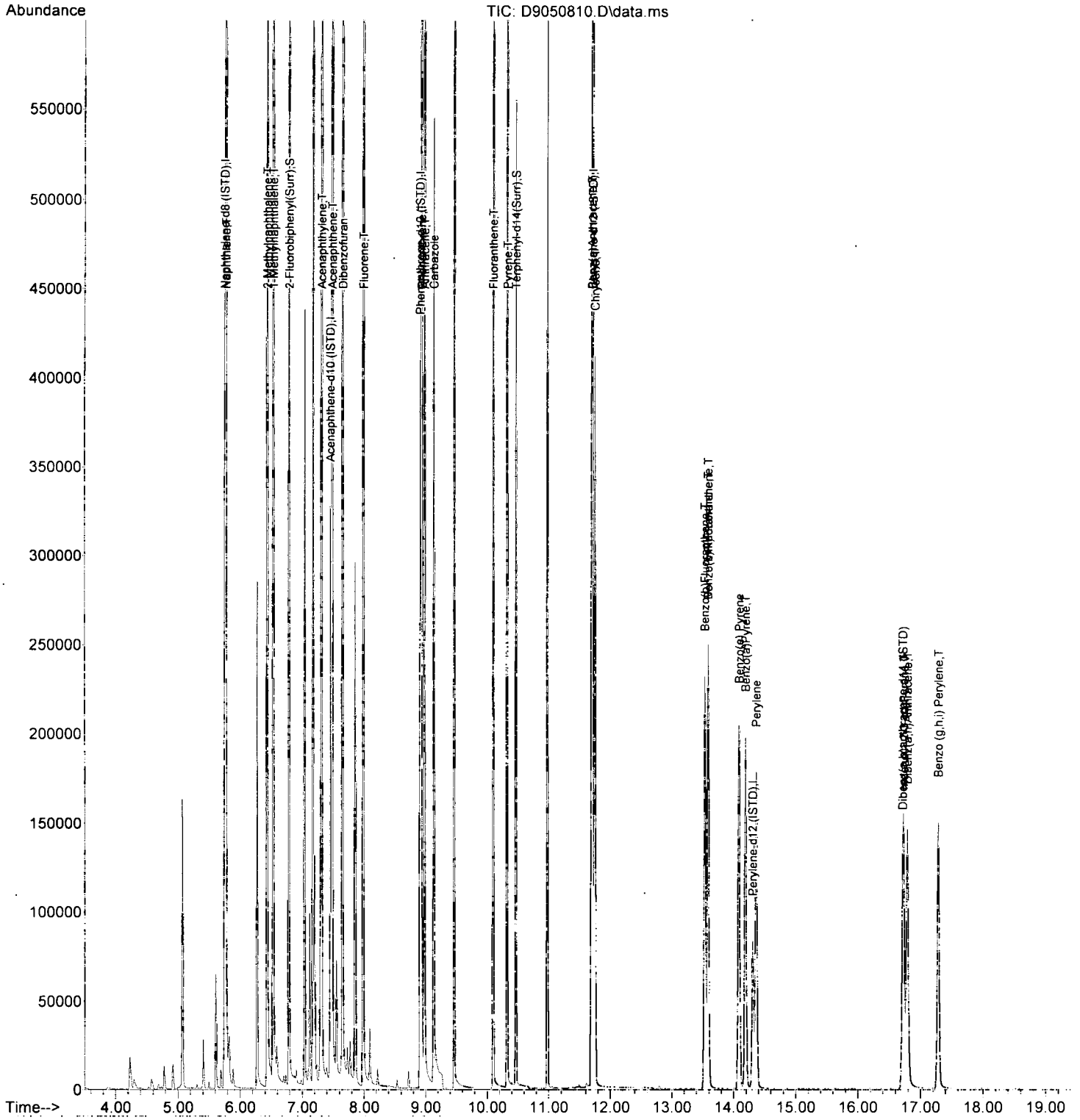
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050810.D
Acq On : 8 May 2019 6:14 pm
Operator : bsj
Sample : 9E08049-CAL8
Misc : 1x A19D060@4000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 08:46:06 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050811.D
Acq On : 8 May 2019 6:40 pm
Operator : bsj
Sample : 9E08049-CAL9
Misc : 1x A19D061@6000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 08:46:09 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	521237	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	259583	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.906	188	362274	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.714	240	194906	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.313	264	124314	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.721	292	81338	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.789	172	1120425	5738.54	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	610757	7033.66	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	1615843	5986.05	ng/ml	100
3) 2-Methylnaphthalene	6.433	142	1054717	5827.29	ng/ml	99
4) 1-Methylnaphthalene	6.531	142	1017377	5801.86	ng/ml	98
7) Acenaphthylene	7.316	152	1412401	5921.23	ng/ml	98
8) Acenaphthene	7.481	153	951380	6135.09	ng/ml	97
9) Dibenzofuran	7.653	168	1262943	5784.32	ng/mL	88
10) Fluorene	7.989	166	1010699	5916.90	ng/ml	100
12) Phenanthrene	8.932	178	1240610	5860.26	ng/ml	98
13) Anthracene	8.980	178	1296799	5882.32	ng/ml	99
14) Carbazole	9.129	167	573298	3025.12	ng/mL	99
15) Fluoranthene	10.098	202	1077725	5276.71	ng/ml	99
16) Pyrene	10.326	202	1087344	5283.54	ng/ml	99
19) Benz(a)Anthracene	11.700	228	682737	5347.28	ng/ml	95
20) Chrysene	11.749	228	669359	5413.78	ng/ml	96
22) Benzo(b)Fluoranthene	13.538	252	505566	6371.58	ng/ml	70
23) Benzo(k)Fluoranthene	13.589	252	511108	6498.68	ng/ml	73
24) Benzo(b+k)Fluoranthene	13.589	252	1017771	12810.91	ng/ml	72
25) Benzo(e) Pyrene	14.089	252	495204	6273.90	ng/mL	98
26) Benzo(a)Pyrene	14.193	252	445993	5998.77	ng/ml	72
27) Perylene	14.365	252	406431	5858.30	ng/mL	96
29) Indeno(1,2,3-cd)Pyrene	16.738	276	302787	5388.92	ng/ml	69
30) Dibenz(a,h)Anthracene	16.794	278	301613	5789.29	ng/ml	73
31) Benzo (g,h,i) Perylene	17.289	276	337352	5723.24	ng/ml	92

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

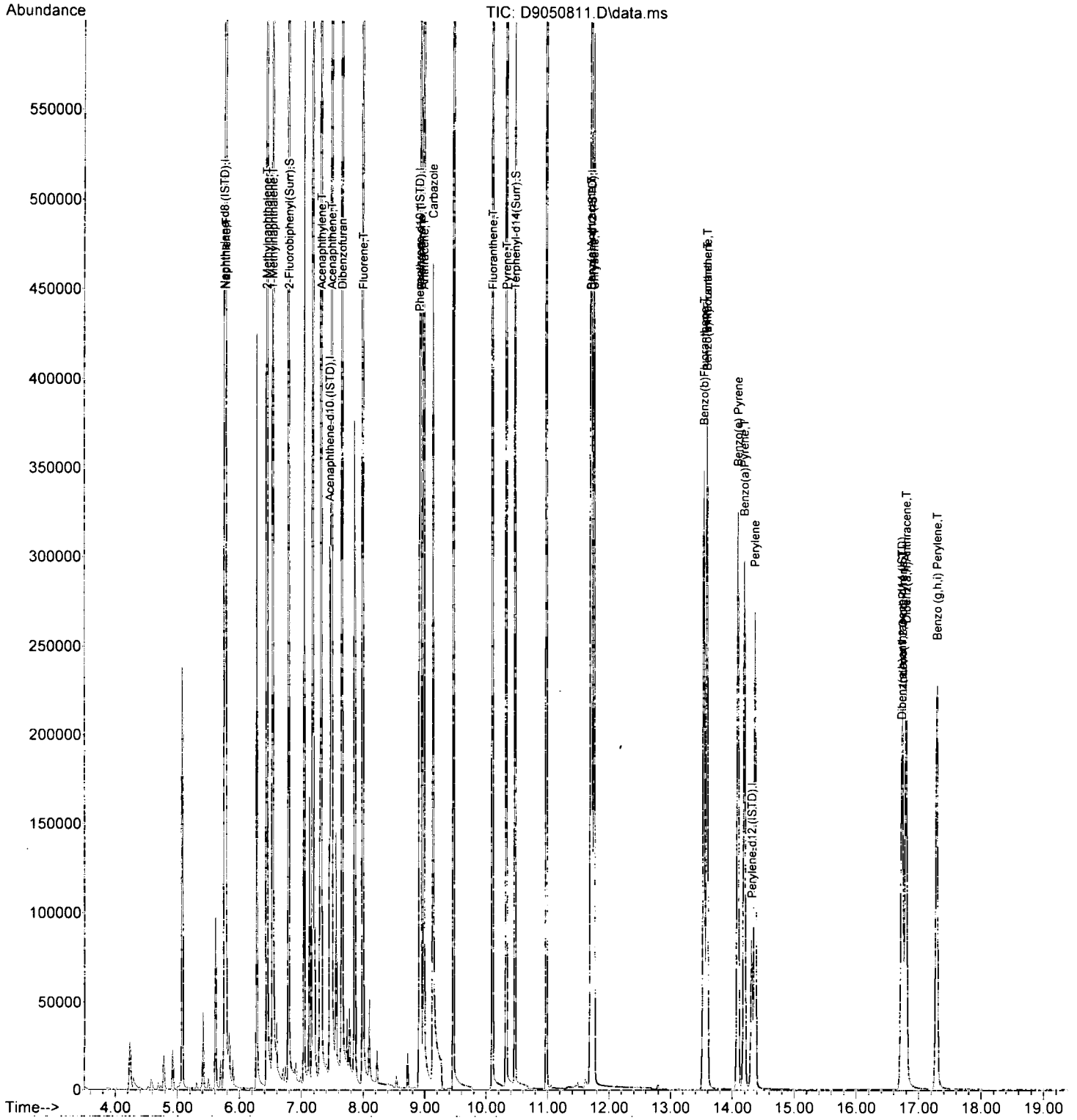
5-09-19

BSS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050811.D
Acq On : 8 May 2019 6:40 pm
Operator : bsj
Sample : 9E08049-CAL9
Misc : 1x A19D061@6000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 08:46:09 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050812.D
Acq On : 8 May 2019 7:07 pm
Operator : bsj
Sample : 9E08049-CALA
Misc : 1x A19D062@8000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 09 08:46:12 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.756	136	514968	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	257246	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.910	188	368024	2000.00	ng/ml	0.01
17) Chrysene-d12 (ISTD)	11.720	240	199250	2000.00	ng/ml	0.01
21) Perylene-d12 (ISTD)	14.313	264	128368	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.727	292	86139	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	6.791	172	1562167	8073.72	ng/ml	0.00
18) Terphenyl-d14(Surr)	10.465	244	826441	9310.04	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthlene	5.769	128	2136745	8012.15	ng/ml	100
3) 2-Methylnaphthalene	6.434	142	1427088	7980.62	ng/ml	99
4) 1-Methylnaphthalene	6.532	142	1368536	7899.45	ng/ml	98
7) Acenaphthylene	7.317	152	1912248	8089.57	ng/ml	98
8) Acenaphthene	7.483	153	1259183	8193.76	ng/ml	97
9) Dibenzofuran	7.654	168	1685438	7789.49	ng/mL	88
10) Fluorene	7.989	166	1334221	7881.84	ng/ml	99
12) Phenanthrene	8.931	178	1690046	7858.53	ng/ml	98
13) Anthracene	8.985	178	1778933	7943.22	ng/ml	99
14) Carbazole	9.133	167	552300	2868.78	ng/mL	99
15) Fluoranthene	10.103	202	1505038	7253.76	ng/ml	99
16) Pyrene	10.326	202	1492775	7140.25	ng/ml	99
19) Benz(a)Anthracene	11.699	228	938499	7190.18	ng/ml	96
20) Chrysene	11.756	228	935309	7399.86	ng/ml	96
22) Benzo(b)Fluoranthene	13.543	252	710929	8676.78	ng/ml	73
23) Benzo(k)Fluoranthene	13.595	252	709605	8737.60	ng/ml	71
24) Benzo(b+k)Fluoranthene	13.595	252	1421874	17332.22	ng/ml	72
25) Benzo(e) Pyrene	14.095	252	676446	8299.47	ng/mL	98
26) Benzo(a)Pyrene	14.198	252	630473	8212.28	ng/ml	74
27) Perylene	14.370	252	563164	7861.09	ng/mL	97
29) Indeno(1,2,3-cd)Pyrene	16.738	276	426588	7169.14	ng/ml	73
30) Dibenz(a,h)Anthracene	16.800	278	430375	7800.38	ng/ml	76
31) Benzo (g,h,i) Perylene	17.290	276	455393	7295.23	ng/ml	93

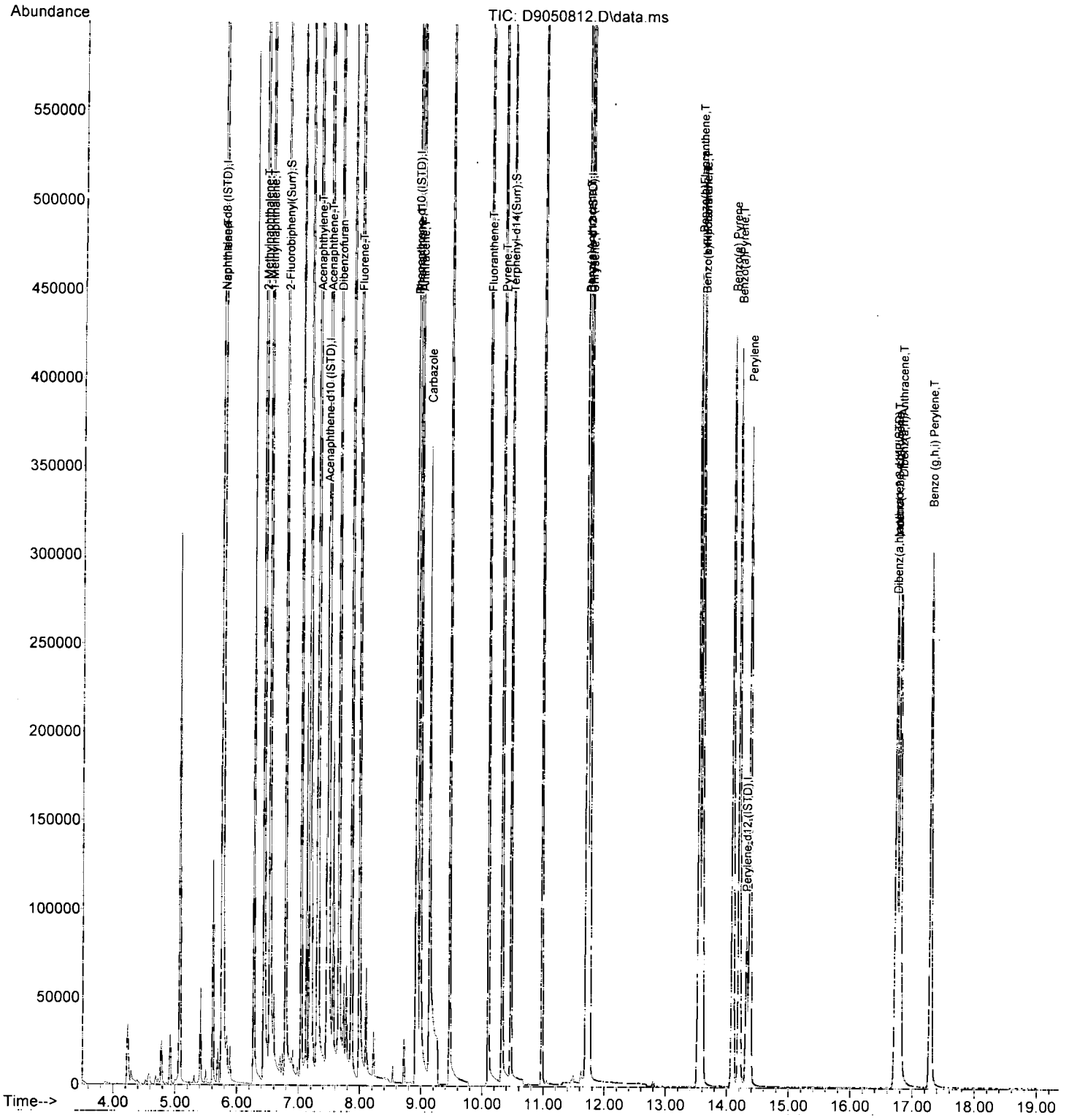
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5-09-19
BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050812.D
Acq On : 8 May 2019 7:07 pm
Operator : bsj
Sample : 9E08049-CALA
Misc : 1x A19D062@8000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 09 08:46:12 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050813.D
Acq On : 8 May 2019 7:34 pm
Operator : bsj
Sample : 9E08049-IBL1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:15 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	5.749	136	521171	2000.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.451	164	259821	2000.00	ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	358888	2000.00	ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.712	240	186260	2000.00	ng/ml	0.00
21) Perylene-d12 (ISTD)	14.308	264	143394	2000.00	ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	94804	2000.00	ng/mL	0.00
System Monitoring Compounds						
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00	ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthlene	0.000		0	N.D.		
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
7) Acenaphthylene	0.000		0	N.D.		
8) Acenaphthene	0.000		0	N.D.		
9) Dibenzofuran	0.000		0	N.D.		
10) Fluorene	0.000		0	N.D.		
12) Phenanthrene	0.000		0	N.D.		
13) Anthracene	0.000		0	N.D.		
14) Carbazole	0.000		0	N.D.		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benz(a)Anthracene	11.712	228	462	3.79	ng/ml#	55
20) Chrysene	11.712	228	462	3.91	ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.		
23) Benzo(k)Fluoranthene	0.000		0	N.D.		
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.		
25) Benzo(e) Pyrene	0.000		0	N.D.		
26) Benzo(a)Pyrene	0.000		0	N.D.		
27) Perylene	14.302	252	475	5.94	ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	16.720	276	594	9.07	ng/ml#	1
30) Dibenz(a,h)Anthracene	16.787	278	358	5.90	ng/ml#	53
31) Benzo (g,h,i) Perylene	17.277	276	451	6.56	ng/ml	80

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

NE

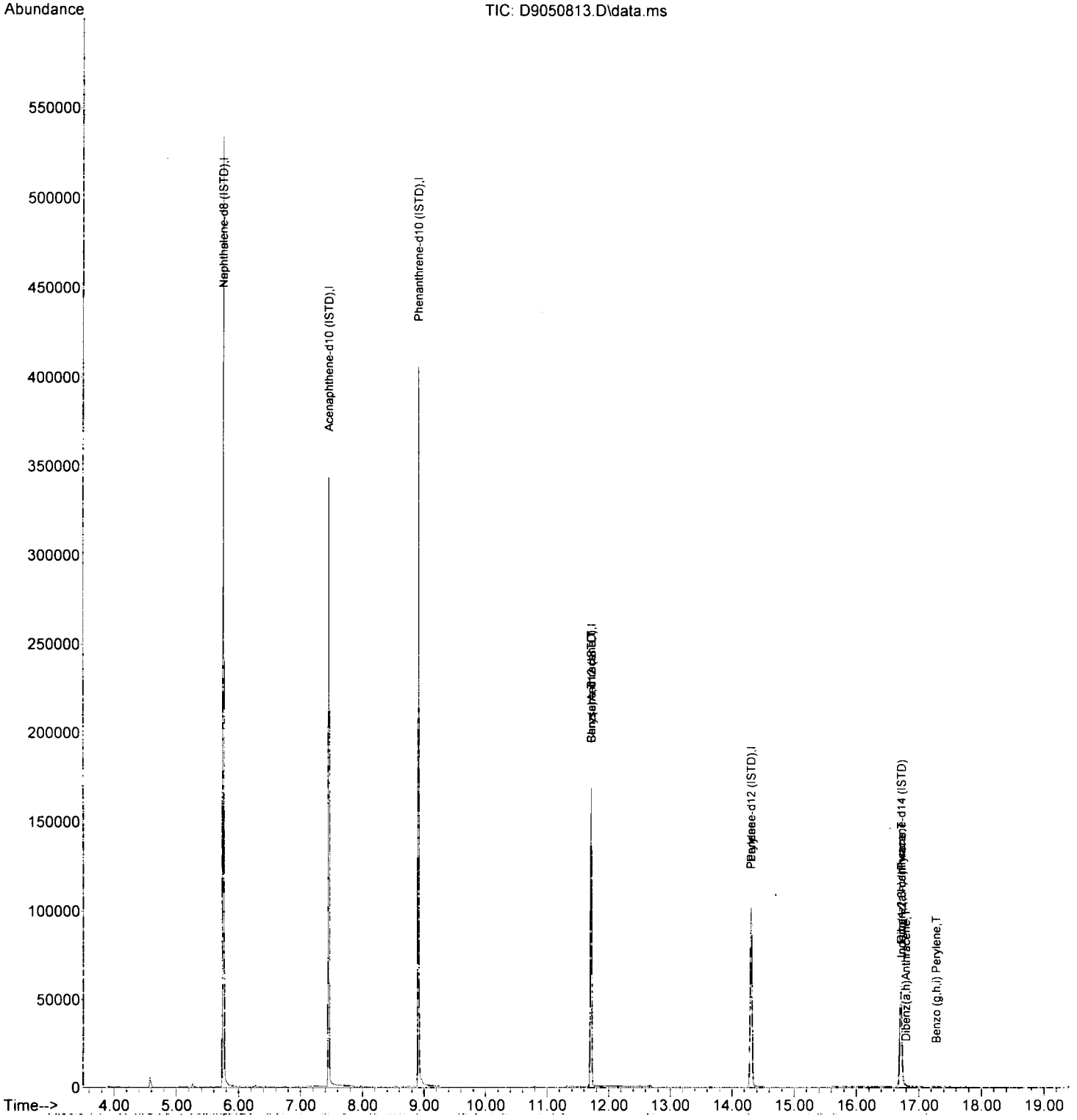
5-09-19

BSJ

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050813.D
Acq On : 8 May 2019 7:34 pm
Operator : bsj
Sample : 9E08049-IBL1
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:15 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:46:18 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.749	136	498686	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.452	164	245258	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.904	188	345376	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.713	240	179105	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	121338	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.715	292	76066	2000.00 ng/mL	0.00
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	6.786	172	182451	989.05 ng/ml	0.00
18) Terphenyl-d14(Surr)	10.464	244	93240	1168.51 ng/ml	0.00
Target Compounds					Qvalue
2) Naphthlene	5.769	128	254732	986.35 ng/ml	99
3) 2-Methylnaphthalene	6.434	142	165246	954.27 ng/ml	99
4) 1-Methylnaphthalene	6.532	142	158374	944.01 ng/ml	98
7) Acenaphthylene	7.311	152	225724	1001.58 ng/ml	98
8) Acenaphthene	7.482	153	148299	1012.18 ng/ml	97
9) Dibenzofuran	7.648	168	199759	968.34 ng/mL	89
10) Fluorene	7.983	166	156263	968.24 ng/ml	99
12) Phenanthrene	8.931	178	196498	973.61 ng/ml	98
13) Anthracene	8.979	178	200051	951.83 ng/ml	98
14) Carbazole	9.127	167	161933	896.28 ng/mL	99
15) Fluoranthene	10.097	202	169427	870.13 ng/ml	99
16) Pyrene	10.319	202	169126	862.01 ng/ml	98
19) Benz(a)Anthracene	11.692	228	105367	898.05 ng/ml	96
20) Chrysene	11.748	228	104873	923.04 ng/ml	96
22) Benzo(b)Fluoranthene	13.525	252	78878	1018.47 ng/ml	67
23) Benzo(k)Fluoranthene	13.577	252	78445	1021.88 ng/ml	70
24) Benzo(b+k)Fluoranthene	13.525	252	157602	2032.43 ng/ml#	58
25) Benzo(e) Pyrene	14.077	252	77309	1003.48 ng/mL	95
26) Benzo(a)Pyrene	14.186	252	67770	933.89 ng/ml	69
27) Perylene	14.358	252	74623	1102.00 ng/mL	94
29) Indeno(1,2,3-cd)Pyrene	16.726	276	47325	900.65 ng/ml	69
30) Dibenz(a,h)Anthracene	16.788	278	43038	883.34 ng/ml	69
31) Benzo (g,h,i) Perylene	17.278	276	50844	922.36 ng/ml	87

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

✓

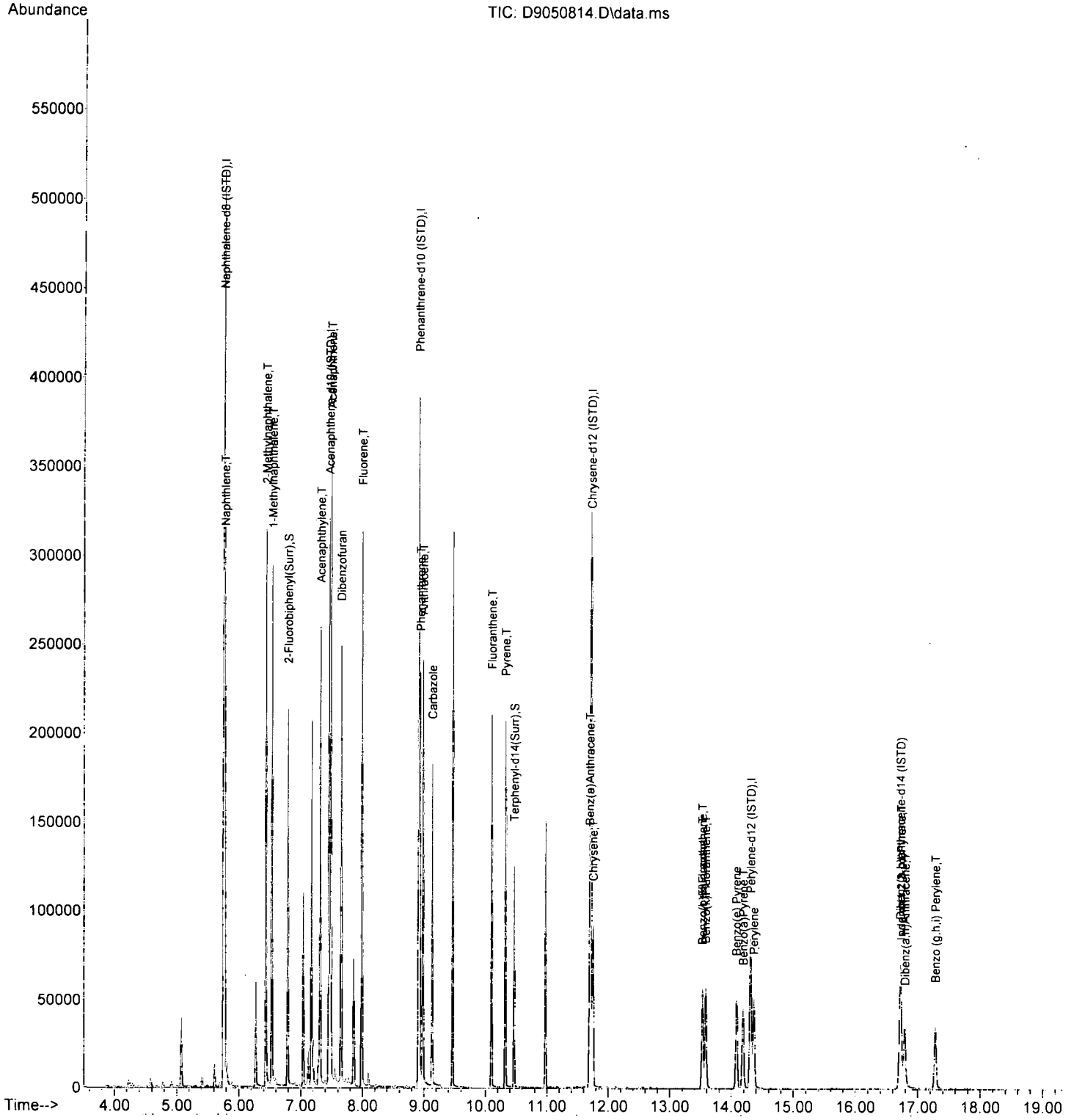
5-09-19

BS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050814.D
Acq On : 8 May 2019 8:01 pm
Operator : bsj
Sample : 9E08049-ICV1
Misc : 1x A19C239@1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 09 08:46:18 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050815.D
Acq On : 8 May 2019 8:28 pm
Operator : bsj
Sample : 9E08049-IBL2
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:21 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8 (ISTD)	5.749	136	564348	2000.00 ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	7.450	164	279660	2000.00 ng/ml	0.00
11) Phenanthrene-d10 (ISTD)	8.903	188	376741	2000.00 ng/ml	0.00
17) Chrysene-d12 (ISTD)	11.712	240	181672	2000.00 ng/ml	0.00
21) Perylene-d12 (ISTD)	14.307	264	131800	2000.00 ng/ml	0.00
28) Dibenz(a,h)anthracene-...	16.709	292	84383	2000.00 ng/mL	-0.01
System Monitoring Compounds					
6) 2-Fluorobiphenyl(Surr)	0.000	172	0	0.00 ng/ml	
18) Terphenyl-d14(Surr)	0.000	244	0	0.00 ng/ml	
Target Compounds					Qvalue
2) Naphthlene	0.000		0	N.D.	
3) 2-Methylnaphthalene	0.000		0	N.D.	
4) 1-Methylnaphthalene	0.000		0	N.D.	
7) Acenaphthylene	0.000		0	N.D.	
8) Acenaphthene	0.000		0	N.D.	
9) Dibenzofuran	0.000		0	N.D.	
10) Fluorene	0.000		0	N.D.	
12) Phenanthrene	0.000		0	N.D.	
13) Anthracene	0.000		0	N.D.	
14) Carbazole	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	0.000		0	N.D.	
19) Benz(a)Anthracene	11.705	228	465	3.91 ng/ml#	55
20) Chrysene	11.705	228	465	4.03 ng/ml#	55
22) Benzo(b)Fluoranthene	0.000		0	N.D.	
23) Benzo(k)Fluoranthene	0.000		0	N.D.	
24) Benzo(b+k)Fluoranthene	0.000		0	N.D.	
25) Benzo(e) Pyrene	0.000		0	N.D.	
26) Benzo(a)Pyrene	0.000		0	N.D.	
27) Perylene	14.301	252	425	5.78 ng/mL#	1
29) Indeno(1,2,3-cd)Pyrene	0.000		0	N.D.	
30) Dibenz(a,h)Anthracene	0.000		0	N.D.	
31) Benzo (g,h,i) Perylene	0.000		0	N.D.	

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

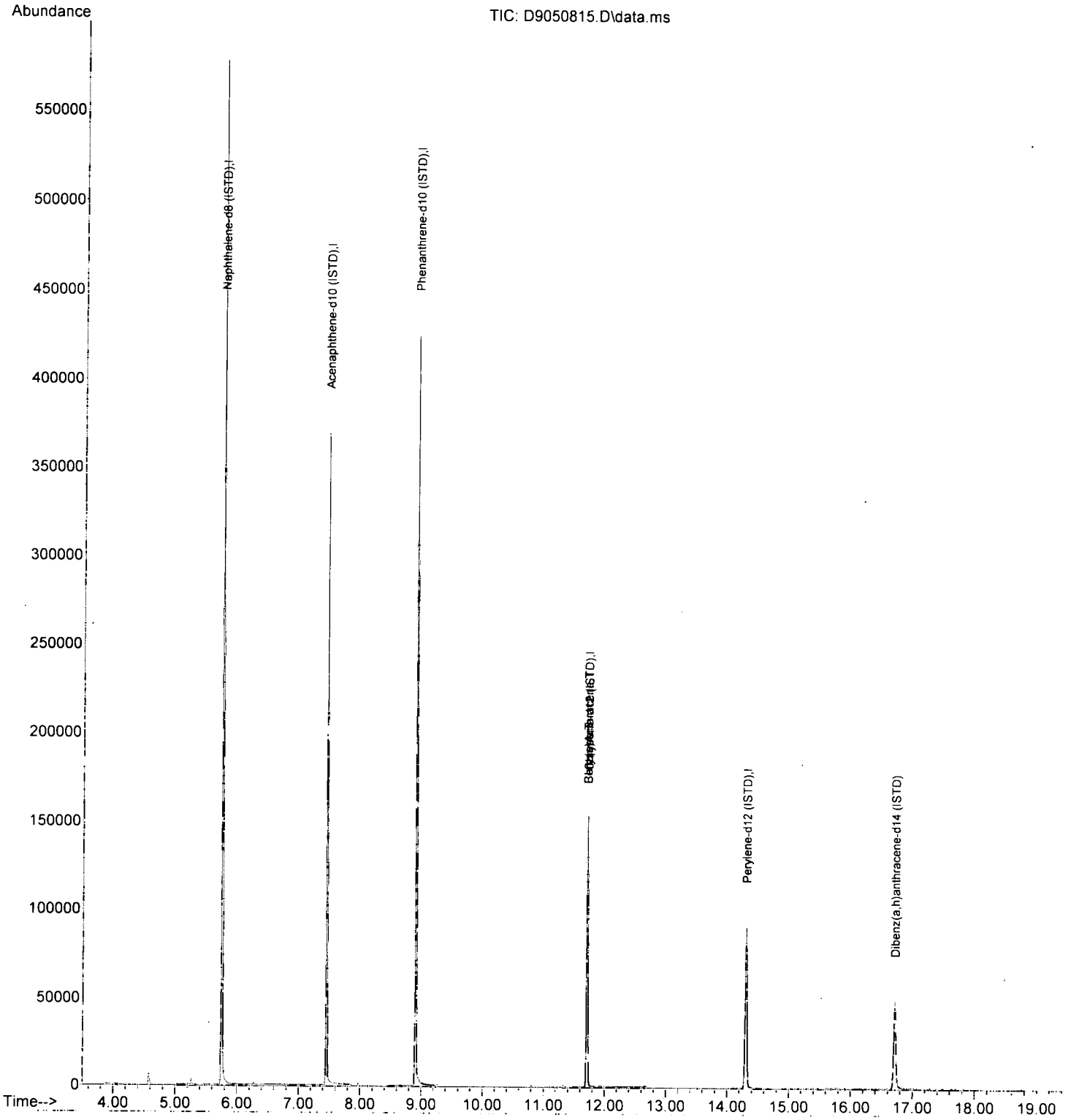
NR

5-09-19 BS

Quantitation Report (Not Reviewed)

Data Path : P:\DATA\2019-05\9E08049\
Data File : D9050815.D
Acq On : 8 May 2019 8:28 pm
Operator : bsj
Sample : 9E08049-IBL2
Misc : 1x DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 08:46:21 2019
Quant Method : C:\msdchem\1\methods\SV4_041819R4.M
Quant Title : EPA 8270 SIM PAH/PCP/PTH
QLast Update : Thu Apr 18 11:03:03 2019
Response via : Initial Calibration
InstName : SV-GCMS4



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

SPLP Extraction by EPA 1312

Benchsheet Data

Batch 9060621 (A9E0785-01)

Batch 9060554 (A9E0785-01)

Apex Laboratories
BATCH #: 9060621 (Matrix: Solid)
TCLP Leachate Bench Sheet

#	Lab Number	Analysis	Initial (g)	Final (mL)	Start Time	Stop Time	Sample pH	TCLP Fluid	Client / Sample
	9060621-BLK1	QC	100	2000	06/05/19 17:15	6/6/19 09:34	5.05	SPLP 2	
	A9E0723-01	SPLP Extraction - Organics	100	2000	06/05/19 17:15	6/6/19 09:34	5.5	SPLP 2	Hahn and Associates / 2708-190521-007
	A9E0785-01	SPLP Extraction - Organics	100	2000	06/05/19 17:15	6/6/19 09:34	5.0	SPLP 2	Hahn and Associates / 2708-190522-011
	A9E0832-02	SPLP Extraction - Organics	100	2000	06/05/19 17:15	6/6/19 09:34	5.0	SPLP 2	Hahn and Associates / 2708-190523-013

Fluid ID: A19F044
Syringe Filter Lot: A19C192
% Solids Filter Lot: A19C193

NSG 6/6/19
Prepared By: Date

James S Johnson 06/06/19
Reviewed By: Date

TCLP \ SPLP* (circle one) Batch # 9060621 Prepared By: MJG

*For SPLP, the FD pre-test is not performed. If the sample is water or waste (not soil) then use fluid #1. If the sample is soil, FD is based on sample origination: east of the Mississippi R. - use fluid #1, west of the Mississippi R. - use fluid #2.

Fluid Determination (FD)

Sample ID	Weight 5 g	+DI H2O 96.5 mL (19.3 mL/g)	pH after 5 min stir	If pH >5, add 3.5 mL 1N HCl** (0.7mL/g)	Heat to 50° for 10 min.	pH @ room temp	Fluid #	% Solids	Size Reduction
	(g)	(mL)	(s.u.)	**pH<5, FD is done, use fluid #1 (mL or "NA")	("✓" or NA)	(s.u. or "NA")	("1" or "2")	(%)	("Y" or "N")
A9E0723-01							2	100	N
A9E0785-01							2	100	N
A9E0832-02							2	100	N

Extraction

Weight*20

Sample ID	Tare Weight	Weight 100±0.1	Fluid 2000±1%	Fluid #	Fluid ID	Extract pH (to nearest 0.5)
	(g)	(g)	(g)	("1" or "2")		(s.u.)
9060621-BLK1	~~1129.04~~	100	2000	2	A19F044	5.05
A9E0723-01	~~1125.13~~	100	2000	↓	↓	5.5
~~A9E0785-01~~	~~1168.30~~					
A9E0832-02	1149.62	100	2000	↓	↓	5.0
A9E0785-01	1168.30	100	2000	↓	↓	5.0

Extraction Start/Stop

	Date	Time	Intl.
START	6/5/19	17:15	MJG
STOP	6/6/19	09:34	MJG

Stop time window:

RPM 31

Reset Min/Max Temp ☑

	Min Temp	Max Temp
As read:	21.8	23.5
Corr factor:	0	0
Actual:	21.8	23.5

Thermometer ID: S/N RC-5-001

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060544 (Water)

Prep Method: ASTM D7511-12 (W)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9060544-BLK1		QC	06/04/19 10:53	5 10	5 10									
	9060544-BS1		QC	06/04/19 10:53	5	5	A19B182		25						
	9060544-BS2		QC	06/04/19 10:53	5	5	A19C272		1000						
	A9F0053-01	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-NaOH-20190603				
	A9F0053-02	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603				
	A9F0053-03	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE1	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE2	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE3	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE4	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE5	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE6	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE7	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			
	A9F0053-03RE8	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	5 JCP 6-4-19	5					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			

JCP 6-4-19
Prepared By: Date

6/4/19
Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9060544 (Water)

Prep Method: ASTM D7511-12 (W)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	A9F0053-03RE9	A	Cyanide, Total Dissolved (ASTM D7511, OIA)	06/04/19 10:53	~~5~~ 10 - JKP 6-4-19	~~5~~ 10 -					AGW278-1-17-Unpres-20190603-Spiked	Field Filtered.			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A19C175	09/09/19	0.1 N NaOH
A19C292	03/26/24	Syringe Filters 0.45um.
A19D009	09/29/19	Total CN-TA1 working
A19D010	09/29/19	Total CN-TA2/SAR-working

Analyte Spike(s)

Std ID	Exp. Date	Description
A19B182	07/07/19	Cyanide working -2- TOTAL
A19C272	09/25/19	Total CN Challenge Mtx. Stock Solution

Surrogate(s)

Std ID	Exp. Date	Description

A19F010 11-30-19 CN Std, matrix-preserved 2.68mL spiked MA0 A9F0053-03 (535.48mL sample)

Balance A13L219

57.52g empty 500mL CN bottle

543.00g A9F0053-03 A bottle

JKP 6-4-19

Prepared By: Date

Reviewed By: Date