

Appendix B

Passive Soil Gas Analytical Data



Beacon Environmental
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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 201009R01
Laboratory Work Order: 0005717R

Project Description:

Northwest Pipe
Portland, OR

Client PO No.: NWP21002

Prepared for:

Kris Ivarson

Jacobs

2020 SW Fourth Avenue, Suite 300

Portland, OR 97201-4973

Ryan W. Schneider
Senior Project Manager

April 26, 2021

Report amended to add Level IV

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

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Interim Quality Manager

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Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0005717-01 Sampler Type:	Trip-1 Beacon Passive Sampler	04/08/2021	EPA 8260C	Air
0005717-02 Sampler Type:	Trip-2 Beacon Passive Sampler	04/08/2021	EPA 8260C	Air
0005717-03 Sampler Type:	NWP_PSG01-03262021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-04 Sampler Type:	NWP_PSG02-03262021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-05 Sampler Type:	NWP_PSG03-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-06 Sampler Type:	NWP_PSG04-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-07 Sampler Type:	NWP_PSG05-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-08 Sampler Type:	NWP_PSG06-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-09 Sampler Type:	NWP_PSG07-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-10 Sampler Type:	NWP_PSG08-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-11 Sampler Type:	NWP_PSG09-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-12 Sampler Type:	NWP_PSG10-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-13 Sampler Type:	NWP_PSG11-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-14 Sampler Type:	NWP_PSG12-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-15 Sampler Type:	NWP_PSG13-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-16 Sampler Type:	NWP_PSG14-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-17 Sampler Type:	NWP_PSG15-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-18 Sampler Type:	NWP_PSG16-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-19 Sampler Type:	NWP_PSG17-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-20 Sampler Type:	NWP_PSG18-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas

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Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0005717-21 Sampler Type:	NWP_PSG19-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-22 Sampler Type:	NWP_PSG20-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-23 Sampler Type:	NWP_PSG21-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-24 Sampler Type:	NWP_PSG22-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-25 Sampler Type:	NWP_PSG23-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-26 Sampler Type:	NWP_PSG24-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-27 Sampler Type:	NWP_PSG25-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-28 Sampler Type:	NWP_PSG26-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-29 Sampler Type:	NWP_PSG27-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-30 Sampler Type:	NWP_PSG28-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-31 Sampler Type:	NWP_PSG29-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-32 Sampler Type:	NWP_PSG30-03242021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-33 Sampler Type:	NWP_PSG31-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-34 Sampler Type:	NWP_PSG32-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-35 Sampler Type:	NWP_PSG33-03262021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-36 Sampler Type:	NWP_PSG34-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-37 Sampler Type:	NWP_PSG35-03252021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-38 Sampler Type:	NWP_PSG36-03262021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-39 Sampler Type:	NWP_PSG37-03262021 Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-40 Sampler Type:	NWP_PSG01-03262021-Dup Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas
0005717-41 Sampler Type:	NWP_PSG16-03242021-Dup Beacon Passive Sampler	04/08/2021	EPA 8260C	Soil Gas

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Project Completeness

Samples Received: 41
Samples Analyzed: 41

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Case Narrative

U.S. EPA Method 8260C

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method 8260C, with laboratory results provided in nanograms (ng). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were in accordance with BEACON's Quality Assurance Project Plan.

Passive Soil-Gas Survey Notes

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

Reporting Limits

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Field sample measurements above the upper calibration standard are estimated; however, these values are reported without qualifiers because all reported measurements are relative to each other and are appropriate to meet the survey objectives of locating source areas and vapor intrusion pathways and defining the lateral extent of the contamination.

Project Details

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window. Sample chromatograms are included in the Raw Data section.

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STATEMENT OF DATA QUALIFICATIONS

Qualifier Summary:

Analysis: EPA 8260C / Soil-Gas Sample Analysis by EPA Method 8260C

Compound	Q	Q Explanation
0005717-28 NWP_PSG26-03252021		
1,2-DCA-d4	S4	Matrix interference caused surrogate recovery outside control limits.
0005717-29 NWP_PSG27-03252021		
1,2-DCA-d4	S4	Matrix interference caused surrogate recovery outside control limits.
0005717-36 NWP_PSG34-03252021		
1,2-DCA-d4	S4	Matrix interference caused surrogate recovery outside control limits.
0005717-38 NWP_PSG36-03262021		
1,2-DCA-d4	S4	Matrix interference caused surrogate recovery outside control limits.

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Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Analytical Results

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Summary of Compound Detections - Mass

Lab Sample ID:	0005717-03	NWP_PSG01-03262021	Method:	EPA 8260C
Soil Gas				

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	Analyzed	File ID
Trichloroethene	79-01-6	446		4.125	10	04/12/2021 15:58	C21041207.D
Tetrachloroethene	127-18-4	10,900		5.804	10	04/12/2021 15:58	C21041207.D

Lab Sample ID:	0005717-04	NWP_PSG02-03262021	Method:	EPA 8260C
Soil Gas				

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	Analyzed	File ID
cis-1,2-Dichloroethene	156-59-2	25		2.937	10	04/12/2021 16:22	C21041208.D
Trichloroethene	79-01-6	1,180		4.125	10	04/12/2021 16:22	C21041208.D
Tetrachloroethene	127-18-4	7,370		5.798	10	04/12/2021 16:22	C21041208.D

Lab Sample ID:	0005717-05	NWP_PSG03-03242021	Method:	EPA 8260C
Soil Gas				

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	Analyzed	File ID
Tetrachloroethene	127-18-4	17		5.798	10	04/12/2021 16:46	C21041209.D

Lab Sample ID:	0005717-11	NWP_PSG09-03252021	Method:	EPA 8260C
Soil Gas				

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	Analyzed	File ID
Tetrachloroethene	127-18-4	136		5.792	10	04/12/2021 19:10	C21041215.D

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Lab Sample ID:	0005717-12	NWP_PSG10-03252021	Method:	EPA 8260C
Soil Gas				

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	Analyzed	File ID
Trichloroethene	79-01-6	24		4.125	10	04/12/2021 19:34	C21041216.D
Tetrachloroethene	127-18-4	674		5.792	10	04/12/2021 19:34	C21041216.D

Lab Sample ID:	0005717-40	NWP_PSG01-03262021-Dup	Method:	EPA 8260C
Soil Gas				

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	Analyzed	File ID
Trichloroethene	79-01-6	170		4.122	10	04/14/2021 10:43	C21041355.D
Tetrachloroethene	127-18-4	9,950		5.801	10	04/14/2021 10:43	C21041355.D

Lab Sample ID:	0005717-41	NWP_PSG16-03242021-Dup	Method:	EPA 8260C
Soil Gas				

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	Analyzed	File ID
Tetrachloroethene	127-18-4	17		5.795	10	04/14/2021 11:07	C21041356.D

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Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Data Summary Table- Mass

Compound	Frequency	LOQ (ng)	Max Value (ng)
cis-1,2-Dichloroethene	1	10	25
Trichloroethene	3	10	1,180
Tetrachloroethene	5	10	10,900

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Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Detailed Analytical Results

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Detailed Analytical Results- Mass

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Lab Sample ID: 0005717-01	Trip-1	Method: EPA 8260C
Air		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/12/2021 15:10	C21041205.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/12/2021 15:10	C21041205.D
Trichloroethene	79-01-6	<10		10	0.00	04/12/2021 15:10	C21041205.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/12/2021 15:10	C21041205.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	107%	70-130		0.00	04/12/2021 15:10	C21041205.D
Surrogate: Toluene-d8	2037-26-5	90.9%	70-130		0.00	04/12/2021 15:10	C21041205.D
Surrogate: Bromofluorobenzene	460-00-4	81.4%	70-130		0.00	04/12/2021 15:10	C21041205.D

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Lab Sample ID: 0005717-02	Trip-2 Air	Method: EPA 8260C
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Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/12/2021 15:34	C21041206.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/12/2021 15:34	C21041206.D
Trichloroethene	79-01-6	<10		10	0.00	04/12/2021 15:34	C21041206.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/12/2021 15:34	C21041206.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	107%	70-130		0.00	04/12/2021 15:34	C21041206.D
Surrogate: Toluene-d8	2037-26-5	92.4%	70-130		0.00	04/12/2021 15:34	C21041206.D
Surrogate: Bromofluorobenzene	460-00-4	81.2%	70-130		0.00	04/12/2021 15:34	C21041206.D

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Lab Sample ID: 0005717-03	NWP_PSG01-03262021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 15:58	C21041207.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 15:58	C21041207.D	
Trichloroethene	79-01-6	446	10	0.00	04/12/2021 15:58	C21041207.D	
Tetrachloroethene	127-18-4	10,900	10	0.00	04/12/2021 15:58	C21041207.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	107%	70-130		0.00	04/12/2021 15:58	C21041207.D
Surrogate: Toluene-d8	2037-26-5	85.9%	70-130		0.00	04/12/2021 15:58	C21041207.D
Surrogate: Bromofluorobenzene	460-00-4	85.7%	70-130		0.00	04/12/2021 15:58	C21041207.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-04	NWP_PSG02-03262021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/12/2021 16:22	C21041208.D
cis-1,2-Dichloroethene	156-59-2	25		10	0.00	04/12/2021 16:22	C21041208.D
Trichloroethene	79-01-6	1,180		10	0.00	04/12/2021 16:22	C21041208.D
Tetrachloroethene	127-18-4	7,370		10	0.00	04/12/2021 16:22	C21041208.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	102%	70-130		0.00	04/12/2021 16:22	C21041208.D
Surrogate: Toluene-d8	2037-26-5	87.9%	70-130		0.00	04/12/2021 16:22	C21041208.D
Surrogate: Bromofluorobenzene	460-00-4	87.2%	70-130		0.00	04/12/2021 16:22	C21041208.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-05	NWP_PSG03-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 16:46	C21041209.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 16:46	C21041209.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 16:46	C21041209.D	
Tetrachloroethene	127-18-4	17	10	0.00	04/12/2021 16:46	C21041209.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130		0.00	04/12/2021 16:46	C21041209.D
Surrogate: Toluene-d8	2037-26-5	89.2%	70-130		0.00	04/12/2021 16:46	C21041209.D
Surrogate: Bromofluorobenzene	460-00-4	84.8%	70-130		0.00	04/12/2021 16:46	C21041209.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-06	NWP_PSG04-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 17:10	C21041210.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 17:10	C21041210.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 17:10	C21041210.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 17:10	C21041210.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	96.3%	70-130		0.00	04/12/2021 17:10	C21041210.D
Surrogate: Toluene-d8	2037-26-5	89.3%	70-130		0.00	04/12/2021 17:10	C21041210.D
Surrogate: Bromofluorobenzene	460-00-4	86.4%	70-130		0.00	04/12/2021 17:10	C21041210.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-07	NWP_PSG05-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/12/2021 17:33	C21041211.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/12/2021 17:33	C21041211.D
Trichloroethene	79-01-6	<10		10	0.00	04/12/2021 17:33	C21041211.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/12/2021 17:33	C21041211.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	89.4%	70-130		0.00	04/12/2021 17:33	C21041211.D
Surrogate: Toluene-d8	2037-26-5	91.9%	70-130		0.00	04/12/2021 17:33	C21041211.D
Surrogate: Bromofluorobenzene	460-00-4	87.5%	70-130		0.00	04/12/2021 17:33	C21041211.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-08	NWP_PSG06-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/12/2021 17:57	C21041212.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/12/2021 17:57	C21041212.D
Trichloroethene	79-01-6	<10		10	0.00	04/12/2021 17:57	C21041212.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/12/2021 17:57	C21041212.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	100%	70-130		0.00	04/12/2021 17:57	C21041212.D
Surrogate: Toluene-d8	2037-26-5	91.3%	70-130		0.00	04/12/2021 17:57	C21041212.D
Surrogate: Bromofluorobenzene	460-00-4	86.4%	70-130		0.00	04/12/2021 17:57	C21041212.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-09	NWP_PSG07-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 18:21	C21041213.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 18:21	C21041213.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 18:21	C21041213.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 18:21	C21041213.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	89.2%	70-130		0.00	04/12/2021 18:21	C21041213.D
Surrogate: Toluene-d8	2037-26-5	88.3%	70-130		0.00	04/12/2021 18:21	C21041213.D
Surrogate: Bromofluorobenzene	460-00-4	85.7%	70-130		0.00	04/12/2021 18:21	C21041213.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-10	NWP_PSG08-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 18:45	C21041214.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 18:45	C21041214.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 18:45	C21041214.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 18:45	C21041214.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.4%	70-130		0.00	04/12/2021 18:45	C21041214.D
Surrogate: Toluene-d8	2037-26-5	91.5%	70-130		0.00	04/12/2021 18:45	C21041214.D
Surrogate: Bromofluorobenzene	460-00-4	83.5%	70-130		0.00	04/12/2021 18:45	C21041214.D

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Lab Sample ID: 0005717-11	NWP_PSG09-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 19:10	C21041215.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 19:10	C21041215.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 19:10	C21041215.D	
Tetrachloroethene	127-18-4	136	10	0.00	04/12/2021 19:10	C21041215.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	105%	70-130		0.00	04/12/2021 19:10	C21041215.D
Surrogate: Toluene-d8	2037-26-5	88.0%	70-130		0.00	04/12/2021 19:10	C21041215.D
Surrogate: Bromofluorobenzene	460-00-4	86.1%	70-130		0.00	04/12/2021 19:10	C21041215.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-12	NWP_PSG10-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 19:34	C21041216.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 19:34	C21041216.D	
Trichloroethene	79-01-6	24	10	0.00	04/12/2021 19:34	C21041216.D	
Tetrachloroethene	127-18-4	674	10	0.00	04/12/2021 19:34	C21041216.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130		0.00	04/12/2021 19:34	C21041216.D
Surrogate: Toluene-d8	2037-26-5	87.7%	70-130		0.00	04/12/2021 19:34	C21041216.D
Surrogate: Bromofluorobenzene	460-00-4	86.5%	70-130		0.00	04/12/2021 19:34	C21041216.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-13	NWP_PSG11-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 19:59	C21041217.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 19:59	C21041217.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 19:59	C21041217.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 19:59	C21041217.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	96.1%	70-130		0.00	04/12/2021 19:59	C21041217.D
Surrogate: Toluene-d8	2037-26-5	88.1%	70-130		0.00	04/12/2021 19:59	C21041217.D
Surrogate: Bromofluorobenzene	460-00-4	87.1%	70-130		0.00	04/12/2021 19:59	C21041217.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-14	NWP_PSG12-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 20:23	C21041218.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 20:23	C21041218.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 20:23	C21041218.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 20:23	C21041218.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	97.6%	70-130		0.00	04/12/2021 20:23	C21041218.D
Surrogate: Toluene-d8	2037-26-5	87.4%	70-130		0.00	04/12/2021 20:23	C21041218.D
Surrogate: Bromofluorobenzene	460-00-4	84.0%	70-130		0.00	04/12/2021 20:23	C21041218.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-15	NWP_PSG13-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 20:47	C21041219.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 20:47	C21041219.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 20:47	C21041219.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 20:47	C21041219.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	94.2%	70-130		0.00	04/12/2021 20:47	C21041219.D
Surrogate: Toluene-d8	2037-26-5	89.8%	70-130		0.00	04/12/2021 20:47	C21041219.D
Surrogate: Bromofluorobenzene	460-00-4	85.7%	70-130		0.00	04/12/2021 20:47	C21041219.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-16	NWP_PSG14-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 21:11	C21041220.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 21:11	C21041220.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 21:11	C21041220.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 21:11	C21041220.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	86.5%	70-130		0.00	04/12/2021 21:11	C21041220.D
Surrogate: Toluene-d8	2037-26-5	85.9%	70-130		0.00	04/12/2021 21:11	C21041220.D
Surrogate: Bromofluorobenzene	460-00-4	90.5%	70-130		0.00	04/12/2021 21:11	C21041220.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-17	NWP_PSG15-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/12/2021 21:34	C21041221.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/12/2021 21:34	C21041221.D
Trichloroethene	79-01-6	<10		10	0.00	04/12/2021 21:34	C21041221.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/12/2021 21:34	C21041221.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	89.0%	70-130		0.00	04/12/2021 21:34	C21041221.D
Surrogate: Toluene-d8	2037-26-5	89.0%	70-130		0.00	04/12/2021 21:34	C21041221.D
Surrogate: Bromofluorobenzene	460-00-4	88.6%	70-130		0.00	04/12/2021 21:34	C21041221.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-18	NWP_PSG16-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 21:58	C21041222.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 21:58	C21041222.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 21:58	C21041222.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 21:58	C21041222.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	91.8%	70-130		0.00	04/12/2021 21:58	C21041222.D
Surrogate: Toluene-d8	2037-26-5	90.2%	70-130		0.00	04/12/2021 21:58	C21041222.D
Surrogate: Bromofluorobenzene	460-00-4	88.1%	70-130		0.00	04/12/2021 21:58	C21041222.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-19	NWP_PSG17-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 22:22	C21041223.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 22:22	C21041223.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 22:22	C21041223.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 22:22	C21041223.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	101%	70-130		0.00	04/12/2021 22:22	C21041223.D
Surrogate: Toluene-d8	2037-26-5	85.8%	70-130		0.00	04/12/2021 22:22	C21041223.D
Surrogate: Bromofluorobenzene	460-00-4	88.6%	70-130		0.00	04/12/2021 22:22	C21041223.D

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Lab Sample ID: 0005717-20	NWP_PSG18-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 22:46	C21041224.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 22:46	C21041224.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 22:46	C21041224.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 22:46	C21041224.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	97.8%	70-130		0.00	04/12/2021 22:46	C21041224.D
Surrogate: Toluene-d8	2037-26-5	89.0%	70-130		0.00	04/12/2021 22:46	C21041224.D
Surrogate: Bromofluorobenzene	460-00-4	86.2%	70-130		0.00	04/12/2021 22:46	C21041224.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-21	NWP_PSG19-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 23:11	C21041225.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 23:11	C21041225.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 23:11	C21041225.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 23:11	C21041225.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	97.2%	70-130		0.00	04/12/2021 23:11	C21041225.D
Surrogate: Toluene-d8	2037-26-5	87.1%	70-130		0.00	04/12/2021 23:11	C21041225.D
Surrogate: Bromofluorobenzene	460-00-4	83.1%	70-130		0.00	04/12/2021 23:11	C21041225.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-22	NWP_PSG20-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/12/2021 23:35	C21041226.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/12/2021 23:35	C21041226.D	
Trichloroethene	79-01-6	<10	10	0.00	04/12/2021 23:35	C21041226.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/12/2021 23:35	C21041226.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	105%	70-130		0.00	04/12/2021 23:35	C21041226.D
Surrogate: Toluene-d8	2037-26-5	87.7%	70-130		0.00	04/12/2021 23:35	C21041226.D
Surrogate: Bromofluorobenzene	460-00-4	83.8%	70-130		0.00	04/12/2021 23:35	C21041226.D

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Lab Sample ID: 0005717-23	NWP_PSG21-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/12/2021 23:59	C21041227.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/12/2021 23:59	C21041227.D
Trichloroethene	79-01-6	<10		10	0.00	04/12/2021 23:59	C21041227.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/12/2021 23:59	C21041227.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	95.3%	70-130		0.00	04/12/2021 23:59	C21041227.D
Surrogate: Toluene-d8	2037-26-5	86.4%	70-130		0.00	04/12/2021 23:59	C21041227.D
Surrogate: Bromofluorobenzene	460-00-4	89.0%	70-130		0.00	04/12/2021 23:59	C21041227.D

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Lab Sample ID: 0005717-24	NWP_PSG22-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 00:23	C21041228.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 00:23	C21041228.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 00:23	C21041228.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 00:23	C21041228.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	94.6%	70-130		0.00	04/13/2021 00:23	C21041228.D
Surrogate: Toluene-d8	2037-26-5	88.3%	70-130		0.00	04/13/2021 00:23	C21041228.D
Surrogate: Bromofluorobenzene	460-00-4	85.8%	70-130		0.00	04/13/2021 00:23	C21041228.D

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Lab Sample ID: 0005717-25	NWP_PSG23-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/13/2021 00:47	C21041229.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/13/2021 00:47	C21041229.D
Trichloroethene	79-01-6	<10		10	0.00	04/13/2021 00:47	C21041229.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/13/2021 00:47	C21041229.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.0%	70-130		0.00	04/13/2021 00:47	C21041229.D
Surrogate: Toluene-d8	2037-26-5	86.9%	70-130		0.00	04/13/2021 00:47	C21041229.D
Surrogate: Bromofluorobenzene	460-00-4	86.5%	70-130		0.00	04/13/2021 00:47	C21041229.D

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Lab Sample ID: 0005717-26	NWP_PSG24-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 01:11	C21041230.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 01:11	C21041230.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 01:11	C21041230.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 01:11	C21041230.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	87.5%	70-130		0.00	04/13/2021 01:11	C21041230.D
Surrogate: Toluene-d8	2037-26-5	88.6%	70-130		0.00	04/13/2021 01:11	C21041230.D
Surrogate: Bromofluorobenzene	460-00-4	87.8%	70-130		0.00	04/13/2021 01:11	C21041230.D

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Lab Sample ID: 0005717-27	NWP_PSG25-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 01:35	C21041231.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 01:35	C21041231.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 01:35	C21041231.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 01:35	C21041231.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	81.7%	70-130		0.00	04/13/2021 01:35	C21041231.D
Surrogate: Toluene-d8	2037-26-5	84.6%	70-130		0.00	04/13/2021 01:35	C21041231.D
Surrogate: Bromofluorobenzene	460-00-4	90.1%	70-130		0.00	04/13/2021 01:35	C21041231.D

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Lab Sample ID: 0005717-28	NWP_PSG26-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	RRT Eval	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	0.00	04/13/2021 01:59	C21041232.D
cis-1,2-Dichloroethene	156-59-2	<10		10	0.00	04/13/2021 01:59	C21041232.D
Trichloroethene	79-01-6	<10		10	0.00	04/13/2021 01:59	C21041232.D
Tetrachloroethene	127-18-4	<10		10	0.00	04/13/2021 01:59	C21041232.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	65.4%	70-130	S4	0.00	04/13/2021 01:59	C21041232.D
Surrogate: Toluene-d8	2037-26-5	86.7%	70-130		0.00	04/13/2021 01:59	C21041232.D
Surrogate: Bromofluorobenzene	460-00-4	88.6%	70-130		0.00	04/13/2021 01:59	C21041232.D

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Lab Sample ID: 0005717-29	NWP_PSG27-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 02:23	C21041233.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 02:23	C21041233.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 02:23	C21041233.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 02:23	C21041233.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	55.8%	70-130	S4	0.00	04/13/2021 02:23	C21041233.D
Surrogate: Toluene-d8	2037-26-5	88.4%	70-130		0.00	04/13/2021 02:23	C21041233.D
Surrogate: Bromofluorobenzene	460-00-4	87.7%	70-130		0.00	04/13/2021 02:23	C21041233.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-30	NWP_PSG28-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 02:47	C21041234.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 02:47	C21041234.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 02:47	C21041234.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 02:47	C21041234.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	90.4%	70-130		0.00	04/13/2021 02:47	C21041234.D
Surrogate: Toluene-d8	2037-26-5	89.1%	70-130		0.00	04/13/2021 02:47	C21041234.D
Surrogate: Bromofluorobenzene	460-00-4	88.0%	70-130		0.00	04/13/2021 02:47	C21041234.D

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Lab Sample ID: 0005717-31	NWP_PSG29-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 03:12	C21041235.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 03:12	C21041235.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 03:12	C21041235.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 03:12	C21041235.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	88.7%	70-130		0.00	04/13/2021 03:12	C21041235.D
Surrogate: Toluene-d8	2037-26-5	88.0%	70-130		0.00	04/13/2021 03:12	C21041235.D
Surrogate: Bromofluorobenzene	460-00-4	87.9%	70-130		0.00	04/13/2021 03:12	C21041235.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-32	NWP_PSG30-03242021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 03:36	C21041236.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 03:36	C21041236.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 03:36	C21041236.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 03:36	C21041236.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	90.4%	70-130		0.00	04/13/2021 03:36	C21041236.D
Surrogate: Toluene-d8	2037-26-5	86.3%	70-130		0.00	04/13/2021 03:36	C21041236.D
Surrogate: Bromofluorobenzene	460-00-4	86.8%	70-130		0.00	04/13/2021 03:36	C21041236.D

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Lab Sample ID: 0005717-33	NWP_PSG31-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 04:00	C21041237.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 04:00	C21041237.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 04:00	C21041237.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 04:00	C21041237.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	81.6%	70-130		0.00	04/13/2021 04:00	C21041237.D
Surrogate: Toluene-d8	2037-26-5	90.4%	70-130		0.00	04/13/2021 04:00	C21041237.D
Surrogate: Bromofluorobenzene	460-00-4	83.1%	70-130		0.00	04/13/2021 04:00	C21041237.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-34	NWP_PSG32-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 04:24	C21041238.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 04:24	C21041238.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 04:24	C21041238.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 04:24	C21041238.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	94.0%	70-130		0.00	04/13/2021 04:24	C21041238.D
Surrogate: Toluene-d8	2037-26-5	88.9%	70-130		0.00	04/13/2021 04:24	C21041238.D
Surrogate: Bromofluorobenzene	460-00-4	85.7%	70-130		0.00	04/13/2021 04:24	C21041238.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-35	NWP_PSG33-03262021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 04:48	C21041239.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 04:48	C21041239.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 04:48	C21041239.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 04:48	C21041239.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	103%	70-130		0.00	04/13/2021 04:48	C21041239.D
Surrogate: Toluene-d8	2037-26-5	86.2%	70-130		0.00	04/13/2021 04:48	C21041239.D
Surrogate: Bromofluorobenzene	460-00-4	86.6%	70-130		0.00	04/13/2021 04:48	C21041239.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-36	NWP_PSG34-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 05:12	C21041240.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 05:12	C21041240.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 05:12	C21041240.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 05:12	C21041240.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	66.3%	70-130	S4	0.00	04/13/2021 05:12	C21041240.D
Surrogate: Toluene-d8	2037-26-5	98.2%	70-130		0.00	04/13/2021 05:12	C21041240.D
Surrogate: Bromofluorobenzene	460-00-4	88.2%	70-130		0.00	04/13/2021 05:12	C21041240.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-37	NWP_PSG35-03252021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 05:36	C21041241.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 05:36	C21041241.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 05:36	C21041241.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 05:36	C21041241.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	82.4%	70-130		0.00	04/13/2021 05:36	C21041241.D
Surrogate: Toluene-d8	2037-26-5	118%	70-130		0.00	04/13/2021 05:36	C21041241.D
Surrogate: Bromofluorobenzene	460-00-4	85.3%	70-130		0.00	04/13/2021 05:36	C21041241.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-38	NWP_PSG36-03262021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 06:00	C21041242.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 06:00	C21041242.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 06:00	C21041242.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 06:00	C21041242.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	66.7%	70-130	S4	0.00	04/13/2021 06:00	C21041242.D
Surrogate: Toluene-d8	2037-26-5	87.5%	70-130		0.00	04/13/2021 06:00	C21041242.D
Surrogate: Bromofluorobenzene	460-00-4	90.2%	70-130		0.00	04/13/2021 06:00	C21041242.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-39	NWP_PSG37-03262021	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/13/2021 06:24	C21041243.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/13/2021 06:24	C21041243.D	
Trichloroethene	79-01-6	<10	10	0.00	04/13/2021 06:24	C21041243.D	
Tetrachloroethene	127-18-4	<10	10	0.00	04/13/2021 06:24	C21041243.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	80.7%	70-130		0.00	04/13/2021 06:24	C21041243.D
Surrogate: Toluene-d8	2037-26-5	88.1%	70-130		0.00	04/13/2021 06:24	C21041243.D
Surrogate: Bromofluorobenzene	460-00-4	85.7%	70-130		0.00	04/13/2021 06:24	C21041243.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-40	NWP_PSG01-03262021-Dup	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/14/2021 10:43	C21041355.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/14/2021 10:43	C21041355.D	
Trichloroethene	79-01-6	170	10	0.00	04/14/2021 10:43	C21041355.D	
Tetrachloroethene	127-18-4	9,950	10	0.00	04/14/2021 10:43	C21041355.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	107%	70-130		0.00	04/14/2021 10:43	C21041355.D
Surrogate: Toluene-d8	2037-26-5	87.5%	70-130		0.00	04/14/2021 10:43	C21041355.D
Surrogate: Bromofluorobenzene	460-00-4	86.4%	70-130		0.00	04/14/2021 10:43	C21041355.D

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab Sample ID: 0005717-41	NWP_PSG16-03242021-Dup	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	RRT Eval	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	0.00	04/14/2021 11:07	C21041356.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	0.00	04/14/2021 11:07	C21041356.D	
Trichloroethene	79-01-6	<10	10	0.00	04/14/2021 11:07	C21041356.D	
Tetrachloroethene	127-18-4	17	10	0.00	04/14/2021 11:07	C21041356.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	RRT Eval	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	100%	70-130		0.00	04/14/2021 11:07	C21041356.D
Surrogate: Toluene-d8	2037-26-5	88.7%	70-130		0.00	04/14/2021 11:07	C21041356.D
Surrogate: Bromofluorobenzene	460-00-4	88.7%	70-130		0.00	04/14/2021 11:07	C21041356.D

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

QC Information/Summary

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D004 - Instrument: C System - File ID: 21040116.D

B21D004-ICV1 (LCSD/Second Source Verification/CALV)

Vinyl Chloride	60.9	10	5	2.5	ng	50.0		122	70-130			
cis-1,2-Dichloroethene	49.6	10	5	2.5	ng	50.0		99.1	70-130			
Trichloroethene	48.1	10	5	2.5	ng	50.0		96.2	70-130			
Tetrachloroethene	51.9	10	5	2.5	ng	50.0		104	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.1</i>				<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>52.9</i>				<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>48.4</i>				<i>ng</i>	<i>50.0</i>		<i>96.7</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D004 - Instrument: C System - File ID: 21040117.D

B21D004-ICB1 (Lab Blank/Initial Calibration Blank)

Vinyl Chloride	<5	10	5	2.5	ng							U
cis-1,2-Dichloroethene	<5	10	5	2.5	ng							U
Trichloroethene	<5	10	5	2.5	ng							U
Tetrachloroethene	<5	10	5	2.5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>100</i>				<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>96.9</i>				<i>ng</i>	<i>100</i>		<i>96.9</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.5</i>				<i>ng</i>	<i>100</i>		<i>91.5</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D035 - Batch: 21D0032 - Instrument: C System - File ID: C21041202.D

21D0032-BS1 (LCS, Calibration Source Verification)

Vinyl Chloride	42.9	10	5	2.5	ng	50.0		85.7	80-120			
cis-1,2-Dichloroethene	53.6	10	5	2.5	ng	50.0		107	80-120			
Trichloroethene	49.7	10	5	2.5	ng	50.0		99.4	80-120			
Tetrachloroethene	51.7	10	5	2.5	ng	50.0		103	80-120			
<i>Surrogate: 1,2-DCA-d4</i>	<i>54.4</i>				<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>47.9</i>				<i>ng</i>	<i>50.0</i>		<i>95.8</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.2</i>				<i>ng</i>	<i>50.0</i>		<i>86.4</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D035 - Batch: 21D0032 - Instrument: C System - File ID: C21041203.D

21D0032-BLK1 (Lab Blank)

Vinyl Chloride	<5	10	5	2.5	ng							
cis-1,2-Dichloroethene	<5	10	5	2.5	ng							
Trichloroethene	<5	10	5	2.5	ng							
Tetrachloroethene	<5	10	5	2.5	ng							
<i>Surrogate: 1,2-DCA-d4</i>	<i>105</i>				<i>ng</i>	<i>100</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>96.1</i>				<i>ng</i>	<i>100</i>		<i>96.1</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>81.6</i>				<i>ng</i>	<i>100</i>		<i>81.6</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D035 - Instrument: C System - File ID: C21041204.D

B21D035-ICV1 (LCSD/Second Source Verification/CALV)

Vinyl Chloride	44.1	10	5	2.5	ng	50.0		88.1	70-130			
cis-1,2-Dichloroethene	49.3	10	5	2.5	ng	50.0		98.6	70-130			
Trichloroethene	50.4	10	5	2.5	ng	50.0		101	70-130			
Tetrachloroethene	51.4	10	5	2.5	ng	50.0		103	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>52.2</i>				<i>ng</i>	<i>50.0</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>47.8</i>				<i>ng</i>	<i>50.0</i>		<i>95.5</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.4</i>				<i>ng</i>	<i>50.0</i>		<i>84.8</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D042 - Batch: 21D0038 - Instrument: C System - File ID: C21041302.D

21D0038-BS1 (LCS, Calibration Source Verification)

Vinyl Chloride	47.7	10	5	2.5	ng	50.0		95.4	80-120			
cis-1,2-Dichloroethene	51.4	10	5	2.5	ng	50.0		103	80-120			
Trichloroethene	51.2	10	5	2.5	ng	50.0		102	80-120			
Tetrachloroethene	51.3	10	5	2.5	ng	50.0		103	80-120			
<i>Surrogate: 1,2-DCA-d4</i>	<i>54.4</i>				<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.1</i>				<i>ng</i>	<i>50.0</i>		<i>96.1</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.4</i>				<i>ng</i>	<i>50.0</i>		<i>88.8</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D042 - Batch: 21D0038 - Instrument: C System - File ID: C21041303.D

21D0038-BLK1 (Lab Blank)

Vinyl Chloride	<5	10	5	2.5	ng							
cis-1,2-Dichloroethene	<5	10	5	2.5	ng							
Trichloroethene	<5	10	5	2.5	ng							
Tetrachloroethene	<5	10	5	2.5	ng							
<i>Surrogate: 1,2-DCA-d4</i>	<i>109</i>				<i>ng</i>	<i>100</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>96.6</i>				<i>ng</i>	<i>100</i>		<i>96.6</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>81.6</i>				<i>ng</i>	<i>100</i>		<i>81.6</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Analyte	Result	LOQ	LOD	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Sequence: B21D042 - Instrument: C System - File ID: C21041304.D

B21D042-ICV1 (LCSD/Second Source Verification/CALV)

Vinyl Chloride	56.8	10	5	2.5	ng	50.0		114	70-130			
cis-1,2-Dichloroethene	52.2	10	5	2.5	ng	50.0		104	70-130			
Trichloroethene	49.8	10	5	2.5	ng	50.0		99.7	70-130			
Tetrachloroethene	52.7	10	5	2.5	ng	50.0		105	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>54.6</i>				<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>47.3</i>				<i>ng</i>	<i>50.0</i>		<i>94.6</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.4</i>				<i>ng</i>	<i>50.0</i>		<i>84.8</i>	<i>70-130</i>			

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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EPA 8260C - LCS/LCSD Quality Control Summary
LCS: 21D0032-BS1 File ID: C21041202.D

Analyzed: 4/12/21 14:45

LCSD: B21D035-ICV1 File ID: C21041204.D

Analyzed: 4/12/21 13:57

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	42.85	85.7	50	44.05	88.10	80-120	2.76	30	
cis-1,2-Dichloroethene	156-59-2	53.61	107.22	50	49.31	98.60	80-120	8.36	30	
Trichloroethene	79-01-6	49.68	99.36	50	50.42	101.00	80-120	1.48	30	
Tetrachloroethene	127-18-4	51.74	103.48	50	51.36	103.00	80-120	0.74	30	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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EPA 8260C - LCS/LCSD Quality Control Summary
LCS: 21D0038-BS1 File ID: C21041302.D

Analyzed: 4/13/21 13:51

LCSD: B21D042-ICV1 File ID: C21041304.D

Analyzed: 4/13/21 13:03

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	47.68	95.36	50	56.75	114.00	80-120	17.37	30	
cis-1,2-Dichloroethene	156-59-2	51.40	102.8	50	52.2	104.00	80-120	1.54	30	
Trichloroethene	79-01-6	51.21	102.42	50	49.83	99.70	80-120	2.73	30	
Tetrachloroethene	127-18-4	51.28	102.56	50	52.72	105.00	80-120	2.77	30	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Duplicate RPD Summary
Soil-Gas Sample Analysis by EPA Method 8260C

Duplicate Sample: NWP_PSG01-03262021-Dup (0005717-40) Sample: NWP_PSG01-03262021 (0005717-03) Average RPD: 24.7%

Analyte	CAS#	Duplicate Result (ng)	LOQ (ng)	Sample Result (ng)	LOQ (ng)	RPD (%)
Vinyl Chloride	75-01-4	<10	10	<10	10	0.0
cis-1,2-Dichloroethene	156-59-2	<10	10	<10	10	0.0
Trichloroethene	79-01-6	170	10	446	10	89.6
Tetrachloroethene	127-18-4	9,950	10	10,900	10	9.1

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Duplicate RPD Summary
Soil-Gas Sample Analysis by EPA Method 8260C

Duplicate Sample: NWP_PSG16-03242021-Dup (0005717-41) Sample: NWP_PSG16-03242021 (0005717-18) Average RPD:
 13.0%

Analyte	CAS#	Duplicate Result (ng)	LOQ (ng)	Sample Result (ng)	LOQ (ng)	RPD (%)
Vinyl Chloride	75-01-4	<10	10	<10	10	0.0
cis-1,2-Dichloroethene	156-59-2	<10	10	<10	10	0.0
Trichloroethene	79-01-6	<10	10	<10	10	0.0
Tetrachloroethene	127-18-4	17.0	10	<10	10	51.9

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

QC/CLP Tables

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Form 1
Volatile Analysis Data Package Sequence Summary

Method: EPA 8260C

Sequence: B21D035

Instrument: C System

Lab Sample ID	Client Sample ID	DF	File ID	QC Description
B21D035-TUN1	MS Tune	1.00	BC21041202.D	MS Tune
21D0032-BS1	LCS	1.00	C21041202.D	LCS, Calibration Source Verification
21D0032-BLK1	Blank	1.00	C21041203.D	Method Blank
B21D035-ICV1	Initial Cal Check	1.00	C21041204.D	LCSD, Second Source Verification/ICV
0005717-01	Trip-1	1.00	C21041205.D	
0005717-02	Trip-2	1.00	C21041206.D	
0005717-03	NWP_PSG01-03262021	1.00	C21041207.D	
0005717-04	NWP_PSG02-03262021	1.00	C21041208.D	
0005717-05	NWP_PSG03-03242021	1.00	C21041209.D	
0005717-06	NWP_PSG04-03242021	1.00	C21041210.D	
0005717-07	NWP_PSG05-03242021	1.00	C21041211.D	
0005717-08	NWP_PSG06-03242021	1.00	C21041212.D	
0005717-09	NWP_PSG07-03242021	1.00	C21041213.D	
0005717-10	NWP_PSG08-03242021	1.00	C21041214.D	
0005717-11	NWP_PSG09-03252021	1.00	C21041215.D	
0005717-12	NWP_PSG10-03252021	1.00	C21041216.D	
0005717-13	NWP_PSG11-03242021	1.00	C21041217.D	
0005717-14	NWP_PSG12-03242021	1.00	C21041218.D	
0005717-15	NWP_PSG13-03242021	1.00	C21041219.D	
0005717-16	NWP_PSG14-03242021	1.00	C21041220.D	
0005717-17	NWP_PSG15-03242021	1.00	C21041221.D	
0005717-18	NWP_PSG16-03242021	1.00	C21041222.D	
0005717-19	NWP_PSG17-03242021	1.00	C21041223.D	
0005717-20	NWP_PSG18-03242021	1.00	C21041224.D	
0005717-21	NWP_PSG19-03242021	1.00	C21041225.D	
0005717-22	NWP_PSG20-03252021	1.00	C21041226.D	
0005717-23	NWP_PSG21-03242021	1.00	C21041227.D	
0005717-24	NWP_PSG22-03252021	1.00	C21041228.D	
0005717-25	NWP_PSG23-03252021	1.00	C21041229.D	
0005717-26	NWP_PSG24-03252021	1.00	C21041230.D	
0005717-27	NWP_PSG25-03252021	1.00	C21041231.D	
0005717-28	NWP_PSG26-03252021	1.00	C21041232.D	
0005717-29	NWP_PSG27-03252021	1.00	C21041233.D	
0005717-30	NWP_PSG28-03252021	1.00	C21041234.D	
0005717-31	NWP_PSG29-03252021	1.00	C21041235.D	
0005717-32	NWP_PSG30-03242021	1.00	C21041236.D	
0005717-33	NWP_PSG31-03252021	1.00	C21041237.D	
0005717-34	NWP_PSG32-03252021	1.00	C21041238.D	
0005717-35	NWP_PSG33-03262021	1.00	C21041239.D	
0005717-36	NWP_PSG34-03252021	1.00	C21041240.D	
0005717-37	NWP_PSG35-03252021	1.00	C21041241.D	
0005717-38	NWP_PSG36-03262021	1.00	C21041242.D	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Form 1
Volatile Analysis Data Package Sequence Summary

Method: EPA 8260C

Sequence: B21D035

Instrument: C System

Lab Sample ID	Client Sample ID	DF	File ID	QC Description
0005717-39	NWP_PSG37-03262021	1.00	C21041243.D	

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Portland, OR 97201-4973**Site Name:** Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson**Beacon Proposal:** 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021**Form 1**
Volatile Analysis Data Package Sequence Summary**Method:** EPA 8260C**Sequence:** B21D042**Instrument:** C System

Lab Sample ID	Client Sample ID	DF	File ID	QC Description
B21D042-TUN1	MS Tune	1.00	C21041301.D	MS Tune
21D0038-BS1	LCS	1.00	C21041302.D	LCS, Calibration Source Verification
21D0038-BLK1	Blank	1.00	C21041303.D	Method Blank
B21D042-ICV1	Initial Cal Check	1.00	C21041304.D	LCSD, Second Source Verification/ICV
0005717-40	NWP_PSG01-03262021-Dup	1.00	C21041355.D	
0005717-41	NWP_PSG16-03242021-Dup	1.00	C21041356.D	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 2 - Form II A VOA
Volatile Deuterated Monitoring Compound Recovery Summary

Method: EPA 8260C

Sequence: B21D035

Instrument: C System

QC Limits: 70 - 130%

+ values are outside method/contract required QC limits

Lab Number	Client Sample Name	File ID	% Recovery		
			Toluene-d8	BFB	1,2-DCA-d4
21D0032-BS1	LCS, Primary Calibration Source	C21041202.D	96	86	109
21D0032-BLK1	Method Blank	C21041203.D	96	82	105
B21D035-ICV1	LCSD, Second Source	C21041204.D	96	85	104
0005717-01	Trip-1	C21041205.D	91	81	107
0005717-02	Trip-2	C21041206.D	92	81	107
0005717-03	NWP_PSG01-03262021	C21041207.D	86	86	107
0005717-04	NWP_PSG02-03262021	C21041208.D	88	87	102
0005717-05	NWP_PSG03-03242021	C21041209.D	89	85	104
0005717-06	NWP_PSG04-03242021	C21041210.D	89	86	96
0005717-07	NWP_PSG05-03242021	C21041211.D	92	88	89
0005717-08	NWP_PSG06-03242021	C21041212.D	91	86	100
0005717-09	NWP_PSG07-03242021	C21041213.D	88	86	89
0005717-10	NWP_PSG08-03242021	C21041214.D	92	83	98
0005717-11	NWP_PSG09-03252021	C21041215.D	88	86	105
0005717-12	NWP_PSG10-03252021	C21041216.D	88	86	104
0005717-13	NWP_PSG11-03242021	C21041217.D	88	87	96
0005717-14	NWP_PSG12-03242021	C21041218.D	87	84	98
0005717-15	NWP_PSG13-03242021	C21041219.D	90	86	94
0005717-16	NWP_PSG14-03242021	C21041220.D	86	90	86
0005717-17	NWP_PSG15-03242021	C21041221.D	89	89	89
0005717-18	NWP_PSG16-03242021	C21041222.D	90	88	92
0005717-19	NWP_PSG17-03242021	C21041223.D	86	89	101
0005717-20	NWP_PSG18-03242021	C21041224.D	89	86	98
0005717-21	NWP_PSG19-03242021	C21041225.D	87	83	97
0005717-22	NWP_PSG20-03252021	C21041226.D	88	84	105
0005717-23	NWP_PSG21-03242021	C21041227.D	86	89	95
0005717-24	NWP_PSG22-03252021	C21041228.D	88	86	95

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**Table 2 - Form II A VOA
 Volatile Deuterated Monitoring Compound Recovery Summary**

Method: EPA 8260C

Instrument: C System

Sequence: B21D035

QC Limits: 70 - 130%

+ values are outside method/contract required QC limits

Lab Number	Client Sample Name	File ID	% Recovery		
			Toluene-d8	BFB	1,2-DCA-d4
0005717-25	NWP_PSG23-03252021	C21041229.D	87	86	98
0005717-26	NWP_PSG24-03252021	C21041230.D	89	88	88
0005717-27	NWP_PSG25-03252021	C21041231.D	85	90	82
0005717-28	NWP_PSG26-03252021	C21041232.D	87	89	65+
0005717-29	NWP_PSG27-03252021	C21041233.D	88	88	56+
0005717-30	NWP_PSG28-03252021	C21041234.D	89	88	90
0005717-31	NWP_PSG29-03252021	C21041235.D	88	88	89
0005717-32	NWP_PSG30-03242021	C21041236.D	86	87	90
0005717-33	NWP_PSG31-03252021	C21041237.D	90	83	82
0005717-34	NWP_PSG32-03252021	C21041238.D	89	86	94
0005717-35	NWP_PSG33-03262021	C21041239.D	86	87	103
0005717-36	NWP_PSG34-03252021	C21041240.D	98	88	66+
0005717-37	NWP_PSG35-03252021	C21041241.D	118	85	82
0005717-38	NWP_PSG36-03262021	C21041242.D	88	90	67+
0005717-39	NWP_PSG37-03262021	C21041243.D	88	86	81

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Table 2 - Form II A VOA
Volatile Deuterated Monitoring Compound Recovery Summary

Method: EPA 8260C

Sequence: B21D042

Instrument: C System

QC Limits: 70 - 130%

+ values are outside method/contract required QC limits

Lab Number	Client Sample Name	File ID	% Recovery		
			Toluene-d8	BFB	1,2-DCA-d4
21D0038-BS1	LCS, Primary Calibration Source	C21041302.D	96	89	109
21D0038-BLK1	Method Blank	C21041303.D	97	82	109
B21D042-ICV1	LCSD, Second Source	C21041304.D	95	85	109
0005717-40	NWP_PSG01-03262021-Dup	C21041355.D	88	86	107
0005717-41	NWP_PSG16-03242021-Dup	C21041356.D	89	89	100

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Table 3 - Form III B VOA
Volatile Laboratory Control Sample Recoveries

Lab Sample No.: 21D0032-BS1

QC Description: LCS

Instrument: C System

Sequence: B21D035

Method: EPA 8260C

File ID: C21041202.D

+ values are outside method/contract required QC limits

Compound	Spike Added (ng)	Spike Result (ng)	% Recovery	Q	QC Limits	Notes
Vinyl Chloride	50.0	42.9	85.7		80 - 120	
cis-1,2-Dichloroethene	50.0	53.6	107.2		80 - 120	
Trichloroethene	50.0	49.7	99.4		80 - 120	
Tetrachloroethene	50.0	51.7	103.5		80 - 120	

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Table 3 - Form III B VOA
Volatile Laboratory Control Sample Recoveries

Lab Sample No.: 21D0038-BS1

QC Description: LCS

Instrument: C System

Sequence: B21D042

Method: EPA 8260C

File ID: C21041302.D

+ values are outside method/contract required QC limits

Compound	Spike Added (ng)	Spike Result (ng)	% Recovery	Q	QC Limits	Notes
Vinyl Chloride	50.0	47.7	95.4		80 - 120	
cis-1,2-Dichloroethene	50.0	51.4	102.8		80 - 120	
Trichloroethene	50.0	51.2	102.4		80 - 120	
Tetrachloroethene	50.0	51.3	102.6		80 - 120	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 3 - Form III B VOA
Volatile LCS/LCSD Recovery/RPD

Lab Sample No.: B21D035-ICV1
Method: EPA 8260C
Batch: B21D035
LCSD FileID: C21041204.D

QC Description: LCSD, Second Source Standard
Sequence: B21D035
Instrument: C System
LCS FileID: C21041202.D

+ values are outside method/contract required QC limits

Compound	Spike Added (ng)	LCS Result (ng)	LCSD Result (ng)	LCSD Recovery (%)	LCSD RPD (%)	RPD Limit (%)	LCSD Recovery Limits (%)
Vinyl Chloride	50	42.85	44.05	88.10	2.76	30	80 - 120
cis-1,2-Dichloroethene	50	53.61	49.31	98.60	8.36	30	80 - 120
Trichloroethene	50	49.68	50.42	101.00	1.48	30	80 - 120
Tetrachloroethene	50	51.74	51.36	103.00	0.74	30	80 - 120

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Table 3 - Form III B VOA
Volatile LCS/LCSD Recovery/RPD

Lab Sample No.: B21D042-ICV1
Method: EPA 8260C
Batch: B21D042
LCSD FileID: C21041304.D

QC Description: LCSD, Second Source Standard
Sequence: B21D042
Instrument: C System
LCS FileID: C21041302.D

+ values are outside method/contract required QC limits

Compound	Spike Added (ng)	LCS Result (ng)	LCSD Result (ng)	LCSD Recovery (%)	LCSD RPD (%)	RPD Limit (%)	LCSD Recovery Limits (%)
Vinyl Chloride	50	47.68	56.75	114.00	17.37	30	80 - 120
cis-1,2-Dichloroethene	50	51.40	52.2	104.00	1.54	30	80 - 120
Trichloroethene	50	51.21	49.83	99.70	2.73	30	80 - 120
Tetrachloroethene	50	51.28	52.72	105.00	2.77	30	80 - 120

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Table 3 - Form III C VOA
Volatile Laboratory Sample Duplicate Data Sheet

+ values are outside method/contract required QC limits

Analyte	Lab Number:	Field Duplicate	Initial Sample	RPD	RPD Limit	Q
	Sample Name:	Result (ng)	Result (ng)			
	0005717-40		0005717-03			
	NWP_PSG01-03262021-Dup		NWP_PSG01-03262021			
Vinyl Chloride		<10	<10		100	
cis-1,2-Dichloroethene		<10	<10		100	
Trichloroethene		170	446	89.6	87	+
Tetrachloroethene		9,950	10,900	9.1	86	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 3 - Form III C VOA
Volatile Laboratory Sample Duplicate Data Sheet

+ values are outside method/contract required QC limits

Analyte	Field Duplicate	Initial Sample	RPD	RPD Limit	Q
	Lab Number: Sample Name:	Result (ng)			
	0005717-41 NWP_PSG16-03242021-Dup	0005717-18 NWP_PSG16-03242021			
Vinyl Chloride	<10	<10		100	
cis-1,2-Dichloroethene	<10	<10		100	
Trichloroethene	<10	<10		87	
Tetrachloroethene	17.0	<10		86	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 4 - Form IV VOA
Volatile Method Blank Summary

Sequence: B21D004

Batch: B21D004

Matrix:
Analysis:

EPA Sample No.: B21D004-ICB1

Instrument: C System

Date Analyzed: 04/01/2021

Sample Name	Lab Sample Number	Lab File ID	Time Analyzed
MS Tune	B21D004-TUN1	21040101.D	10:11:00
Cal Standard	B21D004-CAL1	21040103.D	10:59:00
Cal Standard	B21D004-CAL2	21040104.D	11:23:00
Cal Standard	B21D004-CAL3	21040105.D	11:48:00
Cal Standard	B21D004-CAL4	21040106.D	12:12:00
Cal Standard	B21D004-CAL5	21040107.D	12:36:00
Cal Standard	B21D004-CAL6	21040108.D	13:00:00
Cal Standard	B21D004-CAL7	21040109.D	13:25:00
Cal Standard	B21D004-CAL8	21040110.D	13:49:00
Cal Standard	B21D004-CAL9	21040111.D	14:14:00
Cal Standard	B21D004-CALA	21040112.D	14:38:00
Cal Standard	B21D004-CALB	21040113.D	15:02:00
LCSD/Second Source Verification/CALV	B21D004-ICV1	21040116.D	16:15:00
Lab Blank/Initial Calibration Blank	B21D004-ICB1	21040117.D	16:39:00

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Table 4 - Form IV VOA
Volatile Method Blank Summary

Sequence: B21D035 **Batch:** B21D035 **Matrix:** Air **Analysis:** EPA 8260C
EPA Sample No.: 21D0032-BLK1 **Instrument:** C System **Date Analyzed:** 04/12/2021

Sample Name	Lab Sample Number	Lab File ID	Time Analyzed
MS Tune	B21D035-TUN1	BC21041202.D	13:57:00
LCS, Calibration Source Verification	21D0032-BS1	C21041202.D	13:57:00
Lab Blank	21D0032-BLK1	C21041203.D	14:21:00
LCSD/Second Source Verification/CALV	B21D035-ICV1	C21041204.D	14:45:00
Trip-1	0005717-01	C21041205.D	15:10:00
Trip-2	0005717-02	C21041206.D	15:34:00
NWP_PSG01-03262021	0005717-03	C21041207.D	15:58:00
NWP_PSG02-03262021	0005717-04	C21041208.D	16:22:00
NWP_PSG03-03242021	0005717-05	C21041209.D	16:46:00
NWP_PSG04-03242021	0005717-06	C21041210.D	17:10:00
NWP_PSG05-03242021	0005717-07	C21041211.D	17:33:00
NWP_PSG06-03242021	0005717-08	C21041212.D	17:57:00
NWP_PSG07-03242021	0005717-09	C21041213.D	18:21:00
NWP_PSG08-03242021	0005717-10	C21041214.D	18:45:00
NWP_PSG09-03252021	0005717-11	C21041215.D	19:10:00
NWP_PSG10-03252021	0005717-12	C21041216.D	19:34:00
NWP_PSG11-03242021	0005717-13	C21041217.D	19:59:00
NWP_PSG12-03242021	0005717-14	C21041218.D	20:23:00
NWP_PSG13-03242021	0005717-15	C21041219.D	20:47:00
NWP_PSG14-03242021	0005717-16	C21041220.D	21:11:00
NWP_PSG15-03242021	0005717-17	C21041221.D	21:34:00
NWP_PSG16-03242021	0005717-18	C21041222.D	21:58:00
NWP_PSG17-03242021	0005717-19	C21041223.D	22:22:00
NWP_PSG18-03242021	0005717-20	C21041224.D	22:46:00
NWP_PSG19-03242021	0005717-21	C21041225.D	23:11:00
NWP_PSG20-03252021	0005717-22	C21041226.D	23:35:00
NWP_PSG21-03242021	0005717-23	C21041227.D	23:59:00
NWP_PSG22-03252021	0005717-24	C21041228.D	0:23:00
NWP_PSG23-03252021	0005717-25	C21041229.D	0:47:00

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 4 - Form IV VOA
Volatile Method Blank Summary

Sequence: B21D035

Batch: 21D0032

Matrix: Air

Analysis: EPA 8260C

EPA Sample No.: 21D0032-BLK1

Instrument: C System

Date Analyzed: 04/13/2021

Sample Name	Lab Sample Number	Lab File ID	Time Analyzed
NWP_PSG24-03252021	0005717-26	C21041230.D	1:11:00
NWP_PSG25-03252021	0005717-27	C21041231.D	1:35:00
NWP_PSG26-03252021	0005717-28	C21041232.D	1:59:00
NWP_PSG27-03252021	0005717-29	C21041233.D	2:23:00
NWP_PSG28-03252021	0005717-30	C21041234.D	2:47:00
NWP_PSG29-03252021	0005717-31	C21041235.D	3:12:00
NWP_PSG30-03242021	0005717-32	C21041236.D	3:36:00
NWP_PSG31-03252021	0005717-33	C21041237.D	4:00:00
NWP_PSG32-03252021	0005717-34	C21041238.D	4:24:00
NWP_PSG33-03262021	0005717-35	C21041239.D	4:48:00
NWP_PSG34-03252021	0005717-36	C21041240.D	5:12:00
NWP_PSG35-03252021	0005717-37	C21041241.D	5:36:00
NWP_PSG36-03262021	0005717-38	C21041242.D	6:00:00
NWP_PSG37-03262021	0005717-39	C21041243.D	6:24:00

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 4 - Form IV VOA
Volatile Method Blank Summary

Sequence: B21D042

Batch: B21D042

Matrix: Soil Gas

Analysis: EPA 8260C

EPA Sample No.: 21D0038-BLK1

Instrument: C System

Date Analyzed: 04/13/2021

Sample Name	Lab Sample Number	Lab File ID	Time Analyzed
MS Tune	B21D042-TUN1	C21041301.D	12:39:00
LCS, Calibration Source Verification	21D0038-BS1	C21041302.D	13:03:00
Lab Blank	21D0038-BLK1	C21041303.D	13:27:00
LCSD/Second Source Verification/CALV	B21D042-ICV1	C21041304.D	13:51:00
NWP_PSG01-03262021-Dup	0005717-40	C21041355.D	10:43:00
NWP_PSG16-03242021-Dup	0005717-41	C21041356.D	11:07:00

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 5 - Form V VOA
Volatile Organic Instrument Performance Check (BFB)
EPA 8260C

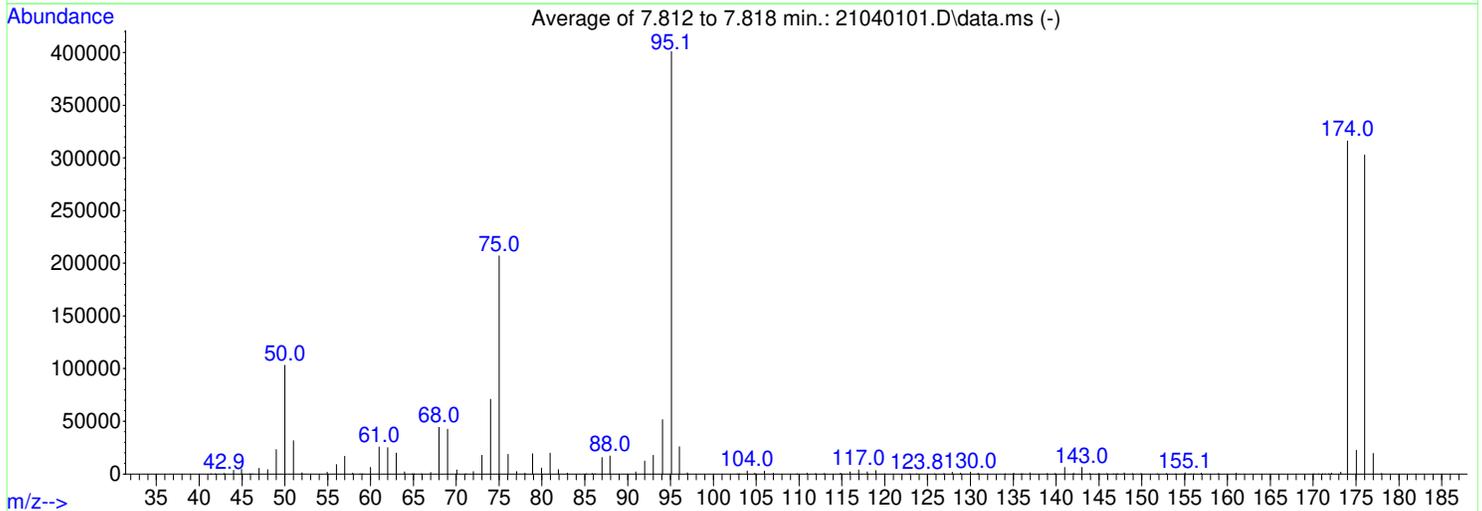
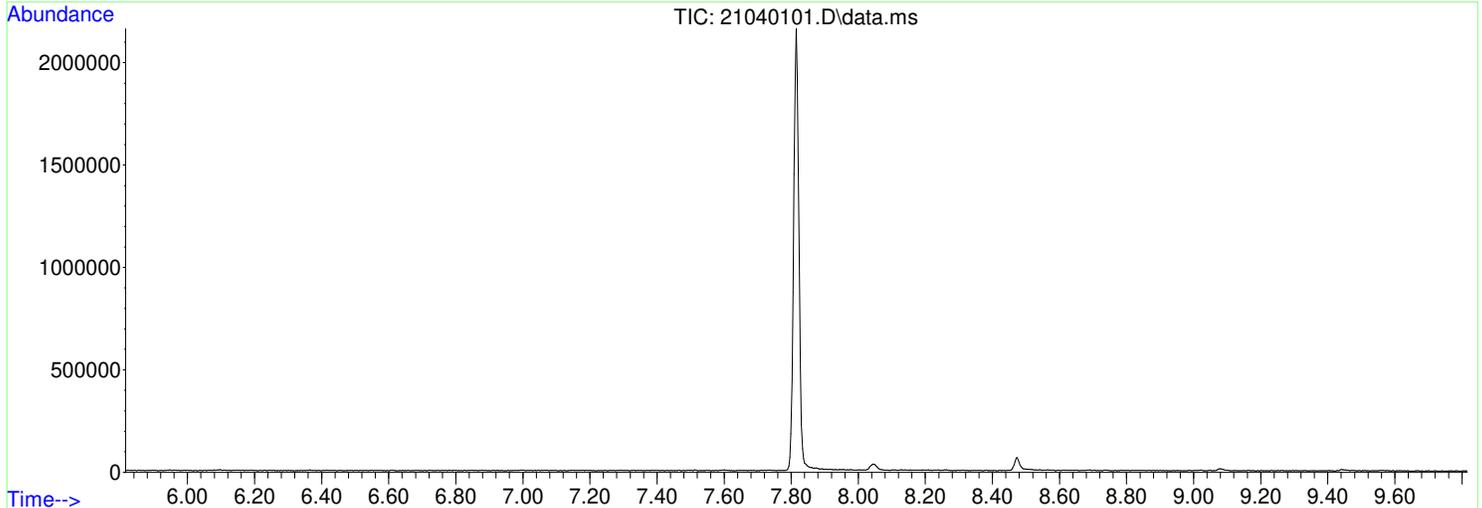
Laboratory:	<u>Beacon Environmental</u>	SDG:	
Client:	<u>Jacobs Portland</u>	Project Site:	Portland, OR
Lab File ID:	<u>21040101.D</u>	Injection Date:	<u>04/01/21</u>
Instrument ID:	<u>C System</u>	Injection Time:	<u>10:11</u>
Sequence:	<u>B21D004</u>	Lab Sample ID:	<u>B21D004-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.7	PASS
75	30 - 60% of 95	51.6	PASS
95	Base peak, 100% relative abundance	100.0	PASS
96	5 - 9% of 95	6.4	PASS
173	Less than 2% of 174	0.5	PASS
174	50 - 200% of 95	78.9	PASS
175	5 - 9% of 174	7.1	PASS
176	95 - 101% of 174	95.8	PASS
177	5 - 9% of 176	6.4	PASS

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040101.D
 Acq On : 01 Apr 2021 10:11 am
 Operator : KAI
 Sample : bfb
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: ALI9.P

Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Title : SOURCE AREA VOA ANALYSIS
 Last Update : Tue Apr 06 12:09:06 2021



AutoFind: Scans 2465, 2466, 2467; Background Corrected with Scan 2455

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	25.7	103075	PASS
75	95	30	60	51.6	207040	PASS
95	95	100	100	100.0	401045	PASS
96	95	5	9	6.4	25859	PASS
173	174	0.00	2	0.5	1525	PASS
174	95	50	200	78.9	316224	PASS
175	174	5	9	7.1	22421	PASS
176	174	95	101	95.8	302955	PASS
177	176	5	9	6.4	19499	PASS

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 5 - Form V VOA
Volatile Organic Instrument Performance Check (BFB)
EPA 8260C

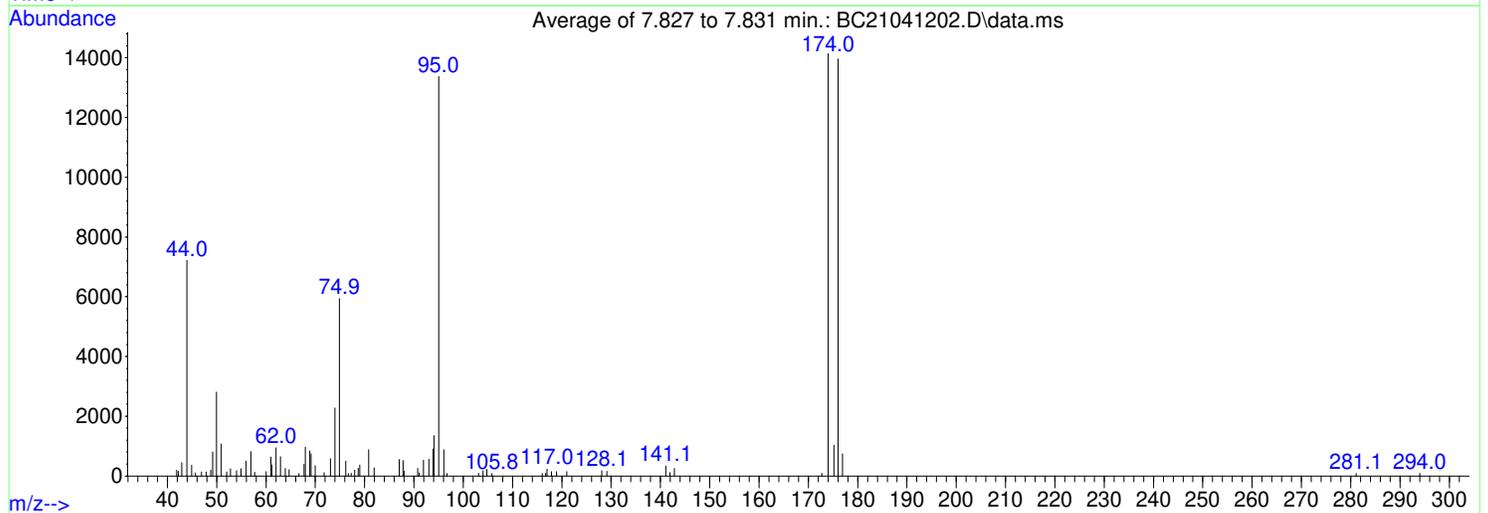
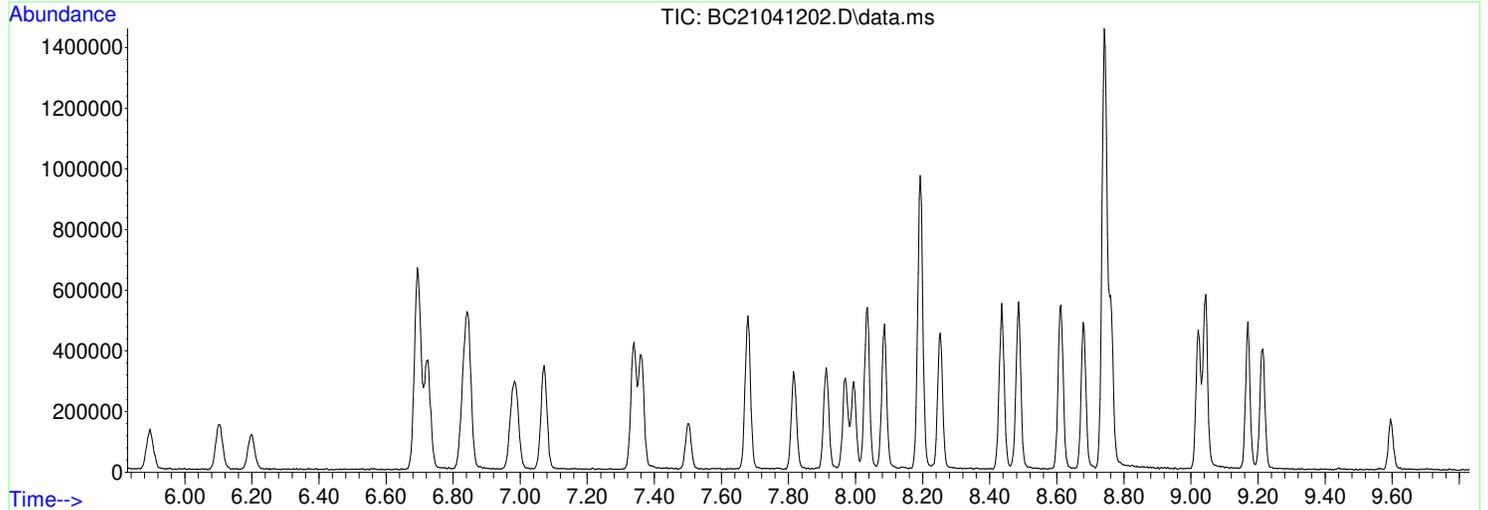
Laboratory:	<u>Beacon Environmental</u>	SDG:	
Client:	<u>Jacobs Portland</u>	Project Site:	Portland, OR
Lab File ID:	<u>BC21041202.D</u>	Injection Date:	<u>04/12/21</u>
Instrument ID:	<u>C System</u>	Injection Time:	<u>13:57</u>
Sequence:	<u>B21D035</u>	Lab Sample ID:	<u>B21D035-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	20.9	PASS
75	30 - 60% of 95	44.4	PASS
95	Base peak, 100% relative abundance	100.0	PASS
96	5 - 9% of 95	6.6	PASS
173	Less than 2% of 174	0.6	PASS
174	50 - 200% of 95	105.7	PASS
175	5 - 9% of 174	7.3	PASS
176	95 - 101% of 174	98.7	PASS
177	5 - 9% of 176	5.3	PASS

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : BC21041202.D
 Acq On : 12 Apr 2021 01:57 pm
 Operator : KAI
 Sample : B21D035-TUN1
 Misc : BFB
 ALS Vial : 2 Sample Multiplier: 1

Integration File: ALI9.P

Method : Z:\msdchem\S_system\5975s_210329_STD LIST_8260C.M
 Title : SOURCE AREA VOA ANALYSIS
 Last Update : Tue Mar 30 16:23:05 2021



Spectrum Information: Average of 7.827 to 7.831 min.

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	20.9	2803	PASS
75	95	30	60	44.4	5942	PASS
95	95	100	100	100.0	13379	PASS
96	95	5	9	6.6	879	PASS
173	174	0.00	2	0.6	88	PASS
174	95	50	200	105.7	14145	PASS
175	174	5	9	7.3	1030	PASS
176	174	95	102	98.7	13959	PASS
177	176	5	9	5.3	746	PASS

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 5 - Form V VOA
Volatile Organic Instrument Performance Check (BFB)
EPA 8260C

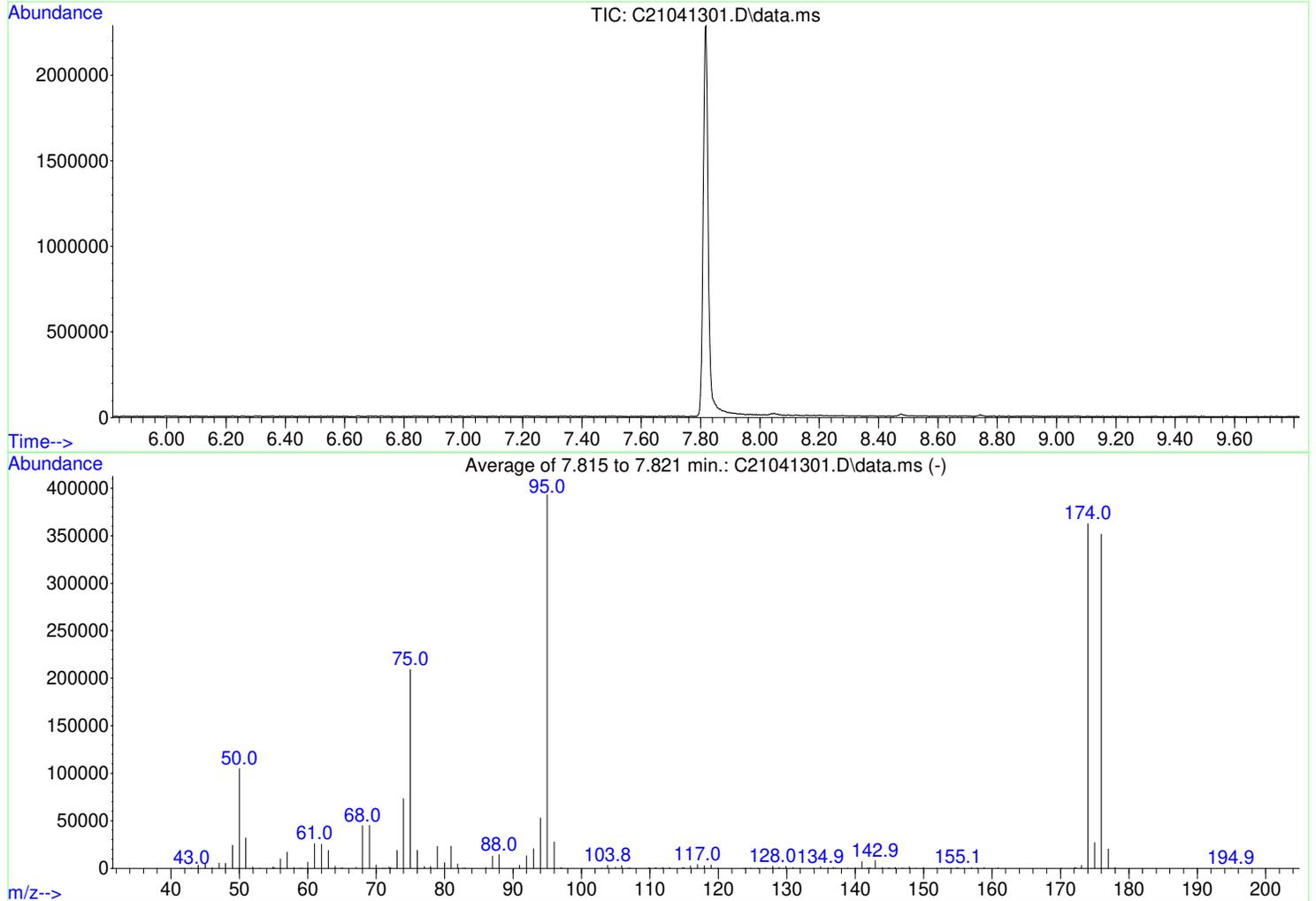
Laboratory:	<u>Beacon Environmental</u>	SDG:	
Client:	<u>Jacobs Portland</u>	Project Site:	Portland, OR
Lab File ID:	<u>C21041301.D</u>	Injection Date:	<u>04/13/21</u>
Instrument ID:	<u>C System</u>	Injection Time:	<u>12:39</u>
Sequence:	<u>B21D042</u>	Lab Sample ID:	<u>B21D042-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.7	PASS
75	30 - 60% of 95	53.2	PASS
95	Base peak, 100% relative abundance	100.0	PASS
96	5 - 9% of 95	7.0	PASS
173	Less than 2% of 174	0.9	PASS
174	50 - 200% of 95	92.2	PASS
175	5 - 9% of 174	7.5	PASS
176	95 - 101% of 174	97.0	PASS
177	5 - 9% of 176	5.8	PASS

Data Path : Z:\GCMS\data\21\04\C210413\
 Data File : C21041301.D
 Acq On : 13 Apr 2021 12:39 pm
 Operator : KAI
 Sample : B21D037-TUN1
 Misc : BFB
 ALS Vial : 1 Sample Multiplier: 1

Integration File: ALI9.P

Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Title : SOURCE AREA VOA ANALYSIS
 Last Update : Tue Apr 06 12:09:06 2021



Spectrum Information: Average of 7.815 to 7.821 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.7	104983	PASS
75	95	30	60	53.2	209195	PASS
95	95	100	100	100.0	393173	PASS
96	95	5	9	7.0	27696	PASS
173	174	0.00	2	0.9	3203	PASS
174	95	50	200	92.2	362517	PASS
175	174	5	9	7.5	27099	PASS
176	174	95	101	97.0	351787	PASS
177	176	5	9	5.8	20317	PASS

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 5 - Form IV VOA
Volatile Organic Instrument Performance Check (BFB) Sequence Summary

Sequence: B21D004

Batch: B21D004

Matrix: Air

EPA Sample No.: B21D004-TUN1

Instrument: C System

Date Analyzed: 04/01/2021

+ values are outside method/contract required QC limits

	Lab Sample Number	Lab File ID	Time Analyzed	Tune to Analysis (hr)	Q
	B21D004-TUN1	21040101.D	10:11:00	0.00	
	B21D004-CAL1	21040103.D	10:59:00	0.80	
	B21D004-CAL2	21040104.D	11:23:00	1.20	
	B21D004-CAL3	21040105.D	11:48:00	1.62	
	B21D004-CAL4	21040106.D	12:12:00	2.02	
	B21D004-CAL5	21040107.D	12:36:00	2.42	
	B21D004-CAL6	21040108.D	13:00:00	2.82	
	B21D004-CAL7	21040109.D	13:25:00	3.23	
	B21D004-CAL8	21040110.D	13:49:00	3.63	
	B21D004-CAL9	21040111.D	14:14:00	4.05	
	B21D004-CALA	21040112.D	14:38:00	4.45	
	B21D004-CALB	21040113.D	15:02:00	4.85	
LCSD, Calibration Verification, Second Source	B21D004-ICV1	21040116.D	16:15:00	6.07	
Lab Blank	B21D004-ICB1	21040117.D	16:39:00	6.47	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 5 - Form IV VOA
Volatile Organic Instrument Performance Check (BFB) Sequence Summary

Sequence: B21D035

Batch: B21D035

Matrix: Air

EPA Sample No.: B21D035-TUN1

Instrument: C System

Date Analyzed: 04/12/2021

+ values are outside method/contract required QC limits

	Lab Sample Number	Lab File ID	Time Analyzed	Tune to Analysis (hr)	Q
B21D035-TUN1	B21D035-TUN1	BC21041202.D	13:57:00	0.00	
LCS, Primary Calibration Source	21D0032-BS1	C21041202.D	13:57:00	0.00	
Method Blank	21D0032-BLK1	C21041203.D	14:21:00	0.40	
LCSD, Calibration Verification, Second Source	B21D035-ICV1	C21041204.D	14:45:00	0.80	
0005717-01	0005717-01	C21041205.D	15:10:00	1.22	
0005717-02	0005717-02	C21041206.D	15:34:00	1.62	
0005717-03	0005717-03	C21041207.D	15:58:00	2.02	
0005717-04	0005717-04	C21041208.D	16:22:00	2.42	
0005717-05	0005717-05	C21041209.D	16:46:00	2.82	
0005717-06	0005717-06	C21041210.D	17:10:00	3.22	
0005717-07	0005717-07	C21041211.D	17:33:00	3.60	
0005717-08	0005717-08	C21041212.D	17:57:00	4.00	
0005717-09	0005717-09	C21041213.D	18:21:00	4.40	
0005717-10	0005717-10	C21041214.D	18:45:00	4.80	
0005717-11	0005717-11	C21041215.D	19:10:00	5.22	
0005717-12	0005717-12	C21041216.D	19:34:00	5.62	
0005717-13	0005717-13	C21041217.D	19:59:00	6.03	
0005717-14	0005717-14	C21041218.D	20:23:00	6.43	
0005717-15	0005717-15	C21041219.D	20:47:00	6.83	
0005717-16	0005717-16	C21041220.D	21:11:00	7.23	
0005717-17	0005717-17	C21041221.D	21:34:00	7.62	
0005717-18	0005717-18	C21041222.D	21:58:00	8.02	
0005717-19	0005717-19	C21041223.D	22:22:00	8.42	
0005717-20	0005717-20	C21041224.D	22:46:00	8.82	
0005717-21	0005717-21	C21041225.D	23:11:00	9.23	
0005717-22	0005717-22	C21041226.D	23:35:00	9.63	
0005717-23	0005717-23	C21041227.D	23:59:00	10.03	
0005717-24	0005717-24	C21041228.D	0:23:00	10.43	
0005717-25	0005717-25	C21041229.D	0:47:00	10.83	
0005717-26	0005717-26	C21041230.D	1:11:00	11.23	
0005717-27	0005717-27	C21041231.D	1:35:00	11.63	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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**Table 5 - Form IV VOA
Volatile Organic Instrument Performance Check (BFB) Sequence Summary**

Sequence: B21D035

Batch: 21D0032

Matrix: Air

EPA Sample No.: B21D035-TUN1

Instrument: C System

Date Analyzed: 04/13/2021

+ values are outside method/contract required QC limits

	Lab Sample Number	Lab File ID	Time Analyzed	Tune to Analysis (hr)	Q
	0005717-28	C21041232.D	1:59:00	12.03	
	0005717-29	C21041233.D	2:23:00	12.43	
	0005717-30	C21041234.D	2:47:00	12.83	
	0005717-31	C21041235.D	3:12:00	13.25	
	0005717-32	C21041236.D	3:36:00	13.65	
	0005717-33	C21041237.D	4:00:00	14.05	
	0005717-34	C21041238.D	4:24:00	14.45	
	0005717-35	C21041239.D	4:48:00	14.85	
	0005717-36	C21041240.D	5:12:00	15.25	
	0005717-37	C21041241.D	5:36:00	15.65	
	0005717-38	C21041242.D	6:00:00	16.05	
	0005717-39	C21041243.D	6:24:00	16.45	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 5 - Form IV VOA
Volatile Organic Instrument Performance Check (BFB) Sequence Summary

Sequence: B21D042

Batch: B21D042

Matrix: Air

EPA Sample No.: B21D042-TUN1

Instrument: C System

Date Analyzed: 04/13/2021

+ values are outside method/contract required QC limits

	Lab Sample Number	Lab File ID	Time Analyzed	Tune to Analysis (hr)	Q
B21D042-TUN1	B21D042-TUN1	C21041301.D	12:39:00	0.00	
LCS, Primary Calibration Source	21D0038-BS1	C21041302.D	13:03:00	0.40	
Method Blank	21D0038-BLK1	C21041303.D	13:27:00	0.80	
LCSD, Calibration Verification, Second Source	B21D042-ICV1	C21041304.D	13:51:00	1.20	
0005717-40	0005717-40	C21041355.D	10:43:00	22.07	
0005717-41	0005717-41	C21041356.D	11:07:00	22.47	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 6 - Form VI A VOA
Volatile Organics Initial Calibration Data

 Calibration: **BD10002**

Calibration Start: 4/1/2021 10:59:00AM

Instrument: C System

Calibration End: 4/1/2021 3:02:00PM

Lab File ID:	21040103.D	21040104.D	21040105.D	21040106.D	21040107.D	21040108.D	21040109.D	
<i>Response Factors/Responses</i>								
Analyte	2.5 ng	5 ng	10 ng	25 ng	50 ng	100 ng	200 ng	
Vinyl Chloride	0.29	0.26	0.26	0.23	0.23	0.24	0.29	
cis-1,2-Dichloroethene	0.32	0.30	0.31	0.29	0.30	0.30	0.31	
1,2-DCA-d4	0.36	0.42	0.40	0.40	0.37	0.39	0.39	
Trichloroethene	0.41	0.39	0.33	0.32	0.32	0.32	0.33	
Toluene-d8	1.92	1.24	1.19	1.21	1.22	1.25	1.27	
Tetrachloroethene	0.38	0.34	0.32	0.33	0.33	0.33	0.33	
Bromofluorobenzene	0.74	0.53	0.46	0.44	0.44	0.48	0.47	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 6 - Form VIA VOA
Volatile Organics Initial Calibration Data

Calibration: BD10002

Calibration Start: 4/1/2021 10:59:00AM

Instrument: C System

Calibration End: 4/1/2021 3:02:00PM

+ values are outside method/contract required QC limits

Lab File ID:	21040110.D	21040111.D	21040112.D	21040113.D	Acceptance Limits	
	<i>Response Factors/Responses</i>				≤ 20	≥ 0.99
Analyte	400 ng	600 ng	800 ng	1000 ng	RSD	R ²
Vinyl Chloride	0.22	0.22	0.28	0.26	10.21	
cis-1,2-Dichloroethene	0.29	0.29	0.29	0.30	2.99	
1,2-DCA-d4	0.38	0.38	0.37	0.37	4.36	
Trichloroethene	0.33	0.31	0.31	0.31	9.74	
Toluene-d8	1.27	1.17	1.13	1.12	17.32	
Tetrachloroethene	0.32	0.31	0.30	0.31	6.65	
Bromofluorobenzene	0.43	0.46	0.45	0.44	18.43	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 7 - Form VII A VOA
Volatile Organics Continuing Calibration Data: Calibration Mid-Point

Sample No.: 50ng Cal Std (B21D004-CAL5) **Calibration:** BD10002 **Calibration Start Date:** 4/1/2021 10:59:00AM
Sequence: B21D004 **Instrument:** C System **Lab File ID:** C21041213.D **Calibration End Date:** 4/1/2021 3:02:00PM
 + values are outside method/contract required QC limits

Compound	Mean RRF	RRF	Minimum RF	%D	%D Limit
Vinyl Chloride	0.25	0.23	0.1	-9.5	20
cis-1,2-Dichloroethene	0.30	0.30	0.1	-1.3	20
1,2-DCA-d4	0.39	0.37	0.1	-3.6	20
Trichloroethene	0.34	0.32	0.2	-3.6	20
Toluene-d8	1.27	1.22	0.4	-3.9	20
Tetrachloroethene	0.33	0.33	0.2	2.1	20
Bromofluorobenzene	0.49	0.45	0.1	-8.6	20

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 7 - Form VII A VOA
Volatile Organics Continuing Calibration Data

Sample No.: B21D004-ICV1

Sample Name: LCSD/Second Source Verification/CALV

Analysis: EPA 8260C

Calibration: BD10002

Calibration Start Date: 4/1/2021 10:59:00AM

Sequence: B21D004

Instrument: C System

Lab File ID: 21040116.D

Calibration End Date: 4/1/2021 3:02:00PM

+ values are outside method/contract required OC limits

Compound	Mean RRF	RRF	Min_RF	%D	Max %D
Vinyl Chloride	0.25	0.31	0.1	23.0	30
cis-1,2-Dichloroethene	0.30	0.30	0.1	0.2	30
1,2-DCA-d4	0.39	0.40	0.1	3.8	30
Trichloroethene	0.34	0.32	0.2	4.6	30
Toluene-d8	1.27	1.30	0.4	2.4	30
Tetrachloroethene	0.33	0.34	0.2	4.2	30
Bromofluorobenzene	0.49	0.47	0.1	3.5	30

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 7 - Form VII A VOA
Volatile Organics Continuing Calibration Data

Sample No.: B21D035-ICV1	Sample Name: LCSD/Second Source Verification/CALV
Analysis: EPA 8260C	Calibration: BD10002 Calibration Start Date: 4/1/2021 10:59:00AM
Sequence: B21D035 Instrument: C System	Lab File ID: C21041204.D Calibration End Date: 4/1/2021 3:02:00PM

+ values are outside method/contract required OC limits

Compound	Mean RRF	RRF	Min_RF	%D	Max %D
Vinyl Chloride	0.25	0.22	0.1	12.7	30
cis-1,2-Dichloroethene	0.30	0.30	0.1	0.2	30
1,2-DCA-d4	0.39	0.40	0.1	3.8	30
Trichloroethene	0.34	0.34	0.2	1.4	30
Toluene-d8	1.27	1.21	0.4	4.7	30
Tetrachloroethene	0.33	0.34	0.2	4.2	30
Bromofluorobenzene	0.49	0.41	0.1	15.8	30

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 7 - Form VII A VOA
Volatile Organics Continuing Calibration Data

Sample No.: B21D042-ICV1	Sample Name: LCSD/Second Source Verification/CALV
Analysis: EPA 8260C	Calibration: BD10002 Calibration Start Date: 4/1/2021 10:59:00AM
Sequence: B21D042	Instrument: C System Lab File ID: C21041304.D Calibration End Date: 4/1/2021 3:02:00PM

+ values are outside method/contract required OC limits

Compound	Mean RRF	RRF	Min_RF	%D	Max %D
Vinyl Chloride	0.25	0.29	0.1	15.1	30
cis-1,2-Dichloroethene	0.30	0.31	0.1	3.1	30
1,2-DCA-d4	0.39	0.42	0.1	9.0	30
Trichloroethene	0.34	0.33	0.2	1.6	30
Toluene-d8	1.27	1.20	0.4	5.5	30
Tetrachloroethene	0.33	0.34	0.2	4.2	30
Bromofluorobenzene	0.49	0.41	0.1	15.8	30

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 8 - Form VIII A VOA
Volatile Internal Standard Area and Retention Time Summary

Sequence: B21D004

Instrument: C System

Calibration: BD10002

Matrix: Air

Calibration Date: 04/01/2021

+ values are outside method/contract required QC limits

<i>Initial Calibration Reference Values</i>								
Reference Value (RV) File ID: 21040107.D			Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
			Response	RT	Response	RT	Response	RT
	Reference Value		385568	3.825	285496	6.70	137059	8.75
	Upper Limit		771136	3.95	570992	6.82	274118	8.87
	Lower Limit		192784	3.71	142748	6.58	68530	8.63
LabNumber	RV	FileID	Response	RT	Response	RT	Response	RT
B21D004-CAL1		21040103.D	381167	3.83	283968	6.70	131938	8.75
B21D004-CAL2		21040104.D	386949	3.83	291553	6.70	138538	8.75
B21D004-CAL3		21040105.D	380864	3.83	287949	6.70	136848	8.75
B21D004-CAL4		21040106.D	377214	3.83	282871	6.70	141954	8.74
B21D004-CAL5	RV	21040107.D	385568	3.83	285496	6.70	137059	8.75
B21D004-CAL6		21040108.D	372672	3.83	280405	6.70	145406	8.75
B21D004-CAL7		21040109.D	377730	3.83	278939	6.70	139490	8.75
B21D004-CAL8		21040110.D	380561	3.83	269239	6.70	119883	8.75
B21D004-CAL9		21040111.D	386448	3.82	291410	6.70	144709	8.75
B21D004-CALA		21040112.D	356889	3.83	274538	6.70	140267	8.74
B21D004-CALB		21040113.D	362407	3.83	274772	6.70	137702	8.75
B21D004-ICV1		21040116.D	371984	3.83	277883	6.70	136626	8.75
B21D004-ICB1		21040117.D	352463	3.83	271339	6.70	125325	8.75

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 8 - Form VIII A VOA
Volatile Internal Standard Area and Retention Time Summary

Sequence: B21D035 **Instrument:** C System **Calibration:** BD10002
Matrix: Air **Calibration Date:** 04/01/2021

+ values are outside method/contract required QC limits

<i>Initial Calibration Reference Values</i>						
Reference Value (RV) File ID: 21040107.D	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Response	RT	Response	RT	Response	RT
Reference Value	385568	3.825	285496	6.70	137059	8.75
Upper Limit	771136	3.95	570992	6.82	274118	8.87
Lower Limit	192784	3.71	142748	6.58	68530	8.63

LabNumber	RV	FileID	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
			Response	RT	Response	RT	Response	RT
21D0032-BS1		C21041202.D	395231	3.83	297851	6.69	155320	8.75
21D0032-BLK1		C21041203.D	369387	3.82	278382	6.69	125080	8.75
B21D035-ICV1		C21041204.D	403719	3.82	307271	6.70	161098	8.74
0005717-01		C21041205.D	331549	3.83	272001	6.69	125323	8.74
0005717-02		C21041206.D	346397	3.83	276526	6.69	124824	8.75
0005717-03		C21041207.D	324059	3.83	284787	6.70	143499	8.74
0005717-04		C21041208.D	322638	3.83	278560	6.70	144569	8.75
0005717-05		C21041209.D	342349	3.83	287282	6.70	142764	8.75
0005717-06		C21041210.D	329793	3.82	275594	6.70	145077	8.75
0005717-07		C21041211.D	342982	3.83	281342	6.70	144264	8.74
0005717-08		C21041212.D	339885	3.83	278279	6.69	141578	8.75
0005717-09		C21041213.D	310296	3.82	268146	6.69	134209	8.75
0005717-10		C21041214.D	319078	3.83	266593	6.69	131930	8.75
0005717-11		C21041215.D	314511	3.83	268897	6.69	134650	8.75
0005717-12		C21041216.D	314160	3.82	267311	6.69	141228	8.75
0005717-13		C21041217.D	298383	3.83	256520	6.69	128283	8.74
0005717-14		C21041218.D	315587	3.83	270957	6.69	134092	8.75
0005717-15		C21041219.D	329458	3.82	270234	6.70	132511	8.75
0005717-16		C21041220.D	267706	3.83	239528	6.70	131582	8.75
0005717-17		C21041221.D	314489	3.83	265895	6.70	139909	8.74
0005717-18		C21041222.D	319254	3.83	263646	6.69	140818	8.75
0005717-19		C21041223.D	278354	3.83	253665	6.69	130737	8.75
0005717-20		C21041224.D	298483	3.83	257179	6.69	130272	8.75
0005717-21		C21041225.D	304556	3.83	264800	6.70	130238	8.75
0005717-22		C21041226.D	300984	3.83	265967	6.69	130112	8.75
0005717-23		C21041227.D	302036	3.82	265462	6.70	147383	8.75
0005717-24		C21041228.D	311381	3.83	268761	6.70	130806	8.75
0005717-25		C21041229.D	279550	3.83	249097	6.70	128788	8.75

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 8 - Form VIII A VOA
Volatile Internal Standard Area and Retention Time Summary

Sequence: B21D035 **Instrument:** C System **Calibration:** BD10002
Matrix: Air **Calibration Date:** 04/01/2021

+ values are outside method/contract required QC limits

<i>Initial Calibration Reference Values</i>								
Reference Value (RV) File ID: 21040107.D			Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
			Response	RT	Response	RT	Response	RT
	Reference Value		385568	3.825	285496	6.70	137059	8.75
	Upper Limit		771136	3.95	570992	6.82	274118	8.87
	Lower Limit		192784	3.71	142748	6.58	68530	8.63

LabNumber	RV	FileID	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
			Response	RT	Response	RT	Response	RT
0005717-26		C21041230.D	303322	3.83	260702	6.69	133830	8.75
0005717-27		C21041231.D	301897	3.83	276780	6.69	150387	8.75
0005717-28		C21041232.D	306298	3.82	271607	6.69	142009	8.75
0005717-29		C21041233.D	310094	3.82	267224	6.69	145393	8.75
0005717-30		C21041234.D	318543	3.82	267765	6.69	152048	8.75
0005717-31		C21041235.D	302076	3.83	261051	6.70	136532	8.75
0005717-32		C21041236.D	300063	3.83	266999	6.70	143508	8.74
0005717-33		C21041237.D	317597	3.83	266450	6.70	133272	8.75
0005717-34		C21041238.D	316857	3.83	268842	6.70	138326	8.74
0005717-35		C21041239.D	270628	3.83	262644	6.69	143642	8.75
0005717-36		C21041240.D	301789	3.83	277033	6.70	155234	8.75
0005717-37		C21041241.D	327207	3.83	285837	6.70	162554	8.75
0005717-38		C21041242.D	313841	3.83	280467	6.70	153512	8.75
0005717-39		C21041243.D	339648	3.82	294812	6.69	149051	8.75

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Table 8 - Form VIII A VOA
Volatile Internal Standard Area and Retention Time Summary

Sequence: B21D042

Instrument: C System

Calibration: BD10002

Matrix: Air

Calibration Date: 04/01/2021

+ values are outside method/contract required QC limits

<i>Initial Calibration Reference Values</i>								
Reference Value (RV) File ID: 21040107.D			Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
			Response	RT	Response	RT	Response	RT
	Reference Value		385568	3.825	285496	6.70	137059	8.75
	Upper Limit		771136	3.95	570992	6.82	274118	8.87
	Lower Limit		192784	3.71	142748	6.58	68530	8.63

LabNumber	RV	FileID	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
			Response	RT	Response	RT	Response	RT
21D0038-BS1		C21041302.D	364777	3.83	276019	6.70	149280	8.75
21D0038-BLK1		C21041303.D	337362	3.83	251684	6.70	114919	8.74
B21D042-ICV1		C21041304.D	365498	3.83	282056	6.70	151604	8.75
0005717-40		C21041355.D	321978	3.82	276509	6.69	136115	8.74
0005717-41		C21041356.D	319848	3.82	272815	6.69	141814	8.75

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Additional QC Information

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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EPA 8260C Holding Time Report

Analysis: EPA 8260C- Mass

SampleName	Sampled	Received	Prepared	Days to Prep	Analyzed	Days to Analysis	Expiration Date	Qualifier
Trip-1	04/07/2021 12:00	04/08/2021 16:26	04/12/2021 15:10	5.13	04/12/2021 15:10	5.13	05/08/2021	
Trip-2	04/07/2021 12:00	04/08/2021 16:26	04/12/2021 15:34	5.15	04/12/2021 15:34	5.15	05/08/2021	
NWP_PSG01-03262021	04/07/2021 12:04	04/08/2021 16:26	04/12/2021 15:58	5.16	04/12/2021 15:58	5.16	05/08/2021	
NWP_PSG02-03262021	04/07/2021 11:55	04/08/2021 16:26	04/12/2021 16:22	5.19	04/12/2021 16:22	5.19	05/08/2021	
NWP_PSG03-03242021	04/07/2021 09:04	04/08/2021 16:26	04/12/2021 16:46	5.32	04/12/2021 16:46	5.32	05/08/2021	
NWP_PSG04-03242021	04/07/2021 09:02	04/08/2021 16:26	04/12/2021 17:10	5.34	04/12/2021 17:10	5.34	05/08/2021	
NWP_PSG05-03242021	04/07/2021 08:59	04/08/2021 16:26	04/12/2021 17:33	5.36	04/12/2021 17:33	5.36	05/08/2021	
NWP_PSG06-03242021	04/07/2021 08:55	04/08/2021 16:26	04/12/2021 17:57	5.38	04/12/2021 17:57	5.38	05/08/2021	
NWP_PSG07-03242021	04/07/2021 08:51	04/08/2021 16:26	04/12/2021 18:21	5.40	04/12/2021 18:21	5.40	05/08/2021	
NWP_PSG08-03242021	04/07/2021 08:47	04/08/2021 16:26	04/12/2021 18:45	5.42	04/12/2021 18:45	5.42	05/08/2021	
NWP_PSG09-03252021	04/07/2021 09:48	04/08/2021 16:26	04/12/2021 19:10	5.39	04/12/2021 19:10	5.39	05/08/2021	
NWP_PSG10-03252021	04/07/2021 09:45	04/08/2021 16:26	04/12/2021 19:34	5.41	04/12/2021 19:34	5.41	05/08/2021	
NWP_PSG11-03242021	04/07/2021 09:42	04/08/2021 16:26	04/12/2021 19:59	5.43	04/12/2021 19:59	5.43	05/08/2021	
NWP_PSG12-03242021	04/07/2021 09:12	04/08/2021 16:26	04/12/2021 20:23	5.47	04/12/2021 20:23	5.47	05/08/2021	
NWP_PSG13-03242021	04/07/2021 09:14	04/08/2021 16:26	04/12/2021 20:47	5.48	04/12/2021 20:47	5.48	05/08/2021	
NWP_PSG14-03242021	04/07/2021 09:16	04/08/2021 16:26	04/12/2021 21:11	5.50	04/12/2021 21:11	5.50	05/08/2021	
NWP_PSG15-03242021	04/07/2021 09:18	04/08/2021 16:26	04/12/2021 21:34	5.51	04/12/2021 21:34	5.51	05/08/2021	
NWP_PSG16-03242021	04/07/2021 09:20	04/08/2021 16:26	04/12/2021 21:58	5.53	04/12/2021 21:58	5.53	05/08/2021	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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EPA 8260C Holding Time Report

Analysis: EPA 8260C- Mass

SampleName	Sampled	Received	Prepared	Days to Prep	Analyzed	Days to Analysis	Expiration Date	Qualifier
NWP_PSG17-03242021	04/07/2021 09:22	04/08/2021 16:26	04/12/2021 22:22	5.54	04/12/2021 22:22	5.54	05/08/2021	
NWP_PSG18-03242021	04/07/2021 09:26	04/08/2021 16:26	04/12/2021 22:46	5.56	04/12/2021 22:46	5.56	05/08/2021	
NWP_PSG19-03242021	04/07/2021 09:29	04/08/2021 16:26	04/12/2021 23:11	5.57	04/12/2021 23:11	5.57	05/08/2021	
NWP_PSG20-03252021	04/07/2021 09:54	04/08/2021 16:26	04/12/2021 23:35	5.57	04/12/2021 23:35	5.57	05/08/2021	
NWP_PSG21-03242021	04/07/2021 09:34	04/08/2021 16:26	04/12/2021 23:59	5.60	04/12/2021 23:59	5.60	05/08/2021	
NWP_PSG22-03252021	04/07/2021 10:15	04/08/2021 16:26	04/13/2021 00:23	5.59	04/13/2021 00:23	5.59	05/08/2021	
NWP_PSG23-03252021	04/07/2021 10:13	04/08/2021 16:26	04/13/2021 00:47	5.61	04/13/2021 00:47	5.61	05/08/2021	
NWP_PSG24-03252021	04/07/2021 10:11	04/08/2021 16:26	04/13/2021 01:11	5.63	04/13/2021 01:11	5.63	05/08/2021	
NWP_PSG25-03252021	04/07/2021 10:07	04/08/2021 16:26	04/13/2021 01:35	5.64	04/13/2021 01:35	5.64	05/08/2021	
NWP_PSG26-03252021	04/07/2021 10:05	04/08/2021 16:26	04/13/2021 01:59	5.66	04/13/2021 01:59	5.66	05/08/2021	
NWP_PSG27-03252021	04/07/2021 10:02	04/08/2021 16:26	04/13/2021 02:23	5.68	04/13/2021 02:23	5.68	05/08/2021	
NWP_PSG28-03252021	04/07/2021 10:00	04/08/2021 16:26	04/13/2021 02:47	5.70	04/13/2021 02:47	5.70	05/08/2021	
NWP_PSG29-03252021	04/07/2021 09:57	04/08/2021 16:26	04/13/2021 03:12	5.72	04/13/2021 03:12	5.72	05/08/2021	
NWP_PSG30-03242021	04/07/2021 11:37	04/08/2021 16:26	04/13/2021 03:36	5.67	04/13/2021 03:36	5.67	05/08/2021	
NWP_PSG31-03252021	04/07/2021 10:41	04/08/2021 16:26	04/13/2021 04:00	5.72	04/13/2021 04:00	5.72	05/08/2021	
NWP_PSG32-03252021	04/07/2021 10:43	04/08/2021 16:26	04/13/2021 04:24	5.74	04/13/2021 04:24	5.74	05/08/2021	
NWP_PSG33-03262021	04/07/2021 10:45	04/08/2021 16:26	04/13/2021 04:48	5.75	04/13/2021 04:48	5.75	05/08/2021	
NWP_PSG34-03252021	04/07/2021 10:52	04/08/2021 16:26	04/13/2021 05:12	5.76	04/13/2021 05:12	5.76	05/08/2021	
NWP_PSG35-03252021	04/07/2021 10:57	04/08/2021 16:26	04/13/2021 05:36	5.78	04/13/2021 05:36	5.78	05/08/2021	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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EPA 8260C Holding Time Report

Analysis: EPA 8260C- Mass

SampleName	Sampled	Received	Prepared	Days to Prep	Analyzed	Days to Analysis	Expiration Date	Qualifier
NWP_PSG36-03262021	04/07/2021 11:02	04/08/2021 16:26	04/13/2021 06:00	5.79	04/13/2021 06:00	5.79	05/08/2021	
NWP_PSG37-03262021	04/07/2021 11:09	04/08/2021 16:26	04/13/2021 06:24	5.80	04/13/2021 06:24	5.80	05/08/2021	
NWP_PSG01-03262021-Dup	04/07/2021 12:04	04/08/2021 16:26	04/14/2021 10:43	6.94	04/14/2021 10:43	6.94	05/08/2021	
NWP_PSG16-03242021-Dup	04/07/2021 09:20	04/08/2021 16:26	04/14/2021 11:07	7.07	04/14/2021 11:07	7.07	05/08/2021	

H = Sample analysis exceeded holding time.

Jacobs
 2020 SW Fourth Avenue, Suite 300
 Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Sample Preparation and Analysis Summary Table

Batch	Sequence	Instrument	FileID	Analyzed Date/Time	Dilution	Analysis
Lab ID: 0005717-01	Method: EPA 8260C		Sample: Trip-1			Matrix: Air
21D0032	B21D035	C System	C21041205.D	4/12/21 15:10	1.00	A 8260C (ng)
Lab ID: 0005717-02	Method: EPA 8260C		Sample: Trip-2			Matrix: Air
21D0032	B21D035	C System	C21041206.D	4/12/21 15:34	1.00	A 8260C (ng)
Lab ID: 0005717-03	Method: EPA 8260C		Sample: NWP PSG01-03262021			Matrix: Air
21D0032	B21D035	C System	C21041207.D	4/12/21 15:58	1.00	A 8260C (ng)
Lab ID: 0005717-04	Method: EPA 8260C		Sample: NWP PSG02-03262021			Matrix: Air
21D0032	B21D035	C System	C21041208.D	4/12/21 16:22	1.00	A 8260C (ng)
Lab ID: 0005717-05	Method: EPA 8260C		Sample: NWP PSG03-03242021			Matrix: Air
21D0032	B21D035	C System	C21041209.D	4/12/21 16:46	1.00	A 8260C (ng)
Lab ID: 0005717-06	Method: EPA 8260C		Sample: NWP PSG04-03242021			Matrix: Air
21D0032	B21D035	C System	C21041210.D	4/12/21 17:10	1.00	A 8260C (ng)
Lab ID: 0005717-07	Method: EPA 8260C		Sample: NWP PSG05-03242021			Matrix: Air
21D0032	B21D035	C System	C21041211.D	4/12/21 17:33	1.00	A 8260C (ng)
Lab ID: 0005717-08	Method: EPA 8260C		Sample: NWP PSG06-03242021			Matrix: Air
21D0032	B21D035	C System	C21041212.D	4/12/21 17:57	1.00	A 8260C (ng)
Lab ID: 0005717-09	Method: EPA 8260C		Sample: NWP PSG07-03242021			Matrix: Air
21D0032	B21D035	C System	C21041213.D	4/12/21 18:21	1.00	A 8260C (ng)
Lab ID: 0005717-10	Method: EPA 8260C		Sample: NWP PSG08-03242021			Matrix: Air
21D0032	B21D035	C System	C21041214.D	4/12/21 18:45	1.00	A 8260C (ng)
Lab ID: 0005717-11	Method: EPA 8260C		Sample: NWP PSG09-03252021			Matrix: Air
21D0032	B21D035	C System	C21041215.D	4/12/21 19:10	1.00	A 8260C (ng)
Lab ID: 0005717-12	Method: EPA 8260C		Sample: NWP PSG10-03252021			Matrix: Air
21D0032	B21D035	C System	C21041216.D	4/12/21 19:34	1.00	A 8260C (ng)
Lab ID: 0005717-13	Method: EPA 8260C		Sample: NWP PSG11-03242021			Matrix: Air
21D0032	B21D035	C System	C21041217.D	4/12/21 19:59	1.00	A 8260C (ng)

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Preparation and Analysis Summary Table

Batch	Sequence	Instrument	FileID	Analyzed Date/Time	Dilution	Analysis
Lab ID: 0005717-14 Method: EPA 8260C Sample: NWP PSG12-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041218.D	4/12/21 20:23	1.00	A 8260C (ng)
Lab ID: 0005717-15 Method: EPA 8260C Sample: NWP PSG13-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041219.D	4/12/21 20:47	1.00	A 8260C (ng)
Lab ID: 0005717-16 Method: EPA 8260C Sample: NWP PSG14-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041220.D	4/12/21 21:11	1.00	A 8260C (ng)
Lab ID: 0005717-17 Method: EPA 8260C Sample: NWP PSG15-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041221.D	4/12/21 21:34	1.00	A 8260C (ng)
Lab ID: 0005717-18 Method: EPA 8260C Sample: NWP PSG16-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041222.D	4/12/21 21:58	1.00	A 8260C (ng)
Lab ID: 0005717-19 Method: EPA 8260C Sample: NWP PSG17-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041223.D	4/12/21 22:22	1.00	A 8260C (ng)
Lab ID: 0005717-20 Method: EPA 8260C Sample: NWP PSG18-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041224.D	4/12/21 22:46	1.00	A 8260C (ng)
Lab ID: 0005717-21 Method: EPA 8260C Sample: NWP PSG19-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041225.D	4/12/21 23:11	1.00	A 8260C (ng)
Lab ID: 0005717-22 Method: EPA 8260C Sample: NWP PSG20-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041226.D	4/12/21 23:35	1.00	A 8260C (ng)
Lab ID: 0005717-23 Method: EPA 8260C Sample: NWP PSG21-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041227.D	4/12/21 23:59	1.00	A 8260C (ng)
Lab ID: 0005717-24 Method: EPA 8260C Sample: NWP PSG22-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041228.D	4/13/21 0:23	1.00	A 8260C (ng)
Lab ID: 0005717-25 Method: EPA 8260C Sample: NWP PSG23-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041229.D	4/13/21 0:47	1.00	A 8260C (ng)
Lab ID: 0005717-26 Method: EPA 8260C Sample: NWP PSG24-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041230.D	4/13/21 1:11	1.00	A 8260C (ng)

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Sample Preparation and Analysis Summary Table

Batch	Sequence	Instrument	FileID	Analyzed Date/Time	Dilution	Analysis
Lab ID: 0005717-27 Method: EPA 8260C Sample: NWP PSG25-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041231.D	4/13/21 1:35	1.00	A 8260C (ng)
Lab ID: 0005717-28 Method: EPA 8260C Sample: NWP PSG26-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041232.D	4/13/21 1:59	1.00	A 8260C (ng)
Lab ID: 0005717-29 Method: EPA 8260C Sample: NWP PSG27-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041233.D	4/13/21 2:23	1.00	A 8260C (ng)
Lab ID: 0005717-30 Method: EPA 8260C Sample: NWP PSG28-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041234.D	4/13/21 2:47	1.00	A 8260C (ng)
Lab ID: 0005717-31 Method: EPA 8260C Sample: NWP PSG29-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041235.D	4/13/21 3:12	1.00	A 8260C (ng)
Lab ID: 0005717-32 Method: EPA 8260C Sample: NWP PSG30-03242021 Matrix: Air						
21D0032	B21D035	C System	C21041236.D	4/13/21 3:36	1.00	A 8260C (ng)
Lab ID: 0005717-33 Method: EPA 8260C Sample: NWP PSG31-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041237.D	4/13/21 4:00	1.00	A 8260C (ng)
Lab ID: 0005717-34 Method: EPA 8260C Sample: NWP PSG32-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041238.D	4/13/21 4:24	1.00	A 8260C (ng)
Lab ID: 0005717-35 Method: EPA 8260C Sample: NWP PSG33-03262021 Matrix: Air						
21D0032	B21D035	C System	C21041239.D	4/13/21 4:48	1.00	A 8260C (ng)
Lab ID: 0005717-36 Method: EPA 8260C Sample: NWP PSG34-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041240.D	4/13/21 5:12	1.00	A 8260C (ng)
Lab ID: 0005717-37 Method: EPA 8260C Sample: NWP PSG35-03252021 Matrix: Air						
21D0032	B21D035	C System	C21041241.D	4/13/21 5:36	1.00	A 8260C (ng)
Lab ID: 0005717-38 Method: EPA 8260C Sample: NWP PSG36-03262021 Matrix: Air						
21D0032	B21D035	C System	C21041242.D	4/13/21 6:00	1.00	A 8260C (ng)
Lab ID: 0005717-39 Method: EPA 8260C Sample: NWP PSG37-03262021 Matrix: Air						
21D0032	B21D035	C System	C21041243.D	4/13/21 6:24	1.00	A 8260C (ng)

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Sample Preparation and Analysis Summary Table

Batch	Sequence	Instrument	FileID	Analyzed Date/Time	Dilution	Analysis
Lab ID: 0005717-40	Method: EPA 8260C		Sample: NWP PSG01-03262021-Dup			Matrix: Air
21D0038	B21D042	C System	C21041355.D	4/14/21 10:43	1.00	A 8260C (ng)
Lab ID: 0005717-41	Method: EPA 8260C		Sample: NWP PSG16-03242021-Dup			Matrix: Air
21D0038	B21D042	C System	C21041356.D	4/14/21 11:07	1.00	A 8260C (ng)

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	01/31/2023	
DoD-ELAP	L20-532	United States Department of Defense Environmental Laboratory Accreditation	12/31/2022	
ISO/IEC 17025:2017	L20-532	General Requirements for the competence of Testing and Calibration Laboratories	12/31/2022	
NY-NELAC	12097	New York Department of Health	04/01/2022	
Utah-NELAC	MD01091	Utah Department of Health	12/31/2021	

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside ± 0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

S4 Matrix interference caused surrogate recovery outside control limits.

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Standard Traceability

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
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Reported: 04/26/2021

Stock Standard Certificates of Analysis

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 080117

Lab Standard No.: 1800015



CERTIFIED WEIGHT REPORT

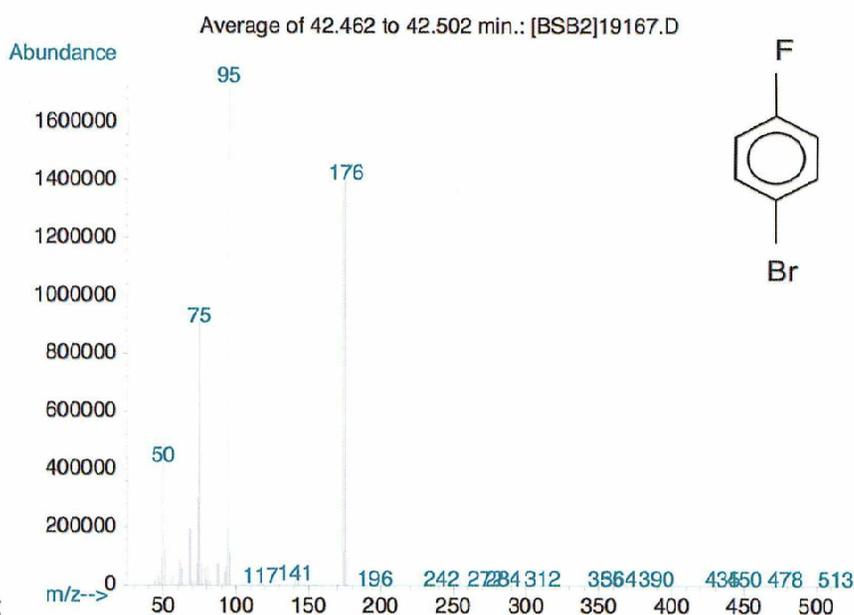
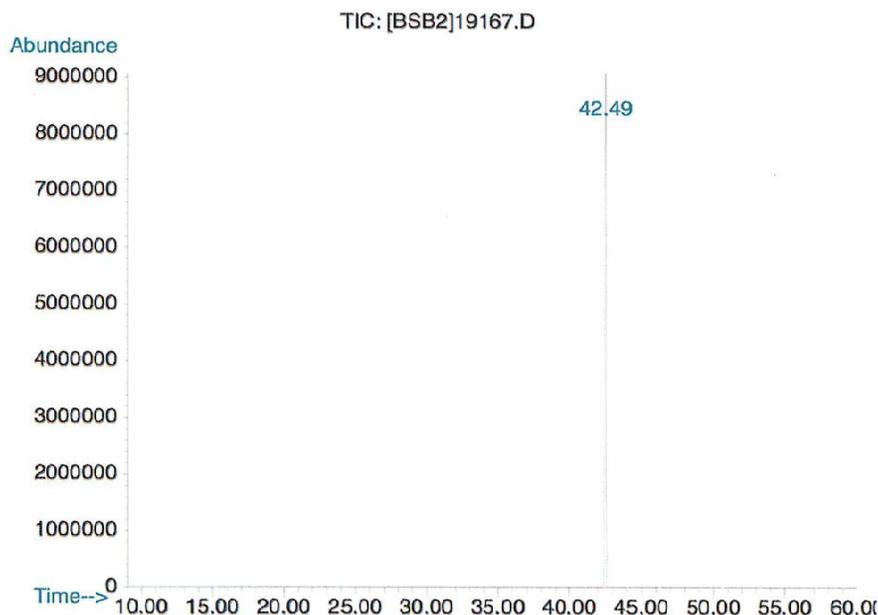
Part Number: 19167
Lot Number: 112514
Description: CLP - Instrument Performance Check Solution
 p-Bromofluorobenzene
Expiration Date: 112520
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2500
NIST Test ID#: 732/245790
Weight(s) shown below were combined and diluted to (mL): 100.0

Solvent(s): Methanol
Lot# DK793

<i>Paul Barron</i>		112514
Formulated By:	Paul Barron	DATE
<i>Pedro L. Rentas</i>		112514
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
										CAS#	OSHA PEL (TWA)	LD50
1. p-Bromofluorobenzene	48	01127COV	2500	99	0.2	0.25254	0.25282	2502.8	10.2	460-00-4	N/A	ori-rat 2700mg/kg

Method GC6MSD-1: Column: Vocol (60m X 0.25mm ID X 1.5µm film thickness).Temp. 1=35°C (10min.), Temp. 2=200°C (8.75 min.), Rate=4°C/min., Injector Temp.=200°C, Detector Temp.=220°C. Solvent vent time = 6 min. Analysis performed by Candice Warren.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



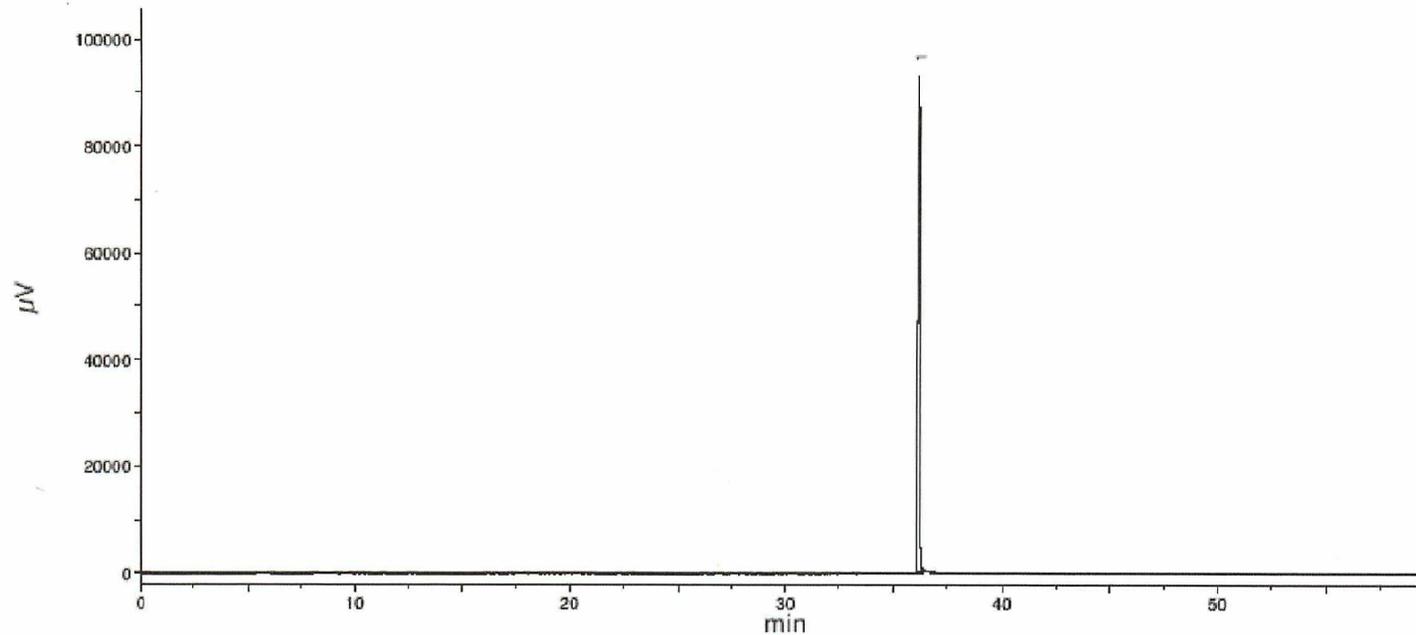
Run 30, "P19167 L112514 [2500µg/mL in MeOH]"

Run Length: 59.99 min, 35996 points at 10 points/second.
Created: Wed, Nov 26, 2014 at 3:27:40 PM.
Sampled: Sequence "112514-GC1", Method "GC1-M7".
Analyzed using Method "GC1-M7".

Comments

GC1-M7 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow = 150mL/min., Helium (carrier) = 10mL/min.,
Helium (make-up) = 40mL/min., Hydrogen (make-up) = 100mL/min.,
Oven Profile: Temp. 1 = 35°C (Time 1 = 10 min.), Temp 2 = 200°C (Time 2 = 8.75 min.),
Rate = 4°C/min., Total run time = 60 min. Injector temp. = 200°C, PID Temp. = 200°C.
ELCD Signal = Edaq Channel 1 PID Signal = Edaq Channel 2
Standard injection = 0.5µL, Range=4 Purge Valve = 8 min

Name	PID RT (min.)
p-Bromofluorobenzene	36.19



Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 112916

Lab Standard No.: 1900018



CERTIFIED WEIGHT REPORT

Part Number: **97270**
Lot Number: **112916**
Description: **8260 VOC 2nd Source Calibration Check**
84 components

Expiration Date: **112921** Solvent(s): **Methanol** Lot# **DP303Q9**
Recommended Storage: **Freezer (0 °C)**
Nominal Concentration (µg/mL): **100**
NIST Test ID#: **822-275872-11** 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): **100.0** 0.001 Flask Uncertainty

Formulated By: <i>Paul Barron</i>	112916
Paul Barron	DATE
Reviewed By: <i>Pedro L. Rentas</i>	112916
Pedro L. Rentas	DATE

SDS Information

(Solvent Safety Info. On Attached pg.)

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Bromodichloromethane	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	75-27-4	N/A	ori-rat 916mg/kg
2. Dibromochloromethane	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.5	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethene	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.5	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	75-09-2	500 ppm	ori-rat 2136mg/kg
6. 1,1-Dichloroethene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.1	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	112116	0.05	5.00	0.025	2000.5	100.0	1.5	74-97-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	112116	0.05	5.00	0.025	2001.2	100.0	1.5	75-25-2	0.5 ppm (5mg/m3)	ori-rat 933mg/kg
9. Carbon tetrachloride	93538	112116	0.05	5.00	0.025	2000.7	100.0	1.5	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	67-66-3	50 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.5	74-95-3	N/A	ori-rat 109mg/kg
12. 1,1-Dichloroethane	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.5	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.5	594-20-7	N/A	N/A
14. Tetrachloroethene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.5	127-18-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2629mg/kg
15. 1,1,1-Trichloroethane	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	96-12-8	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	112116	0.05	5.00	0.025	1999.9	100.0	1.5	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	112116	0.05	5.00	0.025	1999.9	100.0	1.5	78-87-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	142-28-9	N/A	unr-mus 3600mg/kg
21. 1,1-Dichloropropene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	563-58-6	N/A	N/A
22. cis-1,3-Dichloropropene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	87-88-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.5	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	79-34-5	5 ppm (35mg/m3/8H)(skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 836mg/kg
28. Trichloroethane	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	96-18-4	10 ppm (60mg/m3/8H)	ori-rat 149.6mg/kg
30. Benzene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.1	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.1	108-86-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.1	104-51-8	N/A	N/A
33. Ethyl benzene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.1	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.1	99-87-6	N/A	ori-rat 4750mg/kg
35. Naphthalene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.1	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.1	108-88-3	200 ppm	ori-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93538	112116	0.05	5.00	0.025	2001.1	100.0	1.1	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	112116	0.05	5.00	0.025	2000.7	100.0	1.1	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
39. 1,2,4-Trimethylbenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	95-63-6	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.1	108-67-8	N/A	N/A
41. Styrene	93538	112116	0.05	5.00	0.025	2001.4	100.1	1.1	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.1	98-06-6	N/A	N/A
43. sec-Butyl benzene	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.1	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg
45. 2-Chlorotoluene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.1	95-49-8	50 ppm (250mg/m3/8H)	ori-rat 3900mg/kg
46. 4-Chlorotoluene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.1	106-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	112116	0.05	5.00	0.025	2000.5	100.0	1.1	541-73-1	N/A	ipr-mus 1062mg/kg
49. 1,4-Dichlorobenzene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.1	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.1	103-65-1	N/A	ori-rat 6040mg/kg
52. o-Xylene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.1	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
53. m-Xylene	93538	112116	0.05	5.00	0.025	1000.1	50.0	0.7	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	112116	0.05	5.00	0.025	1001.1	50.1	0.7	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulphide	97269	102412	0.005	0.50	0.002	20013.3	100.1	1.0	75-15-0	4 ppm (12mg/m3)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97269	102412	0.005	0.50	0.002	20006.8	100.0	1.0	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
57. xachloroethane	97269	102412	0.005	0.50	0.002	20003.5	100.0	1.0	67-72-1	1 ppm (10mg/m3/8H)(skin)	ori-ggq 4970mg/kg
58. ethyl tert-butyl ether (MTBE)	97269	102412	0.005	0.50	0.002	20022.8	100.1	1.0	1634-04-4	N/A	ori-rat 4g/kg
59. Methylnaphthalene	97269	102412	0.005	0.50	0.002	20001.6	100.0	1.0	91-57-6	N/A	ori-rat 1630mg/kg
60. 2-Trichloro-1,2,2-trifluoroethane	97269	102412	0.005	0.50	0.002	20025.7	100.1	1.0	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
61. Pentane	97235	120114	0.05	5.00	0.025	2002.6	100.1	1.1	109-66-0	600 ppm (1800mg/m3/8H)	ivn-mus 446mg/kg
62. Hexane	97235	120114	0.05	5.00	0.025	2002.6	100.1	1.1	110-54-3	50 ppm (180mg/m3/8H)	ori-rat 28710mg/kg
63. Heptane	97235	120114	0.05	5.00	0.025	2003.1	100.1	1.1	142-82-5	400 ppm (1600mg/m3/8H)	ivn-mus 222mg/kg
64. Octane	97235	120114	0.05	5.00	0.025	2001.6	100.1	1.1	111-65-9	300 ppm (1450mg/m3/8H)	N/A
65. Nonane	97235	120114	0.05	5.00	0.025	2000.7	100.0	1.1	111-84-2	200 ppm (1050mg/m3/8H)	ivn-mus 218mg/kg
66. Decane	97235	120114	0.05	5.00	0.025	2001.8	100.1	1.1	124-18-5	N/A	N/A

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67. n-Undecane	97235	120114	0.05	5.00	0.025	2003.6	100.2	1.1	1120-21-4	N/A	ivr-mus 517mg/kg
68. n-Dodecane	97235	120114	0.05	5.00	0.025	2000.6	100.0	1.1	112-40-3	N/A	N/A
69. n-Tridecane	97235	120114	0.05	5.00	0.025	2000.2	100.0	1.1	629-50-5	N/A	ivr-mus 1161mg/kg
70. n-Tetradecane	97235	120114	0.05	5.00	0.025	2001.5	100.1	1.1	629-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.05	5.00	0.025	2001.3	100.1	1.1	629-62-9	N/A	ivr-mus 3494mg/kg
72. Bromomethane	30058	103116	0.05	5.00	0.025	2004.4	100.2	1.1	74-83-9	5 ppm (20mg/m ³ /8H) (skin)	ori-rat 214mg/kg
73. Chloroethane	30058	103116	0.05	5.00	0.025	2003.4	100.2	1.1	75-00-3	1000 ppm (2600mg/m ³ /8H)	N/A
74. Chloromethane	30058	103116	0.05	5.00	0.025	2003.4	100.2	1.1	74-87-3	100 ppm	ori-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	103116	0.05	5.00	0.025	2000.7	100.0	1.1	75-71-6	1000 ppm (4950mg/m ³ /8H)	N/A
76. Trichlorofluoromethane	30058	103116	0.05	5.00	0.025	2001.7	100.1	1.1	75-69-4	1000 ppm (5600mg/m ³ /8H)	ipi-mus 1743mg/kg
77. Vinyl chloride	30058	103116	0.05	5.00	0.025	2010.4	100.5	1.1	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone (MIBK)	82442	112816	0.00	0.50	0.002	20003.5	100.0	1.0	108-10-1	100 ppm (410mg/m ³ /8H)	ori-rat 2080mg/kg
79. p-Bromofluorobenzene	20002	112816	0.05	5.00	0.025	2000.5	100.0	1.1	460-00-4	N/A	ori-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	112816	0.05	5.00	0.025	2001.8	100.1	1.1	17060-07-0	N/A	ori-mus 625mg/kg
81. Toluene-d8	20002	112816	0.05	5.00	0.025	2002.1	100.1	1.1	2037-26-5	200 ppm	ori-rat 5000mg/kg
82. Chlorobenzene-d5	22013	112816	0.10	10.00	0.006	2001.9	200.2	0.8	3114-55-4	N/A	ori-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	112816	0.10	10.00	0.006	2002.1	200.2	0.9	3855-62-1	N/A	ori-rat 500mg/kg
84. Fluorobenzene	22013	112816	0.10	10.00	0.006	2000.5	200.0	0.9	462-06-6	N/A	ori-rat 4399mg/kg

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kayat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 041218

Lab Standard No.: 1900019



CERTIFIED WEIGHT REPORT

Part Number: 92026
Lot Number: 041218
Description: EPA Method 8260B Internal & Surrogate Standard
7 components
Expiration Date: 041223
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 2506734D

Solvent(s): Methanol
Lot# DS435

Weight(s) shown below were combined and diluted to (mL): 100.0 0.001
5E-05 Balance Uncertainty
Flask Uncertainty

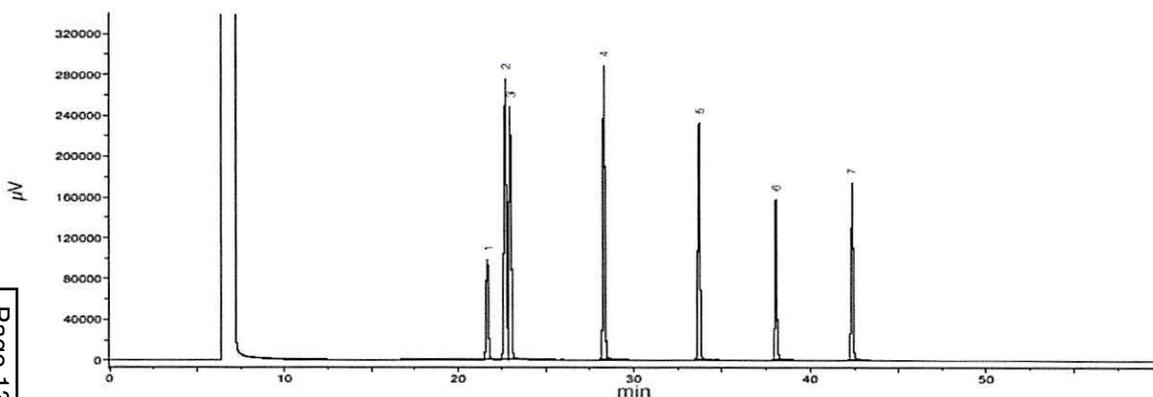
		041218
Formulated By:	Jason Criscio	DATE
		041218
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
										CAS#	OSHA PEL (TWA)	LD50
1. Chlorobenzene-d5	69	PR-23926/062912CB1	2000	99.7	0.2	0.20062	0.20085	2002.3	8.1	3114-55-4	N/A	ori-rat 1110mg/kg
2. 1,4-Dichlorobenzene-d4	118	PR-18488/07267CB1	2000	98	0.2	0.20410	0.20429	2001.8	8.2	3855-82-1	N/A	ori-rat 500mg/kg
3. Fluorobenzene	186	16006LH	2000	99	0.2	0.20204	0.20220	2001.6	8.1	462-06-6	N/A	ori-rat 4399mg/kg
4. p-Bromofluorobenzene	48	01127COV	2000	99	0.2	0.20204	0.20221	2001.7	8.1	460-00-4	N/A	ori-rat 2700mg/kg
5. 1,4-Difluorobenzene	155	13105AO	2000	99	0.2	0.20204	0.20224	2002.0	8.1	540-36-3	N/A	N/A
6. 1,2-Dichloroethane-d4	137	V288P25	2000	99.6	0.2	0.20083	0.20095	2001.2	8.1	17060-07-0	N/A	ori-mus 625mg/kg
7. Toluene-d8	282	PR-27981/120116TL1	2000	99.5	0.2	0.20103	0.20120	2001.7	8.1	2037-26-5	200 ppm	ori-rat 5000mg/kg

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Comments

GC5-M1 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=290mL/min., Helium (carrier)=10mL/min.,
Helium(make-up)=10mL/min., Hydrogen(make-up)=40mL/min., Air(make-up)=230mL/min.
Oven Profile: Temp. 1=35°C (Time 1=10 min.), Temp 2=200°C (Time 2=8.75 min.),
Rate = 4°C/min., Total run time=60 min. Injector temp.=200°C, FID Temp.=200°C.
FID Signal = Edaq Channel 1
Standard injection = 0.5µL, Range=3



Name	FID (min.)
1,2-Dichloroethane-d4	21.67
Fluorobenzene	22.70
1,4-Difluorobenzene	22.98
Toluene-d8	28.30
Chlorobenzene-d5	33.69
p-Bromofluorobenzene	38.06
1,4-Dichlorobenzene-d4	42.36

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 112916

Lab Standard No.: 1900037



CERTIFIED WEIGHT REPORT

Part Number: **97270**
Lot Number: **112916**
Description: **8260 VOC 2nd Source Calibration Check**
84 components
Expiration Date: **112921** Solvent(s): **Methanol** Lot# **DP303Q9**
Recommended Storage: **Freezer (0 °C)**
Nominal Concentration (µg/mL): **100**
NIST Test ID#: **822-275872-11** 5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Formulated By: <i>Paul Barron</i>	112916
Paul Barron	DATE
Reviewed By: <i>Pedro L. Rentas</i>	112916
Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette	Initial Conc.(ug/mL)	Final Conc.(ug/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Bromodichloromethane	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	75-27-4	N/A	ori-rat 916mg/kg
2. Dibromochloromethane	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.5	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethene	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.5	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	75-09-2	500 ppm	ori-rat 2136mg/kg
6. 1,1-Dichloroethene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.1	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	112116	0.05	5.00	0.025	2000.5	100.0	1.5	74-97-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	112116	0.05	5.00	0.025	2001.2	100.0	1.5	75-25-2	0.5 ppm (5mg/m3) (skin)	ori-rat 933mg/kg
9. Carbon tetrachloride	93538	112116	0.05	5.00	0.025	2000.7	100.0	1.5	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	67-66-3	50 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.5	74-95-3	N/A	ori-rat 108mg/kg
12. 1,1-Dichloroethane	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.5	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.5	594-20-7	N/A	N/A
14. Tetrachloroethene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.5	127-18-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2829mg/kg
15. 1,1,1-Trichloroethane	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	96-12-8	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	112116	0.05	5.00	0.025	1999.9	100.0	1.5	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	112116	0.05	5.00	0.025	1999.9	100.0	1.5	78-87-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	142-28-9	N/A	uni-mus 3600mg/kg
21. 1,1-Dichloropropene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	563-58-6	N/A	N/A
22. cis-1,3-Dichloropropene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	87-68-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.5	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.5	79-34-5	5 ppm (35mg/m3/8H)(skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 836mg/kg
28. Trichloroethene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.5	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.5	96-18-4	10 ppm (80mg/m3/8H)	ori-rat 149.6mg/kg
30. Benzene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.1	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.1	108-86-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	112116	0.05	5.00	0.025	2000.9	100.0	1.1	104-51-8	N/A	N/A
33. Ethyl benzene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.1	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.1	99-87-6	N/A	ori-rat 4750mg/kg
35. Naphthalene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.1	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.1	108-88-3	200 ppm	ori-rat 5000mg/kg
37. 1,2-Trichlorobenzene	93538	112116	0.05	5.00	0.025	2001.1	100.0	1.1	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	112116	0.05	5.00	0.025	2000.7	100.0	1.1	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
39. 1,2,4-Trimethylbenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	95-63-6	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.1	108-67-8	N/A	N/A
41. Styrene	93538	112116	0.05	5.00	0.025	2001.4	100.1	1.1	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	112116	0.05	5.00	0.025	2000.2	100.0	1.1	98-06-6	N/A	N/A
43. sec-Butyl benzene	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.1	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg
45. 2-Chlorotoluene	93538	112116	0.05	5.00	0.025	2000.1	100.0	1.1	95-49-8	50 ppm (250mg/m3/8H)	ori-rat 3900mg/kg
46. 4-Chlorotoluene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.1	106-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	112116	0.05	5.00	0.025	2000.5	100.0	1.1	541-73-1	N/A	ipr-mus 1062mg/kg
49. 1,4-Dichlorobenzene	93538	112116	0.05	5.00	0.025	2000.3	100.0	1.1	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	112116	0.05	5.00	0.025	2000.6	100.0	1.1	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	112116	0.05	5.00	0.025	2000.4	100.0	1.1	103-65-1	N/A	ori-rat 6040mg/kg
52. o-Xylene	93538	112116	0.05	5.00	0.025	2000.0	100.0	1.1	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
53. m-Xylene	93538	112116	0.05	5.00	0.025	1000.1	50.0	0.7	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	112116	0.05	5.00	0.025	1001.1	50.1	0.7	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulphide	97269	102412	0.005	0.50	0.002	20013.3	100.1	1.0	75-15-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97269	102412	0.005	0.50	0.002	20006.8	100.0	1.0	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
1,4-dioxane	97269	102412	0.005	0.50	0.002	20003.5	100.0	1.0	67-72-1	1 ppm (10mg/m3/8H)(skin)	ori-gpg 4970mg/kg
1,4-dioxane	97269	102412	0.005	0.50	0.002	20022.8	100.1	1.0	1634-04-4	N/A	ori-rat 4g/kg
1,4-dioxane	97269	102412	0.005	0.50	0.002	20001.6	100.0	1.0	91-57-6	N/A	ori-rat 1630mg/kg
1,2-Trichloro-1,2,2-trifluoroethane	97269	102412	0.005	0.50	0.002	20025.7	100.1	1.0	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
Pentane	97235	120114	0.05	5.00	0.025	2002.6	100.1	1.1	109-66-0	600 ppm (1800mg/m3/8H)	ivn-mus 446mg/kg
Hexane	97235	120114	0.05	5.00	0.025	2002.6	100.1	1.1	110-54-3	50 ppm (180mg/m3/8H)	ori-rat 28710mg/kg
Heptane	97235	120114	0.05	5.00	0.025	2003.1	100.1	1.1	142-82-5	400 ppm (1600mg/m3/8H)	ivn-mus 222mg/kg
Octane	97235	120114	0.05	5.00	0.025	2001.6	100.1	1.1	111-65-9	300 ppm (1450mg/m3/8H)	N/A
Nonane	97235	120114	0.05	5.00	0.025	2000.7	100.0	1.1	111-84-2	200 ppm (1050mg/m3/8H)	ivn-mus 218mg/kg
Decane	97235	120114	0.05	5.00	0.025	2001.8	100.1	1.1	124-18-5	N/A	N/A

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67.	n-Undecane	97235	120114	0.05	5.00	0.025	2003.6	100.2	1.1	1120-21-4	N/A	ivn-mus 517mg/kg
68.	n-Dodecane	97235	120114	0.05	5.00	0.025	2000.6	100.0	1.1	112-40-3	N/A	N/A
69.	n-Tridecane	97235	120114	0.05	5.00	0.025	2000.2	100.0	1.1	629-50-5	N/A	ivn-mus 1161mg/kg
70.	n-Tetradecane	97235	120114	0.05	5.00	0.025	2001.5	100.1	1.1	629-59-4	N/A	N/A
71.	n-Pentadecane	97235	120114	0.05	5.00	0.025	2001.3	100.1	1.1	629-62-9	N/A	ivn-mus 3494mg/kg
72.	Bromomethane	30058	103116	0.05	5.00	0.025	2004.4	100.2	1.1	74-83-9	5 ppm (20mg/m3/8H) (skin)	ori-rat 214mg/kg
73.	Chloroethane	30058	103116	0.05	5.00	0.025	2003.4	100.2	1.1	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
74.	Chloromethane	30058	103116	0.05	5.00	0.025	2003.4	100.2	1.1	74-87-3	100 ppm	ori-rat 1800mg/kg
75.	Dichlorodifluoromethane	30058	103116	0.05	5.00	0.025	2000.7	100.0	1.1	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
76.	Trichlorofluoromethane	30058	103116	0.05	5.00	0.025	2001.7	100.1	1.1	75-69-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg
77.	Vinyl chloride	30058	103116	0.05	5.00	0.025	2010.4	100.5	1.1	75-01-4	N/A	N/A
78.	4-Methyl-2-pentanone (MIBK)	82442	112816	0.00	0.50	0.002	20003.5	100.0	1.0	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg
79.	p-Bromofluorobenzene	20002	112816	0.05	5.00	0.025	2000.5	100.0	1.1	460-00-4	N/A	ori-rat 2700mg/kg
80.	1,2-Dichloroethane-d4	20002	112816	0.05	5.00	0.025	2001.8	100.1	1.1	17060-07-0	N/A	ori-mus 625mg/kg
81.	Toluene-d8	20002	112816	0.05	5.00	0.025	2002.1	100.1	1.1	2037-26-5	200 ppm	ori-rat 5000mg/kg
82.	Chlorobenzene-d5	22013	112816	0.10	10.00	0.006	2001.9	200.2	0.8	3114-55-4	N/A	ori-rat 1110mg/kg
83.	1,4-Dichlorobenzene-d4	22013	112816	0.10	10.00	0.006	2002.1	200.2	0.9	3855-82-1	N/A	ori-rat 500mg/kg
84.	Fluorobenzene	22013	112816	0.10	10.00	0.006	2000.5	200.0	0.9	462-06-6	N/A	ori-rat 4399mg/kg

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 061019

Lab Standard No.: 1900054



CERTIFIED WEIGHT REPORT

Part Number: 64090
Lot Number: 061019
Description: VOC Calibration Level 1 (800 ug/mL)
42 components
Expiration Date: 061022
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): Varied
NIST Test ID#: 6UTB
Solvent: Methanol
Lot#: DU230-USQ10

Volume(s) shown below were combined and diluted to (mL): 20.0 0.002
Flask Uncertainty
RED = Surrogate; BLUE = Internal

<i>Gabriel Helland</i>		061019
Formulated By:	Gabriel Helland	DATE
<i>Pedro L. Rentas</i>		061019
Reviewed By:	Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) µg/mL	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Benzene	64088	060719	0.200	4.00	0.017	4001.1	800.8	7.5	71-43-2	1 ppm	ori-rat 4894mg/kg
2. Carbon tetrachloride	64088	060719	0.200	4.00	0.017	4000.8	800.7	7.5	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
3. Chlorobenzene	64088	060719	0.200	4.00	0.017	4000.7	800.7	7.5	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg
4. Chloroform	64088	060719	0.200	4.00	0.017	4000.7	800.7	7.5	67-66-3	50 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
5. 1,2-Dibromoethane	64088	060719	0.200	4.00	0.017	4000.8	800.7	7.5	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
6. 1,2-Dichlorobenzene	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.5	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
7. 1,3-Dichlorobenzene	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.6	541-73-1	N/A	ipr-mus 1062mg/kg
8. 1,4-Dichlorobenzene	64088	060719	0.200	4.00	0.017	4000.6	800.7	7.5	108-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
9. 1,1-Dichloroethane	64088	060719	0.200	4.00	0.017	4001.0	800.8	7.5	75-34-3	100 ppm	ori-rat 725mg/kg
10. 1,2-Dichloroethane	64088	060719	0.200	4.00	0.017	4001.0	800.8	7.5	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
11. 1,1-Dichloroethene	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.5	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
12. cis-1,2-Dichloroethene	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.5	156-59-2	N/A	N/A
13. trans-1,2-Dichloroethene	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.6	156-60-5	N/A	ori-rat 1235mg/kg
14. 1,4-Dioxane	64088	060719	0.200	4.00	0.017	4000.3	800.6	7.5	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
15. Ethyl benzene	64088	060719	0.200	4.00	0.017	4001.4	800.9	7.5	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
16. Isopropylbenzene	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.5	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
17. Methyl tert-butyl ether (MTBE)	64088	060719	0.200	4.00	0.017	4000.4	800.7	7.5	1634-04-4	N/A	ori-rat 4g/kg
18. 2-Methylnaphthalene	64088	060719	0.200	4.00	0.017	4000.4	800.7	7.6	91-57-6	N/A	ori-rat 1830mg/kg
19. Naphthalene	64088	060719	0.200	4.00	0.017	4000.3	800.6	7.5	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
20. 1,1,1,2-Tetrachloroethane	64088	060719	0.200	4.00	0.017	4000.5	800.7	7.5	630-20-6	N/A	ori-rat 670mg/kg
21. 1,1,2,2-Tetrachloroethane	64088	060719	0.200	4.00	0.017	4000.5	800.7	7.5	79-34-5	5 ppm (35mg/m3/8H)(skin)	ori-rat 800mg/kg
22. Tetrachloroethene	64088	060719	0.200	4.00	0.017	4000.8	800.7	7.5	127-18-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2829mg/kg
23. Toluene	64088	060719	0.200	4.00	0.017	4001.4	800.9	7.5	108-88-3	200 ppm	ori-rat 5000mg/kg
24. 1,2,3-Trichlorobenzene	64088	060719	0.200	4.00	0.017	4000.4	800.7	7.5	87-61-6	N/A	ipr-mus 1390mg/kg
25. 1,2,4-Trichlorobenzene	64088	060719	0.200	4.00	0.017	4000.7	800.7	7.5	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
26. 1,1,1-Trichloroethane	64088	060719	0.200	4.00	0.017	4000.8	800.7	7.5	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg
27. 1,1,2-Trichloroethane	64088	060719	0.200	4.00	0.017	4001.2	800.8	7.6	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 836mg/kg
28. Trichloroethene	64088	060719	0.200	4.00	0.017	4000.8	800.7	7.5	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	64088	060719	0.200	4.00	0.017	4000.3	800.6	7.5	96-18-4	10 ppm (60mg/m3/8H)	ori-rat 149.6mg/kg
30. 1,1,2-Trichlorotrifluoroethane	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.5	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
31. 1,2,4-Trimethylbenzene	64088	060719	0.200	4.00	0.017	4000.3	800.7	7.6	95-63-6	N/A	ori-rat 5g/kg
32. 1,3,5-Trimethylbenzene	64088	060719	0.200	4.00	0.017	4000.3	800.7	7.6	108-67-8	N/A	ori-rat 5000mg/kg
33. o-Xylene	64088	060719	0.200	4.00	0.017	4000.6	800.7	7.5	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
34. m-Xylene	64088	060719	0.200	4.00	0.017	2000.4	400.4	3.8	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
35. p-Xylene	64088	060719	0.200	4.00	0.017	2001.2	400.5	3.8	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
36. Vinyl chloride	33591	052119	0.040	0.80	0.004	20030.1	801.8	8.7	75-01-4	N/A	N/A
37. p-Bromofluorobenzene	64088	060719	0.200	4.00	0.017	4001.3	800.8	7.5	460-00-4	N/A	ori-rat 2700mg/kg
38. 1,2-Dichloroethane-d4	64088	060719	0.200	4.00	0.017	4000.7	800.7	7.5	17060-07-0	N/A	ori-mus 625mg/kg
39. Toluene-d8	64088	060719	0.200	4.00	0.017	4000.6	800.7	7.5	2037-26-5	200 ppm	ori-rat 5000mg/kg
40. Chlorobenzene-d5	22013	022818	0.100	2.00	0.017	2000.6	200.2	3.5	3114-55-4	N/A	ori-rat 1110mg/kg
41. 1,4-Dichlorobenzene-d4	22013	022818	0.100	2.00	0.017	2000.7	200.2	3.5	3855-82-1	N/A	ori-rat 500mg/kg
42. Fluorobenzene	22013	022818	0.100	2.00	0.017	2001.0	200.2	3.5	462-06-6	N/A	ori-rat 4399mg/kg

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
 * All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
 * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 061019

Lab Standard No.: 1900055



CERTIFIED WEIGHT REPORT

Part Number: 64091
Lot Number: 061019
Description: VOC Calibration Level 2 (1200 ug/mL)
42 components
Expiration Date: 061022
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): Varied
NIST Test ID#: 6UTB
Solvent: Methanol
Lot#: DU230-USQ10

Volume(s) shown below were combined and diluted to (mL): 20.0 0.002
RED = Surrogate; BLUE = Internal

<i>Gabriel Helland</i>		061019
Formulated By:	Gabriel Helland	DATE
<i>Pedro L. Rentas</i>		061019
Reviewed By:	Pedro L. Rentas	DATE

SDS Information

(Solvent Safety Info. On Attached pg.)

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) µg/mL	CAS#	OSHA PEL (TWA)	LD50
1. Benzene	64088	060719	0.300	6.00	0.042	4001.1	1201.2	17.6	71-43-2	1 ppm	or-rat 4894mg/kg
2. Carbon tetrachloride	64088	060719	0.300	6.00	0.042	4000.8	1201.1	17.6	56-23-5	2 ppm (12.6mg/m3/8H)	or-rat 2350mg/kg
3. Chlorobenzene	64088	060719	0.300	6.00	0.042	4000.7	1201.1	17.6	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2290mg/kg
4. Chloroform	64088	060719	0.300	6.00	0.042	4000.7	1201.1	17.6	67-66-3	50 ppm (240mg/m3) (CL)	or-rat 908mg/kg
5. 1,2-Dibromoethane	64088	060719	0.300	6.00	0.042	4000.8	1201.1	17.6	106-93-4	20 ppm (8H)	or-rat 1081mg/kg
6. 1,2-Dichlorobenzene	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	95-50-1	50 ppm (300mg/m3) (CL)	or-rat 500mg/kg
7. 1,3-Dichlorobenzene	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	541-73-1	N/A	ipr-mus 1062mg/kg
8. 1,4-Dichlorobenzene	64088	060719	0.300	6.00	0.042	4000.6	1201.1	17.6	106-46-7	75 ppm (450mg/m3/8H)	or-rat 500mg/kg
9. 1,1-Dichloroethane	64088	060719	0.300	6.00	0.042	4001.0	1201.2	17.6	75-34-3	100 ppm	or-rat 725mg/kg
10. 1,2-Dichloroethane	64088	060719	0.300	6.00	0.042	4001.0	1201.2	17.6	107-06-2	50 ppm (8H)	or-rat 670mg/kg
11. 1,1-Dichloroethene	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	75-35-4	1 ppm (4mg/m3/8H)	or-rat 200mg/kg
12. cis-1,2-Dichloroethene	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	156-59-2	N/A	N/A
13. trans-1,2-Dichloroethene	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	156-60-5	N/A	or-rat 1235mg/kg
14. 1,4-Dioxane	64088	060719	0.300	6.00	0.042	4000.3	1201.0	17.6	123-91-1	25 ppm (90mg/m3/8H)(skin)	orl-mus 5700mg/kg
15. Ethyl benzene	64088	060719	0.300	6.00	0.042	4001.4	1201.3	17.6	100-41-4	100 ppm (435mg/m3/8H)	or-rat >2000mg/kg
16. Isopropylbenzene	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	98-82-8	50 ppm (245mg/m3/8H)	or-rat 1400mg/kg
17. Methyl tert-butyl ether (MTBE)	64088	060719	0.300	6.00	0.042	4000.4	1201.0	17.6	1634-04-4	N/A	or-rat 4g/kg
18. 2-Methylnaphthalene	64088	060719	0.300	6.00	0.042	4000.4	1201.0	17.6	91-57-6	N/A	or-rat 1630mg/kg
19. Naphthalene	64088	060719	0.300	6.00	0.042	4000.3	1201.0	17.6	91-20-3	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
20. 1,1,1,2-Tetrachloroethane	64088	060719	0.300	6.00	0.042	4000.5	1201.0	17.6	630-20-6	N/A	or-rat 670mg/kg
21. 1,1,1,2,2-Tetrachloroethane	64088	060719	0.300	6.00	0.042	4000.5	1201.0	17.6	79-34-5	5 ppm (35mg/m3/8H)(skin)	or-rat 800mg/kg
22. Tetrachloroethene	64088	060719	0.300	6.00	0.042	4000.8	1201.1	17.6	127-18-4	25 ppm (170mg/m3/8H)(final)	or-rat 2629mg/kg
23. Toluene	64088	060719	0.300	6.00	0.042	4001.4	1201.3	17.6	108-88-3	200 ppm	or-rat 5000mg/kg
24. 1,2,3-Trichlorobenzene	64088	060719	0.300	6.00	0.042	4000.4	1201.0	17.6	87-61-6	N/A	ipr-mus 1390mg/kg
25. 1,2,4-Trichlorobenzene	64088	060719	0.300	6.00	0.042	4000.7	1201.1	17.6	120-82-1	5 ppm (CL) (40mg/m3)	or-rat 756mg/kg
26. 1,1,1-Trichloroethane	64088	060719	0.300	6.00	0.042	4000.8	1201.1	17.6	71-55-6	350 ppm (1900mg/m3/8H)	or-rat 10300mg/kg
27. 1,1,2-Trichloroethane	64088	060719	0.300	6.00	0.042	4001.2	1201.2	17.6	79-00-5	10 ppm (45mg/m3/8H)(skin)	or-rat 836mg/kg
28. Trichloroethene	64088	060719	0.300	6.00	0.042	4000.8	1201.1	17.6	79-01-6	50 ppm (270mg/m3/8H)	orl-mus 2402mg/kg
29. 1,2,3-Trichloropropane	64088	060719	0.300	6.00	0.042	4000.3	1201.0	17.6	96-18-4	10 ppm (60mg/m3/8H)	or-rat 149.8mg/kg
30. 1,1,2-Trichlorotrifluoroethane	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	76-13-1	1000 ppm (7600mg/m3/8H)	or-rat 43g/kg
31. 1,2,4-Trimethylbenzene	64088	060719	0.300	6.00	0.042	4000.3	1201.0	17.6	95-63-6	N/A	or-rat 5g/kg
32. 1,3,5-Trimethylbenzene	64088	060719	0.300	6.00	0.042	4000.3	1201.0	17.6	108-67-8	N/A	or-rat 5000mg/kg
33. o-Xylene	64088	060719	0.300	6.00	0.042	4000.6	1201.1	17.6	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
34. m-Xylene	64088	060719	0.300	6.00	0.042	2000.4	600.6	8.8	108-38-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
35. p-Xylene	64088	060719	0.300	6.00	0.042	2001.2	600.8	8.8	106-42-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
36. Vinyl chloride	33591	052119	0.060	1.20	0.017	20030.1	1202.7	34.4	75-01-4	N/A	N/A
37. p-Bromofluorobenzene	64088	060719	0.300	6.00	0.042	4001.3	1201.3	17.6	460-00-4	N/A	or-rat 2700mg/kg
38. 1,2-Dichloroethane-d4	64088	060719	0.300	6.00	0.042	4000.7	1201.1	17.6	17060-07-0	N/A	orl-mus 625mg/kg
39. Toluene-d8	64088	060719	0.300	6.00	0.042	4000.6	1201.0	17.6	2037-26-5	200 ppm	or-rat 5000mg/kg
40. Chlorobenzene-d5	22013	022818	0.100	2.00	0.017	2000.6	200.2	3.5	3114-55-4	N/A	or-rat 1110mg/kg
41. 1,4-Dichlorobenzene-d4	22013	022818	0.100	2.00	0.017	2000.7	200.2	3.5	3855-82-1	N/A	or-rat 500mg/kg
42. Fluorobenzene	22013	022818	0.100	2.00	0.017	2001.0	200.2	3.5	462-06-6	N/A	or-rat 4399mg/kg

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
 * All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
 * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 061019

Lab Standard No.: 1900056



CERTIFIED WEIGHT REPORT

Part Number: 64092
 Lot Number: 061019
 Description: VOC Calibration Level 3 (1600 ug/mL)
 42 components
 Expiration Date: 061022
 Recommended Storage: Freezer (0 °C)
 Nominal Concentration (µg/mL): Varied
 NIST Test ID#: 6UTB
 Solvent: Methanol
 Lot#: DU230-USQ10
 5E-05 Balance Uncertainty
 0.002 Flask Uncertainty

Volume(s) shown below were combined and diluted to (mL): 20.0

RED = Surrogate; BLUE = Internal

<i>Gabriel Helland</i>		061019
Formulated By:	Gabriel Helland	DATE
<i>Pedro L. Rentas</i>		061019
Reviewed By:	Pedro L. Rentas	DATE

SDS Information

(Solvent Safety Info. On Attached pg.)

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) µg/mL	CAS#	OSHA PEL (TWA)	LD50
1. Benzene	64088	060719	0.400	8.00	0.042	4001.1	1601.6	18.1	71-43-2	1 ppm	ori-rat 4894mg/kg
2. Carbon tetrachloride	64088	060719	0.400	8.00	0.042	4000.8	1601.5	18.1	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
3. Chlorobenzene	64088	060719	0.400	8.00	0.042	4000.7	1601.4	18.1	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg
4. Chloroform	64088	060719	0.400	8.00	0.042	4000.7	1601.4	18.1	67-66-3	50 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
5. 1,2-Dibromoethane	64088	060719	0.400	8.00	0.042	4000.8	1601.5	18.1	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
6. 1,2-Dichlorobenzene	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
7. 1,3-Dichlorobenzene	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	541-73-1	N/A	ipr-mus 1062mg/kg
8. 1,4-Dichlorobenzene	64088	060719	0.400	8.00	0.042	4000.6	1601.4	18.1	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
9. 1,1-Dichloroethane	64088	060719	0.400	8.00	0.042	4001.0	1601.6	18.1	75-34-3	100 ppm	ori-rat 725mg/kg
10. 1,2-Dichloroethane	64088	060719	0.400	8.00	0.042	4001.0	1601.6	18.1	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
11. 1,1-Dichloroethene	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
12. cis-1,2-Dichloroethene	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	156-59-2	N/A	N/A
13. trans-1,2-Dichloroethene	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	156-60-5	N/A	ori-rat 1235mg/kg
14. 1,4-Dioxane	64088	060719	0.400	8.00	0.042	4000.3	1601.3	18.1	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
15. Ethyl benzene	64088	060719	0.400	8.00	0.042	4001.4	1601.7	18.1	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
16. Isopropylbenzene	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
17. Methyl tert-butyl ether (MTBE)	64088	060719	0.400	8.00	0.042	4000.4	1601.3	18.1	1634-04-4	N/A	ori-rat 4g/kg
18. 2-Methylnaphthalene	64088	060719	0.400	8.00	0.042	4000.4	1601.4	18.1	91-57-6	N/A	ori-rat 1830mg/kg
19. Naphthalene	64088	060719	0.400	8.00	0.042	4000.3	1601.3	18.1	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
20. 1,1,1,2-Tetrachloroethane	64088	060719	0.400	8.00	0.042	4000.5	1601.4	18.1	630-20-6	N/A	ori-rat 670mg/kg
21. 1,1,2,2-Tetrachloroethane	64088	060719	0.400	8.00	0.042	4000.5	1601.4	18.1	79-34-5	5 ppm (35mg/m3/8H)(skin)	ori-rat 800mg/kg
22. Tetrachloroethene	64088	060719	0.400	8.00	0.042	4000.8	1601.5	18.1	127-18-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2629mg/kg
23. Toluene	64088	060719	0.400	8.00	0.042	4001.4	1601.7	18.1	108-88-3	200 ppm	ori-rat 5000mg/kg
24. 1,2,3-Trichlorobenzene	64088	060719	0.400	8.00	0.042	4000.4	1601.3	18.1	87-61-6	N/A	ipr-mus 1390mg/kg
25. 1,2,4-Trichlorobenzene	64088	060719	0.400	8.00	0.042	4000.7	1601.4	18.1	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
26. 1,1,1-Trichloroethane	64088	060719	0.400	8.00	0.042	4000.8	1601.5	18.1	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg
27. 1,1,2-Trichloroethane	64088	060719	0.400	8.00	0.042	4001.2	1601.6	18.1	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 836mg/kg
28. Trichloroethene	64088	060719	0.400	8.00	0.042	4000.8	1601.5	18.1	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	64088	060719	0.400	8.00	0.042	4000.3	1601.3	18.1	96-18-4	10 ppm (60mg/m3/8H)	ori-rat 149.6mg/kg
30. 1,1,2-Trichlorotrifluoroethane	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
31. 1,2,4-Trimethylbenzene	64088	060719	0.400	8.00	0.042	4000.3	1601.3	18.1	95-63-6	N/A	ori-rat 5g/kg
32. 1,3,5-Trimethylbenzene	64088	060719	0.400	8.00	0.042	4000.3	1601.3	18.1	108-67-8	N/A	ori-rat 5000mg/kg
33. o-Xylene	64088	060719	0.400	8.00	0.042	4000.6	1601.4	18.1	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
34. m-Xylene	64088	060719	0.400	8.00	0.042	2000.4	800.8	9.0	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
35. p-Xylene	64088	060719	0.400	8.00	0.042	2001.2	801.1	9.1	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
36. Vinyl chloride	33591	052119	0.080	1.60	0.017	20030.1	1603.6	34.7	75-01-4	N/A	N/A
37. p-Bromofluorobenzene	64088	060719	0.400	8.00	0.042	4001.3	1601.7	18.1	460-00-4	N/A	ori-rat 2700mg/kg
38. 1,2-Dichloroethane-d4	64088	060719	0.400	8.00	0.042	4000.7	1601.4	18.1	17060-07-0	N/A	ori-mus 825mg/kg
39. Toluene-d8	64088	060719	0.400	8.00	0.042	4000.6	1601.4	18.1	2037-26-5	200 ppm	ori-rat 5000mg/kg
40. Chlorobenzene-d5	22013	022818	0.100	2.00	0.017	2000.6	200.2	3.5	3114-55-4	N/A	ori-rat 1110mg/kg
41. 1,4-Dichlorobenzene-d4	22013	022818	0.100	2.00	0.017	2000.7	200.2	3.5	3855-82-1	N/A	ori-rat 500mg/kg
42. Fluorobenzene	22013	022818	0.100	2.00	0.017	2001.0	200.2	3.5	462-06-6	N/A	ori-rat 4399mg/kg

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
 * All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
 * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 061019

Lab Standard No.: 1900057



CERTIFIED WEIGHT REPORT

Part Number: **64093**
 Lot Number: **061019**
 Description: **VOC Calibration Level 4 (2000 ug/mL)**
 42 components
 Expiration Date: **061022**
 Recommended Storage: **Freezer (0 °C)**
 Nominal Concentration (µg/mL): **Varied**
 NIST Test ID#: **6UTB**
 Solvent: **Methanol**
 Lot#: **DU230-USQ10**

Volume(s) shown below were combined and diluted to (mL): **20.0** **0.002** **Flask Uncertainty**

RED = Surrogate; BLUE = Internal

<i>Gabriel Holland</i>		061019
Formulated By:	Gabriel Holland	DATE
<i>Pedro L. Rentas</i>		061019
Reviewed By:	Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) µg/mL	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Benzene	64088	060719	0.500	10.00	0.042	4001.1	2002.0	18.7	71-43-2	1 ppm	orl-rat 4894mg/kg
2. Carbon tetrachloride	64088	060719	0.500	10.00	0.042	4000.8	2001.9	18.7	56-23-5	2 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
3. Chlorobenzene	64088	060719	0.500	10.00	0.042	4000.7	2001.8	18.7	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
4. Chloroform	64088	060719	0.500	10.00	0.042	4000.7	2001.8	18.7	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
5. 1,2-Dibromoethane	64088	060719	0.500	10.00	0.042	4000.8	2001.8	18.7	106-93-4	20 ppm (8H)	orl-rat 1068mg/kg
6. 1,2-Dichlorobenzene	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.7	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
7. 1,3-Dichlorobenzene	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.8	541-73-1	N/A	ipr-mus 1062mg/kg
8. 1,4-Dichlorobenzene	64088	060719	0.500	10.00	0.042	4000.6	2001.8	18.7	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
9. 1,1-Dichloroethane	64088	060719	0.500	10.00	0.042	4001.0	2002.0	18.7	75-34-3	100 ppm	orl-rat 725mg/kg
10. 1,2-Dichloroethane	64088	060719	0.500	10.00	0.042	4001.0	2002.0	18.7	107-06-2	50 ppm (8H)	orl-rat 670mg/kg
11. 1,1-Dichloroethene	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.7	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
12. cis-1,2-Dichloroethene	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.7	156-59-2	N/A	N/A
13. trans-1,2-Dichloroethene	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.8	156-60-5	N/A	orl-rat 1235mg/kg
14. 1,4-Dioxane	64088	060719	0.500	10.00	0.042	4000.3	2001.6	18.7	123-91-1	25 ppm (90mg/m3/8H)(skin)	orl-mus 5700mg/kg
15. Ethyl benzene	64088	060719	0.500	10.00	0.042	4001.4	2002.2	18.7	100-41-4	100 ppm (435mg/m3/8H)	orl-rat >2000mg/kg
16. Isopropylbenzene	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.7	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
17. Methyl tert-butyl ether (MTBE)	64088	060719	0.500	10.00	0.042	4000.4	2001.7	18.7	1634-04-4	N/A	orl-rat 4g/kg
18. 2-Methylnaphthalene	64088	060719	0.500	10.00	0.042	4000.4	2001.7	18.8	91-57-6	N/A	orl-rat 1830mg/kg
19. Naphthalene	64088	060719	0.500	10.00	0.042	4000.3	2001.6	18.7	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
20. 1,1,1,2-Tetrachloroethane	64088	060719	0.500	10.00	0.042	4000.5	2001.7	18.7	630-20-6	N/A	orl-rat 670mg/kg
21. 1,1,2,2-Tetrachloroethane	64088	060719	0.500	10.00	0.042	4000.5	2001.7	18.7	79-34-5	5 ppm (35mg/m3/8H)(skin)	orl-rat 800mg/kg
22. Tetrachloroethene	64088	060719	0.500	10.00	0.042	4000.8	2001.8	18.7	127-18-4	25 ppm (170mg/m3/8H)(final)	orl-rat 2829mg/kg
23. Toluene	64088	060719	0.500	10.00	0.042	4001.4	2002.2	18.7	108-88-3	200 ppm	orl-rat 5000mg/kg
24. 1,2,3-Trichlorobenzene	64088	060719	0.500	10.00	0.042	4000.4	2001.7	18.7	87-61-6	N/A	ipr-mus 1390mg/kg
25. 1,2,4-Trichlorobenzene	64088	060719	0.500	10.00	0.042	4000.7	2001.8	18.7	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
26. 1,1,1-Trichloroethane	64088	060719	0.500	10.00	0.042	4000.8	2001.8	18.7	71-55-6	350 ppm (1900mg/m3/8H)	orl-rat 10300mg/kg
27. 1,1,2-Trichloroethane	64088	060719	0.500	10.00	0.042	4001.2	2002.0	18.8	79-00-5	10 ppm (45mg/m3/8H)(skin)	orl-rat 836mg/kg
28. Trichloroethene	64088	060719	0.500	10.00	0.042	4000.8	2001.9	18.7	79-01-6	50 ppm (270mg/m3/8H)	orl-mus 2402mg/kg
29. 1,2,3-Trichloropropane	64088	060719	0.500	10.00	0.042	4000.3	2001.6	18.7	96-18-4	10 ppm (60mg/m3/8H)	orl-rat 149.6mg/kg
30. 1,1,2-Trichlorotrifluoroethane	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.7	76-13-1	1000 ppm (7600mg/m3/8H)	orl-rat 43g/kg
31. 1,2,4-Trimethylbenzene	64088	060719	0.500	10.00	0.042	4000.3	2001.6	18.8	95-63-6	N/A	orl-rat 5g/kg
32. 1,3,5-Trimethylbenzene	64088	060719	0.500	10.00	0.042	4000.3	2001.6	18.8	108-67-8	N/A	orl-rat 5000mg/kg
33. o-Xylene	64088	060719	0.500	10.00	0.042	4000.6	2001.8	18.7	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
34. m-Xylene	64088	060719	0.500	10.00	0.042	2000.4	1000.9	9.4	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
35. p-Xylene	64088	060719	0.500	10.00	0.042	2001.2	1001.3	9.4	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
36. Vinyl chloride	33591	052119	0.100	2.00	0.017	20030.1	2004.5	35.0	75-01-4	N/A	N/A
37. p-Bromofluorobenzene	64088	060719	0.500	10.00	0.042	4001.3	2002.1	18.7	460-00-4	N/A	orl-rat 2700mg/kg
38. 1,2-Dichloroethane-d4	64088	060719	0.500	10.00	0.042	4000.7	2001.8	18.7	17060-07-0	N/A	orl-mus 825mg/kg
39. Toluene-d8	64088	060719	0.500	10.00	0.042	4000.6	2001.7	18.7	2037-26-5	200 ppm	orl-rat 5000mg/kg
40. Chlorobenzene-d5	22013	022818	0.100	2.00	0.017	2000.6	200.2	3.5	3114-55-4	N/A	orl-rat 1110mg/kg
41. 1,4-Dichlorobenzene-d4	22013	022818	0.100	2.00	0.017	2000.7	200.2	3.5	3855-82-1	N/A	orl-rat 500mg/kg
42. Fluorobenzene	22013	022818	0.100	2.00	0.017	2001.0	200.2	3.5	462-06-6	N/A	orl-rat 4399mg/kg

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
 * All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
 * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021820

Lab Standard No.: 2000089



CERTIFIED WEIGHT REPORT

Part Number: **99080**
Lot Number: **021820**
Description: **8280 VOC Primary Calibration Level 0.5**
Expiration Date: **021823** Solvent(s): **Methanol** Lot# **DV182-USQ12**
Recommended Storage: **Freezer (0 °C)**
Nominal Concentration (µg/mL): **5**
NIST Test ID#: **GUTB** SE-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): **200.0** 0.058 Flask Uncertainty

<i>Gabriel Holland</i>		021820
Formulated By:	Gabriel Holland	DATE
<i>Pedro L. Rentes</i>		021820
Reviewed By:	Pedro L. Rentes	DATE

Compound	Part Number	Lot Number	DL Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Bromodichloromethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	75-27-4	N/A	or-rat 910mg/kg
2. Dibromochloromethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	124-48-1	N/A	or-rat 848mg/kg
3. cis-1,2-Dichloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	156-69-2	N/A	N/A
4. trans-1,2-Dichloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	169-90-5	N/A	or-rat 1235mg/kg
5. Methylene chloride	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	75-09-2	500 ppm	or-rat 820mg/kg
6. 1,1-Dichloroethane	93338	043019	0.0025	0.50	0.004	2000.3	5.0	1.2	75-35-4	1 ppm (4mg/m3/8H)	or-rat 200mg/kg
7. Bromochloromethane	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	74-97-5	200 ppm (1050mg/m3/8H)	or-rat 5000mg/kg
8. Bromoform	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	75-25-2	0.5 ppm (5mg/m3) (skin)	or-rat 833mg/kg
9. Carbon tetrachloride	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	58-29-5	2 ppm (12.8mg/m3/8H)	or-rat 2350mg/kg
10. Chloroform	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	67-66-3	50 ppm (240mg/m3) (CL)	or-rat 908mg/kg
11. Dibromomethane	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	74-85-3	N/A	or-rat 108mg/kg
12. 1,1-Dichloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	75-34-9	100 ppm	or-rat 725mg/kg
13. 2,2-Dichloropropane	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	594-20-7	N/A	N/A
14. Tetrachloroethane	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	127-18-4	25 ppm (170mg/m3/8H)(skin)	or-rat 2820mg/kg
15. 1,1,1-Trichloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	71-55-6	350 ppm (1900mg/m3/8H)	or-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	96-12-6	0.001 ppm	or-rat 1700mg/kg
17. 1,2-Dibromoethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	106-93-4	20 ppm (8H)	or-rat 108mg/kg
18. 1,2-Dichloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	107-06-2	50 ppm (8H)	or-rat 670mg/kg
19. 1,2-Dichloropropane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	78-57-5	75 ppm (350mg/m3/8H)	or-rat 1947mg/kg
20. 1,3-Dichloropropane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	142-28-9	N/A	unr-mus 3600mg/kg
21. 1,1-Dichloropropane	93338	043019	0.0025	0.50	0.004	1981.8	5.0	1.2	593-58-6	N/A	N/A
22. cis-1,3-Dichloropropane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	87-68-3	0.02 ppm (0.24mg/m3/8H)	or-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	630-20-6	N/A	or-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	79-34-5	5 ppm (25mg/m3/8H)(skin)	or-rat 600mg/kg
27. 1,1,2-Trichloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	79-00-5	10 ppm (45mg/m3/8H)(skin)	or-rat 636mg/kg
28. Trichloroethane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	79-01-6	50 ppm (270mg/m3/8H)	or-rat 2402mg/kg
29. 1,2,3-Trichloropropane	93338	043019	0.0025	0.50	0.004	1999.8	5.0	1.2	96-18-4	10 ppm (50mg/m3/8H)	or-rat 149.8mg/kg
30. Benzene	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	71-43-2	1 ppm	or-rat 4394mg/kg
31. Bromobenzene	93338	043019	0.0025	0.50	0.004	2000.2	5.0	1.2	108-98-1	N/A	or-rat 2698mg/kg
32. n-Butyl benzene	93338	043019	0.0025	0.50	0.004	2000.9	5.0	1.2	104-61-8	N/A	N/A
33. Ethyl benzene	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	100-41-4	100 ppm (435mg/m3/8H)	or-rat >2000mg/kg
34. p-Isopropyl toluene	93338	043019	0.0025	0.50	0.004	2000.3	5.0	1.2	99-87-9	N/A	or-rat 4750mg/kg
35. Naphthalene	93338	043019	0.0025	0.50	0.004	2000.1	5.0	1.2	91-20-3	10 ppm (50mg/m3/8H)	or-rat 4500mg/kg
36. Toluene	93338	043019	0.0025	0.50	0.004	2000.1	5.0	1.2	108-88-3	200 ppm	or-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93338	043019	0.0025	0.50	0.004	2001.1	5.0	1.2	87-81-6	N/A	ipr-mus 1590mg/kg
38. 1,2,4-Trichlorobenzene	93338	043019	0.0025	0.50	0.004	2000.7	5.0	1.2	120-82-1	5 ppm (CL) (40mg/m3)	or-rat 758mg/kg
39. 1,2,4-Trimethylbenzene	93338	043019	0.0025	0.50	0.004	2000.8	5.0	1.2	95-63-9	N/A	or-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93338	043019	0.0025	0.50	0.004	2000.4	5.0	1.2	108-67-8	N/A	N/A
41. Styrene	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	100-42-6	100 ppm	or-rat 5000mg/kg
42. tert-Butyl benzene	93338	043019	0.0025	0.50	0.004	2000.2	5.0	1.2	98-06-6	N/A	N/A
43. sec-Butyl benzene	93338	043019	0.0025	0.50	0.004	2000.4	5.0	1.2	135-98-8	N/A	or-rat 2240mg/kg
44. Chlorobenzene	93338	043019	0.0025	0.50	0.004	2000.8	5.0	1.2	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2280mg/kg
45. 2-Chlorotoluene	93338	043019	0.0025	0.50	0.004	2000.1	5.0	1.2	95-48-9	50 ppm (250mg/m3/8H)	or-rat 3900mg/kg
46. 4-Chlorotoluene	93338	043019	0.0025	0.50	0.004	2000.3	5.0	1.2	108-43-4	N/A	or-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93338	043019	0.0025	0.50	0.004	2000.8	5.0	1.2	95-50-1	50 ppm (300mg/m3) (CL)	or-rat 600mg/kg
48. 1,3-Dichlorobenzene	93338	043019	0.0025	0.50	0.004	2000.5	5.0	1.2	541-73-1	N/A	ipr-mus 1062mg/kg
49. 1,4-Dichlorobenzene	93338	043019	0.0025	0.50	0.004	2000.3	5.0	1.2	108-46-7	75 ppm (450mg/m3/8H)	or-rat 500mg/kg
50. Isopropylbenzene	93338	043019	0.0025	0.50	0.004	2000.8	5.0	1.2	98-82-8	50 ppm (245mg/m3/8H)	or-rat 1400mg/kg
51. n-Propylbenzene	93338	043019	0.0025	0.50	0.004	2000.4	5.0	1.2	103-65-1	N/A	or-rat 6040mg/kg
52. o-Xylene	93338	043019	0.0025	0.50	0.004	2000.0	5.0	1.2	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1384mg/kg
53. m-Xylene	93338	043019	0.0025	0.50	0.004	1000.0	2.5	0.6	108-38-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
54. p-Xylene	93338	043019	0.0025	0.50	0.004	999.9	2.5	0.6	108-42-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
55. Carbon disulfide	97233	021720	0.0025	0.50	0.004	2000.8	5.0	1.2	75-15-0	4 ppm (12mg/m3) (skin)	or-rat 1200mg/kg
56. 1,4-Dioxane	97233	021720	0.0025	0.50	0.004	2000.8	5.0	1.2	123-91-1	25 ppm (30mg/m3/8H)(skin)	ipr-mus 5700mg/kg
57. Hexachloroethane	97233	021720	0.0025	0.50	0.004	2000.7	5.0	1.2	67-72-1	1 ppm (10mg/m3/8H)(skin)	or-pg 4970mg/kg
58. Methyl tert-butyl ether (MTBE)	97233	021720	0.0025	0.50	0.004	2000.4	5.0	1.2	1634-04-4	N/A	or-rat 4g/kg
59. 2-Methylnaphthalene	97233	021720	0.0025	0.50	0.004	2000.4	5.0	1.2	91-57-8	N/A	or-rat 1630mg/kg
60. 1,1,2-Trichlorotrifluoroethane	97233	021720	0.0025	0.50	0.004	2000.9	5.0	1.2	76-13-1	1000 ppm (7600mg/m3/8H)	or-rat 43g/kg
61. n-Pentane	97235	120114	0.0025	0.50	0.004	2002.6	5.0	1.2	109-66-0	600 ppm (1800mg/m3/8H)	lvm-mus 446mg/kg
62. n-Hexane	97235	120114	0.0025	0.50	0.004	2002.6	5.0	1.2	110-54-3	50 ppm (160mg/m3/8H)	or-rat 28710mg/kg
63. n-Heptane	97235	120114	0.0025	0.50	0.004	2003.1	5.0	1.2	142-82-6	400 ppm (1600mg/m3/8H)	lvm-mus 222mg/kg
64. n-Octane	97235	120114	0.0025	0.50	0.004	2001.8	5.0	1.2	111-85-9	300 ppm (1450mg/m3/8H)	N/A
65. n-Nonane	97235	120114	0.0025	0.50	0.004	2000.7	5.0	1.2	111-84-2	200 ppm (1050mg/m3/8H)	lvm-mus 218mg/kg
66. n-Decane	97235	120114	0.0025	0.50	0.004	2001.8	5.0	1.2	124-18-6	N/A	N/A
67. n-Undecane	97235	120114	0.0025	0.50	0.004	2003.8	5.0	1.2	1120-21-4	N/A	lvm-mus 517mg/kg
68. n-Dodecane	97235	120114	0.0025	0.50	0.004	2000.8	5.0	1.2	112-40-3	N/A	N/A
69. n-Tridecane	97235	120114	0.0025	0.50	0.004	2000.2	5.0	1.2	829-50-5	N/A	lvm-mus 1181mg/kg
70. n-Tetradecane	97235	120114	0.0025	0.50	0.004	2001.5	5.0	1.2	829-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.0025	0.50	0.004	2001.3	5.0	1.2	829-82-9	N/A	lvm-mus 3494mg/kg
72. Bromoethane	30058	123019	0.0025	0.50	0.004	2004.8	5.0	1.2	74-89-9	5 ppm (20mg/m3/8H) (skin)	or-rat 214mg/kg
73. Chloroethane	30058	123019	0.0025	0.50	0.004	2002.5	5.0	1.2	75-00-3	1000 ppm (2000mg/m3/8H)	N/A
74. Chloromethane	30058	123019	0.0025	0.50	0.004	2003.0	5.0	1.2	74-87-3	100 ppm	or-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	123019	0.0025	0.50	0.004	2034.9	5.1	1.2	75-71-8	1000 ppm (4650mg/m3/8H)	N/A
76. Trichlorofluoromethane	30058	123019	0.0025	0.50	0.004	2009.8	5.0	1.2	75-69-4	1000 ppm (4600mg/m3/8H)	ipr-mus 1749mg/kg
77. Vinyl chloride	30058	123019	0.0025	0.50	0.004	2001.2	5.0	1.2	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone	97259	112818	0.0025	0.50	0.004	2000.1	5.0	1.2	109-10-1	100 ppm (410mg/m3/8H)	or-rat 2060mg/kg
79. p-Bromofluorobenzene	20002	020419	0.0025	0.50	0.004	2000.7	5.0	1.2	480-00-4	N/A	or-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	020419	0.0025	0.50	0.004	2000.8	5.0	1.2	17060-07-0	N/A	or-rat 622mg/kg
81. Toluene-d8	20002	020419	0.0025	0.50	0.004	2000.4	5.0	1.2	2037-28-5	200 ppm	or-rat 5000mg/kg
82. Chlorobenzene-d5	22013	021720	0.10	20.00	0.003	2001.8	200.2	1.4	3114-85-4	N/A	or-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	20.00	0.003	2002.0	200.2	1.4	3855-82-1	N/A	or-rat 900mg/kg
84. Fluorobenzene	22013	021720	0.10	20.00	0.003	2002.1	200.2	1.4	462-09-6		

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021820

Lab Standard No.: 2000090



CERTIFIED WEIGHT REPORT

Part Number: **97253**
Lot Number: **021820**
Description: **8280 VOC Primary Calibration Level 1**
84 components
Expiration Date: **021823**
Recommended Storage: **Freezer (0 °C)**
Nominal Concentration (µg/mL): **10**
NIST Test ID#: **GUTB**
Volume(s) shown below were combined and diluted to (mL): **100.0**

Formulated By: *Gabriel Holland* **021820**
DATE
Reviewed By: *Pedro L. Rentas* **021820**
DATE

Compound	Part Number	Lot Number	DL Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Bromodichloromethane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	75-27-4	N/A	ori-rat 916mg/kg
2. Dibromochloromethane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethene	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethene	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	75-09-2	500 ppm	ori-rat 820mg/kg
6. 1,1-Dichloroethane	93538	043019	0.005	0.50	0.004	2000.3	10.0	0.5	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	74-97-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	75-25-2	0.5 ppm (6mg/m3) (skin)	ori-rat 933mg/kg
9. Carbon tetrachloride	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	67-66-3	50 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	74-95-3	N/A	ori-rat 108mg/kg
12. 1,1-Dichloroethane	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	594-20-7	N/A	N/A
14. Tetrachloroethene	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	127-18-4	25 ppm (170mg/m3/8H) (fina)	ori-rat 2629mg/kg
15. 1,1,1-Trichloroethane	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	96-18-2	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	78-57-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	142-28-9	N/A	uni-mus 3600mg/kg
21. 1,1-Dichloropropane	93538	043019	0.005	0.50	0.004	1981.8	9.9	0.5	583-58-6	N/A	N/A
22. cis-1,3-Dichloropropane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	87-68-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	043019	0.005	0.50	0.004	1999.9	10.0	0.5	79-34-5	5 ppm (35mg/m3/8H) (skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	79-00-5	10 ppm (45mg/m3/8H) (skin)	ori-rat 836mg/kg
28. Trichloroethene	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	043019	0.005	0.50	0.004	1999.8	10.0	0.5	96-18-4	10 ppm (80mg/m3/8H)	ori-rat 149.6mg/kg
30. Benzene	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	043019	0.005	0.50	0.004	2000.2	10.0	0.5	108-86-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	043019	0.005	0.50	0.004	2000.9	10.0	0.5	104-51-8	N/A	N/A
33. Ethyl benzene	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	043019	0.005	0.50	0.004	2000.3	10.0	0.5	99-87-6	N/A	ori-rat 4730mg/kg
35. Naphthalene	93538	043019	0.005	0.50	0.004	2000.1	10.0	0.5	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	043019	0.005	0.50	0.004	2000.1	10.0	0.5	108-88-3	200 ppm	ori-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93538	043019	0.005	0.50	0.004	2001.1	10.0	0.5	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	043019	0.005	0.50	0.004	2000.7	10.0	0.5	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
39. 1,2,4-Trimethylbenzene	93538	043019	0.005	0.50	0.004	2000.6	10.0	0.5	95-63-6	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	043019	0.005	0.50	0.004	2000.4	10.0	0.5	108-67-8	N/A	N/A
41. Styrene	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	043019	0.005	0.50	0.004	2000.2	10.0	0.5	98-06-6	N/A	N/A
43. sec-Butyl benzene	93538	043019	0.005	0.50	0.004	2000.4	10.0	0.5	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	043019	0.005	0.50	0.004	2000.6	10.0	0.5	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg
45. 2-Chlorotoluene	93538	043019	0.005	0.50	0.004	2000.1	10.0	0.5	95-49-8	50 ppm (250mg/m3/8H)	ori-rat 3900mg/kg
46. 4-Chlorotoluene	93538	043019	0.005	0.50	0.004	2000.3	10.0	0.5	106-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	043019	0.005	0.50	0.004	2000.6	10.0	0.5	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	043019	0.005	0.50	0.004	2000.5	10.0	0.5	541-73-1	N/A	ipr-mus 1062mg/kg
49. 1,4-Dichlorobenzene	93538	043019	0.005	0.50	0.004	2000.3	10.0	0.5	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	043019	0.005	0.50	0.004	2000.6	10.0	0.5	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	043019	0.005	0.50	0.004	2000.4	10.0	0.5	103-65-1	N/A	ori-rat 6040mg/kg
52. o-Xylene	93538	043019	0.005	0.50	0.004	2000.0	10.0	0.5	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
53. m-Xylene	93538	043019	0.005	0.50	0.004	1000.0	5.0	0.3	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	043019	0.005	0.50	0.004	999.9	5.0	0.3	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulphide	97233	021720	0.005	0.50	0.004	2000.6	10.0	0.5	75-15-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97233	021720	0.005	0.50	0.004	2000.8	10.0	0.5	123-91-1	25 ppm (90mg/m3/8H) (skin)	ori-mus 5700mg/kg
57. Hexachloroethane	97233	021720	0.005	0.50	0.004	2000.7	10.0	0.5	67-72-1	1 ppm (10mg/m3/8H) (skin)	ipr-ggq 4970mg/kg
58. Methyl tert-butyl ether (MTBE)	97233	021720	0.005	0.50	0.004	2000.7	10.0	0.5	1634-04-4	N/A	ori-rat 4g/kg
59. 2-Methylnaphthalene	97233	021720	0.005	0.50	0.004	2000.4	10.0	0.5	91-57-6	N/A	ori-rat 1630mg/kg
60. 1,1,2-Trichlorotrifluoroethane	97233	021720	0.005	0.50	0.004	2000.9	10.0	0.5	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
61. n-Pentane	97235	120114	0.005	0.50	0.004	2002.6	10.0	0.5	109-66-0	600 ppm (1800mg/m3/8H)	ivn-mus 446mg/kg
62. n-Hexane	97235	120114	0.005	0.50	0.004	2002.6	10.0	0.5	110-54-3	50 ppm (180mg/m3/8H)	ori-rat 28710mg/kg
63. n-Heptane	97235	120114	0.005	0.50	0.004	2003.1	10.0	0.5	142-82-5	400 ppm (1600mg/m3/8H)	ivn-mus 222mg/kg
64. n-Octane	97235	120114	0.005	0.50	0.004	2001.6	10.0	0.5	111-65-9	300 ppm (1450mg/m3/8H)	N/A
65. n-Nonane	97235	120114	0.005	0.50	0.004	2000.7	10.0	0.5	111-84-2	200 ppm (1050mg/m3/8H)	ivn-mus 218mg/kg
66. n-Decane	97235	120114	0.005	0.50	0.004	2001.8	10.0	0.5	124-18-5	N/A	N/A
67. n-Undecane	97235	120114	0.005	0.50	0.004	2003.8	10.0	0.5	1120-21-4	N/A	ivn-mus 517mg/kg
68. n-Dodecane	97235	120114	0.005	0.50	0.004	2000.6	10.0	0.5	112-40-3	N/A	N/A
69. n-Tridecane	97235	120114	0.005	0.50	0.004	2000.2	10.0	0.5	629-50-5	N/A	ivn-mus 1161mg/kg
70. n-Tetradecane	97235	120114	0.005	0.50	0.004	2001.5	10.0	0.5	629-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.005	0.50	0.004	2001.3	10.0	0.5	629-62-9	N/A	ivn-mus 3484mg/kg
72. Bromomethane	30058	123019	0.005	0.50	0.004	2004.8	10.0	0.5	74-83-9	5 ppm (20mg/m3/8H) (skin)	ori-rat 214mg/kg
73. Chloroethane	30058	123019	0.005	0.50	0.004	2002.5	10.0	0.5	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
74. Chloromethane	30058	123019	0.005	0.50	0.004	2003.0	10.0	0.5	74-87-3	100 ppm	ori-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	123019	0.005	0.50	0.004	2034.9	10.2	0.5	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
76. Trichlorofluoromethane	30058	123019	0.005	0.50	0.004	2009.6	10.0	0.5	75-68-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg
77. Vinyl chloride	30058	123019	0.005	0.50	0.004	2001.2	10.0	0.5	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone	97259	112816	0.005	0.50	0.004	2000.1	10.0	0.5	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg
79. p-Bromofluorobenzene	20002	020419	0.005	0.50	0.004	2000.7	10.0	0.5	460-00-4	N/A	ori-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	020419	0.005	0.50	0.004	2000.6	10.0	0.5	17080-07-0	N/A	ori-mus 625mg/kg
81. Toluene-d8	20002	020419	0.005	0.50	0.004	2000.4	10.0	0.5	2037-28-5	200 ppm	ori-rat 5000mg/kg
82. Chlorobenzene-d5	22013	021720	0.10	10.00	0.042	2001.8	200.1	1.9	3114-55-4	N/A	ori-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	10.00	0.042	2002.0	200.2	1.9	3855-82-1	N/A	ori-rat 500mg/kg
84. Fluorobenzene	22013	021720	0.10	10.00	0.042	2002.1	200.2	1.9	462-06-6	N/A	ori-rat 4399mg/kg

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards, after opening

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021823

Lab Standard No.: 2000091



CERTIFIED WEIGHT REPORT

Part Number: 97254
Lot Number: 021820
Description: 8280 VOC Primary Calibration Level 2
84 components
Expiration Date: 021823
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 20
NIST Test ID#: 6UTB
Volume(s) shown below were combined and diluted to (mL): 100.0

Solvent(s): Methanol
Lot# DV182-USQ12

5E-05 Balance Uncertainty
0.012 Flask Uncertainty

Gabriel Helland 021820
Formulated By: Gabriel Helland DATE
Pedro L. Rentas 021820
Reviewed By: Pedro L. Rentas DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LDSO
1. Bromodichloromethane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	75-27-4	N/A	ori-rat 918mg/kg
2. Dibromochloromethane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethane	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	75-09-2	500 ppm	ori-rat 820mg/kg
6. 1,1-Dichloroethane	93538	043019	0.010	1.00	0.004	2000.3	20.0	0.5	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	74-87-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	75-25-2	0.5 ppm (5mg/m3) (skin)	ori-rat 933mg/kg
9. Carbon tetrachloride	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	67-66-3	80 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	74-95-3	N/A	ori-rat 108mg/kg
12. 1,1-Dichloroethane	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	594-20-7	N/A	N/A
14. Tetrachloroethane	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	127-16-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2629mg/kg
15. 1,1,1-Trichloroethane	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	98-12-8	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	78-87-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	142-28-9	N/A	unr-mus 3600mg/kg
21. 1,1-Dichloropropane	93538	043019	0.010	1.00	0.004	1981.8	19.8	0.5	563-56-6	N/A	N/A
22. cis-1,3-Dichloropropane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	87-68-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	043019	0.010	1.00	0.004	1999.9	20.0	0.5	79-34-5	5 ppm (35mg/m3/8H)(skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 836mg/kg
28. Trichloroethane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	043019	0.010	1.00	0.004	1999.8	20.0	0.5	98-18-4	10 ppm (80mg/m3/8H)	ori-rat 148.6mg/kg
30. Benzene	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	043019	0.010	1.00	0.004	2000.2	20.0	0.5	108-86-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	043019	0.010	1.00	0.004	2000.9	20.0	0.5	104-51-8	N/A	N/A
33. Ethyl benzene	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	043019	0.010	1.00	0.004	2000.3	20.0	0.5	99-87-6	N/A	ori-rat 4750mg/kg
35. Naphthalene	93538	043019	0.010	1.00	0.004	2000.1	20.0	0.5	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	043019	0.010	1.00	0.004	2000.1	20.0	0.5	108-86-3	200 ppm	ori-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93538	043019	0.010	1.00	0.004	2001.1	20.0	0.5	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	043019	0.010	1.00	0.004	2000.7	20.0	0.5	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
39. 1,2,4-Trimethylbenzene	93538	043019	0.010	1.00	0.004	2000.6	20.0	0.5	95-63-8	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	043019	0.010	1.00	0.004	2000.4	20.0	0.5	108-67-8	N/A	N/A
41. Styrene	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	043019	0.010	1.00	0.004	2000.2	20.0	0.5	98-06-6	N/A	N/A
43. sec-Butyl benzene	93538	043019	0.010	1.00	0.004	2000.4	20.0	0.5	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	043019	0.010	1.00	0.004	2000.6	20.0	0.5	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2280mg/kg
45. 2-Chlorotoluene	93538	043019	0.010	1.00	0.004	2000.1	20.0	0.5	95-49-8	80 ppm (250mg/m3/8H)	ori-rat 3600mg/kg
46. 4-Chlorotoluene	93538	043019	0.010	1.00	0.004	2000.3	20.0	0.5	108-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	043019	0.010	1.00	0.004	2000.6	20.0	0.5	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	043019	0.010	1.00	0.004	2000.5	20.0	0.5	541-73-1	N/A	ipr-mus 1082mg/kg
49. 1,4-Dichlorobenzene	93538	043019	0.010	1.00	0.004	2000.3	20.0	0.5	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	043019	0.010	1.00	0.004	2000.6	20.0	0.5	98-82-8	80 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	043019	0.010	1.00	0.004	2000.4	20.0	0.5	103-65-1	N/A	ori-rat 6040mg/kg
52. o-Xylene	93538	043019	0.010	1.00	0.004	2000.0	20.0	0.5	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
53. m-Xylene	93538	043019	0.010	1.00	0.004	1000.0	10.0	0.3	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	043019	0.010	1.00	0.004	999.9	10.0	0.3	108-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulfide	97233	021720	0.010	1.00	0.004	2000.6	20.0	0.5	75-15-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97233	021720	0.010	1.00	0.004	2000.8	20.0	0.5	123-91-1	25 ppm (80mg/m3/8H)(skin)	ori-mus 5700mg/kg
57. Hexachloroethane	97233	021720	0.010	1.00	0.004	2000.7	20.0	0.5	67-72-1	1 ppm (10mg/m3/8H)(skin)	ori-gpp 4970mg/kg
58. Methyl tert-butyl ether (MTBE)	97233	021720	0.010	1.00	0.004	2000.7	20.0	0.5	1634-04-4	N/A	ori-rat 4g/kg
59. 2-Methylnaphthalene	97233	021720	0.010	1.00	0.004	2000.4	20.0	0.5	91-57-8	N/A	ori-rat 1630mg/kg
60. 1,1,2-Trichlorotrifluoroethane	97233	021720	0.010	1.00	0.004	2000.9	20.0	0.5	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
61. n-Pentane	97235	120114	0.010	1.00	0.004	2002.6	20.0	0.5	109-66-0	600 ppm (1800mg/m3/8H)	ivn-mus 446mg/kg
62. n-Hexane	97235	120114	0.010	1.00	0.004	2002.6	20.0	0.5	110-54-3	50 ppm (180mg/m3/8H)	ori-rat 28710mg/kg
63. n-Heptane	97235	120114	0.010	1.00	0.004	2003.1	20.0	0.5	142-82-5	400 ppm (1600mg/m3/8H)	ivn-mus 222mg/kg
64. n-Octane	97235	120114	0.010	1.00	0.004	2001.6	20.0	0.5	111-65-9	300 ppm (1450mg/m3/8H)	N/A
65. n-Nonane	97235	120114	0.010	1.00	0.004	2000.7	20.0	0.5	111-84-2	200 ppm (1050mg/m3/8H)	ivn-mus 218mg/kg
66. n-Decane	97235	120114	0.010	1.00	0.004	2001.8	20.0	0.5	124-18-5	N/A	N/A
67. n-Undecane	97235	120114	0.010	1.00	0.004	2003.6	20.0	0.5	1120-21-4	N/A	ivn-mus 517mg/kg
68. n-Dodecane	97235	120114	0.010	1.00	0.004	2000.6	20.0	0.5	112-40-3	N/A	N/A
69. n-Tridecane	97235	120114	0.010	1.00	0.004	2000.2	20.0	0.5	629-50-5	N/A	ivn-mus 1161mg/kg
70. n-Tetradecane	97235	120114	0.010	1.00	0.004	2001.5	20.0	0.5	629-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.010	1.00	0.004	2001.3	20.0	0.5	629-62-9	N/A	ivn-mus 3494mg/kg
72. Bromomethane	30058	123019	0.010	1.00	0.004	2004.8	20.0	0.5	74-83-9	5 ppm (20mg/m3/8H) (skin)	ori-rat 214mg/kg
73. Chloroethane	30058	123019	0.010	1.00	0.004	2002.5	20.0	0.5	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
74. Chloromethane	30058	123019	0.010	1.00	0.004	2003.0	20.0	0.5	74-87-3	100 ppm	ori-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	123019	0.010	1.00	0.004	2034.9	20.3	0.5	75-71-8	1000 ppm (4850mg/m3/8H)	N/A
76. Trichlorofluoromethane	30058	123019	0.010	1.00	0.004	2009.6	20.1	0.5	75-68-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg
77. Vinyl chloride	30058	123019	0.010	1.00	0.004	2001.2	20.0	0.5	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone	97259	112818	0.010	1.00	0.004	2000.1	20.0	0.5	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg
79. p-Bromofluorobenzene	20002	020419	0.010	1.00	0.004	2000.7	20.0	0.5	460-00-4	N/A	ori-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	020419	0.010	1.00	0.004	2000.6	20.0	0.5	17080-07-0	N/A	ori-mus 625mg/kg
81. Toluene-d8	20002	020419	0.010	1.00	0.004	2000.4	20.0	0.5	2037-28-5	200 ppm	ori-rat 5000mg/kg
82. Chlorobenzene-d5	22013	021720	0.10	10.00	0.042	2001.6	200.1	1.9	3114-55-4	N/A	ori-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	10.00	0.042	2002.0	200.2	1.9	3855-82-1	N/A	ori-rat 500mg/kg
84. Fluorobenzene	22013	021720	0.10	10.00	0.042	2002.1	200.2	1.9	462-06-6	N/A	ori-rat 4399mg/kg

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021820

Lab Standard No.: 2000092



CERTIFIED WEIGHT REPORT

Part Number: 97255
Lot Number: 021820
Description: 8280 VOC Primary Calibration Level 3
84 components
Expiration Date: 021823
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 50
NIST Test ID#: 6UTB
Volume(s) shown below were combined and diluted to (mL): 100.0

Solvent(s): Methanol
Lot#: DV182-USQ12
Balance Uncertainty: 5E-05
Flask Uncertainty: 0.012

Gabriel Helland 021820
Formulated By: Gabriel Helland DATE
Pedro L. Rentas 021820
Reviewed By: Pedro L. Rentas DATE

SDS Information

(Solvent Safety Info. On Attached pg.)

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LDSO
1. Bromodichloromethane	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	75-27-4	N/A	ori-rat 916mg/kg
2. Dibromochloromethane	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethene	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethene	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	75-09-2	500 ppm	ori-rat 820mg/kg
6. 1,1-Dichloroethane	93538	043019	0.025	2.50	0.017	2000.3	50.0	0.9	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	74-97-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	75-25-2	0.5 ppm (5mg/m3) (skin)	ori-rat 933mg/kg
9. Carbon tetrachloride	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	67-66-6	50 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	74-95-3	N/A	ori-rat 108mg/kg
12. 1,1-Dichloroethane	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	594-20-7	N/A	N/A
14. Tetrachloroethene	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	127-18-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2629mg/kg
15. 1,1,1-Trichloroethane	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	71-25-6	350 ppm (1800mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	98-12-8	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	106-63-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	78-87-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	142-28-9	N/A	unr-mus 3600mg/kg
21. 1,1-Dichloropropene	93538	043019	0.025	2.50	0.017	1981.8	48.5	1.0	563-58-6	N/A	N/A
22. cis-1,3-Dichloropropene	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropene	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	87-68-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	043019	0.025	2.50	0.017	1999.9	50.0	0.9	79-34-5	5 ppm (25mg/m3/8H)(skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 830mg/kg
28. Trichloroethene	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	043019	0.025	2.50	0.017	1999.8	50.0	0.9	96-18-4	10 ppm (90mg/m3/8H)	ori-rat 149.6mg/kg
30. Benzene	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	043019	0.025	2.50	0.017	2000.2	50.0	0.9	108-96-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	043019	0.025	2.50	0.017	2000.9	50.0	0.9	104-51-8	N/A	N/A
33. Ethyl benzene	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	043019	0.025	2.50	0.017	2000.3	50.0	0.9	99-87-6	N/A	ori-rat 4750mg/kg
35. Naphthalene	93538	043019	0.025	2.50	0.017	2000.1	50.0	0.9	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	043019	0.025	2.50	0.017	2000.1	50.0	0.9	108-88-3	200 ppm	ori-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93538	043019	0.025	2.50	0.017	2001.1	50.0	0.9	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	043019	0.025	2.50	0.017	2000.7	50.0	0.9	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
39. 1,2,4-Trimethylbenzene	93538	043019	0.025	2.50	0.017	2000.6	50.0	0.9	95-63-8	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	043019	0.025	2.50	0.017	2000.4	50.0	0.9	108-67-8	N/A	N/A
41. Styrene	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	043019	0.025	2.50	0.017	2000.2	50.0	0.9	98-06-6	N/A	N/A
43. sec-Butyl benzene	93538	043019	0.025	2.50	0.017	2000.4	50.0	0.9	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	043019	0.025	2.50	0.017	2000.6	50.0	0.9	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg
45. 2-Chlorotoluene	93538	043019	0.025	2.50	0.017	2000.1	50.0	0.9	95-49-8	80 ppm (250mg/m3/8H)	ori-rat 3000mg/kg
46. 4-Chlorotoluene	93538	043019	0.025	2.50	0.017	2000.3	50.0	0.9	106-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	043019	0.025	2.50	0.017	2000.6	50.0	0.9	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	043019	0.025	2.50	0.017	2000.5	50.0	0.9	541-73-1	N/A	ipr-mus 1082mg/kg
49. 1,4-Dichlorobenzene	93538	043019	0.025	2.50	0.017	2000.3	50.0	0.9	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	043019	0.025	2.50	0.017	2000.6	50.0	0.9	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	043019	0.025	2.50	0.017	2000.4	50.0	0.9	103-65-1	N/A	ori-rat 6040mg/kg
52. o-Xylene	93538	043019	0.025	2.50	0.017	2000.0	50.0	0.9	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
53. m-Xylene	93538	043019	0.025	2.50	0.017	1000.0	25.0	0.5	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	043019	0.025	2.50	0.017	999.9	25.0	0.5	108-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulfide	97233	021720	0.025	2.50	0.017	2000.6	50.0	0.9	75-15-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97233	021720	0.025	2.50	0.017	2000.8	50.0	0.9	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
57. Hexachloroethane	97233	021720	0.025	2.50	0.017	2000.7	50.0	0.9	67-72-1	1 ppm (10mg/m3/8H)(skin)	ori-gg 4970mg/kg
58. Methyl tert-butyl ether (MTBE)	97233	021720	0.025	2.50	0.017	2000.7	50.0	0.9	1634-04-4	N/A	ori-rat 4g/kg
59. 2-Methylnaphthalene	97233	021720	0.025	2.50	0.017	2000.4	50.0	0.9	91-57-8	N/A	ori-rat 1630mg/kg
60. 1,1,2-Trichlorotrifluoroethane	97233	021720	0.025	2.50	0.017	2000.9	50.0	0.9	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
61. n-Pentane	97235	120114	0.025	2.50	0.017	2002.6	50.1	0.9	109-66-0	600 ppm (1800mg/m3/8H)	ivm-mus 446mg/kg
62. n-Hexane	97235	120114	0.025	2.50	0.017	2002.6	50.1	0.9	110-54-3	50 ppm (180mg/m3/8H)	ori-rat 28710mg/kg
63. n-Heptane	97235	120114	0.025	2.50	0.017	2003.1	50.1	0.9	142-82-5	400 ppm (1600mg/m3/8H)	ivm-mus 222mg/kg
64. n-Octane	97235	120114	0.025	2.50	0.017	2001.6	50.0	0.9	111-65-9	300 ppm (1450mg/m3/8H)	N/A
65. n-Nonane	97235	120114	0.025	2.50	0.017	2000.7	50.0	0.9	111-84-2	200 ppm (1050mg/m3/8H)	ivm-mus 218mg/kg
66. n-Decane	97235	120114	0.025	2.50	0.017	2001.8	50.0	0.9	124-18-5	N/A	N/A
67. n-Undecane	97235	120114	0.025	2.50	0.017	2003.8	50.1	0.9	1120-21-4	N/A	ivm-mus 517mg/kg
68. n-Dodecane	97235	120114	0.025	2.50	0.017	2000.6	50.0	0.9	112-40-3	N/A	N/A
69. n-Tridecane	97235	120114	0.025	2.50	0.017	2000.2	50.0	0.8	629-50-5	N/A	ivm-mus 1161mg/kg
70. n-Tetradecane	97235	120114	0.025	2.50	0.017	2001.5	50.0	0.9	629-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.025	2.50	0.017	2001.3	50.0	0.9	629-62-9	N/A	ivm-mus 3494mg/kg
72. Bromomethane	30058	123019	0.025	2.50	0.017	2004.8	50.1	0.9	74-83-9	5 ppm (20mg/m3/8H) (skin)	ori-rat 214mg/kg
73. Chloroethane	30058	123019	0.025	2.50	0.017	2002.5	50.1	0.9	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
74. Chloromethane	30058	123019	0.025	2.50	0.017	2003.0	50.1	0.9	74-87-3	100 ppm	ori-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	123019	0.025	2.50	0.017	2034.9	50.9	0.9	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
76. Trichlorofluoromethane	30058	123019	0.025	2.50	0.017	2009.6	50.2	0.9	75-68-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg
77. Vinyl chloride	30058	123019	0.025	2.50	0.017	2001.2	50.0	0.8	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone	97259	112816	0.025	2.50	0.017	2000.1	50.0	0.9	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg
79. p-Bromofluorobenzene	20002	020419	0.025	2.50	0.017	2000.7	50.0	0.8	460-00-4	N/A	ori-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	020419	0.025	2.50	0.017	2000.6	50.0	0.8	17060-07-0	N/A	ori-mus 625mg/kg
81. Toluene-d8	20002	020419	0.025	2.50	0.017	2000.4	50.0	0.8	2037-26-5	200 ppm	ori-rat 5000mg/kg
82. Chlorobenzene-d5	22013	021720	0.10	10.00	0.042	2001.6	200.1	1.9	3114-55-4	N/A	ori-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	10.00	0.042	2002.0	200.2	1.9	3855-82-1	N/A	ori-rat 500mg/kg
84. Fluorobenzene	22013	021720	0.10	10.00	0.042	2002.1	200.2	1.9	462-06-6	N/A	ori-rat 4399mg/kg

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021820

Lab Standard No.: 2000093



CERTIFIED WEIGHT REPORT

Part Number: 97256
Lot Number: 021820
Description: 8280 VOC Primary Calibration Level 4
84 components
Expiration Date: 021823
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 100
NIST Test ID#: GUTB
Solvent(s): Methanol
Lot# DV182-USQ12
Volume(s) shown below were combined and diluted to (mL): 100.0
5E-05 Balance Uncertainty
0.012 Flask Uncertainty

<i>Gabriel Helland</i>		021820
Formulated By:	Gabriel Helland	DATE
<i>Pedro L. Rentas</i>		021820
Reviewed By:	Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	DI Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LDSO
1. Bromodichloromethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	75-27-4	N/A	ori-rat 918mg/kg
2. Dibromochloromethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethene	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	75-09-2	500 ppm	ori-rat 820mg/kg
6. 1,1-Dichloroethene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	74-97-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	75-25-2	0.5 ppm (5mg/m3) (skin)	ori-rat 933mg/kg
9. Carbon tetrachloride	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	67-66-3	60 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	74-95-3	N/A	ori-rat 108mg/kg
12. 1,1-Dichloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	594-20-7	N/A	N/A
14. Tetrachloroethene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	127-16-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2828mg/kg
15. 1,1,1-Trichloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	71-55-6	350 ppm (1800mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	98-12-8	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	78-87-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	142-28-9	N/A	unr-mus 3600mg/kg
21. 1,1-Dichloropropene	93538	043019	0.05	5.00	0.017	1981.8	99.1	1.5	563-58-6	N/A	N/A
22. cis-1,3-Dichloropropene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	87-68-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	79-34-5	5 ppm (25mg/m3/8H)(skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 838mg/kg
28. Trichloroethene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	96-18-4	10 ppm (90mg/m3/8H)	ori-rat 148.6mg/kg
30. Benzene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	043019	0.05	5.00	0.017	2000.2	100.0	1.2	108-86-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	043019	0.05	5.00	0.017	2000.9	100.0	1.2	104-51-8	N/A	N/A
33. Ethyl benzene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	99-87-6	N/A	ori-rat 4750mg/kg
35. Naphthalene	93538	043019	0.05	5.00	0.017	2000.1	100.0	1.2	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	043019	0.05	5.00	0.017	2000.1	100.0	1.2	108-88-3	200 ppm	ori-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93538	043019	0.05	5.00	0.017	2001.1	100.0	1.2	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	043019	0.05	5.00	0.017	2000.7	100.0	1.2	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 758mg/kg
39. 1,2,4-Trimethylbenzene	93538	043019	0.05	5.00	0.017	2000.6	100.0	1.2	95-63-6	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	043019	0.05	5.00	0.017	2000.4	100.0	1.2	108-67-8	N/A	N/A
41. Styrene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	043019	0.05	5.00	0.017	2000.2	100.0	1.2	98-06-6	N/A	N/A
43. sec-Butyl benzene	93538	043019	0.05	5.00	0.017	2000.4	100.0	1.2	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	043019	0.05	5.00	0.017	2000.6	100.0	1.2	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2280mg/kg
45. 2-Chlorotoluene	93538	043019	0.05	5.00	0.017	2000.1	100.0	1.2	95-49-8	80 ppm (250mg/m3/8H)	ori-rat 3600mg/kg
46. 4-Chlorotoluene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	106-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	043019	0.05	5.00	0.017	2000.8	100.0	1.2	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	043019	0.05	5.00	0.017	2000.5	100.0	1.2	641-73-1	N/A	ipr-mus 1082mg/kg
49. 1,4-Dichlorobenzene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	043019	0.05	5.00	0.017	2000.6	100.0	1.2	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	043019	0.05	5.00	0.017	2000.4	100.0	1.2	103-65-1	N/A	ori-rat 6040mg/kg
52. o-Xylene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1384mg/kg
53. m-Xylene	93538	043019	0.05	5.00	0.017	1000.0	50.0	0.6	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	043019	0.05	5.00	0.017	999.9	50.0	0.6	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulfide	97269	020720	0.005	0.50	0.004	20004.9	100.0	5.0	75-10-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97269	020720	0.005	0.50	0.004	20006.9	100.0	5.0	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
57. Hexachloroethane	97269	020720	0.005	0.50	0.004	20005.9	100.0	5.0	67-72-1	1 ppm (10mg/m3/8H)(skin)	ori-gpp 4970mg/kg
58. Methyl tert-butyl ether (MTBE)	97269	020720	0.005	0.50	0.004	20005.9	100.0	5.0	1634-04-4	N/A	ori-rat 4g/kg
59. 2-Methylnaphthalene	97269	020720	0.005	0.50	0.004	20003.3	100.0	5.0	91-57-8	N/A	ori-rat 1630mg/kg
60. 1,1,2-Trichlorotrifluoroethane	97269	020720	0.005	0.50	0.004	20007.9	100.0	5.0	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
61. n-Pentane	97235	120114	0.05	5.00	0.017	2002.6	100.1	0.9	109-66-0	600 ppm(1800mg/m3/8H)	ivm-mus 446mg/kg
62. n-Hexane	97235	120114	0.05	5.00	0.017	2002.6	100.1	0.9	110-54-3	50 ppm(180mg/m3/8H)	ori-rat 28710mg/kg
63. n-Heptane	97235	120114	0.05	5.00	0.017	2003.1	100.2	0.9	142-82-5	400 ppm(1600mg/m3/8H)	ivm-mus 222mg/kg
64. n-Octane	97235	120114	0.05	5.00	0.017	2001.6	100.1	0.9	111-65-9	300 ppm(1450mg/m3/8H)	N/A
65. n-Nonane	97235	120114	0.05	5.00	0.017	2000.7	100.0	0.9	111-84-2	200 ppm(1050mg/m3/8H)	ivm-mus 218mg/kg
66. n-Decane	97235	120114	0.05	5.00	0.017	2001.8	100.1	0.9	124-18-5	N/A	N/A
67. n-Undecane	97235	120114	0.05	5.00	0.017	2003.6	100.2	0.9	1120-21-4	N/A	ivm-mus 517mg/kg
68. n-Dodecane	97235	120114	0.05	5.00	0.017	2000.6	100.0	0.9	112-40-0	N/A	N/A
69. n-Tridecane	97235	120114	0.05	5.00	0.017	2002.2	100.0	0.9	629-50-6	N/A	ivm-mus 1161mg/kg
70. n-Tetradecane	97235	120114	0.05	5.00	0.017	2001.5	100.1	0.9	629-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.05	5.00	0.017	2001.3	100.1	0.9	629-62-9	N/A	ivm-mus 3494mg/kg
72. Bromomethane	30058	123019	0.05	5.00	0.017	2004.8	100.2	0.9	74-83-9	5 ppm (20mg/m3/8H) (skin)	ori-rat 2144mg/kg
73. Chloroethane	30058	123019	0.05	5.00	0.017	2002.5	100.1	0.9	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
74. Chloroform	30058	123019	0.05	5.00	0.017	2003.0	100.1	0.9	74-87-3	100 ppm	ori-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	123019	0.05	5.00	0.017	2034.9	101.7	0.9	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
76. Trichlorofluoromethane	30058	123019	0.05	5.00	0.017	2009.8	100.5	0.9	75-86-4	1000 ppm (8600mg/m3/8H)	ipr-mus 1743mg/kg
77. Vinyl chloride	30058	123019	0.05	5.00	0.017	2001.2	100.1	0.9	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone (MIBK)	82442	112816	0.00	0.50	0.004	20003.5	100.0	5.0	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg
79. n-Bromofluorobenzene	20002	020419	0.05	5.00	0.017	2000.7	100.0	0.9	460-00-4	N/A	ori-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	020419	0.05	5.00	0.017	2000.6	100.0	0.9	17060-07-0	N/A	ori-mus 625mg/kg
81. Toluene-d8	20002	020419	0.05	5.00	0.017	2000.4	100.0	0.9	2037-26-5	200 ppm	ori-rat 5000mg/kg
82. Chlorobenzene-d5	22013	021720	0.10	10.00	0.042	2001.6	200.1	1.9	3114-65-4	N/A	ori-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	10.00	0.042	2002.0	200.2	1.9	3855-82-1	N/A	ori-rat 500mg/kg
84. Fluorobenzene	22013	021720	0.10	10.00	0.042	2002.1	200.2	1.9	462-06-6	N/A	

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021820

Lab Standard No.: 2000094



CERTIFIED WEIGHT REPORT

Part Number: **97257**
Lot Number: **021820**
Description: **8260 VOC Primary Calibration Level 5**
84 components
Expiration Date: **021823** Solvent(s): **Methanol** Lot# **DV182-USQ12**
Recommended Storage: **Freezer (0 °C)**
Nominal Concentration (µg/mL): **200**
NIST Test ID#: **GUTB** SE-05 Balance Uncertainty
0.007 Flask Uncertainty

<i>Gabriel Helland</i>		021820
Formulated By:	Gabriel Helland	DATE
<i>Pedro L. Rentas</i>		021820
Reviewed By:	Pedro L. Rentas	DATE

Volume(s) shown below were combined and diluted to (mL): 50.0

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)			CAS#	OSHA PEL (TWA)	LDSO
								2.2	2.2	2.2			
1. Bromodichloromethane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	75-27-4	N/A	ori-rat 916mg/kg		
2. Dibromochloromethane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	124-48-1	N/A	ori-rat 848mg/kg		
3. cis-1,2-Dichloroethane	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.2	156-59-2	N/A	N/A		
4. trans-1,2-Dichloroethane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	156-60-5	N/A	ori-rat 1235mg/kg		
5. Methylene chloride	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.2	75-09-2	500 ppm	ori-rat 820mg/kg		
6. 1,1-Dichloroethane	93538	043019	0.10	5.00	0.017	2000.3	200.0	2.4	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg		
7. Bromochloromethane	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.2	74-97-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg		
8. Bromoform	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.2	75-25-2	0.5 ppm (5mg/m3) (skin)	ori-rat 933mg/kg		
9. Carbon tetrachloride	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.2	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg		
10. Chloroform	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.1	67-66-3	60 ppm (240mg/m3) (CL)	ori-rat 908mg/kg		
11. Dibromomethane	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.2	74-95-3	N/A	ori-rat 108mg/kg		
12. 1,1-Dichloroethane	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.2	75-34-3	100 ppm	ori-rat 725mg/kg		
13. 2,2-Dichloropropane	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.2	594-20-7	N/A	N/A		
14. Tetrachloroethane	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.2	127-18-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2629mg/kg		
15. 1,1,1-Trichloroethane	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.2	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg		
16. 1,2-Dibromo-3-chloropropane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	96-12-8	0.001 ppm	ori-rat 170mg/kg		
17. 1,2-Dibromoethane	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.2	106-93-4	20 ppm (8H)	ori-rat 108mg/kg		
18. 1,2-Dichloroethane	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.1	107-06-2	50 ppm (8H)	ori-rat 670mg/kg		
19. 1,2-Dichloropropane	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.2	78-57-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg		
20. 1,3-Dichloropropane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	142-28-9	N/A	unr-mus 3600mg/kg		
21. 1,1-Dichloropropane	93538	043019	0.10	5.00	0.017	1981.8	198.2	2.8	563-58-6	N/A	N/A		
22. cis-1,3-Dichloropropane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	10061-01-5	N/A	N/A		
23. trans-1,3-Dichloropropane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	10061-02-6	N/A	N/A		
24. Hexachloro-1,3-butadiene	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	87-88-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg		
25. 1,1,1,2-Tetrachloroethane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	630-20-6	N/A	ori-rat 670mg/kg		
26. 1,1,2,2-Tetrachloroethane	93538	043019	0.10	5.00	0.017	1999.9	200.0	2.2	79-34-5	5 ppm (35mg/m3/8H)(skin)	ori-rat 800mg/kg		
27. 1,1,2-Trichloroethane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 838mg/kg		
28. Trichloroethane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg		
29. 1,2,3-Trichloropropane	93538	043019	0.10	5.00	0.017	1999.8	200.0	2.2	96-18-4	10 ppm (80mg/m3/8H)	ori-rat 149.6mg/kg		
30. Benzene	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.4	71-43-2	1 ppm	ori-rat 4894mg/kg		
31. Bromobenzene	93538	043019	0.10	5.00	0.017	2000.2	200.0	2.4	108-86-1	N/A	ori-rat 2699mg/kg		
32. n-Butyl benzene	93538	043019	0.10	5.00	0.017	2000.9	200.1	2.4	104-51-8	N/A	N/A		
33. Ethyl benzene	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.4	100-14-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg		
34. p-Isopropyl toluene	93538	043019	0.10	5.00	0.017	2000.3	200.0	2.4	99-87-6	N/A	ori-rat 4750mg/kg		
35. Naphthalene	93538	043019	0.10	5.00	0.017	2000.1	200.0	2.4	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg		
36. Toluene	93538	043019	0.10	5.00	0.017	2000.1	200.0	2.4	108-88-3	200 ppm	ori-rat 5000mg/kg		
37. 1,2,3-Trichlorobenzene	93538	043019	0.10	5.00	0.017	2001.1	200.1	2.4	87-61-6	N/A	ipr-mus 1390mg/kg		
38. 1,2,4-Trichlorobenzene	93538	043019	0.10	5.00	0.017	2000.7	200.1	2.4	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 758mg/kg		
39. 1,2,4-Trimethylbenzene	93538	043019	0.10	5.00	0.017	2000.6	200.1	2.4	95-63-1	N/A	ori-rat 5g/kg		
40. 1,3,5-Trimethylbenzene	93538	043019	0.10	5.00	0.017	2000.4	200.1	2.4	108-67-8	N/A	N/A		
41. Styrene	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.4	100-42-5	100 ppm	ori-rat 5000mg/kg		
42. tert-Butyl benzene	93538	043019	0.10	5.00	0.017	2000.2	200.0	2.4	98-06-6	N/A	N/A		
43. sec-Butyl benzene	93538	043019	0.10	5.00	0.017	2000.4	200.0	2.4	135-98-8	N/A	ori-rat 2240mg/kg		
44. Chlorobenzene	93538	043019	0.10	5.00	0.017	2000.8	200.1	2.4	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg		
45. 2-Chlorotoluene	93538	043019	0.10	5.00	0.017	2000.1	200.0	2.4	95-45-8	50 ppm (250mg/m3/8H)	ori-rat 3900mg/kg		
46. 4-Chlorotoluene	93538	043019	0.10	5.00	0.017	2000.3	200.0	2.4	108-43-4	N/A	ori-rat 2100mg/kg		
47. 1,2-Dichlorobenzene	93538	043019	0.10	5.00	0.017	2000.6	200.1	2.4	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg		
48. 1,3-Dichlorobenzene	93538	043019	0.10	5.00	0.017	2000.5	200.1	2.4	541-73-1	N/A	ipr-mus 1082mg/kg		
49. 1,4-Dichlorobenzene	93538	043019	0.10	5.00	0.017	2000.3	200.0	2.4	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg		
50. Isopropylbenzene	93538	043019	0.10	5.00	0.017	2000.6	200.1	2.4	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg		
51. n-Propylbenzene	93538	043019	0.10	5.00	0.017	2000.4	200.0	2.4	103-65-1	N/A	ori-rat 8040mg/kg		
52. o-Xylene	93538	043019	0.10	5.00	0.017	2000.0	200.0	2.4	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1384mg/kg		
53. m-Xylene	93538	043019	0.10	5.00	0.017	1000.0	100.0	1.1	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg		
54. p-Xylene	93538	043019	0.10	5.00	0.017	999.9	100.0	1.1	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg		
55. Carbon disulfide	97269	020720	0.01	0.50	0.004	20004.9	200.1	6.3	75-15-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg		
56. 1,4-Dioxane	97269	020720	0.01	0.50	0.004	20006.9	200.1	6.3	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg		
57. Hexachloroethane	97269	020720	0.01	0.50	0.004	20005.9	200.1	6.3	67-72-1	1 ppm (10mg/m3/8H)(skin)	ipr-gg 4970mg/kg		
58. Methyl tert-butyl ether (MTBE)	97269	020720	0.01	0.50	0.004	20005.9	200.1	6.3	1634-04-4	N/A	ori-rat 4g/kg		
59. 2-Methylnaphthalene	97269	020720	0.01	0.50	0.004	20003.3	200.0	6.3	91-57-6	N/A	ori-rat 1630mg/kg		
60. 1,1,2-Trichlorotrifluoroethane	97269	020720	0.01	0.50	0.004	20007.9	200.1	6.3	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg		
61. n-Pentane	97235	120114	0.10	5.00	0.017	2002.6	200.3	1.7	109-66-0	600 ppm(1800mg/m3/8H)	ivn-mus 446mg/kg		
62. n-Hexane	97235	120114	0.10	5.00	0.017	2002.6	200.3	1.7	110-54-3	50 ppm(180mg/m3/8H)	ori-rat 28710mg/kg		
63. n-Heptane	97235	120114	0.10	5.00	0.017	2003.1	200.3	1.7	142-82-5	400 ppm(1600mg/m3/8H)	ivn-mus 222mg/kg		
64. n-Octane	97235	120114	0.10	5.00	0.017	2001.6	200.2	1.7	111-65-9	300 ppm(1450mg/m3/8H)	N/A		
65. n-Nonane	97235	120114	0.10	5.00	0.017	2000.7	200.1	1.7	111-84-2	200 ppm (1050mg/m3/8H)	ivn-mus 218mg/kg		
66. n-Decane	97235	120114	0.10	5.00	0.017	2001.8	200.2	1.7	124-18-5	N/A	N/A		
67. n-Undecane	97235	120114	0.10	5.00	0.017	2003.8	200.4	1.7	1120-21-4	N/A	ivn-mus 517mg/kg		
68. n-Dodecane	97235	120114	0.10	5.00	0.017	2000.6	200.1	1.7	112-40-3	N/A	N/A		
69. n-Tridecane	97235	120114	0.10	5.00	0.017	2000.2	200.0	1.7	629-50-5	N/A	ivn-mus 1161mg/kg		
70. n-Tetradecane	97235	120114	0.10	5.00	0.017	2001.5	200.2	1.7	629-59-4	N/A	N/A		
71. n-Pentadecane	97235	120114	0.10	5.00	0.017	2001.3	200.1	1.7	629-62-9	N/A	ivn-mus 3494mg/kg		
72. Bromomethane	30058	123019	0.10	5.00	0.017	2004.8	200.5	1.7	74-83-9	5 ppm (20mg/m3/8H) (skin)	ori-rat 214mg/kg		
73. Chloroethane	30058	123019	0.10	5.00	0.017	2002.5	200.3	1.7	75-00-3	1000 ppm (2600mg/m3/8H)	N/A		
74. Chloromethane	30058	123019	0.10	5.00	0.017	2003.0	200.3	1.7	74-87-3	100 ppm	ori-rat 1800mg/kg		
75. Dichlorodifluoromethane	30058	123019	0.10	5.00	0.017	2034.9	203.5	1.7	75-71-8	1000 ppm (4950mg/m3/8H)	N/A		
76. Trichlorofluoromethane	30058	123019	0.10	5.00	0.017	2009.6	201.0	1.7	75-69-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg		
77. Vinyl chloride	30058	123019	0.10	5.00	0.017	2001.2	200.1	1.7	75-01-4	N/A	N/A		
78. 4-Methyl-2-pentanone (MIBK)	82442	112816	0.01	0.50	0.004	20003.5	200.0	6.3	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg		
79. p-Bromofluorobenzene	20002	020419	0.10	5.00	0.017	2000.7	200.1	1.7	480-00-4	N/A	ori-rat 2700mg/kg		
80. 1,2-Dichloroethane-d4	20002	020419	0.10	5.00	0.017	2000.6	200.1	1.7	17080-07-0	N/A	ori-mus 625mg/kg		
81. Toluene-d8	20002	020419	0.10	5.00	0.017	2000.4	200.1	1.7	2037-26-5	200 ppm	ori-rat 5000mg/kg		
82. Chlorobenzene-d5	22013	021720	0.10	5.00	0.017	2001.6	200.2	1.7	3114-55-4	N/A	ori-rat 1110mg/kg		
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	5.00	0.017	2002.0	200.2	1.7	3855-82-1	N/A	ori-rat 500mg/kg		
84. Fluorobenzene	22013	021720	0.10	5.00	0.017	2002							

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021820

Lab Standard No.: 2000095



CERTIFIED WEIGHT REPORT

Part Number: 97258
Lot Number: 021820
Description: 8280 VOC Primary Calibration Level 8
84 components
Expiration Date: 021823
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 400
NIST Test ID: 6UTB
Solvent(s): Methanol
Lot# DV182-USQ12
Volume(s) shown below were combined and diluted to (mL): 50.0 5E-05 Balance Uncertainty 0.007 Flask Uncertainty

<i>Gabriel Helland</i>		021820
Formulated By:	Gabriel Helland	DATE
<i>Pedro L. Rentas</i>		021820
Reviewed By:	Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	Dk. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LDSO
1. Bromodichloromethane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	75-27-4	N/A	ori-rat 916mg/kg
2. Dibromochloromethane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethane	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	75-09-2	500 ppm	ori-rat 820mg/kg
6. 1,1-Dichloroethane	93538	043019	0.20	10.00	0.042	2000.3	400.1	5.0	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	043019	0.20	10.00	0.042	2000.0	400.0	4.6	74-87-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	043019	0.20	10.00	0.042	2000.0	400.0	4.6	75-25-2	0.5 ppm (5mg/m3) (skin)	ori-rat 833mg/kg
9. Carbon tetrachloride	93538	043019	0.20	10.00	0.042	2000.0	400.0	4.6	56-23-5	2 ppm (12.8mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	043019	0.20	10.00	0.042	2000.0	400.0	4.6	67-66-3	50 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	043019	0.20	10.00	0.042	2000.0	400.0	4.6	74-05-3	N/A	ori-rat 108mg/kg
12. 1,1-Dichloroethane	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	043019	0.20	10.00	0.042	2000.0	400.0	4.6	594-20-7	N/A	N/A
14. Tetrachloroethane	93538	043019	0.20	10.00	0.042	2000.0	400.0	4.6	127-18-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2629mg/kg
15. 1,1,1-Trichloroethane	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	71-55-6	350 ppm (1900mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	98-12-8	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	78-87-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	142-28-9	N/A	unr-mus 3600mg/kg
21. 1,1-Dichloropropane	93538	043019	0.20	10.00	0.042	1981.8	396.4	5.9	563-58-6	N/A	N/A
22. cis-1,3-Dichloropropane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	87-88-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	043019	0.20	10.00	0.042	1999.9	400.0	4.6	79-34-5	5 ppm (35mg/m3/8H)(skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 836mg/kg
28. Trichloroethane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	79-10-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	043019	0.20	10.00	0.042	1999.8	400.0	4.6	96-18-4	10 ppm (80mg/m3/8H)	ori-rat 149.6mg/kg
30. Benzene	93538	043019	0.20	10.00	0.042	2000.0	400.0	5.0	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	043019	0.20	10.00	0.042	2000.2	400.1	5.0	108-88-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	043019	0.20	10.00	0.042	2000.9	400.2	5.0	104-51-8	N/A	N/A
33. Ethyl benzene	93538	043019	0.20	10.00	0.042	2000.0	400.0	5.0	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	043019	0.20	10.00	0.042	2000.3	400.1	5.0	99-87-6	N/A	ori-rat 4750mg/kg
35. Naphthalene	93538	043019	0.20	10.00	0.042	2000.1	400.0	5.0	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	043019	0.20	10.00	0.042	2000.1	400.0	5.0	108-88-3	200 ppm	ori-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93538	043019	0.20	10.00	0.042	2001.1	400.2	5.0	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	043019	0.20	10.00	0.042	2000.7	400.2	5.0	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
39. 1,2,4-Trimethylbenzene	93538	043019	0.20	10.00	0.042	2000.6	400.1	5.0	95-63-6	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	043019	0.20	10.00	0.042	2000.4	400.1	5.0	108-67-8	N/A	N/A
41. Styrene	93538	043019	0.20	10.00	0.042	2000.0	400.0	5.0	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	043019	0.20	10.00	0.042	2000.2	400.1	5.0	99-06-6	N/A	N/A
43. sec-Butyl benzene	93538	043019	0.20	10.00	0.042	2000.4	400.1	5.0	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	043019	0.20	10.00	0.042	2000.6	400.1	5.0	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2290mg/kg
45. 2-Chlorotoluene	93538	043019	0.20	10.00	0.042	2000.1	400.0	5.0	95-49-8	80 ppm (250mg/m3/8H)	ori-rat 3900mg/kg
46. 4-Chlorotoluene	93538	043019	0.20	10.00	0.042	2000.3	400.1	5.0	106-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	043019	0.20	10.00	0.042	2000.6	400.1	5.0	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	043019	0.20	10.00	0.042	2000.5	400.1	5.0	541-73-1	N/A	ipr-mus 1062mg/kg
49. 1,4-Dichlorobenzene	93538	043019	0.20	10.00	0.042	2000.3	400.1	5.0	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	043019	0.20	10.00	0.042	2000.6	400.1	5.0	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	043019	0.20	10.00	0.042	2000.4	400.1	5.0	103-65-1	N/A	ori-rat 8040mg/kg
52. o-Xylene	93538	043019	0.20	10.00	0.042	2000.0	400.0	5.0	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
53. m-Xylene	93538	043019	0.20	10.00	0.042	1000.0	200.0	2.3	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	043019	0.20	10.00	0.042	999.9	200.0	2.3	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulfide	97269	020720	0.02	1.00	0.004	20004.9	400.1	3.6	75-15-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97269	020720	0.02	1.00	0.004	20006.9	400.2	3.8	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
57. Hexachloroethane	97269	020720	0.02	1.00	0.004	20005.9	400.1	3.6	67-72-1	1 ppm (10mg/m3/8H)(skin)	ori-gpp 4970mg/kg
58. Methyl tert-butyl ether (MTBE)	97269	020720	0.02	1.00	0.004	20005.9	400.1	3.6	1634-04-4	N/A	ori-rat 4g/kg
59. 2-Methylnaphthalene	97269	020720	0.02	1.00	0.004	20003.3	400.1	3.6	91-57-6	N/A	ori-rat 1630mg/kg
60. 1,1,2-Trichlorotrifluoroethane	97269	020720	0.02	1.00	0.004	20007.9	400.2	3.6	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
61. n-Pentane	97235	120114	0.20	10.00	0.042	2002.6	400.5	3.7	109-66-0	600 ppm (1800mg/m3/8H)	ivn-mus 446mg/kg
62. n-Hexane	97235	120114	0.20	10.00	0.042	2002.6	400.5	3.7	110-54-3	50 ppm (180mg/m3/8H)	ori-rat 28710mg/kg
63. n-Heptane	97235	120114	0.20	10.00	0.042	2003.1	400.6	3.8	142-82-5	400 ppm (1600mg/m3/8H)	ivn-mus 222mg/kg
64. n-Octane	97235	120114	0.20	10.00	0.042	2001.6	400.3	3.7	111-65-9	300 ppm (1450mg/m3/8H)	N/A
65. n-Nonane	97235	120114	0.20	10.00	0.042	2000.7	400.2	3.7	111-84-2	200 ppm (1050mg/m3/8H)	ivn-mus 216mg/kg
66. n-Decane	97235	120114	0.20	10.00	0.042	2001.8	400.4	3.7	124-18-5	N/A	N/A
67. n-Undecane	97235	120114	0.20	10.00	0.042	2003.6	400.7	3.8	1120-21-4	N/A	ivn-mus 517mg/kg
68. n-Dodecane	97235	120114	0.20	10.00	0.042	2000.6	400.1	3.7	112-40-3	N/A	N/A
69. n-Tridecane	97235	120114	0.20	10.00	0.042	2000.2	400.1	3.7	629-50-5	N/A	ivn-mus 1161mg/kg
70. n-Tetradecane	97235	120114	0.20	10.00	0.042	2001.5	400.3	3.7	629-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.20	10.00	0.042	2001.3	400.3	3.7	629-62-9	N/A	ivn-mus 3494mg/kg
72. Bromomethane	30058	123019	0.20	10.00	0.042	2004.8	401.0	3.7	74-83-6	5 ppm (20mg/m3/8H) (skin)	ori-rat 214mg/kg
73. Chloroethane	30058	123019	0.20	10.00	0.042	2002.5	400.5	3.7	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
74. Chloromethane	30058	123019	0.20	10.00	0.042	2003.0	400.6	3.7	74-87-3	100 ppm	ori-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	123019	0.20	10.00	0.042	2034.9	407.0	3.8	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
76. Trichlorofluoromethane	30058	123019	0.20	10.00	0.042	2009.6	401.9	3.8	75-69-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg
77. Vinyl chloride	30058	123019	0.20	10.00	0.042	2001.2	400.3	3.7	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone (MIBK)	82442	103019	0.02	1.00	0.004	20002.0	400.1	3.6	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg
79. p-Bromofluorobenzene	20002	020419	0.20	10.00	0.042	2000.7	400.2	3.7	460-00-4	N/A	ori-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	020419	0.20	10.00	0.042	2000.6	400.1	3.7	17060-07-0	N/A	ori-mus 625mg/kg
81. Toluene-d8	20002	020419	0.20	10.00	0.042	2000.4	400.1	3.7	2037-26-5	200 ppm	ori-rat 5000mg/kg
82. Chlorobenzene-d5	22013	021720	0.10	5.00	0.017	2001.6	200.2	1.6	3114-65-4	N/A	ori-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	5.00	0.017	2002.0	200.2	1.6	3855-82-1	N/A	ori-rat 500mg/kg
84. Fluorobenzene	22013	021720	0.10								

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Vendor: Absolute Standards, Inc.
Lot No.: 021820

Lab Standard No.: 2000348



CERTIFIED WEIGHT REPORT

Part Number: **97256**
Lot Number: **021820**
Description: **8280 VOC Primary Calibration Level 4**
84 components
Expiration Date: **021823**
Recommended Storage: **Freezer (0 °C)**
Nominal Concentration (µg/mL): **100**
NIST Test ID#: **GUTB**
Volume(s) shown below were combined and diluted to (mL): **100.0**

Solvent(s): **Methanol**
Lot#: **DV182-USQ12**

5E-05 Balance Uncertainty
0.012 Flask Uncertainty

Formulated By: <i>Gabriel Helland</i>	021820
Gabriel Helland	DATE
Reviewed By: <i>Pedro L. Rentas</i>	021820
Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Bromodichloromethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	75-27-4	N/A	ori-rat 918mg/kg
2. Dibromochloromethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	124-48-1	N/A	ori-rat 848mg/kg
3. cis-1,2-Dichloroethene	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	156-59-2	N/A	N/A
4. trans-1,2-Dichloroethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	156-60-5	N/A	ori-rat 1235mg/kg
5. Methylene chloride	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	75-09-2	500 ppm	ori-rat 820mg/kg
6. 1,1-Dichloroethene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	75-35-4	1 ppm (4mg/m3/8H)	ori-rat 200mg/kg
7. Bromochloromethane	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	74-87-5	200 ppm (1050mg/m3/8H)	ori-rat 5000mg/kg
8. Bromoform	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	75-25-2	0.5 ppm (5mg/m3) (skin)	ori-rat 933mg/kg
9. Carbon tetrachloride	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	56-23-5	2 ppm (12.6mg/m3/8H)	ori-rat 2350mg/kg
10. Chloroform	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	67-66-3	60 ppm (240mg/m3) (CL)	ori-rat 908mg/kg
11. Dibromomethane	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	74-95-3	N/A	ori-rat 108mg/kg
12. 1,1-Dichloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	75-34-3	100 ppm	ori-rat 725mg/kg
13. 2,2-Dichloropropane	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	594-20-7	N/A	N/A
14. Tetrachloroethene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.1	127-16-4	25 ppm (170mg/m3/8H)(final)	ori-rat 2828mg/kg
15. 1,1,1-Trichloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	71-55-6	350 ppm (1800mg/m3/8H)	ori-rat 10300mg/kg
16. 1,2-Dibromo-3-chloropropane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	98-12-8	0.001 ppm	ori-rat 170mg/kg
17. 1,2-Dibromoethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	106-93-4	20 ppm (8H)	ori-rat 108mg/kg
18. 1,2-Dichloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	107-06-2	50 ppm (8H)	ori-rat 670mg/kg
19. 1,2-Dichloropropane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	78-87-5	75 ppm (350mg/m3/8H)	ori-rat 1947mg/kg
20. 1,3-Dichloropropane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	142-28-9	N/A	unr-mus 3600mg/kg
21. 1,1-Dichloropropene	93538	043019	0.05	5.00	0.017	1981.8	99.1	1.5	563-58-6	N/A	N/A
22. cis-1,3-Dichloropropene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	10061-01-5	N/A	N/A
23. trans-1,3-Dichloropropene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	10061-02-6	N/A	N/A
24. Hexachloro-1,3-butadiene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	87-68-3	0.02 ppm (0.24mg/m3/8H)	ori-rat 82mg/kg
25. 1,1,1,2-Tetrachloroethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	630-20-6	N/A	ori-rat 670mg/kg
26. 1,1,2,2-Tetrachloroethane	93538	043019	0.05	5.00	0.017	1999.9	100.0	1.1	79-34-5	5 ppm (25mg/m3/8H)(skin)	ori-rat 800mg/kg
27. 1,1,2-Trichloroethane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	79-00-5	10 ppm (45mg/m3/8H)(skin)	ori-rat 836mg/kg
28. Trichloroethene	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	79-01-6	50 ppm (270mg/m3/8H)	ori-mus 2402mg/kg
29. 1,2,3-Trichloropropane	93538	043019	0.05	5.00	0.017	1999.8	100.0	1.1	96-18-4	10 ppm (80mg/m3/8H)	ori-rat 148.6mg/kg
30. Benzene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	71-43-2	1 ppm	ori-rat 4894mg/kg
31. Bromobenzene	93538	043019	0.05	5.00	0.017	2000.2	100.0	1.2	108-86-1	N/A	ori-rat 2699mg/kg
32. n-Butyl benzene	93538	043019	0.05	5.00	0.017	2000.9	100.0	1.2	104-51-8	N/A	N/A
33. Ethyl benzene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	100-41-4	100 ppm (435mg/m3/8H)	ori-rat >2000mg/kg
34. p-Isopropyl toluene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	99-87-6	N/A	ori-rat 4750mg/kg
35. Naphthalene	93538	043019	0.05	5.00	0.017	2000.1	100.0	1.2	91-20-3	10 ppm (50mg/m3/8H)	ori-rat 490mg/kg
36. Toluene	93538	043019	0.05	5.00	0.017	2000.1	100.0	1.2	108-88-3	200 ppm	ori-rat 5000mg/kg
37. 1,2,3-Trichlorobenzene	93538	043019	0.05	5.00	0.017	2001.1	100.0	1.2	87-61-6	N/A	ipr-mus 1390mg/kg
38. 1,2,4-Trichlorobenzene	93538	043019	0.05	5.00	0.017	2000.7	100.0	1.2	120-82-1	5 ppm (CL) (40mg/m3)	ori-rat 756mg/kg
39. 1,2,4-Trimethylbenzene	93538	043019	0.05	5.00	0.017	2000.6	100.0	1.2	95-63-6	N/A	ori-rat 5g/kg
40. 1,3,5-Trimethylbenzene	93538	043019	0.05	5.00	0.017	2000.4	100.0	1.2	108-67-8	N/A	N/A
41. Styrene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	100-42-5	100 ppm	ori-rat 5000mg/kg
42. tert-Butyl benzene	93538	043019	0.05	5.00	0.017	2000.2	100.0	1.2	98-06-6	N/A	N/A
43. sec-Butyl benzene	93538	043019	0.05	5.00	0.017	2000.4	100.0	1.2	135-98-8	N/A	ori-rat 2240mg/kg
44. Chlorobenzene	93538	043019	0.05	5.00	0.017	2000.6	100.0	1.2	108-90-7	75 ppm (350mg/m3/8H)	ori-rat 2280mg/kg
45. 2-Chlorotoluene	93538	043019	0.05	5.00	0.017	2000.1	100.0	1.2	95-49-8	80 ppm (250mg/m3/8H)	ori-rat 3600mg/kg
46. 4-Chlorotoluene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	106-43-4	N/A	ori-rat 2100mg/kg
47. 1,2-Dichlorobenzene	93538	043019	0.05	5.00	0.017	2000.6	100.0	1.2	95-50-1	50 ppm (300mg/m3) (CL)	ori-rat 500mg/kg
48. 1,3-Dichlorobenzene	93538	043019	0.05	5.00	0.017	2000.5	100.0	1.2	641-73-1	N/A	ipr-mus 1082mg/kg
49. 1,4-Dichlorobenzene	93538	043019	0.05	5.00	0.017	2000.3	100.0	1.2	106-46-7	75 ppm (450mg/m3/8H)	ori-rat 500mg/kg
50. Isopropylbenzene	93538	043019	0.05	5.00	0.017	2000.6	100.0	1.2	98-82-8	50 ppm (245mg/m3/8H)	ori-rat 1400mg/kg
51. n-Propylbenzene	93538	043019	0.05	5.00	0.017	2000.4	100.0	1.2	103-65-1	N/A	ori-rat 6040mg/kg
52. o-Xylene	93538	043019	0.05	5.00	0.017	2000.0	100.0	1.2	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
53. m-Xylene	93538	043019	0.05	5.00	0.017	1000.0	50.0	0.6	108-38-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
54. p-Xylene	93538	043019	0.05	5.00	0.017	999.9	50.0	0.6	106-42-3	100 ppm (435mg/m3/8H)	ori-rat 5g/kg
55. Carbon disulfide	97269	020720	0.005	0.50	0.004	20004.9	100.0	5.0	75-10-0	4 ppm (12mg/m3) (skin)	ori-rat 1200mg/kg
56. 1,4-Dioxane	97269	020720	0.005	0.50	0.004	20006.9	100.0	5.0	123-91-1	25 ppm (90mg/m3/8H)(skin)	ori-mus 5700mg/kg
57. Hexachloroethane	97269	020720	0.005	0.50	0.004	20005.9	100.0	5.0	67-72-1	1 ppm (10mg/m3/8H)(skin)	ori-gpp 4970mg/kg
58. Methyl tert-butyl ether (MTBE)	97269	020720	0.005	0.50	0.004	20005.9	100.0	5.0	1634-04-4	N/A	ori-rat 4g/kg
59. 2-Methylnaphthalene	97269	020720	0.005	0.50	0.004	20003.3	100.0	5.0	91-57-8	N/A	ori-rat 1630mg/kg
60. 1,1,2-Trichlorotrifluoroethane	97269	020720	0.005	0.50	0.004	20007.9	100.0	5.0	76-13-1	1000 ppm (7600mg/m3/8H)	ori-rat 43g/kg
61. n-Pentane	97235	120114	0.05	5.00	0.017	2002.6	100.1	0.9	109-66-0	600 ppm(1800mg/m3/8H)	ivm-mus 446mg/kg
62. n-Hexane	97235	120114	0.05	5.00	0.017	2002.6	100.1	0.9	110-54-3	50 ppm(180mg/m3/8H)	ori-rat 28710mg/kg
63. n-Heptane	97235	120114	0.05	5.00	0.017	2003.1	100.2	0.9	142-82-5	400 ppm(1600mg/m3/8H)	ivm-mus 222mg/kg
64. n-Octane	97235	120114	0.05	5.00	0.017	2001.6	100.1	0.9	111-65-9	300 ppm(1450mg/m3/8H)	N/A
65. n-Nonane	97235	120114	0.05	5.00	0.017	2000.7	100.0	0.9	111-84-2	200 ppm(1050mg/m3/8H)	ivm-mus 218mg/kg
66. n-Decane	97235	120114	0.05	5.00	0.017	2001.8	100.1	0.9	124-18-5	N/A	N/A
67. n-Undecane	97235	120114	0.05	5.00	0.017	2003.6	100.2	0.9	1120-21-4	N/A	ivm-mus 517mg/kg
68. n-Dodecane	97235	120114	0.05	5.00	0.017	2000.6	100.0	0.9	112-40-0	N/A	N/A
69. n-Tridecane	97235	120114	0.05	5.00	0.017	2002.2	100.0	0.9	629-50-6	N/A	ivm-mus 1161mg/kg
70. n-Tetradecane	97235	120114	0.05	5.00	0.017	2001.5	100.1	0.9	629-59-4	N/A	N/A
71. n-Pentadecane	97235	120114	0.05	5.00	0.017	2001.3	100.1	0.9	629-62-9	N/A	ivm-mus 3494mg/kg
72. Bromomethane	30058	123019	0.05	5.00	0.017	2004.8	100.2	0.9	74-83-9	5 ppm (20mg/m3/8H) (skin)	ori-rat 2144mg/kg
73. Chloroethane	30058	123019	0.05	5.00	0.017	2002.5	100.1	0.9	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
74. Chloromethane	30058	123019	0.05	5.00	0.017	2003.0	100.1	0.9	74-87-3	100 ppm	ori-rat 1800mg/kg
75. Dichlorodifluoromethane	30058	123019	0.05	5.00	0.017	2034.9	101.7	0.9	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
76. Trichlorofluoromethane	30058	123019	0.05	5.00	0.017	2009.6	100.5	0.9	75-66-4	1000 ppm (8600mg/m3/8H)	ipr-mus 1743mg/kg
77. Vinyl chloride	30058	123019	0.05	5.00	0.017	2001.2	100.1	0.9	75-01-4	N/A	N/A
78. 4-Methyl-2-pentanone (MIBK)	82442	112816	0.00	0.50	0.004	20003.5	100.0	5.0	108-10-1	100 ppm (410mg/m3/8H)	ori-rat 2080mg/kg
79. p-Bromofluorobenzene	20002	020419	0.05	5.00	0.017	2000.7	100.0	0.9	460-00-4	N/A	ori-rat 2700mg/kg
80. 1,2-Dichloroethane-d4	20002	020419	0.05	5.00	0.017	2000.6	100.0	0.9	17060-07-0	N/A	ori-mus 625mg/kg
81. Toluene-d8	20002	020419	0.05	5.00	0.017	2000.4	100.0	0.9	2037-26-5	200 ppm	ori-rat 5000mg/kg
82. Chlorobenzene-d5	22013	021720	0.10	10.00	0.042	2001.6	200.1	1.9	3114-65-4	N/A	ori-rat 1110mg/kg
83. 1,4-Dichlorobenzene-d4	22013	021720	0.10	10.00	0.042	2002.0	200.2	1.9	3855-82-1	N/A	ori-rat 500mg/kg
84. Fluorobenzene	2201										

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Working Standard Preparation Summary

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Working Standard Preparation Summary

Parent Standard	Amount (ml)	Final Volume (ml)	Prepared	Expires
Calibration QC				
Standard: 2000337 / 8260 Calibration Std, 5ng, Working 2000090	0.5000	1.00	10/19/2020	02/18/2023
Standard: 2000338 / 8260 Calibration Std, 10ng, Working 2000091	0.5000	1.00	10/19/2020	02/18/2023
Standard: 2000339 / 8260 Calibration Std, 25ng, Working 2000092	0.5000	1.00	10/19/2020	02/18/2023
Standard: 2000340 / 8260 Calibration Std, 50ng, Working 2000093	0.5000	1.00	10/19/2020	02/18/2023
Standard: 2000341 / 8260 Calibration Std, 100ng, Working 2000094	0.5000	1.00	10/19/2020	02/18/2023
Standard: 2000342 / 8260 Calibration Std, 200ng, Working 2000095	0.5000	1.00	10/19/2020	02/18/2023
Standard: 2000343 / 8260 Calibration Std, 2.5ng, Working 2000089	0.5000	1.00	10/19/2020	02/18/2023
Standard: 2000344 / 8260 Calibration Std, 400ng, Working 1900054	0.5000	1.00	10/19/2020	06/10/2022
Standard: 2000345 / 8260 Calibration Std, 600ng, Working 1900055	0.5000	1.00	10/19/2020	06/10/2022
Standard: 2000346 / 8260 Calibration Std, 800ng, Working 1900056	0.5000	1.00	10/19/2020	06/10/2022
Standard: 2000347 / 8260 Calibration Std, 1000ng, Working 1900057	0.5000	1.00	10/19/2020	06/10/2022

Sequence/Sample QC

Standard: 1900037 / LCSD Second Source Working Standard, 50ng 1900018	0.5000	1.00	06/17/2019	11/29/2021
Standard: 2100120 / Working (LB, SMP) ISTD/SURR, Sub-Stock 1900019	0.0500	1.00	03/29/2021	04/05/2021
Standard: 2100146 / Working (LB, SMP) ISTD/SURR, Sub-Stock 1900019	0.0500	1.00	04/12/2021	04/19/2021

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Standard: 2100147 / Working BS ISTD/SURR, Sub-Stock
1900019 0.0500 2.00

04/12/2021

04/19/2021

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Sample Purge Log

Laboratory: Beacon Environmental

Work Order: 0005717

Matrix: Air



WORK ORDER: 0005717

Client: Jacobs_Portland
 Project: Northwest Pipe
 Reporting Options:
 Sampler: Beacon Passive Sampler
 TAT: 7 Day(s)
 Analysis: 8260C (ng)

Sample Purge Log

PURGE TIME: One hour

Beacon Passive Sampler

Purge Gas Tank PSI @Start	Date/Time Purge Start	Initials	LabNumber	SampleID	ReceivedDate	TAT 7 Day(s)	Comments: (e.g. Wet, Discolored, Damaged, QA/QC Requirements)
						DueDate	
1400	4/12/2021 757	PKK	0005717-01	Trip-1	4/8/2021	4/19/2021	
			0005717-02	Trip-2	4/8/2021	4/19/2021	
			0005717-03	NWP_PSG01-03242021	4/8/2021	4/19/2021	
			0005717-04	NWP_PSG02-03242021	4/8/2021	4/19/2021	
			0005717-05	NWP_PSG03-03242021	4/8/2021	4/19/2021	
			0005717-06	NWP_PSG04-03242021	4/8/2021	4/19/2021	
			0005717-07	NWP_PSG05-03242021	4/8/2021	4/19/2021	
			0005717-08	NWP_PSG06-03242021	4/8/2021	4/19/2021	
			0005717-09	NWP_PSG07-03242021	4/8/2021	4/19/2021	
			0005717-10	NWP_PSG08-03242021	4/8/2021	4/19/2021	
			0005717-11	NWP_PSG09-03242021	4/8/2021	4/19/2021	
			0005717-12	NWP_PSG10-03242021	4/8/2021	4/19/2021	
			0005717-13	NWP_PSG11-03242021	4/8/2021	4/19/2021	
			0005717-14	NWP_PSG12-03242021	4/8/2021	4/19/2021	
			0005717-15	NWP_PSG13-03242021	4/8/2021	4/19/2021	
			0005717-16	NWP_PSG14-03242021	4/8/2021	4/19/2021	
			0005717-17	NWP_PSG15-03242021	4/8/2021	4/19/2021	
			0005717-18	NWP_PSG16-03242021	4/8/2021	4/19/2021	
			0005717-19	NWP_PSG17-03242021	4/8/2021	4/19/2021	
			0005717-20	NWP_PSG18-03242021	4/8/2021	4/19/2021	
			0005717-21	NWP_PSG19-03242021	4/8/2021	4/19/2021	
			0005717-22	NWP_PSG20-03242021	4/8/2021	4/19/2021	
			0005717-23	NWP_PSG21-03242021	4/8/2021	4/19/2021	
	4/12/2021 900	PKK	0005717-24	NWP_PSG22-03242021	4/8/2021	4/19/2021	
1250	4/12/2021 902	PKK	0005717-25	NWP_PSG23-03242021	4/8/2021	4/19/2021	
			0005717-26	NWP_PSG24-03242021	4/8/2021	4/19/2021	
			0005717-27	NWP_PSG25-03242021	4/8/2021	4/19/2021	
			0005717-28	NWP_PSG26-03242021	4/8/2021	4/19/2021	
			0005717-29	NWP_PSG27-03242021	4/8/2021	4/19/2021	
			0005717-30	NWP_PSG28-03242021	4/8/2021	4/19/2021	
			0005717-31	NWP_PSG29-03242021	4/8/2021	4/19/2021	
			0005717-32	NWP_PSG30-03242021	4/8/2021	4/19/2021	

Sample Purge Log

PURGE TIME: One hour

Beacon Passive Sampler

Purge Gas Tank PSI @Start	Date/Time Purge Start	Initials	LabNumber	SampleID	ReceivedDate	TAT 7 Day(s)	Comments: (e.g. Wet, Discolored, Damaged, QA/QC Requirements)
						DueDate	
		RC	0005717-33	NWP_PSG31-03242021	4/8/2021	4/19/2021	
			0005717-34	NWP_PSG32-03242021	4/8/2021	4/19/2021	
			0005717-35	NWP_PSG33-03242021	4/8/2021	4/19/2021	
			0005717-36	NWP_PSG34-03242021	4/8/2021	4/19/2021	
			0005717-37	NWP_PSG35-03242021	4/8/2021	4/19/2021	
			0005717-38	NWP_PSG36-03242021	4/8/2021	4/19/2021	
			0005717-39	NWP_PSG37-03242021	4/8/2021	4/19/2021	
Stop:	4/12/2021 1007	RC					

Sample Count: 39

Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Organics.GCMS

Sample Raw Data

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
--	--	--

Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 3:10:00PM **FileID:** C21041205.D **DF:** 1.00
Lab Number: 0005717-01 **Sample Name:** Trip-1

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041205.D
 Acq On : 12 Apr 2021 03:10 pm
 Operator : KAI
 Sample : 0005717-01
 Misc : Trip-1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 13 10:25:25 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

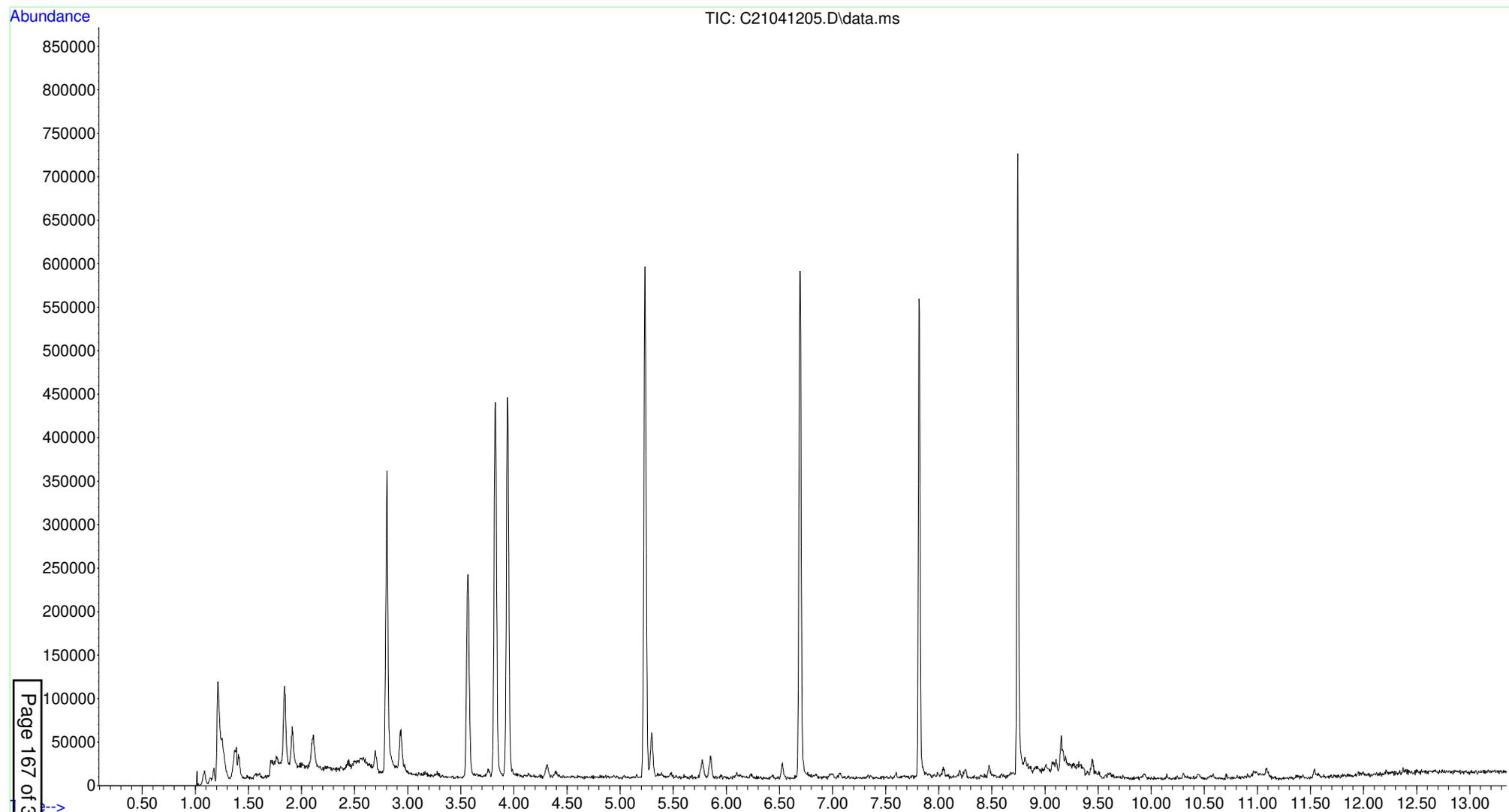
Internal Standards						
1) Fluorobenzene	3.825	96	331549	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	272001	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	125323	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	137192	107.39	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	107.39%	
19) Toluene-d8	5.234	98	313854	90.85	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.85%	
31) Bromofluorobenzene	7.815	95	107793	81.37	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	81.37%	

Target Compounds	Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041205.D
Acq On : 12 Apr 2021 03:10 pm
Operator : KAI
Sample : 0005717-01
Misc : Trip-1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 13 10:25:25 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 3:34:00PM **FileID:** C21041206.D **DF:** 1.00
Lab Number: 0005717-02 **Sample Name:** Trip-2

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041206.D
 Acq On : 12 Apr 2021 03:34 pm
 Operator : KAI
 Sample : 0005717-02
 Misc : Trip-2
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 13 10:25:29 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

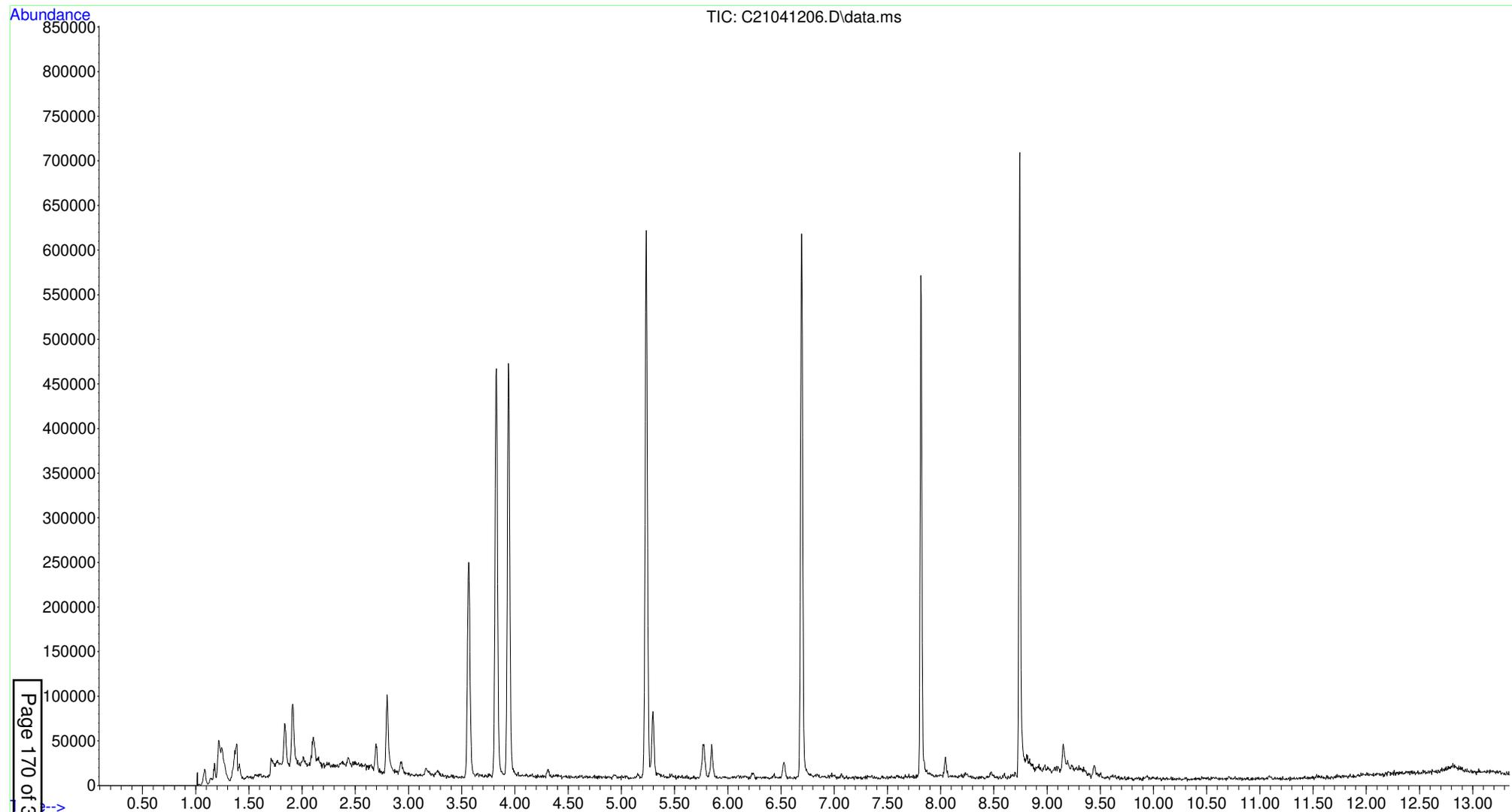
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	346397	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	276526	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	124824	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	142848	107.03	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	107.03%	
19) Toluene-d8	5.234	98	324472	92.38	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	92.38%	
31) Bromofluorobenzene	7.818	95	109295	81.15	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	81.15%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041206.D
Acq On : 12 Apr 2021 03:34 pm
Operator : KAI
Sample : 0005717-02
Misc : Trip-2
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 13 10:25:29 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 3:58:00PM **FileID:** C21041207.D **DF:** 1.00
Lab Number: 0005717-03 **Sample Name:** NWP_PSG01-03262021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041207.D
 Acq On : 12 Apr 2021 03:58 pm
 Operator : KAI
 Sample : 0005717-03
 Misc : NWP_PSG01-03262021
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 13 10:25:33 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

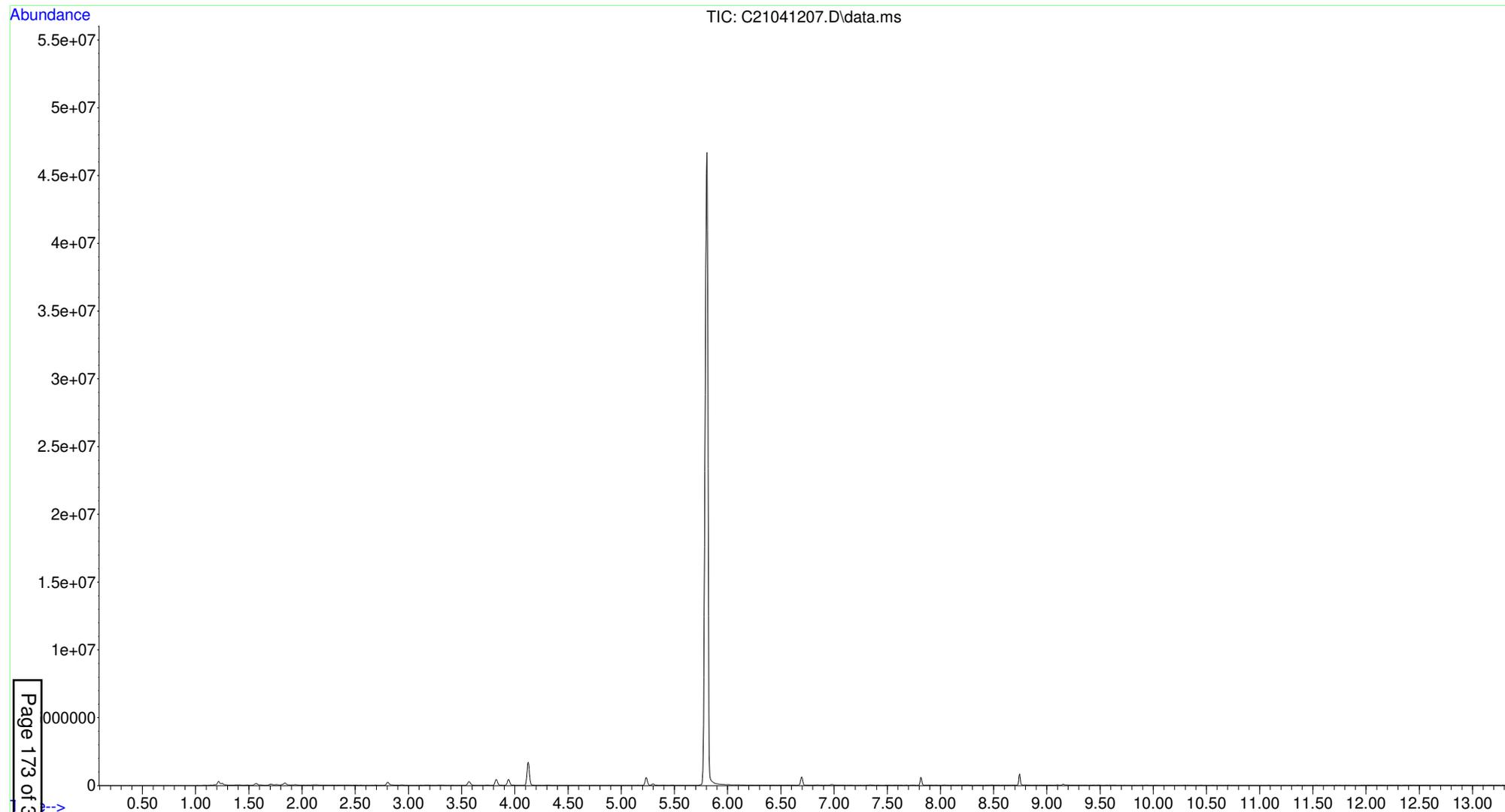
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	324059	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	284787	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.741	152	143499	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	133794	107.15	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	107.15%	
19) Toluene-d8	5.234	98	310820	85.93	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.93%	
31) Bromofluorobenzene	7.815	95	118926	85.74	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.74%	
Target Compounds						
15) Trichloroethene	4.125	130	484732	445.89	ng	96
22) Tetrachloroethene	5.804	131	10133030	10906.40	ng	97

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041207.D
Acq On : 12 Apr 2021 03:58 pm
Operator : KAI
Sample : 0005717-03
Misc : NWP_PSG01-03262021
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 13 10:25:33 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 4:22:00PM **FileID:** C21041208.D **DF:** 1.00
Lab Number: 0005717-04 **Sample Name:** NWP_PSG02-03262021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041208.D
 Acq On : 12 Apr 2021 04:22 pm
 Operator : KAI
 Sample : 0005717-04
 Misc : NWP_PSG02-03262021
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 13 10:25:37 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

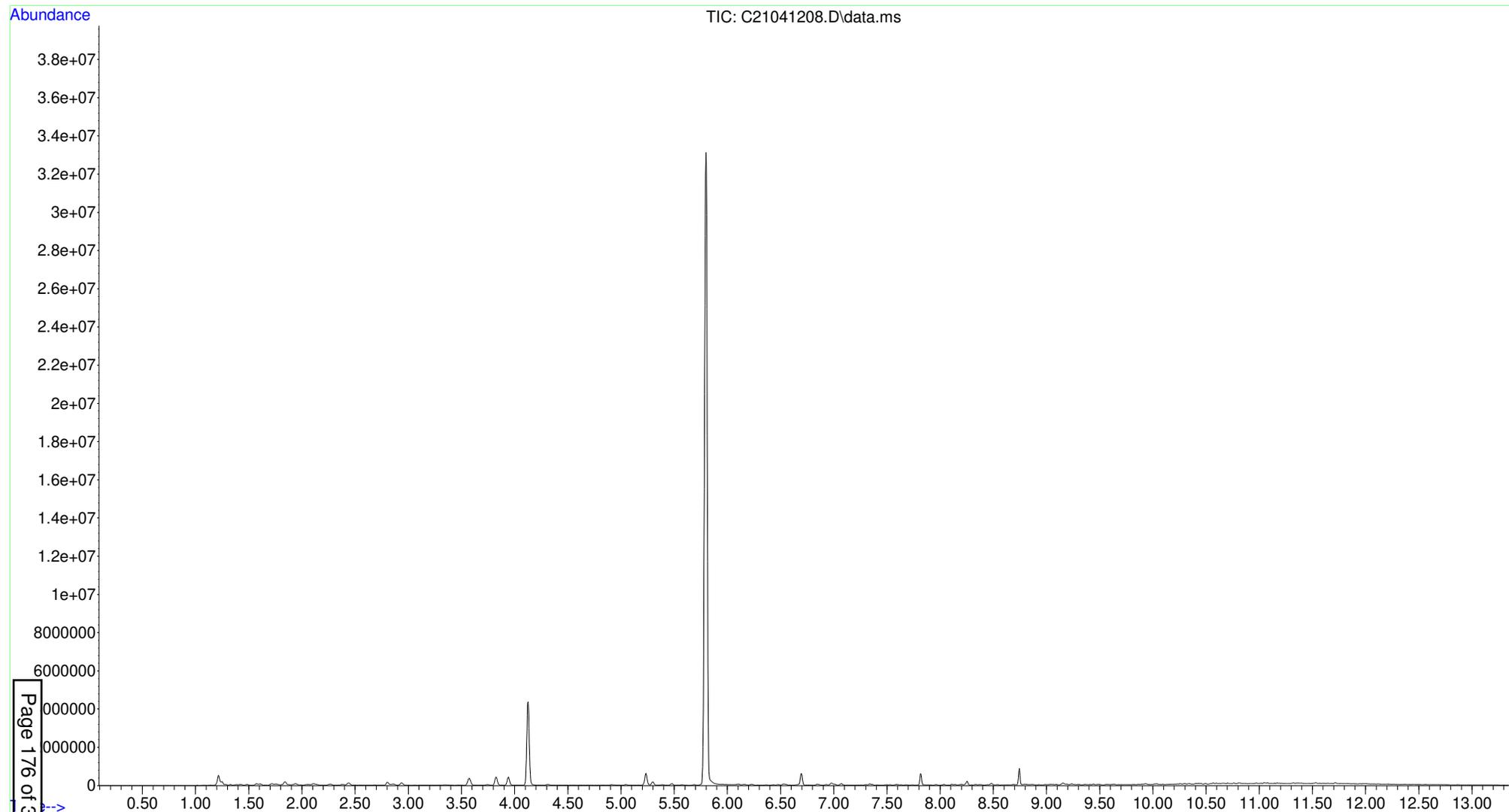
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	322638	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	278560	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	144569	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	126536	101.79	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	101.79%	
19) Toluene-d8	5.234	98	311103	87.93	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.93%	
31) Bromofluorobenzene	7.815	95	118347	87.23	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.23%	
Target Compounds						
8) cis-1,2-Dichloroethene	2.937	96	23958	24.70	ng	93
15) Trichloroethene	4.125	130	1277977	1180.75	ng	97
22) Tetrachloroethene	5.798	131	6700288	7372.88	ng	97

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041208.D
 Acq On : 12 Apr 2021 04:22 pm
 Operator : KAI
 Sample : 0005717-04
 Misc : NWP_PSG02-03262021
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 13 10:25:37 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 4:46:00PM **FileID:** C21041209.D **DF:** 1.00
Lab Number: 0005717-05 **Sample Name:** NWP_PSG03-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041209.D
 Acq On : 12 Apr 2021 04:46 pm
 Operator : KAI
 Sample : 0005717-05
 Misc : NWP_PSG03-03242021
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 13 10:25:41 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

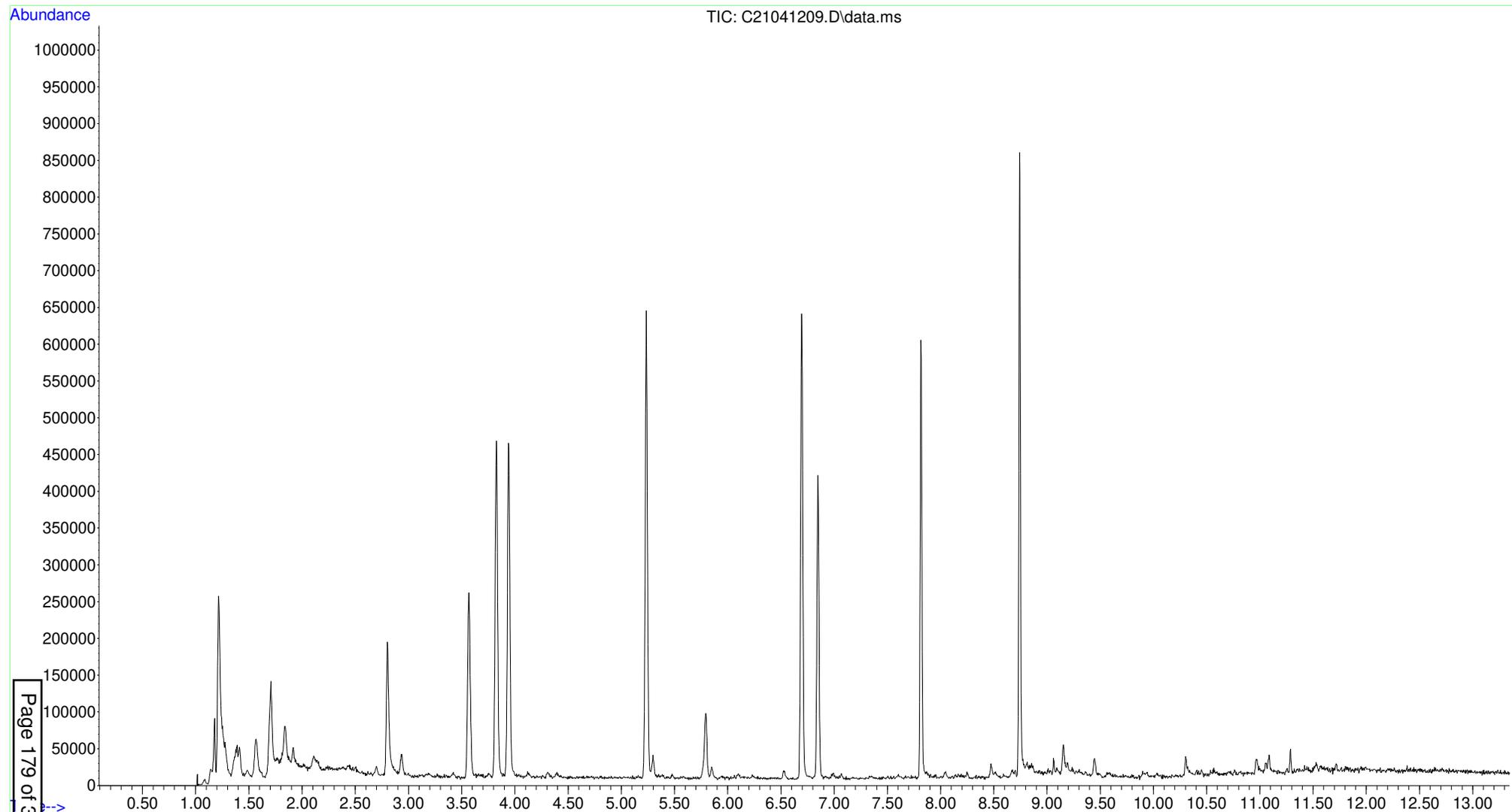
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	342349	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	287282	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	142764	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	137694	104.39	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	104.39%	
19) Toluene-d8	5.234	98	325322	89.16	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	89.16%	
31) Bromofluorobenzene	7.815	95	118578	84.75	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	84.75%	
Target Compounds						
22) Tetrachloroethene	5.798	131	15635	16.68	ng	# 95

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041209.D
Acq On : 12 Apr 2021 04:46 pm
Operator : KAI
Sample : 0005717-05
Misc : NWP_PSG03-03242021
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 13 10:25:41 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 5:10:00PM **FileID:** C21041210.D **DF:** 1.00
Lab Number: 0005717-06 **Sample Name:** NWP_PSG04-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041210.D
 Acq On : 12 Apr 2021 05:10 pm
 Operator : KAI
 Sample : 0005717-06
 Misc : NWP_PSG04-03242021
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 13 10:25:45 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

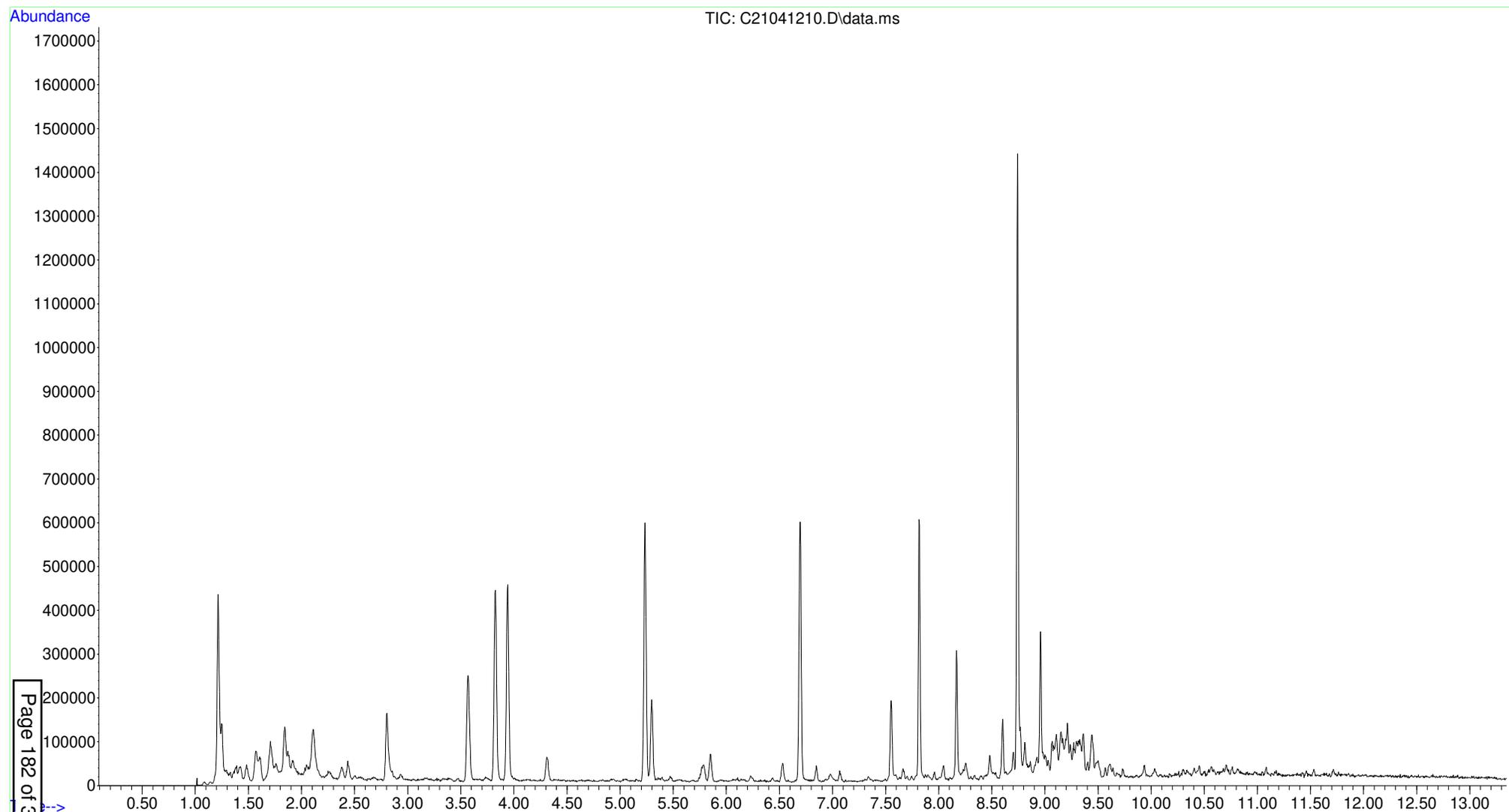
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	329793	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	275594	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	145077	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	122366	96.30	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	96.30%	
19) Toluene-d8	5.234	98	312694	89.33	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	89.33%	
31) Bromofluorobenzene	7.818	95	115915	86.36	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.36%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041210.D
 Acq On : 12 Apr 2021 05:10 pm
 Operator : KAI
 Sample : 0005717-06
 Misc : NWP_PSG04-03242021
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 13 10:25:45 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
--	--	--

Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 5:33:00PM **FileID:** C21041211.D **DF:** 1.00
Lab Number: 0005717-07 **Sample Name:** NWP_PSG05-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041211.D
 Acq On : 12 Apr 2021 05:33 pm
 Operator : KAI
 Sample : 0005717-07
 Misc : NWP_PSG05-03242021
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 13 10:25:49 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

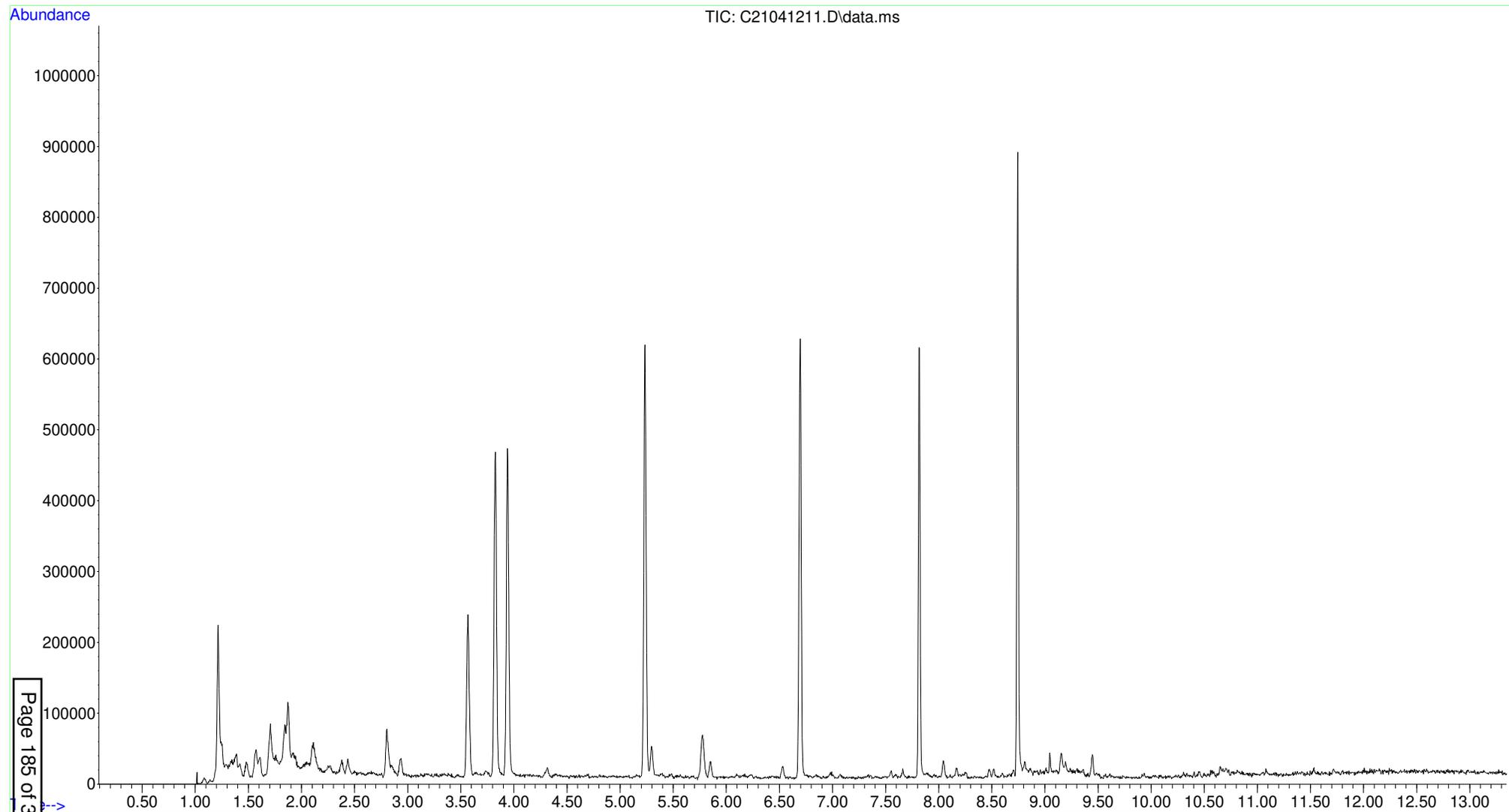
Internal Standards						
1) Fluorobenzene	3.825	96	342982	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	281342	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.742	152	144264	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	118182	89.43	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	89.43%	
19) Toluene-d8	5.234	98	328373	91.89	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	91.89%	
31) Bromofluorobenzene	7.818	95	119873	87.48	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.48%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041211.D
 Acq On : 12 Apr 2021 05:33 pm
 Operator : KAI
 Sample : 0005717-07
 Misc : NWP_PSG05-03242021
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 13 10:25:49 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 5:57:00PM **FileID:** C21041212.D **DF:** 1.00
Lab Number: 0005717-08 **Sample Name:** NWP_PSG06-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041212.D
 Acq On : 12 Apr 2021 05:57 pm
 Operator : KAI
 Sample : 0005717-08
 Misc : NWP_PSG06-03242021
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 13 10:25:52 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

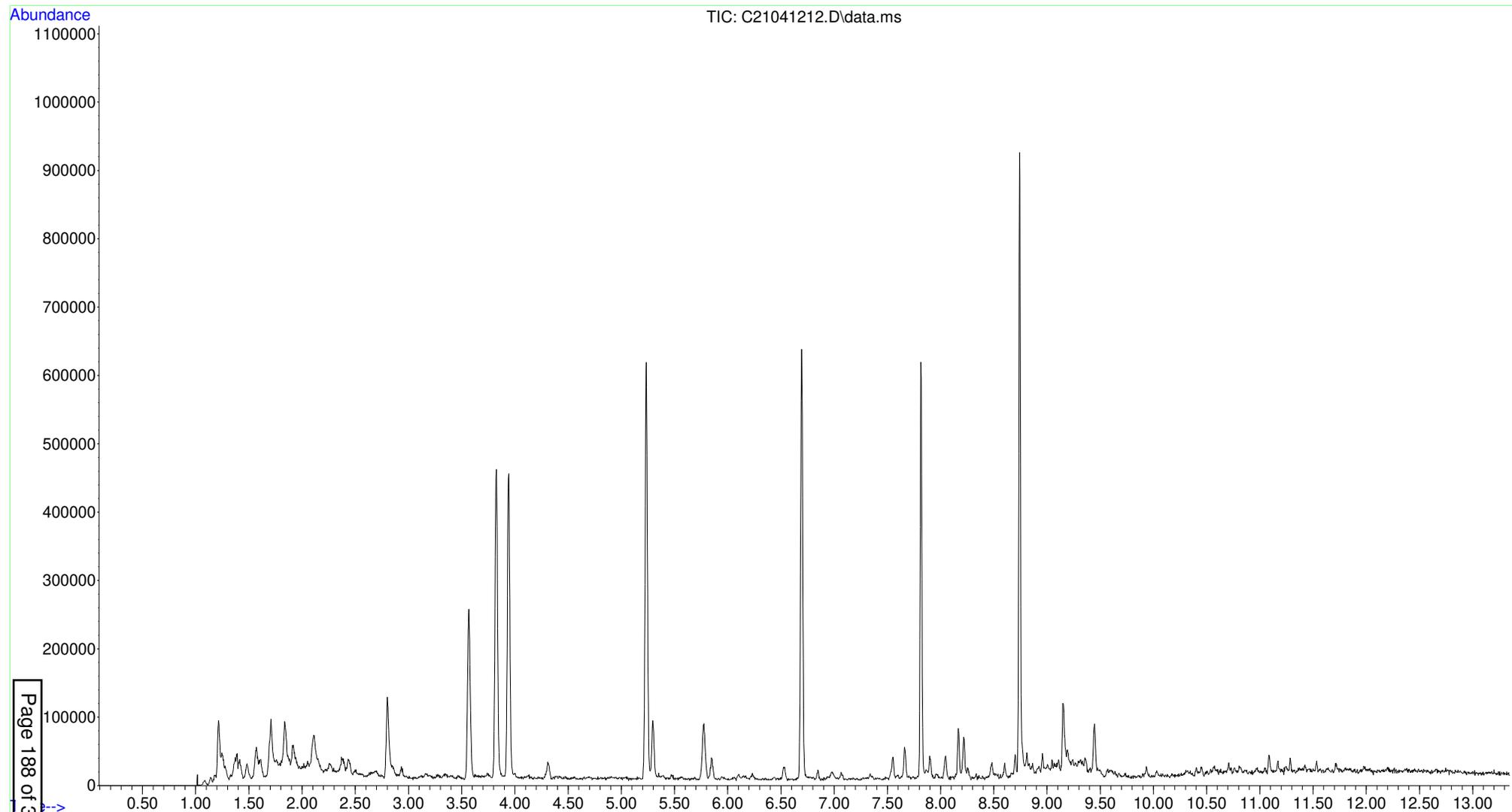
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	339885	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	278279	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	141578	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	131601	100.49	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	100.49%	
19) Toluene-d8	5.234	98	322548	91.26	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	91.26%	
31) Bromofluorobenzene	7.815	95	117084	86.39	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.39%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041212.D
Acq On : 12 Apr 2021 05:57 pm
Operator : KAI
Sample : 0005717-08
Misc : NWP_PSG06-03242021
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 13 10:25:52 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 6:21:00PM **FileID:** C21041213.D **DF:** 1.00
Lab Number: 0005717-09 **Sample Name:** NWP_PSG07-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041213.D
 Acq On : 12 Apr 2021 06:21 pm
 Operator : KAI
 Sample : 0005717-09
 Misc : NWP_PSG07-03242021
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 13 10:25:56 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

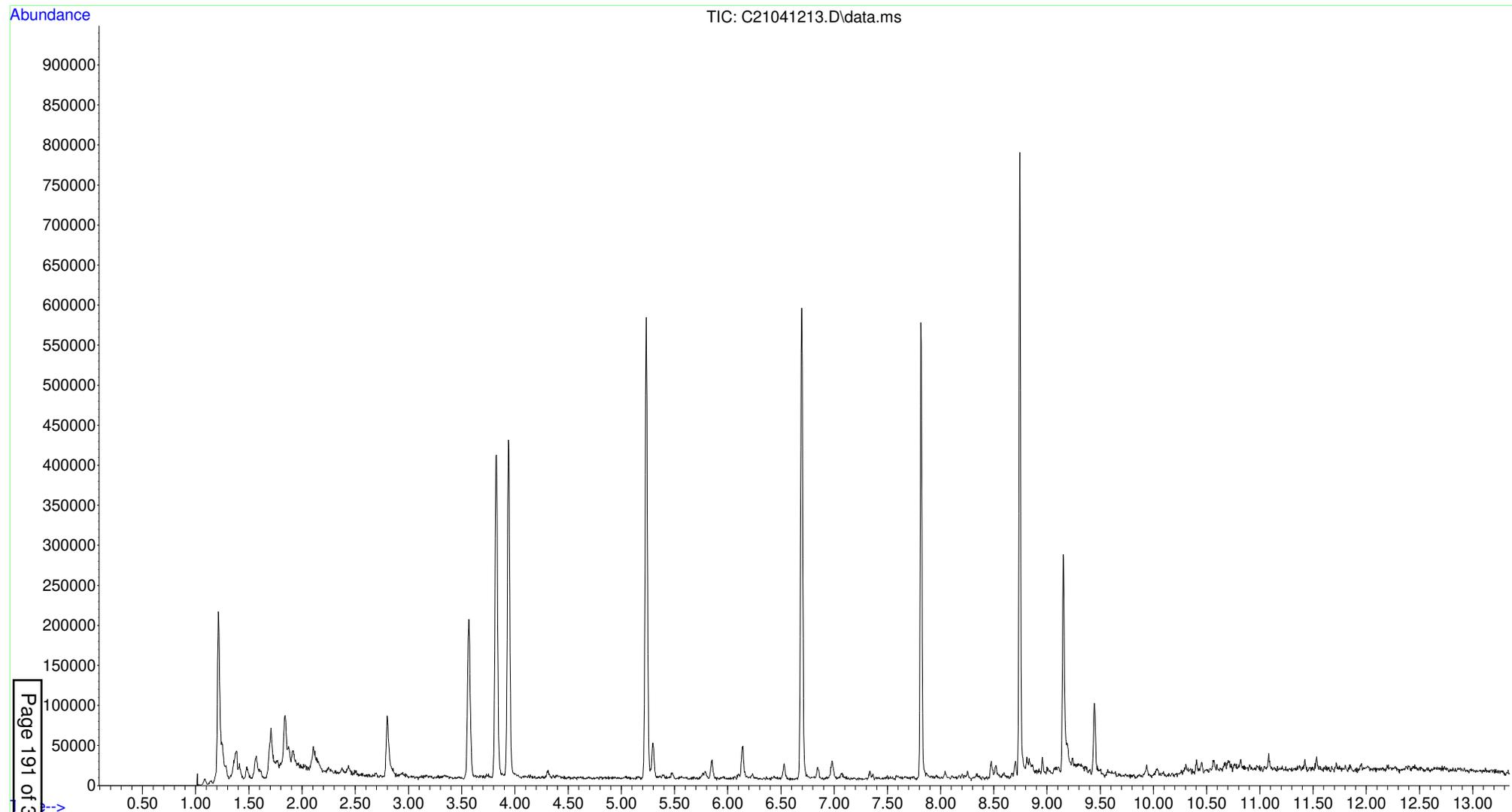
Internal Standards						
1) Fluorobenzene	3.822	96	310296	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	268146	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	134209	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	106634	89.19	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	89.19%	
19) Toluene-d8	5.234	98	300602	88.26	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.26%	
31) Bromofluorobenzene	7.815	95	111965	85.73	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.73%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041213.D
Acq On : 12 Apr 2021 06:21 pm
Operator : KAI
Sample : 0005717-09
Misc : NWP_PSG07-03242021
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 13 10:25:56 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 6:45:00PM **FileID:** C21041214.D **DF:** 1.00
Lab Number: 0005717-10 **Sample Name:** NWP_PSG08-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041214.D
 Acq On : 12 Apr 2021 06:45 pm
 Operator : KAI
 Sample : 0005717-10
 Misc : NWP_PSG08-03242021
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 13 10:26:00 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

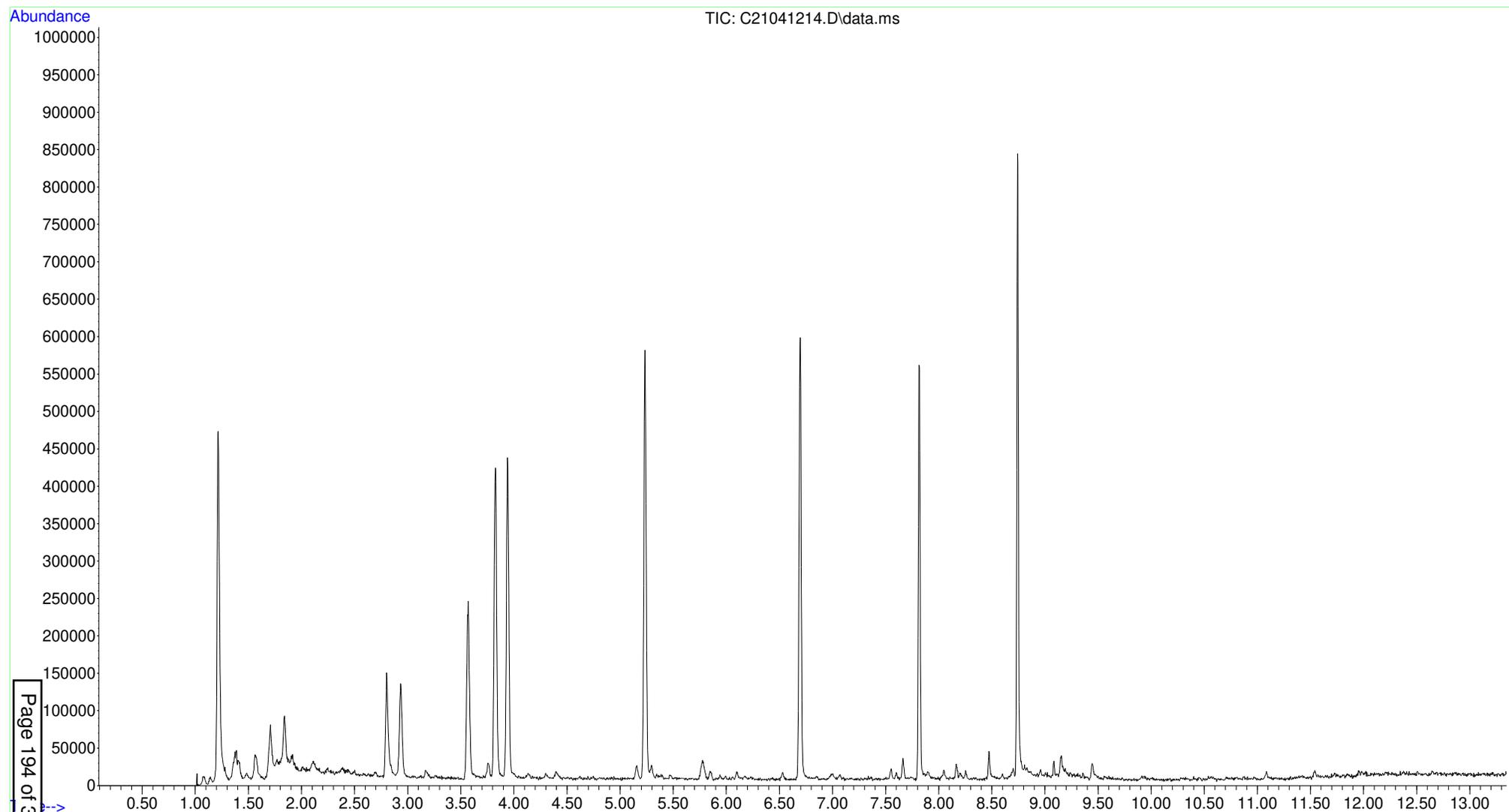
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.826	96	319078	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	266593	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	131930	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	120968	98.39	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	98.39%	
19) Toluene-d8	5.234	98	309961	91.54	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	91.54%	
31) Bromofluorobenzene	7.818	95	108359	83.45	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	83.45%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041214.D
Acq On : 12 Apr 2021 06:45 pm
Operator : KAI
Sample : 0005717-10
Misc : NWP_PSG08-03242021
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 13 10:26:00 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 7:10:00PM **FileID:** C21041215.D **DF:** 1.00
Lab Number: 0005717-11 **Sample Name:** NWP_PSG09-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041215.D
 Acq On : 12 Apr 2021 07:10 pm
 Operator : KAI
 Sample : 0005717-11
 Misc : NWP_PSG09-03252021
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 13 10:26:04 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

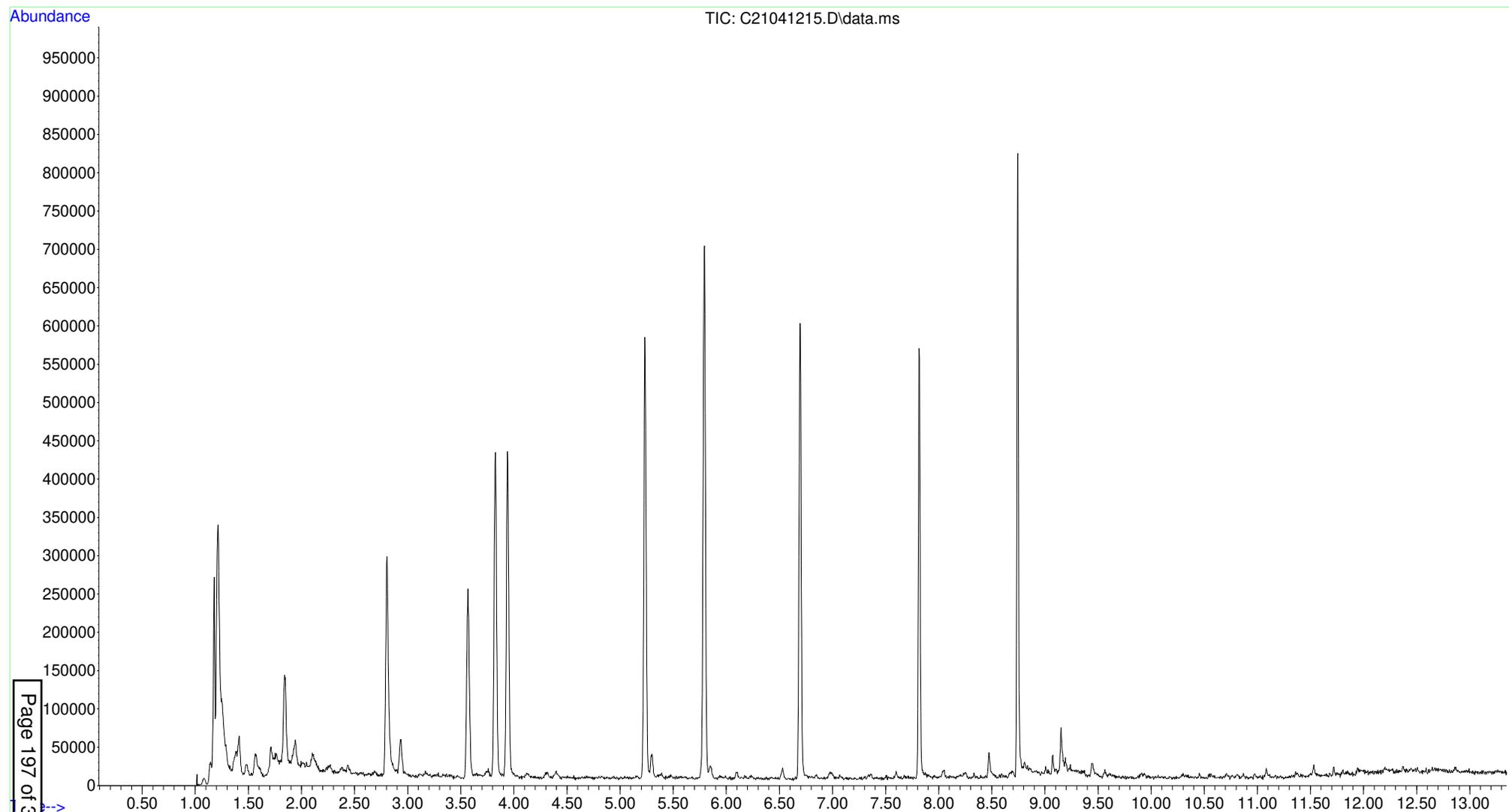
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	314511	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	268897	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	134650	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	127403	105.13	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	105.13%	
19) Toluene-d8	5.231	98	300596	88.01	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.01%	
31) Bromofluorobenzene	7.815	95	112808	86.14	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.14%	
Target Compounds						
22) Tetrachloroethene	5.792	131	119713	136.46	ng	Qvalue 97

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041215.D
Acq On : 12 Apr 2021 07:10 pm
Operator : KAI
Sample : 0005717-11
Misc : NWP_PSG09-03252021
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 13 10:26:04 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 7:34:00PM **FileID:** C21041216.D **DF:** 1.00
Lab Number: 0005717-12 **Sample Name:** NWP_PSG10-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041216.D
 Acq On : 12 Apr 2021 07:34 pm
 Operator : KAI
 Sample : 0005717-12
 Misc : NWP_PSG10-03252021
 ALS Vial : 22 Sample Multiplier: 1

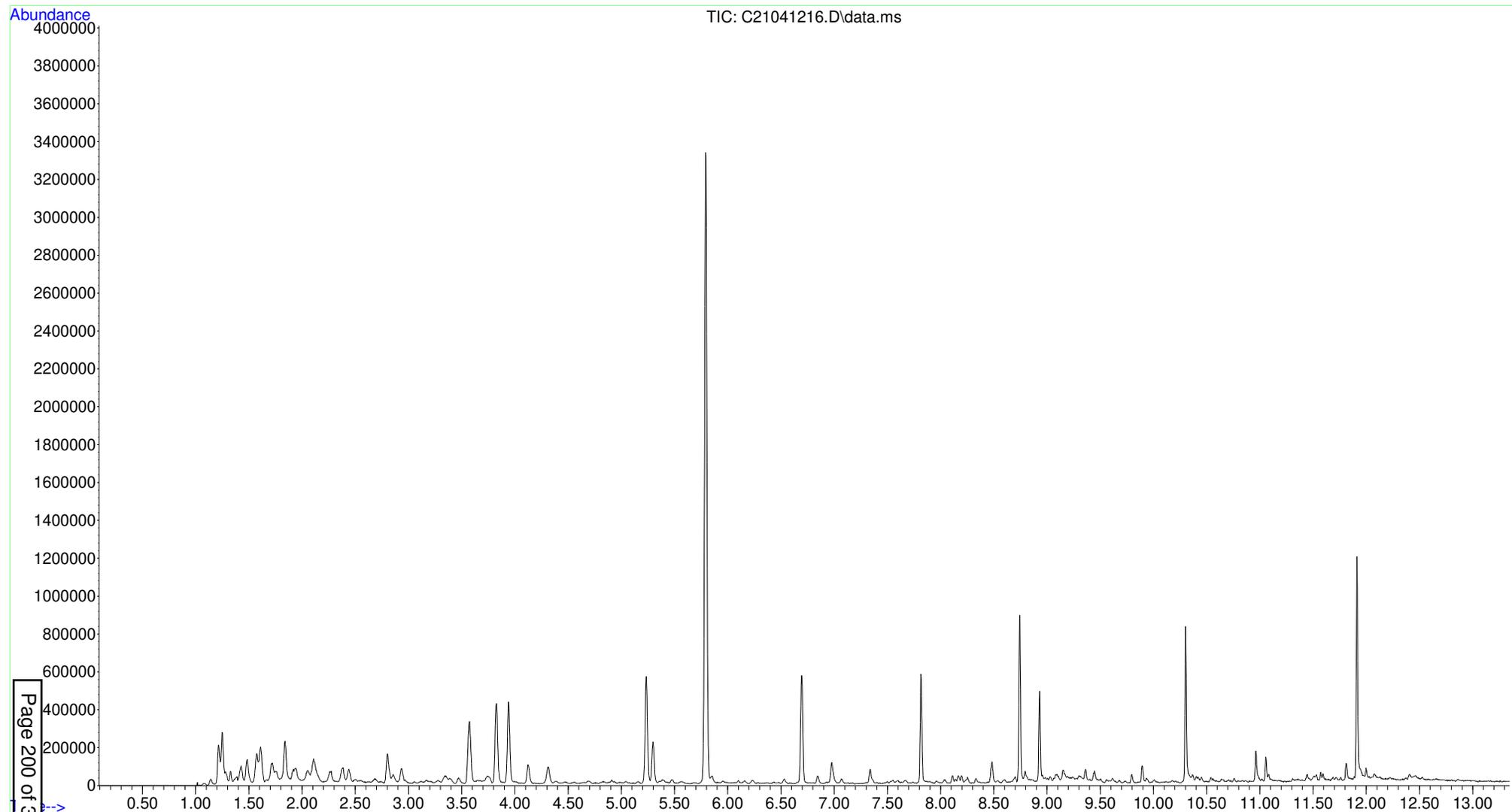
Quant Time: Apr 13 10:26:08 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	314160	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	267311	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	141228	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	126302	104.34	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	104.34%	
19) Toluene-d8	5.234	98	297710	87.69	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.69%	
31) Bromofluorobenzene	7.815	95	112639	86.52	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.52%	
Target Compounds						
15) Trichloroethene	4.125	130	25295	24.00	ng	96
22) Tetrachloroethene	5.792	131	588021	674.28	ng	99

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041216.D
Acq On : 12 Apr 2021 07:34 pm
Operator : KAI
Sample : 0005717-12
Misc : NWP_PSG10-03252021
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 13 10:26:08 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 7:59:00PM **FileID:** C21041217.D **DF:** 1.00
Lab Number: 0005717-13 **Sample Name:** NWP_PSG11-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041217.D
 Acq On : 12 Apr 2021 07:59 pm
 Operator : KAI
 Sample : 0005717-13
 Misc : NWP_PSG11-03242021
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 13 10:26:13 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

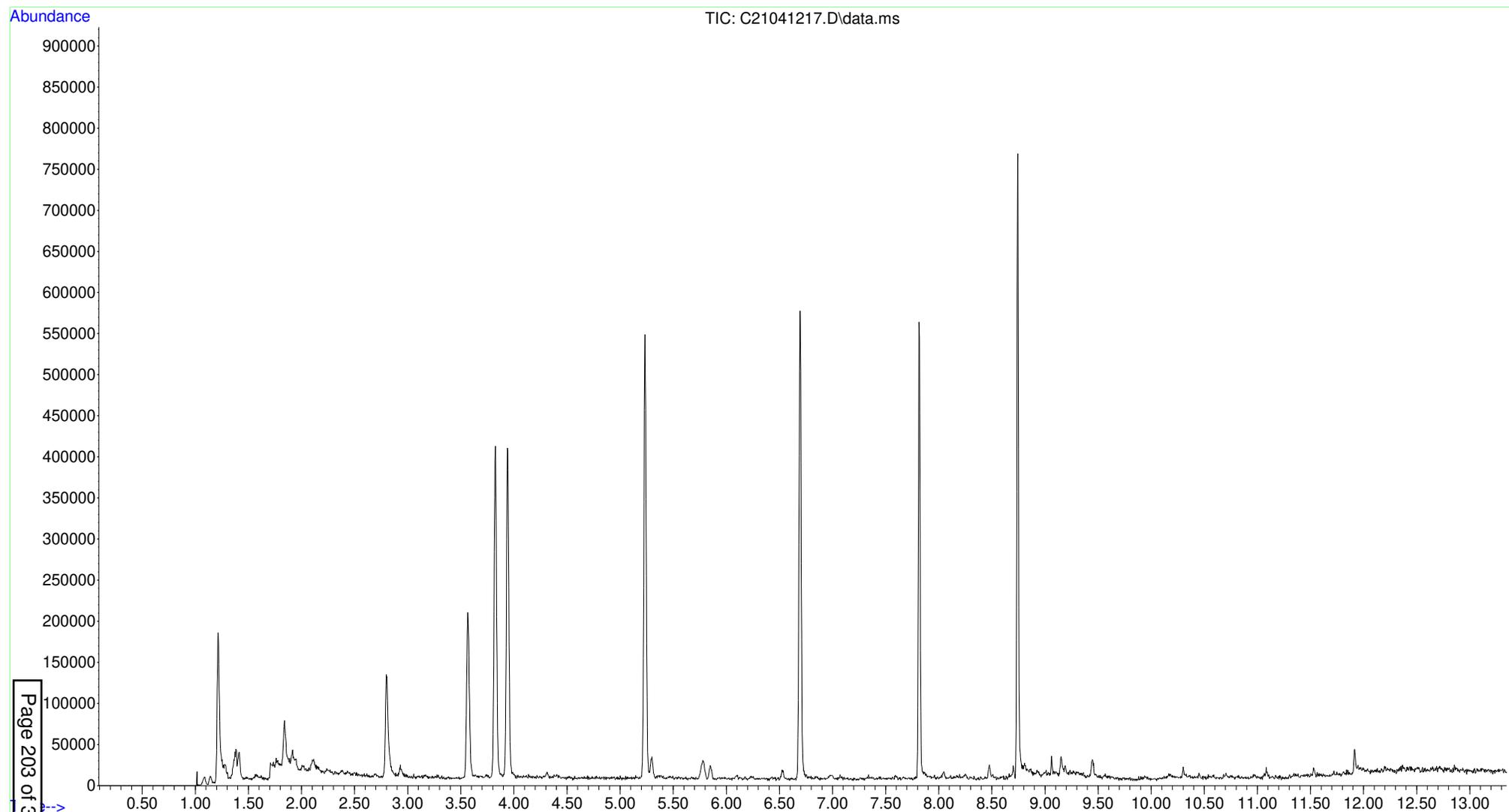
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	298383	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	256520	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	128283	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	110497	96.11	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	96.11%	
19) Toluene-d8	5.234	98	286893	88.05	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.05%	
31) Bromofluorobenzene	7.815	95	108786	87.07	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.07%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041217.D
 Acq On : 12 Apr 2021 07:59 pm
 Operator : KAI
 Sample : 0005717-13
 Misc : NWP_PSG11-03242021
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 13 10:26:13 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 8:23:00PM **FileID:** C21041218.D **DF:** 1.00
Lab Number: 0005717-14 **Sample Name:** NWP_PSG12-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041218.D
 Acq On : 12 Apr 2021 08:23 pm
 Operator : KAI
 Sample : 0005717-14
 Misc : NWP_PSG12-03242021
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 13 10:26:18 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

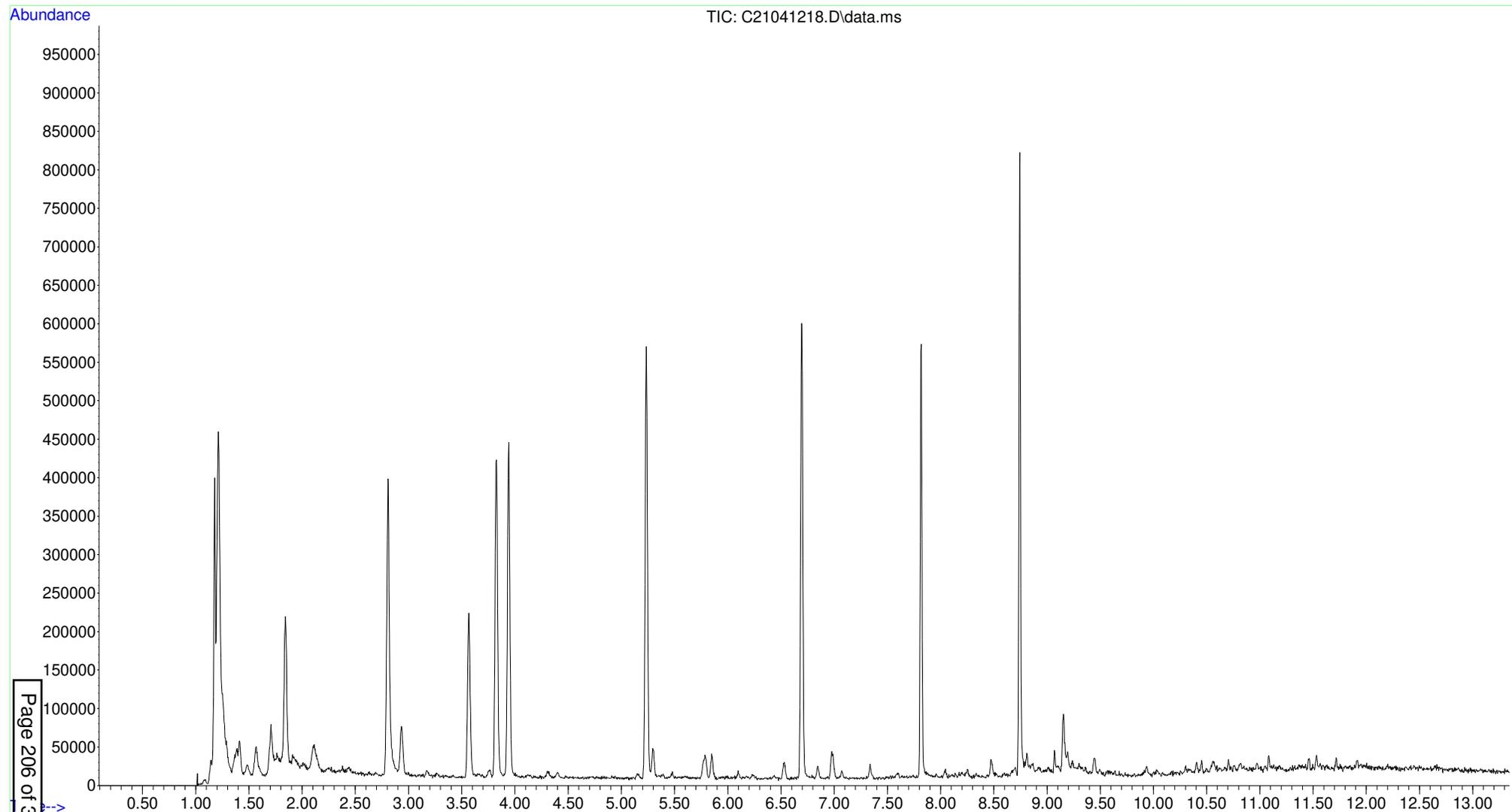
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	315587	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	270957	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	134092	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	118723	97.64	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	97.64%	
19) Toluene-d8	5.234	98	300909	87.44	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.44%	
31) Bromofluorobenzene	7.818	95	110865	84.01	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	84.01%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041218.D
Acq On : 12 Apr 2021 08:23 pm
Operator : KAI
Sample : 0005717-14
Misc : NWP_PSG12-03242021
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 13 10:26:18 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 8:47:00PM **FileID:** C21041219.D **DF:** 1.00
Lab Number: 0005717-15 **Sample Name:** NWP_PSG13-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041219.D
 Acq On : 12 Apr 2021 08:47 pm
 Operator : KAI
 Sample : 0005717-15
 Misc : NWP_PSG13-03242021
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 13 10:26:24 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

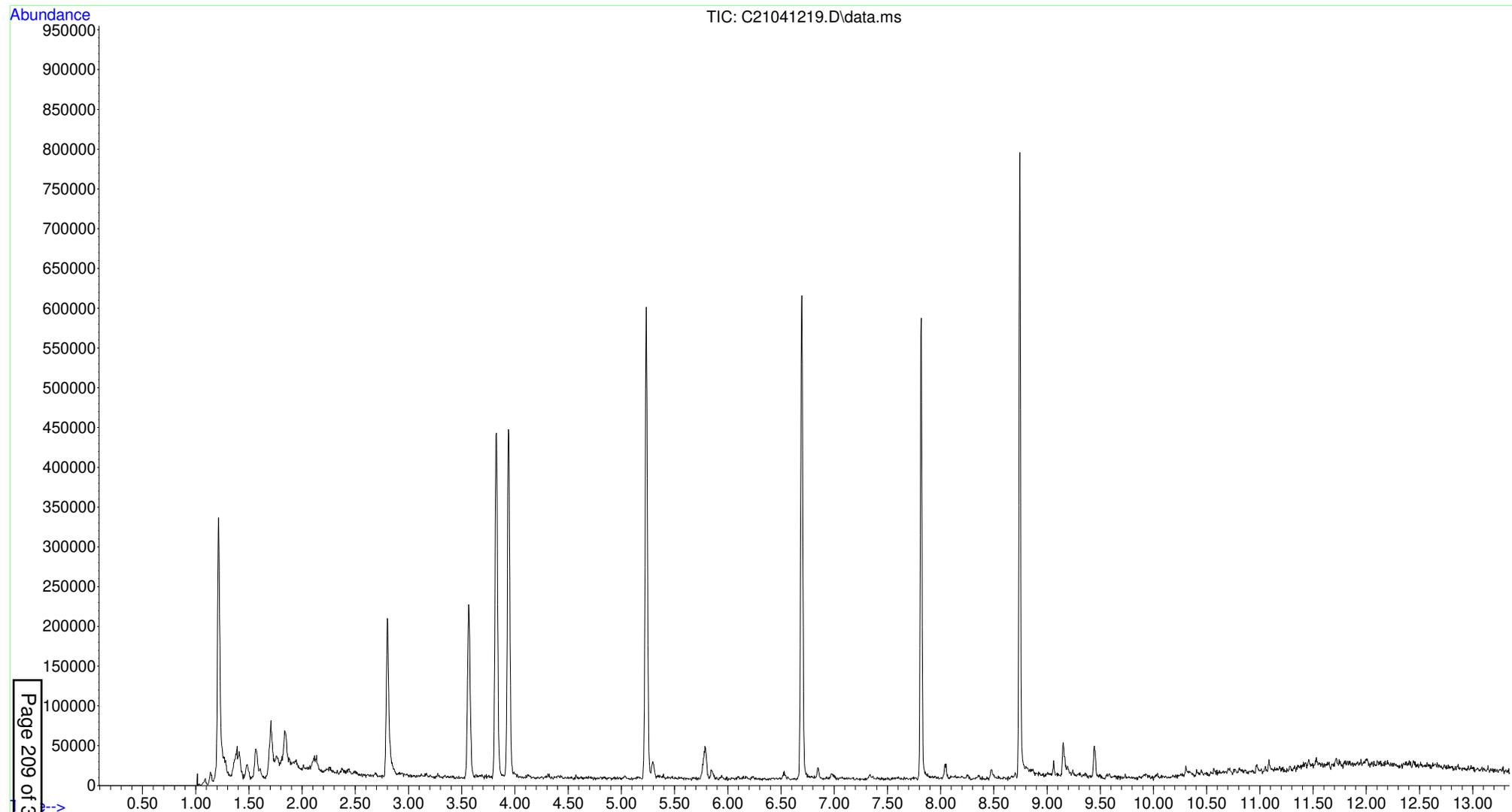
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	329458	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	270234	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	132511	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	119595	94.21	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery =	94.21%		
19) Toluene-d8	5.234	98	308143	89.78	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery =	89.78%		
31) Bromofluorobenzene	7.818	95	112830	85.73	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery =	85.73%		

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041219.D
Acq On : 12 Apr 2021 08:47 pm
Operator : KAI
Sample : 0005717-15
Misc : NWP_PSG13-03242021
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 13 10:26:24 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 9:11:00PM **FileID:** C21041220.D **DF:** 1.00
Lab Number: 0005717-16 **Sample Name:** NWP_PSG14-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041220.D
 Acq On : 12 Apr 2021 09:11 pm
 Operator : KAI
 Sample : 0005717-16
 Misc : NWP_PSG14-03242021
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 13 10:26:28 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

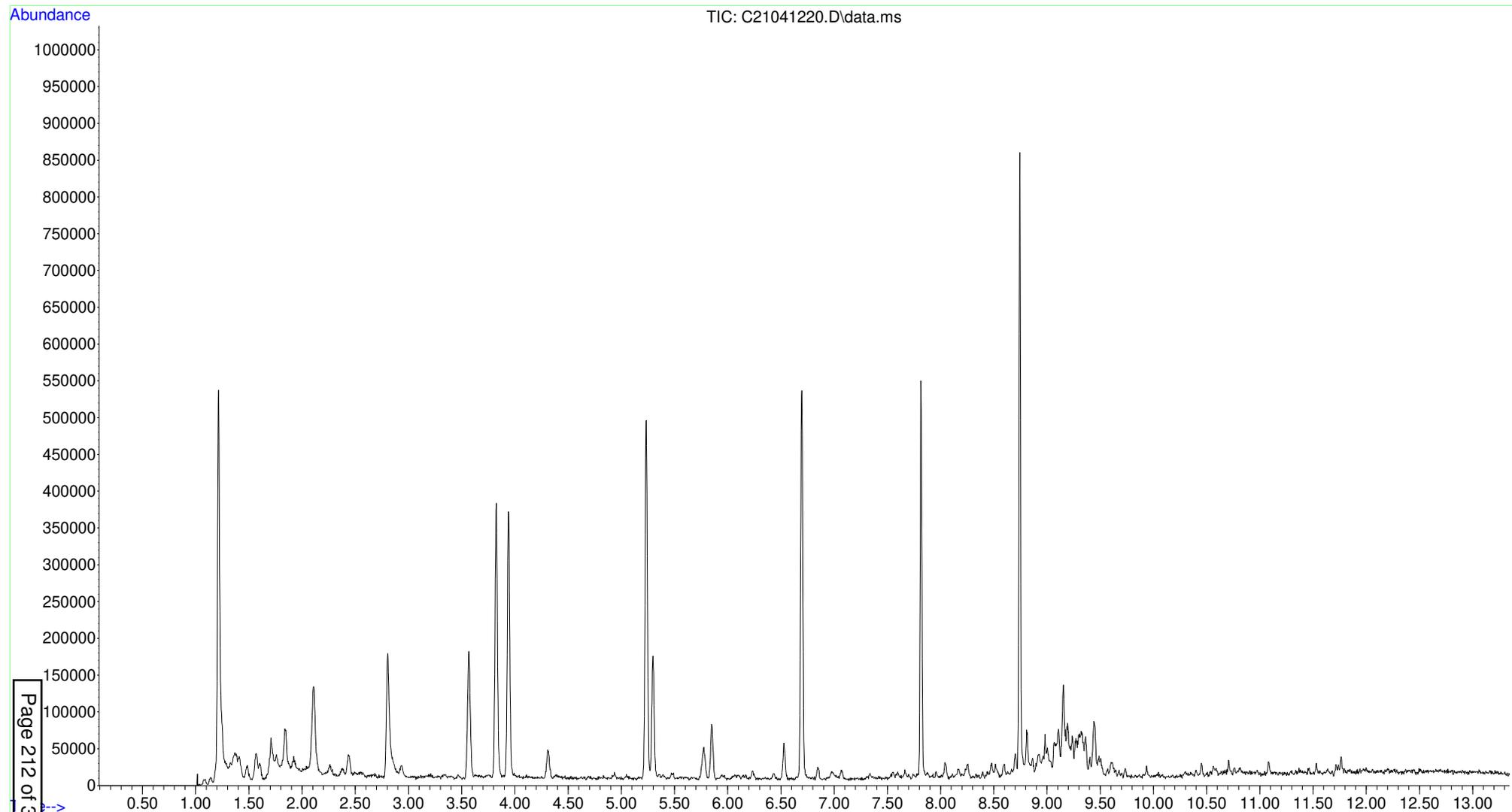
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	267706	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	239528	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	131582	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	89183	86.46	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.46%	
19) Toluene-d8	5.234	98	261242	85.87	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.87%	
31) Bromofluorobenzene	7.815	95	105548	90.47	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.47%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041220.D
Acq On : 12 Apr 2021 09:11 pm
Operator : KAI
Sample : 0005717-16
Misc : NWP_PSG14-03242021
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 13 10:26:28 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 9:34:00PM **FileID:** C21041221.D **DF:** 1.00
Lab Number: 0005717-17 **Sample Name:** NWP_PSG15-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041221.D
 Acq On : 12 Apr 2021 09:34 pm
 Operator : KAI
 Sample : 0005717-17
 Misc : NWP_PSG15-03242021
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 13 10:26:33 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

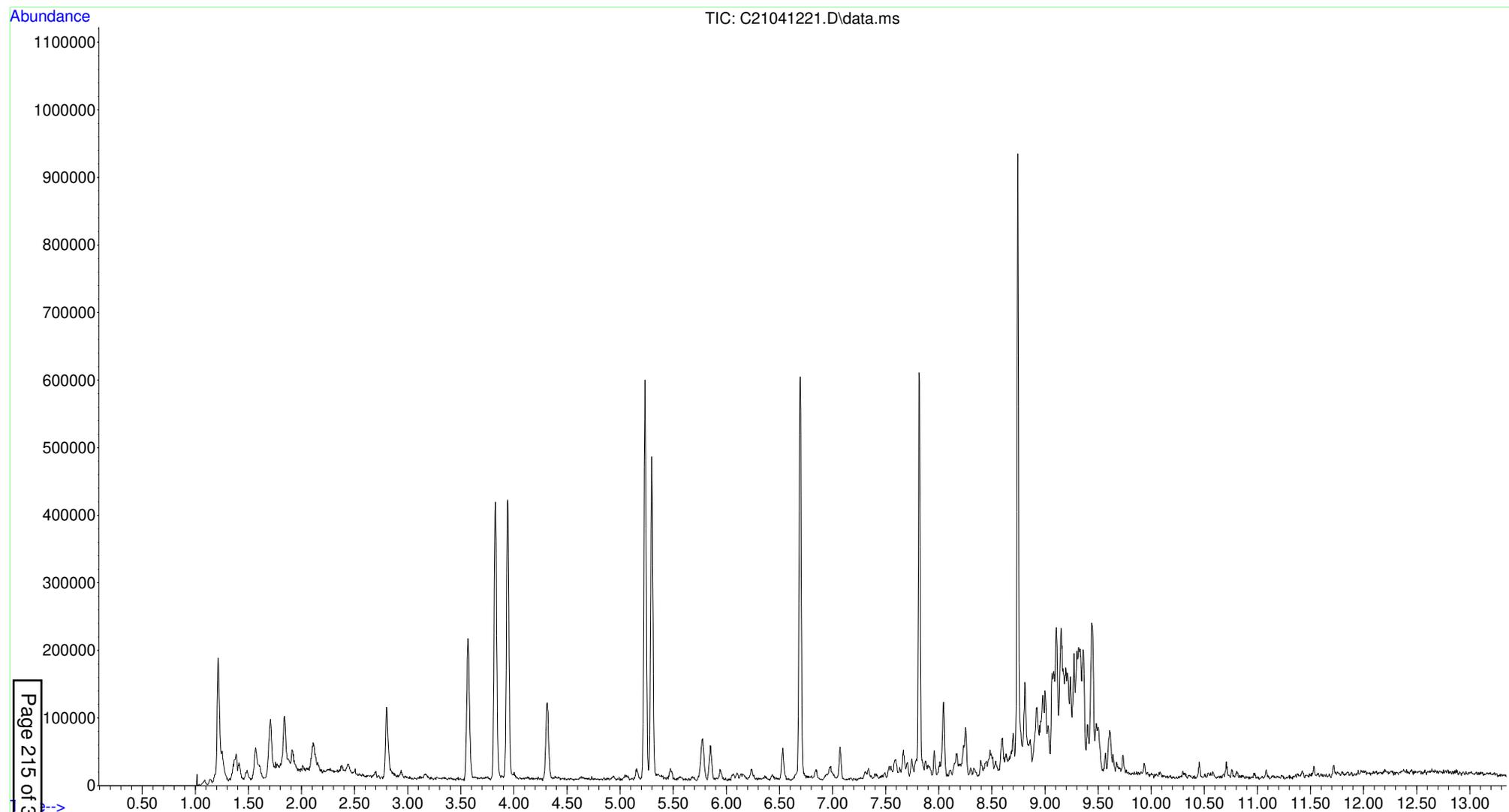
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	314489	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	265895	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	139909	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	107888	89.04	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	89.04%	
19) Toluene-d8	5.234	98	300410	88.95	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.95%	
31) Bromofluorobenzene	7.818	95	114759	88.61	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.61%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041221.D
Acq On : 12 Apr 2021 09:34 pm
Operator : KAI
Sample : 0005717-17
Misc : NWP_PSG15-03242021
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 13 10:26:33 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 9:58:00PM **FileID:** C21041222.D **DF:** 1.00
Lab Number: 0005717-18 **Sample Name:** NWP_PSG16-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041222.D
 Acq On : 12 Apr 2021 09:58 pm
 Operator : KAI
 Sample : 0005717-18
 Misc : NWP_PSG16-03242021
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Apr 13 10:26:37 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

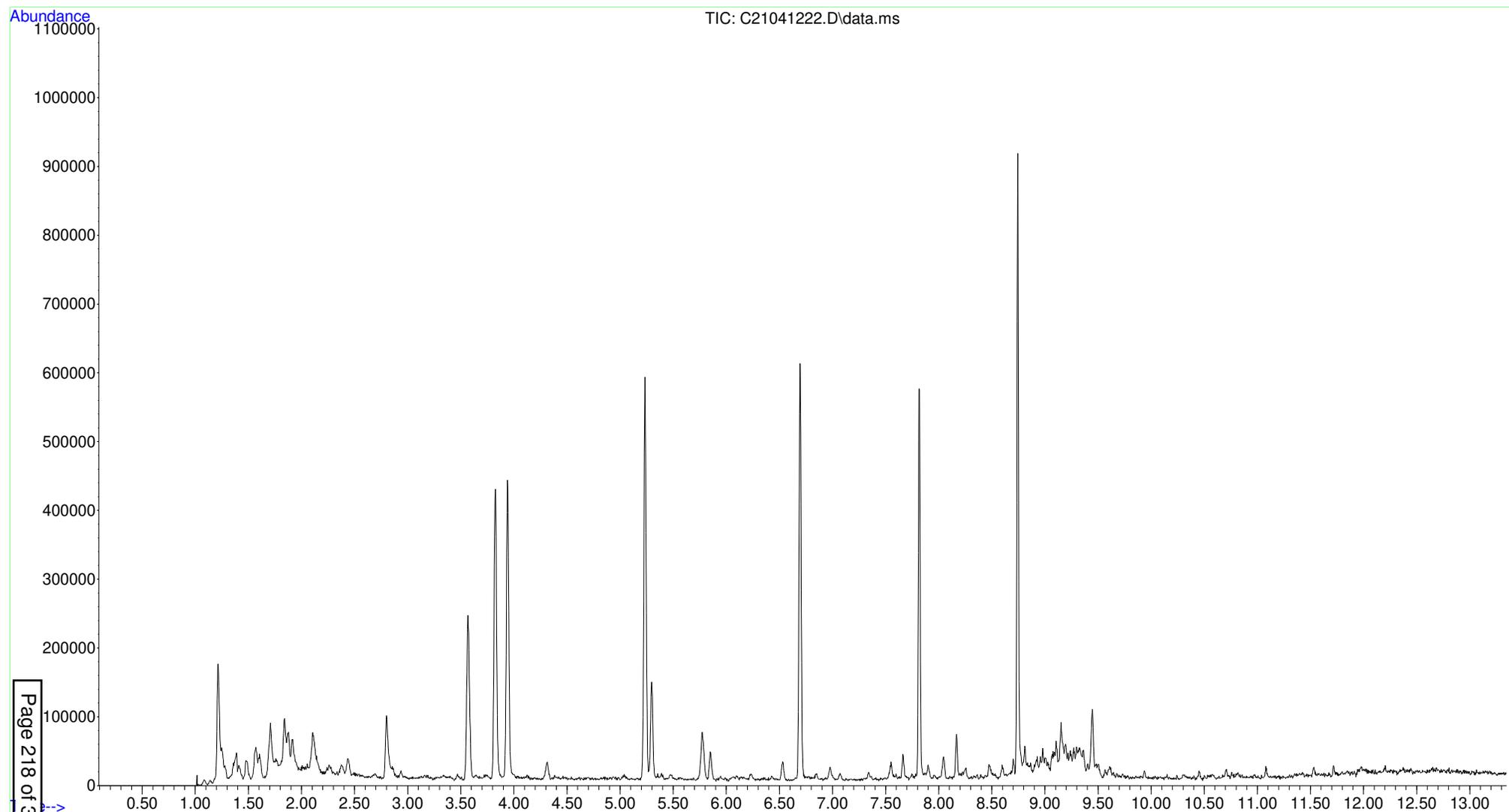
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	319254	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	263646	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	140818	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	112920	91.80	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	91.80%	
19) Toluene-d8	5.234	98	302058	90.20	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.20%	
31) Bromofluorobenzene	7.818	95	113150	88.12	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.12%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041222.D
Acq On : 12 Apr 2021 09:58 pm
Operator : KAI
Sample : 0005717-18
Misc : NWP_PSG16-03242021
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Apr 13 10:26:37 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 10:22:00PM **FileID:** C21041223.D **DF:** 1.00
Lab Number: 0005717-19 **Sample Name:** NWP_PSG17-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041223.D
 Acq On : 12 Apr 2021 10:22 pm
 Operator : KAI
 Sample : 0005717-19
 Misc : NWP_PSG17-03242021
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 13 10:26:40 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

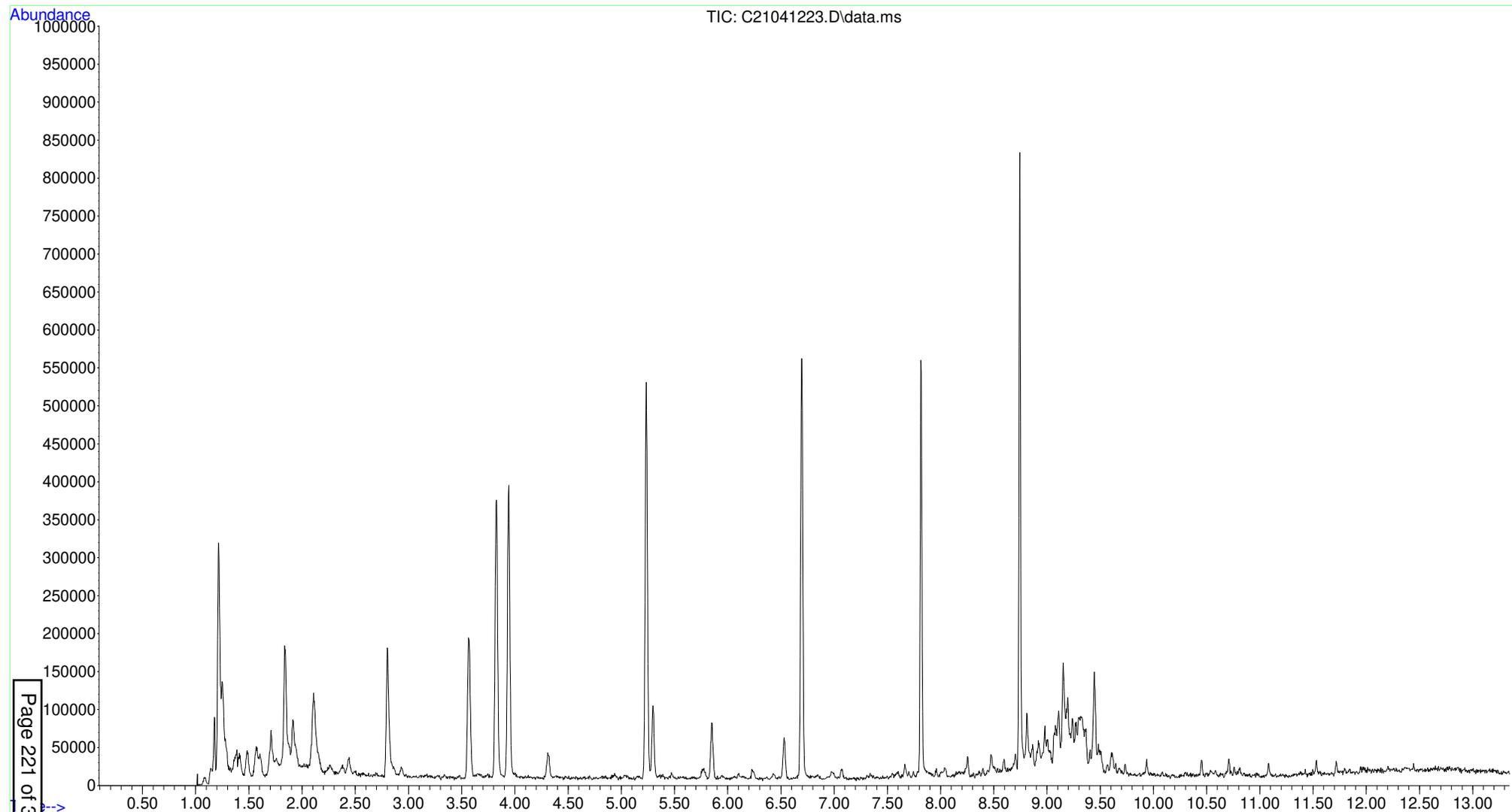
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	278354	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	253665	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	130737	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	108805	101.45	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	101.45%	
19) Toluene-d8	5.234	98	276369	85.78	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.78%	
31) Bromofluorobenzene	7.815	95	109478	88.61	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.61%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041223.D
Acq On : 12 Apr 2021 10:22 pm
Operator : KAI
Sample : 0005717-19
Misc : NWP_PSG17-03242021
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 13 10:26:40 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 10:46:00PM **FileID:** C21041224.D **DF:** 1.00
Lab Number: 0005717-20 **Sample Name:** NWP_PSG18-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041224.D
 Acq On : 12 Apr 2021 10:46 pm
 Operator : KAI
 Sample : 0005717-20
 Misc : NWP_PSG18-03242021
 ALS Vial : 30 Sample Multiplier: 1

Quant Time: Apr 13 10:26:45 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

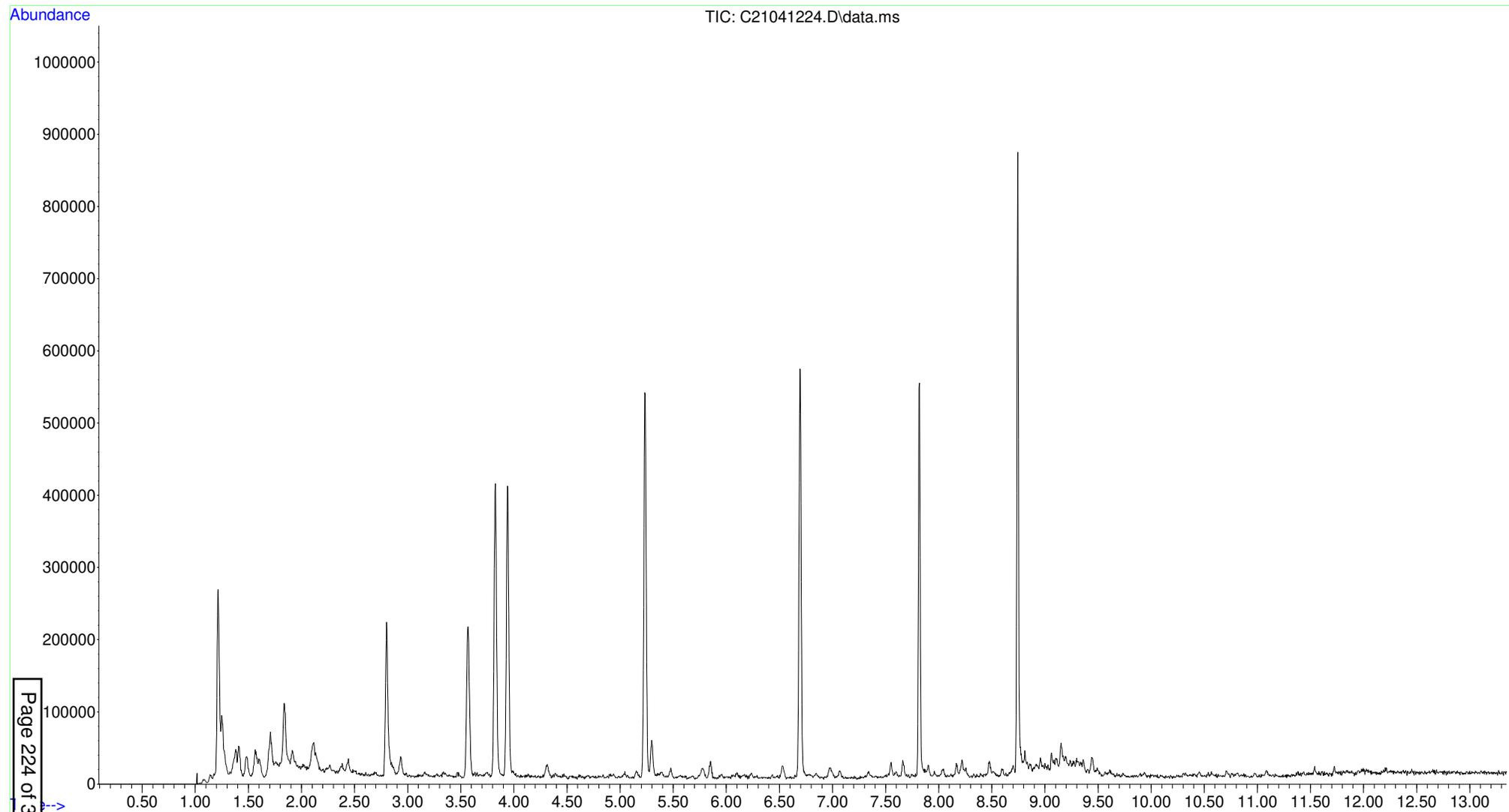
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	298483	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	257179	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	130272	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	112427	97.76	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	97.76%	
19) Toluene-d8	5.237	98	290676	88.99	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.99%	
31) Bromofluorobenzene	7.818	95	107946	86.18	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.18%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041224.D
Acq On : 12 Apr 2021 10:46 pm
Operator : KAI
Sample : 0005717-20
Misc : NWP_PSG18-03242021
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Apr 13 10:26:45 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 11:11:00PM **FileID:** C21041225.D **DF:** 1.00
Lab Number: 0005717-21 **Sample Name:** NWP_PSG19-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041225.D
 Acq On : 12 Apr 2021 11:11 pm
 Operator : KAI
 Sample : 0005717-21
 Misc : NWP_PSG19-03242021
 ALS Vial : 31 Sample Multiplier: 1

Quant Time: Apr 13 10:26:49 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

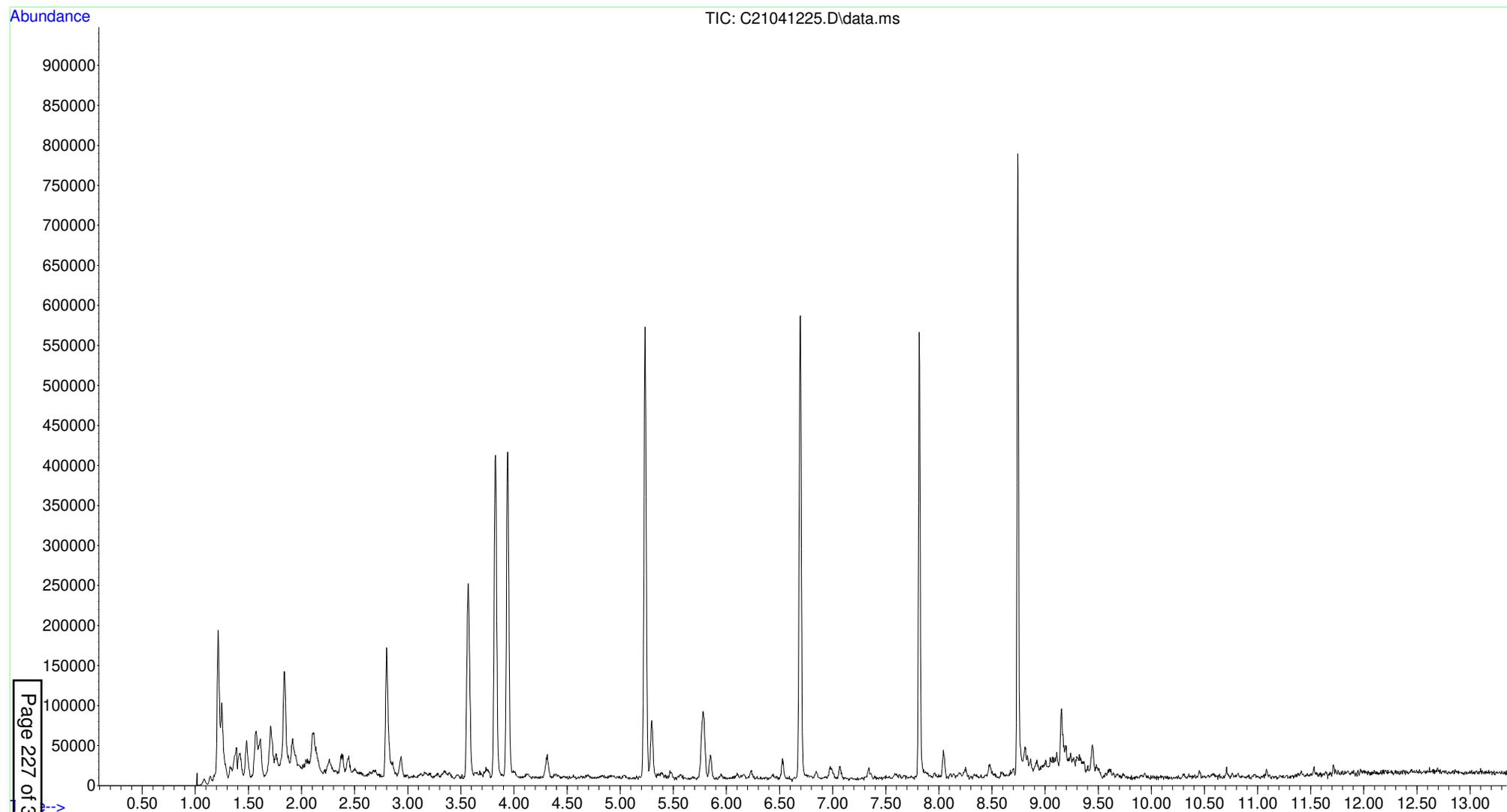
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	304556	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	264800	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	130238	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	114077	97.21	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	97.21%	
19) Toluene-d8	5.234	98	292770	87.05	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.05%	
31) Bromofluorobenzene	7.815	95	107173	83.10	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	83.10%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041225.D
 Acq On : 12 Apr 2021 11:11 pm
 Operator : KAI
 Sample : 0005717-21
 Misc : NWP_PSG19-03242021
 ALS Vial : 31 Sample Multiplier: 1

Quant Time: Apr 13 10:26:49 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 11:35:00PM **FileID:** C21041226.D **DF:** 1.00
Lab Number: 0005717-22 **Sample Name:** NWP_PSG20-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041226.D
 Acq On : 12 Apr 2021 11:35 pm
 Operator : KAI
 Sample : 0005717-22
 Misc : NWP_PSG20-03252021
 ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 13 10:26:53 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

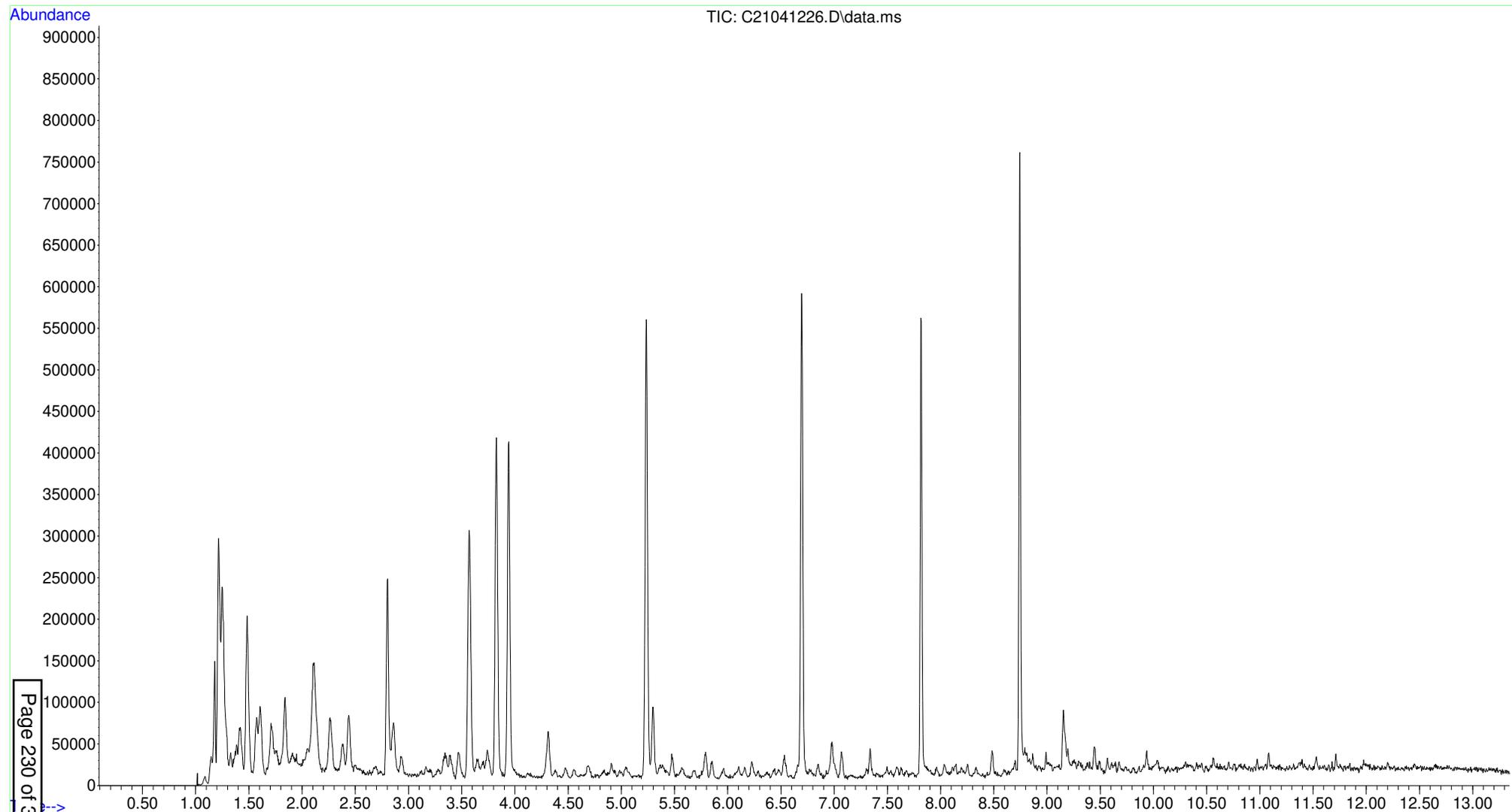
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	300984	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	265967	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	130112	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	121321	104.61	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	104.61%	
19) Toluene-d8	5.237	98	296215	87.69	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.69%	
31) Bromofluorobenzene	7.815	95	108577	83.82	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	83.82%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041226.D
 Acq On : 12 Apr 2021 11:35 pm
 Operator : KAI
 Sample : 0005717-22
 Misc : NWP_PSG20-03252021
 ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 13 10:26:53 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/12/2021 11:59:00PM **FileID:** C21041227.D **DF:** 1.00
Lab Number: 0005717-23 **Sample Name:** NWP_PSG21-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041227.D
 Acq On : 12 Apr 2021 11:59 pm
 Operator : KAI
 Sample : 0005717-23
 Misc : NWP_PSG21-03242021
 ALS Vial : 33 Sample Multiplier: 1

Quant Time: Apr 13 10:26:57 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

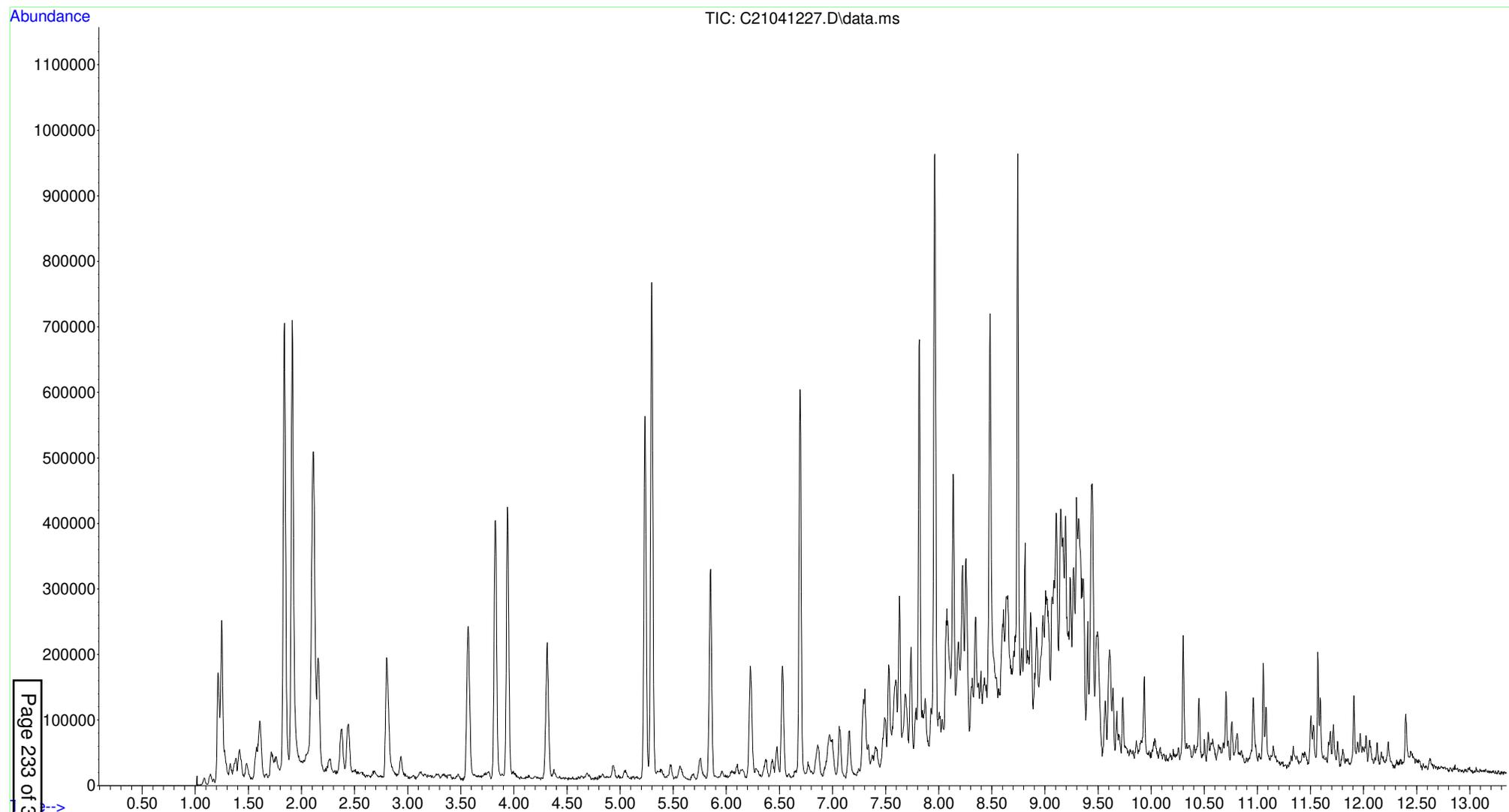
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	302036	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	265462	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	147383	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	110869	95.27	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	95.27%	
19) Toluene-d8	5.234	98	291204	86.37	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.37%	
31) Bromofluorobenzene	7.815	95	115037	88.97	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.97%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041227.D
Acq On : 12 Apr 2021 11:59 pm
Operator : KAI
Sample : 0005717-23
Misc : NWP_PSG21-03242021
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Apr 13 10:26:57 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 12:23:00AM **FileID:** C21041228.D **DF:** 1.00
Lab Number: 0005717-24 **Sample Name:** NWP_PSG22-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041228.D
 Acq On : 13 Apr 2021 12:23 am
 Operator : KAI
 Sample : 0005717-24
 Misc : NWP_PSG22-03252021
 ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 13 10:27:02 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

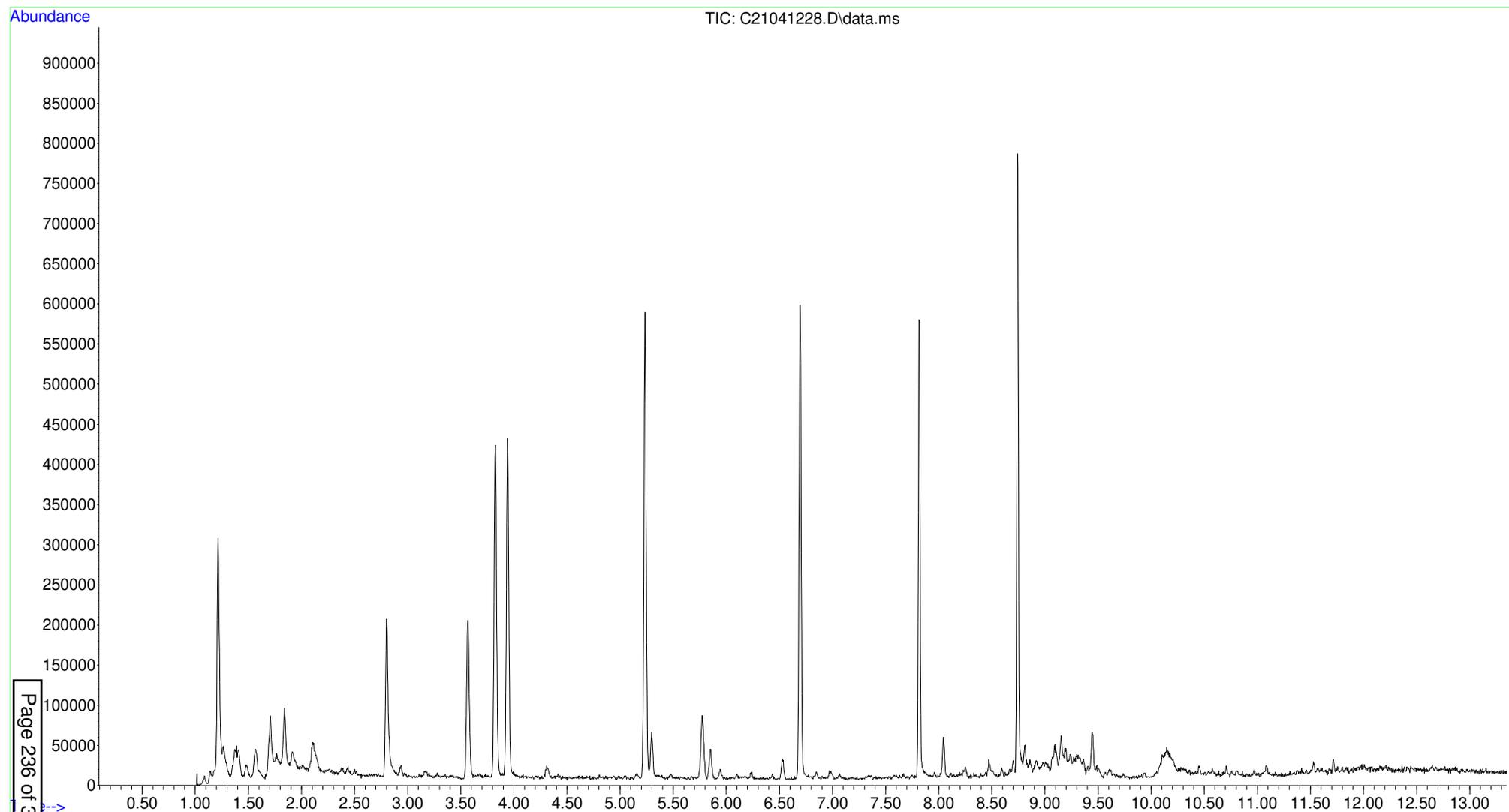
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	311381	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	268761	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	130806	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	113448	94.56	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery =	94.56%		
19) Toluene-d8	5.234	98	301255	88.25	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery =	88.25%		
31) Bromofluorobenzene	7.818	95	112251	85.75	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery =	85.75%		

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041228.D
Acq On : 13 Apr 2021 12:23 am
Operator : KAI
Sample : 0005717-24
Misc : NWP_PSG22-03252021
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 13 10:27:02 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 12:47:00AM **FileID:** C21041229.D **DF:** 1.00
Lab Number: 0005717-25 **Sample Name:** NWP_PSG23-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041229.D
 Acq On : 13 Apr 2021 12:47 am
 Operator : KAI
 Sample : 0005717-25
 Misc : NWP_PSG23-03252021
 ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 13 10:27:06 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

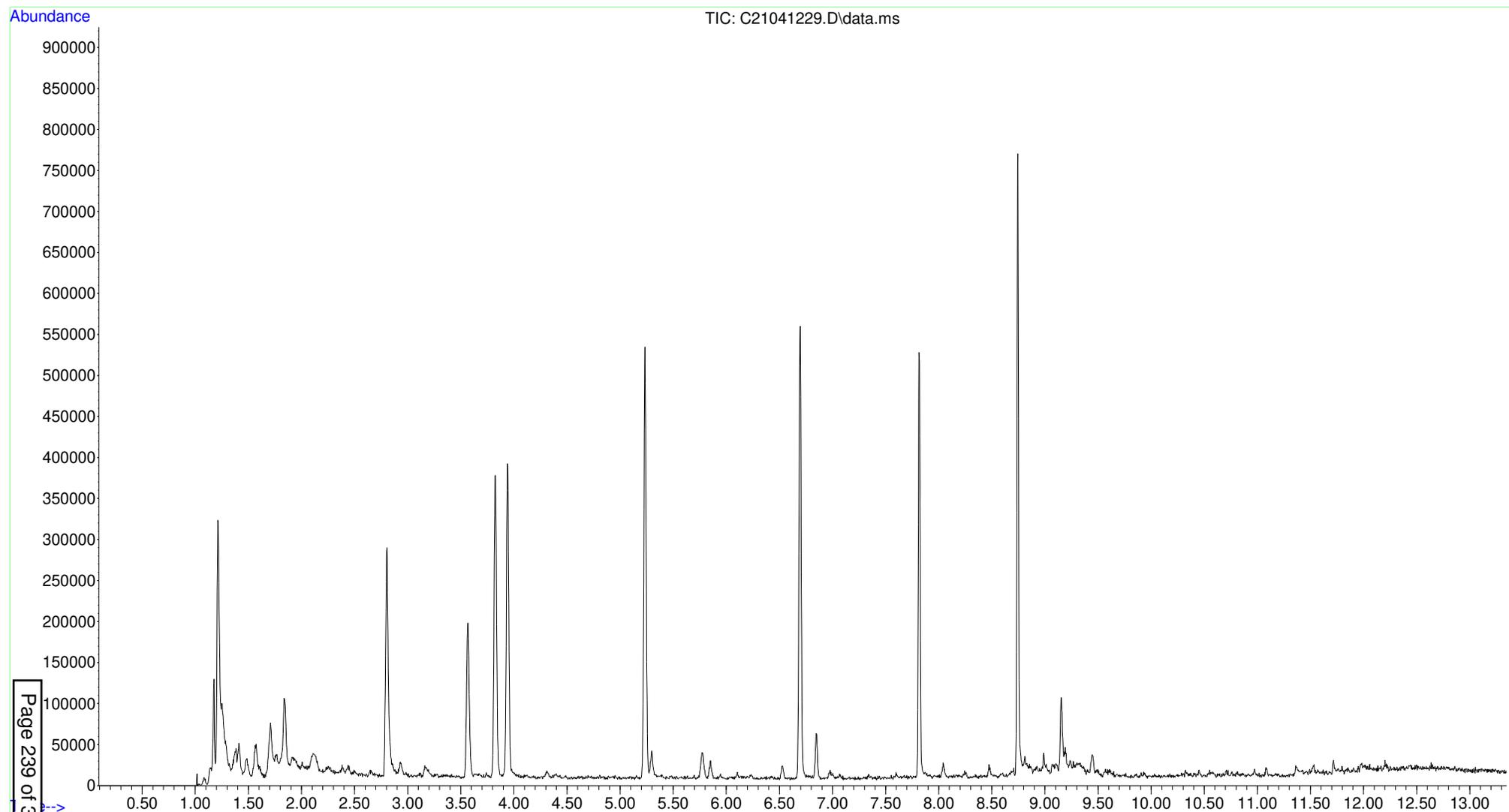
Internal Standards						
1) Fluorobenzene	3.825	96	279550	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	249097	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	128788	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	105556	98.00	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	98.00%	
19) Toluene-d8	5.234	98	274993	86.92	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.92%	
31) Bromofluorobenzene	7.815	95	104972	86.52	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.52%	

Target Compounds	Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041229.D
 Acq On : 13 Apr 2021 12:47 am
 Operator : KAI
 Sample : 0005717-25
 Misc : NWP_PSG23-03252021
 ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 13 10:27:06 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 1:11:00AM **FileID:** C21041230.D **DF:** 1.00
Lab Number: 0005717-26 **Sample Name:** NWP_PSG24-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041230.D
 Acq On : 13 Apr 2021 01:11 am
 Operator : KAI
 Sample : 0005717-26
 Misc : NWP_PSG24-03252021
 ALS Vial : 36 Sample Multiplier: 1

Quant Time: Apr 13 10:27:10 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

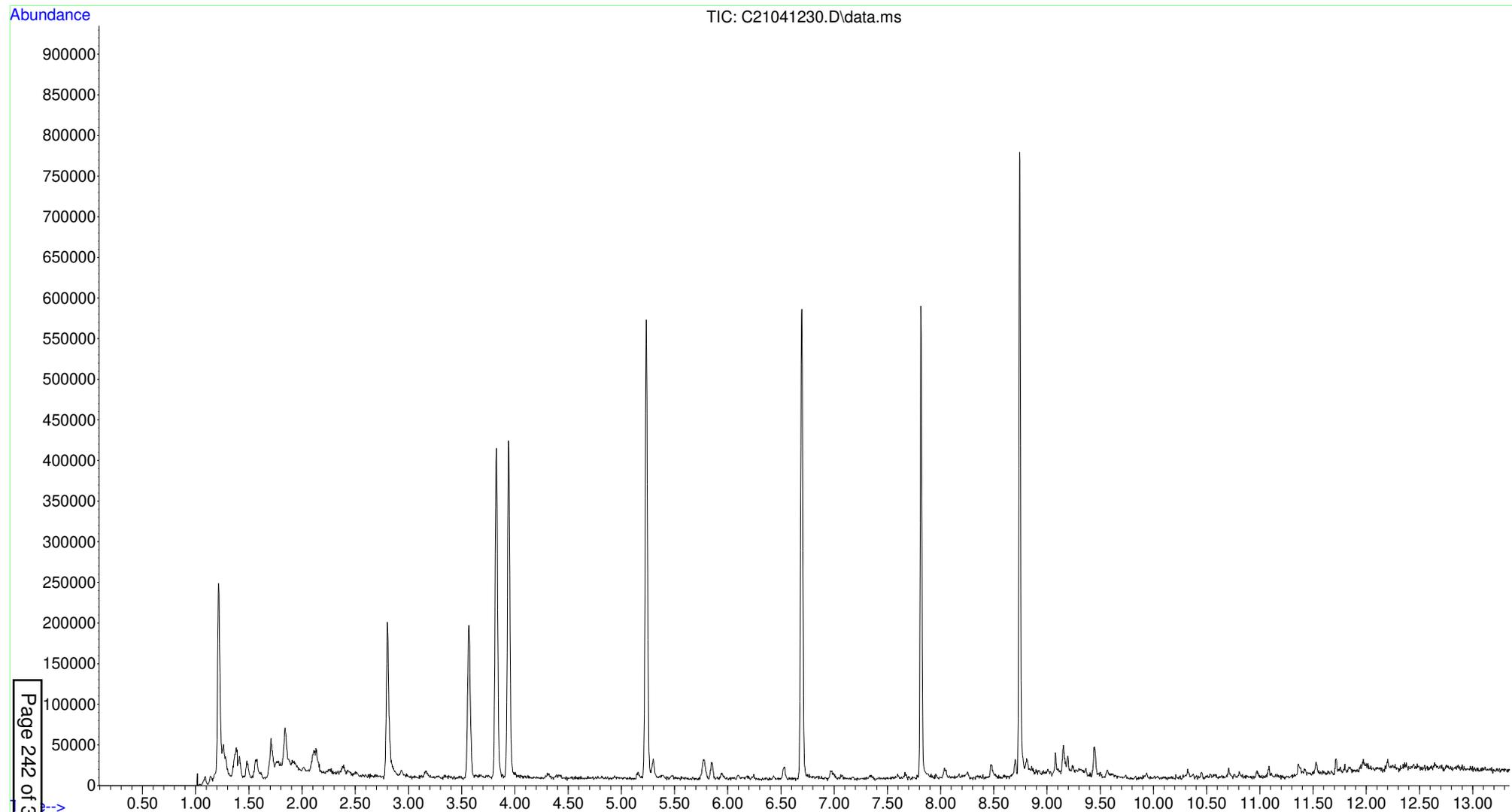
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	303322	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	260702	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	133830	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	102253	87.49	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.49%	
19) Toluene-d8	5.234	98	293343	88.59	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.59%	
31) Bromofluorobenzene	7.815	95	111478	87.80	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.80%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041230.D
Acq On : 13 Apr 2021 01:11 am
Operator : KAI
Sample : 0005717-26
Misc : NWP_PSG24-03252021
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Apr 13 10:27:10 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 1:35:00AM **FileID:** C21041231.D **DF:** 1.00
Lab Number: 0005717-27 **Sample Name:** NWP_PSG25-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041231.D
 Acq On : 13 Apr 2021 01:35 am
 Operator : KAI
 Sample : 0005717-27
 Misc : NWP_PSG25-03252021
 ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 13 10:27:14 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

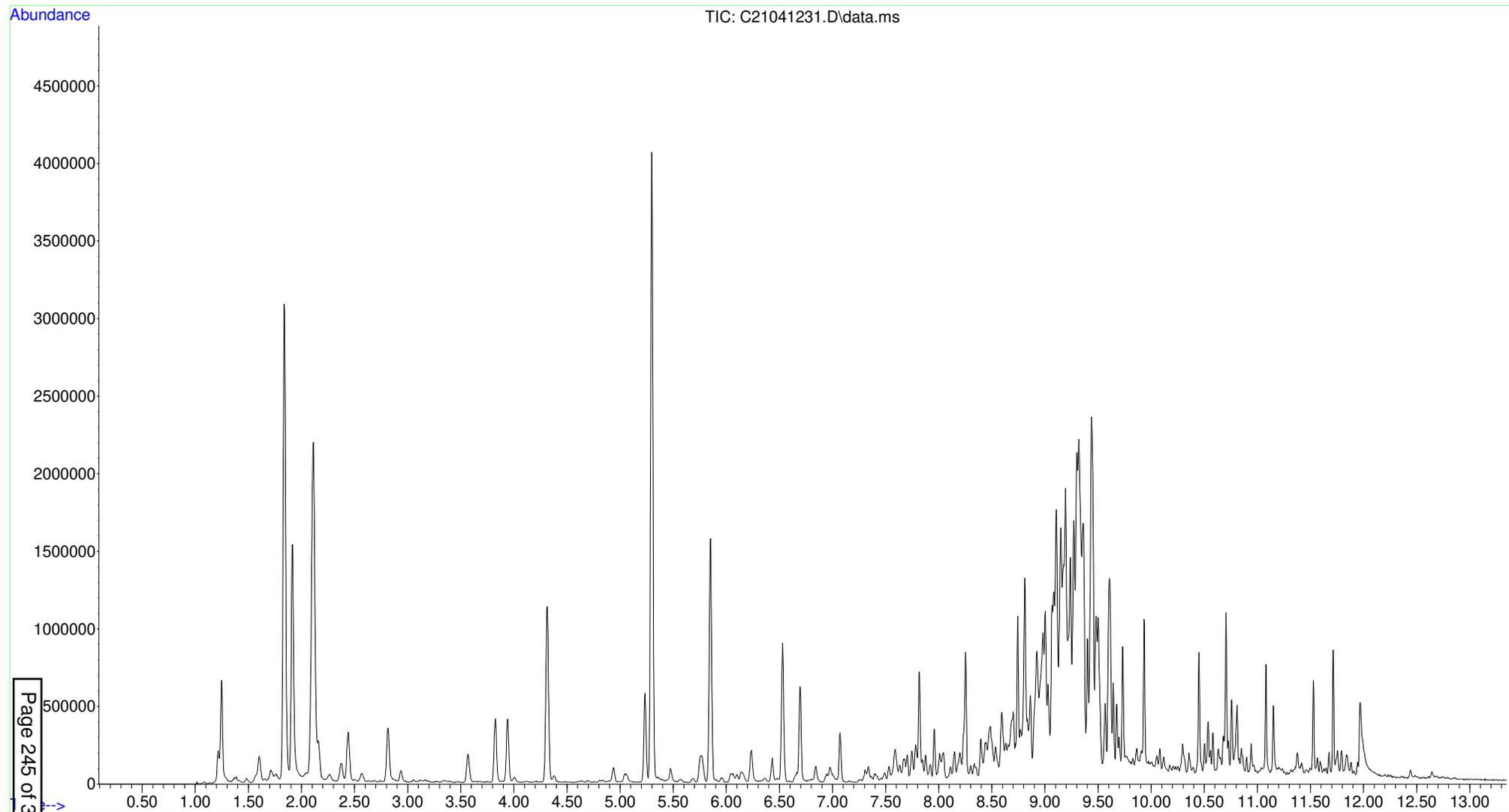
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	301897	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	276780	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	150387	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	95051	81.71	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	81.71%	
19) Toluene-d8	5.234	98	297303	84.57	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	84.57%	
31) Bromofluorobenzene	7.818	95	121429	90.08	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.08%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041231.D
 Acq On : 13 Apr 2021 01:35 am
 Operator : KAI
 Sample : 0005717-27
 Misc : NWP_PSG25-03252021
 ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 13 10:27:14 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 1:59:00AM **FileID:** C21041232.D **DF:** 1.00
Lab Number: 0005717-28 **Sample Name:** NWP_PSG26-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041232.D
 Acq On : 13 Apr 2021 01:59 am
 Operator : KAI
 Sample : 0005717-28
 Misc : NWP_PSG26-03252021
 ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 13 10:27:18 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

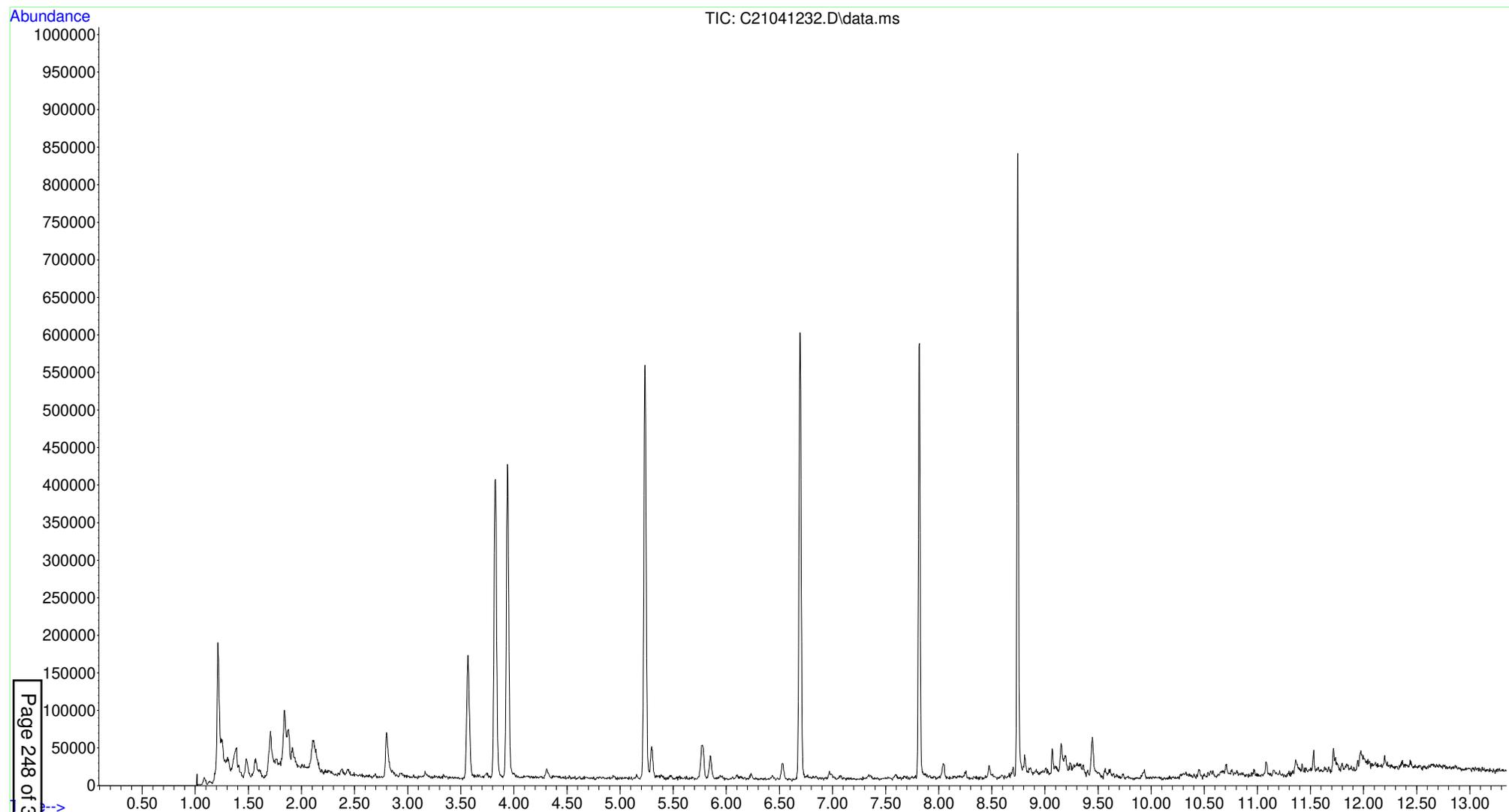
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	306298	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	271607	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	142009	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	77171	65.39	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	65.39%#	
19) Toluene-d8	5.234	98	299111	86.71	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.71%	
31) Bromofluorobenzene	7.818	95	117245	88.63	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.63%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041232.D
Acq On : 13 Apr 2021 01:59 am
Operator : KAI
Sample : 0005717-28
Misc : NWP_PSG26-03252021
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 13 10:27:18 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 2:23:00AM **FileID:** C21041233.D **DF:** 1.00
Lab Number: 0005717-29 **Sample Name:** NWP_PSG27-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041233.D
 Acq On : 13 Apr 2021 02:23 am
 Operator : KAI
 Sample : 0005717-29
 Misc : NWP_PSG27-03252021
 ALS Vial : 39 Sample Multiplier: 1

Quant Time: Apr 13 10:27:21 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

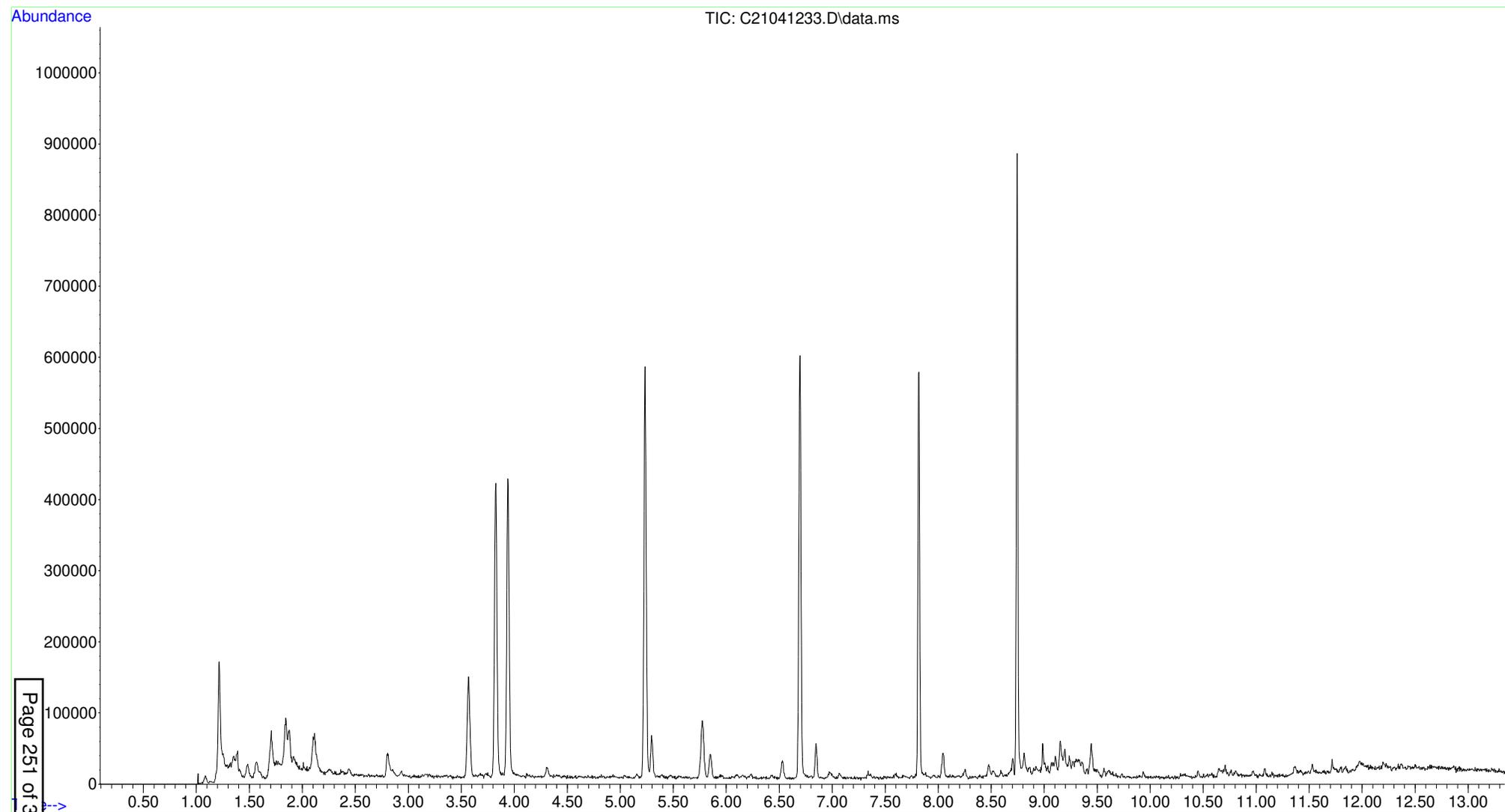
Internal Standards						
1) Fluorobenzene	3.822	96	310094	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	267224	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	145393	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	66720	55.84	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	55.84%#	
19) Toluene-d8	5.234	98	300007	88.39	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.39%	
31) Bromofluorobenzene	7.815	95	114148	87.70	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.70%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041233.D
Acq On : 13 Apr 2021 02:23 am
Operator : KAI
Sample : 0005717-29
Misc : NWP_PSG27-03252021
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Apr 13 10:27:21 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 2:47:00AM **FileID:** C21041234.D **DF:** 1.00
Lab Number: 0005717-30 **Sample Name:** NWP_PSG28-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041234.D
 Acq On : 13 Apr 2021 02:47 am
 Operator : KAI
 Sample : 0005717-30
 Misc : NWP_PSG28-03252021
 ALS Vial : 40 Sample Multiplier: 1

Quant Time: Apr 13 10:27:25 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

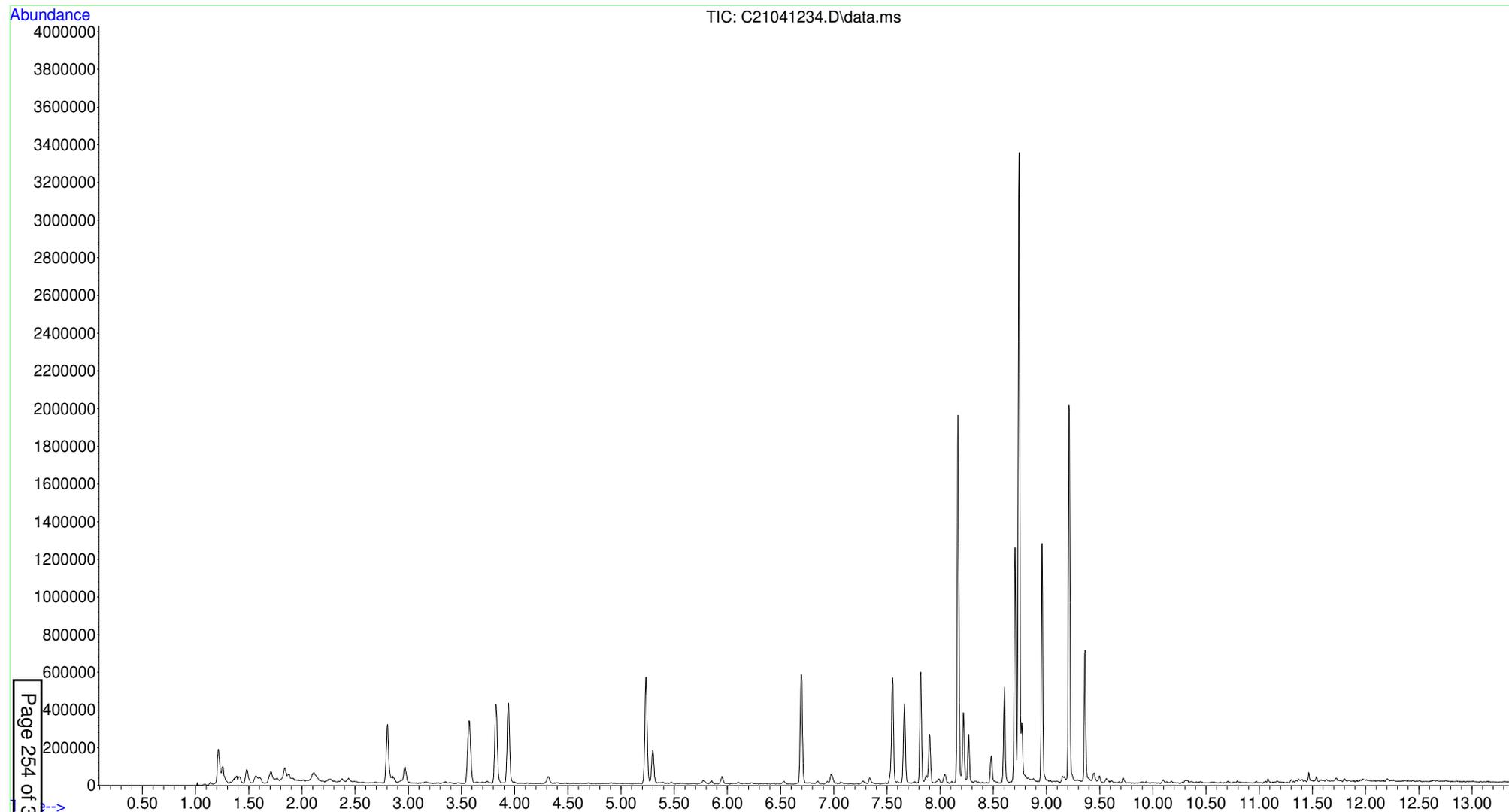
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	318543	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	267765	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	152048	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	110932	90.38	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.38%	
19) Toluene-d8	5.234	98	302840	89.05	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	89.05%	
31) Bromofluorobenzene	7.818	95	114770	88.00	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.00%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041234.D
 Acq On : 13 Apr 2021 02:47 am
 Operator : KAI
 Sample : 0005717-30
 Misc : NWP_PSG28-03252021
 ALS Vial : 40 Sample Multiplier: 1

Quant Time: Apr 13 10:27:25 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 3:12:00AM **FileID:** C21041235.D **DF:** 1.00
Lab Number: 0005717-31 **Sample Name:** NWP_PSG29-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041235.D
 Acq On : 13 Apr 2021 03:12 am
 Operator : KAI
 Sample : 0005717-31
 Misc : NWP_PSG29-03252021
 ALS Vial : 41 Sample Multiplier: 1

Quant Time: Apr 13 10:27:29 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

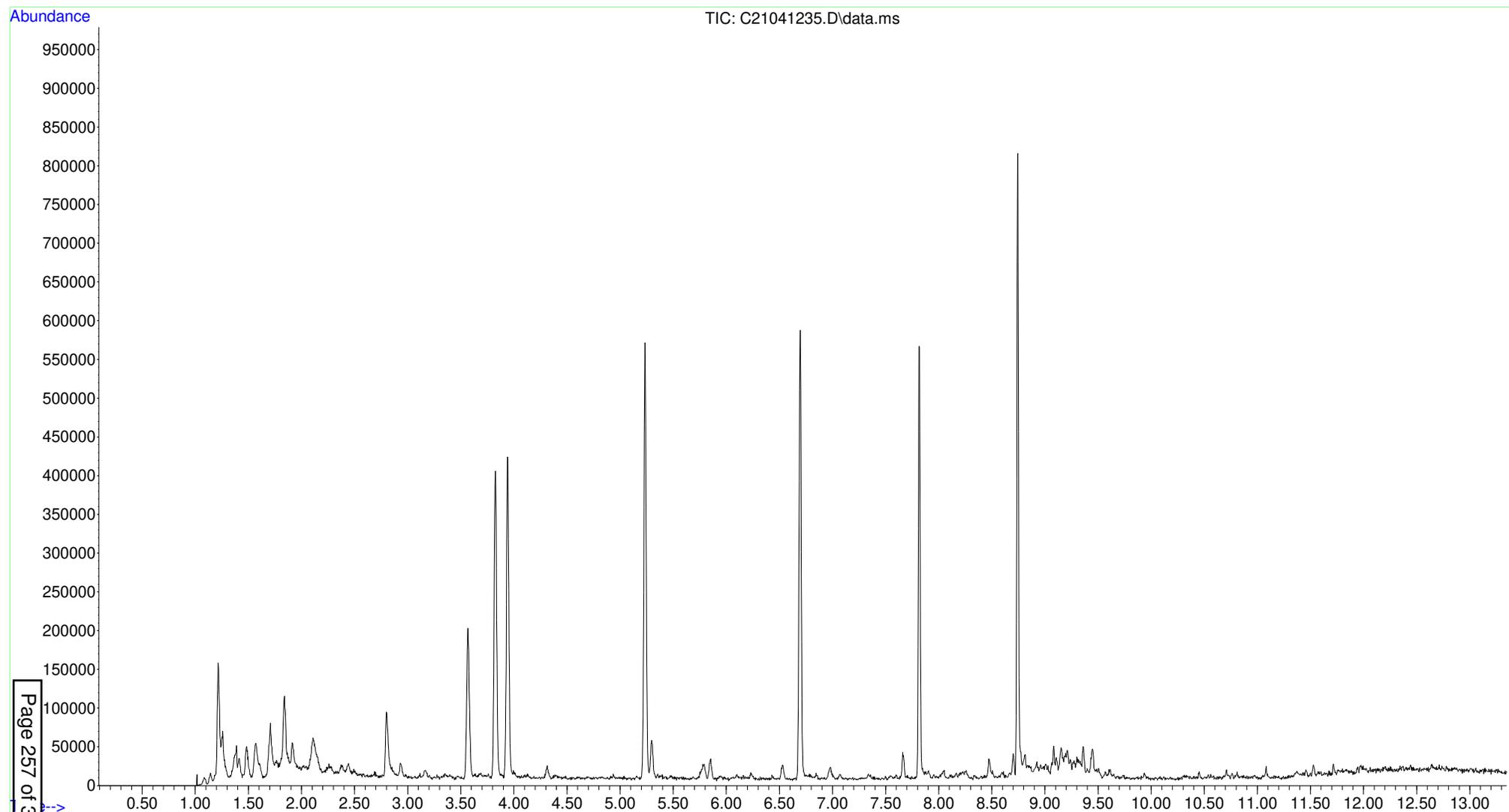
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	302076	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	261051	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	136532	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	103248	88.71	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.71%	
19) Toluene-d8	5.234	98	291745	87.99	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.99%	
31) Bromofluorobenzene	7.815	95	111736	87.88	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.88%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041235.D
 Acq On : 13 Apr 2021 03:12 am
 Operator : KAI
 Sample : 0005717-31
 Misc : NWP_PSG29-03252021
 ALS Vial : 41 Sample Multiplier: 1

Quant Time: Apr 13 10:27:29 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 3:36:00AM **FileID:** C21041236.D **DF:** 1.00
Lab Number: 0005717-32 **Sample Name:** NWP_PSG30-03242021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041236.D
 Acq On : 13 Apr 2021 03:36 am
 Operator : KAI
 Sample : 0005717-32
 Misc : NWP_PSG30-03242021
 ALS Vial : 42 Sample Multiplier: 1

Quant Time: Apr 13 10:27:33 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

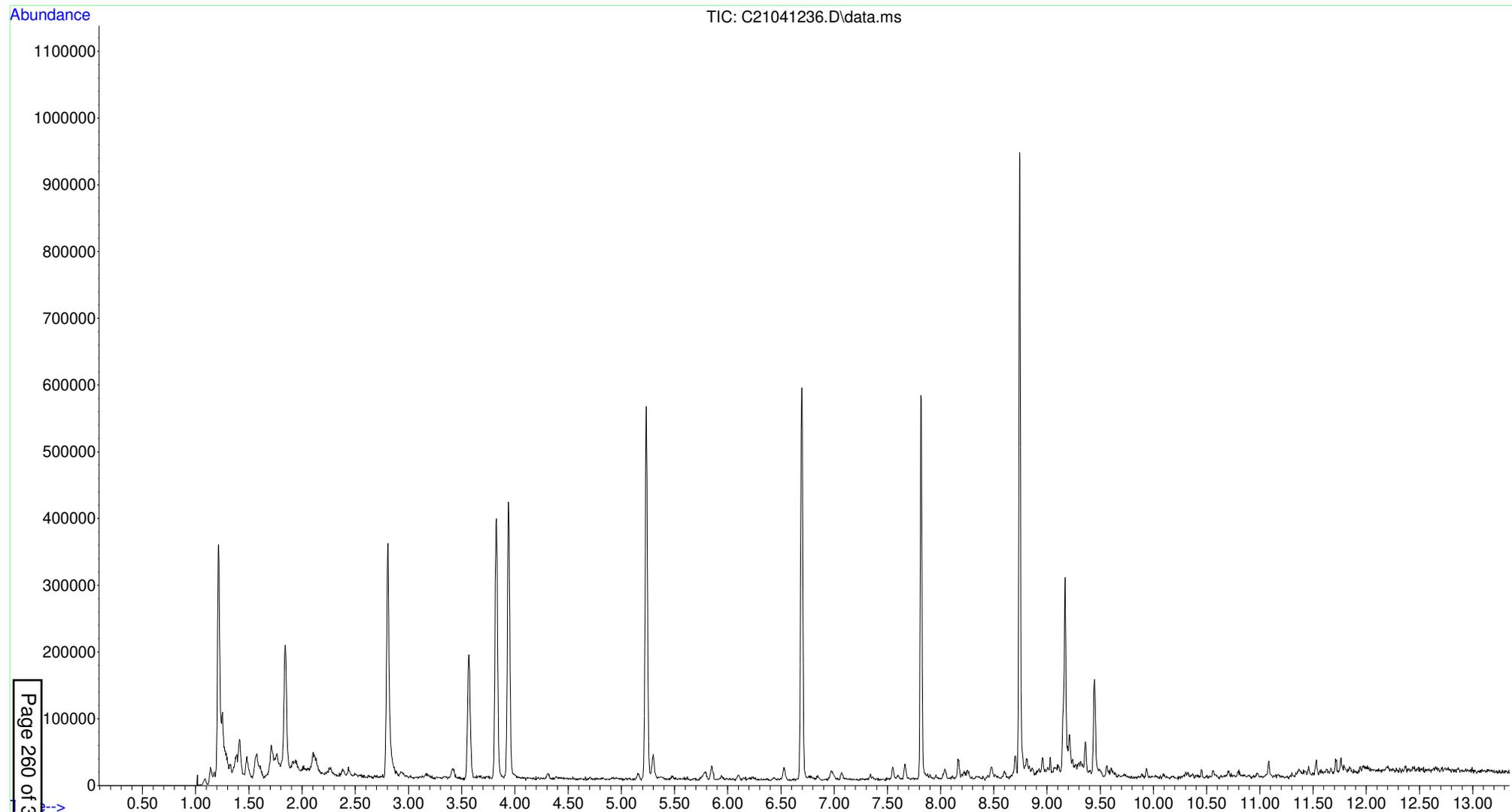
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	300063	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	266999	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.742	152	143508	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	104548	90.43	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.43%	
19) Toluene-d8	5.234	98	292624	86.29	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.29%	
31) Bromofluorobenzene	7.815	95	112842	86.77	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.77%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041236.D
Acq On : 13 Apr 2021 03:36 am
Operator : KAI
Sample : 0005717-32
Misc : NWP_PSG30-03242021
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Apr 13 10:27:33 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 4:00:00AM **FileID:** C21041237.D **DF:** 1.00
Lab Number: 0005717-33 **Sample Name:** NWP_PSG31-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041237.D
 Acq On : 13 Apr 2021 04:00 am
 Operator : KAI
 Sample : 0005717-33
 Misc : NWP_PSG31-03252021
 ALS Vial : 43 Sample Multiplier: 1

Quant Time: Apr 13 10:27:37 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

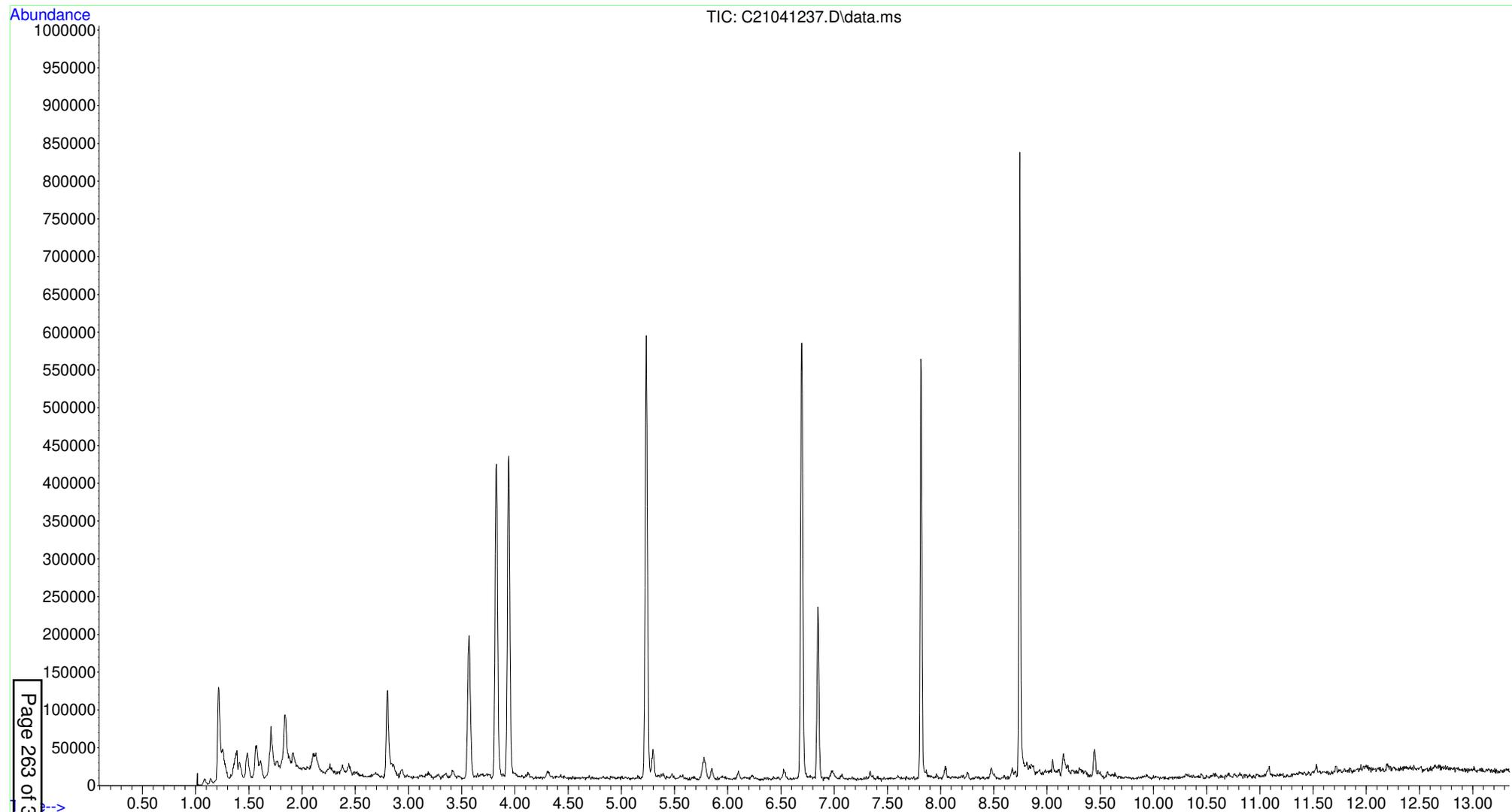
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	317597	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	266450	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	133272	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	99809	81.56	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	81.56%	
19) Toluene-d8	5.234	98	305792	90.36	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.36%	
31) Bromofluorobenzene	7.815	95	107878	83.13	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	83.13%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041237.D
Acq On : 13 Apr 2021 04:00 am
Operator : KAI
Sample : 0005717-33
Misc : NWP_PSG31-03252021
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Apr 13 10:27:37 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 4:24:00AM **FileID:** C21041238.D **DF:** 1.00
Lab Number: 0005717-34 **Sample Name:** NWP_PSG32-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041238.D
 Acq On : 13 Apr 2021 04:24 am
 Operator : KAI
 Sample : 0005717-34
 Misc : NWP_PSG32-03252021
 ALS Vial : 44 Sample Multiplier: 1

Quant Time: Apr 13 10:27:42 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

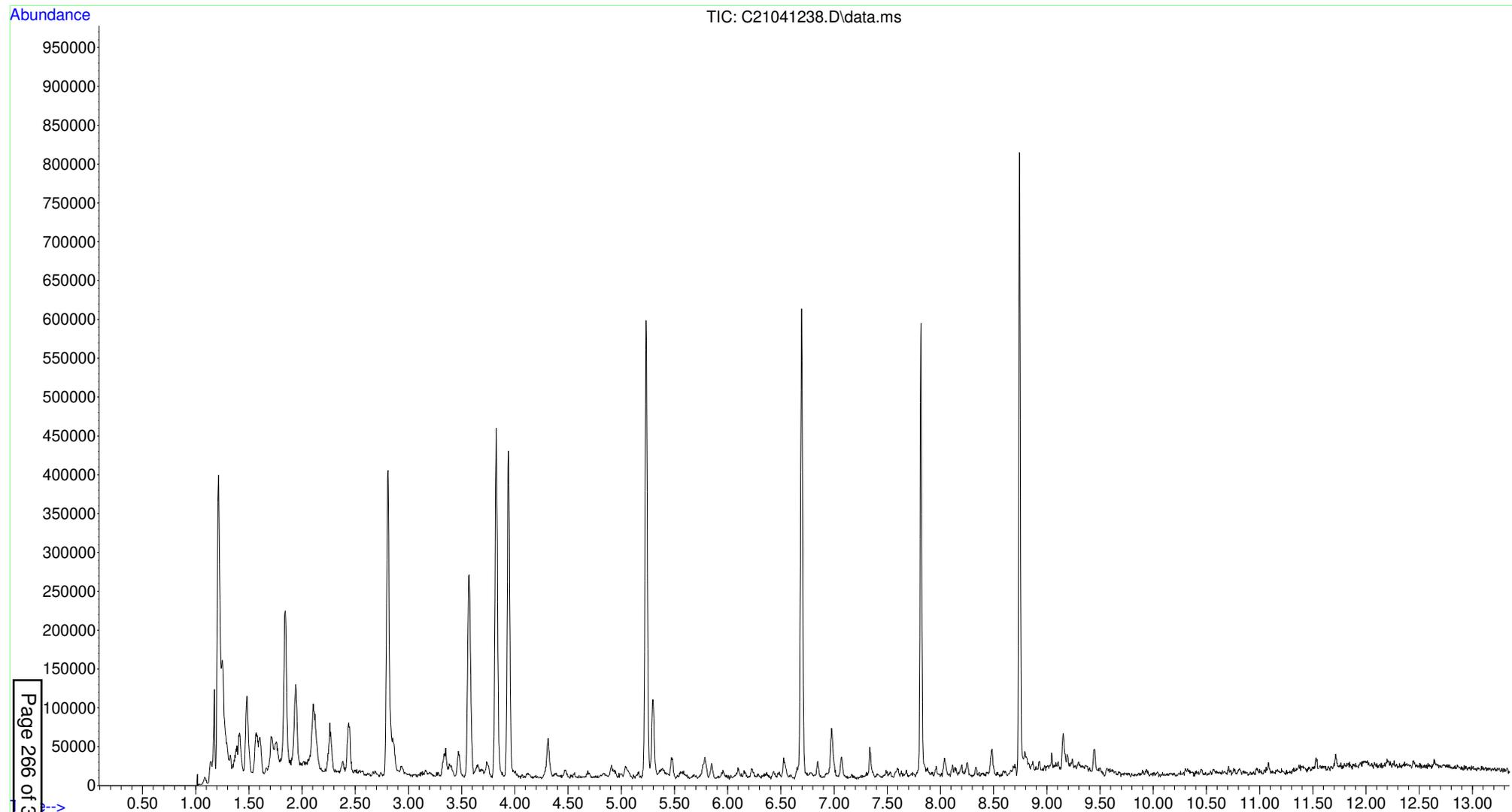
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	316857	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	268842	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.741	152	138326	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	114772	94.01	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	94.01%	
19) Toluene-d8	5.234	98	303691	88.94	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.94%	
31) Bromofluorobenzene	7.818	95	112166	85.66	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.66%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041238.D
 Acq On : 13 Apr 2021 04:24 am
 Operator : KAI
 Sample : 0005717-34
 Misc : NWP_PSG32-03252021
 ALS Vial : 44 Sample Multiplier: 1

Quant Time: Apr 13 10:27:42 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 4:48:00AM **FileID:** C21041239.D **DF:** 1.00
Lab Number: 0005717-35 **Sample Name:** NWP_PSG33-03262021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041239.D
 Acq On : 13 Apr 2021 04:48 am
 Operator : KAI
 Sample : 0005717-35
 Misc : NWP_PSG33-03262021
 ALS Vial : 45 Sample Multiplier: 1

Quant Time: Apr 13 10:27:46 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

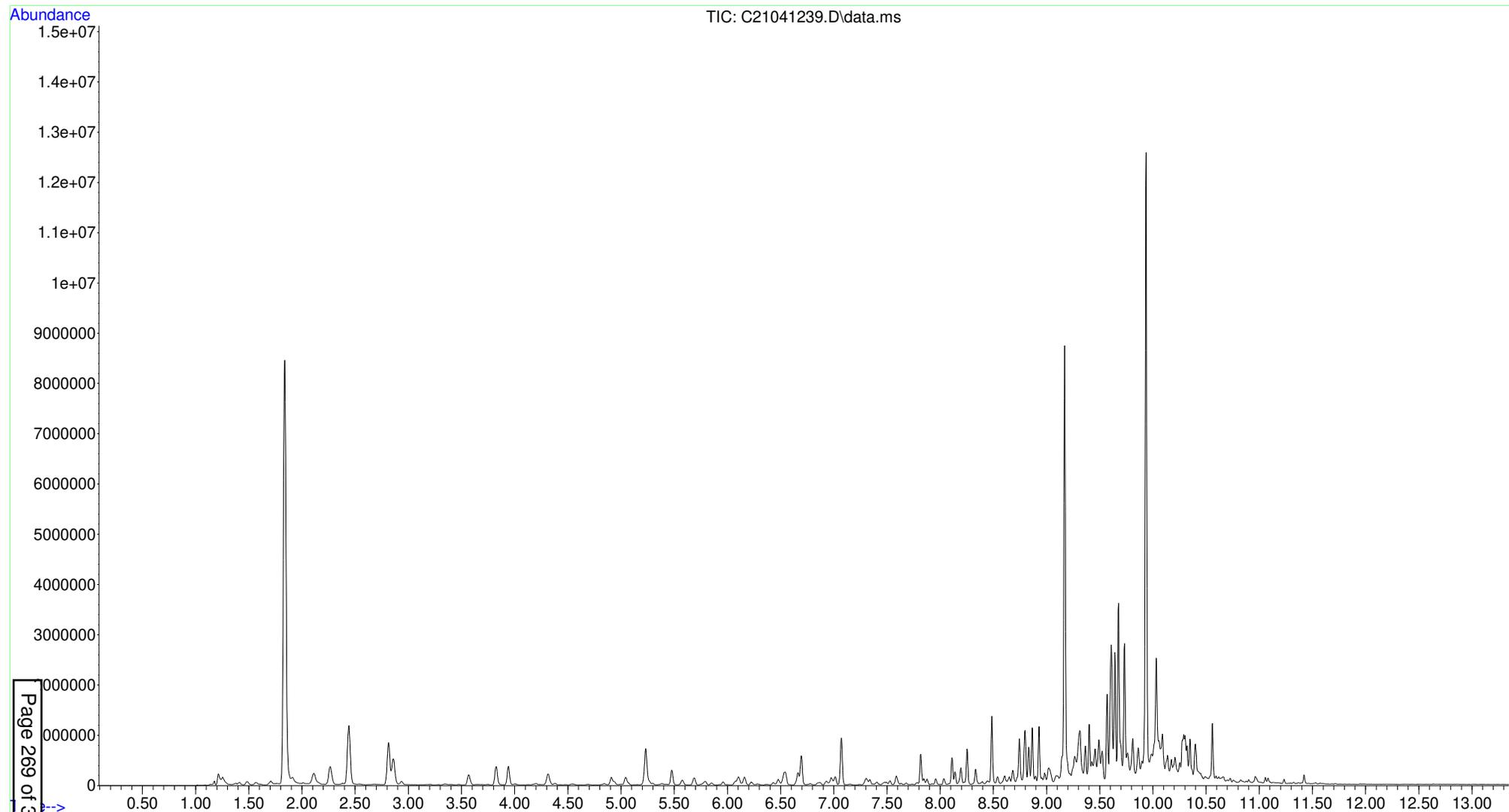
Internal Standards						
1) Fluorobenzene	3.825	96	270628	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	262644	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	143642	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	107120	102.73	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	102.73%	
19) Toluene-d8	5.234	98	287471	86.17	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.17%	
31) Bromofluorobenzene	7.818	95	110724	86.56	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.56%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041239.D
 Acq On : 13 Apr 2021 04:48 am
 Operator : KAI
 Sample : 0005717-35
 Misc : NWP_PSG33-03262021
 ALS Vial : 45 Sample Multiplier: 1

Quant Time: Apr 13 10:27:46 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 5:12:00AM **FileID:** C21041240.D **DF:** 1.00
Lab Number: 0005717-36 **Sample Name:** NWP_PSG34-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041240.D
 Acq On : 13 Apr 2021 05:12 am
 Operator : KAI
 Sample : 0005717-36
 Misc : NWP_PSG34-03252021
 ALS Vial : 46 Sample Multiplier: 1

Quant Time: Apr 13 10:27:50 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

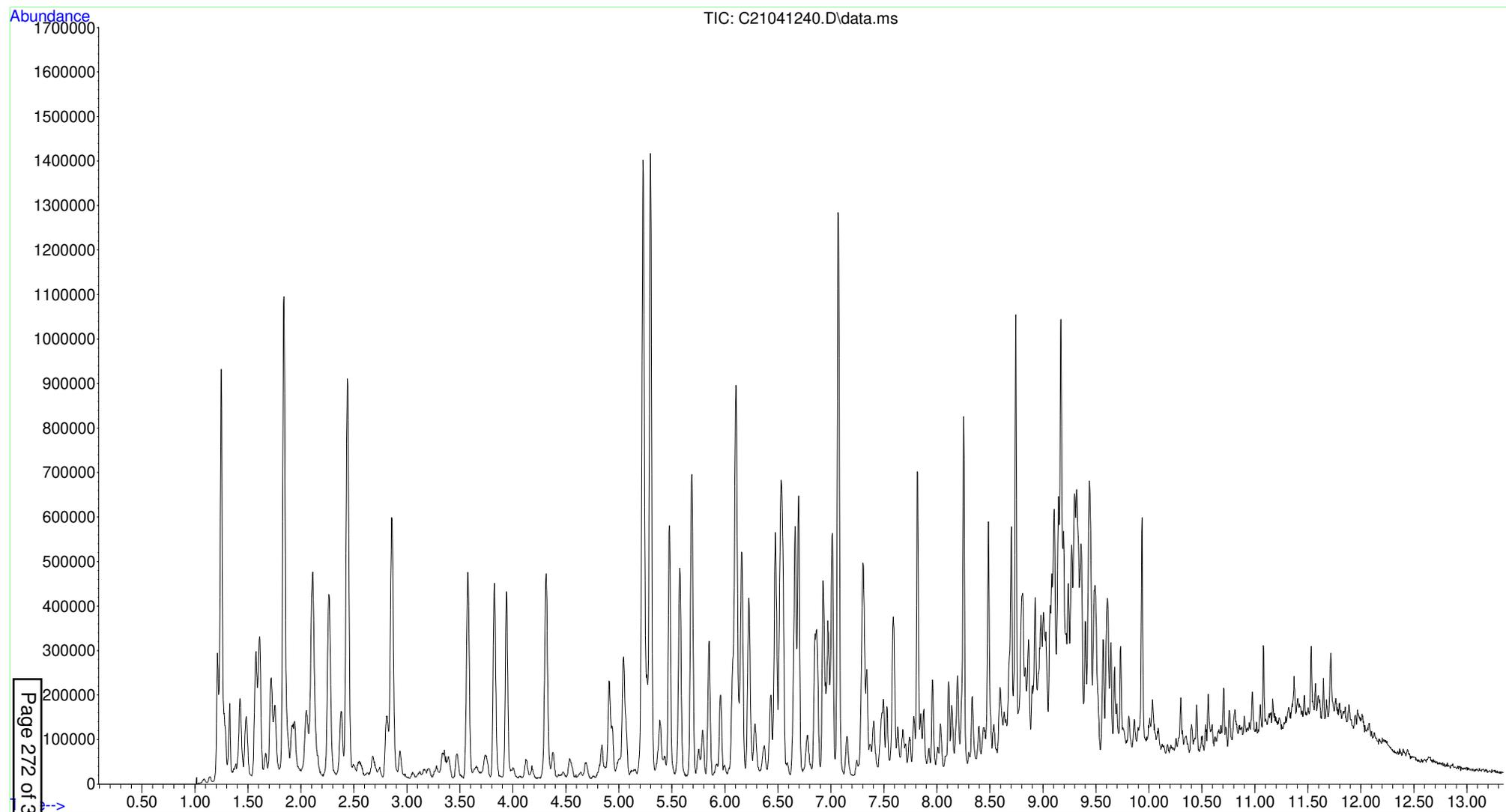
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	301789	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	277033	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	155234	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	77085	66.29	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	66.29%#	
19) Toluene-d8	5.231	98	345506	98.19	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	98.19%	
31) Bromofluorobenzene	7.815	95	118985	88.18	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.18%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041240.D
Acq On : 13 Apr 2021 05:12 am
Operator : KAI
Sample : 0005717-36
Misc : NWP_PSG34-03252021
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Apr 13 10:27:50 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 5:36:00AM **FileID:** C21041241.D **DF:** 1.00
Lab Number: 0005717-37 **Sample Name:** NWP_PSG35-03252021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041241.D
 Acq On : 13 Apr 2021 05:36 am
 Operator : KAI
 Sample : 0005717-37
 Misc : NWP_PSG35-03252021
 ALS Vial : 47 Sample Multiplier: 1

Quant Time: Apr 13 10:27:55 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

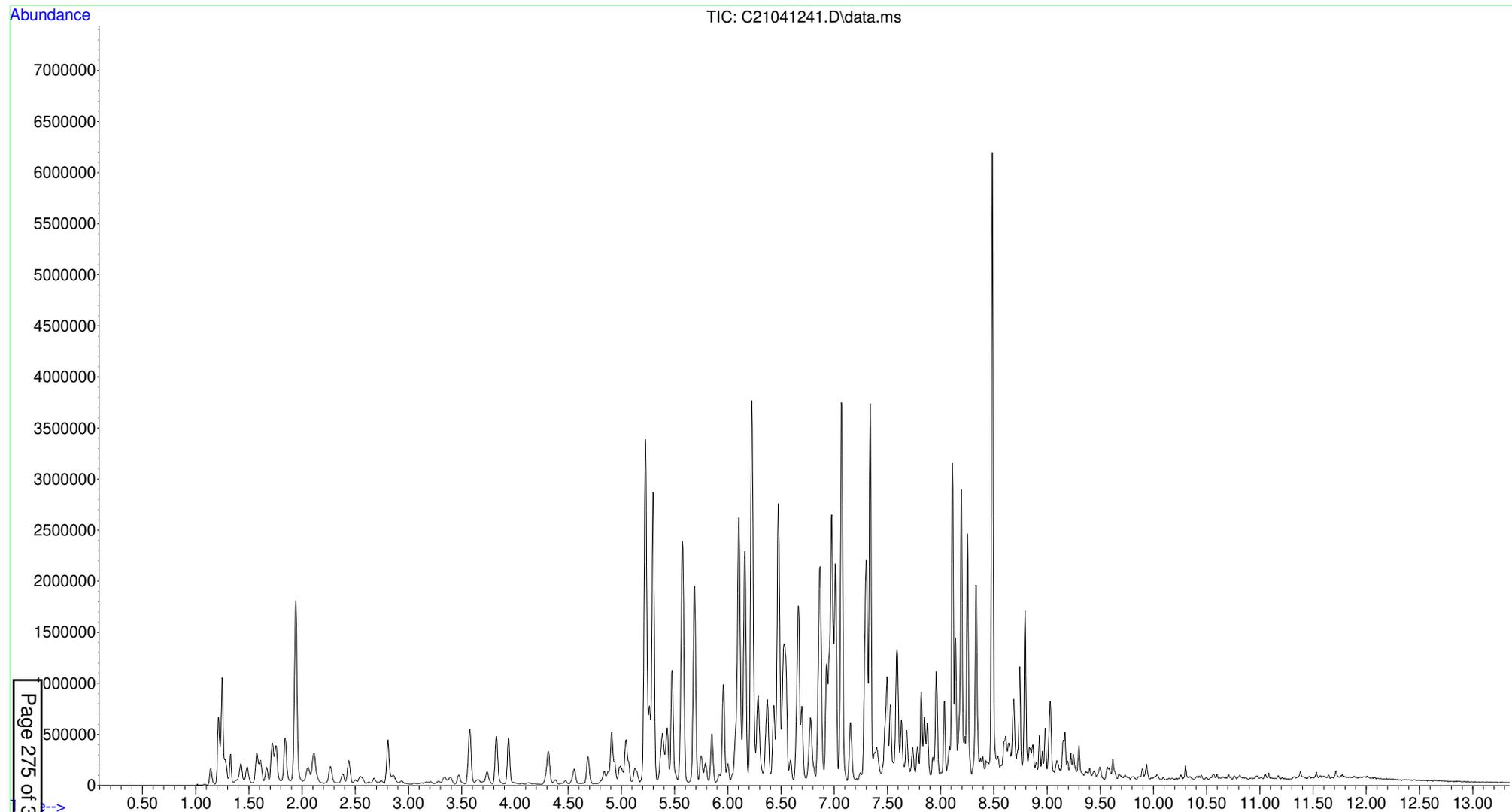
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	327207	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	285837	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	162554	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	103904	82.41	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	82.41%	
19) Toluene-d8	5.234	98	427657	117.80	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	117.80%	
31) Bromofluorobenzene	7.818	95	118712	85.27	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.27%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041241.D
 Acq On : 13 Apr 2021 05:36 am
 Operator : KAI
 Sample : 0005717-37
 Misc : NWP_PSG35-03252021
 ALS Vial : 47 Sample Multiplier: 1

Quant Time: Apr 13 10:27:55 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
--	--	--

Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 6:00:00AM **FileID:** C21041242.D **DF:** 1.00
Lab Number: 0005717-38 **Sample Name:** NWP_PSG36-03262021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041242.D
 Acq On : 13 Apr 2021 06:00 am
 Operator : KAI
 Sample : 0005717-38
 Misc : NWP_PSG36-03262021
 ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 13 10:27:59 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

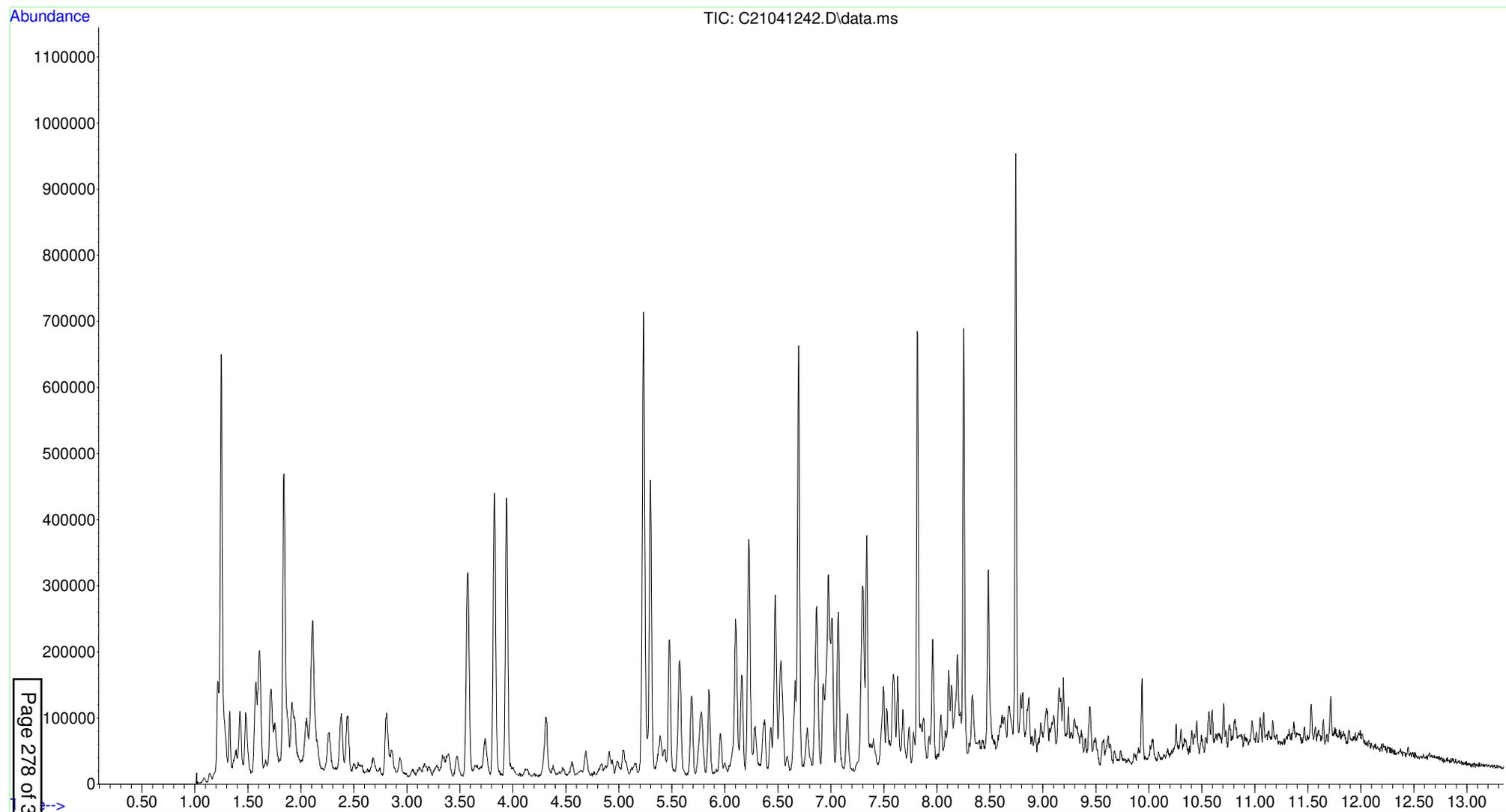
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	313841	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	280467	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	153512	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	80682	66.72	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	66.72%#	
19) Toluene-d8	5.234	98	311698	87.50	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.50%	
31) Bromofluorobenzene	7.815	95	123151	90.15	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	90.15%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041242.D
 Acq On : 13 Apr 2021 06:00 am
 Operator : KAI
 Sample : 0005717-38
 Misc : NWP_PSG36-03262021
 ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 13 10:27:59 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/13/2021 6:24:00AM **FileID:** C21041243.D **DF:** 1.00
Lab Number: 0005717-39 **Sample Name:** NWP_PSG37-03262021

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041243.D
 Acq On : 13 Apr 2021 06:24 am
 Operator : KAI
 Sample : 0005717-39
 Misc : NWP_PSG37-03262021
 ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 13 10:28:03 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

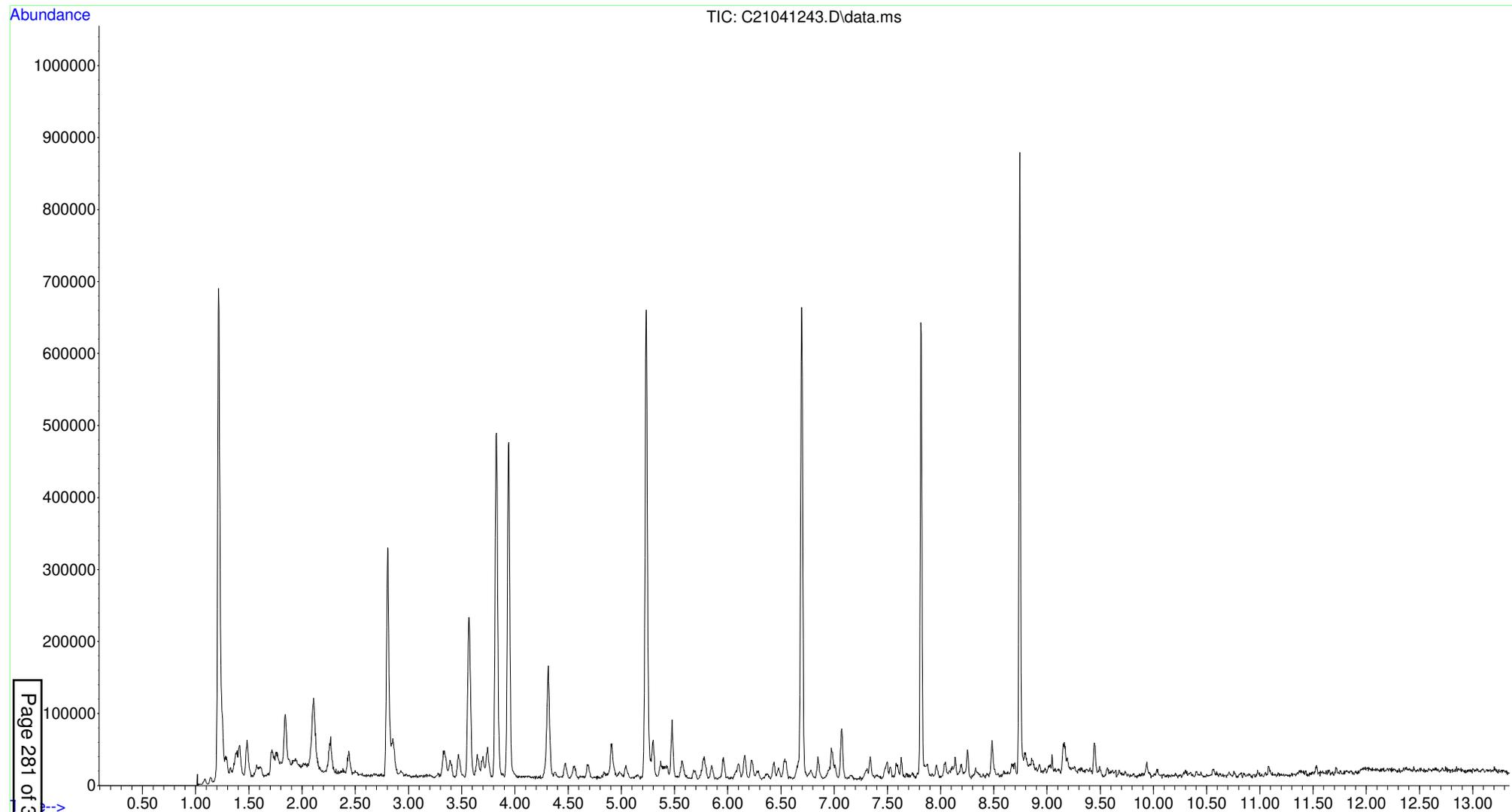
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	339648	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	294812	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	149051	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	105598	80.69	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	80.69%	
19) Toluene-d8	5.234	98	329689	88.05	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.05%	
31) Bromofluorobenzene	7.815	95	123014	85.67	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	85.67%	

Target Compounds Qvalue

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

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041243.D
Acq On : 13 Apr 2021 06:24 am
Operator : KAI
Sample : 0005717-39
Misc : NWP_PSG37-03262021
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 13 10:28:03 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/14/2021 10:43:00AM **FileID:** C21041355.D **DF:** 1.00
Lab Number: 0005717-40 **Sample Name:** NWP_PSG01-03262021-Dup

Data Path : Z:\GCMS\data\21\04\C210413\
 Data File : C21041355.D
 Acq On : 14 Apr 2021 10:43 am
 Operator : KAI
 Sample : 0005717-40
 Misc : NWP_PSG01-03262021-Dup
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 14 11:51:19 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

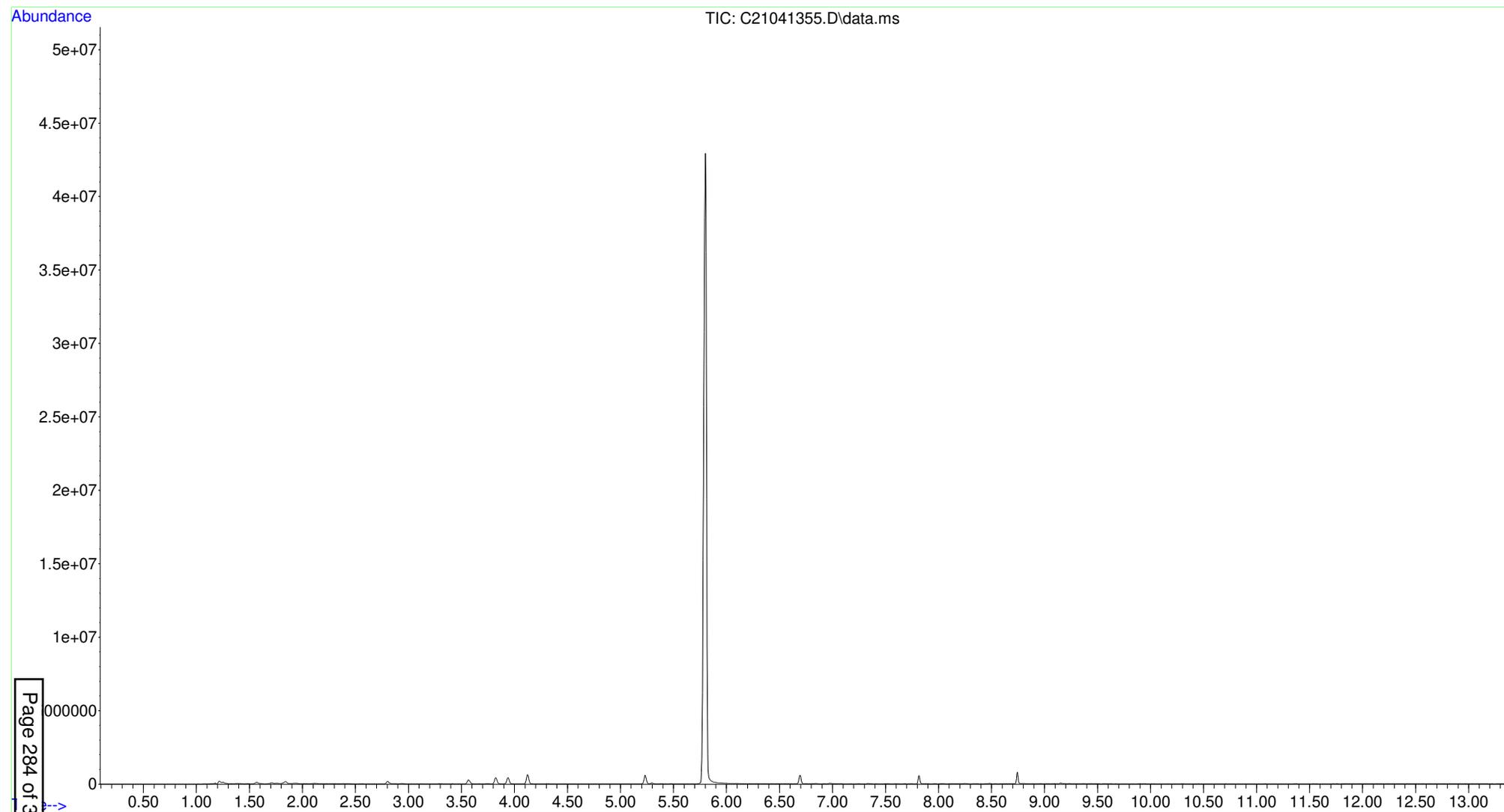
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.822	96	321978	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	276509	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.741	152	136115	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	133152	107.33	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	107.33%	
19) Toluene-d8	5.231	98	307232	87.48	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	87.48%	
31) Bromofluorobenzene	7.815	95	116307	86.36	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	86.36%	
Target Compounds						
15) Trichloroethene	4.122	130	183873	170.23	ng	98
22) Tetrachloroethene	5.801	131	8974650	9948.80	ng	97

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

Data Path : Z:\GCMS\data\21\04\C210413\
Data File : C21041355.D
Acq On : 14 Apr 2021 10:43 am
Operator : KAI
Sample : 0005717-40
Misc : NWP_PSG01-03262021-Dup
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 14 11:51:19 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Raw Data

Analysis: EPA 8260C **Analyzed:** 4/14/2021 11:07:00AM **FileID:** C21041356.D **DF:** 1.00
Lab Number: 0005717-41 **Sample Name:** NWP_PSG16-03242021-Dup

Data Path : Z:\GCMS\data\21\04\C210413\
 Data File : C21041356.D
 Acq On : 14 Apr 2021 11:07 am
 Operator : KAI
 Sample : 0005717-41
 Misc : NWP_PSG16-03242021-Dup
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 14 11:51:28 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

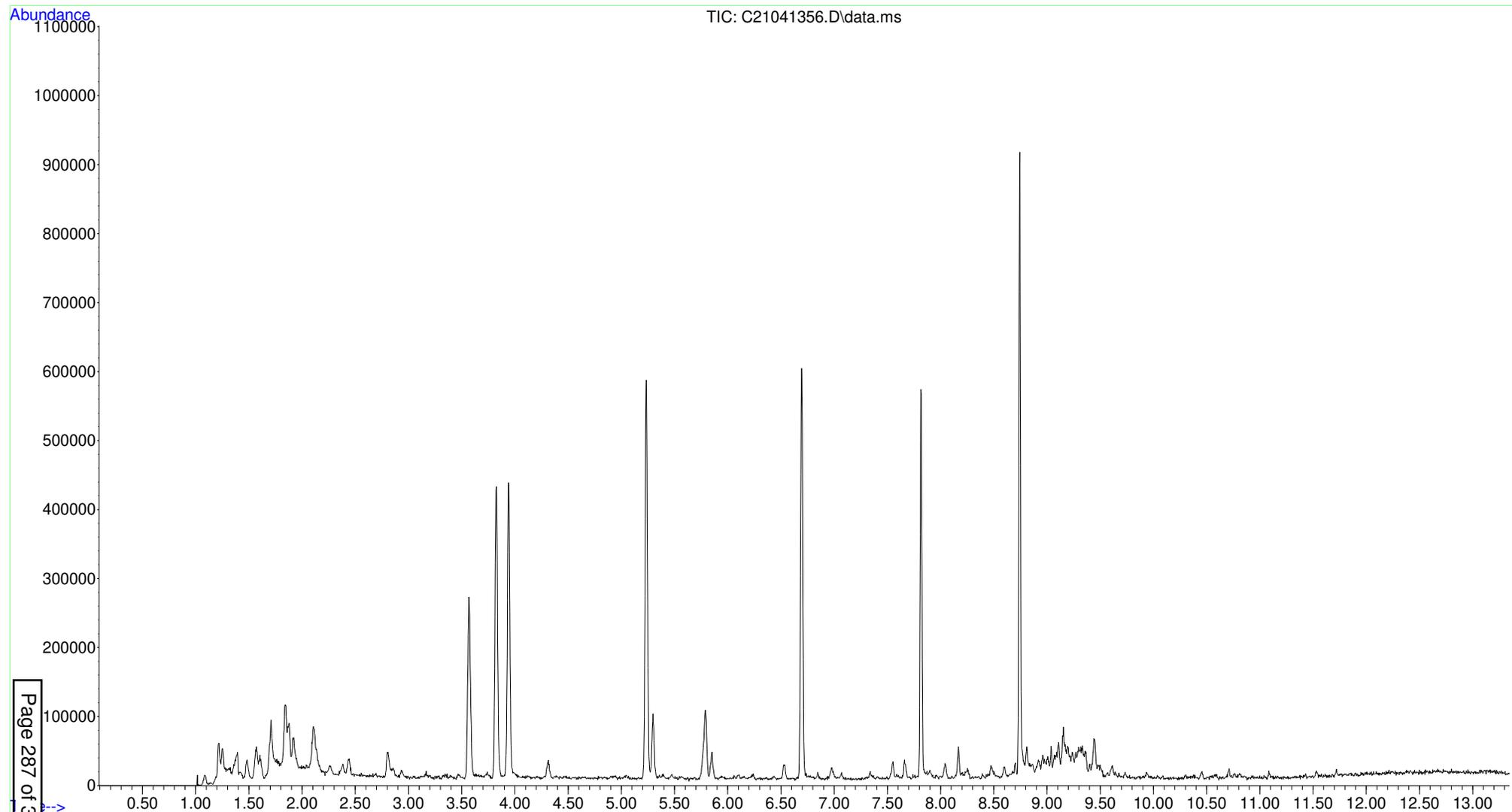
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.822	96	319848	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	272815	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	141814	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	123363	100.10	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	100.10%	
19) Toluene-d8	5.234	98	307411	88.72	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.72%	
31) Bromofluorobenzene	7.815	95	117867	88.71	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	88.71%	
Target Compounds						
22) Tetrachloroethene	5.795	131	15442	17.35	ng	# 94

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

Data Path : Z:\GCMS\data\21\04\C210413\
Data File : C21041356.D
Acq On : 14 Apr 2021 11:07 am
Operator : KAI
Sample : 0005717-41
Misc : NWP_PSG16-03242021-Dup
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 14 11:51:28 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration



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Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

4/11/2021

Batch and Sequence Raw Data

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sequence Raw Data

Analysis: EPA 8260C

Analyzed: 4/12/2021 1:57:00PM

Lab Number: 21D0032-BS1

QC Description: LCS, Calibration Source Verification

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041202.D
 Acq On : 12 Apr 2021 01:57 pm
 Operator : KAI
 Sample : 21D0032-BS1
 Misc : LCS
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 13 10:25:12 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	395231	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	297851	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	155320	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	82848	54.40	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	54.40%#	
19) Toluene-d8	5.234	98	181273	47.92	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	47.92%#	
31) Bromofluorobenzene	7.815	95	62659	43.19	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	43.19%#	
Target Compounds						
2) Vinyl Chloride	1.264	62	42666	42.85	ng	97
3) 1,1-Dichloroethene	1.821	96	49697	51.95	ng	95
4) 1,1,2-Trichlorotrifluo...	1.821	101	61874	55.24	ng	95
5) trans-1,2-Dichloroethene	2.262	96	57685	53.09	ng	100
6) Methyl-t-butyl ether	2.259	73	157547	54.17	ng	98
7) 1,1-Dichloroethane	2.546	63	113487	52.92	ng	99
8) cis-1,2-Dichloroethene	2.943	96	63689	53.61	ng	100
9) Chloroform	3.189	85	67756	54.68	ng	98
11) 1,2-Dichloroethane	3.627	62	108044	54.15	ng	# 43
12) 1,1,1-Trichloroethane	3.305	97	91972	53.06	ng	98
13) Carbon Tetrachloride	3.419	117	94838	58.68	ng	98
14) Benzene	3.576	78	200223	49.22	ng	99
15) Trichloroethene	4.125	130	65865	49.68	ng	96
16) 1,4-Dioxane	4.415	88	41165	49.69	ng	93
17) 1,1,2-Trichloroethane	5.741	99	33622	51.73	ng	98
20) Toluene	5.297	92	125955	50.14	ng	# 95
21) 1,2-Dibromoethane (EDB)	6.198	107	57505	52.62	ng	96
22) Tetrachloroethene	5.795	131	50279	51.74	ng	96
23) 1,1,1,2-Tetrachloroethane	6.832	131	57261	54.31	ng	94
24) Chlorobenzene	6.725	112	151944	51.35	ng	99
25) Ethylbenzene	6.847	106	74020	49.44	ng	97
26) p & m-Xylene	6.983	106	85203	46.73	ng	96
27) 1,1,2,2-Tetrachloroethane	7.969	83	87221	49.42	ng	98
28) o-Xylene	7.339	106	85227	48.22	ng	96
29) 1,2,3-Trichloropropane	7.995	75	71775	47.12	ng	94
30) Isopropylbenzene	7.679	105	228479	49.23	ng	99
33) 1,3,5-Trimethylbenzene	8.196	120	96609	46.19	ng	98
34) 1,2,4-Trimethylbenzene	8.486	120	88662	47.18	ng	97
35) 1,3-Dichlorobenzene	8.682	146	122520	50.58	ng	99
36) 1,4-Dichlorobenzene	8.763	146	130014	52.52	ng	98
37) 1,2-Dichlorobenzene	9.022	146	112904	48.14	ng	97
38) 1,2,4-Trichlorobenzene	10.144	180	81761	50.40	ng	97
39) Naphthalene	10.301	128	240222	45.71	ng	98
40) 1,2,3-Trichlorobenzene	10.437	180	86976	51.66	ng	99
41) 2-Methylnaphthalene	10.963	142	137391	43.01	ng	99
42) TPH C4-C9	4.810	TIC	16216901m	2764.51	ng	
43) TPH C10-C15	9.810	TIC	13962261m	1957.06	ng	

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041202.D
Acq On : 12 Apr 2021 01:57 pm
Operator : KAI
Sample : 21D0032-BS1
Misc : LCS
ALS Vial : 2 Sample Multiplier: 1

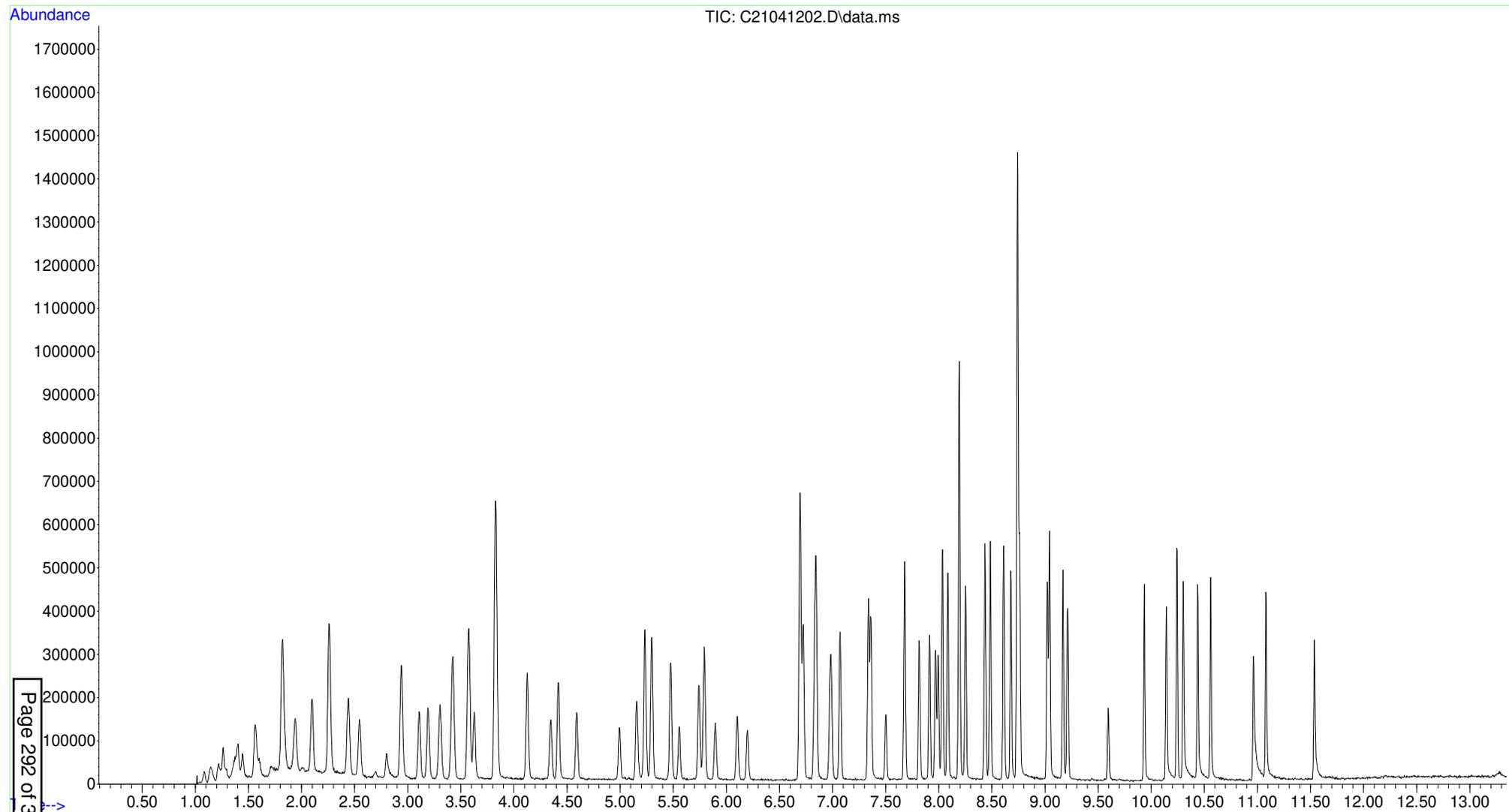
Quant Time: Apr 13 10:25:12 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041202.D
 Acq On : 12 Apr 2021 01:57 pm
 Operator : KAI
 Sample : 21D0032-BS1
 Misc : LCS
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 13 10:25:12 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sequence Raw Data

Analysis: EPA 8260C

Analyzed: 4/12/2021 2:21:00PM

Lab Number: 21D0032-BLK1

QC Description: Lab Blank

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041203.D
 Acq On : 12 Apr 2021 02:21 pm
 Operator : KAI
 Sample : 21D0032-BLK1
 Misc : LB
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 13 10:25:17 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

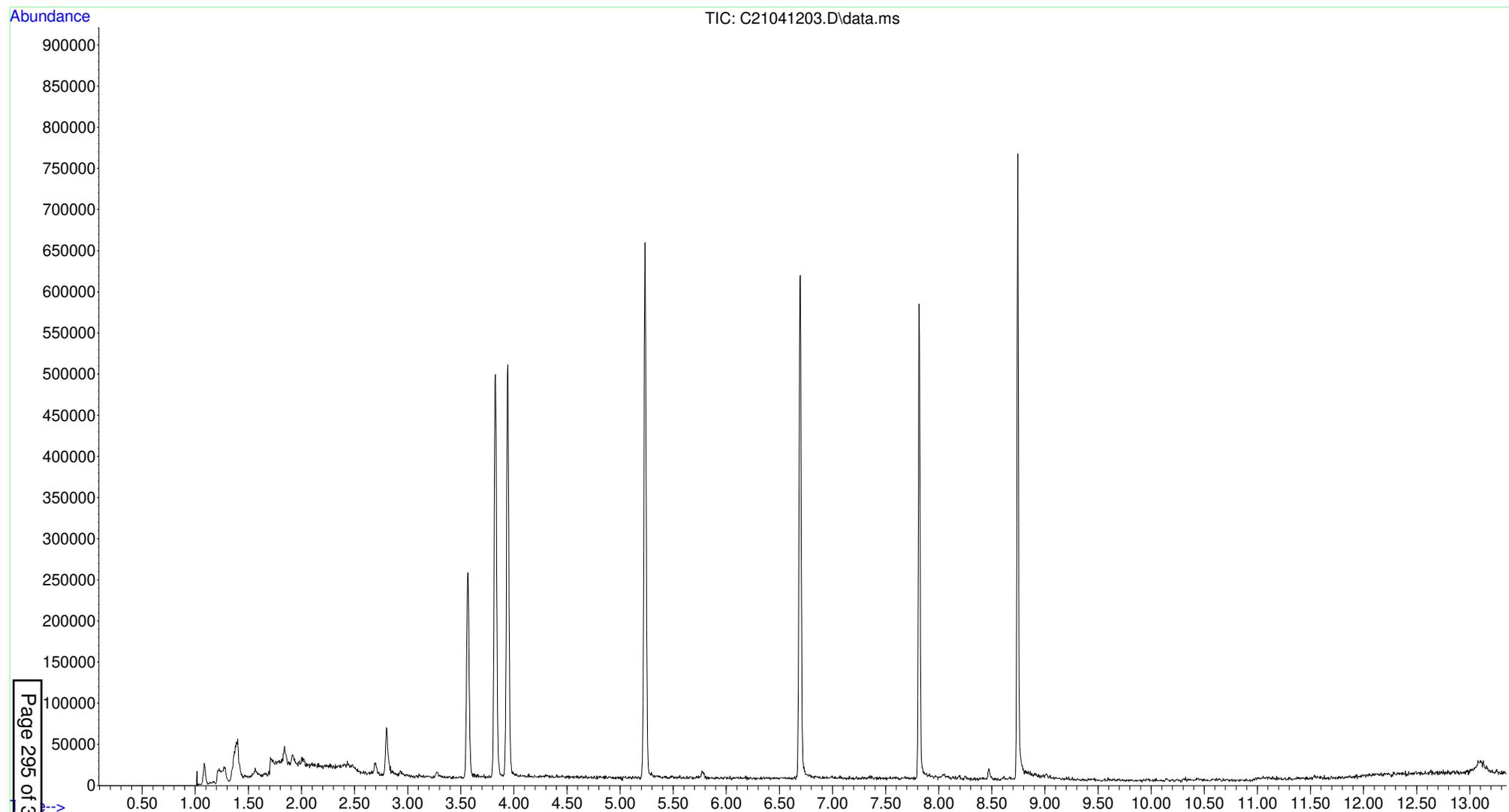
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.822	96	369387	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	278382	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	125080	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	149627	105.13	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	105.13%	
19) Toluene-d8	5.234	98	339647	96.06	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	96.06%	
31) Bromofluorobenzene	7.815	95	110618	81.59	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	81.59%	
Target Compounds						
42) TPH C4-C9	4.810	TIC	5378572m	1138.56	ng	Qvalue
43) TPH C10-C15	9.810	TIC	2018115m	351.26	ng	

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041203.D
 Acq On : 12 Apr 2021 02:21 pm
 Operator : KAI
 Sample : 21D0032-BLK1
 Misc : LB
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 13 10:25:17 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sequence Raw Data

Analysis: EPA 8260C

Analyzed: 4/12/2021 2:45:00PM

Lab Number: B21D035-ICV1

QC Description: LCSD/Second Source Verification/CALV

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041204.D
 Acq On : 12 Apr 2021 02:45 pm
 Operator : KAI
 Sample : B21D035-ICV1
 Misc : LCSD
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 13 10:25:21 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.822	96	403719	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	307271	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	161098	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.560	65	81210	52.21	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	52.21%#	
19) Toluene-d8	5.237	98	186426	47.77	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	47.77%#	
31) Bromofluorobenzene	7.818	95	63434	42.39	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	42.39%#	
Target Compounds						
2) Vinyl Chloride	1.261	62	44802	44.05	ng	98
3) 1,1-Dichloroethene	1.821	96	47313	48.41	ng	99
4) 1,1,2-Trichlorotrifluo...	1.821	101	63167	55.21	ng	96
5) trans-1,2-Dichloroethene	2.259	96	56843	51.21	ng	100
6) Methyl-t-butyl ether	2.256	73	145350	48.93	ng	99
7) 1,1-Dichloroethane	2.549	63	108906	49.71	ng	98
8) cis-1,2-Dichloroethene	2.940	96	59836	49.31	ng	93
9) Chloroform	3.192	85	67559	53.37	ng	99
11) 1,2-Dichloroethane	3.627	62	110248	54.09	ng	100
12) 1,1,1-Trichloroethane	3.305	97	92338	52.15	ng	99
13) Carbon Tetrachloride	3.419	117	94736	57.39	ng	99
14) Benzene	3.579	78	202132	48.64	ng	99
15) Trichloroethene	4.121	130	68283	50.42	ng	96
16) 1,4-Dioxane	4.421	88	42314	50.00	ng	91
17) 1,1,2-Trichloroethane	5.741	99	34061	51.31	ng	95
20) Toluene	5.297	92	125921	48.59	ng	97
21) 1,2-Dibromoethane (EDB)	6.195	107	58636	52.01	ng	100
22) Tetrachloroethene	5.795	131	51485	51.36	ng	97
23) 1,1,1,2-Tetrachloroethane	6.835	131	58677	53.95	ng	98
24) Chlorobenzene	6.724	112	157280	51.52	ng	99
25) Ethylbenzene	6.844	106	72655	47.04	ng	95
26) p & m-Xylene	6.983	106	87209	46.36	ng	97
27) 1,1,2,2-Tetrachloroethane	7.969	83	86174	47.33	ng	97
28) o-Xylene	7.339	106	87553	48.02	ng	97
29) 1,2,3-Trichloropropane	7.994	75	73973	47.07	ng	99
30) Isopropylbenzene	7.679	105	234296	48.93	ng	100
33) 1,3,5-Trimethylbenzene	8.196	120	102729	47.36	ng	98
34) 1,2,4-Trimethylbenzene	8.486	120	91882	47.14	ng	96
35) 1,3-Dichlorobenzene	8.681	146	129225	51.44	ng	98
36) 1,4-Dichlorobenzene	8.763	146	132334	51.54	ng	99
37) 1,2-Dichlorobenzene	9.022	146	121354	49.89	ng	100
38) 1,2,4-Trichlorobenzene	10.144	180	84273	50.09	ng	97
39) Naphthalene	10.301	128	253703	46.54	ng	99
40) 1,2,3-Trichlorobenzene	10.437	180	86920	49.77	ng	99
41) 2-Methylnaphthalene	10.963	142	142024	42.87	ng	99
42) TPH C4-C9	4.810	TIC	17295263m	2842.59	ng	
43) TPH C10-C15	9.810	TIC	14039193m	1897.27	ng	

Data Path : Z:\GCMS\data\21\04\C210412\
Data File : C21041204.D
Acq On : 12 Apr 2021 02:45 pm
Operator : KAI
Sample : B21D035-ICV1
Misc : LCSD
ALS Vial : 4 Sample Multiplier: 1

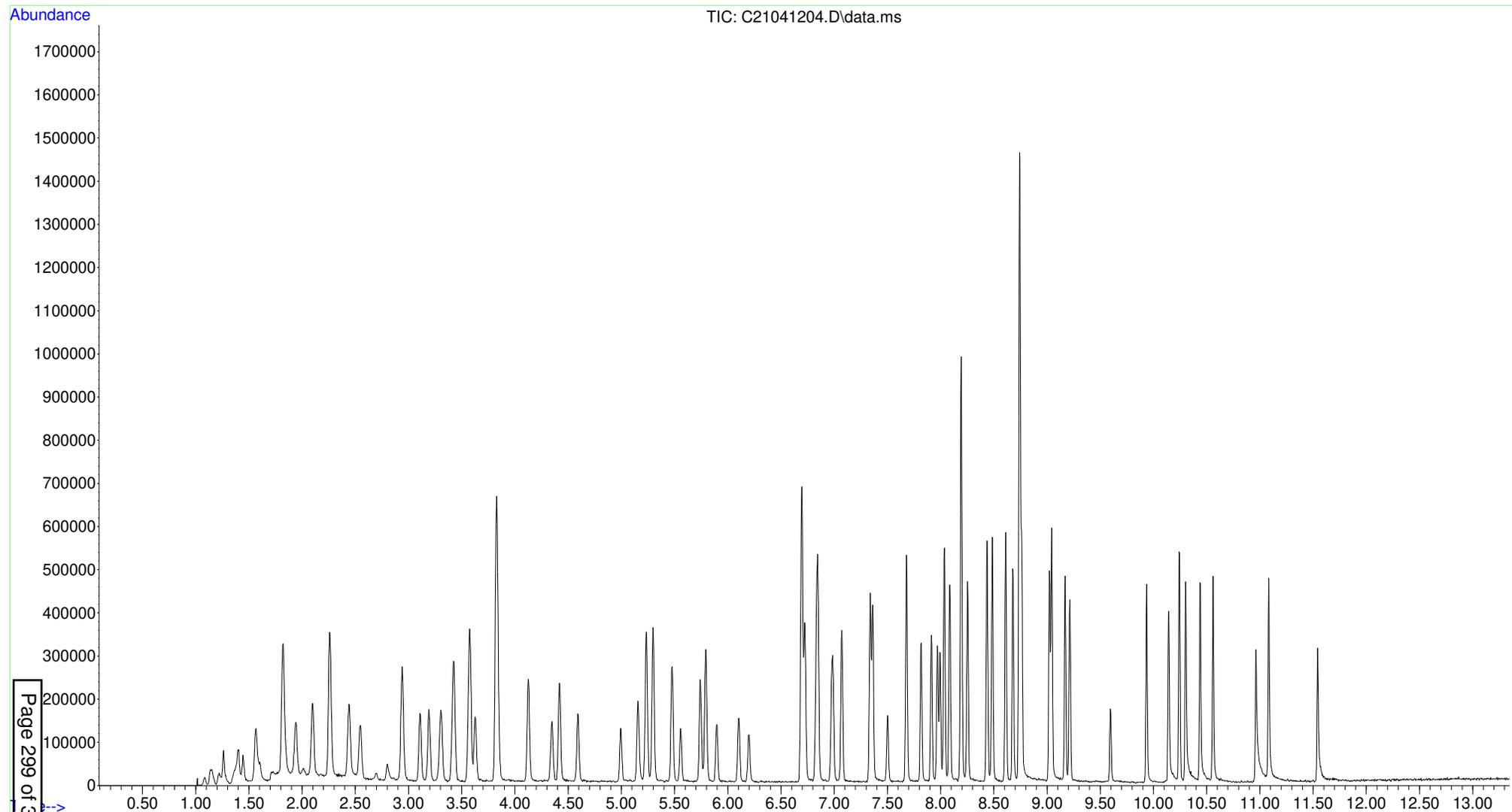
Quant Time: Apr 13 10:25:21 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Tue Apr 06 12:09:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210412\
 Data File : C21041204.D
 Acq On : 12 Apr 2021 02:45 pm
 Operator : KAI
 Sample : B21D035-ICV1
 Misc : LCSD
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 13 10:25:21 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Tue Apr 06 12:09:06 2021
 Response via : Initial Calibration



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Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Organics.GCMS
Calibration Summaries

Method Path : Z:\msdchem\C_system\
 Method File : 5977c_210401_STD_LIST_8260C.M
 Title : SOURCE AREA VOA ANALYSIS
 Last Update : Tue Apr 06 12:09:06 2021
 Response Via : Initial Calibration

Calibration Files

2.5 =21040103.D 5 =21040104.D 10 =21040105.D 25 =21040106.D 50 =21040107.D 100 =21040108.D 200 =21040109.D 400 =21040110.D 600 =21040111.D
 800 =21040112.D 1000=21040113.D

Compound	2.5	5	10	25	50	100	200	400	600	800	1000	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----												
2) T Vinyl Chloride	0.286	0.255	0.262	0.231	0.228	0.242	0.287	0.215	0.225	0.283	0.258	0.252	10.21
3) T 1,1-Dichloroet...	0.252	0.234	0.265	0.249	0.218	0.229	0.247	0.251	0.238	0.242	0.238	0.242	5.26
4) T 1,1,2-Trichlor...	0.283	0.265	0.298	0.275	0.287	0.279	0.292	0.291	0.284	0.287	0.277	0.283	3.25
5) T trans-1,2-Dich...	0.297	0.288	0.274	0.279	0.265	0.266	0.285	0.269	0.269	0.268	0.264	0.275	4.05
6) T Methyl-t-butyl...	0.865	0.789	0.732	0.727	0.706	0.709	0.720	0.721	0.706	0.707	0.712	0.736	6.64
7) P 1,1-Dichloroet...	0.574	0.549	0.550	0.535	0.520	0.548	0.560	0.532	0.531	0.533	0.537	0.543	2.81
8) T cis-1,2-Dichlo...	0.320	0.301	0.309	0.293	0.297	0.295	0.312	0.295	0.295	0.292	0.298	0.301	2.99
9) C ChloroForm	0.325	0.325	0.328	0.320	0.302	0.322	0.321	0.299	0.301	0.301	0.304	0.314	3.76
10) S 1,2-DCA-d4	0.360	0.421	0.399	0.398	0.371	0.388	0.393	0.380	0.381	0.375	0.373	0.385	4.36
11) T 1,2-Dichloroet...	0.502	0.497	0.529	0.520	0.501	0.518	0.522	0.499	0.495	0.497	0.475	0.505	3.07
12) T 1,1,1-Trichlor...	0.499	0.439	0.437	0.438	0.414	0.435	0.442	0.427	0.427	0.433	0.433	0.439	4.88
13) T Carbon Tetrach...	0.442	0.395	0.380	0.417	0.389	0.415	0.427	0.389	0.407	0.419	0.419	0.409	4.66
14) T Benzene	1.200	1.224	1.088	1.049	1.037	1.013	1.028	0.988	0.934	0.901	0.860	1.029	10.94
15) T Trichloroethene	0.407	0.392	0.330	0.323	0.323	0.320	0.327	0.334	0.310	0.312	0.312	0.335	9.74
16) T 1,4-Dioxane	0.248	0.204	0.179	0.202	0.206	0.208	0.206	0.207	0.212	0.217	0.217	0.210	7.70
17) T 1,1,2-Trichlor...	0.173	0.159	0.160	0.173	0.161	0.171	0.166	0.155	0.161	0.164	0.164	0.164	3.62
18) I Chlorobenzene-d5	-----ISTD-----												
19) S Toluene-d8	1.915	1.237	1.190	1.205	1.221	1.246	1.272	1.268	1.172	1.129	1.116	1.270	17.32
20) T Toluene	0.936	0.884	0.832	0.854	0.863	0.879	0.905	0.872	0.780	0.742	0.731	0.843	7.82
21) T 1,2-Dibromoeth...	0.321	0.370	0.365	0.373	0.358	0.387	0.390	0.352	0.372	0.369	0.381	0.367	5.17
22) T Tetrachloroethene	0.382	0.337	0.322	0.328	0.333	0.329	0.325	0.317	0.307	0.300	0.309	0.326	6.65
23) T 1,1,1,2-Tetrac...	0.393	0.338	0.336	0.360	0.352	0.366	0.362	0.334	0.353	0.347	0.352	0.354	4.67
24) P Chlorobenzene	1.073	1.038	0.991	1.013	1.031	1.027	1.022	0.976	0.945	0.911	0.902	0.994	5.49
25) C Ethylbenzene	0.484	0.504	0.512	0.512	0.525	0.542	0.551	0.488	0.483	0.468	0.463	0.503	5.72
26) T p & m-Xylene	0.637	0.616	0.592	0.601	0.600	0.647	0.670	0.590	0.613	0.589	0.579	0.612	4.63
27) P 1,1,2,2-Tetrac...	0.652	0.611	0.592	0.601	0.580	0.614	0.607	0.519	0.575	0.577	0.589	0.593	5.55
28) T o-Xylene	0.563	0.609	0.582	0.600	0.615	0.639	0.642	0.568	0.581	0.568	0.561	0.593	5.01
29) T 1,2,3-Trichlor...	0.552	0.504	0.501	0.515	0.508	0.529	0.531	0.495	0.506	0.495	0.490	0.511	3.69
30) T Isopropylbenzene	1.625	1.470	1.565	1.555	1.607	1.678	1.699	1.464	1.532	1.477	1.469	1.558	5.49
31) S Bromofluoroben...	0.744	0.535	0.464	0.442	0.445	0.476	0.474	0.433	0.456	0.446	0.442	0.487	18.43
32) S 1,4-Dichlorobenzen...	-----ISTD-----												
33) S 1,3,5-Trimethy...	1.295	1.325	1.406	1.303	1.430	1.400	1.420	1.402	1.322	1.259	1.250	1.347	4.95
34) S 1,2,4-Trimethy...	1.174	1.157	1.201	1.221	1.277	1.294	1.307	1.214	1.183	1.133	1.146	1.210	4.96
35) S 1,3-Dichlorobe...	1.506	1.596	1.563	1.529	1.666	1.596	1.609	1.557	1.545	1.480	1.508	1.560	3.47
36) S 1,4-Dichlorobe...	1.711	1.582	1.689	1.625	1.626	1.595	1.619	1.546	1.541	1.485	1.512	1.594	4.41

Method Path : Z:\msdchem\C_system\
Method File : 5977c_210401_STD LIST_8260C.M

Title : SOURCE AREA VOA ANALYSIS

37)	T	1,2-Dichlorobe...	1.743	1.550	1.443	1.446	1.578	1.502	1.543	1.481	1.465	1.417	1.440	1.510	6.16
38)	T	1,2,4-Trichlor...	0.828	0.883	0.935	1.015	1.054	1.113	1.181	1.085	1.137	1.108	1.148	1.044	11.09
39)	T	Naphthalene	2.818	2.800	3.048	3.290	3.418	3.764	3.960	3.593	3.667	3.470	3.393	3.384	11.03
40)	T	1,2,3-Trichlor...	0.972	0.954	1.060	1.115	1.106	1.124	1.173	1.092	1.118	1.088	1.122	1.084	6.11
41)	T	2-Methylnaphth...	1.389	1.663	1.673	1.835	1.911	2.262	2.441	2.323	2.449	2.343	2.335	2.057	18.15
42)	H	TPH C4-C9	1.130	0.916	0.682	0.482	0.427	0.365	0.391	0.459	0.386	0.361	0.369	0.543	E1 47.69
43)	H	TPH C10-C15	1.257	0.965	0.784	0.632	0.579	0.555	0.550	0.472	0.460	0.439	0.443	0.649	E1 39.78

(#) = Out of Range

Tune File : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\21040101.D

Tune Time : 01 Apr 2021 10:11 am

Daily Calibration File : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\21040107.D

File	Sample	Surrogate	Recovery %	Internal Standard	Responses
21040102.D	LB	101	98 98	270128	204691 93007
21040103.D	SEQ-CAL1	4*	4* 4*	381167	283968 131938
21040104.D	SEQ-CAL2	5*	5* 5*	386949	291553 138538
21040105.D	SEQ-CAL3	10*	10* 10*	380864	287949 136848
21040106.D	SEQ-CAL4	25*	24* 23*	377214	282871 141954
21040107.D	SEQ-CAL5	47*	50* 46*	385568	285496 137059
21040108.D	SEQ-CAL6	98	101 98	372672	280405 145406
21040109.D	SEQ-CAL7	199*	207* 194*	377730	278939 139490
21040110.D	SEQ-CAL8	384*	412* 355*	380561	269239 119883
21040111.D	SEQ-CAL9	578*	572* 561*	386448	291410 144709
21040112.D	SEQ-CALA	759*	734* 731*	356889	274538 140267
21040113.D	SEQ-CALB	944*	907* 905*	362407	274772 137702
21040114.D	LB	99	99 96	355631	274241 132771
21040115.D	LB	101	100 94	359238	272710 128988
21040116.D	SEQ-ICV1	51*	53* 48*	371984	277883 136626
21040117.D	SEQ-ICB1	100	97 91	352463	271339 125325
21040118.D	DL 2.5	3*	3* 4*	383657	283103 135666
21040119.D	LOD 5	5*	5* 5*	386802	283322 135211
21040120.D	LOD 5	5*	5* 5*	378839	278202 131053
21040121.D					

	LOD 5	5*	5*	5*	363060	264400	125234
21040122.D	LOD 5	5*	5*	5*	369327	262662	120261
21040123.D	LOQ 10	10*	10*	9*	369799	260349	117811
21040124.D	LOQ 10	11*	10*	10*	376121	265747	131064
21040125.D	LOQ 10	10*	10*	10*	376021	281112	135705
21040126.D	LOQ 10	10*	10*	9*	368197	273247	130665

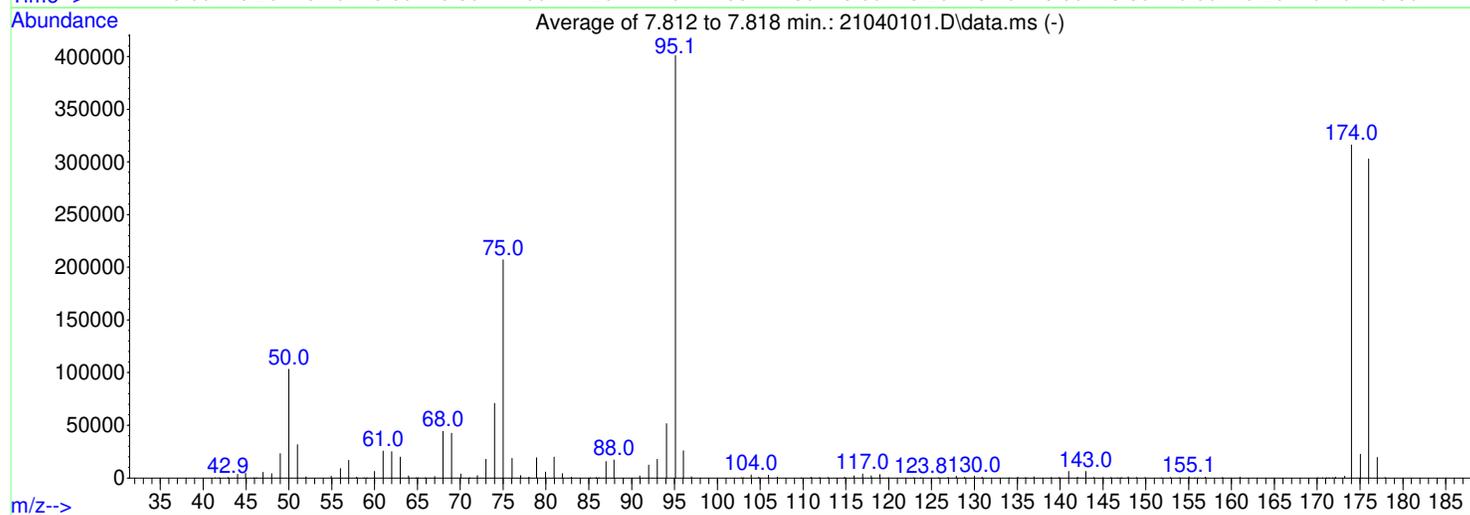
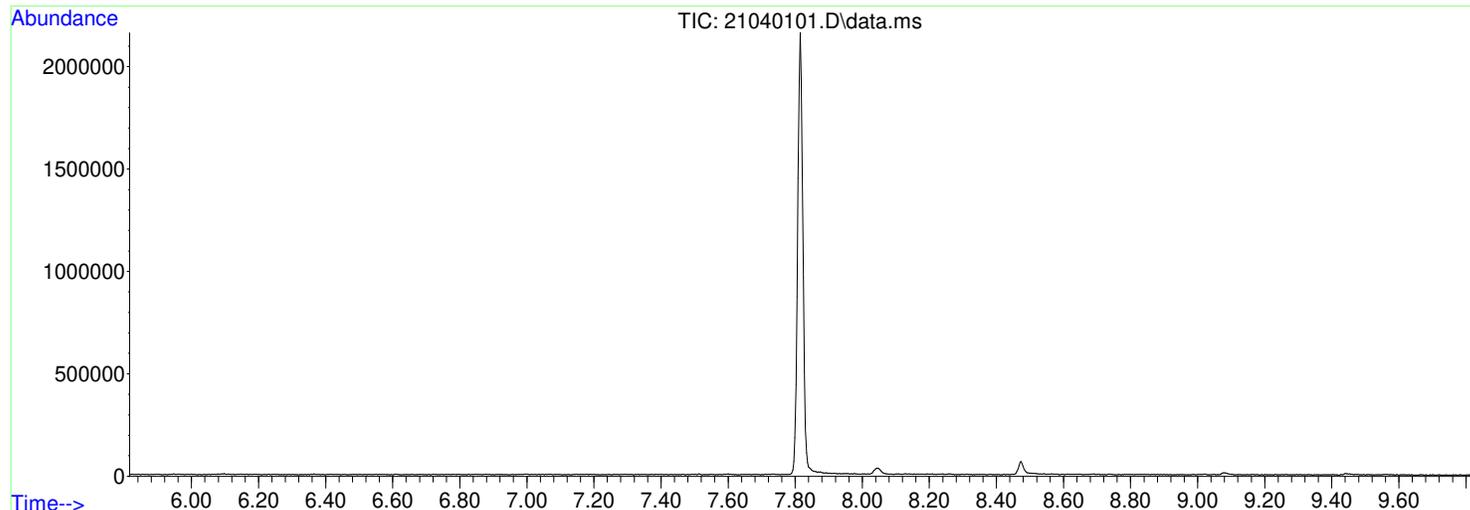
(fails) - fails 24hr time check * - fails criteria

Created: Mon Apr 05 13:01:03 2021 C-System

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040101.D
 Acq On : 01 Apr 2021 10:11 am
 Operator : KAI
 Sample : bfb
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: ALI9.P

Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Title : SOURCE AREA VOA ANALYSIS
 Last Update : Thu Apr 01 15:44:17 2021



AutoFind: Scans 2465, 2466, 2467; Background Corrected with Scan 2455

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.7	103075	PASS
75	95	30	60	51.6	207040	PASS
95	95	100	100	100.0	401045	PASS
96	95	5	9	6.4	25859	PASS
173	174	0.00	2	0.5	1525	PASS
174	95	50	200	78.9	316224	PASS
175	174	5	9	7.1	22421	PASS
176	174	95	101	95.8	302955	PASS
177	176	5	9	6.4	19499	PASS

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040103.D
 Acq On : 01 Apr 2021 10:59 am
 Operator : KAI
 Sample : SEQ-CAL1
 Misc : _2.5
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 12:57:17 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	381167	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	283968	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	131938	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.561	65	6383	4.24	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	4.24%#	
19) Toluene-d8	5.240	98	13597	3.89	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	3.89%#	
31) Bromofluorobenzene	7.818	95	5764	4.16	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	4.16%#	
Target Compounds						
2) Vinyl Chloride	1.258	62	3068	3.19	ng	# 93
3) 1,1-Dichloroethene	1.827	96	2400	2.60	ng	92
4) 1,1,2-Trichlorotrifluo...	1.827	101	2695	2.49	ng	# 29
5) trans-1,2-Dichloroethene	2.265	96	2832	2.70	ng	85
6) Methyl-t-butyl ether	2.259	73	8242	2.94	ng	# 53
7) 1,1-Dichloroethane	2.546	63	5465	2.64	ng	# 54
8) cis-1,2-Dichloroethene	2.933	96	3045	2.66	ng	97
9) Chloroform	3.195	85	3097	2.59	ng	92
11) 1,2-Dichloroethane	3.627	62	4787	2.49	ng	# 69
12) 1,1,1-Trichloroethane	3.308	97	4754	2.84	ng	# 76
13) Carbon Tetrachloride	3.416	117	4216	2.70	ng	# 80
14) Benzene	3.579	78	11437	2.92	ng	# 89
15) Trichloroethene	4.131	130	3880	3.03	ng	97
16) 1,4-Dioxane	4.424	88	2360	2.95	ng	# 73
17) 1,1,2-Trichloroethane	5.748	99	1652	2.64	ng	# 70
20) Toluene	5.294	92	3830	2.27	ng	# 92
21) 1,2-Dibromoethane (EDB)	6.195	107	2279	2.19	ng	# 66
22) Tetrachloroethene	5.789	131	2709	2.92	ng	# 90
23) 1,1,1,2-Tetrachloroethane	6.835	131	2787	2.77	ng	# 1
24) Chlorobenzene	6.724	112	7615	2.70	ng	98
25) Ethylbenzene	6.847	106	3434	2.41	ng	81
26) p & m-Xylene	6.983	106	4522	2.60	ng	96
27) 1,1,2,2-Tetrachloroethane	7.969	83	4631	2.75	ng	98
28) o-Xylene	7.342	106	3994	2.37	ng	87
29) 1,2,3-Trichloropropane	8.001	75	3917	2.70	ng	99
30) Isopropylbenzene	7.673	105	11539	2.61	ng	95
33) 1,3,5-Trimethylbenzene	8.190	120	4270	2.40	ng	98
34) 1,2,4-Trimethylbenzene	8.486	120	3872	2.43	ng	94
35) 1,3-Dichlorobenzene	8.681	146	4967	2.41	ng	99
36) 1,4-Dichlorobenzene	8.760	146	5645	2.68	ng	# 80
37) 1,2-Dichlorobenzene	9.025	146	5748	2.89	ng	89
38) 1,2,4-Trichlorobenzene	10.147	180	2731	1.98	ng	95
39) Naphthalene	10.311	128	9295	2.08	ng	# 83
40) 1,2,3-Trichlorobenzene	10.440	180	3205	2.24	ng	95
41) 2-Methylnaphthalene	10.976	142	4580	1.73	ng	95
42) TPH C4-C9	4.810	TIC	4753050m	953.10	ng	
43) TPH C10-C15	9.810	TIC	2985857m	492.69	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040103.D
Acq On : 01 Apr 2021 10:59 am
Operator : KAI
Sample : SEQ-CAL1
Misc : _2.5
ALS Vial : 3 Sample Multiplier: 1

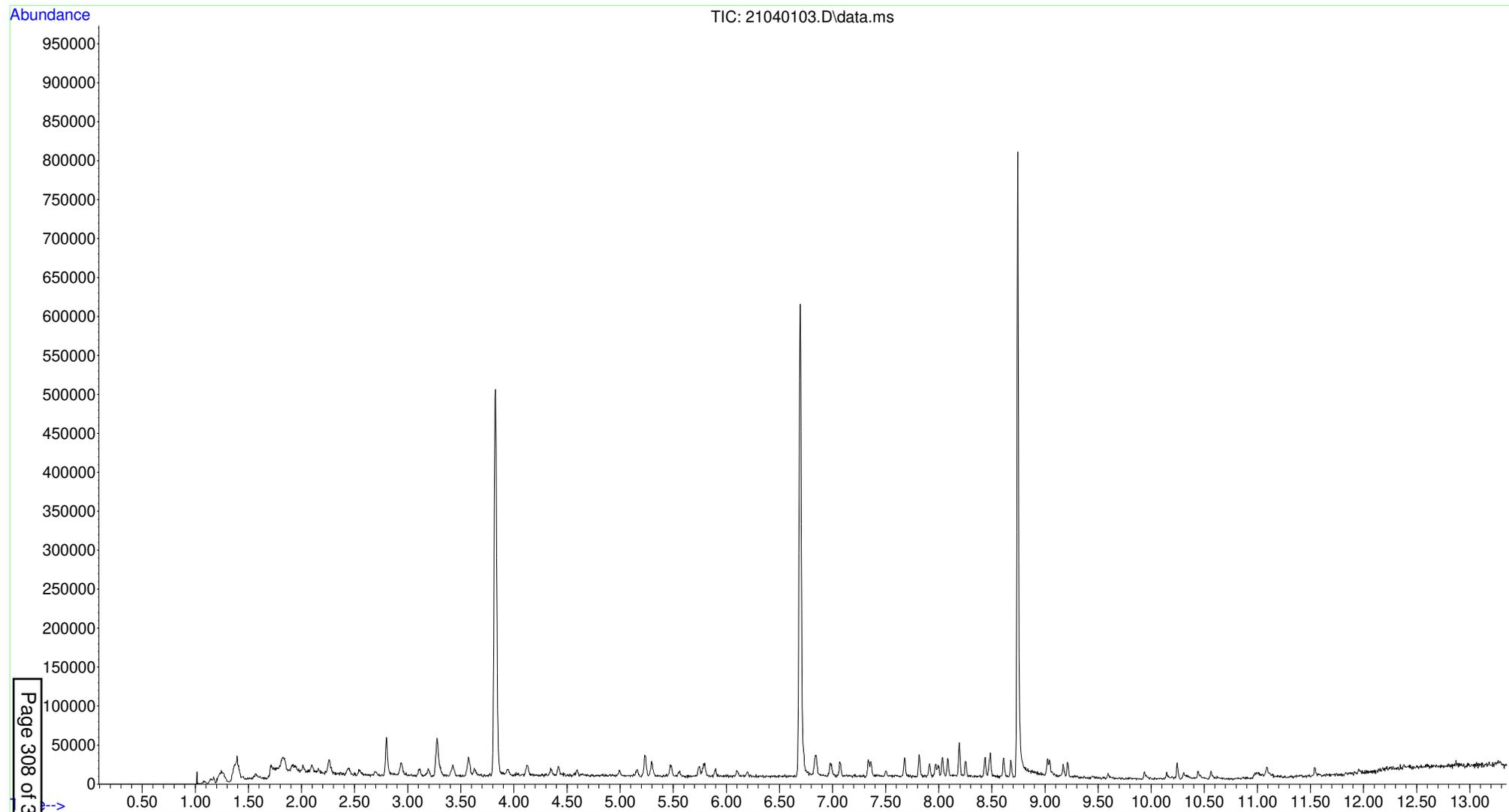
Quant Time: Apr 05 12:57:17 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040103.D
 Acq On : 01 Apr 2021 10:59 am
 Operator : KAI
 Sample : SEQ-CAL1
 Misc : _2.5
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 12:57:17 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040104.D
 Acq On : 01 Apr 2021 11:23 am
 Operator : KAI
 Sample : SEQ-CAL2
 Misc : _5
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 12:57:21 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	386949	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	291553	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	138538	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	8137	5.32	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.32%#	
19) Toluene-d8	5.234	98	18028	5.02	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.02%#	
31) Bromofluorobenzene	7.815	95	7798	5.48	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.48%#	
Target Compounds						
2) Vinyl Chloride	1.267	62	4940	5.07	ng	# 92
3) 1,1-Dichloroethene	1.821	96	4533	4.84	ng	95
4) 1,1,2-Trichlorotrifluo...	1.830	101	5129	4.68	ng	# 65
5) trans-1,2-Dichloroethene	2.265	96	5579	5.24	ng	98
6) Methyl-t-butyl ether	2.253	73	15262	5.36	ng	98
7) 1,1-Dichloroethane	2.546	63	10629	5.06	ng	94
8) cis-1,2-Dichloroethene	2.940	96	5816	5.00	ng	97
9) Chloroform	3.198	85	6297	5.19	ng	99
11) 1,2-Dichloroethane	3.630	62	9623	4.93	ng	96
12) 1,1,1-Trichloroethane	3.302	97	8492	5.00	ng	88
13) Carbon Tetrachloride	3.425	117	7637	4.83	ng	96
14) Benzene	3.576	78	23673	5.94	ng	96
15) Trichloroethene	4.131	130	7581	5.84	ng	# 88
16) 1,4-Dioxane	4.424	88	3949	4.87	ng	91
17) 1,1,2-Trichloroethane	5.744	99	3082	4.84	ng	96
20) Toluene	5.297	92	7614	4.40	ng	# 87
21) 1,2-Dibromoethane (EDB)	6.201	107	5390	5.04	ng	93
22) Tetrachloroethene	5.792	131	4912	5.16	ng	# 94
23) 1,1,1,2-Tetrachloroethane	6.832	131	4933	4.78	ng	# 40
24) Chlorobenzene	6.724	112	15125	5.22	ng	97
25) Ethylbenzene	6.847	106	7340	5.01	ng	96
26) p & m-Xylene	6.983	106	8980	5.03	ng	99
27) 1,1,2,2-Tetrachloroethane	7.969	83	8909	5.16	ng	# 97
28) o-Xylene	7.342	106	8878	5.13	ng	96
29) 1,2,3-Trichloropropane	7.998	75	7354	4.93	ng	# 86
30) Isopropylbenzene	7.682	105	21424	4.72	ng	91
33) 1,3,5-Trimethylbenzene	8.196	120	9177	4.92	ng	99
34) 1,2,4-Trimethylbenzene	8.486	120	8017	4.78	ng	92
35) 1,3-Dichlorobenzene	8.678	146	11054	5.12	ng	94
36) 1,4-Dichlorobenzene	8.760	146	10961	4.96	ng	86
37) 1,2-Dichlorobenzene	9.025	146	10737	5.14	ng	99
38) 1,2,4-Trichlorobenzene	10.144	180	6118	4.23	ng	97
39) Naphthalene	10.304	128	19392	4.14	ng	# 96
40) 1,2,3-Trichlorobenzene	10.440	180	6608	4.40	ng	91
41) 2-Methylnaphthalene	10.976	142	11521	4.15	ng	# 85
42) TPH C4-C9	4.810	TIC	5582768m	1066.15	ng	
43) TPH C10-C15	9.810	TIC	3476089m	546.26	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040104.D
Acq On : 01 Apr 2021 11:23 am
Operator : KAI
Sample : SEQ-CAL2
Misc : _5
ALS Vial : 4 Sample Multiplier: 1

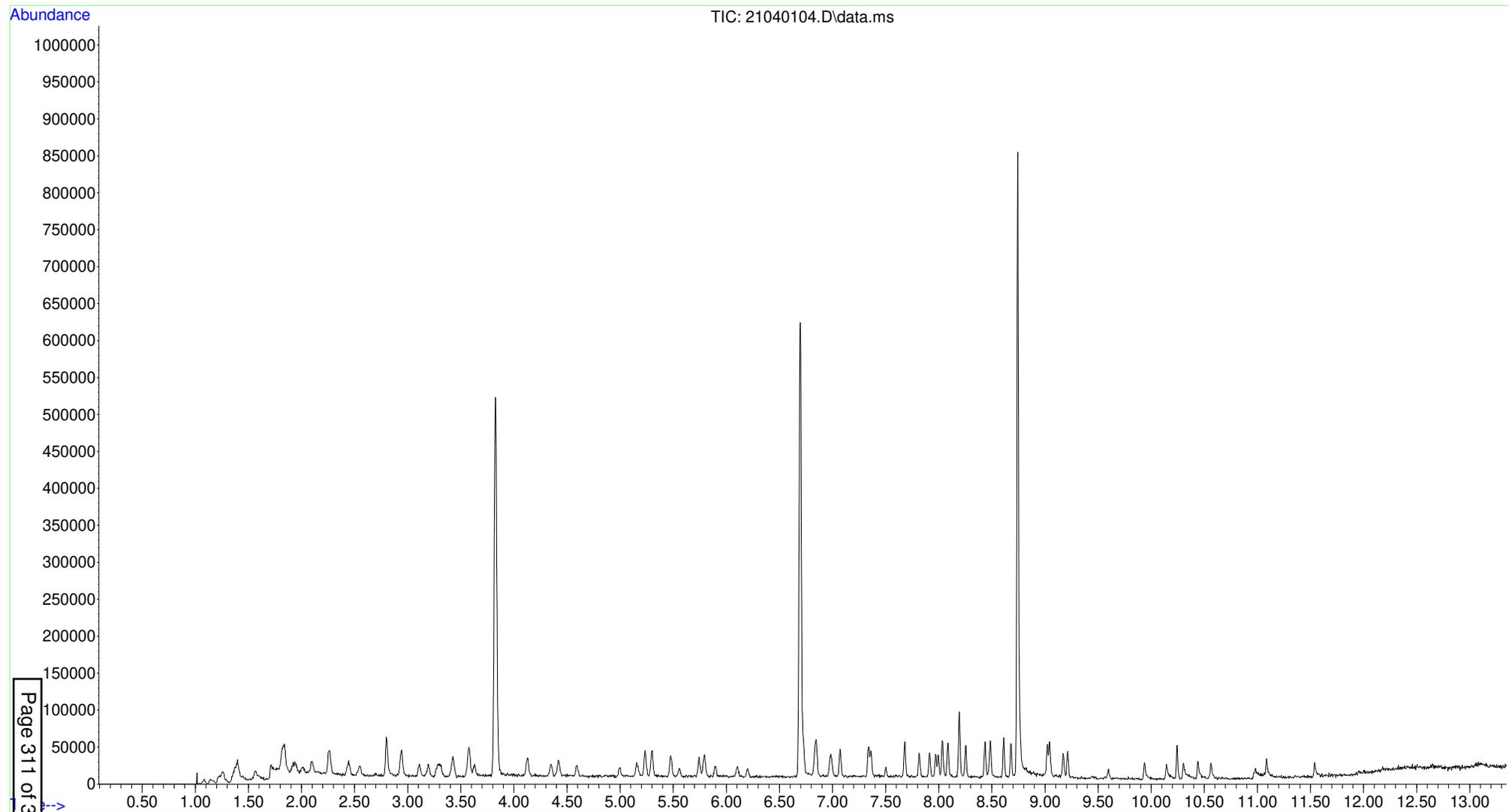
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Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040104.D
 Acq On : 01 Apr 2021 11:23 am
 Operator : KAI
 Sample : SEQ-CAL2
 Misc : _5
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 12:57:21 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040105.D
 Acq On : 01 Apr 2021 11:48 am
 Operator : KAI
 Sample : SEQ-CAL3
 Misc : _10
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 12:57:25 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	380864	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	287949	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	136848	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	15202	10.10	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.10%#	
19) Toluene-d8	5.234	98	34272	9.67	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	9.67%#	
31) Bromofluorobenzene	7.818	95	13368	9.51	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	9.51%#	
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.262	62	9970	10.39	ng	# 93
3) 1,1-Dichloroethene	1.824	96	10109	10.97	ng	92
4) 1,1,2-Trichlorotrifluo...	1.821	101	11365	10.53	ng	94
5) trans-1,2-Dichloroethene	2.269	96	10417	9.95	ng	97
6) Methyl-t-butyl ether	2.256	73	27880	9.95	ng	97
7) 1,1-Dichloroethane	2.543	63	20937	10.13	ng	98
8) cis-1,2-Dichloroethene	2.940	96	11786	10.29	ng	98
9) Chloroform	3.195	85	12477	10.45	ng	94
11) 1,2-Dichloroethane	3.627	62	20144	10.48	ng	# 78
12) 1,1,1-Trichloroethane	3.305	97	16640	9.96	ng	92
13) Carbon Tetrachloride	3.419	117	14454	9.28	ng	96
14) Benzene	3.576	78	41428	10.57	ng	98
15) Trichloroethene	4.128	130	12551	9.82	ng	99
16) 1,4-Dioxane	4.421	88	6825	8.55	ng	99
17) 1,1,2-Trichloroethane	5.745	99	6104	9.75	ng	95
20) Toluene	5.297	92	18448	10.80	ng	# 91
21) 1,2-Dibromoethane (EDB)	6.202	107	10506	9.94	ng	94
22) Tetrachloroethene	5.795	131	9261	9.86	ng	93
23) 1,1,1,2-Tetrachloroethane	6.832	131	9689	9.51	ng	# 62
24) Chlorobenzene	6.725	112	28544	9.98	ng	94
25) Ethylbenzene	6.848	106	14740	10.18	ng	90
26) p & m-Xylene	6.983	106	17043	9.67	ng	98
27) 1,1,2,2-Tetrachloroethane	7.966	83	17035	9.98	ng	98
28) o-Xylene	7.339	106	16762	9.81	ng	97
29) 1,2,3-Trichloropropane	7.998	75	14438	9.80	ng	93
30) Isopropylbenzene	7.680	105	45074	10.05	ng	99
33) 1,3,5-Trimethylbenzene	8.193	120	19244	10.44	ng	93
34) 1,2,4-Trimethylbenzene	8.486	120	16434	9.93	ng	97
35) 1,3-Dichlorobenzene	8.682	146	21390	10.02	ng	99
36) 1,4-Dichlorobenzene	8.760	146	23109	10.60	ng	99
37) 1,2-Dichlorobenzene	9.025	146	19748	9.58	ng	94
38) 1,2,4-Trichlorobenzene	10.147	180	12800	8.96	ng	98
39) Naphthalene	10.305	128	41705	9.01	ng	# 97
40) 1,2,3-Trichlorobenzene	10.437	180	14505	9.78	ng	92
41) 2-Methylnaphthalene	10.966	142	22895	8.35	ng	99
42) TPH C4-C9	4.810	TIC	6345995m	1226.87	ng	
43) TPH C10-C15	9.810	TIC	4503981m	716.53	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040105.D
Acq On : 01 Apr 2021 11:48 am
Operator : KAI
Sample : SEQ-CAL3
Misc : _10
ALS Vial : 5 Sample Multiplier: 1

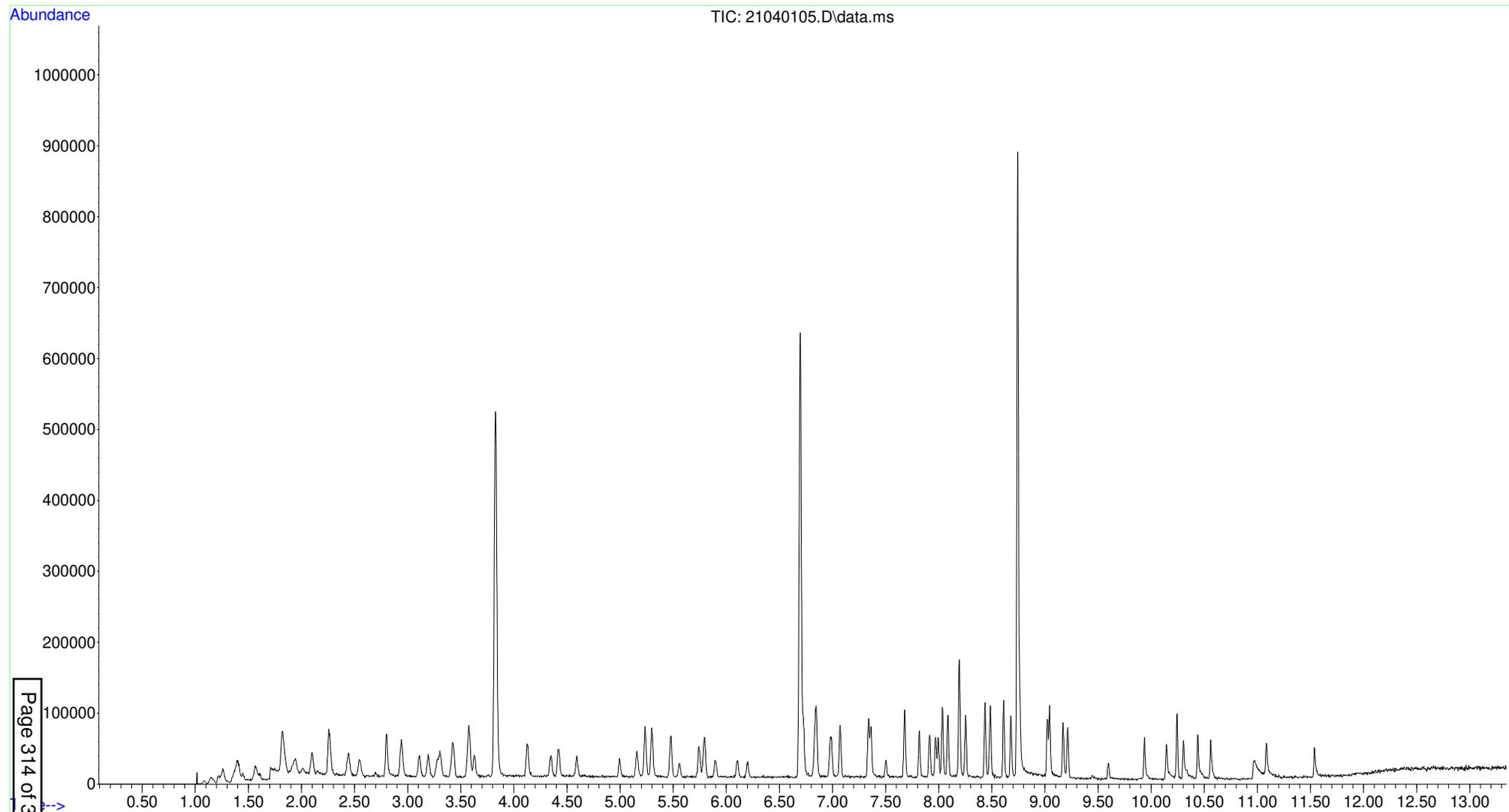
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Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040105.D
 Acq On : 01 Apr 2021 11:48 am
 Operator : KAI
 Sample : SEQ-CAL3
 Misc : _10
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 12:57:25 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040106.D
 Acq On : 01 Apr 2021 12:12 pm
 Operator : KAI
 Sample : SEQ-CAL4
 Misc : _25
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 12:57:29 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	377214	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	282871	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	141954	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	37493	25.14	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	25.14%#	
19) Toluene-d8	5.234	98	85232	24.48	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	24.48%#	
31) Bromofluorobenzene	7.818	95	31251	22.64	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	22.64%#	
Target Compounds						
2) Vinyl Chloride	1.264	62	21741	22.88	ng	99
3) 1,1-Dichloroethene	1.818	96	23447	25.68	ng	100
4) 1,1,2-Trichlorotrifluo...	1.821	101	25919	24.25	ng	88
5) trans-1,2-Dichloroethene	2.265	96	26352	25.41	ng	97
6) Methyl-t-butyl ether	2.259	73	68528	24.69	ng	99
7) 1,1-Dichloroethane	2.546	63	50491	24.67	ng	100
8) cis-1,2-Dichloroethene	2.943	96	27591	24.33	ng	94
9) Chloroform	3.189	85	30192	25.53	ng	95
11) 1,2-Dichloroethane	3.627	62	48996	25.73	ng	99
12) 1,1,1-Trichloroethane	3.308	97	41312	24.97	ng	95
13) Carbon Tetrachloride	3.419	117	39315	25.49	ng	98
14) Benzene	3.579	78	98967	25.49	ng	99
15) Trichloroethene	4.128	130	30488	24.09	ng	96
16) 1,4-Dioxane	4.418	88	19055	24.10	ng	97
17) 1,1,2-Trichloroethane	5.744	99	16319	26.31	ng	100
20) Toluene	5.297	92	43094	25.69	ng	98
21) 1,2-Dibromoethane (EDB)	6.198	107	26345	25.38	ng	98
22) Tetrachloroethene	5.795	131	23201	25.14	ng	# 93
23) 1,1,1,2-Tetrachloroethane	6.835	131	25459	25.43	ng	99
24) Chlorobenzene	6.721	112	71611	25.48	ng	96
25) Ethylbenzene	6.847	106	36225	25.48	ng	100
26) p & m-Xylene	6.989	106	42486	24.53	ng	98
27) 1,1,2,2-Tetrachloroethane	7.972	83	42509	25.36	ng	99
28) o-Xylene	7.339	106	42451	25.29	ng	96
29) 1,2,3-Trichloropropane	7.994	75	36430	25.18	ng	95
30) Isopropylbenzene	7.679	105	109966	24.95	ng	99
33) 1,3,5-Trimethylbenzene	8.196	120	46229	24.19	ng	97
34) 1,2,4-Trimethylbenzene	8.489	120	43344	25.24	ng	99
35) 1,3-Dichlorobenzene	8.681	146	54261	24.51	ng	99
36) 1,4-Dichlorobenzene	8.763	146	57671	25.49	ng	95
37) 1,2-Dichlorobenzene	9.022	146	51315	24.00	ng	97
38) 1,2,4-Trichlorobenzene	10.144	180	36018	24.29	ng	98
39) Naphthalene	10.301	128	116772	24.31	ng	98
40) 1,2,3-Trichlorobenzene	10.440	180	39586	25.73	ng	96
41) 2-Methylnaphthalene	10.966	142	65111	22.88	ng	100
42) TPH C4-C9	4.810	TIC	9586956m	1786.77	ng	
43) TPH C10-C15	9.810	TIC	8074828m	1238.40	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040106.D
Acq On : 01 Apr 2021 12:12 pm
Operator : KAI
Sample : SEQ-CAL4
Misc : _25
ALS Vial : 6 Sample Multiplier: 1

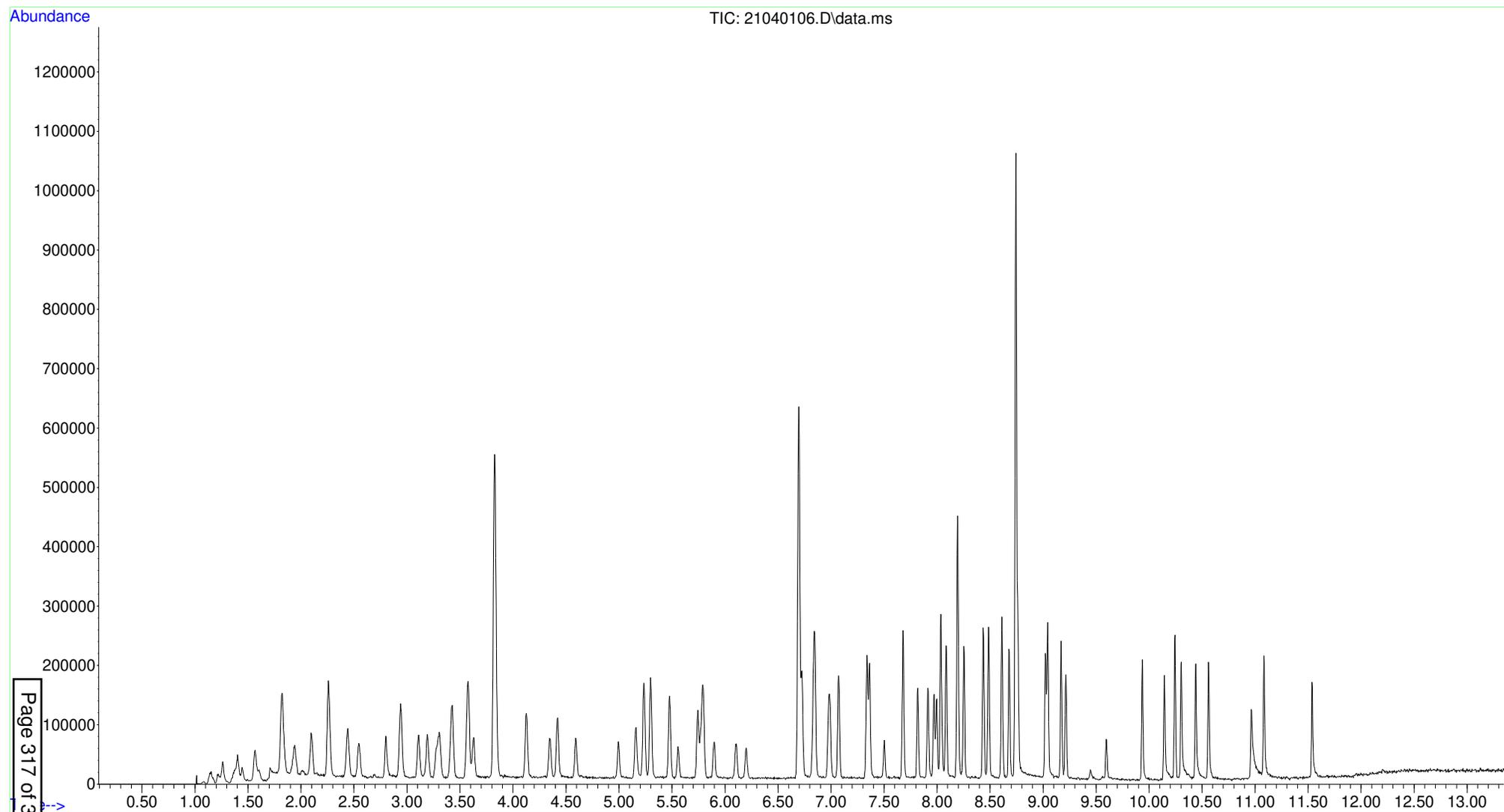
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040106.D
Acq On : 01 Apr 2021 12:12 pm
Operator : KAI
Sample : SEQ-CAL4
Misc : _25
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 12:57:29 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration



Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040107.D
 Acq On : 01 Apr 2021 12:36 pm
 Operator : KAI
 Sample : SEQ-CAL5
 Misc : _50
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 12:57:34 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	385568	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	285496	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	137059	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	71574	46.96	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	46.96%#	
19) Toluene-d8	5.234	98	174243	49.59	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	49.59%#	
31) Bromofluorobenzene	7.815	95	63507	45.58	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	45.58%#	
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.262	62	44018	45.31	ng	100
3) 1,1-Dichloroethene	1.821	96	42048	45.05	ng	100
4) 1,1,2-Trichlorotrifluo...	1.824	101	55305	50.61	ng	100
5) trans-1,2-Dichloroethene	2.262	96	51010	48.12	ng	100
6) Methyl-t-butyl ether	2.259	73	136189	48.00	ng	100
7) 1,1-Dichloroethane	2.546	63	100202	47.89	ng	100
8) cis-1,2-Dichloroethene	2.943	96	57324	49.46	ng	100
9) Chloroform	3.195	85	58196	48.14	ng	100
11) 1,2-Dichloroethane	3.627	62	96519	49.58	ng	100
12) 1,1,1-Trichloroethane	3.309	97	79874	47.24	ng	100
13) Carbon Tetrachloride	3.419	117	74899	47.51	ng	100
14) Benzene	3.580	78	199846	50.36	ng	100
15) Trichloroethene	4.125	130	62208	48.09	ng	100
16) 1,4-Dioxane	4.421	88	39750	49.18	ng	100
17) 1,1,2-Trichloroethane	5.745	99	31089	49.03	ng	100
20) Toluene	5.297	92	90805	53.63	ng	100
21) 1,2-Dibromoethane (EDB)	6.198	107	51038	48.73	ng	100
22) Tetrachloroethene	5.795	131	47544	51.05	ng	100
23) 1,1,1,2-Tetrachloroethane	6.835	131	50247	49.72	ng	100
24) Chlorobenzene	6.725	112	147216	51.90	ng	100
25) Ethylbenzene	6.848	106	74894	52.18	ng	100
26) p & m-Xylene	6.983	106	85663	49.01	ng	100
27) 1,1,2,2-Tetrachloroethane	7.969	83	82780	48.94	ng	100
28) o-Xylene	7.339	106	87756	51.80	ng	100
29) 1,2,3-Trichloropropane	7.995	75	72457	49.63	ng	100
30) Isopropylbenzene	7.680	105	229399	51.56	ng	100
33) 1,3,5-Trimethylbenzene	8.196	120	98012	53.11	ng	100
34) 1,2,4-Trimethylbenzene	8.486	120	87486	52.76	ng	100
35) 1,3-Dichlorobenzene	8.679	146	114152	53.41	ng	100
36) 1,4-Dichlorobenzene	8.760	146	111432	51.02	ng	100
37) 1,2-Dichlorobenzene	9.022	146	108139	52.38	ng	100
38) 1,2,4-Trichlorobenzene	10.144	180	72241	50.47	ng	100
39) Naphthalene	10.301	128	234232	50.51	ng	100
40) 1,2,3-Trichlorobenzene	10.437	180	75822	51.03	ng	100
41) 2-Methylnaphthalene	10.963	142	130961	47.66	ng	100
42) TPH C4-C9	4.810	TIC	15202381m	2934.54	ng	
43) TPH C10-C15	9.810	TIC	13481403m	2141.43	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040107.D
Acq On : 01 Apr 2021 12:36 pm
Operator : KAI
Sample : SEQ-CAL5
Misc : _50
ALS Vial : 7 Sample Multiplier: 1

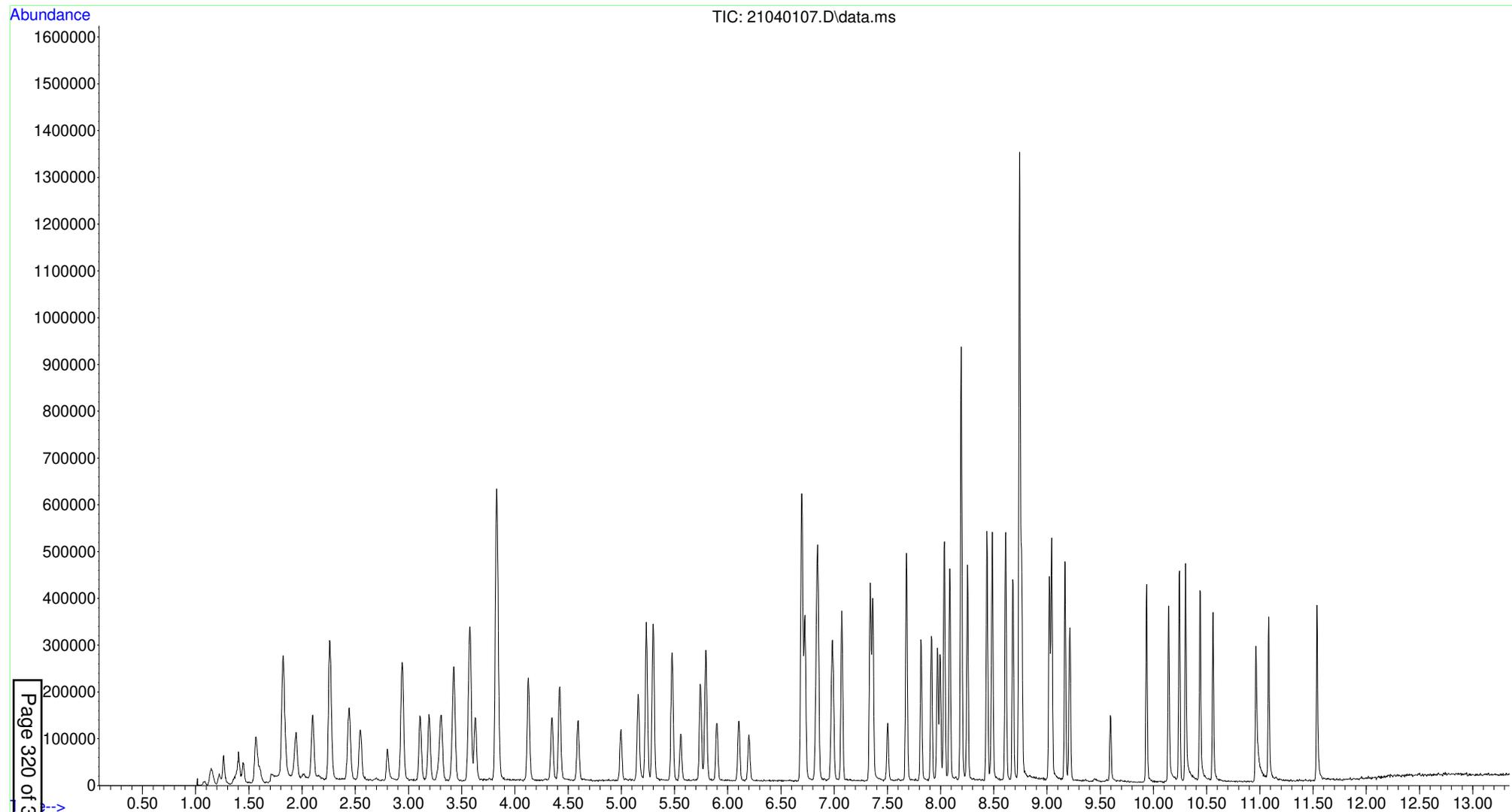
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040107.D
 Acq On : 01 Apr 2021 12:36 pm
 Operator : KAI
 Sample : SEQ-CAL5
 Misc : _50
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 12:57:34 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040108.D
 Acq On : 01 Apr 2021 01:00 pm
 Operator : KAI
 Sample : SEQ-CAL6
 Misc : _100
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 12:57:37 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Fluorobenzene	3.829	96	372672	100.00	ng	0.00	
18) Chlorobenzene-d5	6.696	117	280405	100.00	ng	0.00	
32) 1,4-Dichlorobenzene-d4	8.745	152	145406	100.00	ng	0.00	
System Monitoring Compounds							
10) 1,2-DCA-d4	3.567	65	144755	98.25	ng	0.00	
Spiked Amount	100.000	Range 70 - 130	Recovery	=	98.25%		
19) Toluene-d8	5.234	98	349494	101.27	ng	0.00	
Spiked Amount	100.000	Range 70 - 130	Recovery	=	101.27%		
31) Bromofluorobenzene	7.818	95	133504	97.55	ng	0.00	
Spiked Amount	100.000	Range 70 - 130	Recovery	=	97.55%		
Target Compounds							
2) Vinyl Chloride	1.265	62	90355	96.23	ng	98	Qvalue
3) 1,1-Dichloroethene	1.821	96	85328	94.59	ng	94	
4) 1,1,2-Trichlorotrifluo...	1.824	101	103837	98.32	ng	98	
5) trans-1,2-Dichloroethene	2.262	96	99237	96.86	ng	100	
6) Methyl-t-butyl ether	2.259	73	264239	96.36	ng	98	
7) 1,1-Dichloroethane	2.549	63	204374	101.07	ng	98	
8) cis-1,2-Dichloroethene	2.943	96	109992	98.19	ng	95	
9) Chloroform	3.192	85	120142	102.82	ng	96	
11) 1,2-Dichloroethane	3.627	62	192948	102.55	ng	100	
12) 1,1,1-Trichloroethane	3.305	97	162240	99.27	ng	99	
13) Carbon Tetrachloride	3.422	117	154787	101.57	ng	96	
14) Benzene	3.580	78	377384	98.38	ng	99	
15) Trichloroethene	4.128	130	119318	95.44	ng	97	
16) 1,4-Dioxane	4.418	88	77437	99.13	ng	97	
17) 1,1,2-Trichloroethane	5.745	99	63815	104.13	ng	100	
20) Toluene	5.300	92	179044	107.66	ng	99	
21) 1,2-Dibromoethane (EDB)	6.202	107	108444	105.41	ng	99	
22) Tetrachloroethene	5.792	131	92297	100.89	ng	99	
23) 1,1,1,2-Tetrachloroethane	6.832	131	102501	103.28	ng	99	
24) Chlorobenzene	6.725	112	287899	103.34	ng	99	
25) Ethylbenzene	6.848	106	151875	107.75	ng	99	
26) p & m-Xylene	6.986	106	181452	105.70	ng	100	
27) 1,1,2,2-Tetrachloroethane	7.969	83	172183	103.64	ng	99	
28) o-Xylene	7.342	106	179157	107.67	ng	99	
29) 1,2,3-Trichloropropane	7.995	75	148414	103.49	ng	96	
30) Isopropylbenzene	7.680	105	470466	107.67	ng	100	
33) 1,3,5-Trimethylbenzene	8.196	120	203575	103.97	ng	99	
34) 1,2,4-Trimethylbenzene	8.486	120	188130	106.94	ng	98	
35) 1,3-Dichlorobenzene	8.679	146	232053	102.33	ng	98	
36) 1,4-Dichlorobenzene	8.764	146	231902	100.07	ng	98	
37) 1,2-Dichlorobenzene	9.022	146	218427	99.72	ng	100	
38) 1,2,4-Trichlorobenzene	10.144	180	161866	106.58	ng	98	
39) Naphthalene	10.301	128	547334	111.25	ng	99	
40) 1,2,3-Trichlorobenzene	10.437	180	163439	103.69	ng	100	
41) 2-Methylnaphthalene	10.963	142	328855	112.81	ng	99	
42) TPH C4-C9	4.810	TIC	26563786m	4833.30	ng		
43) TPH C10-C15	9.810	TIC	26639416m	3988.59	ng		

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040108.D
Acq On : 01 Apr 2021 01:00 pm
Operator : KAI
Sample : SEQ-CAL6
Misc : _100
ALS Vial : 8 Sample Multiplier: 1

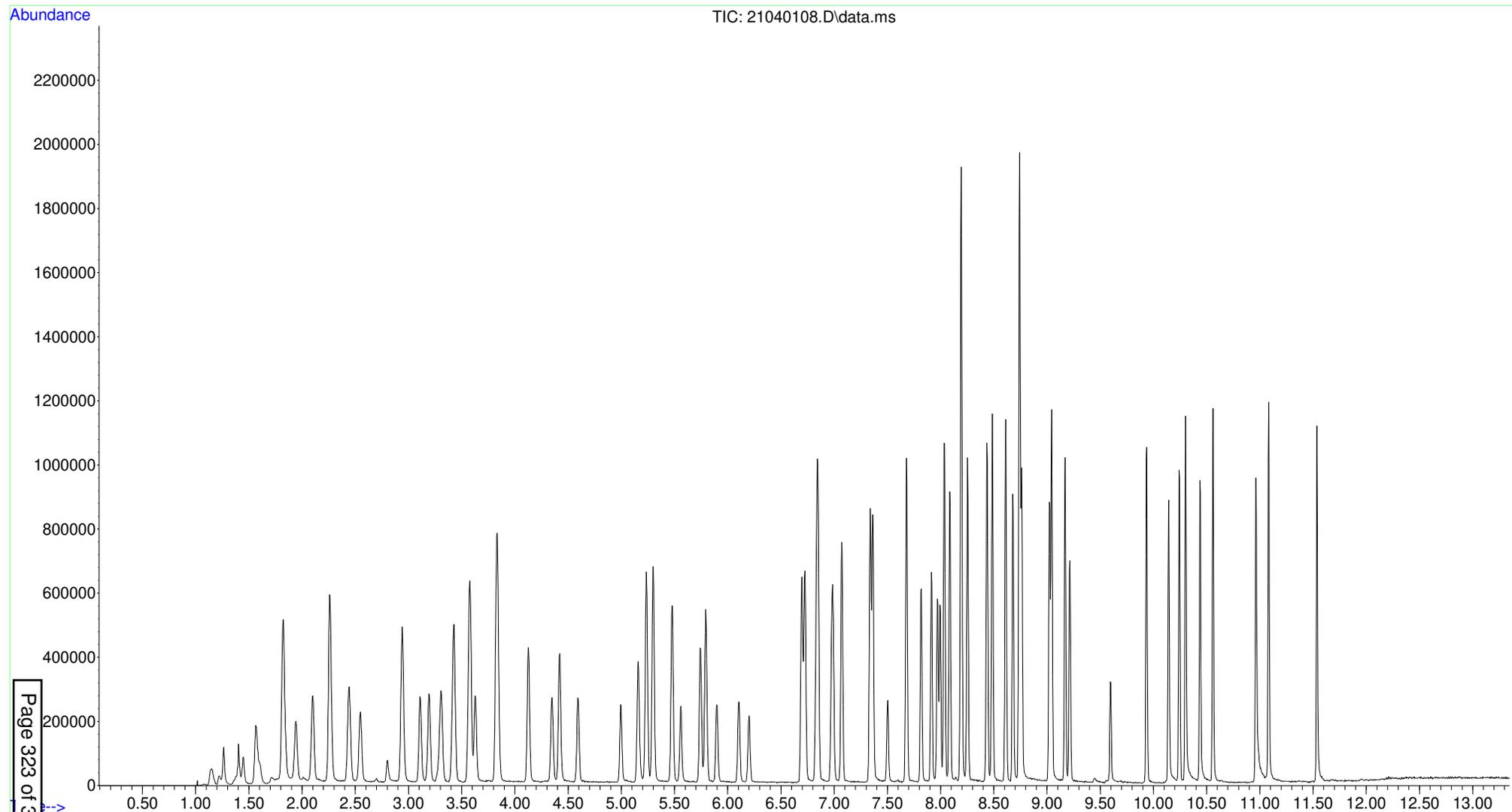
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Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040108.D
Acq On : 01 Apr 2021 01:00 pm
Operator : KAI
Sample : SEQ-CAL6
Misc : _100
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 12:57:37 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040109.D
 Acq On : 01 Apr 2021 01:25 pm
 Operator : KAI
 Sample : SEQ-CAL7
 Misc : _200
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 12:57:40 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.829	96	377730	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	278939	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	139490	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	297166	199.00	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	199.00%#	
19) Toluene-d8	5.234	98	709415	206.64	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	206.64%#	
31) Bromofluorobenzene	7.815	95	264448	194.25	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	194.25%#	
Target Compounds						
2) Vinyl Chloride	1.262	62	216544	227.55	ng	98
3) 1,1-Dichloroethene	1.821	96	186475	203.95	ng	96
4) 1,1,2-Trichlorotrifluo...	1.818	101	220720	206.19	ng	97
5) trans-1,2-Dichloroethene	2.262	96	215665	207.67	ng	98
6) Methyl-t-butyl ether	2.256	73	543881	195.68	ng	97
7) 1,1-Dichloroethane	2.546	63	422694	206.23	ng	99
8) cis-1,2-Dichloroethene	2.940	96	235523	207.43	ng	97
9) Chloroform	3.192	85	242498	204.76	ng	98
11) 1,2-Dichloroethane	3.627	62	394025	206.62	ng	99
12) 1,1,1-Trichloroethane	3.305	97	333964	201.60	ng	99
13) Carbon Tetrachloride	3.422	117	322426	208.75	ng	97
14) Benzene	3.580	78	776323	199.67	ng	100
15) Trichloroethene	4.125	130	247009	194.93	ng	98
16) 1,4-Dioxane	4.418	88	155557	196.47	ng	96
17) 1,1,2-Trichloroethane	5.741	99	125710	202.39	ng	100
20) Toluene	5.297	92	372825	225.35	ng	99
21) 1,2-Dibromoethane (EDB)	6.202	107	217414	212.44	ng	97
22) Tetrachloroethene	5.792	131	181537	199.49	ng	98
23) 1,1,1,2-Tetrachloroethane	6.832	131	202095	204.69	ng	96
24) Chlorobenzene	6.725	112	570149	205.73	ng	99
25) Ethylbenzene	6.848	106	307302	219.16	ng	100
26) p & m-Xylene	6.986	106	373953	218.98	ng	97
27) 1,1,2,2-Tetrachloroethane	7.973	83	338642	204.90	ng	99
28) o-Xylene	7.339	106	358348	216.50	ng	98
29) 1,2,3-Trichloropropane	7.995	75	296121	207.58	ng	97
30) Isopropylbenzene	7.680	105	948038	218.11	ng	100
33) 1,3,5-Trimethylbenzene	8.196	120	396070	210.87	ng	100
34) 1,2,4-Trimethylbenzene	8.486	120	364723	216.12	ng	98
35) 1,3-Dichlorobenzene	8.682	146	448916	206.36	ng	100
36) 1,4-Dichlorobenzene	8.760	146	451566	203.13	ng	99
37) 1,2-Dichlorobenzene	9.022	146	430565	204.90	ng	99
38) 1,2,4-Trichlorobenzene	10.144	180	329417	226.11	ng	100
39) Naphthalene	10.301	128	1104685	234.06	ng	99
40) 1,2,3-Trichlorobenzene	10.437	180	327259	216.43	ng	100
41) 2-Methylnaphthalene	10.963	142	681072	243.55	ng	99
42) TPH C4-C9	4.810	TIC	53458414m	10139.33	ng	
43) TPH C10-C15	9.810	TIC	49840120m	7778.80	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040109.D
Acq On : 01 Apr 2021 01:25 pm
Operator : KAI
Sample : SEQ-CAL7
Misc : _200
ALS Vial : 9 Sample Multiplier: 1

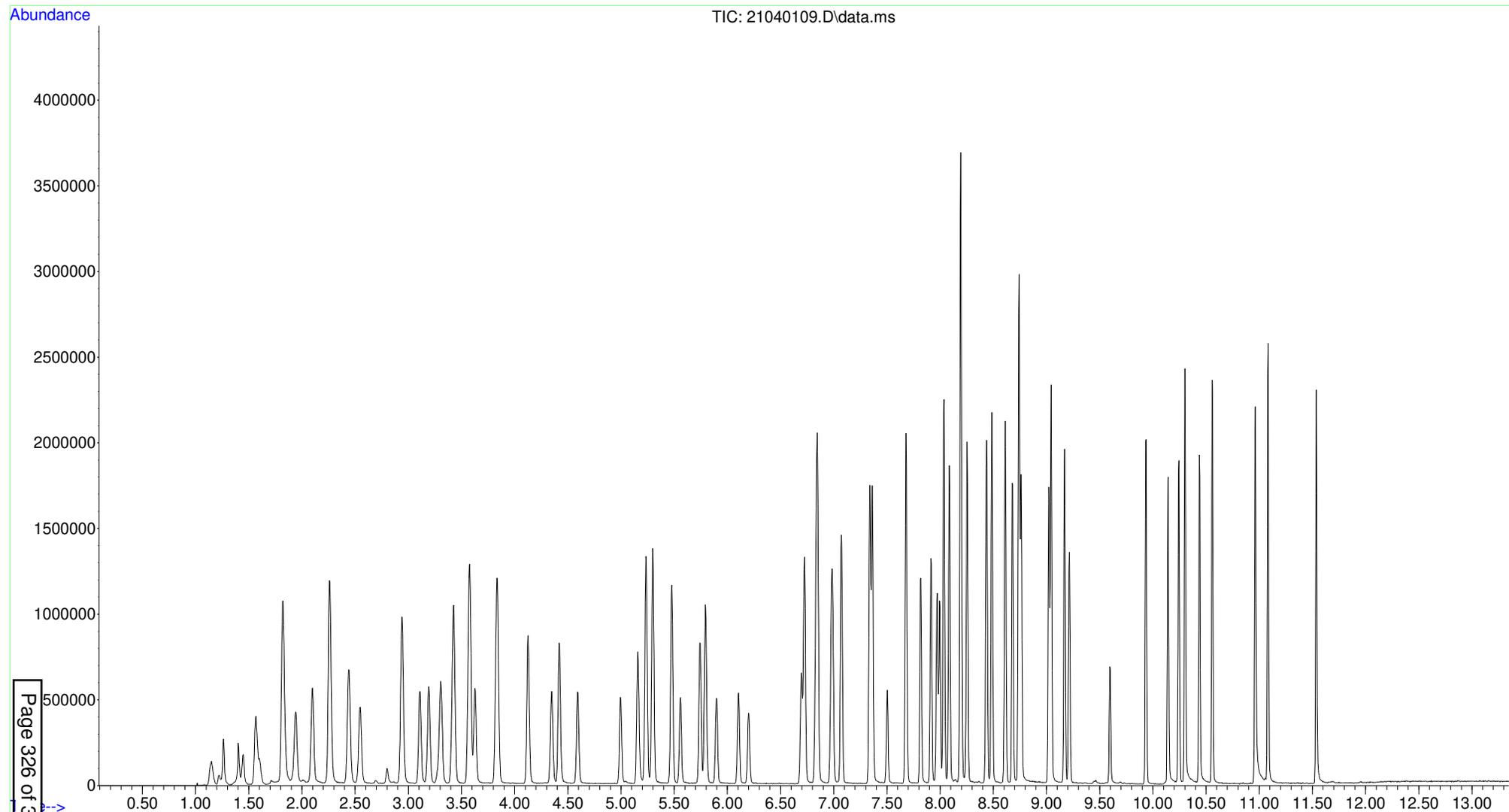
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040109.D
 Acq On : 01 Apr 2021 01:25 pm
 Operator : KAI
 Sample : SEQ-CAL7
 Misc : _200
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 12:57:40 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040110.D
 Acq On : 01 Apr 2021 01:49 pm
 Operator : KAI
 Sample : SEQ-CAL8
 Misc : _400
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 12:57:44 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	380561	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	269239	100.00	ng	# 0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	119883	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	577964	384.16	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	384.16%#	
19) Toluene-d8	5.234	98	1365523	412.08	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	412.08%#	
31) Bromofluorobenzene	7.818	95	466666	355.15	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	355.15%#	
Target Compounds						
2) Vinyl Chloride	1.265	62	327420	341.50	ng	99
3) 1,1-Dichloroethene	1.821	96	381672	414.32	ng	98
4) 1,1,2-Trichlorotrifluo...	1.821	101	442565	410.36	ng	96
5) trans-1,2-Dichloroethene	2.266	96	408834	390.76	ng	99
6) Methyl-t-butyl ether	2.259	73	1097742	392.01	ng	97
7) 1,1-Dichloroethane	2.546	63	809775	392.15	ng	99
8) cis-1,2-Dichloroethene	2.943	96	448570	392.12	ng	98
9) Chloroform	3.192	85	455558	381.79	ng	99
11) 1,2-Dichloroethane	3.627	62	759093	395.09	ng	99
12) 1,1,1-Trichloroethane	3.305	97	649730	389.30	ng	99
13) Carbon Tetrachloride	3.422	117	591885	380.35	ng	97
14) Benzene	3.580	78	1504665	384.13	ng	99
15) Trichloroethene	4.125	130	507917	397.85	ng	97
16) 1,4-Dioxane	4.418	88	315399	395.39	ng	96
17) 1,1,2-Trichloroethane	5.741	99	236279	377.57	ng	99
20) Toluene	5.300	92	680194	425.96	ng	99
21) 1,2-Dibromoethane (EDB)	6.198	107	378708	383.38	ng	99
22) Tetrachloroethene	5.795	131	341441	388.72	ng	98
23) 1,1,1,2-Tetrachloroethane	6.835	131	359671	377.42	ng	95
24) Chlorobenzene	6.725	112	1051544	393.11	ng	99
25) Ethylbenzene	6.848	106	525070	387.95	ng	99
26) p & m-Xylene	6.986	106	635584	385.59	ng	100
27) 1,1,2,2-Tetrachloroethane	7.969	83	558921	350.37	ng	100
28) o-Xylene	7.339	106	611205	382.56	ng	# 96
29) 1,2,3-Trichloropropane	7.995	75	532581	386.79	ng	97
30) Isopropylbenzene	7.680	105	1576166	375.68	ng	100
33) 1,3,5-Trimethylbenzene	8.196	120	672155	416.38	ng	99
34) 1,2,4-Trimethylbenzene	8.486	120	582331	401.50	ng	97
35) 1,3-Dichlorobenzene	8.679	146	746584	399.33	ng	99
36) 1,4-Dichlorobenzene	8.760	146	741247	387.98	ng	99
37) 1,2-Dichlorobenzene	9.022	146	710076	393.19	ng	98
38) 1,2,4-Trichlorobenzene	10.141	180	520469	415.68	ng	99
39) Naphthalene	10.301	128	1722721	424.70	ng	99
40) 1,2,3-Trichlorobenzene	10.437	180	523692	402.98	ng	98
41) 2-Methylnaphthalene	10.963	142	1114148	463.58	ng	98
42) TPH C4-C9	4.810	TIC	58347193m	12876.52	ng	
43) TPH C10-C15	9.810	TIC	32232007m	5853.38	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040110.D
Acq On : 01 Apr 2021 01:49 pm
Operator : KAI
Sample : SEQ-CAL8
Misc : _400
ALS Vial : 10 Sample Multiplier: 1

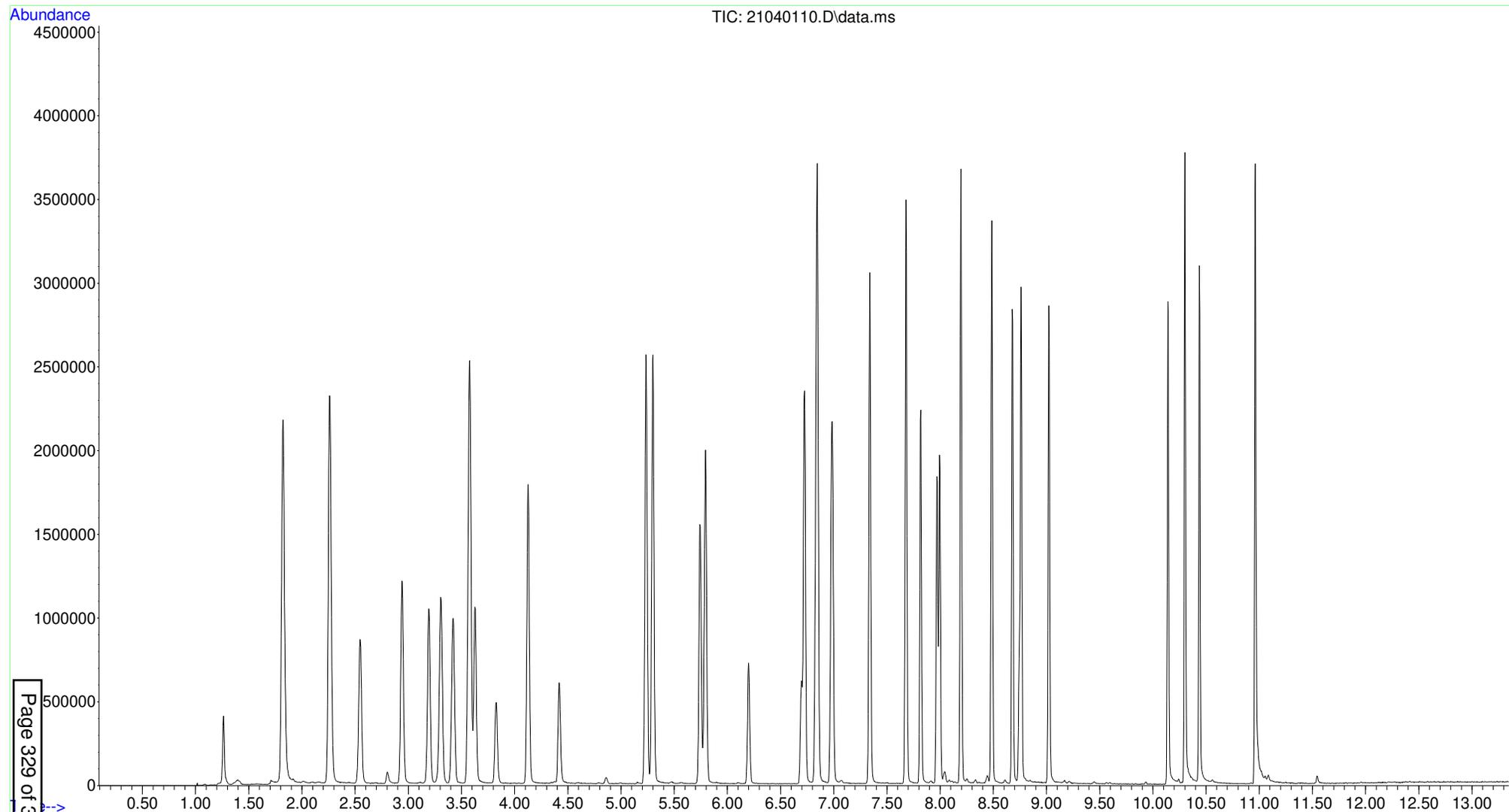
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040110.D
 Acq On : 01 Apr 2021 01:49 pm
 Operator : KAI
 Sample : SEQ-CAL8
 Misc : _400
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 12:57:44 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040111.D
 Acq On : 01 Apr 2021 02:14 pm
 Operator : KAI
 Sample : SEQ-CAL9
 Misc : _600
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:57:47 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Fluorobenzene	3.822	96	386448	100.00	ng	0.00	
18) Chlorobenzene-d5	6.696	117	291410	100.00	ng	# 0.00	
32) 1,4-Dichlorobenzene-d4	8.745	152	144709	100.00	ng	# 0.00	
System Monitoring Compounds							
10) 1,2-DCA-d4	3.564	65	882489	577.63	ng	0.00	
Spiked Amount	100.000	Range 70 - 130	Recovery	=	577.63%#		
19) Toluene-d8	5.234	98	2049778	571.51	ng	0.00	
Spiked Amount	100.000	Range 70 - 130	Recovery	=	571.51%#		
31) Bromofluorobenzene	7.815	95	798012	561.11	ng	0.00	
Spiked Amount	100.000	Range 70 - 130	Recovery	=	561.11%#		
Target Compounds							
							Qvalue
2) Vinyl Chloride	1.262	62	521590	535.73	ng		99
3) 1,1-Dichloroethene	1.821	96	551881	589.97	ng		98
4) 1,1,2-Trichlorotrifluo...	1.821	101	658163	600.97	ng		97
5) trans-1,2-Dichloroethene	2.262	96	623355	586.72	ng		100
6) Methyl-t-butyl ether	2.259	73	1636574	575.52	ng		98
7) 1,1-Dichloroethane	2.546	63	1230717	586.92	ng		99
8) cis-1,2-Dichloroethene	2.940	96	683442	588.33	ng		97
9) Chloroform	3.192	85	699025	576.91	ng		98
11) 1,2-Dichloroethane	3.627	62	1147070	587.93	ng		100
12) 1,1,1-Trichloroethane	3.309	97	990478	584.42	ng		99
13) Carbon Tetrachloride	3.422	117	944857	597.92	ng		96
14) Benzene	3.580	78	2166812	544.74	ng		99
15) Trichloroethene	4.125	130	719648	555.11	ng		98
16) 1,4-Dioxane	4.418	88	491294	606.52	ng		97
17) 1,1,2-Trichloroethane	5.745	99	373530	587.80	ng		99
20) Toluene	5.300	92	975233	564.25	ng		99
21) 1,2-Dibromoethane (EDB)	6.198	107	650191	608.14	ng		98
22) Tetrachloroethene	5.795	131	536660	564.49	ng		99
23) 1,1,1,2-Tetrachloroethane	6.832	131	617264	598.45	ng		96
24) Chlorobenzene	6.725	112	1652489	570.77	ng		99
25) Ethylbenzene	6.848	106	844408	576.43	ng		98
26) p & m-Xylene	6.983	106	1071179	600.42	ng		97
27) 1,1,2,2-Tetrachloroethane	7.969	83	1005368	582.28	ng		100
28) o-Xylene	7.339	106	1016700	587.95	ng	#	96
29) 1,2,3-Trichloropropane	7.995	75	885014	593.84	ng		98
30) Isopropylbenzene	7.680	105	2678673	589.89	ng		100
33) 1,3,5-Trimethylbenzene	8.196	120	1148224	589.27	ng		100
34) 1,2,4-Trimethylbenzene	8.486	120	1027576	586.93	ng		99
35) 1,3-Dichlorobenzene	8.682	146	1341782	594.56	ng		100
36) 1,4-Dichlorobenzene	8.764	146	1337940	580.16	ng		99
37) 1,2-Dichlorobenzene	9.022	146	1271980	583.50	ng		98
38) 1,2,4-Trichlorobenzene	10.144	180	987605	653.45	ng		99
39) Naphthalene	10.301	128	3183457	650.17	ng		100
40) 1,2,3-Trichlorobenzene	10.437	180	970334	618.57	ng		100
41) 2-Methylnaphthalene	10.960	142	2126004	732.83	ng		98
42) TPH C4-C9	4.810	TIC	88214990m	16128.09	ng		
43) TPH C10-C15	9.810	TIC	56623655m	8518.81	ng		

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040111.D
Acq On : 01 Apr 2021 02:14 pm
Operator : KAI
Sample : SEQ-CAL9
Misc : _600
ALS Vial : 11 Sample Multiplier: 1

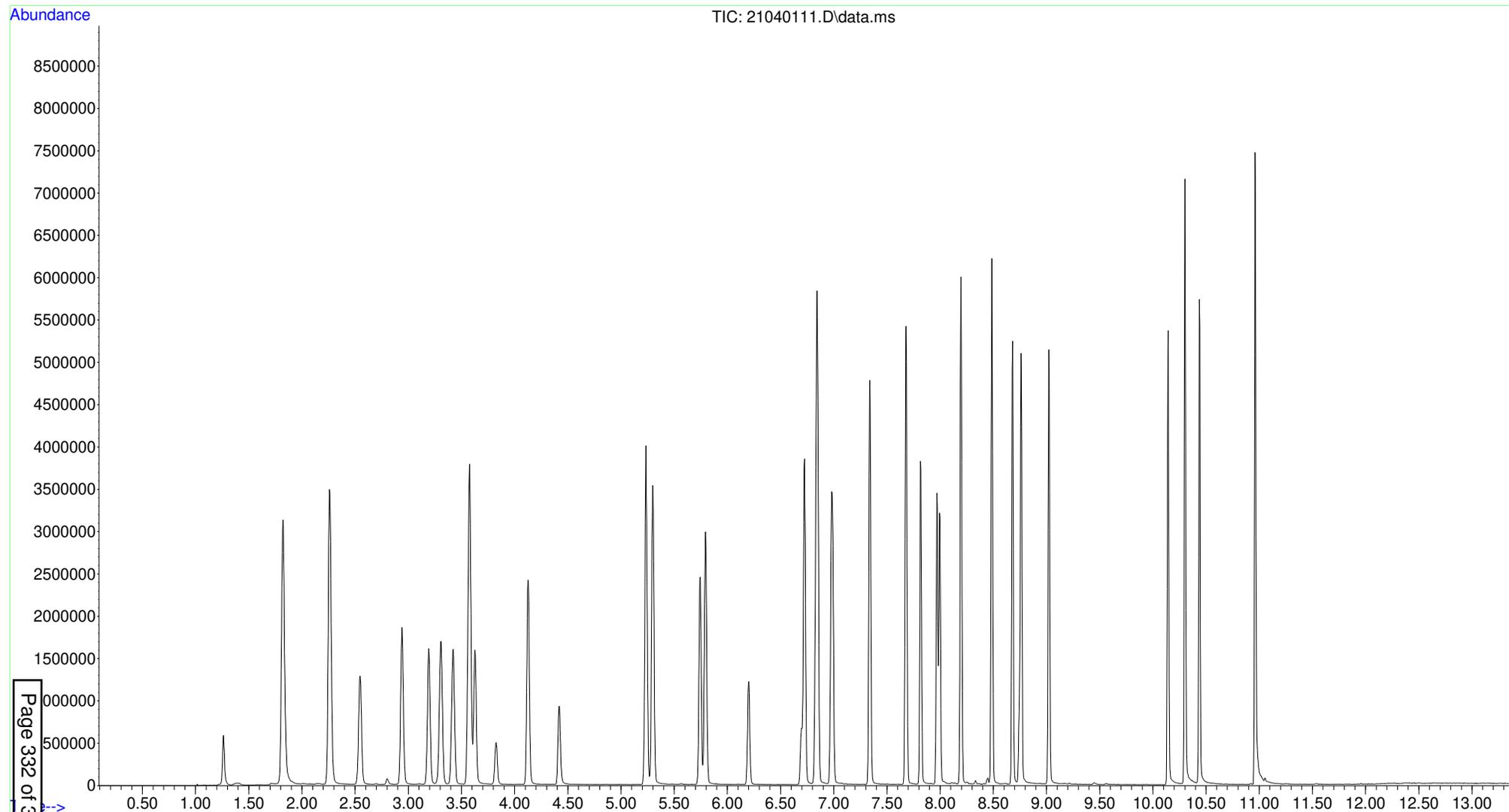
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040111.D
 Acq On : 01 Apr 2021 02:14 pm
 Operator : KAI
 Sample : SEQ-CAL9
 Misc : _600
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:57:47 2021
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 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040112.D
 Acq On : 01 Apr 2021 02:38 pm
 Operator : KAI
 Sample : SEQ-CALA
 Misc : _800
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 05 12:57:51 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	356889	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	274538	100.00	ng	# 0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	140267	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.570	65	1070351	758.63	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	758.63%#	
19) Toluene-d8	5.234	98	2480299	734.05	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	734.05%#	
31) Bromofluorobenzene	7.818	95	979273	730.87	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	730.87%#	
Target Compounds						
2) Vinyl Chloride	1.264	62	807211	897.76	ng	99
3) 1,1-Dichloroethene	1.821	96	690066	798.79	ng	99
4) 1,1,2-Trichlorotrifluo...	1.824	101	818494	809.27	ng	96
5) trans-1,2-Dichloroethene	2.265	96	765990	780.68	ng	99
6) Methyl-t-butyl ether	2.262	73	2019940	769.17	ng	98
7) 1,1-Dichloroethane	2.549	63	1521700	785.80	ng	99
8) cis-1,2-Dichloroethene	2.943	96	834572	777.93	ng	96
9) Chloroform	3.195	85	859463	768.07	ng	98
11) 1,2-Dichloroethane	3.630	62	1418082	787.04	ng	99
12) 1,1,1-Trichloroethane	3.308	97	1236515	790.02	ng	99
13) Carbon Tetrachloride	3.425	117	1195390	819.12	ng	97
14) Benzene	3.579	78	2573547	700.58	ng	99
15) Trichloroethene	4.128	130	891274	744.44	ng	98
16) 1,4-Dioxane	4.418	88	618276	826.50	ng	96
17) 1,1,2-Trichloroethane	5.744	99	467298	796.27	ng	100
20) Toluene	5.300	92	1201393	737.82	ng	# 98
21) 1,2-Dibromoethane (EDB)	6.201	107	811462	805.62	ng	97
22) Tetrachloroethene	5.795	131	659267	736.07	ng	99
23) 1,1,1,2-Tetrachloroethane	6.835	131	761909	784.08	ng	95
24) Chlorobenzene	6.724	112	2001350	733.75	ng	99
25) Ethylbenzene	6.850	106	1027644	744.63	ng	98
26) p & m-Xylene	6.986	106	1294431	770.15	ng	97
27) 1,1,2,2-Tetrachloroethane	7.972	83	1267365	779.13	ng	100
28) o-Xylene	7.339	106	1246665	765.25	ng	# 96
29) 1,2,3-Trichloropropane	7.997	75	1086902	774.13	ng	98
30) Isopropylbenzene	7.679	105	3243239	758.12	ng	99
33) 1,3,5-Trimethylbenzene	8.196	120	1413184	748.21	ng	99
34) 1,2,4-Trimethylbenzene	8.486	120	1271419	749.21	ng	99
35) 1,3-Dichlorobenzene	8.681	146	1661305	759.45	ng	99
36) 1,4-Dichlorobenzene	8.763	146	1666086	745.32	ng	99
37) 1,2-Dichlorobenzene	9.022	146	1590344	752.65	ng	98
38) 1,2,4-Trichlorobenzene	10.144	180	1243497	848.81	ng	99
39) Naphthalene	10.301	128	3893615	820.39	ng	99
40) 1,2,3-Trichlorobenzene	10.440	180	1220587	802.74	ng	100
41) 2-Methylnaphthalene	10.963	142	2628829	934.85	ng	97
42) TPH C4-C9	4.810	TIC	106398710m	20068.60	ng	
43) TPH C10-C15	9.810	TIC	69536946m	10792.87	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040112.D
Acq On : 01 Apr 2021 02:38 pm
Operator : KAI
Sample : SEQ-CALA
Misc : _800
ALS Vial : 12 Sample Multiplier: 1

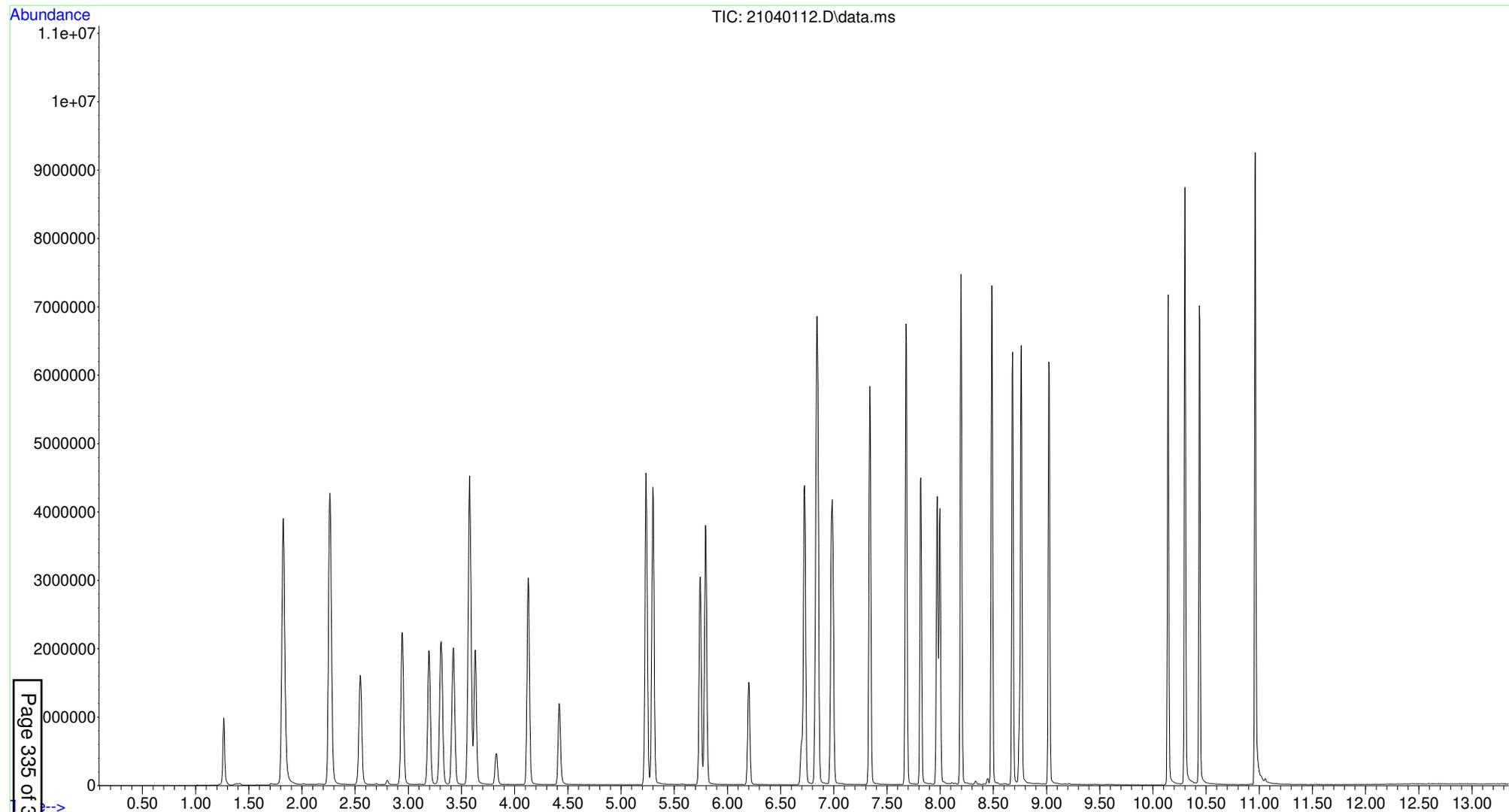
Quant Time: Apr 05 12:57:51 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040112.D
 Acq On : 01 Apr 2021 02:38 pm
 Operator : KAI
 Sample : SEQ-CALA
 Misc : _800
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 05 12:57:51 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040113.D
 Acq On : 01 Apr 2021 03:02 pm
 Operator : KAI
 Sample : SEQ-CALB
 Misc : _1000
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 05 12:57:55 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	362407	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	274772	100.00	ng	# 0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	137702	100.00	ng	# 0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	1351792	943.51	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	943.51%#	
19) Toluene-d8	5.234	98	3065678	906.52	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	906.52%#	
31) Bromofluorobenzene	7.818	95	1213457	904.88	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	904.88%#	
Target Compounds						
2) Vinyl Chloride	1.264	62	933696	1022.62	ng	99
3) 1,1-Dichloroethene	1.824	96	862956	983.71	ng	97
4) 1,1,2-Trichlorotrifluo...	1.824	101	1004695	978.25	ng	97
5) trans-1,2-Dichloroethene	2.262	96	955411	958.91	ng	99
6) Methyl-t-butyl ether	2.259	73	2580000	967.48	ng	98
7) 1,1-Dichloroethane	2.546	63	1947104	990.16	ng	99
8) cis-1,2-Dichloroethene	2.940	96	1081504	992.76	ng	97
9) Chloroform	3.195	85	1100597	968.59	ng	98
11) 1,2-Dichloroethane	3.627	62	1722446	941.40	ng	99
12) 1,1,1-Trichloroethane	3.308	97	1567531	986.26	ng	99
13) Carbon Tetrachloride	3.422	117	1517804	1024.21	ng	96
14) Benzene	3.579	78	3117023	835.61	ng	98
15) Trichloroethene	4.128	130	1131704	930.87	ng	97
16) 1,4-Dioxane	4.418	88	786935	1035.94	ng	97
17) 1,1,2-Trichloroethane	5.744	99	594180	997.06	ng	100
20) Toluene	5.300	92	1464499	898.64	ng	98
21) 1,2-Dibromoethane (EDB)	6.201	107	1045864	1037.46	ng	99
22) Tetrachloroethene	5.795	131	848022	946.01	ng	99
23) 1,1,1,2-Tetrachloroethane	6.835	131	967934	995.25	ng	95
24) Chlorobenzene	6.725	112	2477628	907.59	ng	98
25) Ethylbenzene	6.847	106	1271443	920.50	ng	96
26) p & m-Xylene	6.986	106	1590989	945.78	ng	98
27) 1,1,2,2-Tetrachloroethane	7.969	83	1619327	994.66	ng	100
28) o-Xylene	7.339	106	1540618	944.88	ng	# 96
29) 1,2,3-Trichloropropane	7.995	75	1345174	957.26	ng	98
30) Isopropylbenzene	7.679	105	4036609	942.76	ng	99
33) 1,3,5-Trimethylbenzene	8.196	120	1721455	928.41	ng	100
34) 1,2,4-Trimethylbenzene	8.486	120	1578273	947.35	ng	99
35) 1,3-Dichlorobenzene	8.682	146	2076020	966.71	ng	100
36) 1,4-Dichlorobenzene	8.763	146	2081756	948.62	ng	99
37) 1,2-Dichlorobenzene	9.022	146	1982972	955.94	ng	97
38) 1,2,4-Trichlorobenzene	10.144	180	1580986	1099.28	ng	99
39) Naphthalene	10.301	128	4672551	1002.85	ng	99
40) 1,2,3-Trichlorobenzene	10.437	180	1545396	1035.29	ng	99
41) 2-Methylnaphthalene	10.963	142	3214161	1164.30	ng	98
42) TPH C4-C9	4.810	TIC	133230245m	25597.57	ng	
43) TPH C10-C15	9.810	TIC	85954070m	13589.48	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
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Operator : KAI
Sample : SEQ-CALB
Misc : _1000
ALS Vial : 13 Sample Multiplier: 1

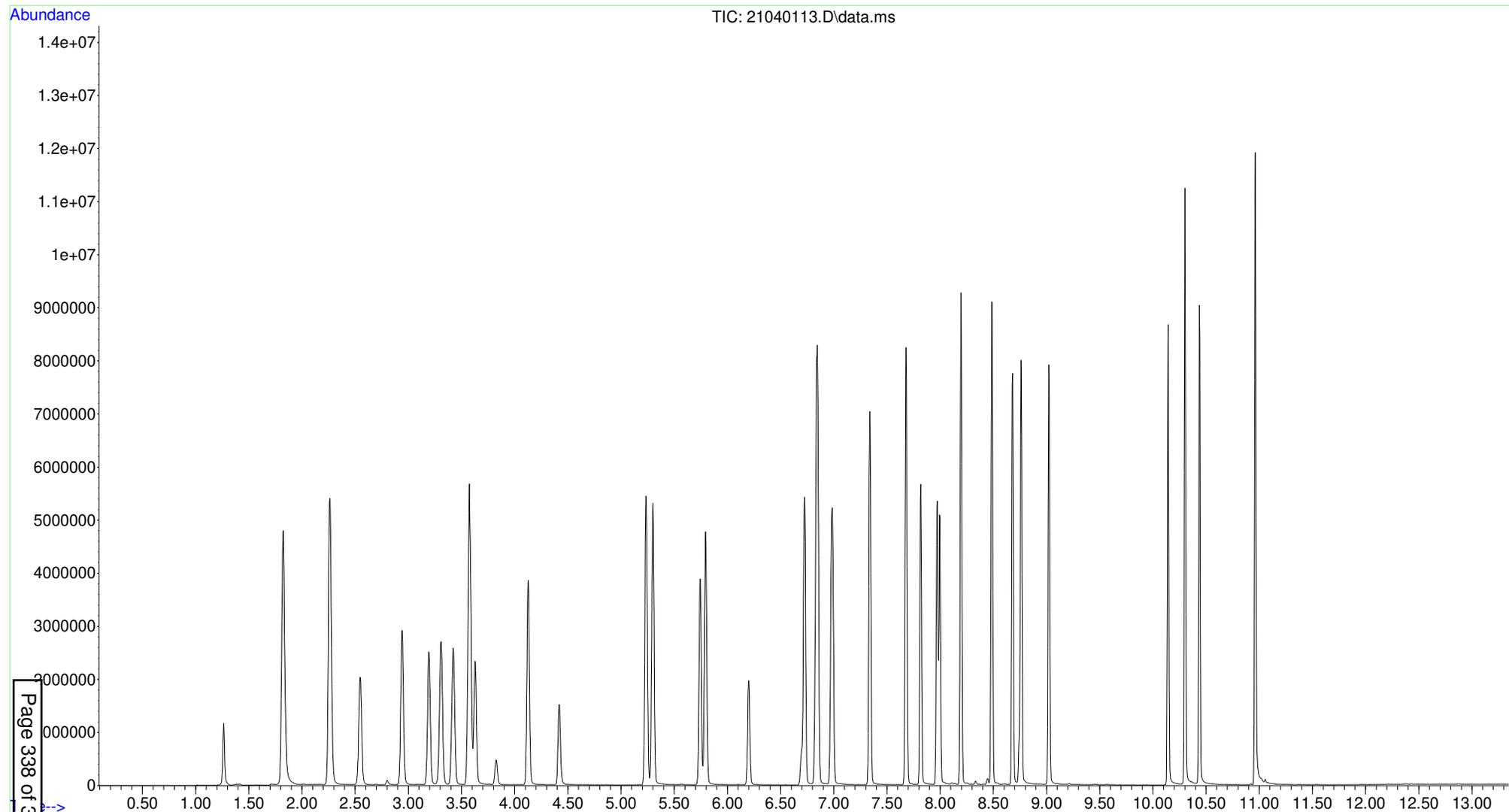
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040113.D
Acq On : 01 Apr 2021 03:02 pm
Operator : KAI
Sample : SEQ-CALB
Misc : _1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 05 12:57:55 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040114.D
 Acq On : 01 Apr 2021 03:26 pm
 Operator : KAI
 Sample : LB
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:57:59 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	355631	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	274241	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	132771	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	139846	99.47	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	99.47%	
19) Toluene-d8	5.234	98	333288	98.74	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	98.74%	
31) Bromofluorobenzene	7.815	95	128042	95.67	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	95.67%	
Target Compounds						
2) Vinyl Chloride	1.271	62	1432	1.60	ng	Qvalue # 91
3) 1,1-Dichloroethene	1.834	96	199	0.23	ng	# 17
4) 1,1,2-Trichlorotrifluo...	1.818	101	1041	1.03	ng	# 1
5) trans-1,2-Dichloroethene	2.269	96	530	0.54	ng	# 71
6) Methyl-t-butyl ether	2.259	73	3755	1.43	ng	# 16
7) 1,1-Dichloroethane	2.555	63	932	0.48	ng	# 67
8) cis-1,2-Dichloroethene	2.930	96	593	0.55	ng	# 60
9) Chloroform	3.189	85	570	0.51	ng	# 82
11) 1,2-Dichloroethane	3.636	62	1486	0.83	ng	# 52
12) 1,1,1-Trichloroethane	3.308	97	1955	1.25	ng	# 41
13) Carbon Tetrachloride	3.422	117	1685	1.16	ng	# 71
14) Benzene	3.583	78	5928	1.62	ng	# 80
15) Trichloroethene	4.125	130	1065	0.89	ng	# 16
16) 1,4-Dioxane	4.415	88	1196	1.60	ng	# 66
17) 1,1,2-Trichloroethane	5.744	99	887	1.52	ng	96
20) Toluene	5.297	92	2257	1.39	ng	# 92
21) 1,2-Dibromoethane (EDB)	6.205	107	1057	1.05	ng	# 77
22) Tetrachloroethene	5.795	131	1298	1.45	ng	# 82
23) 1,1,1,2-Tetrachloroethane	6.825	131	2164	2.23	ng	# 1
24) Chlorobenzene	6.721	112	5692	2.09	ng	100
25) Ethylbenzene	6.847	106	2694	1.95	ng	# 98
26) p & m-Xylene	6.980	106	4192	2.50	ng	# 83
27) 1,1,2,2-Tetrachloroethane	7.972	83	4367	2.69	ng	93
28) o-Xylene	7.336	106	3739	2.30	ng	87
29) 1,2,3-Trichloropropane	7.995	75	3832	2.73	ng	98
30) Isopropylbenzene	7.683	105	10525	2.46	ng	96
33) 1,3,5-Trimethylbenzene	8.193	120	5284	2.96	ng	86
34) 1,2,4-Trimethylbenzene	8.486	120	5016	3.12	ng	99
35) 1,3-Dichlorobenzene	8.678	146	7751	3.74	ng	95
36) 1,4-Dichlorobenzene	8.763	146	9532	4.50	ng	100
37) 1,2-Dichlorobenzene	9.022	146	8718	4.36	ng	99
38) 1,2,4-Trichlorobenzene	10.144	180	15528	11.20	ng	99
39) Naphthalene	10.304	128	78476	17.47	ng	# 97
40) 1,2,3-Trichlorobenzene	10.437	180	23637	16.42	ng	98
41) 2-Methylnaphthalene	10.963	142	82840	31.12	ng	98
42) TPH C4-C9	4.810	TIC	5519598m	1099.87	ng	
43) TPH C10-C15	9.810	TIC	3586164m	588.04	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
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Acq On : 01 Apr 2021 03:26 pm
Operator : KAI
Sample : LB
Misc :
ALS Vial : 14 Sample Multiplier: 1

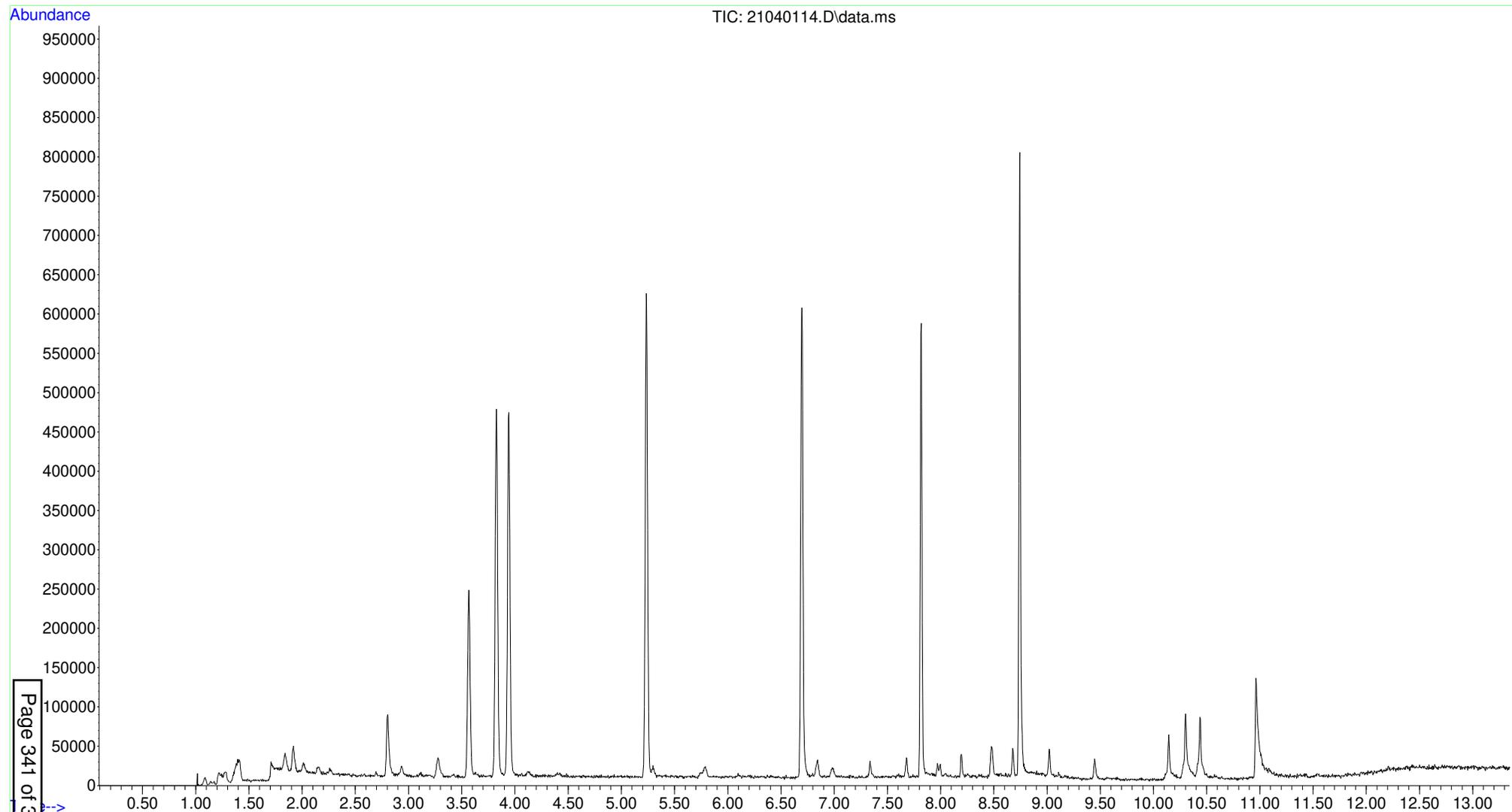
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040114.D
 Acq On : 01 Apr 2021 03:26 pm
 Operator : KAI
 Sample : LB
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:57:59 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040115.D
 Acq On : 01 Apr 2021 03:51 pm
 Operator : KAI
 Sample : LB
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

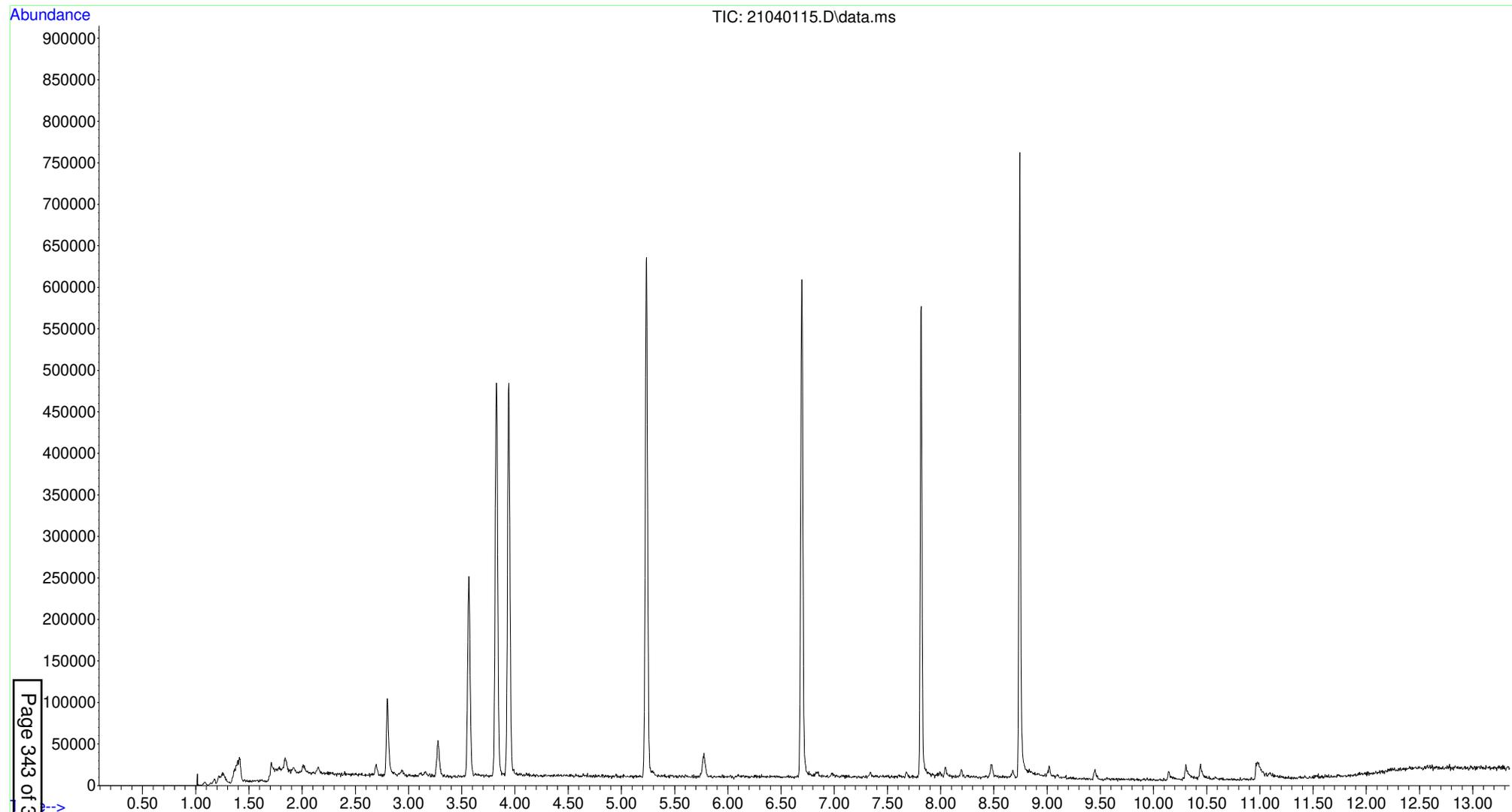
Quant Time: Apr 05 12:58:03 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.828	96	359238	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	272710	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	128988	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	143797	101.25	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	101.25%	
19) Toluene-d8	5.237	98	334943	99.79	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	99.79%	
31) Bromofluorobenzene	7.815	95	125143	94.03	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	94.03%	
Target Compounds						
2) Vinyl Chloride	1.270	62	727	0.80	ng	# 84
4) 1,1,2-Trichlorotrifluo...	1.830	101	236	0.23	ng	# 1
6) Methyl-t-butyl ether	2.275	73	1829	0.69	ng	# 1
7) 1,1-Dichloroethane	2.542	63	158	0.08	ng	# 51
11) 1,2-Dichloroethane	3.630	62	189	0.10	ng	# 56
12) 1,1,1-Trichloroethane	3.308	97	147	0.09	ng	# 34
13) Carbon Tetrachloride	3.425	117	296	0.20	ng	# 20
14) Benzene	3.582	78	2869	0.78	ng	# 52
15) Trichloroethene	4.121	130	119	0.10	ng	# 44
16) 1,4-Dioxane	4.421	88	122	0.16	ng	# 4
20) Toluene	5.300	92	902	0.56	ng	# 91
22) Tetrachloroethene	5.788	131	535	0.60	ng	# 68
23) 1,1,1,2-Tetrachloroethane	6.828	131	445	0.46	ng	# 1
24) Chlorobenzene	6.727	112	1372	0.51	ng	# 94
25) Ethylbenzene	6.841	106	534	0.39	ng	# 28
26) p & m-Xylene	6.980	106	906	0.54	ng	# 79
27) 1,1,2,2-Tetrachloroethane	7.966	83	893	0.55	ng	# 40
28) o-Xylene	7.339	106	961	0.59	ng	# 74
29) 1,2,3-Trichloropropane	7.979	75	97	0.07	ng	# 99
30) Isopropylbenzene	7.676	105	3002	0.71	ng	# 99
33) 1,3,5-Trimethylbenzene	8.199	120	1658	0.95	ng	# 95
34) 1,2,4-Trimethylbenzene	8.483	120	1255	0.80	ng	# 83
35) 1,3-Dichlorobenzene	8.681	146	2495	1.24	ng	# 84
36) 1,4-Dichlorobenzene	8.760	146	3191	1.55	ng	# 81
37) 1,2-Dichlorobenzene	9.022	146	2143	1.10	ng	# 68
38) 1,2,4-Trichlorobenzene	10.143	180	3669	2.72	ng	# 91
39) Naphthalene	10.304	128	18700	4.28	ng	# 94
40) 1,2,3-Trichlorobenzene	10.437	180	5584	3.99	ng	# 97
41) 2-Methylnaphthalene	10.972	142	21730	8.40	ng	# 94
42) TPH C4-C9	4.810	TIC	5378567m	1103.20	ng	
43) TPH C10-C15	9.810	TIC	2484653m	419.37	ng	

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040115.D
 Acq On : 01 Apr 2021 03:51 pm
 Operator : KAI
 Sample : LB
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 12:58:03 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040116.D
 Acq On : 01 Apr 2021 04:15 pm
 Operator : KAI
 Sample : SEQ-ICV1
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 05 12:58:06 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	371984	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	277883	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	136626	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	75084	51.06	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	51.06%#	
19) Toluene-d8	5.234	98	181007	52.92	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	52.92%#	
31) Bromofluorobenzene	7.815	95	65592	48.36	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	48.36%#	
Target Compounds						
2) Vinyl Chloride	1.264	62	57025	60.85	ng	99
3) 1,1-Dichloroethene	1.818	96	43570	48.39	ng	92
4) 1,1,2-Trichlorotrifluo...	1.821	101	56473	53.57	ng	100
5) trans-1,2-Dichloroethene	2.262	96	50809	49.68	ng	98
6) Methyl-t-butyl ether	2.256	73	137497	50.23	ng	97
7) 1,1-Dichloroethane	2.546	63	100378	49.73	ng	99
8) cis-1,2-Dichloroethene	2.937	96	55410	49.55	ng	95
9) Chloroform	3.192	85	58943	50.54	ng	99
11) 1,2-Dichloroethane	3.624	62	99830	53.16	ng	# 43
12) 1,1,1-Trichloroethane	3.305	97	80532	49.36	ng	99
13) Carbon Tetrachloride	3.419	117	74680	49.10	ng	95
14) Benzene	3.579	78	198409	51.82	ng	99
15) Trichloroethene	4.128	130	60027	48.10	ng	98
16) 1,4-Dioxane	4.421	88	40963	52.54	ng	98
17) 1,1,2-Trichloroethane	5.741	99	31678	51.79	ng	99
20) Toluene	5.300	92	92396	56.06	ng	98
21) 1,2-Dibromoethane (EDB)	6.198	107	52275	51.27	ng	97
22) Tetrachloroethene	5.792	131	47025	51.87	ng	99
23) 1,1,1,2-Tetrachloroethane	6.832	131	50312	51.15	ng	99
24) Chlorobenzene	6.724	112	147215	53.32	ng	100
25) Ethylbenzene	6.847	106	73697	52.76	ng	94
26) p & m-Xylene	6.986	106	91574	53.83	ng	92
27) 1,1,2,2-Tetrachloroethane	7.969	83	87846	53.35	ng	98
28) o-Xylene	7.342	106	88118	53.44	ng	93
29) 1,2,3-Trichloropropane	7.994	75	72166	50.78	ng	96
30) Isopropylbenzene	7.679	105	237706	54.90	ng	100
33) 1,3,5-Trimethylbenzene	8.196	120	100195	54.46	ng	99
34) 1,2,4-Trimethylbenzene	8.486	120	90163	54.55	ng	100
35) 1,3-Dichlorobenzene	8.678	146	116625	54.73	ng	100
36) 1,4-Dichlorobenzene	8.763	146	116652	53.57	ng	99
37) 1,2-Dichlorobenzene	9.022	146	110934	53.90	ng	99
38) 1,2,4-Trichlorobenzene	10.144	180	76258	53.44	ng	96
39) Naphthalene	10.304	128	259745	56.19	ng	98
40) 1,2,3-Trichlorobenzene	10.440	180	84684	57.18	ng	96
41) 2-Methylnaphthalene	10.963	142	161133	58.83	ng	98
42) TPH C4-C9	4.810	TIC	15212709m	2945.84	ng	
43) TPH C10-C15	9.810	TIC	14084493m	2244.32	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040116.D
Acq On : 01 Apr 2021 04:15 pm
Operator : KAI
Sample : SEQ-ICV1
Misc :
ALS Vial : 16 Sample Multiplier: 1

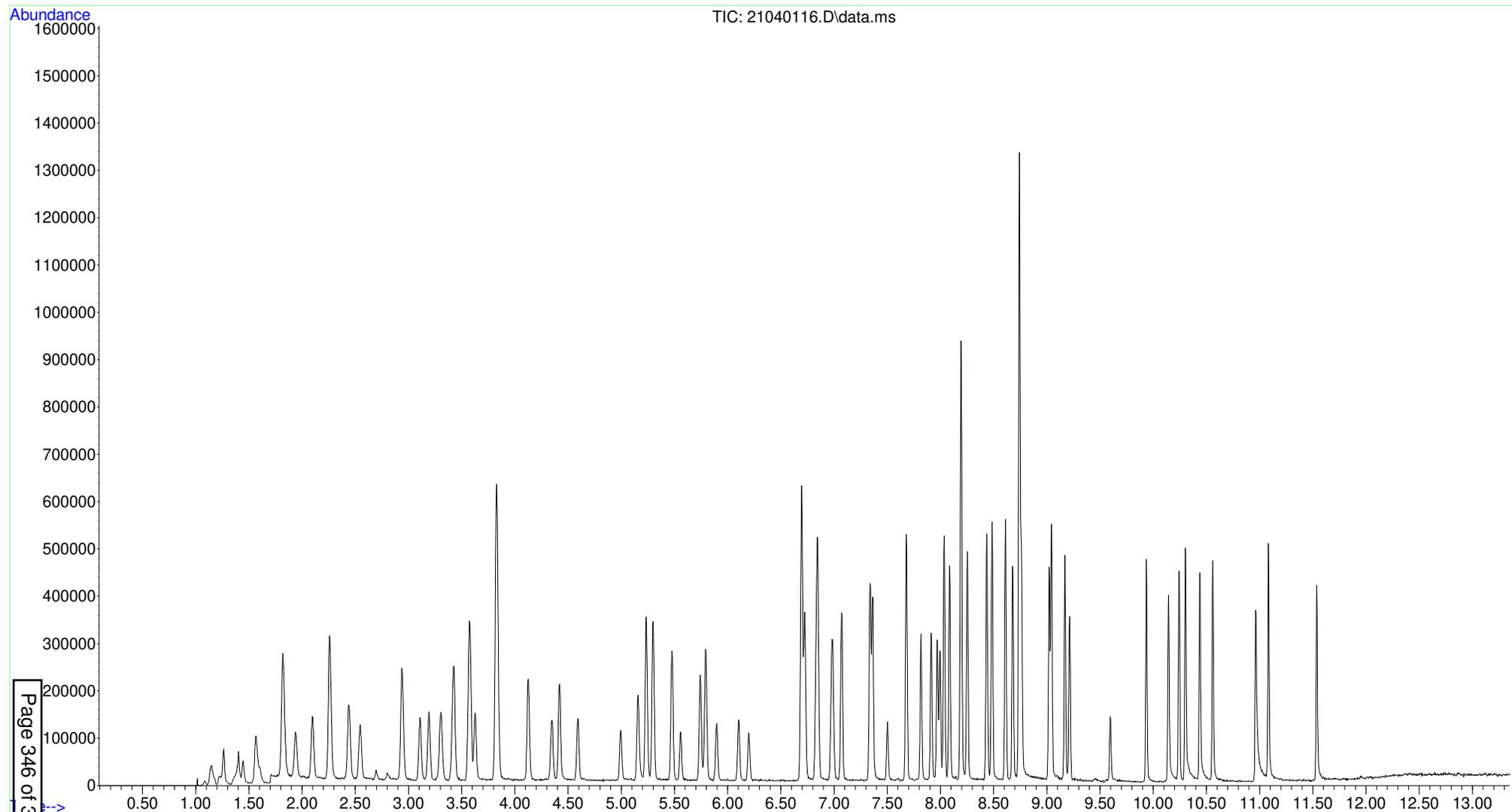
Quant Time: Apr 05 12:58:06 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040116.D
 Acq On : 01 Apr 2021 04:15 pm
 Operator : KAI
 Sample : SEQ-ICV1
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 05 12:58:06 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040117.D
 Acq On : 01 Apr 2021 04:39 pm
 Operator : KAI
 Sample : SEQ-ICB1
 Misc :
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 05 12:58:10 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

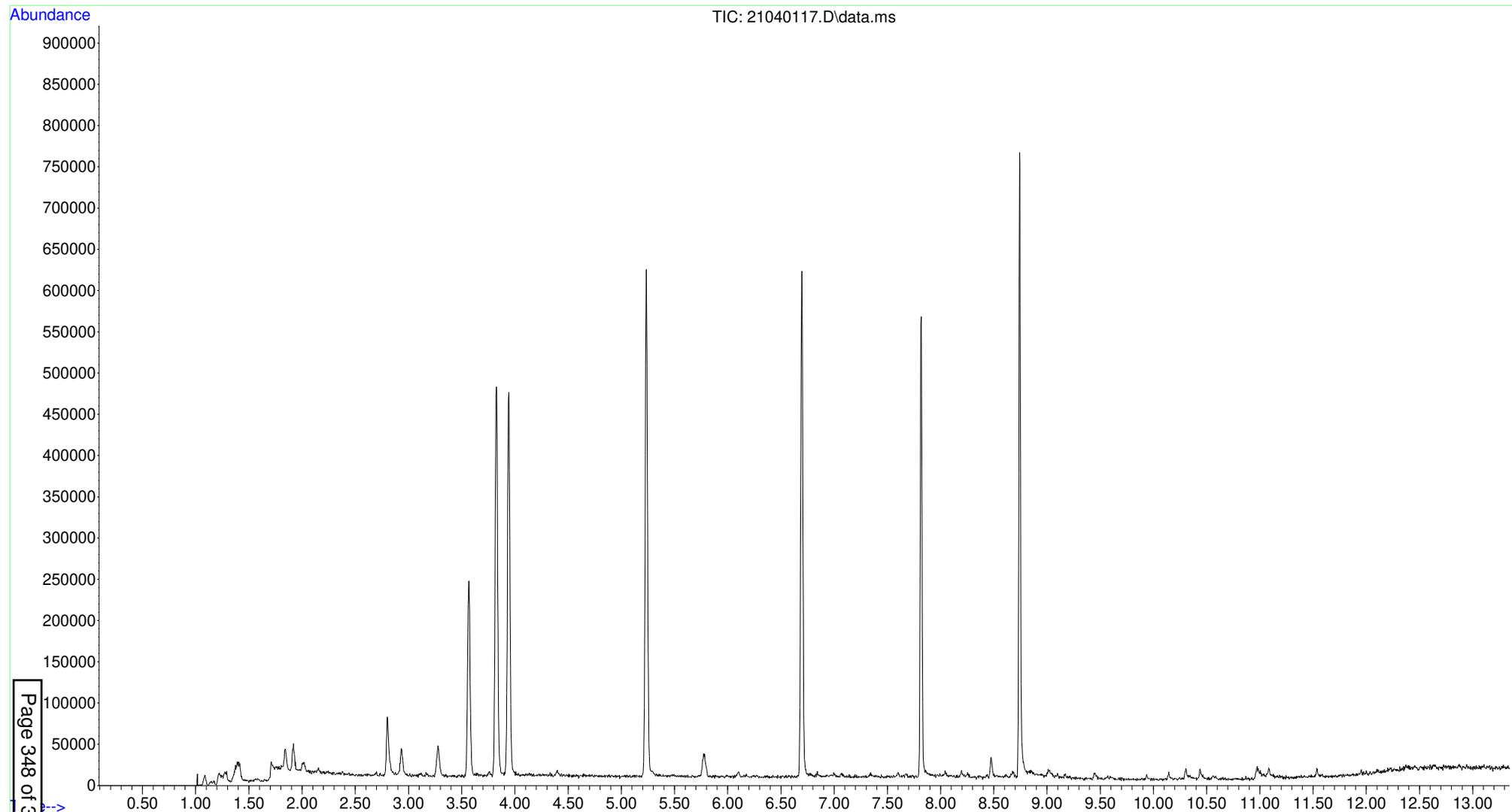
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.826	96	352463	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	271339	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	125325	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	139714	100.27	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	100.27%	
19) Toluene-d8	5.234	98	323548	96.88	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	96.88%	
31) Bromofluorobenzene	7.818	95	121160	91.49	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	91.49%	
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.265	62	501	0.56	ng	# 68
6) Methyl-t-butyl ether	2.272	73	2152	0.83	ng	# 1
7) 1,1-Dichloroethane	2.540	63	111	0.06	ng	# 9
11) 1,2-Dichloroethane	3.589	62	208	0.12	ng	# 43
12) 1,1,1-Trichloroethane	3.306	97	140	0.09	ng	# 49
13) Carbon Tetrachloride	3.416	117	94	0.07	ng	# 75
14) Benzene	3.580	78	4744	1.31	ng	# 73
16) 1,4-Dioxane	4.412	88	84	0.11	ng	# 1
20) Toluene	5.294	92	916	0.57	ng	# 57
22) Tetrachloroethene	5.792	131	1618	1.83	ng	# 61
23) 1,1,1,2-Tetrachloroethane	6.841	131	90	0.09	ng	# 64
24) Chlorobenzene	6.728	112	855	0.32	ng	# 61
25) Ethylbenzene	6.841	106	326	0.24	ng	# 64
26) p & m-Xylene	6.986	106	457	0.28	ng	# 1
27) 1,1,2,2-Tetrachloroethane	7.966	83	690	0.43	ng	# 59
28) o-Xylene	7.339	106	631	0.39	ng	# 77
29) 1,2,3-Trichloropropane	7.982	75	858	0.62	ng	# 60
30) Isopropylbenzene	7.683	105	1743	0.41	ng	# 76
33) 1,3,5-Trimethylbenzene	8.196	120	822	0.49	ng	# 76
34) 1,2,4-Trimethylbenzene	8.483	120	742	0.49	ng	# 71
35) 1,3-Dichlorobenzene	8.675	146	1169	0.60	ng	# 71
36) 1,4-Dichlorobenzene	8.764	146	1763	0.88	ng	# 67
37) 1,2-Dichlorobenzene	9.025	146	1599	0.85	ng	99
38) 1,2,4-Trichlorobenzene	10.147	180	2774	2.12	ng	95
39) Naphthalene	10.298	128	12271	2.89	ng	# 86
40) 1,2,3-Trichlorobenzene	10.437	180	3533	2.60	ng	92
41) 2-Methylnaphthalene	10.973	142	9832	3.91	ng	92
42) TPH C4-C9	4.810	TIC	5580824m	1178.14	ng	
43) TPH C10-C15	9.810	TIC	2449133m	425.45	ng	

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040117.D
 Acq On : 01 Apr 2021 04:39 pm
 Operator : KAI
 Sample : SEQ-ICB1
 Misc :
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 05 12:58:10 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040118.D
 Acq On : 01 Apr 2021 05:03 pm
 Operator : KAI
 Sample : DL 2.5
 Misc :
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 05 12:58:14 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	383657	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	283103	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	135666	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.573	65	4883	3.22	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	3.22%#	
19) Toluene-d8	5.237	98	11629	3.34	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	3.34%#	
31) Bromofluorobenzene	7.815	95	4899	3.55	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	3.55%#	
Target Compounds						
2) Vinyl Chloride	1.264	62	2646	2.74	ng	# 89
3) 1,1-Dichloroethene	1.827	96	2770	2.98	ng	86
4) 1,1,2-Trichlorotrifluo...	1.824	101	3294	3.03	ng	# 61
5) trans-1,2-Dichloroethene	2.262	96	2821	2.67	ng	94
6) Methyl-t-butyl ether	2.262	73	6815	2.41	ng	# 77
7) 1,1-Dichloroethane	2.552	63	5858	2.81	ng	# 92
8) cis-1,2-Dichloroethene	2.943	96	3384	2.93	ng	98
9) Chloroform	3.189	85	3141	2.61	ng	# 1
11) 1,2-Dichloroethane	3.623	62	4967	2.56	ng	89
12) 1,1,1-Trichloroethane	3.302	97	4070	2.42	ng	# 68
13) Carbon Tetrachloride	3.419	117	3438	2.19	ng	# 94
14) Benzene	3.579	78	12717	3.22	ng	96
15) Trichloroethene	4.128	130	3335	2.59	ng	95
16) 1,4-Dioxane	4.414	88	2053	2.55	ng	91
17) 1,1,2-Trichloroethane	5.751	99	1800	2.85	ng	90
20) Toluene	5.300	92	3658	2.18	ng	# 82
21) 1,2-Dibromoethane (EDB)	6.201	107	2574	2.48	ng	89
22) Tetrachloroethene	5.792	131	2882	3.12	ng	# 71
23) 1,1,1,2-Tetrachloroethane	6.832	131	2964	2.96	ng	# 53
24) Chlorobenzene	6.728	112	7666	2.73	ng	93
25) Ethylbenzene	6.850	106	3357	2.36	ng	99
26) p & m-Xylene	6.983	106	4659	2.69	ng	92
27) 1,1,2,2-Tetrachloroethane	7.972	83	4500	2.68	ng	99
28) o-Xylene	7.336	106	3883	2.31	ng	84
29) 1,2,3-Trichloropropane	7.991	75	3689	2.55	ng	# 78
30) Isopropylbenzene	7.676	105	10544	2.39	ng	92
33) 1,3,5-Trimethylbenzene	8.196	120	3886	2.13	ng	# 82
34) 1,2,4-Trimethylbenzene	8.489	120	4380	2.67	ng	# 77
35) 1,3-Dichlorobenzene	8.685	146	6493	3.07	ng	97
36) 1,4-Dichlorobenzene	8.763	146	6335	2.93	ng	# 79
37) 1,2-Dichlorobenzene	9.022	146	5749	2.81	ng	99
38) 1,2,4-Trichlorobenzene	10.147	180	4214	2.97	ng	98
39) Naphthalene	10.304	128	13513	2.94	ng	# 91
40) 1,2,3-Trichlorobenzene	10.437	180	4846	3.30	ng	99
41) 2-Methylnaphthalene	10.976	142	9407	3.46	ng	95
42) TPH C4-C9	4.810	TIC	5345957m	1042.54	ng	
43) TPH C10-C15	9.810	TIC	2659230m	426.74	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040118.D
Acq On : 01 Apr 2021 05:03 pm
Operator : KAI
Sample : DL 2.5
Misc :
ALS Vial : 18 Sample Multiplier: 1

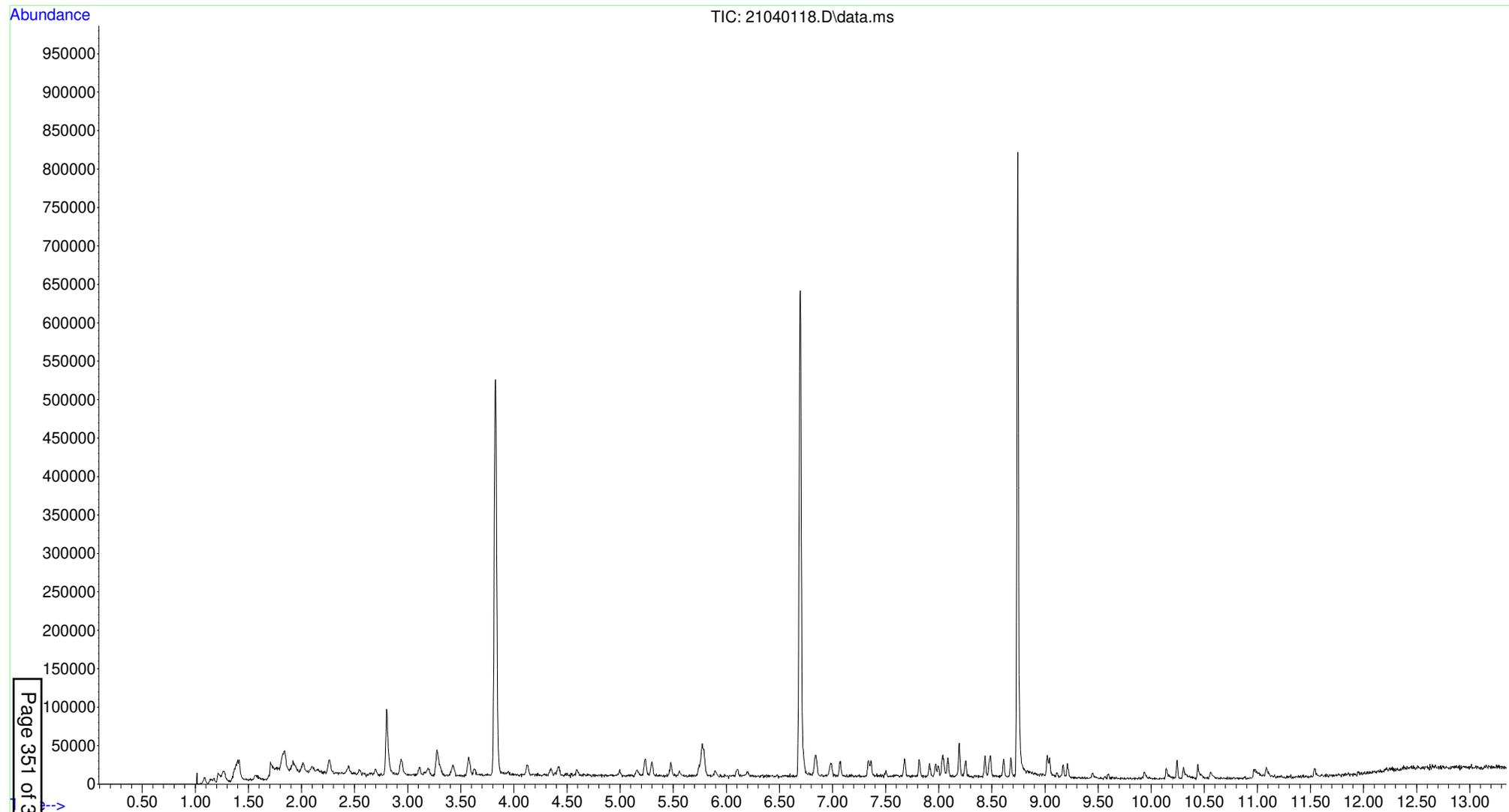
Quant Time: Apr 05 12:58:14 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040118.D
 Acq On : 01 Apr 2021 05:03 pm
 Operator : KAI
 Sample : DL 2.5
 Misc :
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 05 12:58:14 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040119.D
 Acq On : 01 Apr 2021 05:28 pm
 Operator : KAI
 Sample : LOD 5
 Misc :
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 05 12:58:18 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	386802	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	283322	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	135211	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	8081	5.28	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.28%#	
19) Toluene-d8	5.231	98	17897	5.13	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.13%#	
31) Bromofluorobenzene	7.812	95	6692	4.84	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	4.84%#	
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.265	62	4631	4.75	ng	# 90
3) 1,1-Dichloroethene	1.821	96	4413	4.71	ng	97
4) 1,1,2-Trichlorotrifluo...	1.821	101	5486	5.00	ng	85
5) trans-1,2-Dichloroethene	2.259	96	5433	5.11	ng	88
6) Methyl-t-butyl ether	2.266	73	14357	5.04	ng	# 69
7) 1,1-Dichloroethane	2.546	63	10806	5.15	ng	94
8) cis-1,2-Dichloroethene	2.940	96	6092	5.24	ng	89
9) Chloroform	3.189	85	5782	4.77	ng	93
11) 1,2-Dichloroethane	3.630	62	10358	5.30	ng	# 43
12) 1,1,1-Trichloroethane	3.302	97	7899	4.66	ng	# 68
13) Carbon Tetrachloride	3.416	117	7383	4.67	ng	88
14) Benzene	3.576	78	23129	5.81	ng	97
15) Trichloroethene	4.125	130	6086	4.69	ng	90
16) 1,4-Dioxane	4.415	88	4043	4.99	ng	91
17) 1,1,2-Trichloroethane	5.745	99	3212	5.05	ng	# 79
20) Toluene	5.303	92	9235	5.50	ng	# 99
21) 1,2-Dibromoethane (EDB)	6.202	107	5178	4.98	ng	90
22) Tetrachloroethene	5.798	131	5142	5.56	ng	# 93
23) 1,1,1,2-Tetrachloroethane	6.835	131	5178	5.16	ng	# 54
24) Chlorobenzene	6.728	112	14837	5.27	ng	95
25) Ethylbenzene	6.848	106	6940	4.87	ng	92
26) p & m-Xylene	6.977	106	8228	4.74	ng	94
27) 1,1,2,2-Tetrachloroethane	7.969	83	8494	5.06	ng	96
28) o-Xylene	7.339	106	7707	4.58	ng	88
29) 1,2,3-Trichloropropane	7.992	75	7644	5.28	ng	90
30) Isopropylbenzene	7.680	105	19552	4.43	ng	98
33) 1,3,5-Trimethylbenzene	8.196	120	9318	5.12	ng	86
34) 1,2,4-Trimethylbenzene	8.486	120	7781	4.76	ng	# 82
35) 1,3-Dichlorobenzene	8.682	146	10995	5.21	ng	98
36) 1,4-Dichlorobenzene	8.760	146	11365	5.27	ng	88
37) 1,2-Dichlorobenzene	9.022	146	11299	5.55	ng	99
38) 1,2,4-Trichlorobenzene	10.144	180	7194	5.09	ng	87
39) Naphthalene	10.305	128	22591	4.94	ng	# 93
40) 1,2,3-Trichlorobenzene	10.437	180	7099	4.84	ng	92
41) 2-Methylnaphthalene	10.970	142	13710	5.06	ng	90
42) TPH C4-C9	4.810	TIC	5881126m	1150.76	ng	
43) TPH C10-C15	9.810	TIC	3327675m	535.80	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040119.D
Acq On : 01 Apr 2021 05:28 pm
Operator : KAI
Sample : LOD 5
Misc :
ALS Vial : 19 Sample Multiplier: 1

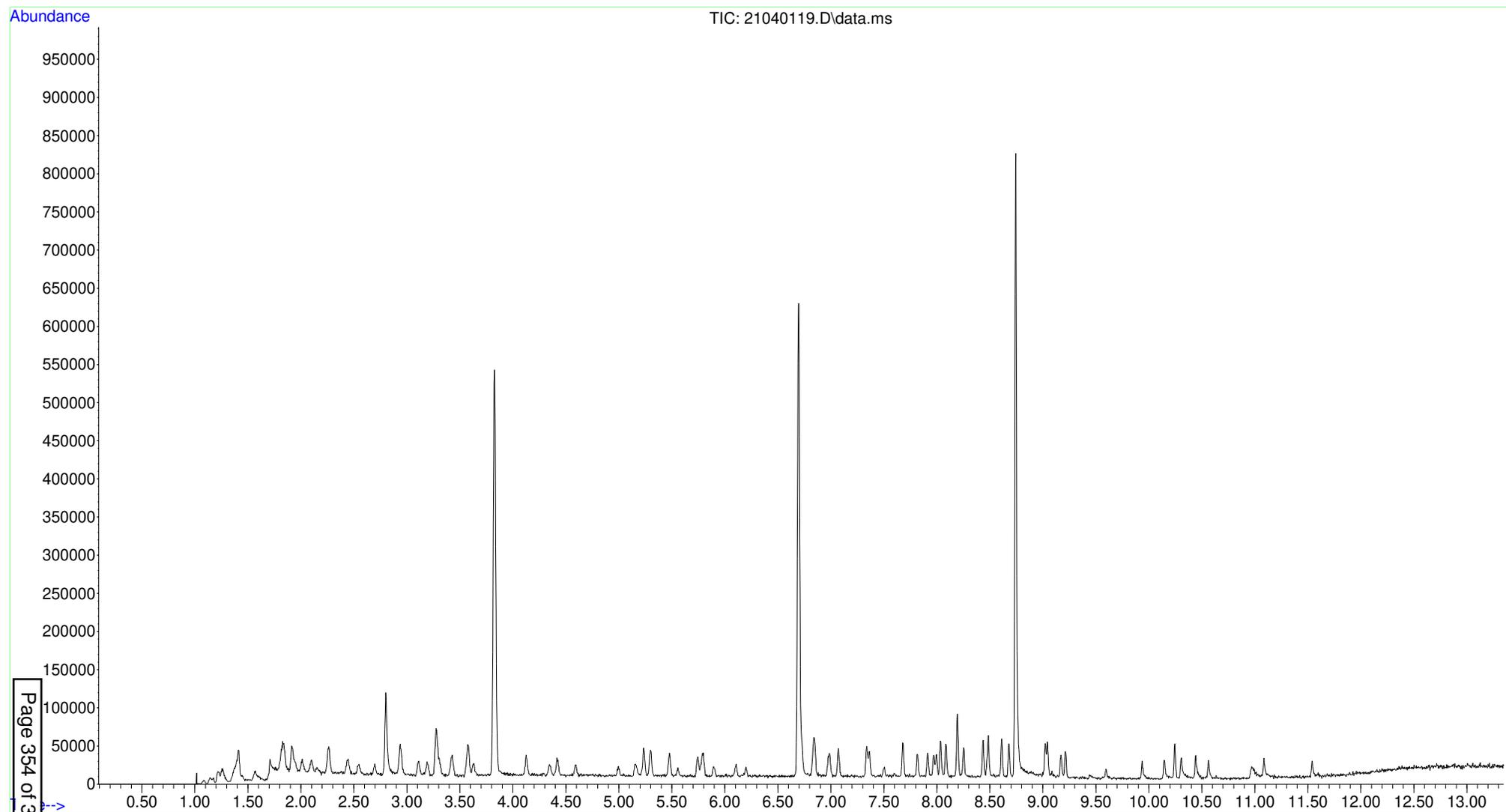
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040119.D
Acq On : 01 Apr 2021 05:28 pm
Operator : KAI
Sample : LOD 5
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 05 12:58:18 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040120.D
 Acq On : 01 Apr 2021 05:52 pm
 Operator : KAI
 Sample : LOD 5
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 05 12:58:22 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.825	96	378839	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	278202	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	131053	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.570	65	8151	5.44	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.44%#	
19) Toluene-d8	5.234	98	17128	5.00	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.00%#	
31) Bromofluorobenzene	7.815	95	6802	5.01	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.01%#	
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.265	62	5061	5.30	ng	# 91
3) 1,1-Dichloroethene	1.824	96	4208	4.59	ng	93
4) 1,1,2-Trichlorotrifluo...	1.821	101	6222	5.80	ng	# 79
5) trans-1,2-Dichloroethene	2.259	96	5147	4.94	ng	95
6) Methyl-t-butyl ether	2.262	73	14598	5.24	ng	97
7) 1,1-Dichloroethane	2.546	63	10555	5.13	ng	99
8) cis-1,2-Dichloroethene	2.937	96	6257	5.49	ng	97
9) Chloroform	3.192	85	6661	5.61	ng	88
11) 1,2-Dichloroethane	3.627	62	10038	5.25	ng	# 76
12) 1,1,1-Trichloroethane	3.305	97	8840	5.32	ng	# 81
13) Carbon Tetrachloride	3.425	117	6958	4.49	ng	# 97
14) Benzene	3.580	78	22584	5.79	ng	98
15) Trichloroethene	4.131	130	5732	4.51	ng	89
16) 1,4-Dioxane	4.427	88	3694	4.65	ng	95
17) 1,1,2-Trichloroethane	5.741	99	3624	5.82	ng	98
20) Toluene	5.300	92	9136	5.54	ng	# 90
21) 1,2-Dibromoethane (EDB)	6.198	107	5418	5.31	ng	94
22) Tetrachloroethene	5.789	131	4656	5.13	ng	# 82
23) 1,1,1,2-Tetrachloroethane	6.838	131	4855	4.93	ng	# 43
24) Chlorobenzene	6.725	112	14757	5.34	ng	96
25) Ethylbenzene	6.851	106	6960	4.98	ng	97
26) p & m-Xylene	6.986	106	8215	4.82	ng	94
27) 1,1,2,2-Tetrachloroethane	7.969	83	8415	5.11	ng	# 95
28) o-Xylene	7.339	106	7894	4.78	ng	96
29) 1,2,3-Trichloropropane	7.995	75	6944	4.88	ng	# 86
30) Isopropylbenzene	7.680	105	20414	4.71	ng	96
33) 1,3,5-Trimethylbenzene	8.193	120	8582	4.86	ng	87
34) 1,2,4-Trimethylbenzene	8.483	120	7504	4.73	ng	# 87
35) 1,3-Dichlorobenzene	8.678	146	10361	5.07	ng	90
36) 1,4-Dichlorobenzene	8.760	146	11367	5.44	ng	98
37) 1,2-Dichlorobenzene	9.022	146	10209	5.17	ng	97
38) 1,2,4-Trichlorobenzene	10.144	180	6695	4.89	ng	93
39) Naphthalene	10.305	128	21034	4.74	ng	# 94
40) 1,2,3-Trichlorobenzene	10.440	180	7517	5.29	ng	99
41) 2-Methylnaphthalene	10.966	142	12617	4.80	ng	97
42) TPH C4-C9	4.810	TIC	5809790m	1172.87	ng	
43) TPH C10-C15	9.810	TIC	3164557m	525.71	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040120.D
Acq On : 01 Apr 2021 05:52 pm
Operator : KAI
Sample : LOD 5
Misc :
ALS Vial : 20 Sample Multiplier: 1

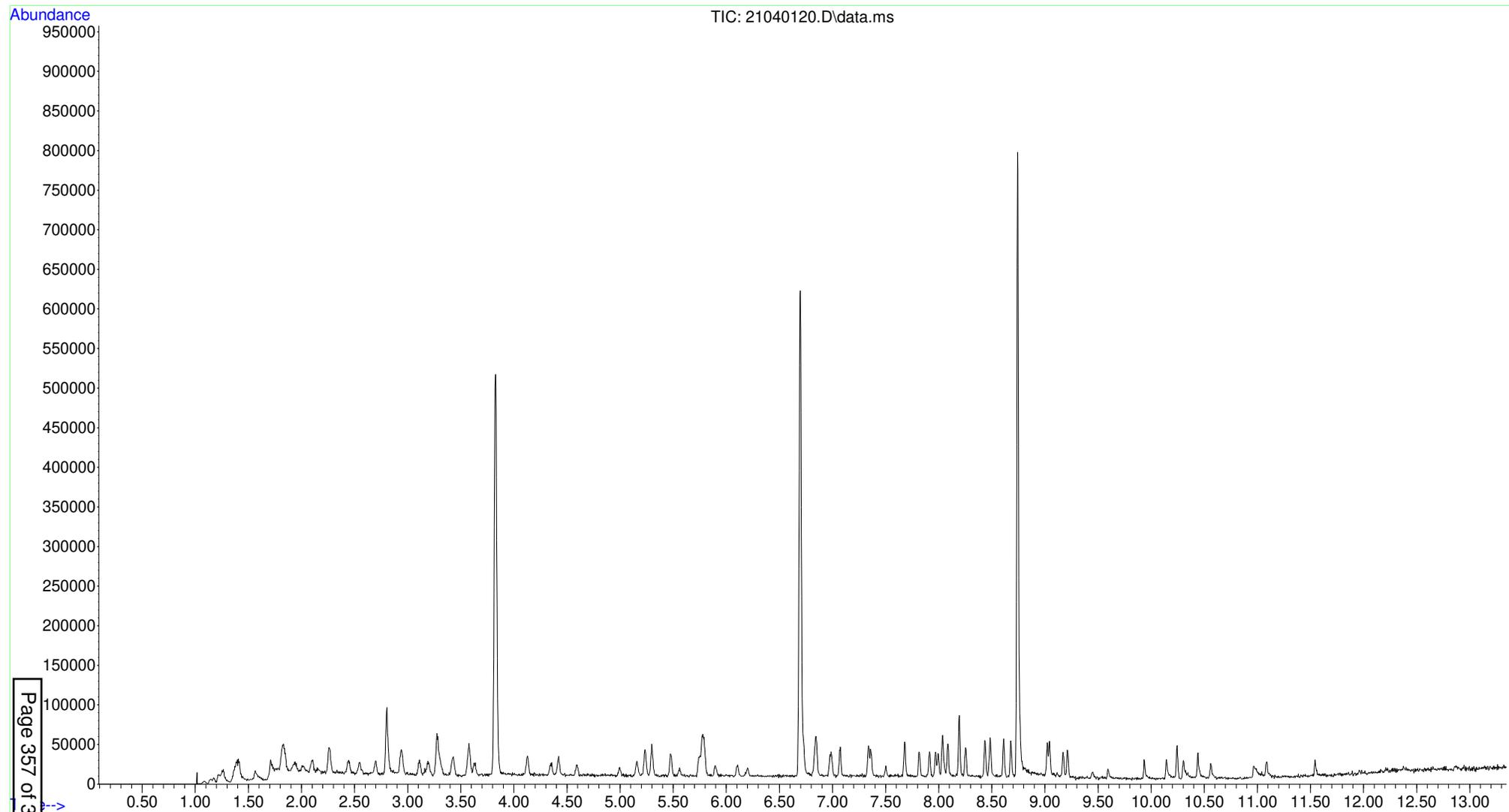
Quant Time: Apr 05 12:58:22 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040120.D
 Acq On : 01 Apr 2021 05:52 pm
 Operator : KAI
 Sample : LOD 5
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 05 12:58:22 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040121.D
 Acq On : 01 Apr 2021 06:17 pm
 Operator : KAI
 Sample : LOD 5
 Misc :
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 05 12:58:26 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	363060	100.00	ng	0.00
18) Chlorobenzene-d5	6.693	117	264400	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	125234	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	7620	5.31	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.31%#	
19) Toluene-d8	5.237	98	16193	4.98	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	4.98%#	
31) Bromofluorobenzene	7.818	95	5988	4.64	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	4.64%#	
Target Compounds						
2) Vinyl Chloride	1.268	62	5281	5.77	ng	# 88
3) 1,1-Dichloroethene	1.815	96	4289	4.88	ng	97
4) 1,1,2-Trichlorotrifluo...	1.827	101	5444	5.29	ng	# 78
5) trans-1,2-Dichloroethene	2.272	96	4906	4.92	ng	91
6) Methyl-t-butyl ether	2.259	73	11788	4.41	ng	# 63
7) 1,1-Dichloroethane	2.546	63	10130	5.14	ng	98
8) cis-1,2-Dichloroethene	2.937	96	5815	5.33	ng	95
9) Chloroform	3.192	85	5846	5.14	ng	99
11) 1,2-Dichloroethane	3.630	62	9574	5.22	ng	# 88
12) 1,1,1-Trichloroethane	3.305	97	7551	4.74	ng	90
13) Carbon Tetrachloride	3.419	117	6642	4.47	ng	# 95
14) Benzene	3.583	78	20403	5.46	ng	98
15) Trichloroethene	4.125	130	5600	4.60	ng	94
16) 1,4-Dioxane	4.424	88	3419	4.49	ng	# 80
17) 1,1,2-Trichloroethane	5.745	99	2873	4.81	ng	# 72
20) Toluene	5.300	92	7951	5.07	ng	# 99
21) 1,2-Dibromoethane (EDB)	6.198	107	4699	4.84	ng	91
22) Tetrachloroethene	5.792	131	4851	5.62	ng	# 67
23) 1,1,1,2-Tetrachloroethane	6.832	131	4882	5.22	ng	# 44
24) Chlorobenzene	6.721	112	14332	5.46	ng	96
25) Ethylbenzene	6.851	106	6419	4.83	ng	90
26) p & m-Xylene	6.980	106	7920	4.89	ng	98
27) 1,1,2,2-Tetrachloroethane	7.969	83	8039	5.13	ng	# 96
28) o-Xylene	7.339	106	7376	4.70	ng	90
29) 1,2,3-Trichloropropane	7.995	75	6443	4.76	ng	99
30) Isopropylbenzene	7.676	105	19160	4.65	ng	99
33) 1,3,5-Trimethylbenzene	8.199	120	8189	4.86	ng	# 92
34) 1,2,4-Trimethylbenzene	8.489	120	7136	4.71	ng	# 88
35) 1,3-Dichlorobenzene	8.682	146	11192	5.73	ng	96
36) 1,4-Dichlorobenzene	8.760	146	10974	5.50	ng	96
37) 1,2-Dichlorobenzene	9.022	146	10048	5.33	ng	99
38) 1,2,4-Trichlorobenzene	10.144	180	6287	4.81	ng	97
39) Naphthalene	10.301	128	19918	4.70	ng	# 87
40) 1,2,3-Trichlorobenzene	10.440	180	6876	5.06	ng	99
41) 2-Methylnaphthalene	10.969	142	11111	4.43	ng	94
42) TPH C4-C9	4.810	TIC	5157196m	1089.50	ng	
43) TPH C10-C15	9.810	TIC	3252884m	565.49	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
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Operator : KAI
Sample : LOD 5
Misc :
ALS Vial : 21 Sample Multiplier: 1

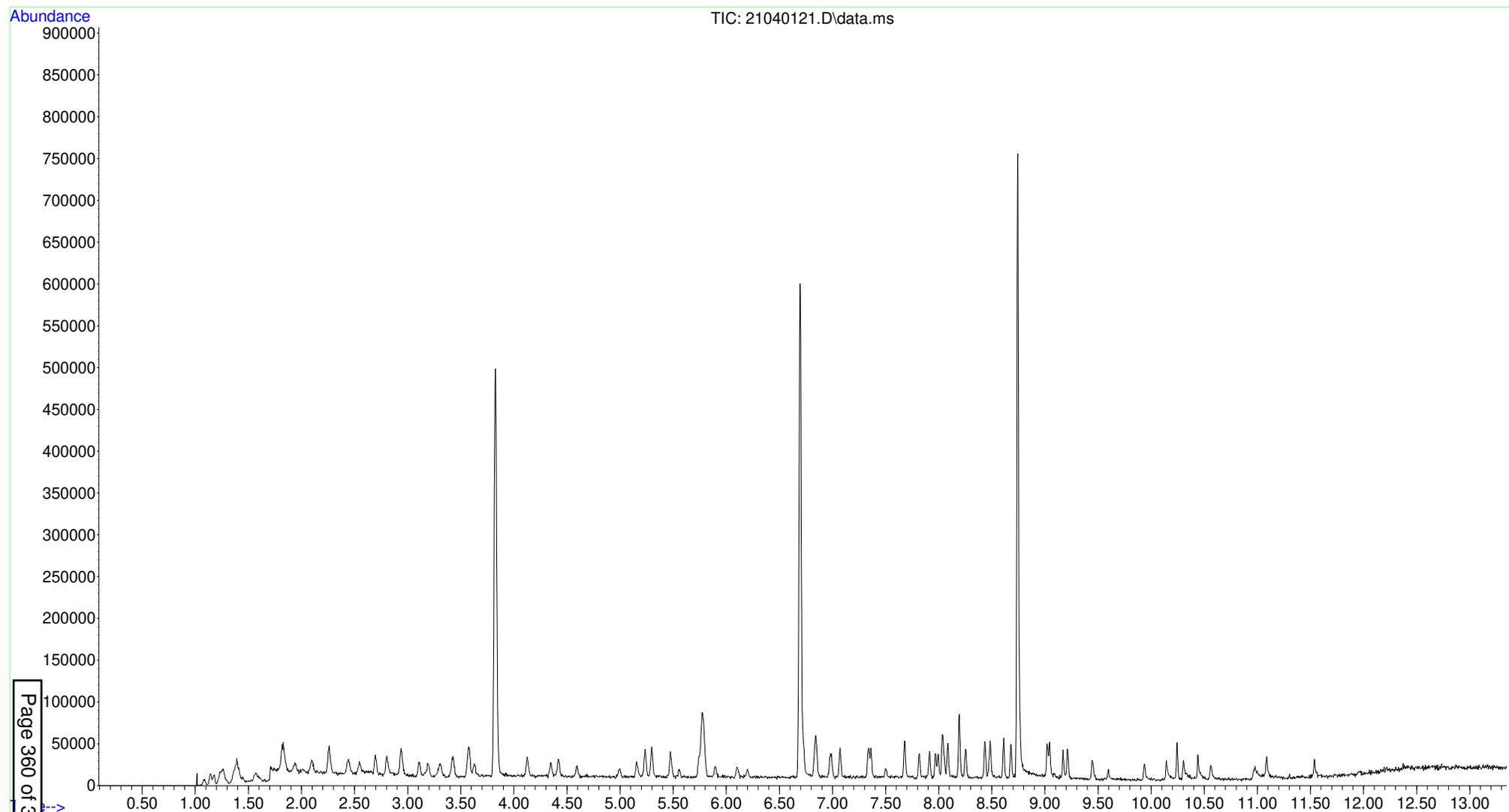
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040121.D
 Acq On : 01 Apr 2021 06:17 pm
 Operator : KAI
 Sample : LOD 5
 Misc :
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 05 12:58:26 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040122.D
 Acq On : 01 Apr 2021 06:41 pm
 Operator : KAI
 Sample : LOD 5
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 05 12:58:30 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene	3.832	96	369327	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	262662	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	120261	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	7424	5.08	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.08%#	
19) Toluene-d8	5.237	98	16739	5.18	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	5.18%#	
31) Bromofluorobenzene	7.815	95	5784	4.51	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	4.51%#	
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.274	62	4414	4.74	ng	# 95
3) 1,1-Dichloroethene	1.834	96	4519	5.05	ng	98
4) 1,1,2-Trichlorotrifluo...	1.830	101	5562	5.31	ng	# 65
5) trans-1,2-Dichloroethene	2.272	96	5168	5.09	ng	91
6) Methyl-t-butyl ether	2.269	73	13849	5.10	ng	# 87
7) 1,1-Dichloroethane	2.555	63	10127	5.05	ng	94
8) cis-1,2-Dichloroethene	2.946	96	5277	4.75	ng	91
9) Chloroform	3.201	85	6064	5.24	ng	93
11) 1,2-Dichloroethane	3.633	62	10179	5.46	ng	# 43
12) 1,1,1-Trichloroethane	3.308	97	8214	5.07	ng	# 79
13) Carbon Tetrachloride	3.422	117	7025	4.65	ng	97
14) Benzene	3.586	78	22369	5.88	ng	97
15) Trichloroethene	4.131	130	6485	5.23	ng	98
16) 1,4-Dioxane	4.424	88	3697	4.78	ng	81
17) 1,1,2-Trichloroethane	5.751	99	3157	5.20	ng	99
20) Toluene	5.300	92	8175	5.25	ng	# 92
21) 1,2-Dibromoethane (EDB)	6.195	107	4413	4.58	ng	94
22) Tetrachloroethene	5.789	131	4861	5.67	ng	# 89
23) 1,1,1,2-Tetrachloroethane	6.838	131	4763	5.12	ng	# 66
24) Chlorobenzene	6.721	112	12996	4.98	ng	94
25) Ethylbenzene	6.844	106	6755	5.12	ng	98
26) p & m-Xylene	6.986	106	7790	4.84	ng	99
27) 1,1,2,2-Tetrachloroethane	7.972	83	7553	4.85	ng	94
28) o-Xylene	7.339	106	7198	4.62	ng	92
29) 1,2,3-Trichloropropane	7.995	75	6964	5.18	ng	98
30) Isopropylbenzene	7.683	105	18964	4.63	ng	98
33) 1,3,5-Trimethylbenzene	8.193	120	7516	4.64	ng	89
34) 1,2,4-Trimethylbenzene	8.489	120	6311	4.34	ng	98
35) 1,3-Dichlorobenzene	8.682	146	9797	5.22	ng	97
36) 1,4-Dichlorobenzene	8.763	146	10665	5.56	ng	94
37) 1,2-Dichlorobenzene	9.025	146	9320	5.14	ng	93
38) 1,2,4-Trichlorobenzene	10.147	180	5263	4.19	ng	97
39) Naphthalene	10.301	128	17092	4.20	ng	# 96
40) 1,2,3-Trichlorobenzene	10.446	180	6866	5.27	ng	96
41) 2-Methylnaphthalene	10.963	142	9222	3.83	ng	95
42) TPH C4-C9	4.810	TIC	5995035m	1318.87	ng	
43) TPH C10-C15	9.810	TIC	2867149m	519.04	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
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Acq On : 01 Apr 2021 06:41 pm
Operator : KAI
Sample : LOD 5
Misc :
ALS Vial : 22 Sample Multiplier: 1

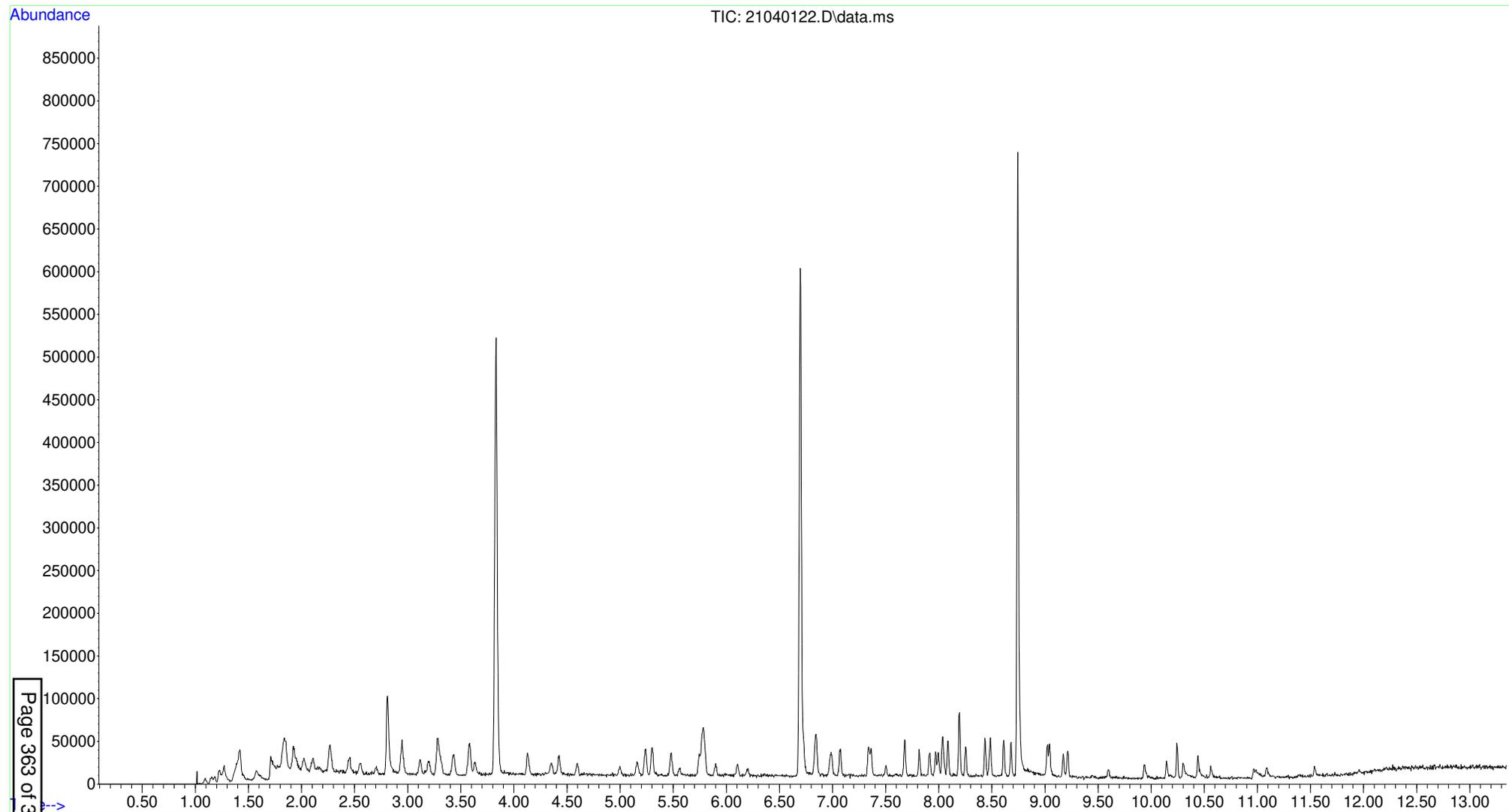
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040122.D
Acq On : 01 Apr 2021 06:41 pm
Operator : KAI
Sample : LOD 5
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 05 12:58:30 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration



Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040123.D
 Acq On : 01 Apr 2021 07:05 pm
 Operator : KAI
 Sample : LOQ 10
 Misc :
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 05 12:58:34 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.826	96	369799	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	260349	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	117811	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	15019	10.27	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.27%#	
19) Toluene-d8	5.234	98	33020	10.30	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.30%#	
31) Bromofluorobenzene	7.815	95	11883	9.35	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	9.35%#	
Target Compounds						
2) Vinyl Chloride	1.262	62	8500	9.12	ng	# 94
3) 1,1-Dichloroethene	1.821	96	9739	10.88	ng	95
4) 1,1,2-Trichlorotrifluo...	1.828	101	10547	10.06	ng	86
5) trans-1,2-Dichloroethene	2.262	96	10479	10.31	ng	94
6) Methyl-t-butyl ether	2.259	73	26259	9.65	ng	# 93
7) 1,1-Dichloroethane	2.546	63	20424	10.18	ng	96
8) cis-1,2-Dichloroethene	2.940	96	11030	9.92	ng	93
9) Chloroform	3.192	85	12784	11.03	ng	# 92
11) 1,2-Dichloroethane	3.627	62	20004	10.71	ng	# 43
12) 1,1,1-Trichloroethane	3.302	97	15728	9.70	ng	# 90
13) Carbon Tetrachloride	3.419	117	14301	9.46	ng	96
14) Benzene	3.577	78	42150	11.07	ng	98
15) Trichloroethene	4.122	130	12193	9.83	ng	92
16) 1,4-Dioxane	4.418	88	7421	9.57	ng	99
17) 1,1,2-Trichloroethane	5.742	99	6333	10.41	ng	99
20) Toluene	5.294	92	15626	10.12	ng	# 95
21) 1,2-Dibromoethane (EDB)	6.199	107	9081	9.51	ng	98
22) Tetrachloroethene	5.795	131	9297	10.95	ng	# 97
23) 1,1,1,2-Tetrachloroethane	6.832	131	9103	9.88	ng	# 79
24) Chlorobenzene	6.722	112	26186	10.12	ng	94
25) Ethylbenzene	6.848	106	12170	9.30	ng	94
26) p & m-Xylene	6.986	106	14740	9.25	ng	94
27) 1,1,2,2-Tetrachloroethane	7.973	83	14736	9.55	ng	# 90
28) o-Xylene	7.336	106	14499	9.39	ng	94
29) 1,2,3-Trichloropropane	7.995	75	13682	10.28	ng	# 87
30) Isopropylbenzene	7.680	105	35954	8.86	ng	94
33) 1,3,5-Trimethylbenzene	8.196	120	14911	9.40	ng	99
34) 1,2,4-Trimethylbenzene	8.490	120	13466	9.45	ng	95
35) 1,3-Dichlorobenzene	8.679	146	18441	10.04	ng	99
36) 1,4-Dichlorobenzene	8.761	146	19023	10.13	ng	91
37) 1,2-Dichlorobenzene	9.025	146	17606	9.92	ng	99
38) 1,2,4-Trichlorobenzene	10.147	180	10483	8.52	ng	96
39) Naphthalene	10.302	128	32890	8.25	ng	# 95
40) 1,2,3-Trichlorobenzene	10.440	180	11535	9.03	ng	95
41) 2-Methylnaphthalene	10.967	142	15380	6.51	ng	84
42) TPH C4-C9	4.810	TIC	6492589m	1458.04	ng	
43) TPH C10-C15	9.810	TIC	3798237m	701.90	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040123.D
Acq On : 01 Apr 2021 07:05 pm
Operator : KAI
Sample : LOQ 10
Misc :
ALS Vial : 23 Sample Multiplier: 1

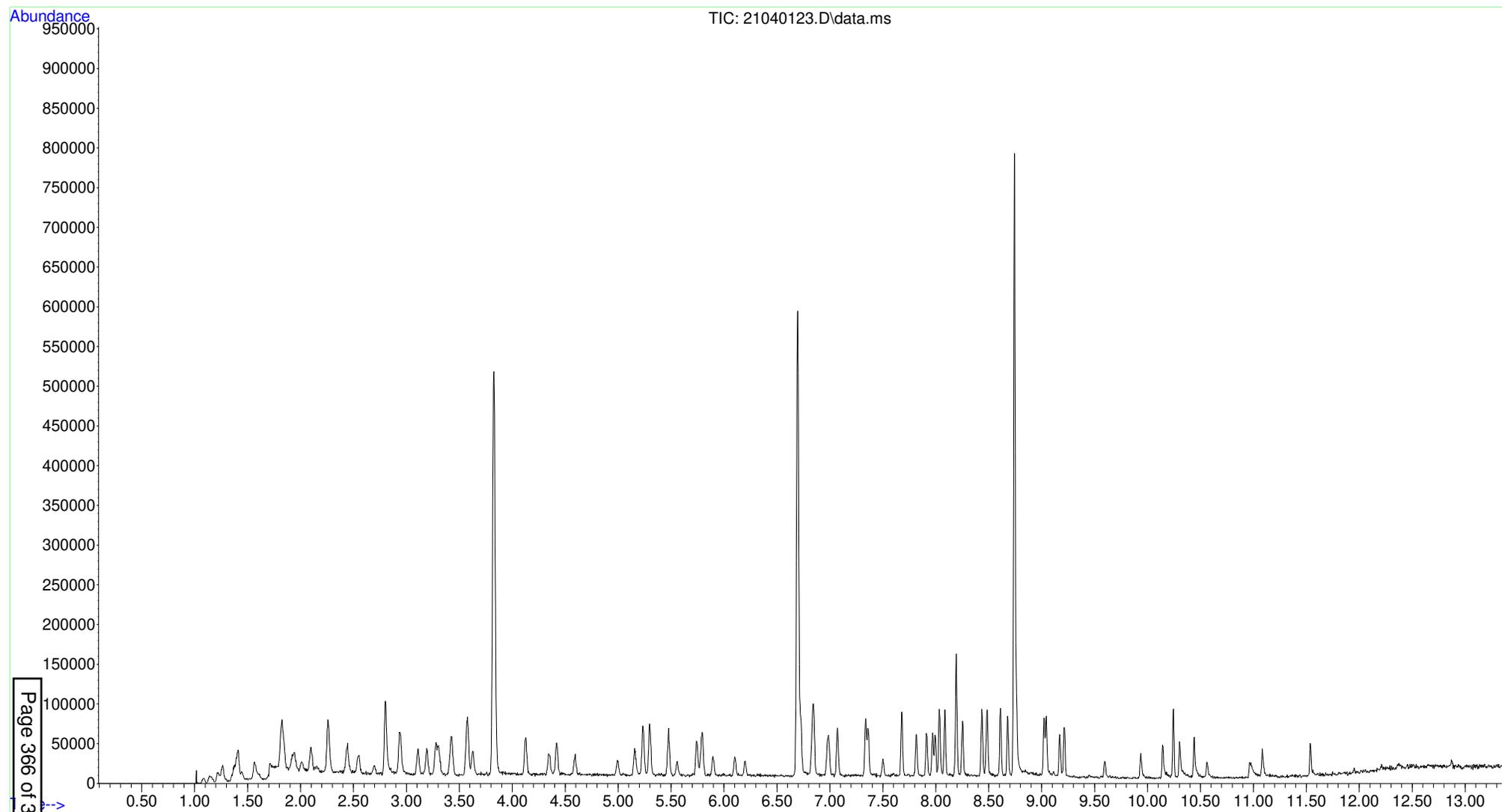
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040123.D
Acq On : 01 Apr 2021 07:05 pm
Operator : KAI
Sample : LOQ 10
Misc :
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 05 12:58:34 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration



Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040124.D
 Acq On : 01 Apr 2021 07:30 pm
 Operator : KAI
 Sample : LOQ 10
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 05 12:58:37 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	376121	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	265747	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	131064	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.567	65	15813	10.63	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.63%#	
19) Toluene-d8	5.234	98	33597	10.27	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.27%#	
31) Bromofluorobenzene	7.818	95	12498	9.64	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	9.64%#	
Target Compounds						
2) Vinyl Chloride	1.264	62	8282	8.74	ng	# 93
3) 1,1-Dichloroethene	1.824	96	10217	11.22	ng	97
4) 1,1,2-Trichlorotrifluo...	1.821	101	11492	10.78	ng	87
5) trans-1,2-Dichloroethene	2.259	96	10890	10.53	ng	91
6) Methyl-t-butyl ether	2.262	73	27315	9.87	ng	98
7) 1,1-Dichloroethane	2.555	63	21198	10.39	ng	99
8) cis-1,2-Dichloroethene	2.946	96	11295	9.99	ng	94
9) Chloroform	3.198	85	12460	10.57	ng	99
11) 1,2-Dichloroethane	3.630	62	20194	10.63	ng	# 44
12) 1,1,1-Trichloroethane	3.305	97	15508	9.40	ng	# 88
13) Carbon Tetrachloride	3.422	117	12069	7.85	ng	96
14) Benzene	3.583	78	40415	10.44	ng	97
15) Trichloroethene	4.125	130	13338	10.57	ng	97
16) 1,4-Dioxane	4.421	88	7708	9.78	ng	93
17) 1,1,2-Trichloroethane	5.744	99	6822	11.03	ng	91
20) Toluene	5.297	92	17410	11.05	ng	# 99
21) 1,2-Dibromoethane (EDB)	6.198	107	8985	9.22	ng	94
22) Tetrachloroethene	5.795	131	10309	11.89	ng	92
23) 1,1,1,2-Tetrachloroethane	6.835	131	8910	9.47	ng	# 79
24) Chlorobenzene	6.724	112	27586	10.45	ng	99
25) Ethylbenzene	6.844	106	12925	9.68	ng	# 93
26) p & m-Xylene	6.986	106	14952	9.19	ng	96
27) 1,1,2,2-Tetrachloroethane	7.969	83	16310	10.36	ng	99
28) o-Xylene	7.339	106	15663	9.93	ng	95
29) 1,2,3-Trichloropropane	7.991	75	13681	10.07	ng	93
30) Isopropylbenzene	7.679	105	37898	9.15	ng	99
33) 1,3,5-Trimethylbenzene	8.193	120	16524	9.36	ng	98
34) 1,2,4-Trimethylbenzene	8.486	120	14799	9.33	ng	93
35) 1,3-Dichlorobenzene	8.681	146	20633	10.09	ng	98
36) 1,4-Dichlorobenzene	8.760	146	22245	10.65	ng	98
37) 1,2-Dichlorobenzene	9.022	146	19081	9.66	ng	95
38) 1,2,4-Trichlorobenzene	10.144	180	12309	8.99	ng	88
39) Naphthalene	10.304	128	36609	8.26	ng	# 97
40) 1,2,3-Trichlorobenzene	10.440	180	13801	9.71	ng	100
41) 2-Methylnaphthalene	10.969	142	20919	7.96	ng	98
42) TPH C4-C9	4.810	TIC	6399021m	1291.71	ng	
43) TPH C10-C15	9.810	TIC	4348731m	722.36	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040124.D
Acq On : 01 Apr 2021 07:30 pm
Operator : KAI
Sample : LOQ 10
Misc :
ALS Vial : 24 Sample Multiplier: 1

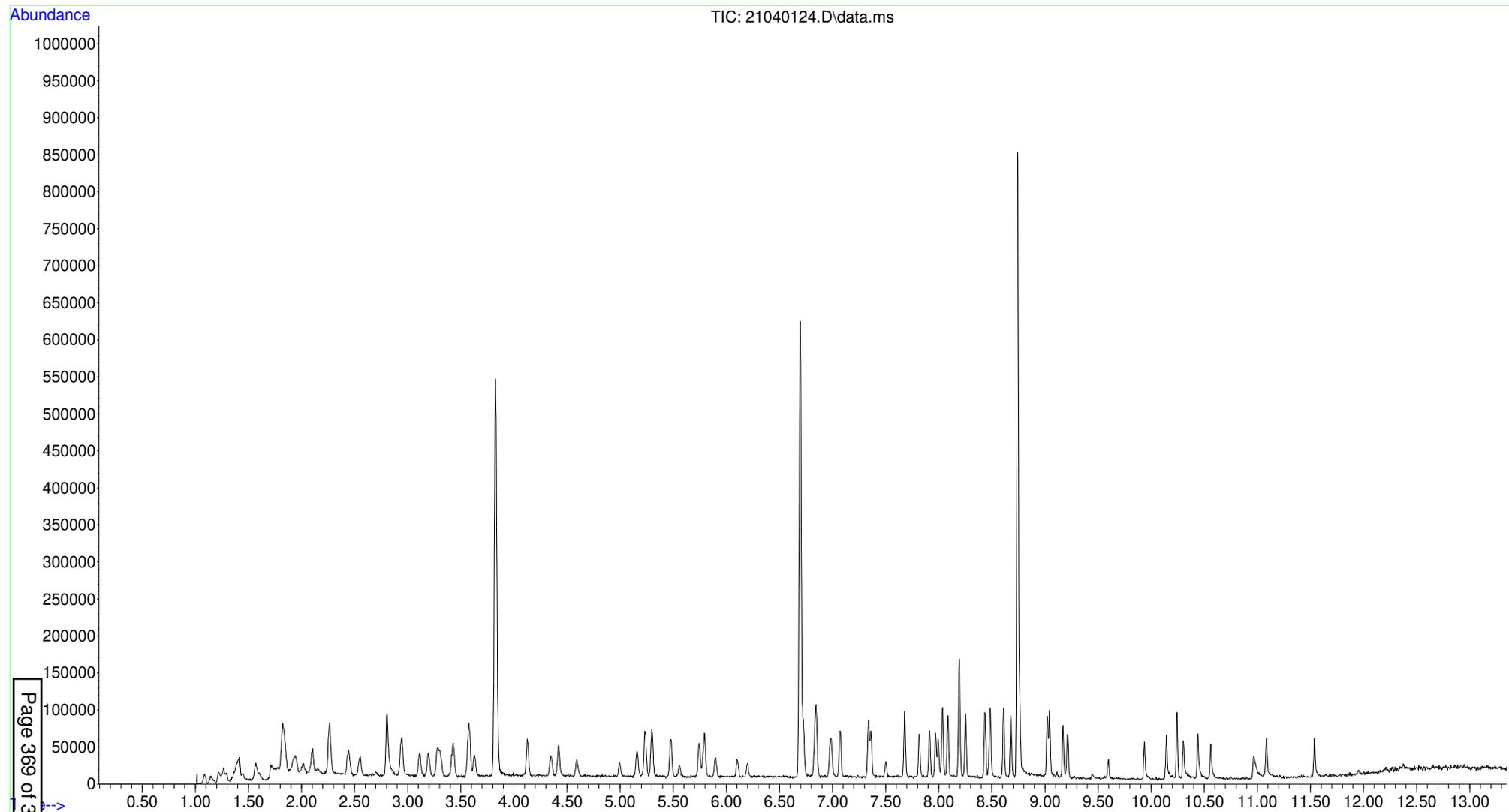
Quant Time: Apr 05 12:58:37 2021
Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040124.D
 Acq On : 01 Apr 2021 07:30 pm
 Operator : KAI
 Sample : LOQ 10
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 05 12:58:37 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040125.D
 Acq On : 01 Apr 2021 07:54 pm
 Operator : KAI
 Sample : LOQ 10
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 05 12:58:41 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.825	96	376021	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	281112	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.745	152	135705	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	15509	10.43	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.43%#	
19) Toluene-d8	5.234	98	35189	10.17	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.17%#	
31) Bromofluorobenzene	7.815	95	13215	9.63	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	9.63%#	
Target Compounds						
2) Vinyl Chloride	1.262	62	8761	9.25	ng	# 94
3) 1,1-Dichloroethene	1.821	96	9292	10.21	ng	94
4) 1,1,2-Trichlorotrifluo...	1.821	101	11224	10.53	ng	89
5) trans-1,2-Dichloroethene	2.266	96	10853	10.50	ng	97
6) Methyl-t-butyl ether	2.259	73	26088	9.43	ng	# 83
7) 1,1-Dichloroethane	2.546	63	19948	9.78	ng	95
8) cis-1,2-Dichloroethene	2.937	96	11846	10.48	ng	98
9) Chloroform	3.192	85	12065	10.23	ng	98
11) 1,2-Dichloroethane	3.630	62	19696	10.38	ng	93
12) 1,1,1-Trichloroethane	3.305	97	16196	9.82	ng	# 90
13) Carbon Tetrachloride	3.422	117	12562	8.17	ng	# 93
14) Benzene	3.577	78	42348	10.94	ng	99
15) Trichloroethene	4.125	130	12760	10.12	ng	99
16) 1,4-Dioxane	4.415	88	7640	9.69	ng	89
17) 1,1,2-Trichloroethane	5.745	99	7175	11.60	ng	96
20) Toluene	5.300	92	18498	11.09	ng	92
21) 1,2-Dibromoethane (EDB)	6.205	107	10565	10.24	ng	96
22) Tetrachloroethene	5.792	131	9680	10.56	ng	# 93
23) 1,1,1,2-Tetrachloroethane	6.835	131	8969	9.01	ng	# 66
24) Chlorobenzene	6.725	112	29863	10.69	ng	98
25) Ethylbenzene	6.844	106	13478	9.54	ng	92
26) p & m-Xylene	6.986	106	16591	9.64	ng	95
27) 1,1,2,2-Tetrachloroethane	7.970	83	16633	9.99	ng	98
28) o-Xylene	7.342	106	15648	9.38	ng	94
29) 1,2,3-Trichloropropane	7.998	75	14710	10.23	ng	97
30) Isopropylbenzene	7.680	105	41046	9.37	ng	96
33) 1,3,5-Trimethylbenzene	8.196	120	16755	9.17	ng	96
34) 1,2,4-Trimethylbenzene	8.486	120	14724	8.97	ng	99
35) 1,3-Dichlorobenzene	8.679	146	20865	9.86	ng	98
36) 1,4-Dichlorobenzene	8.764	146	21950	10.15	ng	98
37) 1,2-Dichlorobenzene	9.022	146	21048	10.30	ng	99
38) 1,2,4-Trichlorobenzene	10.144	180	12733	8.98	ng	98
39) Naphthalene	10.305	128	39745	8.66	ng	# 96
40) 1,2,3-Trichlorobenzene	10.440	180	14353	9.76	ng	94
41) 2-Methylnaphthalene	10.966	142	21183	7.79	ng	98
42) TPH C4-C9	4.810	TIC	7051664m	1374.78	ng	
43) TPH C10-C15	9.810	TIC	4546437m	729.38	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040125.D
Acq On : 01 Apr 2021 07:54 pm
Operator : KAI
Sample : LOQ 10
Misc :
ALS Vial : 25 Sample Multiplier: 1

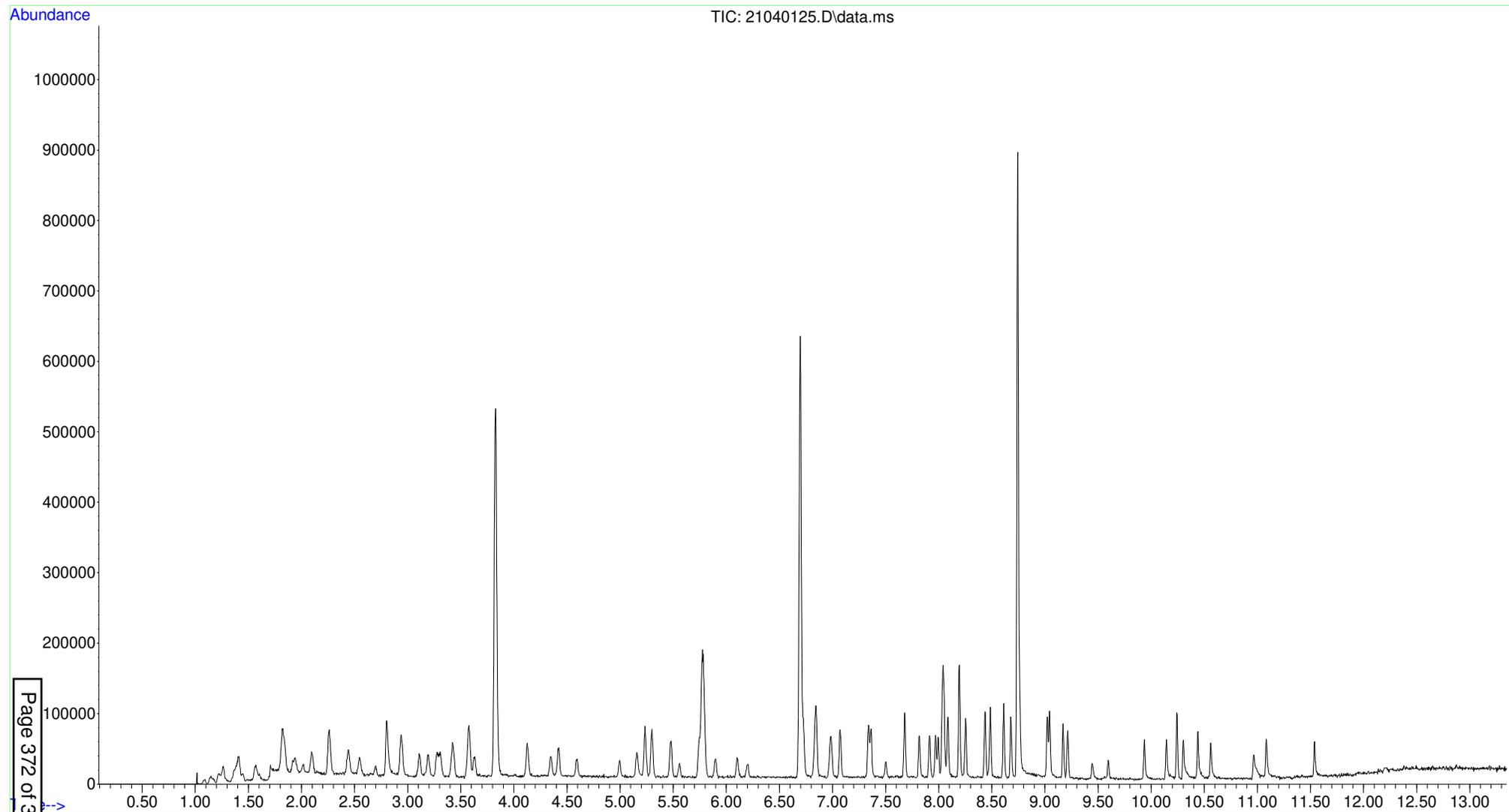
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040125.D
 Acq On : 01 Apr 2021 07:54 pm
 Operator : KAI
 Sample : LOQ 10
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 05 12:58:41 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040126.D
 Acq On : 01 Apr 2021 08:18 pm
 Operator : KAI
 Sample : LOQ 10
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 05 12:58:44 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.828	96	368197	100.00	ng	0.00
18) Chlorobenzene-d5	6.696	117	273247	100.00	ng	0.00
32) 1,4-Dichlorobenzene-d4	8.744	152	130665	100.00	ng	0.00
System Monitoring Compounds						
10) 1,2-DCA-d4	3.564	65	14701	10.10	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	10.10%#	
19) Toluene-d8	5.237	98	32996	9.81	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	9.81%#	
31) Bromofluorobenzene	7.818	95	12252	9.19	ng	0.00
Spiked Amount	100.000	Range 70 - 130	Recovery	=	9.19%#	
Target Compounds						
						Qvalue
2) Vinyl Chloride	1.264	62	8647	9.32	ng	97
3) 1,1-Dichloroethene	1.821	96	8826	9.90	ng	96
4) 1,1,2-Trichlorotrifluo...	1.824	101	10731	10.28	ng	89
5) trans-1,2-Dichloroethene	2.262	96	9923	9.80	ng	95
6) Methyl-t-butyl ether	2.259	73	25501	9.41	ng	# 82
7) 1,1-Dichloroethane	2.543	63	19884	9.95	ng	98
8) cis-1,2-Dichloroethene	2.946	96	10353	9.35	ng	86
9) Chloroform	3.192	85	11597	10.05	ng	97
11) 1,2-Dichloroethane	3.630	62	19479	10.48	ng	# 71
12) 1,1,1-Trichloroethane	3.308	97	15203	9.42	ng	# 86
13) Carbon Tetrachloride	3.419	117	13308	8.84	ng	# 93
14) Benzene	3.583	78	38427	10.14	ng	98
15) Trichloroethene	4.128	130	12599	10.20	ng	98
16) 1,4-Dioxane	4.421	88	7050	9.13	ng	95
17) 1,1,2-Trichloroethane	5.741	99	6533	10.79	ng	96
20) Toluene	5.300	92	17235	10.63	ng	# 96
21) 1,2-Dibromoethane (EDB)	6.198	107	10746	10.72	ng	90
22) Tetrachloroethene	5.792	131	9054	10.16	ng	92
23) 1,1,1,2-Tetrachloroethane	6.835	131	9331	9.65	ng	# 80
24) Chlorobenzene	6.724	112	28284	10.42	ng	97
25) Ethylbenzene	6.850	106	13245	9.64	ng	98
26) p & m-Xylene	6.983	106	15595	9.32	ng	99
27) 1,1,2,2-Tetrachloroethane	7.969	83	15988	9.88	ng	99
28) o-Xylene	7.336	106	14847	9.16	ng	94
29) 1,2,3-Trichloropropane	7.998	75	13703	9.81	ng	# 86
30) Isopropylbenzene	7.676	105	38203	8.97	ng	96
33) 1,3,5-Trimethylbenzene	8.196	120	15969	9.08	ng	99
34) 1,2,4-Trimethylbenzene	8.486	120	14436	9.13	ng	94
35) 1,3-Dichlorobenzene	8.681	146	20773	10.19	ng	95
36) 1,4-Dichlorobenzene	8.760	146	22716	10.91	ng	99
37) 1,2-Dichlorobenzene	9.025	146	17232	8.75	ng	87
38) 1,2,4-Trichlorobenzene	10.147	180	11702	8.57	ng	87
39) Naphthalene	10.301	128	38615	8.73	ng	96
40) 1,2,3-Trichlorobenzene	10.440	180	13681	9.66	ng	99
41) 2-Methylnaphthalene	10.963	142	20478	7.82	ng	92
42) TPH C4-C9	4.810	TIC	6455758m	1307.15	ng	
43) TPH C10-C15	9.810	TIC	3943003m	656.97	ng	

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
Data File : 21040126.D
Acq On : 01 Apr 2021 08:18 pm
Operator : KAI
Sample : LOQ 10
Misc :
ALS Vial : 26 Sample Multiplier: 1

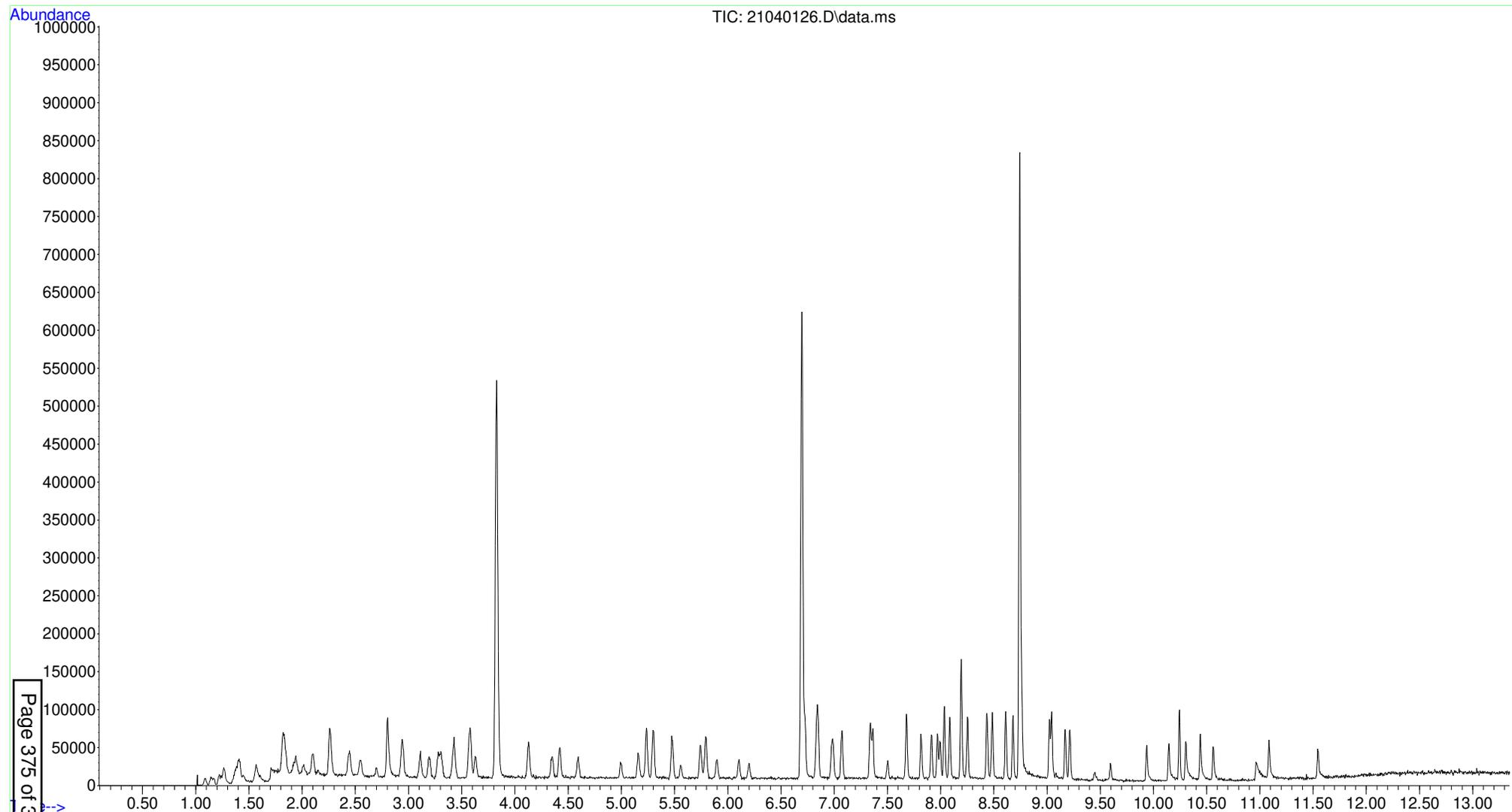
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Quant Title : SOURCE AREA VOA ANALYSIS
QLast Update : Thu Apr 01 15:44:17 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\GCMS\data\21\04\C210401 QUART CAL\STD\8260C\
 Data File : 21040126.D
 Acq On : 01 Apr 2021 08:18 pm
 Operator : KAI
 Sample : LOQ 10
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 05 12:58:44 2021
 Quant Method : Z:\msdchem\C_system\5977c_210401_STD LIST_8260C.M
 Quant Title : SOURCE AREA VOA ANALYSIS
 QLast Update : Thu Apr 01 15:44:17 2021
 Response via : Initial Calibration



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Jacobs
2020 SW Fourth Avenue, Suite 300
Portland, OR 97201-4973

Site Name: Northwest Pipe
Site Location: Portland, OR
Project Manager: Kris Ivarson

Beacon Proposal: 201009R01
Lab Work Order: 0005717
Reported: 04/26/2021

Sample Management Records

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Sample Condition & Receipt Log

Shipped By: Received: 4/8/21 16:26 Samples Logged: 4/8/21 16:26
 Submitted by: Received by: Steve Thornley

Custody Seals Intact or NA	Yes	All Samples Returned	Yes
Containers Intact	Yes	Tools Returned	Yes
COC/Samples Agree	Yes	All Samples received in acceptable Condition	Yes

Lab ID: 0005717-01 **Sample ID: Trip-1**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 12:00	Beacon Passive Sampler	Adsorbent	Air	Good
Comments:				

Lab ID: 0005717-02 **Sample ID: Trip-2**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 12:00	Beacon Passive Sampler	Adsorbent	Air	Good
Comments:				

Lab ID: 0005717-03 **Sample ID: NWP_PSG01-03262021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 12:04	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-04 **Sample ID: NWP_PSG02-03262021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 11:55	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-05 **Sample ID: NWP_PSG03-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:04	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab ID: 0005717-06 **Sample ID: NWP_PSG04-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:02	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-07 **Sample ID: NWP_PSG05-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 8:59	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-08 **Sample ID: NWP_PSG06-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 8:55	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-09 **Sample ID: NWP_PSG07-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 8:51	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-10 **Sample ID: NWP_PSG08-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 8:47	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-11 **Sample ID: NWP_PSG09-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:48	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-12 **Sample ID: NWP_PSG10-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:45	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-13 **Sample ID: NWP_PSG11-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:42	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

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Lab ID: 0005717-14	Sample ID: NWP_PSG12-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:12	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-15	Sample ID: NWP_PSG13-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:14	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-16	Sample ID: NWP_PSG14-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:16	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-17	Sample ID: NWP_PSG15-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:18	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-18	Sample ID: NWP_PSG16-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:20	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-19	Sample ID: NWP_PSG17-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:22	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-20	Sample ID: NWP_PSG18-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:26	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-21	Sample ID: NWP_PSG19-03242021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:29	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

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Lab ID: 0005717-22 **Sample ID: NWP_PSG20-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:54	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-23 **Sample ID: NWP_PSG21-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:34	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-24 **Sample ID: NWP_PSG22-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:15	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-25 **Sample ID: NWP_PSG23-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:13	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-26 **Sample ID: NWP_PSG24-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:11	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-27 **Sample ID: NWP_PSG25-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:07	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-28 **Sample ID: NWP_PSG26-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:05	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-29 **Sample ID: NWP_PSG27-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:02	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab ID: 0005717-30 **Sample ID: NWP_PSG28-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:00	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-31 **Sample ID: NWP_PSG29-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:57	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-32 **Sample ID: NWP_PSG30-03242021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 11:37	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-33 **Sample ID: NWP_PSG31-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:41	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-34 **Sample ID: NWP_PSG32-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:43	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-35 **Sample ID: NWP_PSG33-03262021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:45	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-36 **Sample ID: NWP_PSG34-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:52	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Lab ID: 0005717-37 **Sample ID: NWP_PSG35-03252021**

Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 10:57	Beacon Passive Sampler	Adsorbent	Soil Gas	Good
Comments:				

Jacobs 2020 SW Fourth Avenue, Suite 300 Portland, OR 97201-4973	Site Name: Northwest Pipe Site Location: Portland, OR Project Manager: Kris Ivarson	Beacon Proposal: 201009R01 Lab Work Order: 0005717 Reported: 04/26/2021
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Lab ID: 0005717-38	Sample ID: NWP_PSG36-03262021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 11:02 Comments:	Beacon Passive Sampler	Adsorbent	Soil Gas	Good

Lab ID: 0005717-39	Sample ID: NWP_PSG37-03262021
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 11:09 Comments:	Beacon Passive Sampler	Adsorbent	Soil Gas	Good

Lab ID: 0005717-40	Sample ID: NWP_PSG01-03262021-Dup
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 12:04 Comments:	Beacon Passive Sampler	Adsorbent	Soil Gas	Good

Lab ID: 0005717-41	Sample ID: NWP_PSG16-03242021-Dup
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Sampled	Sampler Type	Preservation	Matrix	Sample Condition
4/7/21 9:20 Comments:	Beacon Passive Sampler	Adsorbent	Soil Gas	Good

Project Information		Client Information	
Site Name: NORTHWEST PIPE	Company Name: JACOBS	Project Manager: KRIS IVARSON	
	Office Location: PDX	Client PO: NWP 21002	
Site Location: PORTLAND, OR	Submitted by: LAURA TOCHKO	Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days	
	Email: LAURA.TOCHKO@JACOBS.COM		

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth (cm)	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
NWP-PS608-03242021	3/24/2021	0930	4/7/2021	0847	91	Soil	
NWP-PS607-03242021	3/24/2021	0946		0851	91	Soil	
NWP-PS606-03242021		1005		0855			
NWP-PS605-03242021		1022		0859			
NWP-PS604-03242021		1042		0902			
NWP-PS603-03242021		1110		0904			
NWP-PS612-03242021		1227		0912			
NWP-PS613-03242021		1246		0914			
NWP-PS614-03242021		1302		0916			
NWP-PS615-03242021		1317		0918			
NWP-PS616-03242021		1334		0920			
NWP-PS617-03242021		1348		0922			
NWP-PS618-03242021		1400		0926			
NWP-PS619-03242021		1420		0929			
NWP-PS621-03242021		1519		0934		Gravel	

Special Instructions:

Relinquished by (signature): <i>[Signature]</i>	Date / Time: 4/7/21 15:00	Received by (signature): <i>[Signature]</i>	Date / Time: 4.8.2021 / 1626
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 5717	Beacon Proposal: 201009R01	Analytical Method: 8260C
Courier Name: <i>FedEx</i>	Shipment Condition: <input checked="" type="checkbox"/>	Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a	Custody Seal No: 3614593

Project Information		Client Information	
Site Name: NORTHWEST PIPE	Company Name: JACOBS	Project Manager: KRIS IVARSON	
Site Location: PORTLAND, OR	Office Location: PDX	Client PO: NWP 21002	
	Submitted by: LAUREA TOCHKO	Turn around time (check one):	
	Email: LAUREA.TOCHKO@JACOBS.COM	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) _____ days	

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth (cm)	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
NWP-PS611-03242021	3/24/2021	1538	4/7/2021	0942	91	Gravel	
NWP-PS610-03252021	3/25/2021	0915		0945	91	Soil Gravel	
NWP-PS609-03252021		0933		0948		Soil/Gravel	
NWP-PS629-03252021		0950		0957		Soil	
NWP-PS628-03252021		1005		1000			
NWP-PS627-03252021		1028		1002			
NWP-PS626-03252021		1044		1005			
NWP-PS625-03252021		1057		1007			
NWP-PS624-03252021		1110		1011			
NWP-PS623-03252021		1122		1013			
NWP-PS622-03252021		1130		1015			
NWP-PS620-03252021		1230		0954		Gravel	
NWP-PS631-03252021		1351		1041		Soil/Gravel	
NWP-PS632-03252021		1415		1043		Soil/Gravel	
NWP-PS634-03252021		1436		1052	76	Asphalt	
NWP-PS635-03252021		1500		1057	76	Asphalt	
NWP-PS630-03262021	3/26/2021	0902		1137	91	Gravel/Soil	
NWP-PS633-03262021		0922		1045	91	Gravel/Soil	
NWP-PS636-03262021		0951		1102	91	Asphalt	
NWP-PS637-03262021		1016	✓	1109	91	Gravel/Soil	

Special Instructions:

For Lab Use Only	Beacon Job No: 5717	Beacon Proposal: 201009R01	Analytical Method: 8260C
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