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Letter of Transmittal

Attention:	Ms. Jennifer Knoepfle (USEPA) Mr. Brian Conrath (IEPA)	Date:	April 20, 2021
Project reference:	Hamilton Sundstrand Corporation Plants 1/2 Facility Southeast Rockford Groundwater Contamination Superfund Site 2421 11th Street Rockford, Illinois 61104 ILD981000417	Project number:	60651001

We are sending you the following:

Number of originals:	Number of copies:	Description:
1	1	2021 First Quarter GMZ Monitoring and System Performance Report

Enclosed please find the 2021 First Quarter GMZ Monitoring and System Performance Report for Hamilton Sundstrand Corporation Plant 1/2 Facility, Southeast Rockford Groundwater Contamination Superfund Site, Rockford, Illinois.

Thank You.

Peter Hollatz, P.E.

cc: Mr. John Wolski, Raytheon Technologies Corporation
Mr. Jon Alberg, AECOM
Project File

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Prepared for:
Hamilton Sundstrand Corporation
Rockford, IL

Prepared by:
AECOM
Lisle, IL
60651001
April 20, 2021

First Quarter 2021 GMZ Monitoring and System Performance Report

Hamilton Sundstrand Corporation Plant 1/2 Facility
Southeast Rockford Groundwater Contamination Superfund Site
2421 11th Street
Rockford, IL 61104
ILD 981000417

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April 20, 2021

Ms. Jennifer Knoepfle, P.G., Ph.D
Remedial Project Manager
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Mr. Brian Conrath
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Subject: First Quarter 2021 GMZ Monitoring and System Performance Report
Hamilton Sundstrand Corporation Plant 1/2 Facility
Southeast Rockford Groundwater Contamination Superfund Site
2421 11th Street
Rockford, Illinois 61104
ILD981000417
AECOM Project No. 60651001

Dear Ms. Knoepfle and Mr. Conrath:

This Quarterly Groundwater Management Zone (GMZ) Monitoring and System Performance Report has been prepared by AECOM Technical Services Inc. (AECOM) on behalf of Hamilton Sundstrand Corporation (HSC). In accordance with the approved March 2007 Operation, Maintenance, and Monitoring Plan (OM&M Plan) and the United States Environmental Protection Agency (EPA) letter dated April 15, 2011, providing approval for combining project reporting documents, this report contains a summary of the following: 1) GMZ leachate monitoring data; 2) the Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system performance data; 3) the Phase 1 and Phase 2 AS/SVE system process air analytical data; and 4) GMZ wells that contain contaminants of concern (COCs) above Preliminary Remediation Goals (PRGs). The second quarter 2021 Quarterly Progress Report will be provided at the end of the quarter.

Per the request of USEPA (letter dated January 12, 2021), 1,4-dioxane was included has a COC during this monitoring event.

As approved in the April 15, 2011 letter from Timothy Drexler (EPA), interpretation of collected leachate quality and system performance data will be included in the Annual GMZ Monitoring and System Performance Report submitted in March of the subsequent year. This quarterly report provides the current environmental data including: tables and figures summarizing the results of first quarter 2021 GMZ monitoring and AS/SVE system performance data and supporting field data sheets and laboratory analytical reports.

The objective of AS/SVE system operation is to treat leachate-impacted groundwater at the HSC Plant 1/2 (Facility) property. The implemented remedy was specifically targeted to address an area of the Facility where COCs were originally present in leachate at concentrations that were two or more orders of magnitude greater than their PRGs. Though the treatment area was not fully defined when the 2002 Record of Decision (ROD) for Operable Unit 3 (OU3) was issued, the entire Facility was identified/defined in the ROD as a "source location" within the larger established "Source Area 9/10" (Area 9/10) based on data collected prior to the ROD[1]. The ROD further required that the Facility remedy include the establishment of a GMZ for this "source location" (the Facility) whose volume was defined by the Facility property boundaries and a vertical limit of 45 feet below ground surface. Two Facility GMZs, GMZ 1 (Facility property north of railroad tracks) and GMZ 2 (Facility property south of railroad tracks), were approved by the Illinois EPA in 2008. Monitoring wells within the Facility GMZs are routinely sampled, and the leachate analytical results are compared to OU3 PRGs to evaluate the effectiveness of the remedy. PRGs for OU3 are federal Maximum Contaminant Levels (MCLs).

During the first quarter 2021 reporting period, the following five GMZ well locations along the Facility boundary contained COCs at concentrations above PRGs:

GMZ Monitoring Well ID	COC Concentrations > PRG (Increase (+) or Decrease (-) or Same (=) from Previous Quarter)
GMZ01	PCE (-)
SMW04	PCE (+)
SMW08	PCE (+)
SMW19	TCE (+)
PMW01	PCE (-)

Trichloroethene (TCE), Tetrachloroethene (PCE)

The above-noted decreases/increases in concentrations represent a relative change in COC concentrations (above the PRG) between the two most recent quarters of data. Such changes should not be viewed as an indication of a trend without further statistical evaluation.

It is noted that 1,4-dioxane was not detected in any samples greater than the Class I groundwater quality standard (Title 35 Illinois Administrative Code [IAC] Part 620). 1,4-dioxane will not be included as a COC in future monitoring events.

[1] See EPA Superfund Record of Decision Southeast Rockford Ground Water Contamination, 2002. EPA/ROD/R05-02/077 2002.

Western Facility Property Boundary GMZ Wells

Although still exceeding the PRGs, the GMZ wells along the western Facility property boundary continue to demonstrate stable or decreasing trends or no trends with degradation to daughter products from parent COCs apparent at several wells. The development of Alternative Cleanup Levels (ACLs) along the western Facility property boundary will represent the maximum allowable concentration at the Facility boundary that will not result in a COC exceedance of a PRG at the Area 9/10 boundary downgradient of the Facility.

Achieving ACLs at the downgradient western Facility property boundary will demonstrate that the Facility is protective of human and environmental receptors at the downgradient Area 9/10 boundary. The downgradient Area 9/10 boundary is located at Harrison Avenue to the south and 6th Street to the west.

A Work Plan for the development of ACLs has been prepared by AECOM on behalf of HSC. The Work Plan was prepared as agreed following the meeting between HSC, AECOM, EPA and the Illinois EPA at the HSC Facility on May 8, 2017. The Work Plan was submitted to EPA and Illinois EPA on August 11, 2017. A letter dated May 29, 2019 was submitted to EPA and Illinois EPA requesting a review and approval of the Work Plan. Comments on the Work Plan provided by EPA and Illinois EPA were provided in a letter dated September 9, 2019. A response to the EPA September 9, 2019 comment letter was submitted on March 13, 2020.

The formulation of ACLs is consistent with the attainment of the OU3 ROD Remedial Action Objective (RAO) for groundwater specified in the ROD[2] and the objectives analysis/Remedial Action Process Flow Diagram (RAPFD) developed and approved for use by the EPA and Illinois EPA at the Facility. The RAPFD, which outlines the use of objective analysis in formulating ACLs that are proposed for the western Facility property boundary, is provided in the Statement of Work attached to the HSC Facility Consent Decree[3] and included in subsequent approved Remedial Action Work Plan.

Southern Facility Property Boundary GMZ Wells

As detailed in the 2020 Annual GMZ Monitoring and System Performance Report and further supported by this monitoring event, PRGs continue to be achieved along the southern Facility property boundary.

Monitoring well data along the southern Facility property boundary since 2016, which consists of 19 consecutive quarterly leachate sampling events, or over 4 plus years of monitoring, the sample results have been below PRGs. Furthermore, sample results from wells upgradient of the Facility property boundary have been below PRGs since 2017, which consists of 14 consecutive quarterly sampling events, or over 3 plus years of monitoring, with minor exceptions. Based on these results an AS/SVE shutdown strategy (with rebound monitoring) should be implemented to advance the remedy towards closure, while ensuring compliance with leachate PRGs at the southern Facility property boundary. The Phase 1 and 2 systems are to remain in place during the rebound

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[2] The OU3 ROD RAO for groundwater media is to: "Prevent the further migration of contamination from the source area that would result in degradation of site-wide groundwater or surface water to levels in excess of state or federal standards, or that pose a threat to human health or the environment."

[3] See the Statement of Work in Appendix C of the Consent Decree between Hamilton Sundstrand Corporation and the United States Environmental Protection Agency (Civil Action Number 08 C 50129), Section II.D.2, *Implementation of Remedial Action and Attainment of Performance Standards* (pages 9 and 10).

monitoring period, consisting of quarterly monitoring events for one year, in the event the system(s) need to be re-activated. This strategy can be developed in parallel with development of ACLs for leachate located along the western Facility property boundary. A work plan detailing the shutdown strategy will be forthcoming for review by USEPA and Illinois EPA.

Please contact either of the undersigned with any questions you may have on the information provided.

Prepared by:

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Attachments:

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Appendices

Appendix A	First Quarter 2021 GMZ and Performance Monitoring Well Analytical Data
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Appendix C	First Quarter 2021 Phase 1/Phase 2 AS/SVE System Operations Data Sheets
Appendix D	First Quarter 2021 Leachate Sampling Data Sheets

Tables

Table 1
Second Quarter 2020 to First Quarter 2021 Leachate Elevations
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Well ID	Top of Casing Elevation (ft)	Depth to Leachate (ft BTOC)	Leachate Elevation (ft AMSL)	Depth to Leachate (ft BTOC)	Leachate Elevation (ft AMSL)	Depth to Leachate (ft BTOC)	Leachate Elevation (ft AMSL)	Depth to Leachate (ft BTOC)	Leachate Elevation (ft AMSL)
		5/11/2020		8/3/2020		12/7/2020		2/22/2021	
MW07FGA	727.49	23.89	703.60	24.08	703.41	25.44	702.05	26.29	701.20
MW203	728.58	24.61	703.97	24.79	703.79	26.15	702.43	27.08	701.50
SMW01	729.71	26.82	702.89	27.05	702.66	28.40	701.31	29.24	700.47
SMW02	726.77	23.18	703.59	23.49	703.28	24.84	701.93	25.68	701.09
SMW04	728.51	26.05	702.46	26.31	702.20	27.66	700.85	28.48	700.03
SMW08	728.81	26.27	702.54	26.51	702.30	27.86	700.95	28.70	700.11
SMW19	728.49	24.89	703.60	25.08	703.41	26.45	702.04	27.27	701.22
SMW20	727.69	25.15	702.54	25.39	702.30	26.76	700.93	27.58	700.11
SMW21	727.25	24.63	702.62	24.88	702.37	26.24	701.01	27.06	700.19
GMZ01	731.41	28.83	702.58	29.07	702.34	30.42	700.99	31.25	700.16
GMZ02	728.76	26.40	702.36	26.62	702.14	27.99	700.77	28.82	699.94
GMZ03	728.22	25.78	702.44	26.02	702.20	27.38	700.84	28.19	700.03
GMZ04	726.84	23.97	702.87	24.19	702.65	25.55	701.29	26.38	700.46
BGW01	728.19	24.75	703.44	24.97	703.22	26.33	701.86	27.18	701.01
BGW02	728.81	25.14	703.67	25.34	703.47	26.74	702.07	27.53	701.28
BGW03	728.96	25.21	703.75	25.40	703.56	26.78	702.18	27.59	701.37
RAMW01	728.91	26.37	702.54	26.61	702.30	27.97	700.94	28.79	700.12
RAMW02	728.90	26.23	702.67	26.47	702.43	27.83	701.07	28.65	700.25
RAMW03	728.71	26.03	702.68	26.26	702.45	27.63	701.08	28.44	700.27
RAMW04	728.80	25.88	702.92	26.10	702.70	27.47	701.33	28.29	700.51
RAMW05	727.65	24.72	702.93	24.94	702.71	26.30	701.35	27.14	700.51
RAMW06	727.64	24.75	702.89	24.97	702.67	26.35	701.29	27.18	700.46
RAMW07	732.20	29.23	702.97	29.46	702.74	30.84	701.36	31.64	700.56
RAMW08	728.45	25.37	703.08	25.58	702.87	26.95	701.50	27.81	700.64
PMW01	728.88	26.49	702.39	26.73	702.15	28.09	700.79	28.91	699.97
PMW02	728.88	26.48	702.40	26.71	702.17	28.08	700.80	28.94	699.94
Ave. GW Elev. (ft AMSL)			702.94		702.71		701.35		700.52

Notes:
NM = Not monitored
ft = feet
ft BTOC = feet below top of casing
ft AMSL = feet above mean sea level
All site well top of casing elevations re-surveyed on May 24, 2011.
RAMW04 riser was lowered due to ice damage that occurred during the 2013 winter. Well was resurveyed on July 1, 2013.

Table 2
Second Quarter 2020 to First Quarter 2021 Leachate Analytical Results - GMZ Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Well	Sample ID	Sample Date	Sample Type	Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride	1,4- Dioxane
			Preliminary Remediation Goals (PRG)[A]	0.005_{c}^{A}	0.005_{c}^{A}	$0.007_{b,c}^{A}$	0.7^{A}	0.005_{c}^{A}	0.07_{c}^{A}	0.1_{c}^{A}	$0.2_{b,c}^{A}$	0.005_{c}^{A}	0.7_{c}^{A}	0.005_{c}^{A}	1.0_{c}^{A}	0.002_{c}^{A}	0.0077_{c}^{A}
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GMZ01	HS SER-GMZ01-051220	12-May-20		**0.0010**	0.0020 U	0.0010 U	**0.0084**	0.0010 U	**0.0029**	0.0010 U	**0.0017**	0.0010 U	0.0010 U	**0.0105[A]**	0.0010 U	0.0010 U	-
	HS SER-GMZ01-080420	4-Aug-20		0.00067 J	0.0020 U	0.0010 U	**0.0058**	0.0010 U	0.00067 J	0.0010 U	**0.0011**	0.0010 U	0.0010 U	**0.0156[A]**	0.0010 U	0.0010 U	-
	HS SER-GMZ01-120820	8-Dec-20		**0.0012**	0.0020 U	0.0010 U	**0.0035**	0.0010 U	0.00062 J	0.0010 U	**0.0019**	0.0010 U	0.0010 U	**0.0147[A]**	0.0010 U	0.0010 U	-
	HS SER-GMZ01-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	**0.0072**	0.0010 U	0.00070 J	0.0010 U	0.00072 J	0.0010 U	0.0010 U	**0.0105[A]**	0.0010 U	0.0010 U	**0.00067**
GMZ02	HS SER-GMZ02-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	0.00071 J	0.0010 U	0.0010 U	0.0010 U	0.00078 J	0.0010 U	0.0010 U	**0.0011**	0.0010 U	0.0010 U	-
	HS SER-GMZ02-080620	6-Aug-20		0.0010 U	0.0020 U	0.0010 U	**0.0011**	0.0010 U	0.0010 U	0.0010 U	**0.0012**	0.0010 U	0.0010 U	**0.0014**	0.0010 U	0.0010 U	-
	HS SER-GMZ02-121020	10-Dec-20		0.0010 U	0.0020 U	0.0010 U	**0.0011**	0.0010 U	0.0010 U	0.0010 U	**0.0013**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-GMZ02-022521	25-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.00087 J	0.0010 U	0.0010 U	0.0010 U	0.00062 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.00081**
GMZ03	HS SER-DUP01-051320	13-May-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.00064 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-GMZ03-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-DUP01-080520	5-Aug-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-GMZ03-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-DUP01-120920	9-Dec-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-GMZ03-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.00098**
	HS SER-DUP01-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.00099**
GMZ04	HS SER-GMZ04-051220	12-May-20		0.0010 U	0.0020 U	0.0010 U	**0.0063**	0.0010 U	0.0010 U	0.0010 U	**0.0025**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-GMZ04-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-GMZ04-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-GMZ04-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0047**
MW07FGA	HS SER-MW07FGA-051220	12-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0012**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-MW07FGA-080420	4-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0011**	0.0010 U	0.0010 U	0.00096 J	0.0010 U	0.0010 U	-
	HS SER-MW07FGA-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0014**	0.0010 U	0.0010 U	**0.0012**	0.0010 U	0.0010 U	-
	HS SER-MW07FGA-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00056 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00040 U
MW203	HS SER-MW203-051220	12-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0025**	0.0010 U	0.0010 U	-
	HS SER-MW203-080420	4-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0030**	0.0010 U	0.0010 U	-
	HS SER-MW203-120820	8-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0031**	0.0010 U	0.0010 U	-
	HS SER-MW203-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0035**	0.0010 U	0.0010 U	0.00040 U
SMW01	HS SER-SMW01-051220	12-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00071 J	0.0010 U	0.0010 U	**0.0017**	0.0010 U	0.0010 U	-
	HS SER-SMW01-080420	4-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00059 J	0.0010 U	0.0010 U	**0.0019**	0.0010 U	0.0010 U	-
	HS SER-SMW01-120820	8-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0014**	0.0010 U	0.0010 U	-
	HS SER-SMW01-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00040 U
SMW02	HS SER-SMW02-051220	12-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW02-080420	4-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW02-120820	8-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.00092 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW02-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0012**	0.0010 U	0.0010 U	0.00040 U
SMW04	HS SER-SMW04-051420	14-May-20		**0.0010**	0.0020 U	0.0010 U	0.00066 J	0.0010 U	0.0010 U	0.0010 U	**0.0062**	0.0010 U	0.0010 U	**0.0231[A]**	0.0010 U	0.0010 U	-
	HS SER-SMW04-080620	6-Aug-20		**0.0018**	0.0020 U	0.0010 U	**0.0014**	0.0010 U	0.00055 J	0.0010 U	**0.0037**	0.0010 U	0.0010 U	**0.0304[A]**	0.0010 U	0.0010 U	-
	HS SER-SMW04-121020	10-Dec-20		**0.0013**	0.0020 U	0.0010 U	**0.0061**	0.0010 U	**0.0040**	0.0010 U	**0.0017**	0.0010 U	0.0010 U	**0.0194[A]**	0.0010 U	0.00091 J	-
	HS SER-SMW04-022521	25-Feb-21		0.00085 J	0.0020 U	0.0010 U	**0.0012**	0.0010 U	0.00086 J	0.0010 U	**0.0050**	0.0010 U	0.0010 U	**0.0233[A]**	0.0010 U	0.0010 U	0.00040 U

See next page for notes.

Table 2
Second Quarter 2020 to First Quarter 2021 Leachate Analytical Results - GMZ Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Well	Sample ID	Sample Date	Sample Type	Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride	1,4- Dioxane
			Preliminary Remediation Goals (PRG)[A]	0.005[c,A]	0.005[c,A]	0.007[b,c,A]	0.7[A]	0.005[c,A]	0.07[c,A]	0.1[c,A]	0.2[b,c,A]	0.005[c,A]	0.7[c,A]	0.005[c,A]	1.0[c,A]	0.002[c,A]	0.0077[c,A]
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SMW08	HS SER-SMW08-051220	12-May-20		**0.0016**	0.0020 U	**0.0013**	**0.0145**	0.0010 U	**0.144[A]**	0.00078 J	**0.0038**	0.0010 U	0.0010 U	**0.0285[A]**	0.0010 U	0.0010 U	-
	HS SER-SMW08-080420	4-Aug-20		**0.0010**	0.0020 U	0.00064 J	**0.0110**	0.0010 U	**0.0417**	0.00076 J	**0.0025**	0.0010 U	0.0010 U	**0.0284[A]**	0.0010 U	0.0010 U	-
	HS SER-SMW08-120820	8-Dec-20		**0.0026**	0.0020 U	**0.0016**	**0.0100**	0.0010 U	**0.0668**	0.00100	**0.0067**	0.0010 U	0.0010 U	**0.0147[A]**	0.0010 U	0.0010 U	-
	HS SER-SMW08-022321	23-Feb-21		**0.0021**	0.0020 U	**0.0012**	**0.0090**	0.0010 U	**0.0307**	0.00100	**0.0058**	0.0010 U	0.0010 U	**0.0187[A]**	0.0010 U	0.0010 U	**0.0014**
SMW19	HS SER-SMW19-051220	12-May-20		**0.0110[A]**	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00059 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0012**	0.0010 U	0.0010 U	-
	HS SER-SMW19-080520	5-Aug-20		**0.0105[A]**	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00054 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0015**	0.0010 U	0.0010 U	-
	HS SER-SMW19-120820	8-Dec-20		**0.0084[A]**	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00070 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0010**	0.0010 U	0.0010 U	-
	HS SER-SMW19-022321	23-Feb-21		**0.0123[A]**	0.0020 U	0.0010 U	0.0010 U	0.0010 U	**0.0016**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0014**	0.0010 U	0.0010 U	0.00030 J
SMW20	HS SER-SMW20-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW20-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW20-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW20-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0013**
SMW21	HS SER-SMW21-051220	12-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00077 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW21-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0047**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW21-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0056**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-SMW21-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0026**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.00057**
PMW01	HS SER-PMW01-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0013**	0.0010 U	0.0010 U	**0.0057[A]**	0.0010 U	0.0010 U	-
	HS SER-PMW01-080620	6-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00090 J	0.0010 U	0.0010 U	**0.0077[A]**	0.0010 U	0.0010 U	-
	HS SER-PMW01-121020	10-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00059 J	0.0010 U	0.0010 U	**0.0057[A]**	0.0010 U	0.0010 U	-
	HS SER-PMW01-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00056 J	0.0010 U	0.0010 U	**0.0056[A]**	0.0010 U	0.0010 U	0.00040 U
PMW02	HS SER-PMW02-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	**0.0026**	0.0010 U	**0.0058**	0.0010 U	**0.0019**	0.0010 U	0.0010 U	**0.0062[A]**	0.0010 U	0.0010 U	-
	HS SER-PMW02-080620	6-Aug-20		0.00057 J	0.0020 U	0.0010 U	**0.0025**	0.0010 U	**0.0030**	0.0010 U	0.00076 J	0.0010 U	0.0010 U	**0.0056[A]**	0.0010 U	0.0010 U	-
	HS SER-PMW02-121020	10-Dec-20		0.0010 U	0.0020 U	0.00074 J	**0.0049**	0.0010 U	**0.0033**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0014**	0.0010 U	**0.0013**	-
	HS SER-PMW02-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	**0.0018**	0.0010 U	**0.0012**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0024**	0.0010 U	0.0010 U	0.00059

Notes:

PRG	Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD)
A	Class 1 - Groundwater Remediation Objectives
6.5[A]	Concentration exceeds the indicated standard.
15.2	Concentration was detected but did not exceed applicable standards.
0.03 U	The analyte was not detected above the laboratory estimated quantitation limit.
0.50 U	Laboratory estimated quantitation limit exceeded standard.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
mg/L	milligrams per liter
b,c	Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change. Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.
c	Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.
*	LCS or LCSD exceeds the control limits
B	The analyte was detected in the method, field and/or trip blank.
H	Sample was prepped or analyzed beyond the specified holding time
J	Indicates estimated value.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

Table 3
Second Quarter 2020 to First Quarter 2021 Leachate Analytical Results - Performance Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride	1,4 - Dioxane
			Preliminary Remediation Goals (PRG)[A]	0.005[c,A]	0.005[c,A]	0.007[b,c,A]	0.7[A]	0.005[c,A]	0.07[c,A]	0.1[c,A]	0.2[b,c,A]	0.005[c,A]	0.7[c,A]	0.005[c,A]	1.0[c,A]	0.002[c,A]	0.0077[c,A]
Well	**Sample ID**	**Sample Date**	**Sample Type**	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
RAMW01	HS SER-RAMW01-051420	14-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0014**	0.0010 U	0.0010 U	-
	HS SER-RAMW01-080620	6-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0017**	0.0010 U	0.0010 U	-
	HS SER-RAMW01-121020	10-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0016**	0.0010 U	0.0010 U	-
	HS SER-RAMW01-022521	25-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0015**	0.0010 U	0.0010 U	**0.00049**
RAMW02	HS SER-RAMW02-051420	14-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW02-080620	6-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW02-121020	10-Dec-20		0.0010 U	0.0020 U	0.0010 U	**0.0014**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW02-022521	25-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.00077 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00040 U
RAMW03	HS SER-RAMW03-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00096 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-DUP02-051320	13-May-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0010**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW03-080620	6-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-DUP02-080620	6-Aug-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW03-121020	10-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-DUP02-121020	10-Dec-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW03-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00059 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0017**
	HS SER-DUP02-022421	24-Feb-21	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00057 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0011**
RAMW04	HS SER-RAMW04-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW04-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW04-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW04-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0014**
RAMW05	HS SER-RAMW05-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	**0.0015**	0.0010 U	**0.0014**	0.0010 U	**0.0651**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW05-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	**0.0019**	0.0010 U	0.00087 J	0.0010 U	**0.1140**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW05-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	**0.0010**	0.0010 U	0.0010 U	0.0010 U	**0.0115**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW05-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	**0.0014**	0.0010 U	0.0010 U	0.0010 U	**0.0082**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.00042**
RAMW06	HS SER-RAMW06-051320	13-May-20		0.00084 J	0.0020 U	**0.0036**	**0.0025**	0.0010 U	**0.0010**	0.0010 U	**0.674[A]**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW06-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	**0.0015**	0.0010 U	**0.0011**	0.0010 U	**0.0425**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW06-120920	9-Dec-20		0.0010 U	0.0020 U	0.0010 U	**0.0027**	0.0010 U	**0.0049**	0.0010 U	**0.0363**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW06-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.0055**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00034 J
RAMW07	HS SER-RAMW07-051320	13-May-20		0.0010 U	0.0020 U	0.0010 U	**0.0019**	0.0010 U	**0.0011**	0.0010 U	**0.1480**	0.0010 U	**0.0110**	0.0010 U	0.00060 J	0.0010 U	-
	HS SER-RAMW07-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	**0.0024**	0.0010 U	0.00096 J	0.0010 U	0.00077 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW07-120820	8-Dec-20		0.00080 J	0.0020 U	**0.0019**	**0.0059**	0.0010 U	**0.0035**	0.0010 U	**0.1950**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW07-022421	24-Feb-21		0.0010 U	0.0020 U	0.0010 U	**0.0011**	0.0010 U	0.0010 U	0.0010 U	**0.0052**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00040 U

See next page for notes.

Table 3
Second Quarter 2020 to First Quarter 2021 Leachate Analytical Results - Performance Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride	1,4 - Dioxane
			Preliminary Remediation Goals (PRG)[A]	0.005_{c}^{A}	0.005_{c}^{A}	$0.007_{b,c}^{A}$	0.7^{A}	0.005_{c}^{A}	0.07_{c}^{A}	0.1_{c}^{A}	$0.2_{b,c}^{A}$	0.005_{c}^{A}	0.7_{c}^{A}	0.005_{c}^{A}	1.0_{c}^{A}	0.002_{c}^{A}	0.0077_{c}^{A}
Well	**Sample ID**	**Sample Date**	**Sample Type**	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
RAMW08	HS SER-RAMW08-051220	12-May-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW08-080520	5-Aug-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW08-120820	8-Dec-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	-
	HS SER-RAMW08-022321	23-Feb-21		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00037 J

Notes:

PRG	Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD)
A	Class 1 - Groundwater Remediation Objectives
6.5[A]	Concentration exceeds the indicated standard at specified well; however, compliance with the standard is only applicable to GMZ wells.
15.2	Concentration was detected but did not exceed applicable standards.
0.50 U	Laboratory estimated quantitation limit exceeded standard.
0.03 U	The analyte was not detected above the laboratory estimated quantitation limit.
mg/L	milligrams per liter
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
b,c	Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
	Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.
c	Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.
B	The analyte was detected in the method, field and/or trip blank.
J	Indicates estimated value.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

Groundwater monitoring wells located within the influence of active treatment systems yield groundwater sample data that is potentially biased by the treatment activities. This potential bias should be considered during evaluation of this data.

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/10/2009		159	53	140	13000	3.76E-02	140 U	0.00E+00	45000	9.67E-02	140 U	0.00E+00	910	1.91E-03	18000	3.79E-02	140 U	0.00E+00	940	3.38E-03	260	7.41E-04	8100	1.10E-02	140 U	0.00E+00
12/22/2009		372	124	140	980	2.84E-03	26 U	0.00E+00	11000	2.36E-02	26 U	0.00E+00	130	2.74E-04	7300	1.54E-02	26 U	0.00E+00	390	1.40E-03	41	1.17E-04	470	6.38E-04	26 U	0.00E+00
2/24/2010		1893	631	150	640	1.99E-03	6.0 U	0.00E+00	1900	4.37E-03	6.0 U	0.00E+00	28	6.31E-05	630	1.42E-03	6.0 U	0.00E+00	150	5.78E-04	24	7.33E-05	33	4.80E-05	6.0 U	0.00E+00
3/15/2010		2345	782	140	1100	3.19E-03	8.4 U	0.00E+00	2800	6.01E-03	8.4 U	0.00E+00	37	7.79E-05	1300	2.74E-03	8.4 U	0.00E+00	180	6.48E-04	30	8.56E-05	32	4.34E-05	8.4 U	0.00E+00
4/14/2010		2804	935	150	1400	4.34E-03	12 U	0.00E+00	4100	9.44E-03	12 U	0.00E+00	31	6.99E-05	1400	3.16E-03	12 U	0.00E+00	790	3.05E-03	86	2.63E-04	91	1.32E-04	12 U	0.00E+00
5/13/2010		3495	1165	140	590	1.71E-03	7.0 U	0.00E+00	2600	5.58E-03	7.0 U	0.00E+00	13	2.74E-05	1100	2.31E-03	7.0 U	0.00E+00	300	1.08E-03	32	9.13E-05	10	1.36E-05	7.0 U	0.00E+00
6/21/2010		4430	1477	108	710	1.59E-03	8.6 U	0.00E+00	2600	4.31E-03	8.6 U	0.00E+00	16 J	2.60E-05	570	9.25E-04	8.6 U	0.00E+00	290	8.05E-04	30	6.60E-05	8.6 U	0.00E+00	8.6 UJ	0.00E+00
7/21/2010		5058	1686	140	480	1.39E-03	7.0 U	0.00E+00	2600	5.58E-03	7.0 U	0.00E+00	10	2.10E-05	630	1.33E-03	7.0 U	0.00E+00	710	2.56E-03	42	1.20E-04	7.0 U	0.00E+00	7.0 U	0.00E+00
8/23/2010		5784	1928	0	370	0.00E+00	8.2 U	0.00E+00	2400	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	540	0.00E+00	8.2 U	0.00E+00	500	0.00E+00	48	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00
9/23/2010		6523	2174	145	480	1.44E-03	7.2 U	0.00E+00	2000	4.45E-03	7.2 U	0.00E+00	7.2 U	0.00E+00	250	5.45E-04	7.2 U	0.00E+00	380	1.42E-03	31	9.16E-05	7.2 U	0.00E+00	7.2 U	0.00E+00
10/22/2010		7219	2406	140	390	1.13E-03	5.0 U	0.00E+00	1600	3.44E-03	5.0 U	0.00E+00	5.0 U	0.00E+00	160	3.37E-04	5.0 U	0.00E+00	240	8.64E-04	21	5.99E-05	5.0 U	0.00E+00	5.0 U	0.00E+00
10/22/2010	Dup	7219	2406	140	2600	7.53E-03	10 U	0.00E+00	960	2.06E-03	10 U	0.00E+00	120	2.53E-04	490	1.03E-03	10 U	0.00E+00	140	5.04E-04	49	1.40E-04	10 U	0.00E+00	10 U	0.00E+00
11/15/2010		7794	2598	140	420	1.22E-03	4.3 U	0.00E+00	1700	3.65E-03	4.3 U	0.00E+00	4.3 U	0.00E+00	140	2.95E-04	4.3 U	0.00E+00	140	5.04E-04	16	4.56E-05	4.3 U	0.00E+00	4.3 U	0.00E+00
12/22/2010		8508	2777	150	600	1.86E-03	4.2 U	0.00E+00	1600	3.68E-03	4.2 U	0.00E+00	8.5	1.92E-05	510	1.15E-03	4.2 U	0.00E+00	75	2.89E-04	11	3.36E-05	4.2 U	0.00E+00	4.2 U	0.00E+00
1/24/2011		9302	2975	170	360	1.27E-03	5.2 U	0.00E+00	1700	4.43E-03	5.2 U	0.00E+00	5.2 U	0.00E+00	140	3.58E-04	5.2 U	0.00E+00	45	1.97E-04	8.6	2.98E-05	5.2 U	0.00E+00	5.2 U	0.00E+00
2/25/2011		10071	3167	165	280	9.56E-04	4.0 U	0.00E+00	1600	4.05E-03	4.0 U	0.00E+00	4.5	1.12E-05	120	2.98E-04	4.0 U	0.00E+00	34	1.44E-04	7.4	2.49E-05	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3293	165	200	6.83E-04	6.3 U	0.00E+00	1900	4.81E-03	6.3 U	0.00E+00	6.3 U	0.00E+00	130	3.22E-04	6.3 U	0.00E+00	32	1.36E-04	6.4	2.15E-05	6.3 U	0.00E+00	6.3 U	0.00E+00
4/15/2011		11241	3460	160	180 J,B	5.96E-04	4.5 U	0.00E+00	1700	4.17E-03	4.5 U	0.00E+00	4.5 U	0.00E+00	110	2.65E-04	4.5 U	0.00E+00	43	1.77E-04	8.6	2.80E-05	4.5 U	0.00E+00	4.5 U	0.00E+00
5/19/2011		12061	3665	160	110	3.64E-04	4.3 U	0.00E+00	1100	2.70E-03	4.3 U	0.00E+00	4.3 U	0.00E+00	85	2.04E-04	4.3 U	0.00E+00	55	2.26E-04	8	2.61E-05	4.3 U	0.00E+00	4.3 U	0.00E+00
6/16/2011		12722	3830	170	150	5.27E-04	2.3 U	0.00E+00	730	1.90E-03	2.3 U	0.00E+00	2.8	7.15E-06	63	1.61E-04	2.3 U	0.00E+00	110	4.81E-04	12	4.16E-05	2.3 U	0.00E+00	2.3 U	0.00E+00
7/15/2011		13417	4472	170	140	4.92E-04	1.2 U	0.00E+00	390	1.02E-03	1.2 U	0.00E+00	2.2	5.62E-06	47	1.20E-04	1.2	3.07E-06	170	7.43E-04	14	4.85E-05	1.2 U	0.00E+00	1.2 U	0.00E+00
8/22/2011		14324	4775	170	150	5.27E-04	1.1 U	0.00E+00	210	5.48E-04	1.1 U	0.00E+00	2.1	5.37E-06	36	9.20E-05	1.1 U	0.00E+00	180	7.87E-04	16	5.54E-05	1.1 U	0.00E+00	2.3 UJ,B	0.00E+00
9/15/2011		14905	4968	170	130	4.57E-04	1.1 U	0.00E+00	130	3.39E-04	1.1 U	0.00E+00	1.5	3.83E-06	40	1.02E-04	1.1 U	0.00E+00	180	7.87E-04	14	4.85E-05	1.5	2.47E-06	1.1 U	0.00E+00
10/14/2011		15598	5199	160	65	2.15E-04	0.74 U	0.00E+00	100	2.45E-04	0.74 U	0.00E+00	1.4	3.37E-06	43	1.03E-04	0.86	2.07E-06	130	5.35E-04	9.8	3.19E-05	3.5	5.43E-06	1.3	2.74E-06
11/21/2011		16510	5503	170	49 J,B	1.72E-04	0.74 U	0.00E+00	68		0.74 U	0.00E+00	2.9	7.41E-06	28	7.15E-05	1.1	2.81E-06	61	2.67E-04	7.3	2.53E-05	1	1.65E-06	7.4 U	0.00E+00
12/14/2011		17010	5670	170	53	1.86E-04	0.78 U	0.00E+00	45	1.17E-04	0.78 U	0.00E+00	2.7	6.90E-06	18	4.60E-05	0.78 U	0.00E+00	57	2.49E-04	5.8	2.01E-05	0.78 U	0.00E+00	7.8 U	0.00E+00
1/19/2012		17923	5974	170	51	1.79E-04	0.79 U	0.00E+00	41	1.07E-04	0.79 U	0.00E+00	1	2.56E-06	12	3.07E-05	0.79 U	0.00E+00	39	1.70E-04	5	1.73E-05	0.79 U	0.00E+00	1.9	4.25E-06
2/15/2012		18566	6189	170	46	1.62E-04	0.78 U	0.00E+00	30	7.82E-05	0.78 U	0.00E+00	9.4	2.40E-05	10	2.56E-05	0.78 U	0.00E+00	37	1.62E-04	4.3	1.49E-05	0.89	1.47E-06	0.78 U	0.00E+00
3/15/2012		19262	6421	170	38 J,B	1.34E-04	0.71 U	0.00E+00	34	8.87E-05	0.71 U	0.00E+00	0.8	2.04E-06	7.8	1.99E-05	0.71 U	0.00E+00	32	1.40E-04	3.9	1.35E-05	0.71 U	0.00E+00	0.71 U	0.00E+00
4/19/2012		20102	6701	160	55	1.82E-04	0.76 U	0.00E+00	38	9.33E-05	0.76 U	0.00E+00	0.76 U	0.00E+00	7.4	1.78E-05	0.76 U	0.00E+00	58	2.39E-04	5.7	1.86E-05	0.76 U	0.00E+00	0.76 U	0.00E+00
5/16/2012		20748	6916	160	51	1.69E-04	0.76 U	0.00E+00	36	8.84E-05	0.76 U	0.00E+00	0.76 U	0.00E+00	7.1	1.71E-05	0.76 U	0.00E+00	77	3.17E-04	6.1	1.99E-05	0.76 U	0.00E+00	0.76 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																										
8/14/2012		21282	7094	160	120	3.97E-04	1.3 U	0.00E+00	51	1.25E-04	1.3 U	0.00E+00	1.3 U	0.00E+00	8.3	2.00E-05	1.3 U	0.00E+00	350	1.44E-03	15	4.89E-05	1.3 U	0.00E+00	13 U	0.00E+00
9/17/2012		21952	7317	160	190	6.29E-04	1.1 U	0.00E+00	77	1.89E-04	1.1 U	0.00E+00	2	4.81E-06	9.8	2.36E-05	1.1 U	0.00E+00	270	1.11E-03	25	8.15E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																										
11/15/2012		21959	7320	160	160	5.29E-04	1.0 U	0.00E+00	56	1.37E-04	1.0 U	0.00E+00	7.2	1.73E-05	9.1	2.19E-05	1.0 U	0.00E+00	220	9.05E-04	18	5.87E-05	1.0 U	0.00E+00	10 U	0.00E+00
12/14/2012		22554	7518	170	140	4.92E-04	1.2 U	0.00E+00	99	2.58E-04	1.2 U	0.00E+00	3.5	8.94E-06	7.4	1.89E-05	1.2 U	0.00E+00	87	3.80E-04	13	4.50E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																										
2/26/2013		22556	7518	160	110	3.64E-04	0.99 U	0.00E+00	83	2.04E-04	0.99 U	0.00E+00	0.99 U	1.73E-05	5.6	1.35E-05	0.99 U	0.00E+00	62	2.55E-04	6.7	2.18E-05	0.99 U	0.00E+00	9.9 U	0.00E+00
4/11/2013		23581	7723	160	85	2.81E-04	1.2 U	0.00E+00	54	1.33E-04	1.2 U	0.00E+00	3.8	1.26E-05	7.4	1.78E-05	1.2 U	0.00E+00	38	1.56E-04	8.2	2.67E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																										
5/10/2013		23583	7724	160	71	2.35E-04	1.1 U	0.00E+00	55	1.35E-04	1.1 U	0.00E+00	1.7	5.63E-06	6	1.44E-05	1.1 U	0.00E+00	37	1.52E-04	6.1	1.99E-05	1.1 U	0.00E+00	11 U	0.00E+00
7/15/2013		25160	8039	160	190	6.29E-04	1.2 U	0.00E+00	79	1.94E-04	1.2 U	0.00E+00	4.7	1.56E-05	11	2.65E-05	1.2 U	0.00E+00	190	7.82E-04	23	7.50E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 15, 2013 to September 9, 2013																										
9/9/2013		25162	8040	160	180	5.96E-04	1.3 U	0.00E+00	67	1.64E-04	1.3 U	0.00E+00	1.6	3.85E-06	9.3	2.24E-05	1.3 U	0.00E+00	270	1.11E-03	21	6.84E-05	1.3 U	0.00E+00	13 U	0.00E+00
11/18/2013		26825	8372	160	120	3.97E-04	1.1 U	0.00E+00	35	8.59E-05	1.1 U	0.00E+00	3.2	7.70E-06	7.3	1.76E-05	1.1 U	0.00E+00	81	3.33E-04	12	3.91E-05	1.1 U	0.00E+00	11 U	0.00E+00

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/10/2009		159	53	140	140 U	0.00E+00	140 U	0.00E+00	17000	2.38E-02	140 U	0.00E+00	560	1.12E-03	250	5.76E-04	1800	4.15E-03	470	1.08E-03	3800	4.79E-03	140 U	0.00E+00	2.25E-01	11.91
12/22/2009		372	124	140	26 U	0.00E+00	26 U	0.00E+00	1700	2.38E-03	26 U	0.00E+00	32	6.40E-05	26 U	0.00E+00	26 U	0.00E+00	26 U	0.00E+00	100 U	0.00E+00	26 U	0.00E+00	4.67E-02	15.23
2/24/2010		1893	631	150	6.0 U	0.00E+00	6.0 U	0.00E+00	130	1.95E-04	19	3.45E-05	6.0 U	0.00E+00	6.0 U	0.00E+00	6.0 U	0.00E+00	6.0 U	0.00E+00	98	1.32E-04	370	6.20E-04	9.52E-03	20.06
3/15/2010		2345	782	140	8.4 U	0.00E+00	8.4 U	0.00E+00	170	2.38E-04	8.4 U	0.00E+00	8.4 U	0.00E+00	8.4 U	0.00E+00	8.4 U	0.00E+00	8.4 U	0.00E+00	34 U	0.00E+00	8.4 U	0.00E+00	1.30E-02	22.02
4/14/2010		2804	935	150	12 U	0.00E+00	12 U	0.00E+00	320	4.80E-04	14	2.54E-05	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	50 U	0.00E+00	12 U	0.00E+00	2.10E-02	25.22
5/13/2010		3495	1165	140	7.0 U	0.00E+00	7.0 U	0.00E+00	100	1.40E-04	12	2.03E-05	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	28 U	0.00E+00	7.0 U	0.00E+00	1.10E-02	27.75
6/21/2010		4430	1477	108	8.6 U	0.00E+00	8.6 U	0.00E+00	87 J	9.40E-05	10	1.31E-05	8.6 U	0.00E+00	8.6 U	0.00E+00	8.6 U	0.00E+00	8.6 U	0.00E+00	34 J	3.31E-05	8.6 U	0.00E+00	7.86E-03	30.20
7/21/2010		5058	1686	140	7.0 U	0.00E+00	7.0 U	0.00E+00	60	8.40E-05	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	28 U	0.00E+00	7.0 U	0.00E+00	1.11E-02	32.52
8/23/2010		5784	1928	0	8.2 U	0.00E+00	8.2 U	0.00E+00	38	0.00E+00	24	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	53	0.00E+00	8.2 U	0.00E+00	0.00E+00	32.52
9/23/2010		6523	2174	145	7.2 U	0.00E+00	7.2 U	0.00E+00	15	2.18E-05	17	2.99E-05	7.2 U	0.00E+00	7.2 U	0.00E+00	7.2 U	0.00E+00	7.2 U	0.00E+00	29 U	0.00E+00	7.2 U	0.00E+00	7.99E-03	34.49
10/22/2010		7219	2406	140	5.0 U	0.00E+00	5.0 U	0.00E+00	11	1.54E-05	7.1	1.20E-05	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	45	5.67E-05	5.0 U	0.00E+00	5.91E-03	35.86
10/22/2010	Dup	7219	2406	140	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	41 U	0.00E+00	10 U	0.00E+00	1.15E-02	37.16
11/15/2010		7794	2598	140	4.3 U	0.00E+00	4.3 U	0.00E+00	12	1.68E-05	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	5.73E-03	36.96
12/22/2010		8508	2777	150	4.2 U	0.00E+00	4.2 U	0.00E+00	10	1.50E-05	5.3	9.63E-06	4.2 U	0.00E+00	4.2 U	0.00E+00	4.2 U	0.00E+00	4.2 U	0.00E+00	16 NJ	2.16E-05	4.2 U	0.00E+00	7.08E-03	38.22
1/24/2011		9302	2975	170	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	21 U	0.00E+00	5.2 U	0.00E+00	6.28E-03	39.47
2/25/2011		10071	3167	165	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	5.48E-03	40.53
3/18/2011		10573	3293	165	6.3 U	0.00E+00	6.3 U	0.00E+00	25 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	25 U	0.00E+00	25 U	0.00E+00	5.97E-03	41.27
4/15/2011		11241	3460	160	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	18 U	0.00E+00	5.24E-03	42.15
5/19/2011		12061	3665	160	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	17 U	0.00E+00	3.52E-03	42.87
6/16/2011		12722	3830	170	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	9.2 U	0.00E+00	3.12E-03	43.39
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.5	3.09E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.4	1.13E-05	4.6 U	0.00E+00	2.44E-03	44.96
8/22/2011		14324	4775	170	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	6.7	1.38E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	44 J,B	6.74E-05	4.5 U	0.00E+00	2.10E-03	45.59
9/15/2011		14905	4968	170	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	5.6	8.57E-06	4.5 U	0.00E+00	1.75E-03	45.93
10/14/2011		15598	5199	160	0.74 U	0.00E+00	0.74 U	0.00E+00	3.0 U	0.00E+00	0.74 U	0.00E+00	1.8	4.11E-06	0.74 U	0.00E+00	0.74 U	0.00E+00	0.74 U	0.00E+00	18	2.59E-05	3.0 U	0.00E+00	1.17E-03	46.20
11/21/2011		16510	5503	170	0.74 U	0.00E+00	0.74 U	0.00E+00	3.0 U	0.00E+00	0.74 U	0.00E+00	0.74 U	0.00E+00	0.74 U	0.00E+00	0.74 U	0.00E+00	0.74 U	0.00E+00	14	2.14E-05	3.0 U	0.00E+00	5.69E-04	46.37
12/14/2011		17010	5670	170	0.78 U	0.00E+00	0.78 U	0.00E+00	3.1 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	7.8 UJ	0.00E+00	3.1 U	0.00E+00	6.26E-04	46.48
1/19/2012		17923	5974	170	0.79 U	0.00E+00	0.79 U	0.00E+00	3.2 U	0.00E+00	0.79 U	0.00E+00	0.79 U	0.00E+00	0.79 U	0.00E+00	0.79 U	0.00E+00	0.79 U	0.00E+00	3.2	4.90E-06	3.2 U	0.00E+00	5.16E-04	46.63
2/15/2012		18566	6189	170	0.78 U	0.00E+00	0.78 U	0.00E+00	3.1 U	0.00E+00	1.2	2.47E-06	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	20	3.06E-05	3.1 U	0.00E+00	5.01E-04	46.74
3/15/2012		19262	6421	170	0.71 U	0.00E+00	0.71 U	0.00E+00	2.8 U	0.00E+00	0.71 U	0.00E+00	1.8	4.37E-06	0.71 U	0.00E+00	0.71 U	0.00E+00	0.71 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	4.02E-04	46.84
4/19/2012		20102	6701	160	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	5.50E-04	46.99
5/16/2012		20748	6916	160	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	6.11E-04	47.12
Pulse -off period June 1, 2012 to August 14, 2012																										
8/14/2012		21282	7094	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	2.03E-03	47.48
9/17/2012		21952	7317	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.04E-03	47.94
Pulse -off period September 17, 2012 to November 15, 2012																										
11/15/2012		21959	7320	160	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.1 U	0.00E+00	1.67E-03	47.94
12/14/2012		22554	7518	170	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	2.1	4.32E-06	7	1.70E-05	1.2 U	0.00E+00	1.5	4.20E-06	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.23E-03	48.19
Pulse -off period December 14, 2012 to February 26, 2013																										
2/26/2013		22556	7518	160	0.99 U	0.00E+00	0.99 U	0.00E+00	4.0 U	0.00E+00	0.99 U	0.00E+00	0.99 U	0.00E+00	0.99 U	0.00E+00	0.99 U	0.00E+00	0.99 U	0.00E+00	9.9 U	0.00E+00	4.0 U	0.00E+00	8.75E-04	48.19
4/11/2013		23581	7723	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.4	3.20E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	6.30E-04	48.32
Pulse -off period April 11, 2013 to May 10, 2013																										
5/10/2013		23583	7724	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.7	3.89E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	5.66E-04	48.32
7/15/2013		25160	8039	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.72E-03	48.86
Pulse -off period July 15, 2013 to September 9, 2013																										
9/9/2013		25162	8040	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	1.97E-03	48.86
11/18/2013		26825	8372	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	8.81E-04	49.15

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																										
1/15/2014		28218	8651	160	100	3.31E-04	1.1 U	0.00E+00	30	7.36E-05	1.1 U	0.00E+00	1.3	3.13E-06	4.7	1.13E-05	1.1 U	0.00E+00	69	2.84E-04	9.1	2.97E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/14/2014		29432	8894	160	78	2.58E-04	1.1 U	0.00E+00	34	8.35E-05	1.1 U	0.00E+00	3.8	9.14E-06	6.1	1.47E-05	1.1 U	0.00E+00	30	1.23E-04	7	2.28E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																										
5/15/2014		29914	8990	160	95	3.14E-04	1.2 U	0.00E+00	32	7.86E-05	1.2 U	0.00E+00	1.9	4.57E-06	6	1.44E-05	1.2 U	0.00E+00	55	2.26E-04	6.8	2.22E-05	1.2 U	0.00E+00	12 U	0.00E+00
7/23/2014		31567	9321	160	160	5.29E-04	1.2 U	0.00E+00	41	1.01E-04	1.2 U	0.00E+00	3.6	8.66E-06	9.3	2.24E-05	1.2 U	0.00E+00	170	6.99E-04	18	5.87E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																										
9/16/2014		32432	9494	160	480	1.59E-03	2.2 U	0.00E+00	11	2.70E-05	2.2 U	0.00E+00	4	9.62E-06	8.7	2.09E-05	2.2 U	0.00E+00	14	5.76E-05	13	4.24E-05	2.2 U	0.00E+00	22 U	0.00E+00
11/14/2014		33847	9777	160	60	1.99E-04	1.1 U	0.00E+00	14	3.44E-05	1.1 U	0.00E+00	1.6	3.85E-06	3.6	8.66E-06	1.1 U	0.00E+00	50	2.06E-04	6.9	2.25E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																										
1/9/2015		33855	9778	160	86	2.85E-04	1.1 U	0.00E+00	20	4.91E-05	1.1 U	0.00E+00	1.1	2.65E-06	4.0	9.62E-06	1.1 U	0.00E+00	55	2.26E-04	8.2	2.67E-05	1.1 U	0.00E+00	11 U	0.00E+00
1/9/2015	Dup	-	-	160	84	2.78E-04	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6	1.11E-05	1.2 U	0.00E+00	80	3.29E-04	8.6	2.80E-05	1.2 U	0.00E+00	12 U	0.00E+00
3/13/2015		35189	10045	160	58	1.92E-04	1.3 U	0.00E+00	17	4.17E-05	1.3 U	0.00E+00	2.4	5.77E-06	3.6	8.66E-06	1.3 U	0.00E+00	32	1.32E-04	5.8	1.89E-05	1.3 U	0.00E+00	13 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																										
5/15/2015		35194	10046	160	63	2.08E-04	2.3 U	0.00E+00	15	3.68E-05	2.3 U	0.00E+00	2.3 U	0.00E+00	2.7	6.49E-06	2.3 U	0.00E+00	67	2.76E-04	7.1	2.31E-05	2.3 U	0.00E+00	23 U	0.00E+00
7/16/2015		36677	10343	160	110	3.64E-04	1.1 U	0.00E+00	32	7.86E-05	1.1 U	0.00E+00	3.1	7.45E-06	6.7	1.61E-05	1.1 U	0.00E+00	170	6.99E-04	19	6.19E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																										
9/22/2015		36680	10343	160	150	4.96E-04	1.4 U	0.00E+00	29	7.12E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6	1.35E-05	1.4 U	0.00E+00	250	1.03E-03	20	6.52E-05	1.4 U	0.00E+00	14 U	0.00E+00
11/20/2015		38094	10626	160	41	1.36E-04	1.0 U	0.00E+00	9.5	2.33E-05	1.0 U	0.00E+00	1.3	3.13E-06	2.5	6.01E-06	1.0 U	0.00E+00	46	1.89E-04	7.7	2.51E-05	1.0 U	0.00E+00	10 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																										
1/19/2016		38101	10627	160	80	2.65E-04	1.1 U	0.00E+00	15	3.68E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.8	6.73E-06	1.1 U	0.00E+00	100	4.11E-04	11	3.59E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/18/2016		39377	10883	160	48	1.59E-04	1.1 U	0.00E+00	14	3.44E-05	1.1 U	0.00E+00	1.9	4.57E-06	3.6	8.66E-06	1.1 U	0.00E+00	43	1.77E-04	7.7	2.51E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																										
5/19/2016		39382	10884	160	55	1.82E-04	0.98 U	0.00E+00	14	3.44E-05	0.98 U	0.00E+00	0.98 U	0.00E+00	2.8	6.73E-06	0.98 U	0.00E+00	70	2.88E-04	8.3	2.71E-05	0.98 U	0.00E+00	9.8 U	0.00E+00
7/22/2016		40915	11190	160	94	3.11E-04	1.2 U	0.00E+00	22	5.40E-05	1.2 U	0.00E+00	2.3	5.53E-06	4.9	1.18E-05	1.2 U	0.00E+00	210	8.64E-04	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																										
9/20/2016		40918	11191	160	120	3.97E-04	1.0 U	0.00E+00	16	3.93E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	3.3	7.94E-06	1.0 U	0.00E+00	260	1.07E-03	15	4.89E-05	1.0 U	0.00E+00	10 U	0.00E+00
11/28/2016		42571	11521	160	50	1.65E-04	1.1 U	0.00E+00	16	3.93E-05	1.1 U	0.00E+00	2.4	5.77E-06	3.2	7.70E-06	1.1 U	0.00E+00	91	3.74E-04	9.7	3.16E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																										
1/24/2017		42575	11522	170	45	1.58E-04	1.1 U	0.00E+00	12	3.13E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	4.09E-06	1.1 U	0.00E+00	49	2.14E-04	6.2	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/23/2017		43840	11775	160	36	1.19E-04	1.2 U	0.00E+00	14	3.44E-05	1.2 U	0.00E+00	2.1	5.05E-06	2.8	6.73E-06	1.2 U	0.00E+00	43	1.77E-04	6.4	2.09E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																										
5/15/2017		43846	11776	160	49	1.62E-04	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.6	6.25E-06	1.1 U	0.00E+00	67	2.76E-04	7.5	2.44E-05	1.1 U	0.00E+00	11 U	0.00E+00
7/20/2017		45423	12092	170	89	3.13E-04	1.2 U	0.00E+00	18	4.69E-05	1.2 U	0.00E+00	2	5.11E-06	4.7	1.20E-05	1.2 U	0.00E+00	190	8.30E-04	19	6.58E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																										
9/14/2017		45432	12094	160	130	4.30E-04	1.1 U	0.00E+00	19	4.66E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	3.4	8.18E-06	1.1 U	0.00E+00	300	1.23E-03	23	7.50E-05	1.1 U	0.00E+00	11 U	0.00E+00
11/17/2017		46966	12400	160	43	1.42E-04	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.7	4.09E-06	3.4	8.18E-06	1.1 U	0.00E+00	86	3.54E-04	12	3.91E-05	1.1 U	0.00E+00	11 U	0.00E+00

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to January 15, 2014																										
1/15/2014		28218	8651	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	7.32E-04	49.36
3/14/2014		29432	8894	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	5.12E-04	49.48
Pulse -off period March 14, 2014 to May 15, 2014																										
5/15/2014		29914	8990	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	6.60E-04	49.54
7/23/2014		31567	9321	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.42E-03	50.01
Pulse -off period July 23, 2014 to September 16, 2014																										
9/16/2014		32432	9494	160	2.2 U	0.00E+00	2.2 U	0.00E+00	9.0 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	9.0 U	0.00E+00	1.75E-03	50.32
11/14/2014		33847	9777	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	4.74E-04	50.45
Pulse -off period November 14, 2014 to January 9, 2015																										
1/9/2015		33855	9778	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	5.99E-04	50.45
1/9/2015	Dup	-	-	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	6.95E-04	-
3/13/2015		35189	10045	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	3.99E-04	50.56
Pulse -off period March 13, 2015 to May 15, 2015																										
5/15/2015		35194	10046	160	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.2 U	0.00E+00	5.51E-04	50.56
7/16/2015		36677	10343	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.23E-03	50.92
Pulse -off period July 16, 2015 to September 22, 2015																										
9/22/2015		36680	10343	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	2.2	5.79E-06	3.4	8.95E-06	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	1.69E-03	50.92
11/20/2015		38094	10626	160	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.5	3.43E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 U	0.00E+00	3.86E-04	51.03
Pulse -off period November 20, 2015 to January 19, 2016																										
1/19/2016		38101	10627	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.2 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.2 U	0.00E+00	7.56E-04	51.03
3/18/2016		39377	10883	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	3.8	1.00E-05	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	4.18E-04	51.14
Pulse -off period March 18, 2016 to May 19, 2016																										
5/19/2016		39382	10884	160	0.98 U	0.00E+00	0.98 U	0.00E+00	3.9 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	9.8 U	0.00E+00	3.8 U	0.00E+00	5.38E-04	51.14
7/22/2016		40915	11190	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.29E-03	51.54
Pulse -off period July 22, 2016 to September 20, 2016																										
9/20/2016		40918	11191	160	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.3	2.97E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 U	0.00E+00	1.57E-03	51.54
11/28/2016		42571	11521	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	6.24E-04	51.74
Pulse -off period November 28, 2016 to January 24, 2017																										
1/24/2017		42575	11522	170	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	4.29E-04	51.74
3/23/2017		43840	11775	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.63E-04	51.84
Pulse -off period March 23, 2017 to May 15, 2017																										
5/15/2017		43846	11776	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	4.95E-04	51.84
7/20/2017		45423	12092	170	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.27E-03	52.24
Pulse -off period July 20, 2017 to September 14, 2017																										
9/14/2017		45432	12094	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.79E-03	52.24
11/17/2017		46966	12400	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	5.74E-04	52.42

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																										
1/22/2018		46970	12401	160	37	1.22E-04	1.3 U	0.00E+00	8.0	1.96E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.1	5.05E-06	1.3 U	0.00E+00	58	2.39E-04	6.5	2.12E-05	1.3 U	0.00E+00	13 U	0.00E+00
3/23/2018		48239	12655	160	27	8.93E-05	1.2 U	0.00E+00	7.2	1.77E-05	1.2 U	0.00E+00	1.2	2.89E-06	1.9	4.57E-06	1.2 U	0.00E+00	40	1.65E-04	5.8	1.89E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																										
5/21/2018		48239	12655	160	36	1.19E-04	1.2 U	0.00E+00	8.0	1.96E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.7	4.09E-06	1.2 U	0.00E+00	68	2.80E-04	7.2	2.35E-05	1.2 U	0.00E+00	12 U	0.00E+00
7/26/2018		49825	12972	160	100	3.31E-04	1.2 U	0.00E+00	16.0	3.93E-05	1.2 U	0.00E+00	2.4	5.77E-06	3.2	7.70E-06	1.2 U	0.00E+00	250	1.03E-03	20	6.52E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																										
9/17/2018		51096	13226	160	140	4.63E-04	1.2 U	0.00E+00	20.0	4.91E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.1	7.46E-06	1.2 U	0.00E+00	340	1.40E-03	23	7.50E-05	1.2 U	0.00E+00	12 U	0.00E+00
11/19/2018		52604	13528	160	40	1.32E-04	1.3 U	0.00E+00	9.9	2.43E-05	1.3 U	0.00E+00	1.6	3.85E-06	2.3	5.53E-06	1.3 U	0.00E+00	82	3.37E-04	12	3.91E-05	1.3 U	0.00E+00	13 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																										
1/21/2019		52607	13529	160	36	1.19E-04	1.2 U	0.00E+00	7.1	1.74E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.4	3.37E-06	1.2 U	0.00E+00	43	1.77E-04	7.3	2.38E-05	1.2 U	0.00E+00	12 U	0.00E+00
3/21/2019		53941	13795	160	24	7.94E-05	1.4 U	0.00E+00	8.6	2.11E-05	1.4 U	0.00E+00	2.4	5.77E-06	1.8	4.33E-06	1.4 U	0.00E+00	28	1.15E-04	6.8	2.22E-05	1.4 U	0.00E+00	14 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																										
5/24/2019		53943	13796	175	38	1.38E-04	1.3 U	0.00E+00	9.2	2.47E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.7	4.47E-06	1.3 U	0.00E+00	58	2.61E-04	8.1	2.89E-05	1.3 U	0.00E+00	13 U	0.00E+00
7/29/2019		55529	14113	160	130	4.30E-04	1.4 U	0.00E+00	14.0	3.44E-05	1.4 U	0.00E+00	2.3	5.53E-06	4.5	1.08E-05	1.4 U	0.00E+00	100	4.11E-04	8.9	2.90E-05	1.4 U	0.00E+00	14 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																										
9/27/2019		55531	14113	180	180	6.70E-04	1.3 U	0.00E+00	11.0	3.04E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.7	4.60E-06	1.3 U	0.00E+00	140	6.48E-04	12	4.40E-05	1.3 U	0.00E+00	13 U	0.00E+00
12/9/2019		57186	14444	180	88	3.28E-04	1.2 U	0.00E+00	4.2	1.16E-05	1.2 U	0.00E+00	1.4	3.79E-06	1.6	4.33E-06	1.2 U	0.00E+00	19	8.79E-05	4.6	1.69E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																										
1/21/2020		57189	14445	180	50	1.86E-04	1.3 U	0.00E+00	3.7	1.02E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	16	7.40E-05	1.7	6.23E-06	1.3 U	0.00E+00	13 U	0.00E+00
3/20/2020		58462	14700	180	36	1.34E-04	1.3 U	0.00E+00	5.9	1.63E-05	1.3 U	0.00E+00	1.9	5.14E-06	1.4	3.79E-06	1.3 U	0.00E+00	13	6.02E-05	4.8	1.76E-05	1.3 U	0.00E+00	13	0.00E+00
Pulse -off period March 20, 2020 to May 21, 2020																										
5/21/2020		58464	14700	180	55	2.05E-04	1.1 U	0.00E+00	6.6	1.82E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.2	3.25E-06	1.1 U	0.00E+00	27	1.25E-04	5.3	1.94E-05	1.1 U	0.00E+00	11 U	0.00E+00
7/22/2020		59951	14997	160	46	1.52E-04	1.4 U	0.00E+00	8.5	2.09E-05	1.4 U	0.00E+00	2.2	5.29E-06	3.5	8.42E-06	1.4 U	0.00E+00	78	3.21E-04	9.8	3.19E-05	1.4 U	0.00E+00	14 U	0.00E+00
Pulse-off period July 22, 2020 to September 29, 2020																										
9/29/2020		59957	14999	175	99	3.58E-04	1.4 U	0.00E+00	6.2	1.66E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	120	5.40E-04	9.2	3.28E-05	1.4 U	0.00E+00	14 U	0.00E+00
11/25/2020		61195	15246	160	78	2.58E-04	1.4 U	0.00E+00	7.2	1.77E-05	1.4 U	0.00E+00	2.3	5.53E-06	2.5	6.01E-06	1.4 U	0.00E+00	32	1.32E-04	4.9	1.60E-05	1.4 U	0.00E+00	14 U	0.00E+00
Pulse-off period November 25, 2020 to January 21, 2021																										
1/21/2021		61197	15247	180	70	2.61E-04	1.4 U	0.00E+00	5.3	1.46E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	27	1.25E-04	4.1	1.50E-05	1.4 U	0.00E+00	14 U	0.00E+00
3/26/2021		62582	15524	170	30	1.05E-04	1.2 U	0.00E+00	7.0	1.83E-05	1.2 U	0.00E+00	2.7	6.90E-06	1.5	3.83E-06	1.2 U	0.00E+00	17	7.43E-05	5.8	2.01E-05	1.3 U	0.00E+00	12 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 17, 2017 to January 22, 2018																										
1/22/2018		46970	12401	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	4.07E-04	52.42
3/23/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.98E-04	52.49
Pulse -off period March 23, 2018 to May 21, 2018																										
5/21/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	4.46E-04	52.49
7/26/2018		49825	12972	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.6	5.21E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.48E-03	52.96
Pulse -off period July 26, 2018 to September 17, 2018																										
9/17/2018		51096	13226	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	1.99E-03	53.47
11/19/2018		52604	13528	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	5.42E-04	53.63
Pulse -off period November 19, 2018 to January 21, 2019																										
1/21/2019		52607	13529	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.4	3.69E-06	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	3.44E-04	53.63
3/21/2019		53941	13795	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	2.48E-04	53.70
Pulse -off period March 21, 2019 to May 24, 2019																										
5/24/2019		53943	13796	175	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	4.57E-04	53.70
7/29/2019		55529	14113	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	9.21E-04	53.99
Pulse -off period July 29, 2019 to September 27, 2019																										
9/27/2019		55531	14113	180	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	1.40E-03	53.99
12/9/2019		57186	14444	180	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.4	5.13E-06	11	2.83E-05	1.2 U	0.00E+00	4.1	1.21E-05	1.2	1.08E-03	12 U	0.00E+00	4.7 U	0.00E+00	1.58E-03	54.52
Pulse -off period December 9, 2019 to January 21, 2020																										
1/21/2020		57189	14445	180	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	28	1.03E-04	75	1.93E-04	9.4	2.79E-05	25	2.89E-09	7.8	1.08E-03	43	6.97E-05	5.1 U	0.00E+00	1.75E-03	54.52
3/20/2020		58462	14700	180	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	1.08E-03	13 U	0.00E+00	5.4 U	0.00E+00	1.32E-03	54.85
Pulse -off period March 20, 2020 to May 21, 2020																										
5/21/2020		58464	14700	180	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	3.71E-04	54.85
7/22/2020		59951	14997	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	27	3.89E-05	5.5 U	0.00E+00	5.78E-04	55.03
Pulse-off period July 22, 2020 to September 29, 2020																										
9/29/2020		59957	14999	175	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	2	5.00E-06	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	9.53E-04	55.03
11/25/2020		61195	15246	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.4 U	0.00E+00	4.35E-04	55.13
Pulse-off period November 25, 2020 to January 21, 2021																										
1/21/2021		61197	15247	180	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	4.15E-04	55.13
3/26/2021		62582	15524	170	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	17	2.60E-05	4.7 U	0.00E+00	2.55E-04	55.20

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/11/2009		178	59	150	40000	1.24E-01	86 U	0.00E+00	21000	4.83E-02	86 U	0.00E+00	4500	1.01E-02	25000	5.64E-02	86 U	0.00E+00	1500	5.78E-03
12/15/2009		205	68	140	27000	7.82E-02	110 U	0.00E+00	14000	3.01E-02	110 U	0.00E+00	3100	6.52E-03	16000	3.37E-02	110 U	0.00E+00	950	3.42E-03
12/29/2009		539	180	140	24000	6.95E-02	100 U	0.00E+00	9100	1.95E-02	100 U	0.00E+00	2100	4.42E-03	9200	1.94E-02	100 U	0.00E+00	1000	3.60E-03
1/13/2010		903	301	150	9100	2.82E-02	35 U	0.00E+00	3700	8.52E-03	35 U	0.00E+00	880	1.98E-03	3200	7.21E-03	35 U	0.00E+00	610	2.35E-03
1/27/2010		1224	408	150	13000	4.03E-02	40 U	0.00E+00	4300	9.90E-03	40 U	0.00E+00	1100	2.48E-03	3900	8.79E-03	40 U	0.00E+00	600	2.31E-03
1/27/2010	Dup	1224	408	150	14000	4.34E-02	40 U	0.00E+00	4800	1.10E-02	40 U	0.00E+00	1200	2.71E-03	4400	9.92E-03	40 U	0.00E+00	630	2.43E-03
2/24/2010		1893	631	150	8000	2.48E-02	22 U	0.00E+00	3000	6.90E-03	22 U	0.00E+00	520	1.17E-03	2300	5.19E-03	22 U	0.00E+00	200	7.71E-04
3/15/2010		2345	782	140	17000	4.92E-02	48 U	0.00E+00	8000	1.72E-02	48 U	0.00E+00	1100	2.31E-03	6300	1.33E-02	48 U	0.00E+00	860	3.10E-03
4/14/2010		2804	935	150	8400	2.61E-02	23 U	0.00E+00	2200	5.06E-03	23 U	0.00E+00	480	1.08E-03	2000	4.51E-03	23 U	0.00E+00	1300	5.01E-03
5/13/2010		3495	1165	140	8000	2.32E-02	11 U	0.00E+00	3100	6.66E-03	11 U	0.00E+00	480	1.01E-03	2800	5.89E-03	11 U	0.00E+00	380	1.37E-03
6/21/2010		4430	1477	108	5800	1.30E-02	23 U	0.00E+00	3000 J	4.97E-03	23 U	0.00E+00	360 J	5.84E-04	2100	3.41E-03	23 U	0.00E+00	300	8.33E-04
7/21/2010		5058	1686	140	4500	1.30E-02	14 U	0.00E+00	1600	3.44E-03	14 U	0.00E+00	280	5.89E-04	1200	2.53E-03	14 U	0.00E+00	260	9.36E-04
8/23/2010		5784	1928	0	7100	0.00E+00	20 U	0.00E+00	2700	0.00E+00	20 U	0.00E+00	290	0.00E+00	1400	0.00E+00	20 U	0.00E+00	620	0.00E+00
9/23/2010		6523	2174	145	4300	1.29E-02	12 U	0.00E+00	1600	3.56E-03	12 U	0.00E+00	270	5.88E-04	940	2.05E-03	12 U	0.00E+00	290	1.08E-03
10/22/2010		7219	2406	140	2500	7.24E-03	10 U	0.00E+00	890	1.91E-03	10 U	0.00E+00	110	2.31E-04	470	9.89E-04	10 U	0.00E+00	180	6.48E-04
11/15/2010		7794	2598	140	3200	9.27E-03	11 U	0.00E+00	1100	2.36E-03	11 U	0.00E+00	130	2.74E-04	440	9.26E-04	11 U	0.00E+00	120	4.32E-04
12/22/2010		8508	2955	150	4000	1.24E-02	14 U	0.00E+00	1500	3.45E-03	14 U	0.00E+00	240	5.41E-04	730	1.65E-03	14 U	0.00E+00	72	2.78E-04
1/24/2011		9302	3352	170	780	2.74E-03	2.7 U	0.00E+00	800	2.09E-03	2.7 U	0.00E+00	22	5.62E-05	390	9.96E-04	2.7 U	0.00E+00	26	1.14E-04
2/25/2011		10071	3737	165	1500	5.12E-03	4.0 U	0.00E+00	1100	2.78E-03	4.0 U	0.00E+00	44	1.09E-04	560	1.39E-03	4.0 U	0.00E+00	32	1.36E-04
3/18/2011		10573	3988	165	370	1.26E-03	1.0 U	0.00E+00	160	4.05E-04	1.0 U	0.00E+00	11	2.73E-05	62	1.54E-04	1.0 U	0.00E+00	19	8.06E-05
4/15/2011		11241	4322	160	300 J,B	9.93E-04	1.0 U	0.00E+00	95	2.33E-04	1.0 U	0.00E+00	12	2.89E-05	41	9.86E-05	1.0 U	0.00E+00	20	8.23E-05
5/19/2011		12061	4732	160	93	3.08E-04	1.1 U	0.00E+00	39	9.57E-05	1.1 U	0.00E+00	3.5	8.42E-06	21	5.05E-05	1.1 U	0.00E+00	14	5.76E-05
6/16/2011		12722	5062	170	99	3.48E-04	1.2 U	0.00E+00	48	1.25E-04	1.2 U	0.00E+00	2.4	6.13E-06	21	5.37E-05	1.2 U	0.00E+00	30	1.31E-04
7/15/2011		13417	4472	170	77	2.71E-04	1.2 U	0.00E+00	25	6.52E-05	1.2 U	0.00E+00	1.7	4.34E-06	18	4.60E-05	1.2 U	0.00E+00	30	1.31E-04
8/22/2011		14324	4775	170	78	2.74E-04	1.2 U	0.00E+00	31	8.09E-05	1.2 U	0.00E+00	1.2	3.07E-06	17	4.34E-05	1.2 U	0.00E+00	54	2.36E-04
9/15/2011		14905	4968	170	69	2.43E-04	1.1 U	0.00E+00	20	5.22E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	12	3.07E-05	1.1 U	0.00E+00	32	1.40E-04
10/14/2011		15598	5199	160	43	1.42E-04	0.82 U	0.00E+00	12	2.95E-05	0.82 U	0.00E+00	0.82 U	0.00E+00	6.3	1.52E-05	0.82 U	0.00E+00	8.4	3.46E-05
11/21/2011		16510	5503	170	28 J,B	9.85E-05	1.6 U	0.00E+00	7.7	2.01E-05	1.6 U	0.00E+00	1.6 U	0.00E+00	4.1	1.05E-05	1.6 U	0.00E+00	7	3.06E-05
12/14/2011		17010	5670	170	26	9.14E-05	0.76 U	0.00E+00	5.2	1.36E-05	0.76 U	0.00E+00	2.4	6.13E-06	4.2	1.07E-05	0.76 U	0.00E+00	6.9	3.02E-05
1/19/2012		17923	5974	170	25	8.79E-05	0.74 U	0.00E+00	6.9	1.80E-05	0.74 U	0.00E+00	0.74 U	0.00E+00	3	7.67E-06	0.74 U	0.00E+00	4.4	1.92E-05
2/15/2012		18566	6189	170	31	1.09E-04	0.73 U	0.00E+00	7.6	1.98E-05	0.73 U	0.00E+00	1.9	4.85E-06	3.5	8.94E-06	0.73 U	0.00E+00	4.8	2.10E-05
3/15/2012		19262	6421	170	29 J,B	1.02E-04	0.71 U	0.00E+00	8.1	2.11E-05	0.71 U	0.00E+00	0.71 U	0.00E+00	3.7	9.45E-06	0.71 U	0.00E+00	3.9	1.70E-05
4/19/2012		20102	6701	160	31	1.03E-04	0.76 U	0.00E+00	11	2.70E-05	0.76 U	0.00E+00	0.76 U	0.00E+00	4.6	1.11E-05	0.76 U	0.00E+00	8.2	3.37E-05
5/16/2012		20748	6916	160	28	9.27E-05	0.78 U	0.00E+00	11	2.70E-05	0.78 U	0.00E+00	0.78 U	0.00E+00	5	1.20E-05	0.78 U	0.00E+00	11	4.53E-05
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		21282	7094	160	370	1.22E-03	1.3 U	0.00E+00	160	3.93E-04	1.3 U	0.00E+00	4.5	1.08E-05	11	2.65E-05	1.3 U	0.00E+00	16	6.58E-05
9/17/2012		21952	7317	160	180	5.96E-04	1.1 U	0.00E+00	36	8.84E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	10	2.40E-05	1.1 U	0.00E+00	20	8.23E-05
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		21959	7320	160	430	1.42E-03	1.1 U	0.00E+00	140	3.44E-04	1.1 U	0.00E+00	12	2.89E-05	13	3.13E-05	1.1 U	0.00E+00	41	1.69E-04
12/14/2012		22554	7518	170	610	2.14E-03	1.9 U	0.00E+00	11	2.87E-05	1.9 U	0.00E+00	12	3.07E-05	4	1.02E-05	1.9 U	0.00E+00	5.3	2.32E-05
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013		22556	7518	160	1.9	6.29E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
4/11/2013		23581	7723	160	140	4.63E-04	1.2 U	0.00E+00	10	2.45E-05	1.2 U	0.00E+00	4	9.62E-06	3.3	7.94E-06	1.2 U	0.00E+00	5.4	2.22E-05
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013		23583	7724	160	210	6.95E-04	1.1 U	0.00E+00	62	1.52E-04	1.2 U	0.00E+00	3.9	9.38E-06	5.4	1.30E-05	1.1 U	0.00E+00	6.4	2.63E-05
7/15/2013		25160	8039	160	160	5.29E-04	1.1 U	0.00E+00	20	4.91E-05	1.1 U	0.00E+00	3.7	8.90E-06	3.7	8.90E-06	1.1 U	0.00E+00	21	8.64E-05
7/15/2013	Dup	25160	8039	160	160	5.29E-04	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	3.2	7.70E-06	3.5	8.42E-06	1.2 U	0.00E+00	17	6.99E-05
Pulse -off period July 15, 2013 to September 9, 2013																				
9/9/2013		25162	8040	160	380	1.26E-03	2.0 U	0.00E+00	110	2.70E-04	2.0 U	0.00E+00	3.4	8.18E-06	7	1.68E-05	2.0 U	0.00E+00	49	2.02E-04
11/18/2013		26825	8372	160	44	1.46E-04	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.3	3.13E-06	2.3	5.53E-06	1.1 U	0.00E+00	14	5.76E-05
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	8651	160	160	5.29E-04	1.2 U	0.00E+00	55	1.35E-04	1.2 U	0.00E+00	3.3	7.94E-06	2.9	6.97E-06	1.2 U	0.00E+00	7.2	2.96E-05
3/14/2014		29432	8894	160	16	5.29E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.9	4.57E-06	1.2 U	0.00E+00	1.2 U	0.00E+00
3/14/2014	Dup	29432	8894	160	19	6.29E-05	1.2 U	0.00E+00	1.6	3.93E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.8	4.33E-06	1.2 U	0.00E+00	1.7	6.99E-06

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/11/2009		178	59	150	330	1.01E-03	4400	6.40E-03	86 U	0.00E+00	86 U	0.00E+00	86 U	0.00E+00	210	3.15E-04	86 U	0.00E+00	200	4.29E-04
12/15/2009		205	68	140	240	6.84E-04	3500	4.75E-03	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	370	5.18E-04	110 U	0.00E+00	140	2.80E-04
12/29/2009		539	180	140	240	6.84E-04	1500	2.03E-03	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	120	1.68E-04	100 U	0.00E+00	100 U	0.00E+00
1/13/2010		903	301	150	130	3.97E-04	250	3.63E-04	35 U	0.00E+00	35 U	0.00E+00	35 U	0.00E+00	170	2.55E-04	35 U	0.00E+00	35 U	0.00E+00
1/27/2010		1224	408	150	150	4.58E-04	200	2.91E-04	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	120	1.80E-04	40 U	0.00E+00	40 U	0.00E+00
1/27/2010	Dup	1224	408	150	180	5.50E-04	240	3.49E-04	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	130	1.95E-04	40 U	0.00E+00	40 U	0.00E+00
2/24/2010		1893	631	150	98	2.99E-04	73	1.06E-04	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	38	5.70E-05	22 U	0.00E+00	22 U	0.00E+00
3/15/2010		2345	782	140	210	5.99E-04	62	8.41E-05	48 U	0.00E+00	48 U	0.00E+00	48 U	0.00E+00	180	2.52E-04	48 U	0.00E+00	48 U	0.00E+00
4/14/2010		2804	935	150	190	5.81E-04	69	1.00E-04	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00
5/13/2010		3495	1165	140	78	2.22E-04	42	5.70E-05	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	20	2.80E-05	11 U	0.00E+00	11 U	0.00E+00
6/21/2010		4430	1477	108	88	1.94E-04	23 U	0.00E+00	23 UJ	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	33 J	3.56E-05	23 U	0.00E+00	23 U	0.00E+00
7/21/2010		5058	1686	140	80	2.28E-04	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00
8/23/2010		5784	1928	0	150	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	21	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
9/23/2010		6523	2174	145	74	2.19E-04	12	1.69E-05	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00
10/22/2010		7219	2406	140	42	1.20E-04	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00
11/15/2010		7794	2598	140	35	9.98E-05	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00
12/22/2010		8508	2955	150	27	8.25E-05	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00
1/24/2011		9302	3352	170	9	3.12E-05	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	3.1	7.53E-06
2/25/2011		10071	3737	165	15	5.04E-05	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3988	165	7.3	2.45E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
4/15/2011		11241	4322	160	8.5	2.77E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
5/19/2011		12061	4732	160	11	3.59E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	8.1	1.57E-05	1.1 U	0.00E+00
6/16/2011		12722	5062	170	15	5.19E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.9	3.91E-06	1.2 U	0.00E+00
7/15/2011		13417	4472	170	21	7.27E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	5.3	1.09E-05	1.2 U	0.00E+00
8/22/2011		14324	4775	170	22	7.62E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.6	3.29E-06	1.2 U	0.00E+00
9/15/2011		14905	4968	170	18	6.23E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	4.6	9.47E-06	1.1 U	0.00E+00
10/14/2011		15598	5199	160	9.1	2.97E-05	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	3.3 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00
11/21/2011		16510	5503	170	5.1	1.77E-05	1.6 U	0.00E+00	1.6 UJ	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	6.4 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00
12/14/2011		17010	5670	170	3.4	1.18E-05	0.76 U	0.00E+00	7.6 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	0.78	1.61E-06	0.76 U	0.00E+00
1/19/2012		17923	5974	170	2.9	1.00E-05	0.74 U	0.00E+00	1.9	4.25E-06	0.74 U	0.00E+00	0.74 U	0.00E+00	3.0 U	0.00E+00	0.74 U	0.00E+00	1	2.43E-06
2/15/2012		18566	6189	170	2.2	7.62E-06	0.73 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00	2.9 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00
3/15/2012		19262	6421	170	2.4	8.31E-06	0.71 U	0.00E+00	0.71 U	0.00E+00	0.71 U	0.00E+00	0.71 U	0.00E+00	2.8 U	0.00E+00	0.71 U	0.00E+00	1.6	3.89E-06
4/19/2012		20102	6701	160	4.3	1.40E-05	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00
5/16/2012		20748	6916	160	5.3	1.73E-05	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	3.1 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		21282	7094	160	12	3.91E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
9/17/2012		21952	7317	160	29	9.45E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		21959	7320	160	26	8.47E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
12/14/2012		22554	7518	170	17	5.89E-05	1.9 U	0.00E+00	19 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	7.4 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013		22556	7518	160	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
4/11/2013		23581	7723	160	8	2.61E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013		23583	7724	160	9.5	3.10E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	18	2.88E-05	1.1 U	0.00E+00	1.1 U	0.00E+00
7/15/2013		25160	8039	160	24	7.82E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
7/15/2013	Dup	25160	8039	160	24	7.82E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 15, 2013 to September 9, 2013																				
9/9/2013		25162	8040	160	31	1.01E-04	2.0 U	0.00E+00	20 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	8.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00
11/18/2013		26825	8372	160	8.4	2.74E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	8651	160	7.2	2.35E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	4.9	1.12E-05
3/14/2014		29432	8894	160	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/14/2014	Dup	29432	8894	160	1.5	4.89E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)			
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
12/11/2009		178	59	150	86 U	0.00E+00	240	5.93E-04	110	2.72E-04	340 U	0.00E+00	86 U	0.00E+00	2.54E-01	15.05
12/15/2009		205	68	140	110 U	0.00E+00	230	5.30E-04	110 U	0.00E+00	430 U	0.00E+00	110 U	0.00E+00	1.59E-01	16.48
12/29/2009		539	180	140	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	1.19E-01	29.76
1/13/2010		903	301	150	35 U	0.00E+00	35 U	0.00E+00	35 U	0.00E+00	140 U	0.00E+00	35 U	0.00E+00	4.93E-02	35.75
1/27/2010		1224	408	150	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	160 U	0.00E+00	40 U	0.00E+00	6.47E-02	42.68
1/27/2010	Dup	1224	408	150	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	160 U	0.00E+00	40 U	0.00E+00	7.06E-02	43.31
2/24/2010		1893	631	150	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	87 U	0.00E+00	22 U	0.00E+00	3.93E-02	51.44
3/15/2010		2345	782	140	48 U	0.00E+00	48 U	0.00E+00	48 U	0.00E+00	190 U	0.00E+00	48 U	0.00E+00	8.60E-02	64.40
4/14/2010		2804	935	150	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	92 U	0.00E+00	23 U	0.00E+00	4.24E-02	70.89
5/13/2010		3495	1165	140	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	43 U	0.00E+00	11 U	0.00E+00	3.84E-02	79.74
6/21/2010		4430	1477	108	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	92 U	0.00E+00	23 U	0.00E+00	2.30E-02	86.90
7/21/2010		5058	1686	140	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	58 U	0.00E+00	14 U	0.00E+00	2.07E-02	91.24
8/23/2010		5784	1928	0	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	0.00E+00	91.24
9/23/2010		6523	2174	145	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	47 U	0.00E+00	12 U	0.00E+00	2.04E-02	96.27
10/22/2010		7219	2406	140	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	42 U	0.00E+00	10 U	0.00E+00	1.11E-02	98.85
11/15/2010		7794	2598	140	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	44 U	0.00E+00	11 U	0.00E+00	1.34E-02	101.41
12/22/2010		8508	2955	150	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	56 U	0.00E+00	14 U	0.00E+00	1.84E-02	107.99
1/24/2011		9302	3352	170	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	11 U	0.00E+00	11	2.09E-05	6.06E-03	110.39
2/25/2011		10071	3737	165	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	9.59E-03	114.08
3/18/2011		10573	3988	165	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	15	2.23E-05	4.0 U	0.00E+00	1.98E-03	114.57
4/15/2011		11241	4322	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	8.2 J,B	1.18E-05	4.1 U	0.00E+00	1.48E-03	115.07
5/19/2011		12061	4732	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11	1.58E-05	4.5 U	0.00E+00	5.87E-04	115.31
6/16/2011		12722	5062	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	19	2.91E-05	4.7 U	0.00E+00	7.49E-04	115.55
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	19	2.91E-05	4.6 U	0.00E+00	6.30E-04	115.18
8/22/2011		14324	4775	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	6.8 J,B	1.04E-05	4.7 U	0.00E+00	7.28E-04	115.40
9/15/2011		14905	4968	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11	1.68E-05	4.5 U	0.00E+00	5.54E-04	115.51
10/14/2011		15598	5199	160	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	5	7.20E-06	3.3 U	0.00E+00	2.58E-04	115.57
11/21/2011		16510	5503	170	1.6 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	6.4 UJ	0.00E+00	6.4 U	0.00E+00	1.77E-04	115.62
12/14/2011		17010	5670	170	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	7.6 UJ	0.00E+00	3.0 U	0.00E+00	1.65E-04	115.65
1/19/2012		17923	5974	170	0.79	2.21E-06	1.5	4.20E-06	1.1	3.08E-06	14	2.14E-05	3.0 U	0.00E+00	1.80E-04	115.71
2/15/2012		18566	6189	170	0.73 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00	7.9	1.21E-05	2.9 U	0.00E+00	1.83E-04	115.74
3/15/2012		19262	6421	170	0.71 U	0.00E+00	0.71 U	0.00E+00	0.71 U	0.00E+00	8.9	1.36E-05	2.8 U	0.00E+00	1.75E-04	115.79
4/19/2012		20102	6701	160	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	1.88E-04	115.84
5/16/2012		20748	6916	160	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00	1.94E-04	115.88
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		21282	7094	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	21	3.03E-05	5.3 U	0.00E+00	1.79E-03	116.20
9/17/2012		21952	7317	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	8.85E-04	116.40
Pulse -off period September 17, 2012 to November 15, 2012																
11/15/2012		21959	7320	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.08E-03	116.40
12/14/2012		22554	7518	170	1.9 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	19 U	0.00E+00	7.4 U	0.00E+00	2.30E-03	116.86
Pulse -off period December 14, 2012 to February 26, 2013																
2/26/2013		22556	7518	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5 U	0.00E+00	6.29E-06	116.86
4/11/2013		23581	7723	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	5.54E-04	116.97
Pulse -off period April 11, 2013 to May 10, 2013																
5/10/2013		23583	7724	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	9.56E-04	116.97
7/15/2013		25160	8039	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	7.61E-04	117.21
7/15/2013	Dup	25160	8039	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	7.43E-04	-
Pulse -off period July 15, 2013 to September 9, 2013																
9/9/2013		25162	8040	160	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	20 U	0.00E+00	8.0 U	0.00E+00	1.86E-03	117.21
11/18/2013		26825	8372	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.66E-04	117.30
Pulse -off period November 18, 2013 to January 15, 2014																
1/15/2014		28218	8651	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	7.44E-04	117.51
3/14/2014		29432	8894	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	5.75E-05	117.52
3/14/2014	Dup	29432	8894	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	8.30E-05	-

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	8990	160	240	7.94E-04	1.1 U	0.00E+00	99	2.43E-04	1.1 U	0.00E+00	4.8	1.15E-05	7.8	1.88E-05	1.1 U	0.00E+00	14	5.76E-05
7/23/2014		31567	9321	160	89	2.95E-04	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.8	4.33E-06	3.7	8.90E-06	1.2 U	0.00E+00	11	4.52E-05
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	9494	160	310	1.03E-03	2.1 U	0.00E+00	120	2.95E-04	2.1 U	0.00E+00	3.9	9.38E-06	6	1.44E-05	2.1 U	0.00E+00	19	7.82E-05
11/14/2014		33847	9777	160	42	1.39E-04	1.1 U	0.00E+00	7.8	1.91E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	3.85E-06	1.1 U	0.00E+00	11	4.52E-05
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	9778	160	210	6.95E-04	1.2 U	0.00E+00	69	1.69E-04	1.2 U	0.00E+00	3.7	8.90E-06	3.4	8.18E-06	1.2 U	0.00E+00	8.2	3.37E-05
3/13/2015		35189	10045	160	18	5.96E-05	1.3 U	0.00E+00	5.4	1.33E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	3.5	1.44E-05
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	10046	160	240	7.94E-04	1.2 U	0.00E+00	76	1.87E-04	1.2 U	0.00E+00	3.0	7.21E-06	3.5	8.42E-06	1.2 U	0.00E+00	8.2	3.37E-05
7/16/2015		36677	10343	160	64	2.12E-04	1.2 U	0.00E+00	17	4.17E-05	1.2 U	0.00E+00	1.7	4.09E-06	4.2	1.01E-05	1.2 U	0.00E+00	8.6	3.54E-05
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	10343	160	450	1.49E-03	1.1 U	0.00E+00	210	5.16E-04	1.1 U	0.00E+00	3.4	8.18E-06	9.6	2.31E-05	1.1 U	0.00E+00	28	1.15E-04
11/20/2015		38094	10626	160	43	1.42E-04	1.2 U	0.00E+00	12	2.95E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.5	3.61E-06	1.2 U	0.00E+00	14	5.76E-05
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	10627	160	260	8.60E-04	1.1 U	0.00E+00	89	2.18E-04	1.1 U	0.00E+00	2.5	6.01E-06	3.2	7.70E-06	1.1 U	0.00E+00	14	5.76E-05
3/18/2016		39377	10883	160	23	7.61E-05	1.1 U	0.00E+00	9.5	2.33E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	3.6	1.48E-05
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	10884	160	210	6.95E-04	1.2 U	0.00E+00		0.00E+00	1.2 U	0.00E+00	2.7	6.49E-06	3.1	7.46E-06	1.2 U	0.00E+00	7	2.88E-05
7/22/2016		40915	11190	160	33	1.09E-04	1.2 U	0.00E+00	13	3.19E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.8	9.14E-06	1.2 U	0.00E+00	19	7.82E-05
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	11191	160	280	9.27E-04	1.2 U	0.00E+00	150	3.68E-04	1.2 U	0.00E+00	3.2	7.70E-06	6.9	1.66E-05	1.2 U	0.00E+00	32	1.32E-04
11/28/2016		42571	11521	160	26	8.60E-05	1.1 U	0.00E+00	12	2.95E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.3	5.53E-06	1.1 U	0.00E+00	20	8.23E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	11522	170	150	5.27E-04	1.1 U	0.00E+00	78	2.03E-04	1.1 U	0.00E+00	2.2	5.62E-06	2.6	6.64E-06	1.1 U	0.00E+00	23	1.01E-04
3/23/2017		43840	11775	160	27	8.93E-05	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.1	5.05E-06	1.1 U	0.00E+00	5.2	2.14E-05
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	11776	160	150	4.96E-04	1.2 U	0.00E+00	77	1.89E-04	1.2 U	0.00E+00	2.1	5.05E-06	3.4	8.18E-06	1.2 U	0.00E+00	12	4.94E-05
7/20/2017		45423	12092	170	24	8.44E-05	1.2 U	0.00E+00	13	3.39E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.3	3.32E-06	1.2 U	0.00E+00	14	6.12E-05
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		45432	12094	160	280	9.27E-04	1.1 U	0.00E+00	250	6.14E-04	1.1 U	0.00E+00	2	4.81E-06	8.4	2.02E-05	1.1 U	0.00E+00	41	1.69E-04
11/17/2017		46966	12400	160	22	7.28E-05	1.2 U	0.00E+00	9.3	2.28E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.5	3.09E-05

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	8990	160	6.6	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	16	2.56E-05	1.1 U	0.00E+00	1.1 U	0.00E+00
7/23/2014		31567	9321	160	19	6.19E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	9494	160	26	8.47E-05	2.1 U	0.00E+00	21 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	8.3 U	0.00E+00	3.5	6.78E-06	2.1 U	0.00E+00
11/14/2014		33847	9777	160	7.3	2.38E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	9778	160	9.3	3.03E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/13/2015		35189	10045	160	3.0	9.78E-06	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	10046	160	5.4	1.76E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.0	1.12E-05	1.2 U	0.00E+00	1.2 U	0.00E+00
7/16/2015		36677	10343	160	18.0	5.87E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	10343	160	30	9.78E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
11/20/2015		38094	10626	160	9.7	3.16E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	10627	160	8.5	2.77E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		39377	10883	160	3	9.78E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	10884	160	4.2	1.37E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/22/2016		40915	11190	160	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.5	2.91E-06	1.2 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	11191	160	20	6.52E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		42571	11521	160	8.9	2.90E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	11522	170	8.7	3.01E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		43840	11775	160	5.6	1.83E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	11776	160	7.4	2.41E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/20/2017		45423	12092	170	18	6.23E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		45432	12094	160	33	1.08E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
11/17/2017		46966	12400	160	7.1	2.31E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period March 14, 2014 to May 15, 2014																
5/15/2014		29914	8990	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	25	3.60E-05	11 U	0.00E+00	1.21E-03	117.64
7/23/2014		31567	9321	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	4.64E-04	117.79
Pulse -off period July 23, 2014 to September 16, 2014																
9/16/2014		32432	9494	160	2.1 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	1.51E-03	118.05
11/14/2014		33847	9777	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.31E-04	118.12
Pulse -off period November 14, 2014 to January 9, 2015																
1/9/2015		33855	9778	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	9.45E-04	118.12
3/13/2015		35189	10045	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	9.70E-05	118.15
Pulse -off period March 13, 2015 to May 15, 2015																
5/15/2015		35194	10046	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.06E-03	118.15
7/16/2015		36677	10343	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.62E-04	118.25
Pulse -off period July 16, 2015 to September 22, 2015																
9/22/2015		36680	10343	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.25E-03	118.26
11/20/2015		38094	10626	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	2.65E-04	118.33
Pulse -off period November 20, 2015 to January 19, 2016																
1/19/2016		38101	10627	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.18E-03	118.33
3/18/2016		39377	10883	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.24E-04	118.36
Pulse -off period March 18, 2016 to May 19, 2016																
5/19/2016		39382	10884	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	7.51E-04	118.36
7/22/2016		40915	11190	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.77E-04	118.45
Pulse -off period July 22, 2016 to September 20, 2016																
9/20/2016		40918	11191	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.52E-03	118.45
11/28/2016		42571	11521	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.32E-04	118.53
Pulse -off period November 28, 2016 to January 24, 2017																
1/24/2017		42575	11522	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	8.74E-04	118.53
3/23/2017		43840	11775	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	1.61E-04	118.57
Pulse -off period March 23, 2017 to May 15, 2017																
5/15/2017		43846	11776	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12	0.00E+00	4.9 U	0.00E+00	7.72E-04	118.57
7/20/2017		45423	12092	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.45E-04	118.65
Pulse -off period July 20, 2017 to September 14, 2017																
9/14/2017		45432	12094	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.84E-03	118.65
11/17/2017		46966	12400	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.50E-04	118.70

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	12401	160	180	5.96E-04	1.2 U	0.00E+00	90	2.21E-04	1.2 U	0.00E+00	3.0	7.21E-06	3.1	7.46E-06	1.2 U	0.00E+00	10	4.11E-05
3/23/2018		48239	12655	160	3.3	1.09E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	3.6	1.48E-05
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	12656	160	160	5.29E-04	1.3 U	0.00E+00	96	2.36E-04	1.3 U	0.00E+00	2.6	6.25E-06	2.5	6.01E-06	1.3 U	0.00E+00	7.2	2.96E-05
7/26/2018		49825	12972	160	27	8.93E-05	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2	2.89E-06	1.2 U	0.00E+00	17	6.99E-05
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	13226	160	290	9.60E-04	1.3 U	0.00E+00	370	9.08E-04	1.3 U	0.00E+00	3.7	8.90E-06	15	3.61E-05	1.3 U	0.00E+00	41	1.69E-04
11/19/2018		52604	13528	160	18	5.96E-05	1.3 U	0.00E+00	13	3.19E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	7.7	3.17E-05
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	13529	160	200	6.62E-04	1.2 U	0.00E+00	110	2.70E-04	1.2 U	0.00E+00	3.2	7.70E-06	3.8	9.14E-06	1.2 U	0.00E+00	16	6.58E-05
3/21/2019		53941	13795	160	16	5.29E-05	1.3 U	0.00E+00	7.9	1.94E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	4.6	1.89E-05
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	13796	175	250	9.05E-04	1.3 U	0.00E+00	160	4.30E-04	1.3 U	0.00E+00	3.4	8.94E-06	4.5	1.18E-05	1.3 U	0.00E+00	8.2	3.69E-05
7/29/2019		55529	14113	160	110	3.64E-04	1.5 U	0.00E+00	16	3.93E-05	1.5 U	0.00E+00	1.5 U	0.00E+00	4.4	1.06E-05	1.5 U	0.00E+00	19	7.82E-05
Pulse -off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	14113	180	290	1.08E-03	1.3 U	0.00E+00	130	3.59E-04	1.3 U	0.00E+00	2.5	6.76E-06	5.2	1.41E-05	1.3 U	0.00E+00	20	9.26E-05
9/27/2019	Dup	-	-	-	290	-	1.3 U	-	130	-	1.3 U	-	2.4	-	4.8	-	1.3 U	-	23	-
12/9/2019		57186	14444	180	35	1.30E-04	1.3 U	0.00E+00	1.6	4.42E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	3.8	1.76E-05
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	14445	180	130	4.84E-04	1.4 U	0.00E+00	48	1.33E-04	1.4 U	0.00E+00	1.8	4.87E-06	1.7	4.60E-06	1.4 U	0.00E+00	7.7	3.56E-05
3/20/2020		58462	14700	180	36	1.34E-04	1.3 U	0.00E+00	5.9	1.63E-05	1.3 U	0.00E+00	1.9	5.14E-06	1.4	3.79E-06	1.3 U	0.00E+00	13	6.02E-05
Pulse -off period March 20, 2020 to May 21, 2020																				
5/21/2020		58464	14700	180	130	4.84E-04	1.2 U	0.00E+00	76	2.10E-04	1.2 U	0.00E+00	1.6	4.33E-06	2.2	5.95E-06	1.2 U	0.00E+00	5	2.31E-05
7/22/2020		59951	14997	160	34	1.13E-04	1.3 U	0.00E+00	9.4	2.31E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.4	5.77E-06	1.3 U	0.00E+00	21	8.64E-05
7/22/2020	Dup	-	-	-	34	-	1.3 U	-	9.6	-	1.3 U	-	1.3 U	-	2.4	-	1.3 U	-	13	-
Pulse -off period July 22, 2020 to September 29, 2020																				
9/29/2020		59957	14999	175	190	6.88E-04	1.4 U	0.00E+00	92	2.47E-04	1.4 U	0.00E+00	1.8	4.73E-06	3	7.89E-06	1.4 U	0.00E+00	20	9.00E-05
11/25/2020		61195	15246	160	76	2.51E-04	1.4 U	0.00E+00	6.9	1.69E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	3	7.21E-06	1.4 U	0.00E+00	8.1	3.33E-05
Pulse-off period November 25, 2020 to January 21, 2021																				
1/21/2021		61197	15247	180	140	5.21E-04	1.3 U	0.00E+00	49	1.35E-04	1.3 U	0.00E+00	2.0	5.41E-06	1.9	5.14E-06	1.3 U	0.00E+00	6.2	2.87E-05
3/26/2021		62582	15524	170	27	9.49E-05	1.0 U	0.00E+00	7	1.83E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.1	2.81E-06	1.0 U	0.00E+00	5.3	2.32E-05

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library of Medicine)
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	12401	160	7.5	2.44E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0	8.00E-06	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	12656	160	3.7	1.21E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	9.3	1.49E-05	1.3 U	0.00E+00	1.3 U	0.00E+00
7/26/2018		49825	12972	160	20	6.52E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	13226	160	24	7.82E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.8	9.28E-06	1.3 U	0.00E+00	1.3 U	0.00E+00
11/19/2018		52604	13528	160	7.2	2.35E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	13529	160	6.6	2.15E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		53941	13795	160	3.2	1.04E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	13796	175	4.8	1.71E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13.0	2.28E-05	1.3 U	0.00E+00	1.23U	0.00E+00
7/29/2019		55529	14113	160	11	3.59E-05	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	5.9 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	14113	180	14	5.13E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
9/27/2019	Dup	-	-	-	14	-	1.3 U	-	13 U	-	1.3 U	-	1.3 U	-	5.3 U	-	1.3 U	-	1.3 U	-
12/9/2019		57186	14444	180	1.9	6.97E-06	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	14445	180	2.2	8.07E-06	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
3/20/2020		58462	14700	180	4.8	1.76E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 20, 2020 to May 21, 2020																				
5/21/2020		58464	14700	180	3.5	1.28E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/22/2020		59951	14997	160	13	4.24E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
7/22/2020	Dup	-	-	-	14	-	1.3 U	-	13 U	-	1.3 U	-	1.3 U	-	5.3 U	-	1.7	-	1.3 U	-
Pulse -off period July 22, 2020 to September 29, 2020																				
9/29/2020		59957	14999	175	12	4.28E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
11/25/2020		61195	15246	160	8.4	2.74E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.7 U	0.00E+00	3.7	7.17E-06	6.4	1.46E-05
Pulse-off period November 25, 2020 to January 21, 2021																				
1/21/2021		61197	15247	180	4	1.47E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
3/26/2021		62582	15524	170	5	1.73E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library of Medicine)
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018		46970	12401	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	9.05E-04	118.70
3/23/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.57E-05	118.70
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018		48242	12656	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	8.34E-04	118.70
7/26/2018		49825	12972	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	2.76E-04	118.79
Pulse -off period July 26, 2018 to September 17, 2018																
9/17/2018		51096	13226	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	2.17E-03	119.34
11/19/2018		52604	13528	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	1.47E-04	119.39
Pulse -off period November 19, 2018 to January 21, 2019																
1/21/2019		52607	13529	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.04E-03	119.39
3/21/2019		53941	13795	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	1.02E-04	119.41
Pulse -off period March 21, 2019 to May 24, 2019																
5/24/2019		53943	13796	175	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	1.43E-03	119.41
7/29/2019		55529	14113	160	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	5.9 U	0.00E+00	5.28E-04	119.58
Pulse -off period July 29, 2019 to September 27, 2019																
9/27/2019		55531	14113	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	1.60E-03	119.58
9/27/2019	Dup	-	-	-	1.3 U	-	1.3 U	-	1.3 U	-	13 U	-	5.3 U	-	-	-
12/9/2019		57186	14444	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	1.59E-04	119.64
Pulse -off period December 9, 2019 to January 21, 2020																
1/21/2020		57189	14445	180	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.4 U	0.00E+00	6.70E-04	119.64
3/20/2020		58462	14700	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	2.37E-04	119.70
Pulse -off period March 20, 2020 to May 21, 2020																
5/21/2020		58464	14700	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	24	3.89E-05	4.8 U	0.00E+00	7.79E-04	119.70
7/22/2020		59951	14997	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	2.70E-04	119.78
7/22/2020	Dup	-	-	-	1.3 U	-	1.3 U	-	1.3 U	-	13 U	-	5.3 U	-	-	-
Pulse -off period July 22, 2020 to September 29, 2020																
9/29/2020		59957	14999	175	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.8 U	0.00E+00	1.08E-03	119.78
11/25/2020		61195	15246	160	1.4 U	0.00E+00	1.6	4.21E-06	1.4 U	0.00E+00	14 U	0.00E+00	5.7 U	0.00E+00	3.62E-04	119.87
Pulse-off period November 25, 2020 to January 21, 2021																
1/21/2021		61197	15247	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	7.10E-04	119.87
3/26/2021		62582	15524	170	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	11	1.68E-05	4.4	2.44E-05	1.98E-04	119.92

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library of Medicine)
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/14/2009		181	60	140	94000	2.72E-01	270 U	0.00E+00	1100	2.36E-03	270 U	0.00E+00	2300	4.84E-03	8100	1.70E-02	270 U	0.00E+00	750	2.70E-03
12/16/2009		229	76	150	46000	1.43E-01	110 U	0.00E+00	710	1.63E-03	110 U	0.00E+00	1100	2.48E-03	5500	1.24E-02	110 U	0.00E+00	400	1.54E-03
1/5/2010		707	236	140	42000	1.22E-01	150 U	0.00E+00	290	6.23E-04	150 U	0.00E+00	980	2.06E-03	1500	3.16E-03	150 U	0.00E+00	240	8.64E-04
1/21/2010		1084	361	150	15000	4.65E-02	42 U	0.00E+00	260	5.98E-04	42 U	0.00E+00	280	6.31E-04	1600	3.61E-03	42 U	0.00E+00	170	6.56E-04
1/21/2010	Dup	1084	361	150	16000	4.96E-02	43 U	0.00E+00	280	6.44E-04	43 U	0.00E+00	290	6.54E-04	1700	3.83E-03	43 U	0.00E+00	170	6.56E-04
2/24/2010		1893	631	150	11000	3.41E-02	28 U	0.00E+00	240	5.52E-04	28 U	0.00E+00	280	6.31E-04	1100	2.48E-03	28 U	0.00E+00	140	5.40E-04
3/15/2010		2345	782	140	20000	5.79E-02	21 U	0.00E+00	400	8.59E-04	21 U	0.00E+00	510	1.07E-03	1900	4.00E-03	21 U	0.00E+00	280	1.01E-03
4/14/2010		2804	935	150	31000	9.62E-02	100 U	0.00E+00	380	8.75E-04	100 U	0.00E+00	1100	2.48E-03	1200	2.71E-03	100 U	0.00E+00	820	3.16E-03
5/13/2010		3495	1165	140	8300	2.40E-02	12 U	0.00E+00	220	4.73E-04	12 U	0.00E+00	190	4.00E-04	960	2.02E-03	12 U	0.00E+00	200	7.20E-04
6/21/2010		4430	1477	108	7200	1.61E-02	21 U	0.00E+00	220	3.65E-04	21 U	0.00E+00	150	2.43E-04	660	1.07E-03	21 U	0.00E+00	160	4.44E-04
7/21/2010		5058	1686	140	6100	1.77E-02	20 U	0.00E+00	120	2.58E-04	20 U	0.00E+00	130	2.74E-04	460	9.68E-04	20 U	0.00E+00	120	4.32E-04
8/23/2010		5784	1928	0	8000	0.00E+00	20 U	0.00E+00	200	0.00E+00	20 U	0.00E+00	120	0.00E+00	490	0.00E+00	20 U	0.00E+00	220	0.00E+00
9/23/2010		6523	2174	145	6600	1.98E-02	11 U	0.00E+00	140	3.11E-04	11 U	0.00E+00	140	3.05E-04	440	9.59E-04	11 U	0.00E+00	160	5.96E-04
10/22/2010		7219	2406	140	3700	1.07E-02	14 U	0.00E+00	91	1.95E-04	14 U	0.00E+00	66	1.39E-04	210	4.42E-04	14 U	0.00E+00	110	3.96E-04
11/15/2010		7794	2598	140	4600	1.33E-02	15 U	0.00E+00	120	2.58E-04	15 U	0.00E+00	64	1.35E-04	170	3.58E-04	15 U	0.00E+00	88	3.17E-04
12/22/2010		8508	2777	150	5600	1.74E-02	20 U	0.00E+00	150	3.45E-04	20 U	0.00E+00	120	2.71E-04	330	7.44E-04	20 U	0.00E+00	56	2.16E-04
1/24/2011		9302	2975	170	2200	7.74E-03	8.3 U	0.00E+00	130	3.39E-04	8.3 U	0.00E+00	27	6.90E-05	200	5.11E-04	8.3 U	0.00E+00	35	1.53E-04
2/25/2011		10071	3167	165	1300	4.44E-03	4.0 U	0.00E+00	45	1.14E-04	4.0 U	0.00E+00	25	6.20E-05	72	1.79E-04	4.0 U	0.00E+00	28	1.19E-04
3/18/2011		10573	3293	165	360	1.23E-03	1.3 U	0.00E+00	24	6.08E-05	1.3 U	0.00E+00	5.4	1.34E-05	35	8.68E-05	1.3 U	0.00E+00	13	5.51E-05
4/15/2011		11241	3460	160	160 J,B	5.29E-04	1.0 U	0.00E+00	17	4.17E-05	1.0 U	0.00E+00	2.8	6.73E-06	28	6.73E-05	1.0 U	0.00E+00	15	6.17E-05
5/19/2011		12061	3665	160	64	2.12E-04	1.2 U	0.00E+00	10	2.45E-05	1.2 U	0.00E+00	1.4	3.37E-06	12	2.89E-05	1.2 U	0.00E+00	9.6	3.95E-05
6/16/2011		12722	3830	170	160	5.63E-04	1.2 U	0.00E+00	280	7.30E-04	1.2 U	0.00E+00	2.5	6.39E-06	34	8.69E-05	1.2 U	0.00E+00	61	2.67E-04
7/15/2011		13417	4472	170	190	6.68E-04	1.2 U	0.00E+00	8.3	2.16E-05	1.2 U	0.00E+00	2.8	7.15E-06	23	5.88E-05	1.2 U	0.00E+00	22	9.62E-05
8/22/2011		14324	4775	170	1600	5.63E-03	4.3 U	0.00E+00	19	4.96E-05	4.3 U	0.00E+00	21	5.37E-05	130	3.32E-04	4.3 U	0.00E+00	39	1.70E-04
9/15/2011		14905	4968	170	800	2.81E-03	3.7 U	0.00E+00	9.5	2.48E-05	3.7 U	0.00E+00	12	3.07E-05	62	1.58E-04	3.7 U	0.00E+00	24	1.05E-04
10/14/2011		15598	5199	160	750	2.48E-03	3.0 U	0.00E+00	10	2.45E-05	3.0 U	0.00E+00	13	3.13E-05	37	8.90E-05	3.0 U	0.00E+00	15	6.17E-05
11/21/2011		16510	5503	170	380	1.34E-03	1.4 U	0.00E+00	6.6	1.72E-05	1.4 U	0.00E+00	5.6	1.43E-05	24	6.13E-05	1.4 U	0.00E+00	7.9	3.45E-05
12/14/2011		17010	5670	170	830	2.92E-03	3.5 U	0.00E+00	8.7	2.27E-05	3.5 U	0.00E+00	70	1.79E-04	33	8.43E-05	3.5 U	0.00E+00	6.9	3.02E-05
1/19/2012		17923	5974	170	800	2.81E-03	3.0 U	0.00E+00	12	3.13E-05	3.0 U	0.00E+00	13	3.32E-05	33	8.43E-05	3.0 U	0.00E+00	6.4	2.80E-05
2/15/2012		18566	6189	170	1600	5.63E-03	4.5 U	0.00E+00	22	5.74E-05	4.5 U	0.00E+00	260	6.64E-04	95	2.43E-04	4.5 U	0.00E+00	6.7	2.93E-05
3/15/2012		19262	6421	170	1600	5.63E-03	5.1 U	0.00E+00	28	7.30E-05	5.1 U	0.00E+00	22	5.62E-05	59	1.51E-04	5.1 U	0.00E+00	7.3	3.19E-05
4/19/2012		20102	6701	160	580	1.92E-03	1.8 U	0.00E+00	14	3.44E-05	1.8 U	0.00E+00	5.8	1.39E-05	23	5.53E-05	1.8 U	0.00E+00	11	4.53E-05
5/16/2012		20748	6916	160	300	9.93E-04	0.80 U	0.00E+00	9.3	2.28E-05	0.80 U	0.00E+00	3.7	8.90E-06	21	5.05E-05	0.80 U	0.00E+00	7.5	3.09E-05
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		21282	7094	160	1200	3.97E-03	4.7 U	0.00E+00	20	4.91E-05	4.7 U	0.00E+00	17	4.09E-05	8.4	2.02E-05	4.7 U	0.00E+00	26	1.07E-04
9/17/2012		21952	7317	160	5000	1.65E-02	16 U	0.00E+00	38	9.33E-05	16 U	0.00E+00	16 U	0.00E+00	130	3.13E-04	16 U	0.00E+00	100	4.11E-04
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		21959	7320	160	640	2.12E-03	2.1 U	0.00E+00	130	3.19E-04	2.1 U	0.00E+00	22	5.29E-05	18	4.33E-05	2.1 U	0.00E+00	18	7.40E-05
12/14/2012		22554	7518	170	1100	3.87E-03	4.6 U	0.00E+00	17 J	4.43E-05	4.6 U	0.00E+00	15	3.83E-05	70 J	1.79E-04	4.6 U	0.00E+00	7.1 J	3.10E-05
12/14/2012	Dup	22554	7518	170	1100 J	3.87E-03	4.5 U	0.00E+00	25 J	6.52E-05	4.5 U	0.00E+00	17 J	4.34E-05	36 J	9.20E-05	4.5 U	0.00E+00	49 J	2.14E-04
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013		22556	7519	160	640	2.12E-03	2.4 U	0.00E+00	12	2.95E-05	2.4 U	0.00E+00	8	1.92E-05	23	5.53E-05	2.4 U	0.00E+00	15	6.17E-05
4/11/2013		23581	8134	160	180	5.96E-04	1.2 U	0.00E+00	7	1.72E-05	1.2 U	0.00E+00	2.8	6.73E-06	28	6.73E-05	1.2 U	0.00E+00	4.6	1.89E-05
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013		23583	8135	160	200	6.62E-04	1.1 U	0.00E+00	5.5	1.35E-05	1.1 U	0.00E+00	3.3	7.94E-06	22	5.29E-05	1.1 U	0.00E+00	4.4	1.81E-05
7/15/2013		25160	9082	160	64	2.12E-04	1.2 U	0.00E+00	3.6	8.84E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.9	4.57E-06	1.2 U	0.00E+00	14	5.76E-05
Pulse -off period July 15, 2013 to September 9, 2013																				
9/9/2013		25162	9083	160	390	1.29E-03	1.7 U	0.00E+00	5.6	1.37E-05	1.7 U	0.00E+00	3	9.93E-06	2	4.81E-06	1.7 U	0.00E+00	21	8.64E-05
11/18/2013		26825	10081	160	350	1.16E-03	1.2 U	0.00E+00	8.2	2.01E-05	1.2 U	0.00E+00	6.6	2.18E-05	45	1.08E-04	1.2 U	0.00E+00	5.7	2.34E-05

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/14/2009		181	60	140	1000	2.85E-03	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00
12/16/2009		229	76	150	550	1.68E-03	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00
1/5/2010		707	236	140	250	7.13E-04	150 U	0.00E+00	220	4.06E-04	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00
1/21/2010		1084	361	150	140	4.28E-04	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00
1/21/2010	Dup	1084	361	150	140	4.28E-04	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00
2/24/2010		1893	631	150	66	2.02E-04	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00
3/15/2010		2345	782	140	120	3.42E-04	51	6.92E-05	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00
4/14/2010		2804	935	150	190	5.81E-04	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00
5/13/2010		3495	1165	140	43	1.23E-04	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00
6/21/2010		4430	1477	108	55	1.21E-04	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00
7/21/2010		5058	1686	140	44	1.25E-04	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
8/23/2010		5784	1928	0	66	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
9/23/2010		6523	2174	145	50	1.48E-04	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00
10/22/2010		7219	2406	140	31	8.84E-05	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00
11/15/2010		7794	2598	140	29	8.27E-05	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00
12/22/2010		8508	2777	150	21	6.42E-05	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
1/24/2011		9302	2975	170	17	5.89E-05	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00
2/25/2011		10071	3167	165	16	5.38E-05	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3293	165	5.9	1.98E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.9	3.80E-06	1.3 U	0.00E+00
4/15/2011		11241	3460	160	7.7	2.51E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	2.6	5.04E-06	1.0 U	0.00E+00
5/19/2011		12061	3665	160	6.9	2.25E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.9	3.68E-06	1.2 U	0.00E+00
6/16/2011		12722	3830	170	9.8	3.39E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.6	3.29E-06	1.2 U	0.00E+00
7/15/2011		13417	4472	170	9.3	3.22E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
8/22/2011		14324	4775	170	21	7.27E-05	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00
9/15/2011		14905	4968	170	14	4.85E-05	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	15 U	0.00E+00	4.1	8.44E-06	3.7 U	0.00E+00
10/14/2011		15598	5199	160	13	4.24E-05	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00
11/21/2011		16510	5503	170	9.2	3.19E-05	1.4 U	0.00E+00	1.4 UJ	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
12/14/2011		17010	5670	170	22	7.62E-05	3.5 U	0.00E+00	35 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	14 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00
1/19/2012		17923	5974	170	12	4.16E-05	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00
2/15/2012		18566	6189	170	24	8.31E-05	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00
3/15/2012		19262	6421	170	30	1.04E-04	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	20 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00
4/19/2012		20102	6701	160	19	6.19E-05	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	7.3 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00
5/16/2012		20748	6916	160	18	5.87E-05	0.80 U	0.00E+00	0.80 U	0.00E+00	0.80 U	0.00E+00	0.80 U	0.00E+00	3.2 U	0.00E+00	0.80 U	0.00E+00	0.80 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		21282	7094	160	25	8.15E-05	4.7 U	0.00E+00	47 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	19 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00
9/17/2012		21952	7317	160	180	5.87E-04	16 U	0.00E+00	160 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	65 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		21959	7320	160	39	1.27E-04	2.1 U	0.00E+00	21 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	8.5 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00
12/14/2012		22554	7518	170	90 J	3.12E-04	4.6 U	0.00E+00	46 U	0.00E+00	4.6 U	0.00E+00	4.6 U	0.00E+00	18 U	0.00E+00	4.6 U	0.00E+00	4.6 U	0.00E+00
12/14/2012	Dup	22554	7518	170	52 J	1.80E-04	4.5 U	0.00E+00	45 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013		22556	7519	160	36	1.17E-04	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
4/11/2013		23581	8134	160	15	4.89E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013		23583	8135	160	13	4.24E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
7/15/2013		25160	9082	160	10	3.26E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 15, 2013 to September 9, 2013																				
9/9/2013		25162	9083	160	12	3.91E-05	1.7 U	0.00E+00	17 U	0.00E+00	1.7 U	0.00E+00	1.7 U	0.00E+00	6.8 U	0.00E+00	1.7 U	0.00E+00	1.7 U	0.00E+00
11/18/2013		26825	10081	160	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/14/2009		181	60	140	270 U	0.00E+00	1600	3.69E-03	510	1.18E-03	1100 U	0.00E+00	270 U	0.00E+00	3.07E-01	18.51
12/16/2009		229	76	150	110 U	0.00E+00	540	1.33E-03	240	5.93E-04	590	7.97E-04	110 U	0.00E+00	1.65E-01	21.16
1/5/2010		707	236	140	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	590 U	0.00E+00	150 U	0.00E+00	1.29E-01	41.78
1/21/2010		1084	361	150	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	170 U	0.00E+00	42 U	0.00E+00	5.25E-02	48.37
1/21/2010	Dup	1084	361	150	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	170 U	0.00E+00	43 U	0.00E+00	5.59E-02	48.80
2/24/2010		1893	631	150	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	110 U	0.00E+00	28 U	0.00E+00	3.85E-02	58.76
3/15/2010		2345	782	140	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	83 U	0.00E+00	21 U	0.00E+00	6.53E-02	68.60
4/14/2010		2804	935	150	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	1.06E-01	84.81
5/13/2010		3495	1165	140	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	48 U	0.00E+00	12 U	0.00E+00	2.78E-02	91.21
6/21/2010		4430	1477	108	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	83 U	0.00E+00	21 U	0.00E+00	1.83E-02	96.92
7/21/2010		5058	1686	140	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	79 U	0.00E+00	20 U	0.00E+00	1.97E-02	101.05
8/23/2010		5784	1928	0	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	0.00E+00	101.05
9/23/2010		6523	2174	145	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	43 U	0.00E+00	11 U	0.00E+00	2.21E-02	106.49
10/22/2010		7219	2406	140	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	55 U	0.00E+00	14 U	0.00E+00	1.20E-02	109.27
11/15/2010		7794	2598	140	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	59 U	0.00E+00	15 U	0.00E+00	1.45E-02	112.05
12/22/2010		8508	2777	150	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	82 U	0.00E+00	20 U	0.00E+00	1.90E-02	115.44
1/24/2011		9302	2975	170	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	33 U	0.00E+00	8.3 U	0.00E+00	8.87E-03	117.20
2/25/2011		10071	3167	165	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	4.96E-03	118.15
3/18/2011		10573	3293	165	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	10	1.49E-05	5.4 U	0.00E+00	1.48E-03	118.34
4/15/2011		11241	3460	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	7.3 J,B	1.05E-05	4.1 U	0.00E+00	7.48E-04	118.47
5/19/2011		12061	3665	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	3.34E-04	118.53
6/16/2011		12722	3830	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	6.8	1.04E-05	4.7 U	0.00E+00	1.70E-03	118.81
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.7	1.18E-05	4.8 U	0.00E+00	8.96E-04	119.39
8/22/2011		14324	4775	170	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	17 U	0.00E+00	6.30E-03	121.30
9/15/2011		14905	4968	170	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	3.19E-03	121.91
10/14/2011		15598	5199	160	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	2.73E-03	122.54
11/21/2011		16510	5503	170	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 UJ	0.00E+00	5.5 U	0.00E+00	1.50E-03	123.00
12/14/2011		17010	5670	170	3.5 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	380 J	5.82E-04	58	1.10E-04	4.00E-03	123.67
1/19/2012		17923	5974	170	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	3.03E-03	124.59
2/15/2012		18566	6189	170	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	18 U	0.00E+00	6.70E-03	126.03
3/15/2012		19262	6421	170	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	6.04E-03	127.43
4/19/2012		20102	6701	160	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	7.3 U	0.00E+00	7.3 U	0.00E+00	2.13E-03	128.02
5/16/2012		20748	6916	160	0.80 U	0.00E+00	0.80 U	0.00E+00	0.80 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	1.16E-03	128.27
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		21282	7094	160	4.7 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	47 U	0.00E+00	19 U	0.00E+00	4.27E-03	129.03
9/17/2012		21952	7317	160	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	160 U	0.00E+00	65 U	0.00E+00	1.80E-02	133.04
Pulse -off period September 17, 2012 to November 15, 2012																
11/15/2012		21959	7320	160	2.1 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	21 U	0.00E+00	8.5 U	0.00E+00	2.73E-03	133.05
12/14/2012		22554	7518	170	4.6 U	0.00E+00	4.6 U	0.00E+00	4.6 U	0.00E+00	46 U	0.00E+00	18 U	0.00E+00	4.47E-03	133.94
12/14/2012	Dup	22554	7518	170	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	45 U	0.00E+00	18 U	0.00E+00	4.46E-03	-
Pulse -off period December 14, 2012 to February 26, 2013																
2/26/2013		22556	7519	160	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	2.40E-03	133.94
4/11/2013		23581	8134	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	7.55E-04	134.40
Pulse -off period April 11, 2013 to May 10, 2013																
5/10/2013		23583	8135	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	7.97E-04	134.40
7/15/2013		25160	9082	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	3.15E-04	134.70
Pulse -off period July 15, 2013 to September 9, 2013																
9/9/2013		25162	9083	160	1.7 U	0.00E+00	1.7 U	0.00E+00	1.7 U	0.00E+00	17 U	0.00E+00	6.8 U	0.00E+00	1.44E-03	134.70
11/18/2013		26825	10081	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.38E-03	136.08

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	10916	160	240	7.94E-04	1.2 U	0.00E+00	5	1.23E-05	1.2 U	0.00E+00	4.1	1.36E-05	16	3.85E-05	1.2 U	0.00E+00	18	7.40E-05
3/14/2014		29432	11645	160	72	2.38E-04	1.2 U	0.00E+00	8.7	2.14E-05	1.2 U	0.00E+00	2.4	7.94E-06	6.4	1.54E-05	1.2 U	0.00E+00	9.5	3.91E-05
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	11934	160	770	2.55E-03	2.3 U	0.00E+00	15	3.68E-05	2.3 U	0.00E+00	12	3.97E-05	86	2.07E-04	2.3 U	0.00E+00	6.9	2.84E-05
7/23/2014		31567	12926	160	130	4.30E-04	1.4 U	0.00E+00	5	1.23E-05	1.4 U	0.00E+00	1.4	4.63E-06	10	2.40E-05	1.4 U	0.00E+00	10	4.11E-05
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	13445	160	390	1.29E-03	2.4 U	0.00E+00	15	3.68E-05	2.4 U	0.00E+00	3	7.21E-06	8.4	2.02E-05	2.4 U	0.00E+00	17	6.99E-05
11/14/2014		33847	14294	160	180	5.96E-04	1.2 U	0.00E+00	5.2	1.28E-05	1.2 U	0.00E+00	3	9.93E-06	25	6.01E-05	1.2 U	0.00E+00	18	7.40E-05
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	14299	160	220	7.28E-04	1.1 U	0.00E+00	4.7	1.15E-05	1.1 U	0.00E+00	2.2	5.29E-06	18	4.33E-05	1.1 U	0.00E+00	11	4.52E-05
3/13/2015		35189	15099	160	200	6.62E-04	1.2 U	0.00E+00	4.4	1.08E-05	1.2 U	0.00E+00	3.1	1.03E-05	14	3.37E-05	1.2 U	0.00E+00	4.2	1.73E-05
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	15102	160	300	9.93E-04	1.2 U	0.00E+00	5.6	1.37E-05	1.2 U	0.00E+00	3.1	7.45E-06	10	2.40E-05	1.2 U	0.00E+00	8.1	3.33E-05
7/16/2015		36677	15992	160	180	5.96E-04	1.2 U	0.00E+00	6.5	1.60E-05	1.2 U	0.00E+00	2.3	7.61E-06	19	4.57E-05	1.2 U	0.00E+00	6	2.47E-05
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	15994	160	530	1.75E-03	2.3 U	0.00E+00	11	2.70E-05	2.3 U	0.00E+00	2.6	6.25E-06	10	2.40E-05	2.3 U	0.00E+00	18	7.40E-05
11/20/2015		38094	16842	160	64	2.12E-04	1.1 U	0.00E+00	3.2	7.86E-06	1.1 U	0.00E+00	1.2	2.89E-06	5.4	1.30E-05	1.1 U	0.00E+00	7.3	3.00E-05
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	16846	160	68	2.25E-04	1.1 U	0.00E+00	2.6	6.38E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.3	3.13E-06	1.1 U	0.00E+00	12	4.94E-05
3/18/2016		39377	17612	160	66	2.18E-04	1.1 U	0.00E+00	2.4	5.89E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3.8	9.14E-06	1.1 U	0.00E+00	2.7	1.11E-05
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	17615	160	240	7.94E-04	1.1 U	0.00E+00	110	2.70E-04	1.1 U	0.00E+00	2.7	6.49E-06	3.7	8.90E-06	1.1 U	0.00E+00	6.4	2.63E-05
7/22/2016		40915	17921	160	120	3.97E-04	1.3 U	0.00E+00	5.2	1.28E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	9.7	2.33E-05	1.3 U	0.00E+00	9.6	3.95E-05
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	17923	160	220	7.28E-04	1.2 U	0.00E+00	5.1	1.25E-05	1.2 U	0.00E+00	1.5	3.61E-06	3.9	9.38E-06	1.2 U	0.00E+00	15	6.17E-05
11/28/2016		42571	18915	160	19	6.29E-05	1.0 U	0.00E+00	1.6	3.93E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	7.2	2.96E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	18917	170	42	1.48E-04	1.1 U	0.00E+00	1.9	4.96E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	2.7	1.18E-05
3/23/2017		43840	19676	160	130	4.30E-04	1.3 U	0.00E+00	4.1	1.01E-05	1.3 U	0.00E+00	1.8	4.33E-06	9.2	2.21E-05	1.3 U	0.00E+00	2.8	1.15E-05
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	19680	160	120	3.97E-04	1.0 U	0.00E+00	3	7.36E-06	1.0 U	0.00E+00	1.1	2.65E-06	5.2	1.25E-05	1.0 U	0.00E+00	4	1.65E-05
7/20/2017		45423	20626	170	82	2.88E-04	1.1 U	0.00E+00	2.2	5.74E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3	7.67E-06	1.1 U	0.00E+00	7.2	3.15E-05
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		45432	20632	160	120	3.97E-04	1.1 U	0.00E+00	2.2	5.40E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	10	4.11E-05
11/17/2017		46966	21552	160	39	1.29E-04	1.2 U	0.00E+00	3.0	7.36E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	2.4	5.77E-06	1.2 U	0.00E+00	5.2	2.14E-05

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	10916	160	7.6	2.48E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/14/2014		29432	11645	160	8.1	2.64E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	11934	160	20	6.52E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00
7/23/2014		31567	12926	160	9	2.93E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	13445	160	14	4.56E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	3	5.81E-06	2.4 U	0.00E+00
11/14/2014		33847	14294	160	6.2	2.02E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	14299	160	6	1.96E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		35189	15099	160	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	15102	160	10	3.26E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/16/2015		36677	15992	160	12	3.91E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	15994	160	14	4.56E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00
11/20/2015		38094	16842	160	14	4.56E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	16846	160	7	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		39377	17612	160	11	3.59E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	17615	160	4.2	1.37E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
7/22/2016		40915	17921	160	9	2.93E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	17923	160	8.5	2.77E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		42571	18915	160	2.3	7.50E-06	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	18917	170	2.7	9.35E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		43840	19676	160	6.1	1.99E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	19680	160	4.5	1.47E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
7/20/2017		45423	20626	170	11.0	3.81E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		45432	20632	160	7.6	2.48E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
11/17/2017		46966	21552	160	8.1	2.64E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	2.2	4.26E-06	1.2 U	0.00E+00

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to January 15, 2014																
1/15/2014		28218	10916	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	9.57E-04	136.88
3/14/2014		29432	11645	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	3.48E-04	137.13
Pulse -off period March 14, 2014 to May 15, 2014																
5/15/2014		29914	11934	160	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.3 U	0.00E+00	2.92E-03	137.98
7/23/2014		31567	12926	160	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	5.42E-04	138.52
Pulse -off period July 23, 2014 to September 16, 2014																
9/16/2014		32432	13445	160	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	1.48E-03	139.28
11/14/2014		33847	14294	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12	1.73E-05	4.6 U	0.00E+00	7.90E-04	139.95
Pulse -off period November 14, 2014 to January 9, 2015																
1/9/2015		33855	14299	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	8.53E-04	139.96
3/13/2015		35189	15099	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	7.79E-04	140.58
Pulse -off period March 13, 2015 to May 15, 2015																
5/15/2015		35194	15102	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.10E-03	140.58
7/16/2015		36677	15992	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	7.29E-04	141.23
Pulse -off period July 16, 2015 to September 22, 2015																
9/22/2015		36680	15994	160	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.3 U	0.00E+00	1.93E-03	141.24
11/20/2015		38094	16842	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	3.11E-04	141.50
Pulse -off period November 20, 2015 to January 19, 2016																
1/19/2016		38101	16846	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.05E-04	141.50
3/18/2016		39377	17612	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.80E-04	141.72
Pulse -off period March 18, 2016 to May 19, 2016																
5/19/2016		39382	17615	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.12E-03	141.72
7/22/2016		40915	17921	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	5.02E-04	141.87
Pulse -off period July 22, 2016 to September 20, 2016																
9/20/2016		40918	17923	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	8.43E-04	141.87
11/28/2016		42571	18915	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	1.04E-04	141.98
Pulse -off period November 28, 2016 to January 24, 2017																
1/24/2017		42575	18917	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.74E-04	141.98
3/23/2017		43840	19676	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	4.98E-04	142.36
Pulse -off period March 23, 2017 to May 15, 2017																
5/15/2017		43846	19680	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	4.51E-04	142.36
7/20/2017		45423	20626	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	3.71E-04	142.71
Pulse -off period July 20, 2017 to September 14, 2017																
9/14/2017		45432	20632	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	4.68E-04	142.71
11/17/2017		46966	21552	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.94E-04	142.89

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	21554	160	63	2.08E-04	1.2 U	0.00E+00	2.9	7.12E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8	1.97E-05
3/23/2018		48239	22316	160	35	1.16E-04	1.4 U	0.00E+00	1.9	4.66E-06	1.4 U	0.00E+00	1.4 U	0.00E+00	1.5	3.61E-06	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	22318	160	51	1.69E-04	1.2 U	0.00E+00	2.2	5.40E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8	1.97E-05
7/26/2018		49825	23267	160	43	1.42E-04	1.0 U	0.00E+00	3.6	8.84E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.3	3.13E-06	1.0 U	0.00E+00	13	5.35E-05
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	24030	160	110	3.64E-04	1.3 U	0.00E+00	4.7	1.15E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	11	4.52E-05
11/19/2018		52604	24935	160	23	7.61E-05	1.3 U	0.00E+00	3.6	8.84E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.7	4.09E-06	1.3 U	0.00E+00	3.1	1.28E-05
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	24937	160	44	1.46E-04	1.2 U	0.00E+00	3.6	8.84E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.7	2.34E-05
3/21/2019		53941	25737	160	42	1.39E-04	1.3 U	0.00E+00	5.5	1.35E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.7	6.49E-06	1.3 U	0.00E+00	2.4	9.87E-06
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	25738	175	65	2.35E-04	1.3 U	0.00E+00	6.5	1.75E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.5	6.58E-06	1.3 U	0.00E+00	3	1.35E-05
7/29/2019		55529	26690	160	190	6.29E-04	1.5 U	0.00E+00	16.0	3.93E-05	1.5 U	0.00E+00	2.2	5.29E-06	5.8	1.39E-05	1.5 U	0.00E+00	12	4.94E-05
Pulse -off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	26691	180	330	1.23E-03	1.4 U	0.00E+00	13.0	3.59E-05	1.4 U	0.00E+00	2.5	6.76E-06	1.8	4.87E-06	1.4 U	0.00E+00	19	8.79E-05
12/9/2019		57186	34312	180	160	5.96E-04	1.2 U	0.00E+00	5.8	1.60E-05	1.2 U	0.00E+00	2.4	6.49E-06	2.6	7.03E-06	1.2 U	0.00E+00	9.4	4.35E-05
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	34313	180	160	5.96E-04	1.3 U	0.00E+00	5.5	1.52E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.1	5.68E-06	1.3 U	0.00E+00	6.8	3.15E-05
3/20/2020		58462	35077	180	43	1.60E-04	1.3 U	0.00E+00	3.4	9.39E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.8	4.87E-06	1.3 U	0.00E+00	3.2	1.48E-05
Pulse -off period March 20, 2020 to May 21, 2020																				
5/21/2020		58464	35078	180	67	2.49E-04	1.2 U	0.00E+00	3.9	1.08E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	3.1	1.43E-05
7/22/2020		59951	35971	160	33	1.09E-04	1.4 U	0.00E+00	3.2	7.86E-06	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	12	4.94E-05
Pulse -off period July 22, 2020 to September 29, 2020																				
9/29/2020		59957	35974	175	150	5.43E-04	1.2 U	0.00E+00	4.2	1.13E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	14	6.30E-05
11/25/2020		61195	36717	160	120	3.97E-04	1.4 U	0.00E+00	5.3	1.30E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	3.8	9.14E-06	1.4 U	0.00E+00	4.4	1.81E-05
Pulse-off period November 25, 2020 to January 21, 2021																				
1/21/2021		61197	36718	180	140	5.21E-04	1.3 U	0.00E+00	4.7	1.30E-05	1.3 U	0.00E+00	1.4	3.79E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	4.2	1.94E-05
3/26/2021		62582	37549	170	33	1.16E-04	1.1 U	0.00E+00	3.0	7.82E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1	2.81E-06	1.1 U	0.00E+00	3.7	1.62E-05
3/26/2021	Dup	-	-	170	33	1.16E-04	1.2 U	0.00E+00	3.2	8.35E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	3.1	1.35E-05

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	21554	160	5.9	1.92E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		48239	22316	160	5.8	1.89E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	22318	160	5.9	1.92E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/26/2018		49825	23267	160	11.0	3.59E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.1	2.13E-06	1.0 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	24030	160	11.0	3.59E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
11/19/2018		52604	24935	160	8.2	2.67E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	24937	160	4.1	1.34E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		53941	25737	160	6.4	2.09E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	25738	175	5.6	2.00E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
7/29/2019		55529	26690	160	7.4	2.41E-05	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	6.1 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	26691	180	8.4	3.08E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
12/9/2019		57186	34312	180	7.8	2.86E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	34313	180	5.3	1.94E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
3/20/2020		58462	35077	180	6.4	2.35E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 20, 2020 to May 21, 2020																				
5/21/2020		58464	35078	180	3.9	1.43E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/22/2020		59951	35971	160	11.0	3.59E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 22, 2020 to September 29, 2020																				
9/29/2020		59957	35974	175	6.8	2.42E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/25/2020		61195	36717	160	5.3	1.73E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.9	3.68E-06	2.9	6.63E-06
Pulse-off period November 25, 2020 to January 21, 2021																				
1/21/2021		61197	36718	180	3.9	1.43E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
3/26/2021		62582	37549	170	6.4	2.22E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/26/2021	Dup	-	-	170	6.4	2.22E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018		46970	21554	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.55E-04	142.89
3/23/2018		48239	22316	160	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.4 U	0.00E+00	1.43E-04	143.00
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018		48242	22318	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.13E-04	143.00
7/26/2018		49825	23267	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	2.46E-04	143.23
Pulse -off period July 26, 2018 to September 17, 2018																
9/17/2018		51096	24030	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	4.57E-04	143.58
11/19/2018		52604	24935	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	1.29E-04	143.70
Pulse -off period November 19, 2018 to January 21, 2019																
1/21/2019		52607	24937	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.2 U	0.00E+00	1.91E-04	143.70
3/21/2019		53941	25737	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	1.90E-04	143.85
Pulse -off period March 21, 2019 to May 24, 2019																
5/24/2019		53943	25738	175	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	2.93E-04	143.85
7/29/2019		55529	26690	160	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	6.1 U	0.00E+00	7.61E-04	144.57
Pulse -off period July 29, 2019 to September 27, 2019																
9/27/2019		55531	26691	180	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	1.39E-03	144.58
12/9/2019		57186	34312	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	6.97E-04	149.89
Pulse -off period December 9, 2019 to January 21, 2020																
1/21/2020		57189	34313	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	6.67E-04	149.89
3/20/2020		58462	35077	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	2.13E-04	150.05
Pulse -off period March 20, 2020 to May 21, 2020																
5/21/2020		58464	35078	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	2.89E-04	150.05
7/22/2020		59951	35971	160	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	2.02E-04	150.23
Pulse -off period July 22, 2020 to September 29, 2020																
9/29/2020		59957	35974	175	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	6.41E-04	150.24
11/25/2020		61195	36717	160	1.4 U	0.00E+00	2.1	5.53E-06	1.4 U	0.00E+00	67	9.65E-05	6.8	3.55E-05	6.02E-04	150.68
Pulse-off period November 25, 2020 to January 21, 2021																
1/21/2021		61197	36718	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	5.72E-04	150.68
3/26/2021		62582	37549	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.65E-04	150.82
3/26/2021	Dup	-	-	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	-	-

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		222	222	500	150000	1.55E+00	600 U	0.00E+00	1800	1.38E-02	600 U	0.00E+00	860	6.46E-03	1400	1.05E-02	600 U	0.00E+00
3/18/2011		366	366	500	41000	4.24E-01	150 U	0.00E+00	1000	7.67E-03	150 U	0.00E+00	250	1.88E-03	460	3.46E-03	150 U	0.00E+00
3/18/2011	Dup	366	366	500	40000	4.14E-01	130 U	0.00E+00	1000	7.67E-03	130 U	0.00E+00	300	2.25E-03	480	3.61E-03	130 U	0.00E+00
3/25/2011		463	463	500	22000	2.28E-01	62 U	0.00E+00	980	7.52E-03	62 U	0.00E+00	87	6.54E-04	290	2.18E-03	62 U	0.00E+00
3/30/2011		558	558	500	25000	2.59E-01	68 U	0.00E+00	820	6.29E-03	68 U	0.00E+00	190	1.43E-03	290	2.18E-03	68 U	0.00E+00
4/8/2011		764	764	500	22000	2.28E-01	80 U	0.00E+00	1000	7.67E-03	80 U	0.00E+00	170	1.28E-03	340	2.56E-03	80 U	0.00E+00
4/15/2011		924	924	500	18000	1.86E-01	84 U	0.00E+00	930	7.13E-03	84 U	0.00E+00	110	8.27E-04	280	2.10E-03	84 U	0.00E+00
4/15/2011	Dup	924	924	500	16000 J	1.65E-01	60 U	0.00E+00	820 J	6.29E-03	60 U	0.00E+00	60 UJ	0.00E+00	260 J	1.95E-03	60 U	0.00E+00
5/19/2011		1685	1685	500	11000	1.14E-01	11 U	0.00E+00	640	4.91E-03	11 U	0.00E+00	100	7.52E-04	190	1.43E-03	11 U	0.00E+00
6/16/2011		2191	2191	420	10000	8.69E-02	11 U	0.00E+00	530	3.42E-03	11 U	0.00E+00	110 J	6.94E-04	160	1.01E-03	11 U	0.00E+00
6/16/2011	Dup	2191	2191	420	9600	8.34E-02	11 U	0.00E+00	510	3.29E-03	11 U	0.00E+00	110 J	6.94E-04	160	1.01E-03	11 U	0.00E+00
7/15/2011		2750	2750	420	7600	6.60E-02	24 U	0.00E+00	290	1.87E-03	24 U	0.00E+00	58	3.66E-04	79	4.99E-04	24 U	0.00E+00
8/22/2011		3133	3133	420	9000	7.82E-02	27 U	0.00E+00	410	2.64E-03	27 U	0.00E+00	92	5.81E-04	160	1.01E-03	27 U	0.00E+00
8/22/2011	Dup	3133	3133	420	9000	7.82E-02	22 U	0.00E+00	400	2.58E-03	22 U	0.00E+00	80	5.05E-04	150	9.47E-04	22 U	0.00E+00
9/15/2011		3630	3630	420	7000	6.08E-02	22 U	0.00E+00	250	1.61E-03	22 U	0.00E+00	55	3.47E-04	97	6.12E-04	22 U	0.00E+00
10/14/2011		4226	4226	420	4400	3.82E-02	19 U	0.00E+00	180	1.16E-03	19 U	0.00E+00	59	3.72E-04	60	3.79E-04	19 U	0.00E+00
11/21/2011		5019	5019	380	3700	2.91E-02	16 U	0.00E+00	170	9.91E-04	16 U	0.00E+00	320	1.83E-03	63	3.60E-04	16 U	0.00E+00
12/14/2011		5343	5343	260	4000	2.15E-02	19 U	0.00E+00	140	5.58E-04	19 U	0.00E+00	300	1.17E-03	55	2.15E-04	19 U	0.00E+00
1/19/2012		5993	5993	0	5200	0.00E+00	24 U	0.00E+00	160	0.00E+00	24 U	0.00E+00	58	0.00E+00	38	0.00E+00	24 U	0.00E+00
2/15/2012		6368	6368	260	4200	2.26E-02	19 U	0.00E+00	100	3.99E-04	19 U	0.00E+00	700	2.74E-03	53	2.07E-04	19 U	0.00E+00
3/15/2012		6946	6946	350	4000	2.90E-02	15 U	0.00E+00	120	6.44E-04	15 U	0.00E+00	38	2.00E-04	38	2.00E-04	15 U	0.00E+00
4/19/2012		7629	7629	380	5200	4.09E-02	16 U	0.00E+00	160	9.33E-04	16 U	0.00E+00	42	2.40E-04	43	2.46E-04	16 U	0.00E+00
5/16/2012		8143	8143	420	4100	3.56E-02	15 U	0.00E+00	110	7.09E-04	15 U	0.00E+00	43	2.71E-04	40	2.53E-04	15 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																		
8/14/2012		8546	8546	420	5000	4.34E-02	16 U	0.00E+00	98	6.32E-04	16 U	0.00E+00	66	4.17E-04	27	1.70E-04	16 U	0.00E+00
9/17/2012		9033	9033	470	3700	3.60E-02	15 U	0.00E+00	140	1.01E-03	15 U	0.00E+00	15 U	0.00E+00	26	1.84E-04	15 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																		
11/15/2012		9037	9037	420	4900 J	4.26E-02	28 U	0.00E+00	74 J	4.77E-04	28 U	0.00E+00	110 J	6.94E-04	29 J	1.83E-04	28 U	0.00E+00
11/15/2012	Dup	9037	9037	420	8700	7.56E-02	24 U	0.00E+00	200 J	1.29E-03	24 U	0.00E+00	220	1.39E-03	360 J	2.27E-03	24 U	0.00E+00
12/14/2012		9439	9439	150	500	1.55E-03	1.9 U	0.00E+00	14	3.22E-05	1.9 U	0.00E+00	6.8	1.53E-05	18	4.06E-05	1.9 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																		
2/26/2013		9439	9439	0	520	0.00E+00	2.2 U	0.00E+00	23	0.00E+00	2.2 U	0.00E+00	5.7	0.00E+00	28	0.00E+00	2.2 U	0.00E+00
4/11/2013		9876	9876	340	430	3.02E-03	1.8 U	0.00E+00	26	1.36E-04	1.8 U	0.00E+00	7.1	3.63E-05	28	1.43E-04	1.8 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																		
5/10/2013		9882	9882	340	270	1.90E-03	1.1 U	0.00E+00	23	1.20E-04	1.1 U	0.00E+00	3.4	1.74E-05	30	1.53E-04	1.1 U	0.00E+00
7/15/2013		10907	10907	340	100	7.03E-04	1.1 U	0.00E+00	13	6.78E-05	1.1 U	0.00E+00	1.7	8.69E-06	14	7.15E-05	1.1 U	0.00E+00
Pulse -off period July 15, 2013 to September 9, 2013																		
9/9/2013		10914	10914	340	170	1.20E-03	1.2 U	0.00E+00	17	8.87E-05	1.2 U	0.00E+00	2.2	1.12E-05	27	1.38E-04	1.2	6.13E-06
11/18/2013		11992	11992	260	330	1.77E-03	1.1 U	0.00E+00	7.9	3.15E-05	1.1 U	0.00E+00	5.2	2.03E-05	14	5.47E-05	1.1 U	0.00E+00

See notes on last page.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		222	222	500	7200	9.26E-02	3900	3.97E-02	600 U	0.00E+00	600 U	0.00E+00	600 U	0.00E+00	600 U	0.00E+00	2400 U	0.00E+00	600 U	0.00E+00
3/18/2011		366	366	500	2900	3.73E-02	1600	1.63E-02	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	750 J	3.75E-03	150 U	0.00E+00
3/18/2011	Dup	366	366	500	3000	3.86E-02	1600	1.63E-02	130 UJ	0.00E+00	130 U	0.00E+00	130 U	0.00E+00	130 U	0.00E+00	1100 J	5.50E-03	130 U	0.00E+00
3/25/2011		463	463	500	3200	4.11E-02	970	9.88E-03	62 U	0.00E+00	61 NJ	4.02E-04	62 U	0.00E+00	62 U	0.00E+00	610	3.05E-03	62 U	0.00E+00
3/30/2011		558	558	500	2500	3.21E-02	1000	1.02E-02	68 U	0.00E+00	68 U	0.00E+00	68 U	0.00E+00	68 U	0.00E+00	470	2.35E-03	68 U	0.00E+00
4/8/2011		764	764	500	2400	3.09E-02	1000	1.02E-02	80 U	0.00E+00	80 U	0.00E+00	80 U	0.00E+00	80 U	0.00E+00	430	2.15E-03	80 U	0.00E+00
4/15/2011		924	924	500	1700	2.19E-02	920	9.37E-03	84 U	0.00E+00	84 U	0.00E+00	84 U	0.00E+00	84 U	0.00E+00	340 U	0.00E+00	84 U	0.00E+00
4/15/2011	Dup	924	924	500	1500 J	1.93E-02	830 J	8.45E-03	60 U	0.00E+00	60 U	0.00E+00	60 U	0.00E+00	60 U	0.00E+00	260 J	1.30E-03	60 U	0.00E+00
5/19/2011		1685	1685	500	1400	1.80E-02	530	5.40E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	67	3.35E-04	26	1.57E-04
6/16/2011		2191	2191	420	1000	1.08E-02	410	3.51E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	46 U	0.00E+00	14	7.12E-05
6/16/2011	Dup	2191	2191	420	960	1.04E-02	400	3.42E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	45 U	0.00E+00	12	6.10E-05
7/15/2011		2750	2750	420	570	6.16E-03	250	2.14E-03	24 U	0.00E+00	28	1.55E-04	24 U	0.00E+00	24 U	0.00E+00	95 U	0.00E+00	24 U	0.00E+00
8/22/2011		3133	3133	420	920	9.93E-03	380	3.25E-03	27 U	0.00E+00	27 U	0.00E+00	27 U	0.00E+00	27 U	0.00E+00	110 U	0.00E+00	27 U	0.00E+00
8/22/2011	Dup	3133	3133	420	940	1.02E-02	360	3.08E-03	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	90 U	0.00E+00	22 U	0.00E+00
9/15/2011		3630	3630	420	660	7.13E-03	270	2.31E-03	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	90 U	0.00E+00	22 U	0.00E+00
10/14/2011		4226	4226	420	390	4.21E-03	180	1.54E-03	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	77 U	0.00E+00	19 U	0.00E+00
11/21/2011		5019	5019	380	360	3.52E-03	180	1.39E-03	16 U	0.00E+00	160 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	63 U	0.00E+00	16 U	0.00E+00
12/14/2011		5343	5343	260	360	2.41E-03	160	8.47E-04	19 U	0.00E+00	190 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	74 U	0.00E+00	19 U	0.00E+00
1/19/2012		5993	5993	0	320	0.00E+00	180	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	97 U	0.00E+00	24 U	0.00E+00
2/15/2012		6368	6368	260	280	1.87E-03	150	7.94E-04	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	78 U	0.00E+00	19 U	0.00E+00
3/15/2012		6946	6946	350	240	2.16E-03	140	9.98E-04	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	58 U	0.00E+00	15 U	0.00E+00
4/19/2012		7629	7629	380	400	3.91E-03	180	1.39E-03	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	62 U	0.00E+00	16 U	0.00E+00
5/16/2012		8143	8143	420	320	3.46E-03	150	1.28E-03	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	61 U	0.00E+00	15 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		8546	8546	420	490	5.29E-03	180	1.54E-03	16 U	0.00E+00	160 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	63 U	0.00E+00	16 U	0.00E+00
9/17/2012		9033	9033	470	410	4.95E-03	220	2.11E-03	15 U	0.00E+00	150 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	61 U	0.00E+00	15 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		9037	9037	420	260 J	2.81E-03	150 J	1.28E-03	28 U	0.00E+00	280 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	110 U	0.00E+00	28 U	0.00E+00
11/15/2012	Dup	9037	9037	420	1200 J	1.30E-02	390 J	3.34E-03	24 U	0.00E+00	240 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	94 U	0.00E+00	24 U	0.00E+00
12/14/2012		9439	9439	150	62	2.39E-04	28	8.56E-05	1.9 U	0.00E+00	19 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	7.5 U	0.00E+00	1.9 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013		9439	9439	0	130	0.00E+00	27	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	8.7 U	0.00E+00	2.2 U	0.00E+00
4/11/2013		9876	9876	340	98	8.57E-04	25	1.73E-04	1.8 U	0.00E+00	18 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	7.1 U	0.00E+00	1.8 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013		9882	9882	340	120	1.05E-03	23	1.59E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
7/15/2013		10907	10907	340	180	1.57E-03	30	2.08E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period July 15, 2013 to September 9, 2013																				
9/9/2013		10914	10914	340	350	3.06E-03	50	3.46E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
11/18/2013		11992	11992	260	50	3.34E-04	13	6.89E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00

See notes on last page.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
3/11/2011		222	222	500	600 U	0.00E+00	600 U	0.00E+00	710	5.84E-03	600 U	0.00E+00	2400 U	0.00E+00	2400 U	0.00E+00	1.72E+00	381.87
3/18/2011		366	366	500	620 J	4.43E-03	150 U	0.00E+00	240	1.98E-03	200	1.65E-03	1500 J	6.75E-03	590 U	0.00E+00	5.09E-01	453.50
3/18/2011	Dup	366	366	500	380 J	2.71E-03	130 U	0.00E+00	250	2.06E-03	240	1.98E-03	690 J	3.11E-03	540 U	0.00E+00	4.97E-01	453.50
3/25/2011		463	463	500	140	1.00E-03	62 U	0.00E+00	78	6.42E-04	67	5.51E-04	250 U	0.00E+00	250 U	0.00E+00	2.95E-01	482.07
3/30/2011		558	558	500	190	1.36E-03	68 U	0.00E+00	250	2.06E-03	140	1.15E-03	270 U	0.00E+00	270 U	0.00E+00	3.18E-01	512.25
4/8/2011		764	764	500	200	1.43E-03	120	9.88E-04	560	4.61E-03	260	2.14E-03	320 U	0.00E+00	320 U	0.00E+00	2.91E-01	572.27
4/15/2011		924	924	500	170	1.21E-03	110	9.05E-04	540	4.44E-03	260	2.14E-03	340 U	0.00E+00	340 U	0.00E+00	2.36E-01	610.05
4/15/2011	Dup	924	924	500	140 J	1.00E-03	99 J	8.15E-04	540 J	4.44E-03	230 J	1.89E-03	240 J,B	1.08E-03	240 U	0.00E+00	2.12E-01	610.05
5/19/2011		1685	1685	500	100	7.14E-04	140	1.15E-03	920	7.57E-03	420	3.46E-03	81	3.65E-04	43 U	0.00E+00	1.58E-01	730.28
6/16/2011		2191	2191	420	51	3.06E-04	83	5.74E-04	600	4.15E-03	280	1.94E-03	46 J,B	1.74E-04	46 U	0.00E+00	1.14E-01	753.86
6/16/2011	Dup	2191	2191	420	53	3.18E-04	78	5.39E-04	580	4.01E-03	270	1.87E-03	69 J,B	2.61E-04	45 U	0.00E+00	1.09E-01	785.55
7/15/2011		2750	2750	420	28	1.68E-04	41	2.83E-04	270	1.87E-03	120	8.30E-04	180	6.81E-04	95 U	0.00E+00	8.10E-02	830.85
8/22/2011		3133	3133	420	35 J	2.10E-04	59 J	4.08E-04	340	2.35E-03	140	9.68E-04	110 U	0.00E+00	110 U	0.00E+00	9.95E-02	868.97
8/22/2011	Dup	3133	3133	420	22 UJ	0.00E+00	30 J	2.07E-04	310	2.14E-03	130	8.99E-04	90 U	0.00E+00	90 U	0.00E+00	9.87E-02	868.65
9/15/2011		3630	3630	420	22 U	0.00E+00	31	2.14E-04	340	2.35E-03	130	8.99E-04	90 U	0.00E+00	90 U	0.00E+00	7.63E-02	906.88
10/14/2011		4226	4226	420	38	2.28E-04	19 U	0.00E+00	170	1.18E-03	70	4.84E-04	77 U	0.00E+00	77 U	0.00E+00	4.78E-02	935.35
11/21/2011		5019	5019	380	16 U	0.00E+00	17	1.06E-04	220	1.38E-03	100	6.25E-04	160 U	0.00E+00	63 U	0.00E+00	3.93E-02	966.50
12/14/2011		5343	5343	260	19 U	0.00E+00	19 U	0.00E+00	76	3.25E-04	55	2.35E-04	190 UJ	0.00E+00	74 U	0.00E+00	2.73E-02	975.34
1/19/2012		5993	5993	0	36	0.00E+00	24 U	0.00E+00	78	0.00E+00	50	0.00E+00	97 U	0.00E+00	97 U	0.00E+00	0.00E+00	975.34
2/15/2012		6368	6368	260	19 U	0.00E+00	19 U	0.00E+00	58	2.48E-04	40	1.71E-04	300	7.02E-04	78 U	0.00E+00	2.97E-02	986.48
3/15/2012		6946	6946	350	15 U	0.00E+00	15 U	0.00E+00	44	2.53E-04	31	1.79E-04	58 U	0.00E+00	58 U	0.00E+00	3.36E-02	1005.89
4/19/2012		7629	7629	380	16 U	0.00E+00	16 U	0.00E+00	48	3.00E-04	33	2.06E-04	62 U	0.00E+00	62 U	0.00E+00	4.81E-02	1038.74
5/16/2012		8143	8143	420	15 U	0.00E+00	15 U	0.00E+00	28	1.94E-04	23	1.59E-04	61 U	0.00E+00	61 U	0.00E+00	4.19E-02	1060.30
Pulse -off period June 1, 2012 to August 14, 2012																		
8/14/2012		8546	8546	420	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	160 U	0.00E+00	63 U	0.00E+00	5.15E-02	1081.05
9/17/2012		9033	9033	470	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	150 U	0.00E+00	61 U	0.00E+00	4.42E-02	1102.58
Pulse -off period September 17, 2012 to November 15, 2012																		
11/15/2012		9037	9037	420	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	280 U	0.00E+00	110 U	0.00E+00	4.80E-02	1102.78
11/15/2012	Dup	9037	9037	420	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	240 U	0.00E+00	94 U	0.00E+00	9.68E-02	-
12/14/2012		9439	9439	150	1.9 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	19 U	0.00E+00	7.5 U	0.00E+00	1.96E-03	1103.57
Pulse -off period December 14, 2012 to February 26, 2013																		
2/26/2013		9439	9439	0	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	8.7 U	0.00E+00	0.00E+00	1103.57
4/11/2013		9876	9876	340	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	18 U	0.00E+00	7.1 U	0.00E+00	4.37E-03	1105.48
Pulse -off period April 11, 2013 to May 10, 2013																		
5/10/2013		9882	9882	340	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	3.40E-03	1105.50
7/15/2013		10907	10907	340	19	9.23E-05	1.2	6.72E-06	2.2	1.23E-05	1.1 U	0.00E+00	24	7.35E-05	4.9	1.86E-05	2.84E-03	1108.40
Pulse -off period July 15, 2013 to September 9, 2013																		
9/9/2013		10914	10914	340	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	14	4.29E-05	4.6 U	0.00E+00	4.89E-03	1108.44
11/18/2013		11992	11992	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	2.28E-03	1110.90

See notes on last page.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to March 14, 2014																		
1/15/2014		11997	11997	320	200	1.32E-03	1.2 U	0.00E+00	5.5	2.70E-05	1.2 U	0.00E+00	3.3	1.59E-05	9.6	4.62E-05	1.2 U	0.00E+00
3/14/2014		12980	12980	180	430	1.60E-03	2.6 U	0.00E+00	6.2	1.71E-05	2.6 U	0.00E+00	8.2	2.22E-05	18	4.87E-05	2.6 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																		
5/15/2014		12986	12986	180	470	1.75E-03	1.1 U	0.00E+00	10	2.76E-05	1.1 U	0.00E+00	6.9	1.87E-05	22	5.95E-05	1.1 U	0.00E+00
7/23/2014		14627	14627	300	14	8.69E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.6	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																		
9/16/2014		14634	14628	320	150	9.93E-04	1.2 U	0.00E+00	9	4.42E-05	1.2 U	0.00E+00	1.7	8.18E-06	15	7.21E-05	1.2 U	0.00E+00
11/14/2014		16008	16008	320	220	1.46E-03	0.96 U	0.00E+00	5	2.45E-05	0.96 U	0.00E+00	3.6	1.73E-05	8.9	4.28E-05	0.96 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																		
1/9/2015		16015	16015	260	150	8.07E-04	1.1 U	0.00E+00	4.1	1.64E-05	1.1 U	0.00E+00	2.2	8.60E-06	7.4	2.89E-05	1.1 U	0.00E+00
3/13/2015		17178	17178	220	190	8.65E-04	1.2 U	0.00E+00	4.9	1.65E-05	1.2 U	0.00E+00	3.1	1.03E-05	5.5	1.82E-05	1.2 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																		
5/15/2015		17186	17186	320	180	1.19E-03	2.6 U	0.00E+00	4.3	2.11E-05	2.6 U	0.00E+00	2.8	1.35E-05	5.2	2.50E-05	2.6 U	0.00E+00
7/16/2015		18436	18436	310	270	1.73E-03	1.2 U	0.00E+00	7.7	3.66E-05	1.2 U	0.00E+00	4	1.86E-05	13	6.06E-05	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																		
9/22/2015		18439	18439	300	200	1.24E-03	1.1 U	0.00E+00	6.3	2.90E-05	1.1 U	0.00E+00	2.1	9.47E-06	11	4.96E-05	1.1 U	0.00E+00
11/20/2015		19832	19832	530	170	1.86E-03	1.2 U	0.00E+00	7	5.69E-05	1.2 U	0.00E+00	2.6	2.07E-05	12	9.56E-05	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																		
1/19/2016		19841	19841	380	39	3.07E-04	1.1 U	0.00E+00	1.7	9.91E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3.4	1.94E-05	1.1 U	0.00E+00
3/18/2016		21088	21088	420	88	7.64E-04	1.1 U	0.00E+00	5	3.22E-05	1.1 U	0.00E+00	1.2	7.57E-06	6.8	4.29E-05	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																		
5/19/2016		21092	21092	180	9.3	3.46E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
5/19/2016	Dup	21092	21092	180	14	5.21E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	4.33E-06	1.1 U	0.00E+00
7/22/2016		22610	22610	230	33	1.57E-04	1.0 U	0.00E+00	1.9	6.70E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	3.5	1.21E-05	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																		
9/20/2016*		22611	22611	180	33	1.23E-04	1.0 U	0.00E+00	1.9	5.25E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	3.5	9.47E-06	1.0 U	0.00E+00
11/28/2016		24162	24162	100	17	3.52E-05	1.1 U	0.00E+00	1.7	2.61E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.9	2.86E-06	1.1 U	0.00E+00

See notes on last page.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to March 14, 2014																				
1/15/2014		11997	11997	320	51	4.20E-04	11	7.17E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00
3/14/2014		12980	12980	180	7.8	3.61E-05	14	5.13E-05	2.6 U	0.00E+00	26 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	10 U	0.00E+00	2.6 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		12986	12986	180	38	1.76E-04	17	6.23E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00
7/23/2014		14627	14627	300	15	1.16E-04	2.4	1.47E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		14634	14628	320	200	1.65E-03	39	2.54E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	2	7.75E-06
11/14/2014		16008	16008	320	69	5.68E-04	12	7.82E-05	0.96 U	0.00E+00	9.6 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	3.8 U	0.00E+00	0.96 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		16015	16015	260	50	3.34E-04	11	5.83E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		17178	17178	220	27	1.53E-04	6.9	3.09E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		17186	17186	320	45	3.70E-04	9.8	6.39E-05	2.6 U	0.00E+00	26 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	10 U	0.00E+00	2.6 U	0.00E+00
7/16/2015		18436	18436	310	130	1.04E-03	27	1.71E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		18439	18439	300	200	1.54E-03	36	2.20E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
11/20/2015		19832	19832	530	120	1.64E-03	23	2.48E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		19841	19841	380	62	6.06E-04	11	8.51E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		21088	21088	420	52	5.62E-04	11	9.41E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		21092	21092	180	14	6.48E-05	2.4	8.80E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
5/19/2016	Dup	21092	21092	180	21	9.72E-05	3.9	1.43E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
7/22/2016		22610	22610	230	39	2.31E-04	7.5	3.51E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016*		22611	22611	180	39	1.80E-04	7.5	2.75E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00
11/28/2016		24162	24162	100	14	3.60E-05	2.8	5.70E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00

See notes on last page.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to March 14, 2014																		
1/15/2014		11997	11997	320	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.90E-03	1110.91
3/14/2014		12980	12980	180	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	26 U	0.00E+00	10 U	0.00E+00	1.78E-03	1112.65
Pulse -off period March 14, 2014 to May 15, 2014																		
5/15/2014		12986	12986	180	3.9	1.00E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.10E-03	1112.67
7/23/2014		14627	14627	300	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	2.17E-04	1113.02
Pulse -off period July 23, 2014 to September 16, 2014																		
9/16/2014		14634	14628	320	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	21	6.05E-05	4.9 U	0.00E+00	3.09E-03	1113.03
11/14/2014		16008	16008	320	0.96 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	9.6 U	0.00E+00	3.8 U	0.00E+00	2.19E-03	1116.04
Pulse -off period November 14, 2014 to January 9, 2015																		
1/9/2015		16015	16015	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	1.25E-03	1116.05
3/13/2015		17178	17178	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.09E-03	1117.32
Pulse -off period March 13, 2015 to May 15, 2015																		
5/15/2015		17186	17186	320	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	26 U	0.00E+00	10 U	0.00E+00	1.68E-03	1117.34
7/16/2015		18436	18436	310	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	3.05E-03	1121.16
Pulse -off period July 16, 2015 to September 22, 2015																		
9/22/2015		18439	18439	300	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.09E-03	1121.16
11/20/2015		19832	19832	530	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	3.92E-03	1126.63
Pulse -off period November 20, 2015 to January 19, 2016																		
1/19/2016		19841	19841	380	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.03E-03	1126.63
3/18/2016		21088	21088	420	2.7	1.62E-05	1.1 U	0.00E+00	9.7	6.71E-05	4.1	2.83E-05	11 U	0.00E+00	4.5 U	0.00E+00	1.61E-03	1128.65
Pulse -off period March 18, 2016 to May 19, 2016																		
5/19/2016		21092	21092	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.08E-04	1128.65
5/19/2016	Dup	21092	21092	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.68E-04	-
7/22/2016		22610	22610	230	1.2	3.94E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	18	3.73E-05	4.2 U	0.00E+00	4.83E-04	1129.38
Pulse -off period July 22, 2016 to September 20, 2016																		
9/20/2016*		22611	22611	180	1.2	3.09E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	18	2.92E-05	4.2 U	0.00E+00	3.78E-04	1129.38
11/28/2016		24162	24162	100	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	8.23E-05	1129.51

See notes on last page.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 28, 2016 to January 24, 2017																		
1/24/2017		24166	24166	220	19	8.65E-05	1.1 U	0.00E+00	1.5	5.06E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.5	4.96E-06	1.1 U	0.00E+00
1/24/2017	Dup	24166	24166	220	22	1.00E-04	1.1 U	0.00E+00	1.7	5.74E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.5	4.96E-06	1.1 U	0.00E+00
3/23/2017		25427	25427	190	55	2.16E-04	1.2 U	0.00E+00	4.1	1.20E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.4	9.71E-06	1.2 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																		
5/15/2017		25452	25452	180	25	9.31E-05	1.2 U	0.00E+00	1.6	4.42E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	2	5.41E-06	1.2 U	0.00E+00
7/20/2017		26992	26992	410	100	8.48E-04	2.2 U	0.00E+00	5.6	3.52E-05	2.2 U	0.00E+00	2.2 U	0.00E+00	9.4	5.79E-05	2.2 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																		
9/14/2017		27001	27001	420	120	1.04E-03	1.0 U	0.00E+00	5	3.22E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	6.4	4.04E-05	1.0 U	0.00E+00
9/14/2017	Dup	-	-	-	120	-	1.0 U	-	5.1	-	1.0 U	-	1.0 U	-	6.6	-	1.0 U	-
11/17/2017		28486	28486	480	78	7.74E-04	1.1 U	0.00E+00	4.3	3.17E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	4.9	3.54E-05	1.1 U	0.00E+00
Pulse -off period November 17, 2017 to January 22, 2018																		
1/22/2018		28489	28489	460	63	5.99E-04	1.2 U	0.00E+00	2.5	1.76E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.0	2.07E-05	1.3	8.99E-06
3/23/2018		29726	29726	440	53	4.82E-04	1.3 U	0.00E+00	5.5	3.71E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	3.8	2.51E-05	1.3 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																		
5/21/2018		29731	29731	410	39	3.31E-04	1.3 U	0.00E+00	3	1.89E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.5	1.54E-05	1.3 U	0.00E+00
5/21/2018	Dup	-	-	-	40	-	1.2 U	-	3.2	-	1.2 U	-	1.2 U	-	2.4	-	1.2 U	-
7/26/2018		30783	30783	410	55	4.66E-04	1.3 U	0.00E+00	5.6	3.52E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	8.6	5.30E-05	1.3 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																		
9/17/2018		30791	30791	360	95	7.07E-04	1.3 U	0.00E+00	5.5	3.04E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	6.7	3.63E-05	1.3 U	0.00E+00
11/19/2018		32280	32280	410	25	2.12E-04	1.3 U	0.00E+00	2.8	1.76E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	3.3	2.03E-05	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																		
1/21/2019		32284	32284	280	16	9.27E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		33265	33265	300	32	1.99E-04	1.3 U	0.00E+00	3.6	1.66E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	4.0	1.80E-05	1.3 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																		
5/24/2019		33269	33269	260	35	1.88E-04	1.4 U	0.00E+00	2.7	1.08E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	2.9	1.13E-05	1.4 U	0.00E+00
7/29/2019		34775	34775	200	13	5.38E-05	1.4 U	0.00E+00	1.5	4.60E-06	1.4 U	0.00E+00	1.4 U	0.00E+00	2.1	6.31E-06	1.4 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																		
9/27/2019		34779	34779	100	20	4.14E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
12/9/2019		36495	36495	180	9.3	3.46E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																		
1/21/2020		36523	36523	260	8.2	4.41E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
3/20/2020		37827	37827	100	24	4.96E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period March 20, 2020 to May 21, 2020																		
5/21/2020		37827	37827	320	18	1.19E-04	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2	5.77E-06
7/22/2020		39172	39172	320	19	1.26E-04	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	2.7	1.30E-05	1.4 U	0.00E+00
Pulse -off period July 22, 2020 to September 29, 2020																		
9/29/2020		39178	39178	320	29	1.92E-04	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
11/25/2020		40065	40065	320	22	1.46E-04	1.4 U	0.00E+00	1.6	7.86E-06	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	7.6	3.66E-05
Pulse-off period November 25, 2020 to January 21, 2021																		
1/21/2021		40066	40066	140	15	4.34E-05	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
3/26/2021		41340	41340	220	5.2	2.37E-05	1.2 U	0.00E+00	1.3	4.39E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		24166	24166	220	18	1.02E-04	4	1.79E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
1/24/2017	Dup	24166	24166	220	19	1.07E-04	4	1.79E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		25427	25427	190	20	9.77E-05	4.5	1.74E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		25452	25452	180	21	9.72E-05	4.1	1.50E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
7/20/2017		26992	26992	410	150	1.58E-03	28	2.34E-04	2.2 U	0.00E+00	22 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	8.6 U	0.00E+00	2.2 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		27001	27001	420	240	2.59E-03	46	3.94E-04	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00
9/14/2017	Dup	-	-	-	240	-	46	-	1.0 U	-	11 U	-	1.0 U	-	1.0 U	-	4.5 U	-	1.0 U	-
11/17/2017		28486	28486	480	69	8.52E-04	16	1.56E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		28489	28489	460	45	5.32E-04	9.9	9.28E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		29726	29726	440	39	4.41E-04	8.3	7.44E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		29731	29731	410	45	4.74E-04	9	7.52E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00
5/21/2018	Dup	-	-	-	47	-	9.3	-	1.2 U	-	12 U	-	1.2 U	-	1.2 U	-	4.9 U	-	1.2 U	-
7/26/2018		30783	30783	410	200	2.11E-03	43	3.59E-04	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		30791	30791	360	220	2.04E-03	47	3.45E-04	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00
11/19/2018		32280	32280	410	41	4.32E-04	8.7	7.27E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		32284	32284	280	23	1.66E-04	4.6	2.62E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		33265	33265	300	20	1.54E-04	4.8	2.93E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		33269	33269	260	27	1.80E-04	6.2	3.28E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00
7/29/2019		34775	34775	200	24	1.23E-04	4.3	1.75E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																				
9/27/2019		34779	34779	100	42	1.08E-04	7.3	1.49E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.7 U	0.00E+00	1.4 U	0.00E+00
12/9/2019		36495	36495	180	8.1	3.75E-05	1.6	5.87E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		36523	36523	260	6.5	4.35E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	14	4.41E-05
3/20/2020		37827	37827	100	6.4	1.65E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period March 20, 2020 to May 21, 2020																				
5/21/2020		37827	37827	320	8.7	7.16E-05	1.8	1.17E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00
7/22/2020		39172	39172	320	36	2.96E-04	7.9	5.15E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 22, 2020 to September 29, 2020																				
9/29/2020		39178	39178	320	54	4.44E-04	10	6.52E-05	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	6.0 U	0.00E+00	1.5 U	0.00E+00
11/25/2020		40065	40065	320	9.8	8.06E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00
Pulse-off period November 25, 2020 to January 21, 2021																				
1/21/2021		40066	40066	140	10	3.60E-05	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	6.1 U	0.00E+00	1.5 U	0.00E+00
3/26/2021		41340	41340	220	7.8	4.41E-05	1.4	6.27E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 28, 2016 to January 24, 2017																		
1/24/2017		24166	24166	220	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.16E-04	1129.51
1/24/2017	Dup	24166	24166	220	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.36E-04	-
3/23/2017		25427	25427	190	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.53E-04	1129.95
Pulse -off period March 23, 2017 to May 15, 2017																		
5/15/2017		25452	25452	180	2.1	5.40E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	2.21E-04	1129.96
7/20/2017		26992	26992	410	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	8.6 U	0.00E+00	2.76E-03	1134.20
Pulse -off period July 20, 2017 to September 14, 2017																		
9/14/2017		27001	27001	420	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.1 U	0.00E+00	4.10E-03	1134.24
9/14/2017	Dup	-	-	-	1.0 U	-	1.0 U	-	1.0 U	-	1.0 U	-	11 U	-	4.5 U	-	-	-
11/17/2017		28486	28486	480	1.6	1.10E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.86E-03	1137.00
Pulse -off period November 17, 2017 to January 22, 2018																		
1/22/2018		28489	28489	460	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	1.27E-03	1137.01
3/23/2018		29726	29726	440	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	1.06E-03	1138.32
Pulse -off period March 23, 2018 to May 21, 2018																		
5/21/2018		29731	29731	410	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	9.15E-04	1138.32
5/21/2018	Dup	-	-	-	1.2	-	1.2 U	-	1.2 U	-	1.2 U	-	12 U	-	4.9 U	-	-	-
7/26/2018		30783	30783	410	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	3.02E-03	1141.50
Pulse -off period July 26, 2018 to September 17, 2018																		
9/17/2018		30791	30791	360	1.4	7.20E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	3.16E-03	1141.53
11/19/2018		32280	32280	410	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	7.55E-04	1142.65
Pulse -off period November 19, 2018 to January 21, 2019																		
1/21/2019		32284	32284	280	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.84E-04	1142.65
3/21/2019		33265	33265	300	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	4.17E-04	1143.06
Pulse -off period March 21, 2019 to May 24, 2019																		
5/24/2019		33269	33269	260	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.8 U	0.00E+00	4.24E-04	1143.06
7/29/2019		34775	34775	200	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	46	8.28E-05	5.8 U	0.00E+00	2.88E-04	1143.50
Pulse -off period July 29, 2019 to September 27, 2019																		
9/27/2019		34779	34779	100	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.7 U	0.00E+00	1.64E-04	1143.50
12/9/2019		36495	36495	180	1.2 U	0.00E+00	1.2 U	0.00E+00	2.8	8.30E-06	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	8.63E-05	1143.65
Pulse -off period December 9, 2019 to January 21, 2020																		
1/21/2020		36523	36523	260	50	1.86E-04	9.2	3.94E-05	20	8.56E-05	7.4	3.17E-05	15	3.51E-05	5.6 U	0.00E+00	5.09E-04	1143.66
3/20/2020		37827	37827	100	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.8 U	0.00E+00	6.61E-05	1143.75
Pulse -off period March 20, 2020 to May 21, 2020																		
5/21/2020		37827	37827	320	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	2.08E-04	1143.75
7/22/2020		39172	39172	320	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	4.86E-04	1144.40
Pulse -off period July 22, 2020 to September 29, 2020																		
9/29/2020		39178	39178	320	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	6.0 U	0.00E+00	7.01E-04	1144.41
11/25/2020		40065	40065	320	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	30	8.64E-05	5.6 U	0.00E+00	3.57E-04	1144.72
Pulse-off period November 25, 2020 to January 21, 2021																		
1/21/2021		40066	40066	140	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	6.1 U	0.00E+00	7.94E-05	1144.72
3/26/2021		41340	41340	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 u	0.00E+00	4.6 U	0.00E+00	7.84E-05	1144.82

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		218	218	360	28000	2.08E-01	100 U	0.00E+00	2400	1.33E-02	100 U	0.00E+00	740	4.00E-03	10000	5.41E-02	100 U	0.00E+00	5900	5.46E-02
3/18/2011		362	362	360	13000	9.68E-02	52 U	0.00E+00	1100	6.08E-03	52 U	0.00E+00	280	1.52E-03	4800	2.60E-02	52 U	0.00E+00	6800	6.29E-02
3/25/2011		459	459	360	8900	6.63E-02	30 U	0.00E+00	650	3.59E-03	30 U	0.00E+00	200	1.08E-03	2600	1.41E-02	30 U	0.00E+00	5400	5.00E-02
3/30/2011		553	553	360	4600	3.43E-02	13 U	0.00E+00	310	1.71E-03	13 U	0.00E+00	100	5.41E-04	1300	7.03E-03	13 U	0.00E+00	4000	3.70E-02
4/8/2011		759	759	360	4600	3.43E-02	20 U	0.00E+00	330	1.82E-03	20 U	0.00E+00	95	5.14E-04	1100	5.95E-03	20 U	0.00E+00	5700	5.28E-02
4/15/2011		920	920	360	4600	3.43E-02	20 U	0.00E+00	370	2.04E-03	20 U	0.00E+00	69	3.73E-04	980	5.30E-03	20 U	0.00E+00	4600	4.26E-02
5/19/2011		1681	1681	330	2800	1.91E-02	12 U	0.00E+00	250	1.27E-03	12 U	0.00E+00	34	1.69E-04	730	3.62E-03	12 U	0.00E+00	7800	6.62E-02
6/16/2011		2187	2187	300	1800	1.12E-02	7.8 U	0.00E+00	170	7.82E-04	7.8 U	0.00E+00	23 J	1.04E-04	520	2.34E-03	7.8 U	0.00E+00	2400	1.85E-02
7/15/2011		2745	2745	220	2400	1.09E-02	7.6 U	0.00E+00	180	6.08E-04	7.6 U	0.00E+00	27	8.93E-05	840	2.78E-03	7.6 U	0.00E+00	2700	1.53E-02
8/22/2011		3129	3129	260	1700	9.14E-03	5.0 U	0.00E+00	150	5.98E-04	5.0 U	0.00E+00	21	8.21E-05	690	2.70E-03	5.0 U	0.00E+00	2000	1.34E-02
9/15/2011		3626	3626	220	1400	6.37E-03	4.5 U	0.00E+00	69	2.33E-04	4.5 U	0.00E+00	22	7.27E-05	380	1.26E-03	4.5 U	0.00E+00	1100	6.22E-03
10/14/2011		4222	4222	220	980	4.46E-03	3.9 U	0.00E+00	57	1.92E-04	3.9 U	0.00E+00	19	6.28E-05	310	1.03E-03	3.9 U	0.00E+00	760	4.30E-03
11/21/2011		5015	5015	200	690	2.85E-03	3.2 U	0.00E+00	55	1.69E-04	3.2 U	0.00E+00	45	1.35E-04	290	8.72E-04	3.2 U	0.00E+00	380	1.95E-03
11/21/2011	Dup	5015	5015	200	700	2.90E-03	3.1 U	0.00E+00	57	1.75E-04	3.1 U	0.00E+00	59	1.77E-04	300	9.02E-04	3.1 U	0.00E+00	390	2.01E-03
12/14/2011		5339	5339	200	890	3.68E-03	3.2 U	0.00E+00	62	1.90E-04	3.2 U	0.00E+00	64	1.92E-04	270	8.12E-04	3.2 U	0.00E+00	350	1.80E-03
1/19/2012		5958	5958	0	540	0.00E+00	2.8 U	0.00E+00	17	0.00E+00	2.8 U	0.00E+00	9.9	0.00E+00	69	0.00E+00	2.8 U	0.00E+00	78	0.00E+00
2/15/2012		6364	6364	0	990	0.00E+00	4.1 U	0.00E+00	24	0.00E+00	4.1 U	0.00E+00	100	0.00E+00	230	0.00E+00	4.1 U	0.00E+00	150	0.00E+00
3/15/2012		6942	6942	0	1100	0.00E+00	3.8 U	0.00E+00	43	0.00E+00	3.8 U	0.00E+00	20	0.00E+00	220	0.00E+00	3.8 U	0.00E+00	140	0.00E+00
4/19/2012		7625	7625	80	650	1.08E-03	2.4 U	0.00E+00	28	3.44E-05	2.4 U	0.00E+00	8.1	9.74E-06	130	1.56E-04	2.4 U	0.00E+00	100	2.06E-04
5/16/2012		8138	8138	200	650	2.69E-03	2.0 U	0.00E+00	28	8.59E-05	2.0 U	0.00E+00	8.9	2.68E-05	110	3.31E-04	2.0 U	0.00E+00	130	6.68E-04
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		8541	8541	360	710	3.23E-03	2.5 U	0.00E+00	44	1.49E-04	2.5 U	0.00E+00	11	3.64E-05	110	3.64E-04	2.5 U	0.00E+00	540	3.05E-03
9/17/2012		9029	9029	360	2000	8.27E-03	8.0 U	0.00E+00	29	8.90E-05	8.0 U	0.00E+00	19	5.71E-05	42	1.26E-04	8.0 U	0.00E+00	190	9.77E-04
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		9033	9033	220	1200	5.46E-03	4.4 U	0.00E+00	19	6.41E-05	4.4 U	0.00E+00	33	1.09E-04	8	2.65E-05	4.4 U	0.00E+00	55	3.11E-04
12/14/2012		9436	9436	200	1200	4.96E-03	4.8 U	0.00E+00	35	1.07E-04	4.8 U	0.00E+00	16	4.81E-05	37	1.11E-04	4.8 U	0.00E+00	61	3.14E-04
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013		9511	9511	440	70	6.37E-04	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00
4/11/2013		9952	9952	420	1600	1.39E-02	8	6.95E-05	160	1.03E-03	5.1 U	0.00E+00	20	1.26E-04	88	5.56E-04	5.1 U	0.00E+00	320	3.46E-03
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013		9958	9958	420	1200	1.04E-02	5.4 U	0.00E+00	86	5.54E-04	5.4 U	0.00E+00	12	7.57E-05	45	2.84E-04	5.4 U	0.00E+00	220	2.38E-03
7/15/2013		10984	10984	360	1600	1.19E-02	12	8.93E-05	100	5.52E-04	4.7 U	0.00E+00	25	1.35E-04	38	2.06E-04	4.7 U	0.00E+00	310	2.87E-03
Pulse -off period July 15, 2013 to September 9, 2013																				
9/9/2013		10991	10991	380	810	6.37E-03	4 U	0.00E+00	30	1.75E-04	4 U	0.00E+00	6.3	3.60E-05	16	9.14E-05	4 U	0.00E+00	170	1.66E-03
11/18/2013		12069	12069	380	1600	1.26E-02	7.6 U	0.00E+00	87	5.07E-04	7.6 U	0.00E+00	23	1.31E-04	50	2.86E-04	7.6 U	0.00E+00	180	1.76E-03

See notes on last page.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		218	218	360	1400	1.03E-02	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	350	1.80E-03
3/18/2011		362	362	360	1100	8.07E-03	52 U	0.00E+00	52 U	0.00E+00	52 U	0.00E+00	52 U	0.00E+00	210 U	0.00E+00	52 U	0.00E+00	120 JB	6.17E-04
3/25/2011		459	459	360	760	5.57E-03	30 U	0.00E+00	33	1.56E-04	30 U	0.00E+00	30 U	0.00E+00	120 U	0.00E+00	30 U	0.00E+00	73	3.75E-04
3/30/2011		553	553	360	420	3.08E-03	13 U	0.00E+00	13 U	0.00E+00	13 U	0.00E+00	13 U	0.00E+00	51 U	0.00E+00	13 U	0.00E+00	37	1.90E-04
4/8/2011		759	759	360	560	4.11E-03	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	57	2.93E-04
4/15/2011		920	920	360	560	4.11E-03	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	85	4.37E-04
5/19/2011		1681	1681	330	360	2.42E-03	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	47 U	0.00E+00	12 U	0.00E+00	120	5.66E-04
6/16/2011		2187	2187	300	180	1.10E-03	7.8 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	31 U	0.00E+00	12	4.36E-05	7.8 U	0.00E+00
7/15/2011		2745	2745	220	280	1.25E-03	7.6 U	0.00E+00	20	5.79E-05	7.6 U	0.00E+00	7.6 U	0.00E+00	30 U	0.00E+00	7.6 U	0.00E+00	49	1.54E-04
8/22/2011		3129	3129	260	160	8.47E-04	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	20 U	0.00E+00	7.6	2.39E-05	5.0 U	0.00E+00
9/15/2011		3626	3626	220	83	3.72E-04	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	5	1.33E-05	4.5 U	0.00E+00
10/14/2011		4222	4222	220	50	2.24E-04	3.9 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00	16 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00
11/21/2011		5015	5015	200	27	1.10E-04	3.2 U	0.00E+00	32 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	13 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00
11/21/2011	Dup	5015	5015	200	28	1.14E-04	3.1 U	0.00E+00	31 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00	12 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00
12/14/2011		5339	5339	200	24	9.78E-05	3.2 U	0.00E+00	32 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	13 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00
1/19/2012		5958	5958	0	10	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	11 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00
2/15/2012		6364	6364	0	19	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	16 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00
3/15/2012		6942	6942	0	25	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	15 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00
4/19/2012		7625	7625	80	19	3.10E-05	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
5/16/2012		8138	8138	200	24	9.78E-05	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	7.9 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		8541	8541	360	64	2.87E-04	2.5 U	0.00E+00	25 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00	9.9 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00
9/17/2012		9029	9029	360	71	2.89E-04	8.0 U	0.00E+00	80 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00	32 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		9033	9033	220	39	1.75E-04	4.4 U	0.00E+00	44 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00	18 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00
12/14/2012		9436	9436	200	60	2.44E-04	4.8 U	0.00E+00	48 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	19 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013		9511	9511	440	6.8 U	0.00E+00	6.8 U	0.00E+00	68 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	27 U	0.00E+00	12	6.39E-05	6.8 U	0.00E+00
4/11/2013		9952	9952	420	110	9.41E-04	5.1 U	0.00E+00	51 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	20 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013		9958	9958	420	79	6.76E-04	5.4 U	0.00E+00	54 U	0.00E+00	5.4 U	0.00E+00	5.4 U	0.00E+00	22 U	0.00E+00	5.4 U	0.00E+00	5.4 U	0.00E+00
7/15/2013		10984	10984	360	100	7.33E-04	4.7 U	0.00E+00	47 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	19 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00
Pulse -off period July 15, 2013 to September 9, 2013																				
9/9/2013		10991	10991	380	62	4.80E-04	4 U	0.00E+00	40 U	0.00E+00	4 U	0.00E+00	4 U	0.00E+00	16 U	0.00E+00	4 U	0.00E+00	4 U	0.00E+00
11/18/2013		12069	12069	380	71	5.50E-04	7.6 U	0.00E+00	76 U	0.00E+00	7.6 U	0.00E+00	7.6 U	0.00E+00	31 U	0.00E+00	7.6 U	0.00E+00	7.6 U	0.00E+00

See notes on last page.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
3/11/2011		218	218	360	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	420 U	0.00E+00	3.47E-01	75.54
3/18/2011		362	362	360	52 U	0.00E+00	59	3.50E-04	110	6.52E-04	210 U	0.00E+00	210 U	0.00E+00	2.03E-01	104.77
3/25/2011		459	459	360	30 U	0.00E+00	30 U	0.00E+00	47	2.79E-04	130	4.21E-04	120 U	0.00E+00	1.42E-01	118.53
3/30/2011		553	553	360	16	9.48E-05	23	1.36E-04	46	2.73E-04	99	3.21E-04	51 U	0.00E+00	8.47E-02	126.48
4/8/2011		759	759	360	38	2.25E-04	84	4.98E-04	120	7.11E-04	81 U	0.00E+00	81 U	0.00E+00	1.01E-01	147.32
4/15/2011		920	920	360	45	2.67E-04	160	9.48E-04	140	8.30E-04	180 J,B	5.83E-04	81 U	0.00E+00	9.17E-02	162.08
5/19/2011		1681	1681	330	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	360	1.07E-03	47 U	0.00E+00	9.44E-02	233.92
6/16/2011		2187	2187	300	15	7.41E-05	54	2.67E-04	64	3.16E-04	69 J,B	1.86E-04	31 U	0.00E+00	3.49E-02	251.58
7/15/2011		2745	2745	220	13	4.71E-05	120	4.35E-04	140	5.07E-04	94	1.86E-04	30 U	0.00E+00	3.23E-02	269.61
8/22/2011		3129	3129	260	5.9	2.52E-05	19	8.13E-05	29	1.24E-04	62 J,B	1.45E-04	20 U	0.00E+00	2.71E-02	280.03
9/15/2011		3626	3626	220	4.5 U	0.00E+00	14	5.07E-05	17	6.16E-05	49	9.71E-05	18 U	0.00E+00	1.47E-02	287.36
10/14/2011		4222	4222	220	3.9 U	0.00E+00	7.1	2.57E-05	10	3.62E-05	16 U	0.00E+00	16 U	0.00E+00	1.03E-02	293.51
11/21/2011		5015	5015	200	3.2 U	0.00E+00	4.5	1.48E-05	6.1	2.01E-05	36	6.48E-05	13 U	0.00E+00	6.19E-03	298.43
11/21/2011	Dup	5015	5015	200	3.1 U	0.00E+00	4.2	1.38E-05	6.2	2.04E-05	31 U	0.00E+00	12 U	0.00E+00	6.30E-03	298.51
12/14/2011		5339	5339	200	3.2 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	32 UJ	0.00E+00	13 U	0.00E+00	6.77E-03	300.62
1/19/2012		5958	5958	0	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	0.00E+00	300.62
2/15/2012		6364	6364	0	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	0.00E+00	300.62
3/15/2012		6942	6942	0	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	0.00E+00	300.62
4/19/2012		7625	7625	80	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.4 U	0.00E+00	9.4 U	0.00E+00	1.51E-03	301.65
5/16/2012		8138	8138	200	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	7.9 U	0.00E+00	7.9 U	0.00E+00	3.90E-03	303.65
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		8541	8541	360	2.5 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00	25 U	0.00E+00	9.9 U	0.00E+00	7.12E-03	306.52
9/17/2012		9029	9029	360	8.0 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00	80 U	0.00E+00	32 U	0.00E+00	9.81E-03	311.31
Pulse -off period September 17, 2012 to November 15, 2012																
11/15/2012		9033	9033	220	4.4 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00	44 U	0.00E+00	18 U	0.00E+00	6.15E-03	311.34
12/14/2012		9436	9436	200	4.8 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	48 U	0.00E+00	19 U	0.00E+00	5.79E-03	313.67
Pulse -off period December 14, 2012 to February 26, 2013																
2/26/2013		9511	9511	440	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	68 U	0.00E+00	27 U	0.00E+00	7.01E-04	313.72
4/11/2013		9952	9952	420	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	51 U	0.00E+00	20 U	0.00E+00	2.01E-02	322.58
Pulse -off period April 11, 2013 to May 10, 2013																
5/10/2013		9958	9958	420	5.4 U	0.00E+00	5.4 U	0.00E+00	5.4 U	0.00E+00	54 U	0.00E+00	22 U	0.00E+00	1.44E-02	322.66
7/15/2013		10984	10984	360	4.7 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	47 U	0.00E+00	19 U	0.00E+00	1.65E-02	339.59
Pulse -off period July 15, 2013 to September 9, 2013																
9/9/2013		10991	10991	380	4 U	0.00E+00	4 U	0.00E+00	4 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	8.81E-03	339.65
11/18/2013		12069	12069	380	7.6 U	0.00E+00	7.6 U	0.00E+00	7.6 U	0.00E+00	76 U	0.00E+00	31 U	0.00E+00	1.58E-02	356.69

See notes on last page.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		12074	12074	380	950	7.47E-03	3.5 U	0.00E+00	24	1.40E-04	3.5 U	0.00E+00	10	5.71E-05	23	1.31E-04	3.5 U	0.00E+00	82	8.01E-04
3/14/2014		13057	13057	380	1400	1.10E-02	7.8 U	0.00E+00	32	1.87E-04	7.8 U	0.00E+00	24	1.37E-04	88	5.03E-04	7.8 U	0.00E+00	30	2.93E-04
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		13063	13063	300	1000	6.20E-03	3.0 U	0.00E+00	20	9.21E-05	3.0 U	0.00E+00	14	6.31E-05	65	2.93E-04	3.0 U	0.00E+00	71	5.48E-04
7/23/2014		14714	14714	100	670	1.39E-03	2.2 U	0.00E+00	19	2.92E-05	2.2 U	0.00E+00	9.6	1.44E-05	12	1.80E-05	2.2 U	0.00E+00	47	1.21E-04
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		14721	14715	120	470	1.17E-03	2.3 U	0.00E+00	10	1.84E-05	2.3 U	0.00E+00	4.8	8.66E-06	6.9	1.24E-05	2.3 U	0.00E+00	79	2.44E-04
11/14/2014		16095	16095	290	660	3.96E-03	2.4 U	0.00E+00	15	6.67E-05	2.4 U	0.00E+00	8.5	3.70E-05	19	8.28E-05	2.4 U	0.00E+00	32	2.39E-04
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		16102	16102	180	360	1.34E-03	1.1 U	0.00E+00	4.6	1.27E-05	1.1 U	0.00E+00	4.0	1.08E-05	7.2	1.95E-05	1.1 U	0.00E+00	12	5.55E-05
3/13/2015		17322	17322	260	660	3.55E-03	2.4 U	0.00E+00	22	8.78E-05	2.4 U	0.00E+00	8.0	3.13E-05	16	6.25E-05	2.4 U	0.00E+00	29	1.94E-04
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		17329	17329	260	360	1.94E-03	1.1 U	0.00E+00	7.3	2.91E-05	1.1 U	0.00E+00	2.5	9.77E-06	5.9	2.31E-05	1.1 U	0.00E+00	31	2.07E-04
7/16/2015		18578	18578	180	260	9.68E-04	1.2 U	0.00E+00	22	6.08E-05	1.2 U	0.00E+00	3.5	9.47E-06	12	3.25E-05	1.2 U	0.00E+00	54	2.50E-04
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		18580	18580	160	150	4.96E-04	1.2 U	0.00E+00	4.2	1.03E-05	1.2 U	0.00E+00	1.2	2.89E-06	2.4	5.77E-06	1.2 U	0.00E+00	47	1.93E-04
11/20/2015		19973	19973	230	320	1.52E-03	1.2 U	0.00E+00	26	9.17E-05	1.2 U	0.00E+00	5.5	1.90E-05	13	4.49E-05	1.2 U	0.00E+00	50	2.96E-04
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		19982	19982	180	78	2.90E-04	1.1 U	0.00E+00	1.9	5.25E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.3	3.52E-06	1.1 U	0.00E+00	10	4.63E-05
3/18/2016		21229	21229	260	340	1.83E-03	1.1 U	0.00E+00	21	8.38E-05	1.1 U	0.00E+00	5.4	2.11E-05	11	4.30E-05	1.1 U	0.00E+00	30	2.01E-04
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		21233	21233	140	100	2.90E-04	1.2 U	0.00E+00	2.9	6.23E-06	1.2 U	0.00E+00	1.4	2.95E-06	2.2	4.63E-06	1.2 U	0.00E+00	9.3	3.35E-05
7/22/2016		22751	22751	180	340	1.27E-03	1.0 U	0.00E+00	13	3.59E-05	1.0 U	0.00E+00	5.2	1.41E-05	8.5	2.30E-05	1.0 U	0.00E+00	40	1.85E-04
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		22752	22752	180	160	5.96E-04	1.2 U	0.00E+00	3.4	9.39E-06	1.2 U	0.00E+00	1.8	4.87E-06	2.6	7.03E-06	1.2 U	0.00E+00	41	1.90E-04
11/28/2016		24305	24305	220	330	1.50E-03	1.2 U	0.00E+00	10	3.38E-05	1.2 U	0.00E+00	5.1	1.69E-05	8.3	2.74E-05	1.2 U	0.00E+00	13	7.35E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		24309	24309	190	52	2.04E-04	1.2 U	0.00E+00	1.4	4.08E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2017		25572	25572	90	440	8.19E-04	2.4 U	0.00E+00	8.6	1.19E-05	2.4 U	0.00E+00	3.7	5.00E-06	9	1.22E-05	2.4 U	0.00E+00	9	2.08E-05
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		25597	25597	90	190	3.54E-04	1.2 U	0.00E+00	2.1	2.90E-06	1.2 U	0.00E+00	1.6	2.16E-06	2.9	3.92E-06	1.2 U	0.00E+00	4.7	1.09E-05
7/20/2017		27137	27137	350	240	1.74E-03	1.2 U	0.00E+00	7.8	4.19E-05	1.2 U	0.00E+00	2.3	1.21E-05	4.2	2.21E-05	1.2 U	0.00E+00	23	2.07E-04
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		27146	27146	350	260	1.88E-03	1.1 U	0.00E+00	3.5	1.88E-05	1.1 U	0.00E+00	1.3	6.84E-06	2.9	1.53E-05	1.1 U	0.00E+00	21	1.89E-04
11/17/2017		28631	28631	480	250	2.48E-03	1.1 U	0.00E+00	7.5	5.52E-05	1.1 U	0.00E+00	2.3	1.66E-05	4.8	3.46E-05	1.1 U	0.00E+00	12	1.48E-04

See notes on last page.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		12074	12074	380	37	2.86E-04	3.5 U	0.00E+00	35 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	14 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00
3/14/2014		13057	13057	380	41	3.17E-04	7.8 U	0.00E+00	78 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	31 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		13063	13063	300	33	2.02E-04	3.0 U	0.00E+00	30 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00
7/23/2014		14714	14714	100	14	2.85E-05	2.2 U	0.00E+00	22 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	9.0 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		14721	14715	120	22	5.38E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.4 U	0.00E+00	6.4	9.30E-06	2.3 U	0.00E+00
11/14/2014		16095	16095	290	11	6.50E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.7 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		16102	16102	180	4.9	1.80E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		17322	17322	260	12	6.36E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		17329	17329	260	8.2	4.34E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.4	5.20E-06
7/16/2015		18578	18578	180	14	5.13E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		18580	18580	160	11	3.59E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/20/2015		19973	19973	230	11	5.15E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		19982	19982	180	2	7.33E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		21229	21229	260	8.5	4.50E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		21233	21233	140	2.1	5.99E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/22/2016		22751	22751	180	9.3	3.41E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		22752	22752	180	10	3.67E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		24305	24305	220	4.7	2.11E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		24309	24309	190	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2017		25572	25572	90	4.6	8.43E-06	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		25597	25597	90	2.7	4.95E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.5	1.93E-06
7/20/2017		27137	27137	350	7	4.99E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		27146	27146	350	7	4.99E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	14	7.00E-05
11/17/2017		28631	28631	480	4.9	4.79E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00

See notes on last page.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to January 15, 2014																
1/15/2014		12074	12074	380	3.5 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	35 U	0.00E+00	14 U	0.00E+00	8.88E-03	356.73
3/14/2014		13057	13057	380	7.8 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	78 U	0.00E+00	31 U	0.00E+00	1.24E-02	368.96
Pulse -off period March 14, 2014 to May 15, 2014																
5/15/2014		13063	13063	300	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	30 U	0.00E+00	12 U	0.00E+00	7.40E-03	369.01
7/23/2014		14714	14714	100	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	9.0 U	0.00E+00	1.60E-03	371.61
Pulse -off period July 23, 2014 to September 16, 2014																
9/16/2014		14721	14715	120	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	32	3.46E-05	9.4 U	0.00E+00	1.55E-03	371.61
11/14/2014		16095	16095	290	2.4 U	0.00E+00	2.4 U	0.00E+00	2.8	1.34E-05	24 U	0.00E+00	9.7 U	0.00E+00	4.46E-03	377.77
Pulse -off period November 14, 2014 to January 9, 2015																
1/9/2015		16102	16102	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.46E-03	377.78
3/13/2015		17322	17322	260	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	3.99E-03	382.64
Pulse -off period March 13, 2015 to May 15, 2015																
5/15/2015		17329	17329	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.25E-03	382.66
7/16/2015		18578	18578	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.37E-03	384.37
Pulse -off period July 16, 2015 to September 22, 2015																
9/22/2015		18580	18580	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	7.45E-04	384.37
11/20/2015		19973	19973	230	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.03E-03	387.19
Pulse -off period November 20, 2015 to January 19, 2016																
1/19/2016		19982	19982	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.53E-04	387.20
3/18/2016		21229	21229	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.22E-03	389.97
Pulse -off period March 18, 2016 to May 19, 2016																
5/19/2016		21233	21233	140	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	3.43E-04	389.97
7/22/2016		22751	22751	180	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 J	0.00E+00	1.56E-03	392.33
Pulse -off period July 22, 2016 to September 20, 2016																
9/20/2016		22752	22752	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	8.43E-04	392.33
11/28/2016		24305	24305	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.67E-03	394.93
Pulse -off period November 28, 2016 to January 24, 2017																
1/24/2017		24309	24309	190	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.08E-04	394.94
3/23/2017		25572	25572	90	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	8.77E-04	396.04
Pulse -off period March 23, 2017 to May 15, 2017																
5/15/2017		25597	25597	90	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.80E-04	396.05
7/20/2017		27137	27137	350	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	2.07E-03	399.24
Pulse -off period July 20, 2017 to September 14, 2017																
9/14/2017		27146	27146	350	1.1 U	0.00E+00	1.1	6.34E-06	1.1 U	0.00E+00	12	3.78E-05	4.3 U	0.00E+00	2.28E-03	402.77
11/17/2017		28631	28631	480	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	2.78E-03	406.93

See notes on last page.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		28634	28634	440	160	1.46E-03	1.2 U	0.00E+00	3.3	2.23E-05	1.2 U	0.00E+00	1.4	9.26E-06	2.4	1.59E-05	1.2 U	0.00E+00	4.2	4.75E-05
3/23/2018		29870	29870	460	170	1.62E-03	1.2 U	0.00E+00	7.9	5.58E-05	1.2 U	0.00E+00	2.1	1.45E-05	4.2	2.90E-05	1.2 U	0.00E+00	9.0	1.06E-04
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		29870	29870	420	120	1.04E-03	1.2 U	0.00E+00	3.7	2.38E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	2.6	1.64E-05	1.2 U	0.00E+00	7.2	7.77E-05
7/26/2018		31423	31423	420	150	1.30E-03	1.2 U	0.00E+00	10	6.44E-05	1.2 U	0.00E+00	1.8	1.14E-05	3	1.89E-05	1.2 U	0.00E+00	34	3.67E-04
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		31431	31431	420	140	1.22E-03	1.2 U	0.00E+00	4.6	2.96E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	2.3	1.45E-05	1.2 U	0.00E+00	25	2.70E-04
11/19/2018		32920	32920	420	99	8.60E-04	1.3 U	0.00E+00	7.4	4.77E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	3.7	2.34E-05	1.3 U	0.00E+00	12	1.30E-04
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		32944	32944	320	53	3.51E-04	1.3 U	0.00E+00	1.7	8.35E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	3.9	3.21E-05
3/21/2019		33985	33985	220	75	3.41E-04	1.6 U	0.00E+00	6.8	2.30E-05	1.6 U	0.00E+00	1.6 U	0.00E+00	2.2	7.28E-06	1.6 U	0.00E+00	6.6	3.73E-05
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		33989	33989	250	86	4.45E-04	1.5 U	0.00E+00	3.4	1.30E-05	1.5 U	0.00E+00	1.5 U	0.00E+00	2.3	8.64E-06	1.7	6.39E-06	5.4	3.47E-05
7/29/2019		35359	35359	420	210	1.82E-03	1.4 U	0.00E+00	9.2	5.93E-05	1.4 U	0.00E+00	2.1	1.33E-05	5.7	3.60E-05	1.4 U	0.00E+00	16	1.73E-04
Pulse -off period July 29, 2019 to September 27, 2019																				
Blower was off-line during the fourth quarter 2019 for inspections and was replaced with a new blower in January 2020.																				
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		35360	35360	260	25	1.34E-04	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.6	1.07E-05
3/20/2020		36661	36661	180	230	8.56E-04	1.3 U	0.00E+00	7.1	1.96E-05	1.3 U	0.00E+00	1.5	4.06E-06	2.1	5.68E-06	1.3 U	0.00E+00	12	5.55E-05
Pulse -off period March 20, 2020 to May 21, 2020																				
5/21/2020		36661	36661	180	130	4.84E-04	1.3 U	0.00E+00	2.1	5.80E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	7	3.24E-05
7/22/2020		38006	38006	320	150	9.93E-04	1.4 U	0.00E+00	17	8.35E-05	1.4 U	0.00E+00	2.0	9.62E-06	3	1.44E-05	1.4 U	0.00E+00	60	4.94E-04
Pulse -off period July 22, 2020 to September 29, 2020																				
9/29/2020		38012	38012	260	130	6.99E-04	1.4 U	0.00E+00	4.4	1.76E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	52	3.48E-04
11/25/2020		38375	38375	260	85	4.57E-04	4.1 U	0.00E+00	6.6	2.63E-05	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	6.9	2.70E-05	9.1	6.08E-05
Pulse-off period November 25, 2020 to January 21, 2021																				
1/21/2021		38376	38376	180	62	2.31E-04	1.5 U	0.00E+00	2.7	7.46E-06	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	4.2	1.94E-05
3/26/2021		39650	39650	180	68	2.53E-04	1.3 U	0.00E+00	4.1	1.13E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 u	0.00E+00	7.8	3.61E-05

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library of Medicine)
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		28634	28634	440	2.2	1.97E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		29870	29870	460	2.7	2.53E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		29870	29870	420	2.4	2.05E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/26/2018		31423	31423	420	8.4	7.19E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		31431	31431	420	6.1	5.22E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	2.3	1.38E-05
11/19/2018		32920	32920	420	3.5	2.99E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		32944	32944	320	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
3/21/2019		33985	33985	220	2.2	9.86E-06	1.6 U	0.00E+00	16 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	6.4 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		33989	33989	250	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	5.9 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
7/29/2019		35359	35359	420	3.8	3.25E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																				
Blower was off-line during the fourth quarter 2019 for inspections and v																				
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		35360	35360	260	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
3/20/2020		36661	36661	180	3.2	1.17E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 20, 2020 to May 21, 2020																				
5/21/2020		36661	36661	180	2.7	9.90E-06	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
7/22/2020		38006	38006	320	14	9.13E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 22, 2020 to September 29, 2020																				
9/29/2020		38012	38012	260	12	6.36E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.7 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
11/25/2020		38375	38375	260	4.1 U	0.00E+00	4.1 U	0.00E+00	41 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	16 U	0.00E+00	350	1.10E-03	490	1.82E-03
Pulse-off period November 25, 2020 to January 21, 2021																				
1/21/2021		38376	38376	180	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	5.9 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
3/26/2021		39650	39650	180	1.7	6.23E-06	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library of Medicine)
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018		28634	28634	440	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	29	1.15E-04	4.7 U	0.00E+00	1.69E-03	406.93
3/23/2018		29870	29870	460	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.85E-03	409.22
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018		29870	29870	420	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	1.18E-03	409.22
7/26/2018		31423	31423	420	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.84E-03	412.07
Pulse -off period July 26, 2018 to September 17, 2018																
9/17/2018		31431	31431	420	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	14	5.29E-05	4.9 U	0.00E+00	1.65E-03	412.08
11/19/2018		32920	32920	420	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	1.09E-03	413.71
Pulse -off period November 19, 2018 to January 21, 2019																
1/21/2019		32944	32944	320	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	3.91E-04	413.72
3/21/2019		33985	33985	220	1.6 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	16 U	0.00E+00	6.4 U	0.00E+00	4.19E-04	414.15
Pulse -off period March 21, 2019 to May 24, 2019																
5/24/2019		33989	33989	250	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	5.9 U	0.00E+00	5.07E-04	414.15
7/29/2019		35359	35359	420	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	2.14E-03	417.08
Pulse -off period July 29, 2019 to September 27, 2019																
Blower was off-line during the fourth quarter 2019 for inspections and v																
Pulse -off period December 9, 2019 to January 21, 2020																
1/21/2020		35360	35360	260	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	1.45E-04	417.08
3/20/2020		36661	36661	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	15	2.43E-05	5.3 U	0.00E+00	9.77E-04	418.35
Pulse -off period March 20, 2020 to May 21, 2020																
5/21/2020		36661	36661	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	5.32E-04	418.35
7/22/2020		38006	38006	320	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.8 U	0.00E+00	1.69E-03	420.62
Pulse -off period July 22, 2020 to September 29, 2020																
9/29/2020		38012	38012	260	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.7 U	0.00E+00	1.13E-03	420.63
11/25/2020		38375	38375	260	40	1.71E-04	89	3.81E-04	24	1.03E-04	960	2.25E-03	16 U	0.00E+00	6.40E-03	422.95
Pulse-off period November 25, 2020 to January 21, 2021																
1/21/2021		38376	38376	180	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	5.9 U	0.00E+00	2.58E-04	422.95
3/26/2021		39650	39650	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	3.07E-04	423.34

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW	molecular weight (values from the U.S. National Library of Medicine)
SCFM	standard cubic feet per minute
J	Indicates estimated value.
B	The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Date	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
12/3/2009	0						SYSTEM STARTUP									0.00
12/10/2009	53	0.22	11.91													11.91
12/11/2009				59	0.25	15.05										26.97
12/14/2009							60	0.31	18.51							45.48
12/15/2009				68	0.16	16.48										46.91
12/16/2009							76	0.17	21.16							49.55
12/22/2009	124	0.05	15.23													52.86
12/29/2009				180	0.12	29.76										66.15
1/5/2010							236	0.13	41.78							86.77
1/13/2010				301	0.05	35.75										92.75
1/21/2010							361	0.05	48.37							99.35
1/27/2010				408	0.06	42.68										106.27
2/24/2010	631	0.01	20.06	631	0.04	51.44	631	0.04	58.76							130.26
3/15/2010	782	0.01	22.02	782	0.09	64.40	782	0.07	68.60							155.02
4/14/2010	935	0.02	25.22	935	0.04	70.89	935	0.11	84.81							180.92
5/13/2010	1165	0.01	27.75	1165	0.04	79.74	1165	0.03	91.21							198.69
6/21/2010	1477	0.01	30.20	1477	0.02	86.90	1477	0.02	96.92							214.02
7/21/2010	1686	0.01	32.52	1686	0.02	91.24	1686	0.02	101.05							224.81
8/23/2010	1928	0.00	32.52	1928	0.00	91.24	1928	0.00	101.05							224.81
9/23/2010	2174	0.01	34.49	2174	0.02	96.27	2174	0.02	106.49							237.25
10/22/2010	2406	0.01	35.86	2406	0.01	98.85	2406	0.01	109.27							243.98
11/15/2010	2598	0.01	36.96	2598	0.01	101.41	2598	0.01	112.05							250.42
12/22/2010	2777	0.01	38.22	2955	0.02	107.99	2777	0.02	115.44							261.65
1/24/2011	2975	0.01	39.47	3352	0.01	110.39	2975	0.01	117.20							267.06
2/25/2011	3167	0.01	40.53	3737	0.01	114.08	3167	0.00	118.15							272.76
3/11/2011										222	1.72	381.87	218	0.35	75.54	730.17
3/18/2011	3293	0.01	41.27	3988	0.00	114.57	3293	0.00	118.34	366	0.51	453.50	362	0.20	104.77	832.46
3/25/2011										463	0.29	482.07	459	0.14	118.53	874.78
3/30/2011										558	0.32	512.25	553	0.08	126.48	912.92
4/8/2011										764	0.29	572.27	759	0.10	147.32	993.77
4/15/2011	3460	0.01	42.15	4322	0.00	115.07	3460	0.00	118.47	924	0.24	610.05	920	0.09	162.08	1047.81
5/19/2011	3665	0.00	42.87	4732	0.00	115.31	3665	0.00	118.53	1685	0.16	730.28	1681	0.09	233.92	1240.92
6/16/2011	3830	0.00	43.39	5062	0.00	115.55	3830	0.00	118.81	2191	0.11	753.86	2187	0.03	251.58	1283.20
7/15/2011	4472	0.00	44.96	4472	0.00	115.18	4472	0.00	119.39	2750	0.08	830.85	2745	0.03	269.61	1380.36
8/22/2011	4775	0.00	45.59	4775	0.00	115.40	4775	0.01	121.30	3133	0.10	868.97	3129	0.03	280.03	1431.44
9/15/2011	4968	0.00	45.93	4968	0.00	115.51	4968	0.00	121.91	3630	0.08	906.88	3626	0.01	287.36	1477.64
10/14/2011	5199	0.00	46.20	5199	0.00	115.57	5199	0.00	122.54	4226	0.05	935.35	4222	0.01	293.51	1513.18
11/21/2011	5503	0.00	46.43	5503	0.00	115.62	5503	0.00	123.00	5019	0.04	966.50	5015	0.01	298.43	1549.98
12/14/2011	5670	0.00	46.53	5670	0.00	115.65	5670	0.00	123.67	5343	0.03	975.34	5339	0.01	300.62	1561.80
1/19/2012	5974	0.00	46.69	5974	0.00	115.71	5974	0.00	124.59	5993	0.00	975.34	5958	0.00	300.62	1562.94
2/15/2012	6189	0.00	46.80	6189	0.00	115.74	6189	0.01	126.03	6368	0.03	986.48	6364	0.00	300.62	1575.67
3/15/2012	6421	0.00	46.89	6421	0.00	115.79	6421	0.01	127.43	6946	0.03	1005.89	6942	0.00	300.62	1596.62
4/19/2012	6701	0.00	47.04	6701	0.00	115.84	6701	0.00	128.02	7629	0.05	1038.74	7625	0.00	301.65	1631.30
5/16/2012	6916	0.00	47.18	6916	0.00	115.88	6916	0.00	128.27	8143	0.04	1060.30	8138	0.00	303.65	1655.28
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012	7094	0.00	47.54	7094	0.00	116.20	7094	0.00	129.03	8546	0.05	1081.05	8541	0.01	306.52	1680.34
9/17/2012	7317	0.00	47.99	7317	0.00	116.40	7317	0.02	133.04	9033	0.04	1102.58	9029	0.01	311.31	1711.33
Pulse -off period September 17, 2012 to November 14, 2012																
11/15/2012	7320	0.00	48.00	7320	0.00	116.40	7320	0.00	133.05	9037	0.05	1102.78	9033	0.01	311.34	1711.56
12/14/2012	7518	0.00	48.24	7518	0.00	116.86	7518	0.00	133.94	9439	0.00	1103.57	9436	0.01	313.67	1716.27

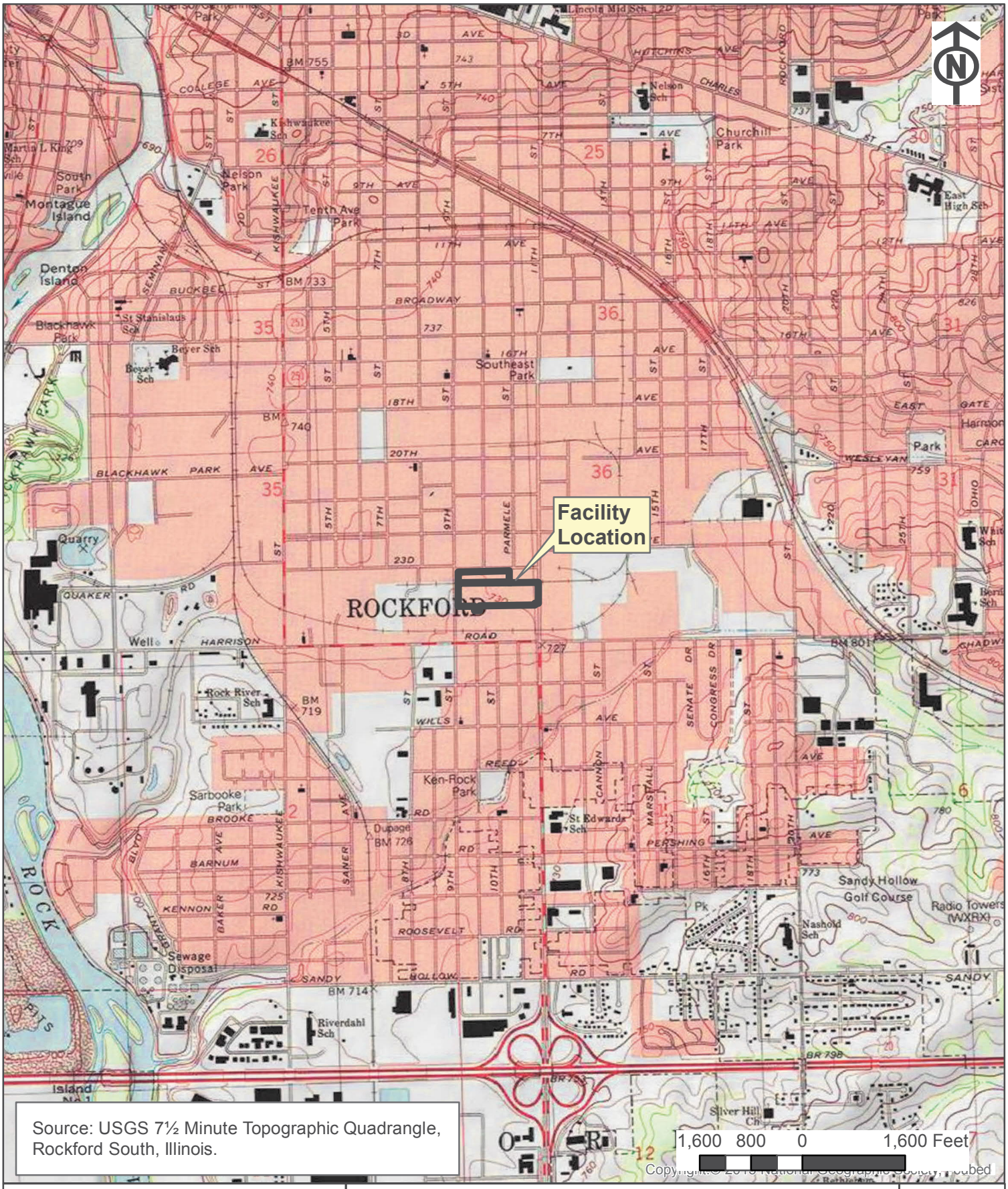
Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Date	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
Pulse -off period December 14, 2012 to February 26, 2013																
2/26/2013	7518	0.00	48.19	7518	0.00	116.86	7519	0.00	133.94	9439	0.00	1103.57	9511	0.00	313.72	1716.32
4/11/2013	7723	0.00	48.32	7723	0.00	116.97	8134	0.00	134.40	9876	0.00	1105.48	9952	0.02	322.58	1727.74
Pulse -off period April 11, 2013 to May 10, 2013																
5/10/2013	7724	0.00	48.32	7724	0.00	116.97	8135	0.00	134.40	9882	0.00	1105.50	9958	0.01	322.66	1727.85
7/15/2013	8039	0.00	48.86	8039	0.00	117.21	9082	0.00	134.70	10907	0.00	1108.40	10984	0.02	339.59	1748.76
Pulse -off period July 15, 2013 to September 9, 2013																
9/9/2013	8040	0.00	48.86	8040	0.00	117.21	9083	0.00	134.70	10914	0.00	1108.44	10991	0.01	339.65	1748.86
11/18/2013	8372	0.00	49.15	8372	0.00	117.30	10081	0.00	136.08	11992	0.00	1110.90	12069	0.02	356.69	1770.12
Pulse -off period November 18, 2013 to January 15, 2014																
1/15/2014	8651	0.00	49.36	8651	0.00	117.51	10916	0.00	136.88	11997	0.00	1110.91	12074	0.01	356.73	1771.39
3/14/2014	8894	0.00	49.48	8894	0.00	117.52	11645	0.00	137.13	12980	0.00	1112.65	13057	0.01	368.96	1785.75
Pulse -off period March 14, 2014 to May 15, 2014																
5/15/2014	8990	0.00	49.54	8990	0.00	117.64	11934	0.00	137.98	12986	0.00	1112.67	13063	0.01	369.01	1786.83
7/23/2014	9321	0.00	50.01	9321	0.00	117.79	12926	0.00	138.52	14627	0.00	1113.02	14714	0.00	371.61	1790.95
Pulse -off period July 23, 2014 to September 16, 2014																
9/16/2014	9494	0.00	50.32	9494	0.00	118.05	13445	0.00	139.28	14628	0.00	1113.03	14715	0.00	371.61	1792.29
11/14/2014	9777	0.00	50.45	9777	0.00	118.12	14294	0.00	139.95	16008	0.00	1116.04	16095	0.00	377.77	1802.33
Pulse -off period November 14, 2014 to January 9, 2015																
1/9/2015	9778	0.00	50.45	9778	0.00	118.12	14299	0.00	139.96	16015	0.00	1116.05	16102	0.00	377.78	1802.36
3/13/2015	10045	0.00	50.56	10045	0.00	118.15	15099	0.00	140.58	17178	0.00	1117.32	17322	0.00	382.64	1809.25
Pulse -off period March 13, 2015 to May 15, 2015																
5/15/2015	10046	0.00	50.56	10046	0.00	118.15	15102	0.00	140.58	17186	0.00	1117.34	17329	0.00	382.66	1809.28
7/16/2015	10343	0.00	50.92	10343	0.00	118.25	15992	0.00	141.23	18436	0.00	1121.16	18578	0.00	384.37	1815.93
Pulse -off period July 16, 2015 to September 22, 2015																
9/22/2015	10343	0.00	50.92	10343	0.00	118.26	15994	0.00	141.24	18439	0.00	1121.16	18580	0.00	384.37	1815.95
11/20/2015	10626	0.00	51.03	10626	0.00	118.33	16842	0.00	141.50	19832	0.00	1126.63	19973	0.00	387.19	1824.68
Pulse -off period November 20, 2015 to January 19, 2016																
1/19/2016	10627	0.00	51.03	10627	0.00	118.33	16846	0.00	141.50	19841	0.00	1126.63	19982	0.00	387.20	1824.70
3/18/2016	10883	0.00	51.14	10883	0.00	118.36	17612	0.00	141.72	21088	0.00	1128.65	21229	0.00	389.97	1829.83
Pulse -off period March 18, 2016 to May 19, 2016																
5/19/2016	10884	0.00	51.14	10884	0.00	118.36	17615	0.00	141.72	21092	0.00	1128.65	21233	0.00	389.97	1829.84
7/22/2016	11190	0.00	51.54	11190	0.00	118.45	17921	0.00	141.87	22610	0.00	1129.38	22751	0.00	392.33	1833.57
Pulse -off period July 22, 2016 to September 20, 2016																
9/20/2016	11191	0.00	51.54	11191	0.00	118.45	17923	0.00	141.87	22611	0.00	1129.38	22752	0.00	392.33	1833.58
11/28/2016	11521	0.00	51.74	11521	0.00	118.53	18915	0.00	141.98	24162	0.00	1129.51	24305	0.00	394.93	1836.69
Pulse -off period November 28, 2016 to January 24, 2017																
1/24/2017	11522	0.00	51.74	11522	0.00	118.53	18917	0.00	141.98	24166	0.00	1129.51	24309	0.00	394.94	1836.69
3/23/2017	11775	0.00	51.84	11775	0.00	118.57	19676	0.00	142.36	25427	0.00	1129.95	25572	0.00	396.04	1838.76
Pulse -off period March 23, 2017 to May 15, 2017																
5/15/2017	11776	0.00	51.84	11776	0.00	118.57	19680	0.00	142.36	25452	0.00	1129.96	25597	0.00	396.05	1838.78
7/20/2017	12092	0.00	52.24	12092	0.00	118.65	20626	0.00	142.71	26992	0.00	1134.20	27137	0.00	399.24	1847.04
Pulse -off period July 20, 2017 to September 14, 2017																
9/14/2017	12094	0.00	52.24	12094	0.00	118.65	20632	0.00	142.71	27001	0.00	1134.24	27146	0.00	402.77	1850.61
11/17/2017	12400	0.00	52.42	12400	0.00	118.70	21552	0.00	142.89	28486	0.00	1137.00	28631	0.00	406.93	1857.93

Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - March 2021
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Date	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018	12401	0.00	52.42	12401	0.00	118.70	21554	0.00	142.89	28489	0.00	1137.01	28634	0.00	406.93	1857.94
3/23/2018	12655	0.00	52.49	12655	0.00	118.70	22316	0.00	143.00	29726	0.00	1138.32	29870	0.00	409.22	1861.73
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018	12655	0.00	52.49	12656	0.00	118.70	22318	0.00	143.00	29731	0.00	1138.32	29870	0.00	409.22	1861.74
7/26/2018	12972	0.00	52.96	12972	0.00	118.79	23267	0.00	143.23	30783	0.00	1141.50	31423	0.00	412.07	1868.56
Pulse -off period July 26, 2018 to September 17, 2018																
9/17/2018	13226	0.00	53.47	13226	0.00	119.34	24030	0.00	143.58	30791	0.00	1141.53	31431	0.00	412.08	1870.00
11/19/2018	13528	0.00	53.63	13528	0.00	119.39	24935	0.00	143.70	32280	0.00	1142.65	32920	0.00	413.71	1873.08
Pulse -off period November 19, 2018 to January 21, 2019																
1/21/2019	13529	0.00	53.63	13529	0.00	119.39	24937	0.00	143.70	32284	0.00	1142.65	32944	0.00	413.72	1873.09
3/21/2019	13795	0.00	53.70	13795	0.00	119.41	25737	0.00	143.85	33265	0.00	1143.06	33985	0.00	414.15	1874.18
Pulse -off period March 21, 2019 to May 24, 2019																
5/24/2019	13796	0.00	53.70	13796	0.00	119.41	25738	0.00	143.85	33269	0.00	1143.06	33989	0.00	414.15	1874.18
7/29/2019	14113	0.00	53.99	14113	0.00	119.58	26690	0.00	144.57	34775	0.00	1143.50	35359	0.00	417.08	1878.73
Pulse -off period July 29, 2019 to September 27, 2019																
9/27/2019	14113	0.00	53.99	14113	0.00	119.58	26691	0.00	144.58	34779	0.00	1143.50	-	-	417.08	1878.73
12/9/2019	14444	0.00	54.52	14444	0.00	119.64	34312	0.00	149.89	36495	0.00	1143.65	-	-	417.08	1884.77
Pulse -off period December 9, 2019 to January 21, 2020																
1/21/2020	14445	0.00	54.52	14445	0.00	119.64	34313	0.00	149.89	36523	0.00	1143.66	35360	0.00	417.08	1884.79
3/20/2020	14700	0.00	54.85	14700	0.00	119.70	35077	0.00	150.05	37827	0.00	1143.75	36661	0.00	418.35	1886.70
Pulse -off period March 20, 2020 to May 21, 2020																
5/21/2020	14700	0.00	54.85	14700	0.00	119.70	35078	0.00	150.05	37827	0.00	1143.75	36661	0.00	418.35	1886.70
7/22/2020	14997	0.00	55.03	14997	0.00	119.78	35971	0.00	150.23	39172	0.00	1144.40	38006	0.00	420.62	1890.06
Pulse-off period July 22, 2020 to September 29, 2020																
9/29/2020	14999	0.00	55.03	14999	0.00	119.78	35974	0.00	150.24	39178	0.00	1144.41	38012	0.00	420.63	1890.07
11/25/2020	15246	0.00	55.13	15246	0.00	119.87	36717	0.00	150.68	40065	0.00	1144.72	38375	0.01	422.95	1893.36

Figures



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WARRENVILLE, ILLINOIS 60555
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Facility Location Map
Area 9/10 Remedial Action
Southeast Rockford Groundwater
Contamination Superfund Site
Rockford, IL

FIGURE NUMBER	
1	

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
CC	8/2/2018	60562097.4213	1 of 1

Path: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q1 2018\Figure 1 - Facility Location Map.mxd

LEGEND:

- GMZ Monitoring Well
- Performance Monitoring Well
- Site and GMZ Boundary
- Approximate Extent of Phase 1 AS/SVE System Influence
- Approximate Extent of Phase 2 AS/SVE System Influence

N

60 0 120

1"=120'

AECOM

AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS

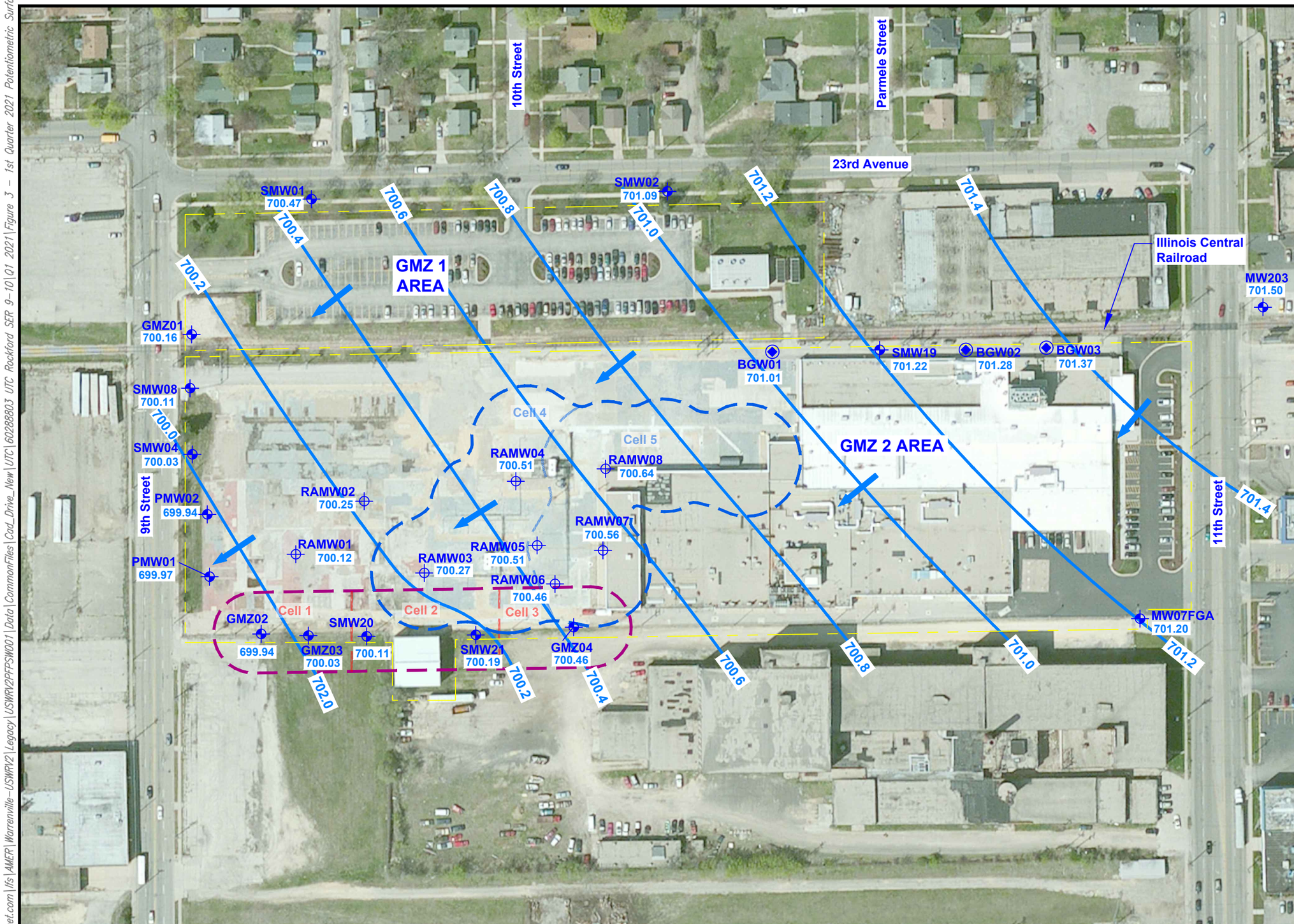
PROJECT NO. 60562097.4213

DATE: 8/2/18 | DRWN: CCC

GMZ / PERFORMANCE WELL NETWORK

FIGURE 2

File: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q2 2018\Figure 2 - GMZ Performance Well Network.dwg Layout: ANSI_B(-LJ User: candice.czosnyka Plotted: Aug 02, 2018 - 3:43pm



LEGEND:

- GMZ Monitoring Well
- Performance Monitoring Well
- Site and GMZ Boundary
- Approximate Extent of Phase 1 AS/SVE System Influence
- Approximate Extent of Phase 2 AS/SVE System Influence
- Potentiometric Surface Contour
- 703.68 Groundwater Elevation (Feet)
- Groundwater Flow Direction
- NM Not Monitored

NOTES:

1. Water Levels measured on 2/22/2021
2. NM = not measured

N

60 0 120

1"=120'

AECOM

AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS

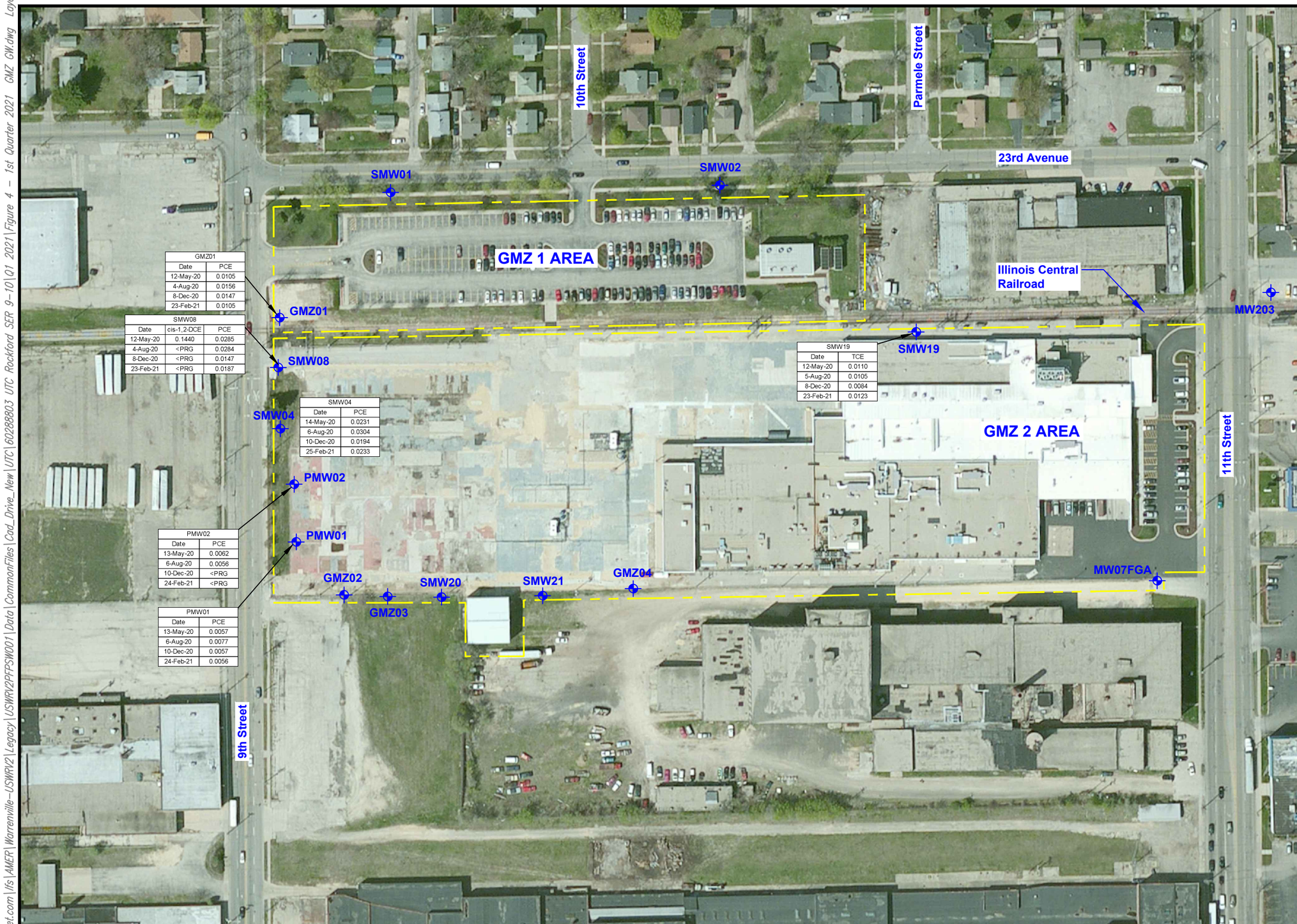
PROJECT NO. 60595520.4212

DATE: 03/22/21 | DRWN: LM

FIRST QUARTER 2021
POTENTIOMETRIC SURFACE MAP

FIGURE 3

File: \\na.aecomnet.com\Vfs\AMER\Warrenville-USWR\2\Legacy\USWR\2PFPS\W001\Data\CommonFiles\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q1 2021\Figure 3 - 1st Quarter 2021 Potentiometric Surface M



GMZ01	
Date	PCE
12-May-20	0.0105
4-Aug-20	0.0156
8-Dec-20	0.0147
23-Feb-21	0.0105

SMW08		
Date	cis-1,2-DCE	PCE
12-May-20	0.1440	0.0285
4-Aug-20	<PRG	0.0284
8-Dec-20	<PRG	0.0147
23-Feb-21	<PRG	0.0187

SMW19	
Date	TCE
12-May-20	0.0110
5-Aug-20	0.0105
8-Dec-20	0.0084
23-Feb-21	0.0123

SMW04	
Date	PCE
14-May-20	0.0231
6-Aug-20	0.0304
10-Dec-20	0.0194
25-Feb-21	0.0233

PMW02	
Date	PCE
13-May-20	0.0062
6-Aug-20	0.0056
10-Dec-20	<PRG
24-Feb-21	<PRG

PMW01	
Date	PCE
13-May-20	0.0057
6-Aug-20	0.0077
10-Dec-20	0.0057
24-Feb-21	0.0056

LEGEND:

GMZ Monitoring Well

Site and GMZ Boundary

NOTES:

1. Values are listed only for those wells in which a Volatile Organic Compound (VOC) was identified above the Preliminary Remediation Goal (PRG) for the previous four events.

2. mg/L milligrams per liter

Preliminary Remediation Goals (PRG)	
Trichloroethene (TCE)	0.005 mg/L
cis-1,2-Dichloroethene (DCE)	0.07 mg/L
1,1,1-Trichloroethane (TCA)	0.2 mg/L
Tetrachloroethene (PCE)	0.005 mg/L
Vinyl chloride	0.002 mg/L

N

65 0 130

1"=130'

AECOM

AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS

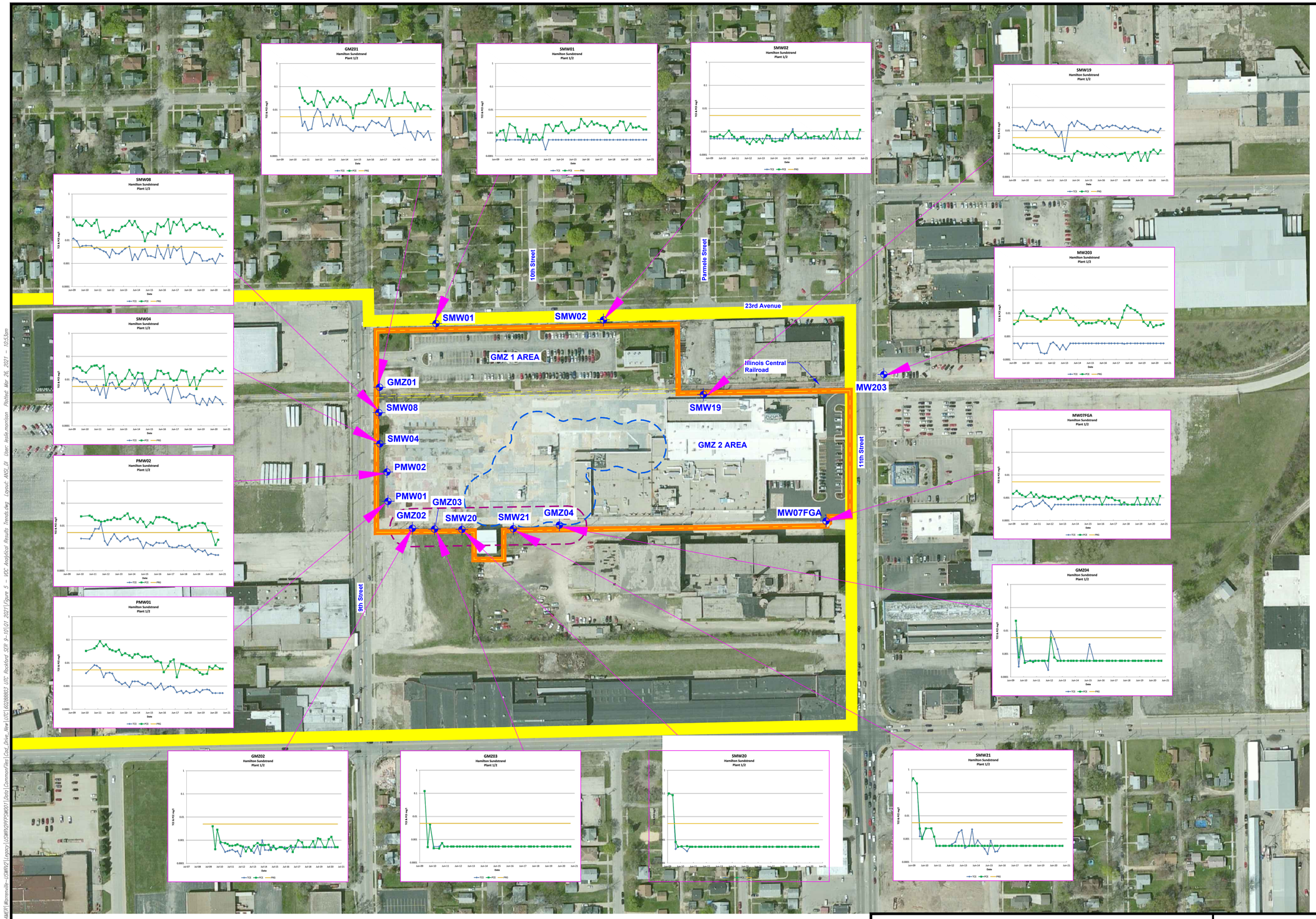
PROJECT NO. 60595520.4211

DATE: 03/26/21 DRWN: CC

FIRST QUARTER 2021
12 MONTH GMZ WELL GROUNDWATER ANALYTICAL RESULTS ABOVE THE PRG

FIGURE 4

File: \\na.aecomnet.com\Vfs\AMER\Warrenville-USWRV2\Legacy\USWRV2PFPSW001\Data\CommonFiles\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q1 2021\Figure 4 - 1st Quarter 2021 GMZ GW.dwg Layout:



LEGEND:

- GMZ Monitoring Wells
- Property and GMZ Boundary
- Source Area 9/10 Boundary
- HS Property Boundary
- PCE
- TCE
- PRG

NOTES:

1. Analytes not detected above the Laboratory estimated quantitation limit are expressed graphically as one half the reporting limit.

Preliminary Remediation Goal (PRG)	
TCE	0.005 (mg/L)
PCE	0.005 (mg/L)

N

62.5 0 125

1"=125'

AECOM

AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS

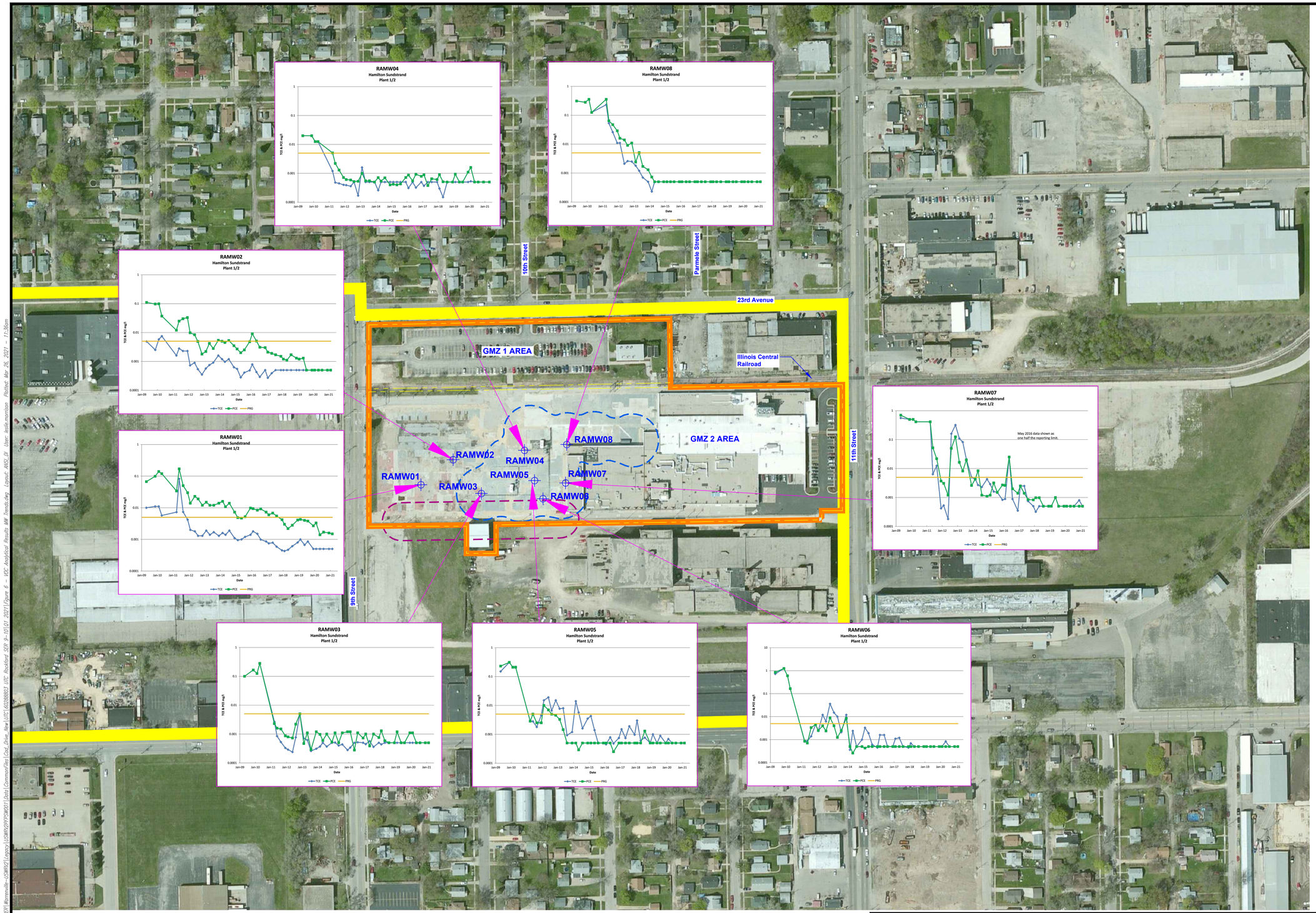
PROJECT NO. 60595520.4211

DATE: 03/26/21 | DRWN: CC

QUATERLY GMZ VOC ANALYTICAL RESULTS TRENDS

FIGURE 5

File: \\ma.aecomnet.com\Ills\AMER\Warrenville - UCWR\Legacy\UCWR\GPP\GW01\Data\Common\Figs\Grid_Area_New\UTC 60595853 UTC Rockford SCFP 4- 1Q1Q1 2021\Figure 5 - VOC Analytical Results Trends.dwg Layout: ANSI_B User: kevin.morrison Plotted: Mar 26, 2021 - 10:23am



LEGEND:

- Performance Monitoring Wells
- Property and GMZ Boundary
- Source Area 9/10 Boundary
- HS Property Boundary
- PCE
- TCE
- PRG

NOTES:

1. Analytes not detected above the Laboratory estimated quantitation limit are expressed graphically as one half the reporting limit.

2. Groundwater monitoring wells located within the influence of active treatment systems yield groundwater sample data that is potentially biased by the treatment activities. This potential bias should be considered during evaluation of this data.

Preliminary Remediation Goal (PRG)	
TCE	0.005 (mg/L)
PCE	0.005 (mg/L)

N

62.5 0 125

1"=125'

AECOM

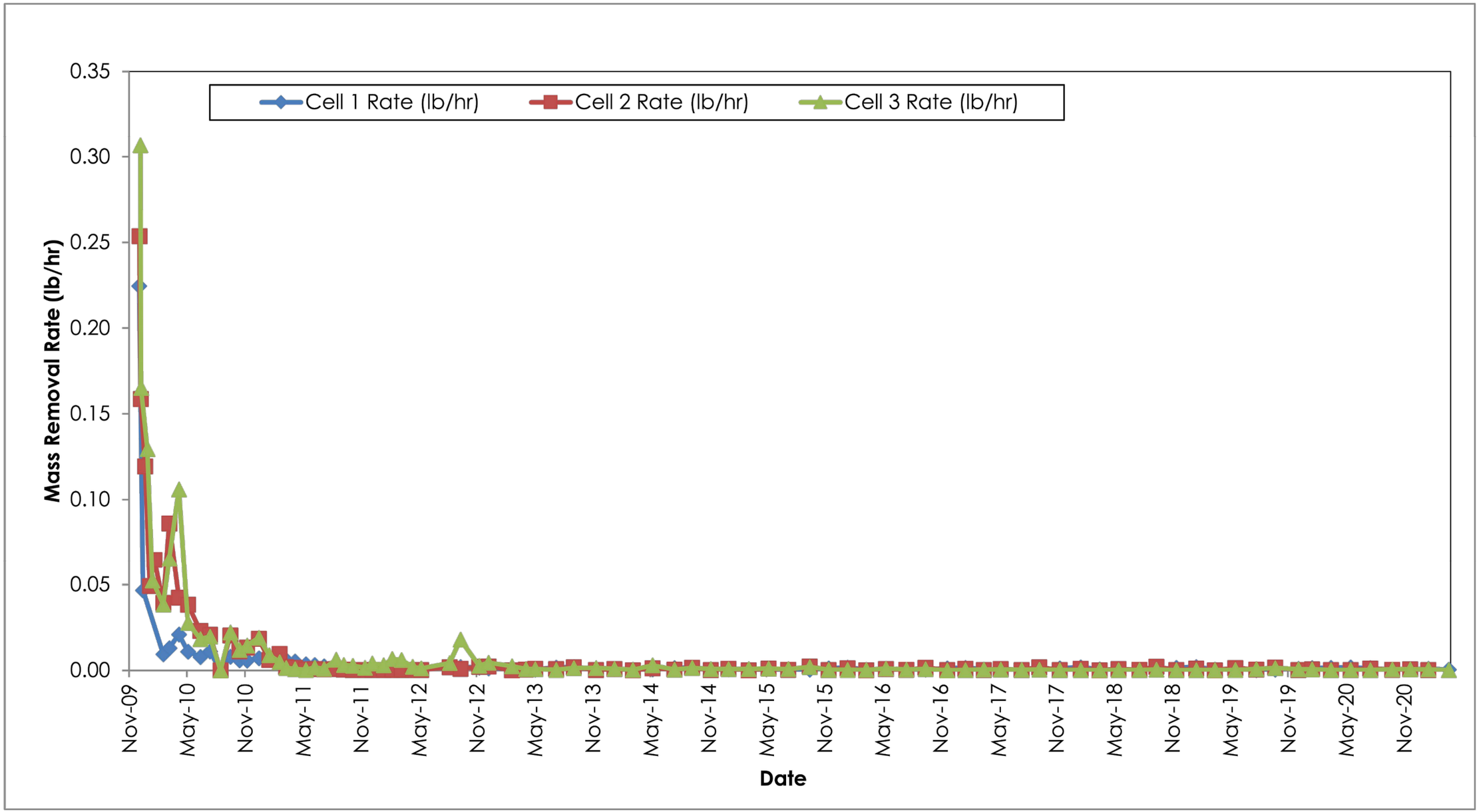
AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS

PROJECT NO. 60595520.4211

DATE: 03/26/21 | DRWN: CC

QUATERLY PERFORMANCE MONITORING WELL VOC ANALYTICAL RESULTS TRENDS

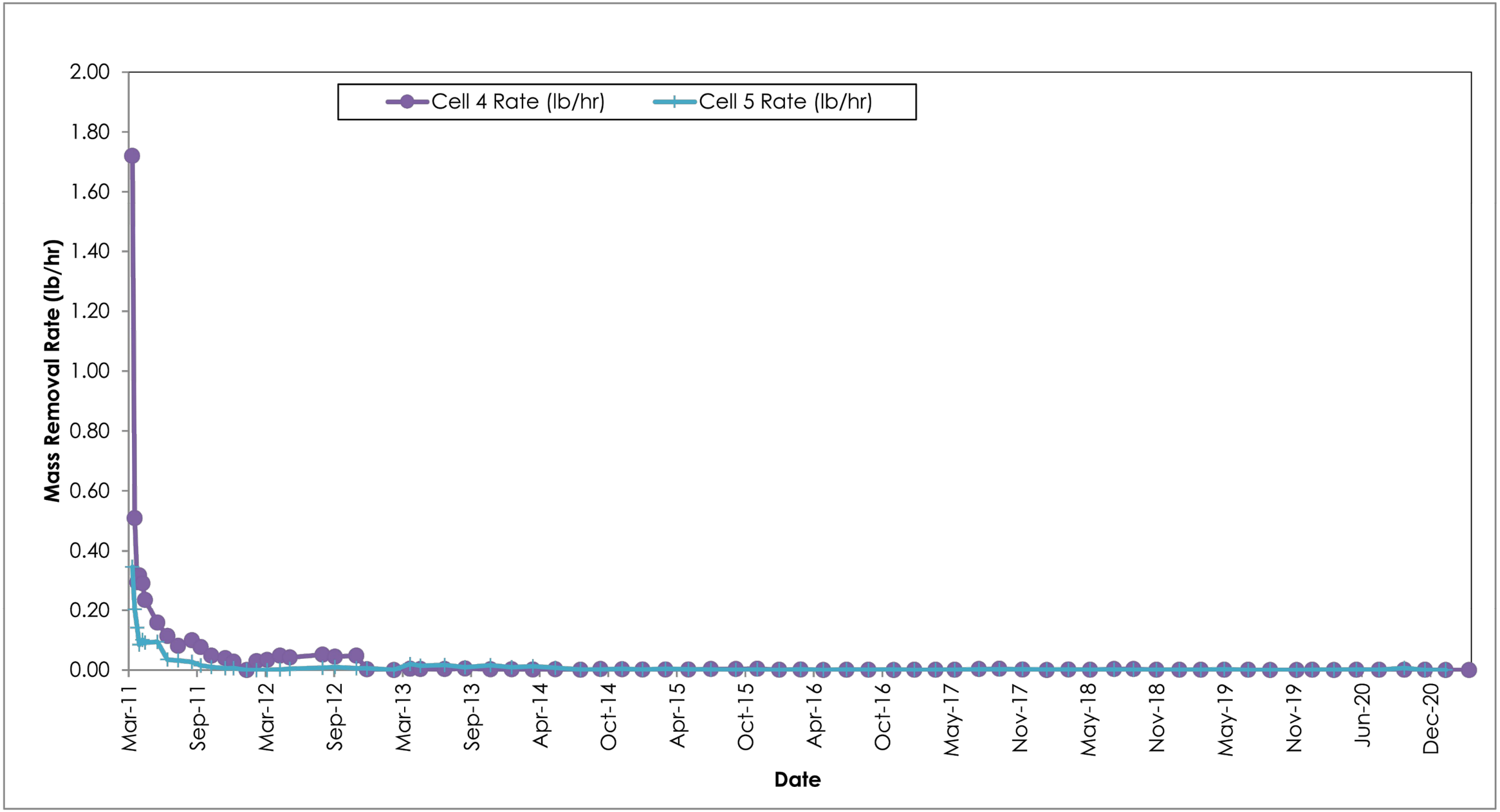
FIGURE 6



AECOM

AREA 9/10 REMEDIAL ACTION ROCKFORD, ILLINOIS PROJECT NO. 60595520.4211	AVERAGE VOC MASS REMOVAL RATE VS TIME PHASE 1 AS/SVE SYSTEM
DATE: 04/13/21 DRWN: LLM	FIGURE 7

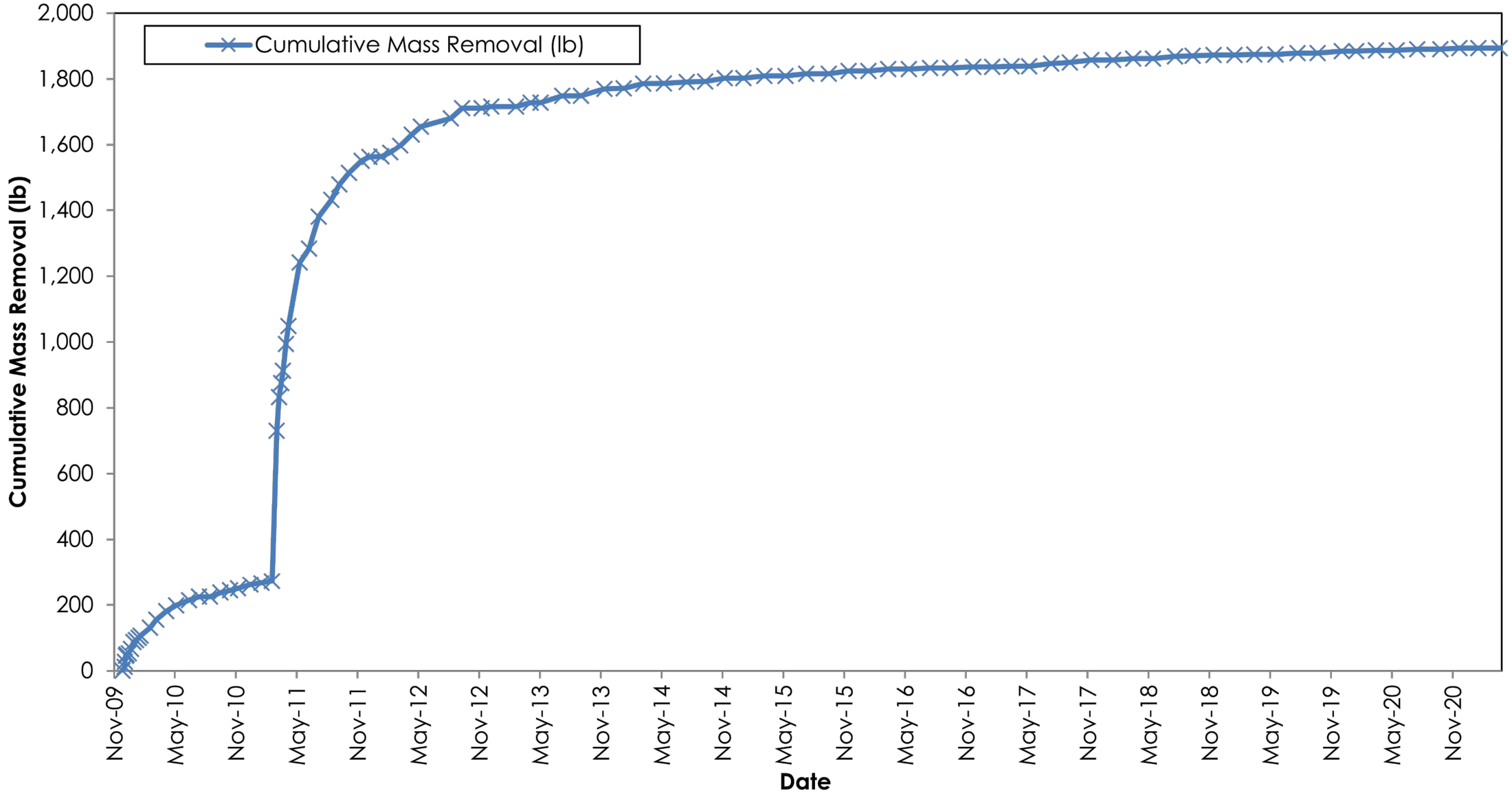
File:\\na.aecomnet.com\fs\AMER\Warrenville-USWR\2\Legacy\USWR\2PFPSW001\Data\CommonFiles\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q1 2021\Figure 7 - VOC vs Time Phase 1.dwg Date:April 13, 2021 User:leslie.morrison



AECOM

AREA 9/10 REMEDIAL ACTION ROCKFORD, ILLINOIS PROJECT NO. 60595520.4211		AVERAGE VOC MASS REMOVAL RATE VS TIME PHASE 2 AS/SVE SYSTEM
DATE: 4/13/2021	DRWN: LLM	FIGURE 8

File:\\na.aecomnet.com\fs\AMER\Warrenville-USWR\2\Legacy\USWR\2\PPSW001\Data\CommonFiles\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q1 2021\Figure 8 - VOC vs Time Phase 2.dwg Date:April 13, 2021 User:leslie.morrison



AECOM

AREA 9/10 REMEDIAL ACTION ROCKFORD, ILLINOIS PROJECT NO. 60595520.4211	CUMULATIVE MASS REMOVAL PHASE 1/ PHASE 2 AS/SVE SYSTEM
DATE: 4/13/2021 DRWN: LLM	FIGURE 9

File:\\na.aecomnet.com\fs\AMER\Warrenville-USWR12\Legacy\USWR12PFPSW001\Data\CommonFiles\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q1 2021\Figure 9 - Cumulative Phase 1 & 2.dwg Date:April 13, 2021 User:leslie.morrison

Appendix A

First Quarter 2021 GMZ and Performance Monitoring Well Analytical Data

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Raytheon Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

60651001

SGS Job Number: JD20919

Sampling Dates: 02/23/21 - 02/25/21

Report to:

AECOM, INC.
4320 Winfield Road
Warrenville, IL 60555
Peter.Hollatz@AECOM.com

ATTN: Peter Hollatz

Total number of pages in report: **446**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

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Sample Summary

Raytheon Technologies Corporation

Job No: JD20919

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD20919-1	02/23/21	10:35	AS	02/27/21	AQ	Ground Water	HSSER-SMW08-022321
JD20919-2	02/23/21	10:40	AS	02/27/21	AQ	Ground Water	HSSER-GMZ01-022321
JD20919-3	02/23/21	10:50	AS	02/27/21	AQ	Field Blank Water	HSSER-FBLK01-022321
JD20919-4	02/23/21	11:40	AS	02/27/21	AQ	Ground Water	HSSER-SMW02-022321
JD20919-5	02/23/21	11:45	AS	02/27/21	AQ	Ground Water	HSSER-SMW01-022321
JD20919-6	02/23/21	12:25	AS	02/27/21	AQ	Ground Water	HSSER-MW203-022321
JD20919-7	02/23/21	12:35	AS	02/27/21	AQ	Ground Water	HSSER-MW07FGA-022321
JD20919-8	02/23/21	14:05	AS	02/27/21	AQ	Ground Water	HSSER-SMW19-022321
JD20919-9	02/23/21	14:20	AS	02/27/21	AQ	Ground Water	HSSER-GMZ04-022321
JD20919-10	02/23/21	15:30	AS	02/27/21	AQ	Ground Water	HSSER-SMW21-022321
JD20919-11	02/24/21	10:45	AS	02/27/21	AQ	Ground Water	HSSER-PMW01-022421
JD20919-12	02/24/21	11:40	AS	02/27/21	AQ	Ground Water	HSSER-PMW02-022421

SGS North America Inc.

Sample Summary
(continued)

Raytheon Technologies Corporation

Job No: JD20919

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD20919-13	02/24/21	11:55	AS	02/27/21	AQ	Equipment Blank	HSSER-EBLK01-022421
JD20919-14	02/24/21	13:15	AS	02/27/21	AQ	Ground Water	HSSER-SMW20-022421
JD20919-15	02/24/21	14:40	AS	02/27/21	AQ	Ground Water	HSSER-GMZ03-022421
JD20919-16	02/24/21	00:00	AS	02/27/21	AQ	Ground Water	HSSER-DUP01-022421
JD20919-17	02/25/21	10:25	AS	02/27/21	AQ	Ground Water	HSSER-GMZ02-022521
JD20919-17D	02/25/21	10:25	AS	02/27/21	AQ	Water Dup/MSD	HSSER-MSD01-022521
JD20919-17S	02/25/21	10:25	AS	02/27/21	AQ	Water Matrix Spike	HSSER-MS01-022521
JD20919-18	02/25/21	13:05	AS	02/27/21	AQ	Ground Water	HSSER-SMW04-022521
JD20919-19	02/25/21	13:05	AS	02/27/21	AQ	Trip Blank Water	HSSER-TBLK01-022321

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Raytheon Technologies Corporation	**Job No**	JD20919
Site:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL	**Report Date**	3/8/2021 3:47:57 PM

On 02/27/2021, 17 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD20919 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** V2A9078

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD20919-16DUP, JD20919-18MS were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** V4B4445

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD20919-17MS, JD20919-17MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

MS Volatiles By Method SW846 8260C BY SIM

Matrix: AQ **Batch ID:** V3A7169

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD20919-17MS, JD20919-17MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** V3A7170

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD20920-11MS, JD20920-11MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD20919
Account: Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Collected: 02/23/21 thru 02/25/21

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD20919-1	**HSSER-SMW08-022321**					
1,1-Dichloroethane		0.0090	0.0010	0.00057	mg/l	SW846 8260C
1,1-Dichloroethene		0.0012	0.0010	0.00059	mg/l	SW846 8260C
cis-1,2-Dichloroethene		0.0307	0.0010	0.00051	mg/l	SW846 8260C
Tetrachloroethene		0.0187	0.0010	0.00090	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.0058	0.0010	0.00054	mg/l	SW846 8260C
Trichloroethene		0.0021	0.0010	0.00053	mg/l	SW846 8260C
1,4-Dioxane		0.0014	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-2	**HSSER-GMZ01-022321**					
1,1-Dichloroethane		0.0072	0.0010	0.00057	mg/l	SW846 8260C
cis-1,2-Dichloroethene		0.00070 J	0.0010	0.00051	mg/l	SW846 8260C
Tetrachloroethene		0.0105	0.0010	0.00090	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.00072 J	0.0010	0.00054	mg/l	SW846 8260C
1,4-Dioxane		0.00067	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-3	**HSSER-FBLK01-022321**					
No hits reported in this sample.						
JD20919-4	**HSSER-SMW02-022321**					
Tetrachloroethene		0.0012	0.0010	0.00090	mg/l	SW846 8260C
JD20919-5	**HSSER-SMW01-022321**					
No hits reported in this sample.						
JD20919-6	**HSSER-MW203-022321**					
Tetrachloroethene		0.0035	0.0010	0.00090	mg/l	SW846 8260C
JD20919-7	**HSSER-MW07FGA-022321**					
1,1,1-Trichloroethane		0.00056 J	0.0010	0.00054	mg/l	SW846 8260C
JD20919-8	**HSSER-SMW19-022321**					
cis-1,2-Dichloroethene		0.0016	0.0010	0.00051	mg/l	SW846 8260C
Tetrachloroethene		0.0014	0.0010	0.00090	mg/l	SW846 8260C
Trichloroethene		0.0123	0.0010	0.00053	mg/l	SW846 8260C
1,4-Dioxane		0.00030 J	0.00040	0.000095	mg/l	SW846 8260C BY SIM

Summary of Hits

Job Number: JD20919
Account: Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Collected: 02/23/21 thru 02/25/21

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD20919-9	**HSSER-GMZ04-022321**					
1,4-Dioxane		0.0047	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-10	**HSSER-SMW21-022321**					
1,1,1-Trichloroethane		0.0026	0.0010	0.00054	mg/l	SW846 8260C
1,4-Dioxane		0.00057	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-11	**HSSER-PMW01-022421**					
Tetrachloroethene		0.0056	0.0010	0.00090	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.00056 J	0.0010	0.00054	mg/l	SW846 8260C
JD20919-12	**HSSER-PMW02-022421**					
1,1-Dichloroethane		0.0018	0.0010	0.00057	mg/l	SW846 8260C
cis-1,2-Dichloroethene		0.0012	0.0010	0.00051	mg/l	SW846 8260C
Tetrachloroethene		0.0024	0.0010	0.00090	mg/l	SW846 8260C
1,4-Dioxane		0.00059	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-13	**HSSER-EBLK01-022421**					
No hits reported in this sample.						
JD20919-14	**HSSER-SMW20-022421**					
1,4-Dioxane		0.0013	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-15	**HSSER-GMZ03-022421**					
1,4-Dioxane		0.00098	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-16	**HSSER-DUP01-022421**					
1,4-Dioxane		0.00099	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20919-17	**HSSER-GMZ02-022521**					
1,1-Dichloroethane		0.00087 J	0.0010	0.00057	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.00062 J	0.0010	0.00054	mg/l	SW846 8260C
1,4-Dioxane		0.00081	0.00040	0.000095	mg/l	SW846 8260C BY SIM

Summary of Hits

Job Number: JD20919
Account: Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Collected: 02/23/21 thru 02/25/21

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD20919-18	**HSSER-SMW04-022521**					
1,1-Dichloroethane		0.0012	0.0010	0.00057	mg/l	SW846 8260C
cis-1,2-Dichloroethene		0.00086 J	0.0010	0.00051	mg/l	SW846 8260C
Tetrachloroethene		0.0233	0.0010	0.00090	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.0050	0.0010	0.00054	mg/l	SW846 8260C
Trichloroethene		0.00085 J	0.0010	0.00053	mg/l	SW846 8260C
JD20919-19	**HSSER-TBLK01-022321**					
Toluene		0.0172	0.0010	0.00053	mg/l	SW846 8260C

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW08-022321		
Lab Sample ID:	JD20919-1	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102757.D	1	03/04/21 12:49	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0090	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	0.0012	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0307	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0187	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0058	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.0021	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	100%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW08-022321		
Lab Sample ID:	JD20919-1	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165043.D	1	03/03/21 19:02	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.0014	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	109%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ01-022321		
Lab Sample ID:	JD20919-2	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102758.D	1	03/04/21 13:18	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0072	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.00070	0.0010	0.00051	mg/l	J
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0105	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00072	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ01-022321		
Lab Sample ID:	JD20919-2	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165044.D	1	03/03/21 19:31	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00067	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	95%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-FBLK01-022321		
Lab Sample ID:	JD20919-3	**Date Sampled:**	02/23/21
Matrix:	AQ - Field Blank Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102763.D	1	03/04/21 15:38	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-FBLK01-022321		
Lab Sample ID:	JD20919-3	**Date Sampled:**	02/23/21
Matrix:	AQ - Field Blank Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165041.D	1	03/03/21 17:49	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	85%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW02-022321		
Lab Sample ID:	JD20919-4	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102759.D	1	03/04/21 13:46	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0012	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	99%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW02-022321		
Lab Sample ID:	JD20919-4	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165045.D	1	03/03/21 20:00	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	94%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW01-022321		
Lab Sample ID:	JD20919-5	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102766.D	1	03/04/21 17:03	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW01-022321		
Lab Sample ID:	JD20919-5	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165046.D	1	03/03/21 20:28	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	96%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-MW203-022321		
Lab Sample ID:	JD20919-6	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102767.D	1	03/04/21 17:31	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0035	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-MW203-022321		
Lab Sample ID:	JD20919-6	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165047.D	1	03/03/21 20:57	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	93%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-MW07FGA-022321		
Lab Sample ID:	JD20919-7	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102768.D	1	03/04/21 17:59	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00056	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-MW07FGA-022321		
Lab Sample ID:	JD20919-7	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165048.D	1	03/03/21 21:26	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	97%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW19-022321		
Lab Sample ID:	JD20919-8	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102769.D	1	03/04/21 18:27	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0016	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0014	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.0123	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW19-022321		
Lab Sample ID:	JD20919-8	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165049.D	1	03/03/21 21:54	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00030	0.00040	0.000095	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	96%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ04-022321		
Lab Sample ID:	JD20919-9	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102770.D	1	03/04/21 18:56	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ04-022321		
Lab Sample ID:	JD20919-9	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165050.D	1	03/03/21 22:23	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.0047	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	99%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW21-022321		
Lab Sample ID:	JD20919-10	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102771.D	1	03/04/21 19:24	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0026	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	109%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW21-022321		
Lab Sample ID:	JD20919-10	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165051.D	1	03/03/21 22:52	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00057	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	110%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-PMW01-022421		
Lab Sample ID:	JD20919-11	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102772.D	1	03/04/21 19:52	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0056	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00056	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-PMW01-022421		
Lab Sample ID:	JD20919-11	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165052.D	1	03/03/21 23:20	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	112%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-PMW02-022421		
Lab Sample ID:	JD20919-12	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102773.D	1	03/04/21 20:20	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0018	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0012	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0024	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-PMW02-022421		
Lab Sample ID:	JD20919-12	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165053.D	1	03/03/21 23:49	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00059	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	115%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-EBLK01-022421		
Lab Sample ID:	JD20919-13	**Date Sampled:**	02/24/21
Matrix:	AQ - Equipment Blank	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102764.D	1	03/04/21 16:07	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	101%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-EBLK01-022421		
Lab Sample ID:	JD20919-13	**Date Sampled:**	02/24/21
Matrix:	AQ - Equipment Blank	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165042.D	1	03/03/21 18:34	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	79%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW20-022421		
Lab Sample ID:	JD20919-14	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102774.D	1	03/04/21 20:48	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW20-022421		
Lab Sample ID:	JD20919-14	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165054.D	1	03/04/21 00:18	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.0013	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	104%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ03-022421		
Lab Sample ID:	JD20919-15	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102775.D	1	03/04/21 21:17	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ03-022421		
Lab Sample ID:	JD20919-15	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165055.D	1	03/04/21 00:48	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00098	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	104%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-DUP01-022421		
Lab Sample ID:	JD20919-16	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A208828.D	1	03/05/21 11:05	KC	n/a	n/a	V2A9078
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-DUP01-022421		
Lab Sample ID:	JD20919-16	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165060.D	1	03/04/21 12:49	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00099	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	105%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ02-022521		
Lab Sample ID:	JD20919-17	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102756.D	1	03/04/21 12:21	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00087	0.0010	0.00057	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00062	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-GMZ02-022521		
Lab Sample ID:	JD20919-17	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165038.D	1	03/03/21 16:15	RS	n/a	n/a	V3A7169
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00081	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	85%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW04-022521		
Lab Sample ID:	JD20919-18	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A208829.D	1	03/05/21 11:34	KC	n/a	n/a	V2A9078
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0012	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.00086	0.0010	0.00051	mg/l	J
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0233	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0050	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.00085	0.0010	0.00053	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-SMW04-022521		
Lab Sample ID:	JD20919-18	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165061.D	1	03/04/21 13:18	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	121%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-TBLK01-022321		
Lab Sample ID:	JD20919-19	**Date Sampled:**	02/25/21
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102765.D	1	03/04/21 16:35	BK	n/a	n/a	V4B4445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	0.0172	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	108%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SGS ACCUTEST

GW WTB

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 2

FED-EX Tracking # 7841 5387 7137
Bottle Order Control # None
SGS Accutest Quote #
SGS Accutest Job # JD20919

Client / Reporting Information

Company Name: AECOM
Street Address: 3333 Warrenville Rd Suite 200
City: Lisle State: IL Zip: 60532
Project Contact: Peter.Hellatz@aecom.com E-mail:
Phone #: 630-461-1194 Fax #:
Sampler(s) Name(s): A. Hellatz / A. Sokolowsky Phone #:

Project Information

Project Name: UTAS-SER- Plants 1/2 Facility
Street:
City: Rockford State: IL
Project #: 60651001
Client Purchase Order #:
Project Manager: Peter Hellatz
Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Na Water	MEOH	ENCORE	* VOC's 8260SIM 1,4 Dioxane		LAB USE ONLY
1	HSSER-SMW08-022321		2-23-21	1035	AS	GW	6	X								X	X	
2	HSSER-GM201-022321		2-23-21	1040	AH	GW	6	X								X	X	V1204
3	HSSER-FBLK01-022321		2-23-21	1050	AS	GW	6	X								X	X	V1205
4	HSSER-SMW02-022321		2-23-21	1140	AH	GW	6	X								X	X	V1206
5	HSSER-SMW01-022321		2-23-21	1145	AS	GW	6	X								X	X	
6	HSSER-MW203-022321		2-23-21	1225	AH	GW	6	X								X	X	
7	HSSER-MW07FLOA-022321		2-23-21	1235	AS	GW	6	X								X	X	
8	HSSER-SMW19-022321		2-23-21	1405	AH	GW	6	X								X	X	
9	HSSER-GM204-022321		2-23-21	1420	AS	GW	6	X								X	X	
10	HSSER-SMW21-022321		2-23-21	1530	AJ	GW	6	X								X	X	
11	HSSER-PMW01-022421		2-24-21	1045	AS	GW	6	X								X	X	
12	HSSER-PMW02-022421		2-24-21	1140	AS	GW	6	X								X	X	

Turnaround Time (Business days)

- X Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:

INITIAL ASESSMENT 2B-PP

LABEL VERIFICATION

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" "Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

*List of 13 VOC's

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

CHICAGO SC

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2-26-21 1000	2	2/0:30AM		2 FedEx
Relinquished by Sampler: FedEx	Date Time: 2/27/2021 1140	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐

On Ice ☑ Cooler Temp. 2.3°C

IR4 IP

JD20919: Chain of Custody
Page 1 of 3

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: JD20919

Client / Reporting Information

Company Name: AECOM
Street Address: 3333 Warrenville Rd Suite 200
City: Lisle State: FL Zip: 60532
Project Contact: Peter.Hellatz@aecom.com E-mail:
Phone #: 630-461-1194 Fax #:
Sampler(s) Name(s): A. Hellatz / A. Sikolewsky Phone #:

Project Information

Project Name: UTAS-SER Plants 1/2-Facility
Street:
City: Rockford State: FL
Project #: 60651001
Client Purchase Order #:
Project Manager: Peter Hellatz

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	VOC's *	8260 SFMS 1,4 Dioxane									LAB USE ONLY
13	HSSER-EBLK01-022421		2-24-21	1155	AS	GW	6	X								X	X									
14	HSSER-SMW20-022421		2-24-21	1315	AS	GW	6	X								X	X									
15	HSSER-GMZ03-022421		2-24-21	1440	AS	GW	6	X								X	X									
16	HSSER-DUP01-022421		2-24-21	0000	AS	GW	6	X								X	X									
	HSSER-GMZ02-022521		2-25-21	1025	AS	GW	6	X								X	X									
17	HSSER-MS01-022521		2-25-21	1025	AS	GW	6	X								X	X									
	HSSER-MSD01-022521		2-25-21	1025	AS	GW	6	X								X	X									
18	HSSER-SMW04-022521		2-25-21	1305	AS	GW	6	X								X	X									
19	HSSER-FBLK01-022321		2-23-21	—	—	GW	3	X								X										

Turnaround Time (Business days)

Approved by (SGS Accutest PM): / Date:

- ☑ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other_____

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* List of 13 VOC's

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2-26-21 1000	1	2 10:50 AM		2 FedEx
Relinquished by Sampler: FedEx	Date Time: 2/27/2021	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice IR4 ✓ Cooler Temp. 2.3°C

CHICAGO SC

JD20919: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: JD20919 **Client:** _____ **Project:** _____

Date / Time Received: 2/27/2021 11:40:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.3);

Cooler Temps (Corrected) °C: Cooler 1: (1.0);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 212820 pH 12+: 203117A Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

JD20919: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Raytheon Technologies Corporation

Job No: JD20919

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD20919-1	Collected: 23-FEB-21 10:35 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-SMW08-022321						
JD20919-1	SW846 8260C BY SIM	03-MAR-21 19:02	RS			V8260SIMDIOX
JD20919-1	SW846 8260C	04-MAR-21 12:49	BK			V8260SL
JD20919-2	Collected: 23-FEB-21 10:40 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-GMZ01-022321						
JD20919-2	SW846 8260C BY SIM	03-MAR-21 19:31	RS			V8260SIMDIOX
JD20919-2	SW846 8260C	04-MAR-21 13:18	BK			V8260SL
JD20919-3	Collected: 23-FEB-21 10:50 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-FBLK01-022321						
JD20919-3	SW846 8260C BY SIM	03-MAR-21 17:49	RS			V8260SIMDIOX
JD20919-3	SW846 8260C	04-MAR-21 15:38	BK			V8260SL
JD20919-4	Collected: 23-FEB-21 11:40 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-SMW02-022321						
JD20919-4	SW846 8260C BY SIM	03-MAR-21 20:00	RS			V8260SIMDIOX
JD20919-4	SW846 8260C	04-MAR-21 13:46	BK			V8260SL
JD20919-5	Collected: 23-FEB-21 11:45 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-SMW01-022321						
JD20919-5	SW846 8260C BY SIM	03-MAR-21 20:28	RS			V8260SIMDIOX
JD20919-5	SW846 8260C	04-MAR-21 17:03	BK			V8260SL
JD20919-6	Collected: 23-FEB-21 12:25 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-MW203-022321						
JD20919-6	SW846 8260C BY SIM	03-MAR-21 20:57	RS			V8260SIMDIOX
JD20919-6	SW846 8260C	04-MAR-21 17:31	BK			V8260SL
JD20919-7	Collected: 23-FEB-21 12:35 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-MW07FGA-022321						
JD20919-7	SW846 8260C BY SIM	03-MAR-21 21:26	RS			V8260SIMDIOX

Internal Sample Tracking Chronicle

Raytheon Technologies Corporation

Job No: JD20919

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD20919-7	SW846 8260C	04-MAR-21 17:59	BK			V8260SL
JD20919-8	Collected: 23-FEB-21 14:05 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-SMW19-022321						
JD20919-8	SW846 8260C BY SIM	03-MAR-21 21:54	RS			V8260SIMDIOX
JD20919-8	SW846 8260C	04-MAR-21 18:27	BK			V8260SL
JD20919-9	Collected: 23-FEB-21 14:20 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-GMZ04-022321						
JD20919-9	SW846 8260C BY SIM	03-MAR-21 22:23	RS			V8260SIMDIOX
JD20919-9	SW846 8260C	04-MAR-21 18:56	BK			V8260SL
JD20919-10	Collected: 23-FEB-21 15:30 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-SMW21-022321						
JD20919-10	SW846 8260C BY SIM	03-MAR-21 22:52	RS			V8260SIMDIOX
JD20919-10	SW846 8260C	04-MAR-21 19:24	BK			V8260SL
JD20919-11	Collected: 24-FEB-21 10:45 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-PMW01-022421						
JD20919-11	SW846 8260C BY SIM	03-MAR-21 23:20	RS			V8260SIMDIOX
JD20919-11	SW846 8260C	04-MAR-21 19:52	BK			V8260SL
JD20919-12	Collected: 24-FEB-21 11:40 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-PMW02-022421						
JD20919-12	SW846 8260C BY SIM	03-MAR-21 23:49	RS			V8260SIMDIOX
JD20919-12	SW846 8260C	04-MAR-21 20:20	BK			V8260SL
JD20919-13	Collected: 24-FEB-21 11:55 By: AS		Received: 27-FEB-21 By: DDH			
HSSER-EBLK01-022421						
JD20919-13	SW846 8260C BY SIM	03-MAR-21 18:34	RS			V8260SIMDIOX
JD20919-13	SW846 8260C	04-MAR-21 16:07	BK			V8260SL

Internal Sample Tracking Chronicle

Raytheon Technologies Corporation

Job No: JD20919

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD20919-14 Collected: 24-FEB-21 13:15 By: AS			Received: 27-FEB-21 By: DDH			
HSSER-SMW20-022421						
JD20919-14	SW846 8260C BY SIM	04-MAR-21 00:18	RS			V8260SIMDIOX
JD20919-14	SW846 8260C	04-MAR-21 20:48	BK			V8260SL
JD20919-15 Collected: 24-FEB-21 14:40 By: AS			Received: 27-FEB-21 By: DDH			
HSSER-GMZ03-022421						
JD20919-15	SW846 8260C BY SIM	04-MAR-21 00:48	RS			V8260SIMDIOX
JD20919-15	SW846 8260C	04-MAR-21 21:17	BK			V8260SL
JD20919-16 Collected: 24-FEB-21 00:00 By: AS			Received: 27-FEB-21 By: DDH			
HSSER-DUP01-022421						
JD20919-16	SW846 8260C BY SIM	04-MAR-21 12:49	RS			V8260SIMDIOX
JD20919-16	SW846 8260C	05-MAR-21 11:05	KC			V8260SL
JD20919-17 Collected: 25-FEB-21 10:25 By: AS			Received: 27-FEB-21 By: DDH			
HSSER-GMZ02-022521						
JD20919-17	SW846 8260C BY SIM	03-MAR-21 16:15	RS			V8260SIMDIOX
JD20919-17	SW846 8260C	04-MAR-21 12:21	BK			V8260SL
JD20919-18 Collected: 25-FEB-21 13:05 By: AS			Received: 27-FEB-21 By: DDH			
HSSER-SMW04-022521						
JD20919-18	SW846 8260C BY SIM	04-MAR-21 13:18	RS			V8260SIMDIOX
JD20919-18	SW846 8260C	05-MAR-21 11:34	KC			V8260SL
JD20919-19 Collected: 25-FEB-21 13:05 By: AS			Received: 27-FEB-21 By: DDH			
HSSER-TBLK01-022321						
JD20919-19	SW846 8260C	04-MAR-21 16:35	BK			V8260SL

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-1.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-1.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-1.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-1.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-1.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-1.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-1.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-1.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-1.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-1.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-1.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-1.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-1.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-2.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-2.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-2.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-2.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-2.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-2.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-2.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-2.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-2.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-2.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-2.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-2.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-2.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-3.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-3.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-3.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-3.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-3.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-3.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-3.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-3.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-3.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-3.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-3.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-3.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-3.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-4.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-4.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-4.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-4.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-4.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-4.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-4.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-4.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-4.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-4.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-4.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-4.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-4.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-5.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-5.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-5.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-5.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-5.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-5.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-5.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-5.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-5.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-5.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-5.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-5.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-5.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-6.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-6.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-6.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-6.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-6.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-6.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-6.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-6.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-6.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-6.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-6.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-6.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-6.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-7.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-7.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-7.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-7.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-7.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-7.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-7.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-7.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-7.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-7.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-7.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-7.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-7.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-8.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-8.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-8.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-8.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-8.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-8.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-8.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-8.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-8.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-8.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-8.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-8.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-8.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-9.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-9.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-9.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-9.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-9.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-9.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-9.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-9.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-9.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-9.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-9.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-9.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-9.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-10.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-10.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-10.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-10.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-10.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-10.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-10.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-10.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-10.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-10.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-10.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-10.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-10.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-11.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-11.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-11.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-11.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-11.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-11.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-11.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-11.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-11.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-11.5	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-11.5	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-11.5	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-11.5	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-12.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-12.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-12.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-12.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-12.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-12.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-12.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-12.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-12.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-12.5	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-12.5	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-12.5	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-12.5	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-13.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-13.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-13.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-13.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-13.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-13.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-13.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-13.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-13.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-13.5	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-13.5	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-13.5	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-13.5	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-14.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-14.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-14.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-14.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-14.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-14.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-14.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-14.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-14.5	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-14.5	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-14.5	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-14.5	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-14.5	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-15.1	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-15.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-15.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-15.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-15.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-15.2	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-15.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage
JD20919-15.4	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-15.5	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-15.5	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-15.5	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-15.5	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-15.5	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-16.1	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-16.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-16.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-16.1	GCMS3A	Robert Szot	03/03/21 18:34	Unload from Instrument
JD20919-16.1	Robert Szot	Secured Storage	03/03/21 18:34	Return to Storage
JD20919-16.2	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-16.2	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20919-16.2	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20919-16.2	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20919-16.2	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20919-16.3	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-16.3	Secured Storage	Krizhka Cuenta	03/05/21 12:01	Retrieve from Storage
JD20919-16.3	Krizhka Cuenta	GCMS2A	03/05/21 12:01	Load on Instrument
JD20919-16.3	GCMS2A	Krizhka Cuenta	03/08/21 08:10	Unload from Instrument
JD20919-16.3	Krizhka Cuenta	Secured Storage	03/08/21 08:10	Return to Storage
JD20919-16.4	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-16.5	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-16.5	Secured Storage	Krizhka Cuenta	03/05/21 10:58	Retrieve from Storage
JD20919-16.5	Krizhka Cuenta	GCMS2A	03/05/21 10:59	Load on Instrument
JD20919-16.5	GCMS2A	Krizhka Cuenta	03/08/21 08:10	Unload from Instrument
JD20919-16.5	Krizhka Cuenta	Secured Storage	03/08/21 08:10	Return to Storage
JD20919-17.1	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-17.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-17.1	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-17.1	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-17.2	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.3	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.3	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-17.3	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-17.3	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-17.3	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-17.4	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.4	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-17.4	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-17.4	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-17.4	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-17.5	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.5	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-17.5	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-17.5	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-17.5	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-17.6	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.7	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.7	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-17.7	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-17.7	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-17.7	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-17.8	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.8	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-17.8	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-17.8	GCMS3A	Robert Szot	03/04/21 12:26	Unload from Instrument
JD20919-17.8	Robert Szot	Secured Storage	03/04/21 12:26	Return to Storage
JD20919-17.9	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.10	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.11	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.12	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.13	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.14	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.15	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-17.16	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20919-17.17	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-18.1	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-18.1	Secured Storage	Robert Szot	03/03/21 16:02	Retrieve from Storage
JD20919-18.1	Robert Szot	GCMS3A	03/03/21 16:02	Load on Instrument
JD20919-18.1	GCMS3A	Robert Szot	03/03/21 17:39	Unload from Instrument
JD20919-18.1	Robert Szot	Secured Storage	03/03/21 17:39	Return to Storage
JD20919-18.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20919-18.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20919-18.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20919-18.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20919-18.2	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-18.2	Secured Storage	Krizhka Cuenta	03/05/21 12:01	Retrieve from Storage
JD20919-18.2	Krizhka Cuenta	GCMS2A	03/05/21 12:01	Load on Instrument
JD20919-18.2	GCMS2A	Krizhka Cuenta	03/08/21 08:10	Unload from Instrument
JD20919-18.2	Krizhka Cuenta	Secured Storage	03/08/21 08:10	Return to Storage
JD20919-18.3	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-18.4	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-18.4	Secured Storage	Krizhka Cuenta	03/05/21 10:58	Retrieve from Storage
JD20919-18.4	Krizhka Cuenta	GCMS2A	03/05/21 10:59	Load on Instrument
JD20919-18.4	GCMS2A	Krizhka Cuenta	03/08/21 08:10	Unload from Instrument
JD20919-18.4	Krizhka Cuenta	Secured Storage	03/08/21 08:10	Return to Storage
JD20919-18.5	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-19.1	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-19.1	Secured Storage	Brittany Klimek	03/04/21 11:01	Retrieve from Storage
JD20919-19.1	Brittany Klimek	GCMS4B	03/04/21 11:01	Load on Instrument
JD20919-19.1	GCMS4B	Brittany Klimek	03/05/21 09:45	Unload from Instrument
JD20919-19.1	Brittany Klimek	Secured Storage	03/05/21 09:45	Return to Storage
JD20919-19.2	Shivani Gogwekar	Secured Storage	02/27/21 14:56	Return to Storage
JD20919-19.3	Shivani Gogwekar	Secured Storage	02/27/21 14:53	Return to Storage

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B4445-MB	4B102755.D	1	03/04/21	BK	n/a	n/a	V4B4445

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20919-1, JD20919-2, JD20919-3, JD20919-4, JD20919-5, JD20919-6, JD20919-7, JD20919-8, JD20919-9, JD20919-10, JD20919-11, JD20919-12, JD20919-13, JD20919-14, JD20919-15, JD20919-17, JD20919-19

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	101%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9078-MB	2A208827.D	1	03/05/21	KC	n/a	n/a	V2A9078

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20919-16, JD20919-18

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	98%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A7169-MB	3A165037.D	1	03/03/21	RS	n/a	n/a	V3A7169

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20919-1, JD20919-2, JD20919-3, JD20919-4, JD20919-5, JD20919-6, JD20919-7, JD20919-8, JD20919-9, JD20919-10, JD20919-11, JD20919-12, JD20919-13, JD20919-14, JD20919-15, JD20919-17

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.40	0.095	ug/l	

CAS No.	Surrogate Recoveries		Limits
17647-74-4	1,4-Dioxane-d8	102%	39-174%

Method Blank Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A7170-MB	3A165059.D	1	03/04/21	RS	n/a	n/a	V3A7170

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20919-16, JD20919-18

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.40	0.095	ug/l	

CAS No.	Surrogate Recoveries		Limits
17647-74-4	1,4-Dioxane-d8	93%	39-174%

Blank Spike Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B4445-BS	4B102753.D	1	03/04/21	BK	n/a	n/a	V4B4445

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20919-1, JD20919-2, JD20919-3, JD20919-4, JD20919-5, JD20919-6, JD20919-7, JD20919-8, JD20919-9, JD20919-10, JD20919-11, JD20919-12, JD20919-13, JD20919-14, JD20919-15, JD20919-17, JD20919-19

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	49.2	98	79-120
107-06-2	1,2-Dichloroethane	50	45.9	92	78-126
75-35-4	1,1-Dichloroethene	50	46.7	93	69-126
156-59-2	cis-1,2-Dichloroethene	50	49.2	98	80-120
156-60-5	trans-1,2-Dichloroethene	50	50.3	101	76-120
100-41-4	Ethylbenzene	50	47.9	96	80-120
75-09-2	Methylene chloride	50	47.6	95	77-120
127-18-4	Tetrachloroethene	50	48.1	96	70-131
108-88-3	Toluene	50	48.5	97	80-120
71-55-6	1,1,1-Trichloroethane	50	50.4	101	81-128
79-00-5	1,1,2-Trichloroethane	50	50.2	100	83-118
79-01-6	Trichloroethene	50	46.0	92	80-120
75-01-4	Vinyl chloride	50	56.8	114	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	81-124%
2037-26-5	Toluene-D8	104%	80-120%
460-00-4	4-Bromofluorobenzene	98%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9078-BS	2A208825.D	1	03/05/21	KC	n/a	n/a	V2A9078

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20919-16, JD20919-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	46.7	93	79-120
107-06-2	1,2-Dichloroethane	50	48.0	96	78-126
75-35-4	1,1-Dichloroethene	50	42.1	84	69-126
156-59-2	cis-1,2-Dichloroethene	50	46.2	92	80-120
156-60-5	trans-1,2-Dichloroethene	50	45.1	90	76-120
100-41-4	Ethylbenzene	50	46.7	93	80-120
75-09-2	Methylene chloride	50	44.3	89	77-120
127-18-4	Tetrachloroethene	50	48.8	98	70-131
108-88-3	Toluene	50	48.0	96	80-120
71-55-6	1,1,1-Trichloroethane	50	47.0	94	81-128
79-00-5	1,1,2-Trichloroethane	50	47.1	94	83-118
79-01-6	Trichloroethene	50	46.0	92	80-120
75-01-4	Vinyl chloride	50	48.6	97	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	81-124%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	97%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A7169-BS	3A165036.D	1	03/03/21	RS	n/a	n/a	V3A7169

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20919-1, JD20919-2, JD20919-3, JD20919-4, JD20919-5, JD20919-6, JD20919-7, JD20919-8, JD20919-9, JD20919-10, JD20919-11, JD20919-12, JD20919-13, JD20919-14, JD20919-15, JD20919-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	20	13.8	69	61-125

CAS No.	Surrogate Recoveries	BSP	Limits
17647-74-4	1,4-Dioxane-d8	74%	39-174%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A7170-BS	3A165058.D	1	03/04/21	RS	n/a	n/a	V3A7170

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20919-16, JD20919-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	20	17.5	88	61-125

CAS No.	Surrogate Recoveries	BSP	Limits
17647-74-4	1,4-Dioxane-d8	91%	39-174%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20919-18MS	2A208834.D	1	03/05/21	KC	n/a	n/a	V2A9078
JD20919-18	2A208829.D	1	03/05/21	KC	n/a	n/a	V2A9078

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20919-16, JD20919-18

CAS No.	Compound	JD20919-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
75-34-3	1,1-Dichloroethane	1.2		50	47.8	93	73-126
107-06-2	1,2-Dichloroethane	ND		50	45.8	92	72-131
75-35-4	1,1-Dichloroethene	ND		50	44.9	90	63-136
156-59-2	cis-1,2-Dichloroethene	0.86	J	50	46.4	91	60-136
156-60-5	trans-1,2-Dichloroethene	ND		50	46.3	93	70-126
100-41-4	Ethylbenzene	ND		50	46.7	93	51-140
75-09-2	Methylene chloride	ND		50	44.0	88	73-125
127-18-4	Tetrachloroethene	23.3		50	69.9	93	61-139
108-88-3	Toluene	ND		50	47.7	95	60-135
71-55-6	1,1,1-Trichloroethane	5.0		50	53.6	97	74-138
79-00-5	1,1,2-Trichloroethane	ND		50	44.3	89	78-121
79-01-6	Trichloroethene	0.85	J	50	47.9	94	62-141
75-01-4	Vinyl chloride	ND		50	52.3	105	43-146

CAS No.	Surrogate Recoveries	MS	JD20919-18	Limits
1868-53-7	Dibromofluoromethane	104%	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	104%	105%	81-124%
2037-26-5	Toluene-D8	101%	101%	80-120%
460-00-4	4-Bromofluorobenzene	96%	97%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20919-17MS	4B102760.D	1	03/04/21	BK	n/a	n/a	V4B4445
JD20919-17MSD	4B102761.D	1	03/04/21	BK	n/a	n/a	V4B4445
JD20919-17	4B102756.D	1	03/04/21	BK	n/a	n/a	V4B4445

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20919-1, JD20919-2, JD20919-3, JD20919-4, JD20919-5, JD20919-6, JD20919-7, JD20919-8, JD20919-9, JD20919-10, JD20919-11, JD20919-12, JD20919-13, JD20919-14, JD20919-15, JD20919-17, JD20919-19

CAS No.	Compound	JD20919-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-34-3	1,1-Dichloroethane	0.87	J	50	44.8	88	50	47.2	93	5	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	43.3	87	50	46.5	93	7	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	42.7	85	50	45.7	91	7	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	43.8	88	50	46.4	93	6	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	44.5	89	50	47.3	95	6	70-126/11
100-41-4	Ethylbenzene	ND		50	45.8	92	50	48.2	96	5	51-140/20
75-09-2	Methylene chloride	ND		50	39.1	78	50	41.7	83	6	73-125/13
127-18-4	Tetrachloroethene	ND		50	47.2	94	50	49.2	98	4	61-139/11
108-88-3	Toluene	ND		50	44.8	90	50	47.5	95	6	60-135/10
71-55-6	1,1,1-Trichloroethane	0.62	J	50	46.7	92	50	50.7	100	8	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	46.8	94	50	49.4	99	5	78-121/11
79-01-6	Trichloroethene	ND		50	45.9	92	50	48.3	97	5	62-141/10
75-01-4	Vinyl chloride	ND		50	52.5	105	50	55.0	110	5	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JD20919-17	Limits
1868-53-7	Dibromofluoromethane	101%	101%	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	103%	104%	81-124%
2037-26-5	Toluene-D8	102%	103%	101%	80-120%
460-00-4	4-Bromofluorobenzene	103%	101%	99%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20919-17MS	3A165039.D	1	03/03/21	RS	n/a	n/a	V3A7169
JD20919-17MSD	3A165040.D	1	03/03/21	RS	n/a	n/a	V3A7169
JD20919-17	3A165038.D	1	03/03/21	RS	n/a	n/a	V3A7169

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20919-1, JD20919-2, JD20919-3, JD20919-4, JD20919-5, JD20919-6, JD20919-7, JD20919-8, JD20919-9, JD20919-10, JD20919-11, JD20919-12, JD20919-13, JD20919-14, JD20919-15, JD20919-17

CAS No.	Compound	JD20919-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	0.81		20	17.0	81	20	16.7	79	2	36-157/42

CAS No.	Surrogate Recoveries	MS	MSD	JD20919-17	Limits
17647-74-4	1,4-Dioxane-d8	100%	93%	85%	39-174%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20920-11MS	3A165063.D	1	03/04/21	RS	n/a	n/a	V3A7170
JD20920-11MSD	3A165064.D	1	03/04/21	RS	n/a	n/a	V3A7170
JD20920-11	3A165062.D	1	03/04/21	RS	n/a	n/a	V3A7170

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20919-16, JD20919-18

CAS No.	Compound	JD20920-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	ND		20	20.7	104	20	21.7	109	5	36-157/42

CAS No.	Surrogate Recoveries	MS	MSD	JD20920-11	Limits
17647-74-4	1,4-Dioxane-d8	118%	143%	121%	39-174%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20919-16DUP	2A208836.D	1	03/05/21	KC	n/a	n/a	V2A9078
JD20919-16	2A208828.D	1	03/05/21	KC	n/a	n/a	V2A9078

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20919-16, JD20919-18

CAS No.	Compound	JD20919-16 ug/l	Q	DUP ug/l	Q	RPD	Limits
75-34-3	1,1-Dichloroethane	ND		ND		nc	20
107-06-2	1,2-Dichloroethane	ND		ND		nc	20
75-35-4	1,1-Dichloroethene	ND		ND		nc	20
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	20
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	20
100-41-4	Ethylbenzene	ND		ND		nc	20
75-09-2	Methylene chloride	ND		ND		nc	20
127-18-4	Tetrachloroethene	ND		ND		nc	20
108-88-3	Toluene	ND		ND		nc	20
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	20
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	20
79-01-6	Trichloroethene	ND		ND		nc	20
75-01-4	Vinyl chloride	ND		ND		nc	20

CAS No.	Surrogate Recoveries	DUP	JD20919-16	Limits
1868-53-7	Dibromofluoromethane	102%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	106%	81-124%
2037-26-5	Toluene-D8	100%	100%	80-120%
460-00-4	4-Bromofluorobenzene	97%	97%	80-120%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2A8967-BFB
Lab File ID: 2A206380.D
Instrument ID: GCMS2A
Injection Date: 11/11/20
Injection Time: 15:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	28360	15.6		Pass
75	30.0 - 60.0% of mass 95	80296	44.2		Pass
95	Base peak, 100% relative abundance	181461	100.0		Pass
96	5.0 - 9.0% of mass 95	12072	6.65		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	161344	88.9		Pass
175	5.0 - 9.0% of mass 174	11891	6.55	(7.37) [a]	Pass
176	95.0 - 101.0% of mass 174	157568	86.8	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	10598	5.84	(6.73) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A8967-IC8967	2A206381.D	11/11/20	15:42	00:36	Initial cal 0.2
V2A8967-IC8967	2A206382.D	11/11/20	16:11	01:05	Initial cal 0.5
V2A8967-IC8967	2A206383.D	11/11/20	16:41	01:35	Initial cal 1
V2A8967-IC8967	2A206384.D	11/11/20	17:10	02:04	Initial cal 2
V2A8967-IC8967	2A206385.D	11/11/20	17:40	02:34	Initial cal 4
V2A8967-IC8967	2A206386.D	11/11/20	18:09	03:03	Initial cal 8
V2A8967-IC8967	2A206387.D	11/11/20	18:38	03:32	Initial cal 20
V2A8967-ICC8967	2A206388.D	11/11/20	19:08	04:02	Initial cal 50
V2A8967-IC8967	2A206389.D	11/11/20	19:37	04:31	Initial cal 100
V2A8967-IC8967	2A206390.D	11/11/20	20:06	05:00	Initial cal 200
V2A8967-ICV8967	2A206393.D	11/11/20	21:35	06:29	Initial cal verification 50
V2A8967-ICV8967	2A206394.D	11/11/20	22:04	06:58	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2A9078-BFB
Lab File ID: 2A208823.D
Instrument ID: GCMS2A
Injection Date: 03/05/21
Injection Time: 08:32

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	36317	16.5		Pass
75	30.0 - 60.0% of mass 95	97984	44.6		Pass
95	Base peak, 100% relative abundance	219499	100.0		Pass
96	5.0 - 9.0% of mass 95	14549	6.63		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	191723	87.3		Pass
175	5.0 - 9.0% of mass 174	14654	6.68	(7.64) [a]	Pass
176	95.0 - 101.0% of mass 174	185920	84.7	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	12750	5.81	(6.86) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A9078-CC8967	2A208823.D	03/05/21	08:32	00:00	Continuing cal 20
V2A9078-BS	2A208825.D	03/05/21	09:34	01:02	Blank Spike
V2A9078-MB	2A208827.D	03/05/21	10:31	01:59	Method Blank
JD20919-16	2A208828.D	03/05/21	11:05	02:33	HSSER-DUP01-022421
JD20919-18	2A208829.D	03/05/21	11:34	03:02	HSSER-SMW04-022521
ZZZZZZ	2A208830.D	03/05/21	12:03	03:31	(unrelated sample)
ZZZZZZ	2A208831.D	03/05/21	12:31	03:59	(unrelated sample)
ZZZZZZ	2A208833.D	03/05/21	13:35	05:03	(unrelated sample)
JD20919-18MS	2A208834.D	03/05/21	14:03	05:31	Matrix Spike
ZZZZZZ	2A208835.D	03/05/21	14:32	06:00	(unrelated sample)
JD20919-16DUP	2A208836.D	03/05/21	15:01	06:29	Duplicate
ZZZZZZ	2A208837.D	03/05/21	15:29	06:57	(unrelated sample)
ZZZZZZ	2A208838.D	03/05/21	15:58	07:26	(unrelated sample)
ZZZZZZ	2A208839.D	03/05/21	16:26	07:54	(unrelated sample)
ZZZZZZ	2A208840.D	03/05/21	16:54	08:22	(unrelated sample)
ZZZZZZ	2A208841.D	03/05/21	17:23	08:51	(unrelated sample)
ZZZZZZ	2A208842.D	03/05/21	17:51	09:19	(unrelated sample)
ZZZZZZ	2A208843.D	03/05/21	18:20	09:48	(unrelated sample)
ZZZZZZ	2A208844.D	03/05/21	18:48	10:16	(unrelated sample)
ZZZZZZ	2A208845.D	03/05/21	19:17	10:45	(unrelated sample)
ZZZZZZ	2A208846.D	03/05/21	19:45	11:13	(unrelated sample)
V2A9078-ECC8967	2A208847.D	03/05/21	20:13	11:41	Ending cal 50

Instrument Performance Check (BFB)

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V3A6923-BFB
Lab File ID: 3A160428.D
Instrument ID: GCMS3A
Injection Date: 07/18/18
Injection Time: 16:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	25408	20.8		Pass
75	30.0 - 60.0% of mass 95	62880	51.6		Pass
95	Base peak, 100% relative abundance	121864	100.0		Pass
96	5.0 - 9.0% of mass 95	8101	6.65		Pass
173	Less than 2.0% of mass 174	826	0.68	(0.81) [a]	Pass
174	50.0 - 120.0% of mass 95	102317	84.0		Pass
175	5.0 - 9.0% of mass 174	8168	6.70	(7.98) [a]	Pass
176	95.0 - 101.0% of mass 174	100370	82.4	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	6691	5.49	(6.67) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A6923-IC6923	3A160429.D	07/18/18	17:26	00:31	Initial cal 0.25
V3A6923-IC6923	3A160430.D	07/18/18	17:52	00:57	Initial cal 0.4
V3A6923-IC6923	3A160431.D	07/18/18	18:18	01:23	Initial cal 1
V3A6923-IC6923	3A160432.D	07/18/18	18:43	01:48	Initial cal 2
V3A6923-IC6923	3A160433.D	07/18/18	19:09	02:14	Initial cal 5
V3A6923-ICC6923	3A160434.D	07/18/18	19:35	02:40	Initial cal 20
V3A6923-IC6923	3A160435.D	07/18/18	20:00	03:05	Initial cal 50
V3A6923-IC6923	3A160436.D	07/18/18	20:26	03:31	Initial cal 100
V3A6923-IC6923	3A160437.D	07/18/18	20:52	03:57	Initial cal 200
V3A6923-ICV6923	3A160443.D	07/18/18	23:25	06:30	Initial cal verification 20

Instrument Performance Check (BFB)

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V3A7169-BFB
Lab File ID: 3A165034.D
Instrument ID: GCMS3A
Injection Date: 03/03/21
Injection Time: 13:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	20520	18.3		Pass
75	30.0 - 60.0% of mass 95	54061	48.1		Pass
95	Base peak, 100% relative abundance	112330	100.0		Pass
96	5.0 - 9.0% of mass 95	6834	6.08		Pass
173	Less than 2.0% of mass 174	1212	1.08	(1.09) [a]	Pass
174	50.0 - 120.0% of mass 95	110842	98.7		Pass
175	5.0 - 9.0% of mass 174	8060	7.18	(7.27) [a]	Pass
176	95.0 - 101.0% of mass 174	110176	98.1	(99.4) [a]	Pass
177	5.0 - 9.0% of mass 176	7384	6.57	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A7169-CC6923	3A165035.D	03/03/21	13:40	00:30	Continuing cal 5
V3A7169-BS	3A165036.D	03/03/21	15:07	01:57	Blank Spike
V3A7169-MB	3A165037.D	03/03/21	15:36	02:26	Method Blank
JD20919-17	3A165038.D	03/03/21	16:15	03:05	HSSER-GMZ02-022521
JD20919-17MS	3A165039.D	03/03/21	16:51	03:41	Matrix Spike
JD20919-17MSD	3A165040.D	03/03/21	17:20	04:10	Matrix Spike Duplicate
JD20919-3	3A165041.D	03/03/21	17:49	04:39	HSSER-FBLK01-022321
JD20919-13	3A165042.D	03/03/21	18:34	05:24	HSSER-EBLK01-022421
JD20919-1	3A165043.D	03/03/21	19:02	05:52	HSSER-SMW08-022321
JD20919-2	3A165044.D	03/03/21	19:31	06:21	HSSER-GMZ01-022321
JD20919-4	3A165045.D	03/03/21	20:00	06:50	HSSER-SMW02-022321
JD20919-5	3A165046.D	03/03/21	20:28	07:18	HSSER-SMW01-022321
JD20919-6	3A165047.D	03/03/21	20:57	07:47	HSSER-MW203-022321
JD20919-7	3A165048.D	03/03/21	21:26	08:16	HSSER-MW07FGA-022321
JD20919-8	3A165049.D	03/03/21	21:54	08:44	HSSER-SMW19-022321
JD20919-9	3A165050.D	03/03/21	22:23	09:13	HSSER-GMZ04-022321
JD20919-10	3A165051.D	03/03/21	22:52	09:42	HSSER-SMW21-022321
JD20919-11	3A165052.D	03/03/21	23:20	10:10	HSSER-PMW01-022421
JD20919-12	3A165053.D	03/03/21	23:49	10:39	HSSER-PMW02-022421
JD20919-14	3A165054.D	03/04/21	00:18	11:08	HSSER-SMW20-022421
JD20919-15	3A165055.D	03/04/21	00:48	11:38	HSSER-GMZ03-022421

Instrument Performance Check (BFB)

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V3A7170-BFB
Lab File ID: 3A165056.D
Instrument ID: GCMS3A
Injection Date: 03/04/21
Injection Time: 10:09

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12600	18.7		Pass
75	30.0 - 60.0% of mass 95	31168	46.2		Pass
95	Base peak, 100% relative abundance	67437	100.0		Pass
96	5.0 - 9.0% of mass 95	4218	6.25		Pass
173	Less than 2.0% of mass 174	669	0.99	(1.02) [a]	Pass
174	50.0 - 120.0% of mass 95	65834	97.6		Pass
175	5.0 - 9.0% of mass 174	4956	7.35	(7.53) [a]	Pass
176	95.0 - 101.0% of mass 174	64389	95.5	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4246	6.30	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A7170-CC6923	3A165057.D	03/04/21	10:45	00:36	Continuing cal 5
V3A7170-BS	3A165058.D	03/04/21	11:19	01:10	Blank Spike
V3A7170-MB	3A165059.D	03/04/21	11:48	01:39	Method Blank
JD20919-16	3A165060.D	03/04/21	12:49	02:40	HSSER-DUP01-022421
JD20919-18	3A165061.D	03/04/21	13:18	03:09	HSSER-SMW04-022521
JD20920-11	3A165062.D	03/04/21	13:47	03:38	(used for QC only; not part of job JD20919)
JD20920-11MS	3A165063.D	03/04/21	14:16	04:07	Matrix Spike
JD20920-11MSD	3A165064.D	03/04/21	14:45	04:36	Matrix Spike Duplicate
ZZZZZZ	3A165066.D	03/04/21	15:43	05:34	(unrelated sample)
ZZZZZZ	3A165067.D	03/04/21	16:11	06:02	(unrelated sample)
ZZZZZZ	3A165068.D	03/04/21	16:40	06:31	(unrelated sample)
ZZZZZZ	3A165069.D	03/04/21	17:09	07:00	(unrelated sample)
ZZZZZZ	3A165070.D	03/04/21	17:37	07:28	(unrelated sample)
ZZZZZZ	3A165071.D	03/04/21	18:06	07:57	(unrelated sample)
ZZZZZZ	3A165072.D	03/04/21	18:34	08:25	(unrelated sample)
ZZZZZZ	3A165073.D	03/04/21	19:03	08:54	(unrelated sample)
ZZZZZZ	3A165074.D	03/04/21	19:32	09:23	(unrelated sample)
ZZZZZZ	3A165075.D	03/04/21	20:01	09:52	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B4435-BFB
Lab File ID: 4B102495.D
Instrument ID: GCMS4B
Injection Date: 02/17/21
Injection Time: 20:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19973	18.9		Pass
75	30.0 - 60.0% of mass 95	51397	48.5		Pass
95	Base peak, 100% relative abundance	105933	100.0		Pass
96	5.0 - 9.0% of mass 95	6912	6.52		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	104266	98.4		Pass
175	5.0 - 9.0% of mass 174	8799	8.31	(8.44) [a]	Pass
176	95.0 - 101.0% of mass 174	101728	96.0	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	7225	6.82	(7.10) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B4435-IC4435	4B102496.D	02/17/21	20:52	00:35	Initial cal 0.2
V4B4435-IC4435	4B102497.D	02/17/21	21:20	01:03	Initial cal 0.5
V4B4435-IC4435	4B102498.D	02/17/21	21:48	01:31	Initial cal 1
V4B4435-IC4435	4B102499.D	02/17/21	22:17	02:00	Initial cal 2
V4B4435-IC4435	4B102500.D	02/17/21	22:45	02:28	Initial cal 4
V4B4435-IC4435	4B102501.D	02/17/21	23:13	02:56	Initial cal 8
V4B4435-IC4435	4B102502.D	02/17/21	23:41	03:24	Initial cal 20
V4B4435-ICC4435	4B102503.D	02/18/21	00:09	03:52	Initial cal 50
V4B4435-IC4435	4B102504.D	02/18/21	00:37	04:20	Initial cal 100
V4B4435-IC4435	4B102505.D	02/18/21	01:05	04:48	Initial cal 200
V4B4435-ICV4435	4B102508.D	02/18/21	02:30	06:13	Initial cal verification 50
V4B4435-ICV4435	4B102509.D	02/18/21	02:58	06:41	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B4445-BFB
Lab File ID: 4B102752.D
Instrument ID: GCMS4B
Injection Date: 03/04/21
Injection Time: 10:02

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	17409	17.8		Pass
75	30.0 - 60.0% of mass 95	46032	47.1		Pass
95	Base peak, 100% relative abundance	97712	100.0		Pass
96	5.0 - 9.0% of mass 95	6081	6.22		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	99848	102.2		Pass
175	5.0 - 9.0% of mass 174	8469	8.67	(8.48) [a]	Pass
176	95.0 - 101.0% of mass 174	96555	98.8	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	6174	6.32	(6.39) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B4445-CC4435	4B102752.D	03/04/21	10:02	00:00	Continuing cal 20
V4B4445-BS	4B102753.D	03/04/21	10:55	00:53	Blank Spike
V4B4445-MB	4B102755.D	03/04/21	11:51	01:49	Method Blank
JD20919-17	4B102756.D	03/04/21	12:21	02:19	HSSER-GMZ02-022521
JD20919-1	4B102757.D	03/04/21	12:49	02:47	HSSER-SMW08-022321
JD20919-2	4B102758.D	03/04/21	13:18	03:16	HSSER-GMZ01-022321
JD20919-4	4B102759.D	03/04/21	13:46	03:44	HSSER-SMW02-022321
JD20919-17MS	4B102760.D	03/04/21	14:14	04:12	Matrix Spike
JD20919-17MSD	4B102761.D	03/04/21	14:42	04:40	Matrix Spike Duplicate
JD20919-3	4B102763.D	03/04/21	15:38	05:36	HSSER-FBLK01-022321
JD20919-13	4B102764.D	03/04/21	16:07	06:05	HSSER-EBLK01-022421
JD20919-19	4B102765.D	03/04/21	16:35	06:33	HSSER-TBLK01-022321
JD20919-5	4B102766.D	03/04/21	17:03	07:01	HSSER-SMW01-022321
JD20919-6	4B102767.D	03/04/21	17:31	07:29	HSSER-MW203-022321
JD20919-7	4B102768.D	03/04/21	17:59	07:57	HSSER-MW07FGA-022321
JD20919-8	4B102769.D	03/04/21	18:27	08:25	HSSER-SMW19-022321
JD20919-9	4B102770.D	03/04/21	18:56	08:54	HSSER-GMZ04-022321
JD20919-10	4B102771.D	03/04/21	19:24	09:22	HSSER-SMW21-022321
JD20919-11	4B102772.D	03/04/21	19:52	09:50	HSSER-PMW01-022421
JD20919-12	4B102773.D	03/04/21	20:20	10:18	HSSER-PMW02-022421
JD20919-14	4B102774.D	03/04/21	20:48	10:46	HSSER-SMW20-022421
JD20919-15	4B102775.D	03/04/21	21:17	11:15	HSSER-GMZ03-022421

Internal Standard Area Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V2A9078-CC8967	**Injection Date:**	03/05/21
Lab File ID:	2A208823.D	**Injection Time:**	08:32
Instrument ID:	GCMS2A	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	141557	7.28	580664	9.54	833071	10.48	733083	13.60	379834	15.93
Upper Limit [a]	283114	7.78	1161328	10.04	1666142	10.98	1466166	14.10	759668	16.43
Lower Limit [b]	70779	6.78	290332	9.04	416536	9.98	366542	13.10	189917	15.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V2A9078-BS	150874	7.27	603809	9.54	875406	10.48	751544	13.60	386715	15.93
V2A9078-MB	145713	7.27	580221	9.54	840471	10.48	738770	13.60	373406	15.93
JD20919-16	158527	7.28	592003	9.55	850403	10.48	744049	13.60	375005	15.93
JD20919-18	146939	7.29	573718	9.55	828902	10.48	721027	13.60	363042	15.93
ZZZZZZ	142838	7.29	587794	9.55	838788	10.48	733519	13.60	371048	15.93
ZZZZZZ	150588	7.28	606864	9.55	869799	10.48	768016	13.60	401159	15.93
ZZZZZZ	156752	7.29	590530	9.55	846307	10.48	746493	13.60	386280	15.93
JD20919-18MS	151694	7.28	592661	9.54	851453	10.48	742104	13.60	383720	15.93
ZZZZZZ	148122	7.27	587588	9.55	835865	10.48	749995	13.60	375705	15.93
JD20919-16DUP	146959	7.27	595535	9.55	853976	10.48	749847	13.60	378424	15.93
ZZZZZZ	149587	7.27	596497	9.55	848175	10.48	745387	13.60	381479	15.93
ZZZZZZ	147942	7.27	608267	9.54	878035	10.48	764370	13.60	383770	15.93
ZZZZZZ	140036	7.29	581401	9.55	832181	10.48	734963	13.60	373641	15.93
ZZZZZZ	143375	7.27	587545	9.55	848372	10.48	745996	13.60	376590	15.93
ZZZZZZ	142742	7.28	589389	9.54	851649	10.48	754108	13.60	380559	15.93
ZZZZZZ	146532	7.28	592325	9.55	849351	10.48	756363	13.60	378656	15.93
ZZZZZZ	144880	7.28	578841	9.55	828366	10.48	728001	13.60	371797	15.93
ZZZZZZ	169093	7.29	587406	9.55	845903	10.48	737554	13.60	380438	15.93
ZZZZZZ	147117	7.28	585938	9.54	841203	10.48	736114	13.60	375784	15.93
ZZZZZZ	172453	7.28	607637	9.55	870983	10.48	762936	13.60	387883	15.93
V2A9078-ECC8967	144161	7.28	590244	9.55	850507	10.48	741808	13.60	388868	15.93

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V3A7169-CC6923	**Injection Date:**	03/03/21
Lab File ID:	3A165035.D	**Injection Time:**	13:40
Instrument ID:	GCMS3A	**Method:**	SW846 8260C BY SIM

	IS 1 AREA	RT
Check Std	14500	15.77
Upper Limit [a]	29000	16.27
Lower Limit [b]	7250	15.27

Lab Sample ID	IS 1 AREA	RT
V3A7169-BS	14467	15.77
V3A7169-MB	12178	15.77
JD20919-17	12174	15.77
JD20919-17MS	12374	15.77
JD20919-17MSD	11802	15.77
JD20919-3	11735	15.77
JD20919-13	12923	15.77
JD20919-1	10119	15.77
JD20919-2	11498	15.77
JD20919-4	11575	15.77
JD20919-5	10502	15.77
JD20919-6	10694	15.77
JD20919-7	11109	15.77
JD20919-8	10735	15.77
JD20919-9	10828	15.77
JD20919-10	10606	15.77
JD20919-11	9464	15.77
JD20919-12	9061	15.77
JD20919-14	10445	15.77
JD20919-15	10436	15.77

IS 1 = 4-Bromofluorobenzene

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V3A7170-CC6923	**Injection Date:**	03/04/21
Lab File ID:	3A165057.D	**Injection Time:**	10:45
Instrument ID:	GCMS3A	**Method:**	SW846 8260C BY SIM

	IS 1 AREA	RT
Check Std	11964	15.77
Upper Limit [a]	23928	16.27
Lower Limit [b]	5982	15.27

Lab Sample ID	IS 1 AREA	RT
V3A7170-BS	11514	15.77
V3A7170-MB	10902	15.77
JD20919-16	10889	15.77
JD20919-18	10165	15.77
JD20920-11	8804	15.77
JD20920-11MS	9997	15.77
JD20920-11MSD	9697	15.77
ZZZZZZ	10380	15.77
ZZZZZZ	10217	15.77
ZZZZZZ	9874	15.77
ZZZZZZ	8849	15.77
ZZZZZZ	9696	15.77
ZZZZZZ	10135	15.77
ZZZZZZ	10728	15.77
ZZZZZZ	10057	15.77
ZZZZZZ	9238	15.77
ZZZZZZ	10500	15.77

IS 1 = 4-Bromofluorobenzene

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V4B4445-CC4435	**Injection Date:**	03/04/21
Lab File ID:	4B102752.D	**Injection Time:**	10:02
Instrument ID:	GCMS4B	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	143541	6.47	234741	8.45	300821	9.31	318428	12.50	247128	15.07
Upper Limit [a]	287082	6.97	469482	8.95	601642	9.81	636856	13.00	494256	15.57
Lower Limit [b]	71771	5.97	117371	7.95	150411	8.81	159214	12.00	123564	14.57

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4B4445-BS	132195	6.47	239391	8.45	305153	9.31	307469	12.50	215935	15.07
V4B4445-MB	129454	6.46	273559	8.45	369306	9.31	394186	12.50	289992	15.07
JD20919-17	142022	6.48	234221	8.45	281949	9.31	299094	12.50	215360	15.07
JD20919-1	87888	6.47	250891	8.45	336296	9.31	362982	12.50	254874	15.07
JD20919-2	127734	6.47	253671	8.45	325817	9.31	347195	12.50	260400	15.07
JD20919-4	117773	6.48	259566	8.45	361920	9.31	376846	12.50	260051	15.07
JD20919-17MS	114104	6.48	250008	8.45	350114	9.31	353853	12.49	245327	15.07
JD20919-17MSD	122172	6.47	241667	8.45	317290	9.31	322874	12.49	222232	15.07
JD20919-3	115173	6.47	257395	8.45	335279	9.31	351338	12.50	260309	15.07
JD20919-13	115214	6.45	244860	8.45	330493	9.31	356070	12.50	266217	15.07
JD20919-19	127051	6.47	247281	8.45	328601	9.31	410991	12.50	272066	15.07
JD20919-5	116468	6.47	243369	8.45	321284	9.31	355475	12.50	261886	15.07
JD20919-6	108277	6.46	236531	8.45	317374	9.31	346625	12.50	256574	15.07
JD20919-7	111034	6.46	231955	8.45	309252	9.31	340538	12.50	250739	15.07
JD20919-8	109491	6.47	239356	8.45	318998	9.31	357672	12.50	247139	15.07
JD20919-9	113795	6.47	234990	8.45	318719	9.31	342540	12.50	254586	15.07
JD20919-10	116700	6.48	238474	8.45	318486	9.31	366546	12.50	250169	15.07
JD20919-11	112759	6.47	220028	8.45	299189	9.31	334834	12.50	245736	15.07
JD20919-12	115262	6.47	219990	8.45	290661	9.31	319701	12.49	236597	15.07
JD20919-14	106755	6.47	217645	8.45	289638	9.31	324288	12.49	247769	15.07
JD20919-15	106500	6.47	226070	8.45	307030	9.31	328895	12.50	239233	15.07

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD20919-1	4B102757.D	102	100	101	103
JD20919-2	4B102758.D	102	105	100	100
JD20919-3	4B102763.D	103	103	101	100
JD20919-4	4B102759.D	100	99	99	105
JD20919-5	4B102766.D	103	105	97	104
JD20919-6	4B102767.D	103	104	98	104
JD20919-7	4B102768.D	102	105	97	102
JD20919-8	4B102769.D	102	105	98	104
JD20919-9	4B102770.D	106	106	99	100
JD20919-10	4B102771.D	103	107	95	109
JD20919-11	4B102772.D	104	105	96	104
JD20919-12	4B102773.D	105	109	99	101
JD20919-13	4B102764.D	102	101	97	104
JD20919-14	4B102774.D	107	109	98	102
JD20919-15	4B102775.D	106	109	99	105
JD20919-16	2A208828.D	101	106	100	97
JD20919-17	4B102756.D	99	104	101	99
JD20919-18	2A208829.D	102	105	101	97
JD20919-19	4B102765.D	101	104	95	108
JD20919-16DUP	2A208836.D	102	101	100	97
JD20919-17MS	4B102760.D	101	100	102	103
JD20919-17MSD	4B102761.D	101	103	103	101
JD20919-18MS	2A208834.D	104	104	101	96
V2A9078-BS	2A208825.D	102	101	101	97
V2A9078-MB	2A208827.D	102	103	99	98
V4B4445-BS	4B102753.D	102	100	104	98
V4B4445-MB	4B102755.D	101	98	98	101

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

Surrogate Recovery Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD20919-1	3A165043.D	109
JD20919-2	3A165044.D	95
JD20919-3	3A165041.D	85
JD20919-4	3A165045.D	94
JD20919-5	3A165046.D	96
JD20919-6	3A165047.D	93
JD20919-7	3A165048.D	97
JD20919-8	3A165049.D	96
JD20919-9	3A165050.D	99
JD20919-10	3A165051.D	110
JD20919-11	3A165052.D	112
JD20919-12	3A165053.D	115
JD20919-13	3A165042.D	79
JD20919-14	3A165054.D	104
JD20919-15	3A165055.D	104
JD20919-16	3A165060.D	105
JD20919-17	3A165038.D	85
JD20919-18	3A165061.D	121
JD20919-17MS	3A165039.D	100
JD20919-17MSD	3A165040.D	93
JD20920-11MS	3A165063.D	118
JD20920-11MSD	3A165064.D	143
V3A7169-BS	3A165036.D	74
V3A7169-MB	3A165037.D	102
V3A7170-BS	3A165058.D	91
V3A7170-MB	3A165059.D	93

Surrogate Compounds	Recovery Limits
S1 = 1,4-Dioxane-d8	39-174%

Initial Calibration Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Sample: V2A8967-ICC8967
Lab FileID: 2A206388.D

```
                        Response Factor Report  Instrumen

Method       : C:\MSDCHEM\1\METHODS\M2A8967.M (RTE Integrator)
Title        : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
Last Update  : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Calibration Files
4   =2A206385.D  8   =2A206386.D  0.5 =2A206382.D  50  =2A206388.D
100 =2A206389.D  1   =2A206383.D  200 =2A206390.D  20  =2A206387.D
2   =2A206384.D  0.2 =2A206381.D      =                =

Compound
        4     8     0.5   50    100   1     200   20    2     0.2    Avg   %RSD
-------------------------------------------------------------------------------

1) I   tert butyl alcohol-d9 ----------------ISTD---------------------
2)  ethanol
     0.155 0.157 0.191 0.166 0.165 0.170 0.150 0.157 0.168        0.164    7.29
3)  tertiary butyl alcohol
     1.444 1.518 1.485 1.668 1.646 2.016 1.524 1.529 1.547        1.597   10.79
4)  1,4-dioxane
     0.143 0.152       0.162 0.166 0.166 0.149 0.152 0.133        0.153    7.42

5) I   pentafluorobenzene    ----------------ISTD---------------------
6)  chlorodifluoromethane
     0.762 0.764 0.786 0.797 0.763 0.740 0.735 0.746 0.740 0.799  0.763    3.13
7)  dichlorodifluoromethane
     0.781 0.805 0.697 0.818 0.772 0.748 0.754 0.749 0.807        0.770    4.94
8)  chloromethane
     0.852 0.803 0.924 0.839 0.789 0.875 0.773 0.774 0.865        0.833    6.22
9)  vinyl chloride
     0.798 0.796 0.897 0.823 0.777 0.769 0.762 0.771 0.819 0.917  0.813    6.63
10)  1,3-butadiene
     0.658 0.707 0.724 0.679 0.628 0.648 0.600 0.650 0.660 0.589  0.655    6.48
11)  bromomethane
     0.595 0.567       0.580 0.545 0.653 0.500 0.539 0.625        0.575    8.54
12)  chloroethane
     0.448 0.452 0.463 0.478 0.459 0.431 0.453 0.434 0.467 0.452  0.454    3.13
13)  vinyl bromide
     0.450 0.436       0.469 0.457 0.421 0.450 0.431 0.448        0.445    3.46
14)  trichlorofluoromethane
     1.013 1.020 1.044 1.059 1.017 0.993 0.991 0.974 1.015        1.014    2.59
15)  ethyl ether
     0.296 0.297 0.288 0.317 0.317 0.308 0.308 0.301 0.287        0.302    3.69
16)  acrolein
     0.058 0.059       0.070 0.073       0.074 0.062 0.058        0.065   10.90
17)  freon 113
     0.494 0.531 0.452 0.525 0.506 0.439 0.497 0.493 0.474        0.490    6.27
18)  1,1-dichloroethene
     0.539 0.549 0.605 0.562 0.536 0.545 0.528 0.529 0.532 0.610  0.553    5.45
19)  acetone
     0.182 0.171       0.174 0.165 0.183 0.149 0.177 0.175        0.172    6.40
20)  acetonitrile
     0.055 0.056       0.056 0.055 0.058 0.053 0.054 0.060        0.056    3.75
21)  iodomethane
     1.182 1.202 1.199 1.251 1.197 1.165 1.164 1.171 1.169 1.148  1.185    2.46
22)  carbon disulfide
     1.765 1.792 1.998 1.870 1.775 1.763 1.714 1.746 1.706        1.792    5.06
23)  methylene chloride
```

```
      0.605 0.620 0.789 0.637 0.605 0.716 0.598 0.612 0.656        0.649    9.90
24)  methyl acetate
      0.381 0.407 0.424 0.438 0.439 0.393 0.418 0.413 0.394        0.412    4.88
25)  methyl tert butyl ether
      1.498 1.512 1.637 1.560 1.476 1.487 1.409 1.480 1.549 1.781  1.539    6.79
26)  trans-1,2-dichloroethene
      0.582 0.599 0.695 0.617 0.585 0.607 0.575 0.588 0.610 0.613  0.607    5.62
27)  hexane
      0.903 0.988 1.062 0.959 0.926 0.883 0.873 0.914 0.841 0.798  0.915    8.23
28)  di-isopropyl ether
      1.854 1.893 1.938 1.941 1.840 1.874 1.719 1.839 1.927 1.828  1.865    3.57
29)  ethyl tert-butyl ether
      1.804 1.837 1.879 1.865 1.782 1.846 1.652 1.794 1.860 1.945  1.826    4.24
30)  2-butanone
      0.055 0.054 0.047 0.060 0.060 0.048 0.056 0.055 0.055        0.055    7.97
31)  1,1-dichloroethane
      1.048 1.068 1.107 1.079 1.036 1.039 0.985 1.030 1.043 1.021  1.046    3.18
32)  chloroprene
      0.813 0.845 0.795 0.895 0.864 0.796 0.832 0.844 0.806 0.773  0.826    4.44
33)  acrylonitrile
      0.164 0.159       0.177 0.179       0.177 0.167 0.140        0.166    8.27
34)  vinyl acetate
            0.080       0.079 0.093       0.092 0.081              0.085    7.99
35)  ethyl acetate
      0.050 0.065       0.067 0.069       0.064 0.063              0.063   10.29
36)  2,2-dichloropropane
      0.771 0.775 0.942 0.766 0.709 0.824 0.675 0.732 0.769        0.774    9.87
37)  cis-1,2-dichloroethene
      0.631 0.643 0.744 0.664 0.643 0.697 0.614 0.634 0.634 0.677  0.658    5.88
38)  propionitrile
      0.059 0.061 0.063 0.065 0.063 0.059 0.059 0.061 0.063        0.061    3.44
39)  bromochloromethane
      0.411 0.422 0.394 0.435 0.421 0.404 0.406 0.411 0.410        0.413    2.83
40)  tetrahydrofuran
      0.139 0.135       0.132 0.130       0.122 0.129 0.154        0.134    7.45
41)  chloroform
      1.084 1.063       1.103 1.045 1.226 0.976 1.060 1.134        1.086    6.70
42)  tert-butyl formate  *This compound fails Initial Calibrtion criteria*
      0.405 0.446 0.454 0.438 0.460 0.471 0.444 0.425 0.417        0.440    4.88
43)  isobutyl alcohol
      0.019 0.018       0.021 0.021       0.021 0.020 0.019        0.020    7.03
44)  dibromofluoromethane (s)
      0.436 0.436 0.439 0.443 0.442 0.439 0.445 0.438 0.434 0.436  0.439    0.81
45)  methacrylonitrile
      0.183 0.187       0.209 0.209 0.160 0.199 0.192 0.176        0.189    8.92
46)  1,1,1-trichloroethane
      0.948 0.958 1.010 0.988 0.933 0.969 0.901 0.926 0.871 0.843  0.935    5.54
47)  cyclohexane
      0.922 0.988 0.954 0.973 0.916 0.903 0.899 0.912 0.948 0.751  0.916    7.15
48)  1,1-dichloropropene
      0.772 0.808 0.765 0.843 0.808 0.763 0.760 0.807 0.794 0.738  0.786    4.00
49)  tert-amyl alcohol
      0.023 0.026       0.027 0.027       0.026 0.025 0.027        0.026    5.28
50)  carbon tetrachloride
      0.842 0.868 0.876 0.910 0.860 0.836 0.830 0.840 0.803 0.757  0.842    4.98

51) I   1,4-difluorobenzene   ----------------ISTD---------------------
52)  1,2-dichloroethane-d4 (s)
      0.311 0.313 0.312 0.312 0.303 0.311 0.304 0.310 0.314 0.320  0.311    1.60
53)  2,2,4-trimethylpentane
```

```
      1.583 1.744 1.856 1.699 1.574 1.548 1.452 1.586 1.511 1.496  1.605    7.78
54)  tert-amyl methyl ether
      1.190 1.195 1.350 1.229 1.138 1.269 1.038 1.174 1.246 1.300  1.213    7.25
55)  n-butyl alcohol
      0.009 0.010       0.010 0.010       0.009 0.010 0.008        0.009    6.10
56)  benzene
      1.546 1.580 1.752 1.603 1.515 1.578 1.371 1.543 1.593 1.735  1.582    6.82
57)  heptane
      0.303 0.354 0.370 0.342 0.328 0.321 0.308 0.322 0.300 0.304  0.325    7.28
58)  isopropyl acetate
      0.068 0.072       0.079 0.078       0.073 0.073 0.068        0.073    5.71
59)  1,2-dichloroethane
      0.483 0.496 0.540 0.515 0.493 0.522 0.457 0.493 0.511 0.637  0.515    9.42
60)  trichloroethene
      0.416 0.430 0.471 0.452 0.425 0.420 0.398 0.424 0.440 0.431  0.431    4.67
61)  ethyl acrylate
      0.362 0.369 0.345 0.407 0.404 0.330 0.376 0.383 0.361        0.371    6.83
62)  2-nitropropane
      0.057 0.064       0.075 0.076 0.069 0.073 0.070 0.077        0.070    9.72
63)  2-chloroethyl vinyl ether
      0.213 0.223 0.226 0.237 0.228 0.214 0.203 0.223 0.216 0.213  0.220    4.39
64)  methyl methacrylate
      0.082 0.085       0.098 0.099       0.093 0.089 0.076        0.089    9.46
65)  1,2-dichloropropane
      0.404 0.413 0.472 0.428 0.409 0.417 0.381 0.402 0.411 0.392  0.413    5.95
66)  methylcyclohexane
      0.738 0.777 0.835 0.792 0.736 0.751 0.701 0.743 0.716 0.612  0.740    8.02
67)  dibromomethane
      0.232 0.230 0.241 0.245 0.241 0.246 0.225 0.233 0.238 0.261  0.239    4.17
68)  bromodichloromethane
      0.514 0.525 0.578 0.556 0.538 0.489 0.506 0.521 0.511 0.593  0.533    6.18
69)  epichlorohydrin
      0.029 0.030 0.032 0.031 0.031 0.027 0.029 0.029 0.028        0.030    5.39
70)  cis-1,3-dichloropropene
      0.626 0.644 0.702 0.683 0.657 0.633 0.616 0.647 0.625 0.641  0.647    4.16
71)  4-methyl-2-pentanone
      0.121 0.125 0.135 0.131 0.125 0.133 0.116 0.125 0.129 0.117  0.126    5.12
72)  3-methyl-1-butanol
      0.007 0.008       0.009 0.009       0.008 0.008 0.009        0.008    6.02

73) I   chlorobenzene-d5      ----------------ISTD---------------------
74)  toluene-d8 (s)
      1.256 1.264 1.263 1.282 1.286 1.252 1.297 1.262 1.260 1.237  1.266    1.39
75)  toluene
      1.090 1.138 1.247 1.175 1.127 1.115 1.035 1.115 1.143 1.192  1.138    5.10
76)  trans-1,3-dichloropropene
      0.613 0.642 0.639 0.695 0.683 0.616 0.619 0.653 0.651 0.716  0.653    5.38
77)  ethyl methacrylate
            0.438       0.538 0.549       0.512 0.475              0.502    9.19
78)  1,1,2-trichloroethane
      0.310 0.331 0.358 0.349 0.340 0.319 0.319 0.331 0.334        0.332    4.64
79)  2-hexanone
      0.143 0.148 0.159 0.153 0.149 0.175 0.135 0.149 0.145        0.151    7.42
80)  tetrachloroethene
      0.523 0.543 0.597 0.541 0.530 0.513 0.498 0.528 0.543 0.481  0.530    5.88
81)  1,3-dichloropropane
      0.626 0.645 0.712 0.656 0.647 0.612 0.598 0.635 0.636 0.576  0.634    5.76
82)  butyl acetate
      0.229 0.243 0.215 0.259 0.263 0.235 0.251 0.241 0.226        0.240    6.58
83)  dibromochloromethane
```

```
      0.436 0.464 0.444 0.503 0.504 0.435 0.480 0.471 0.438 0.470  0.465    5.62
 84)  1,2-dibromoethane
      0.457 0.472 0.483 0.490 0.489 0.439 0.458 0.469 0.449 0.445  0.465    3.92
 85)  n-butyl ether
      1.877 1.952 2.071 2.011 1.885 1.873 1.636 1.927 2.001 2.004  1.924    6.28
 86)  chlorobenzene
      1.245 1.246 1.397 1.289 1.235 1.239 1.123 1.238 1.283 1.243  1.254    5.39
 87)  1,1,1,2-tetrachloroethane
      0.446 0.454 0.455 0.494 0.474 0.450 0.446 0.458 0.465 0.476  0.462    3.34
 88)  ethylbenzene
      2.039 2.072 2.258 2.092 1.935 2.100 1.650 2.032 2.039 2.257  2.048    8.37
 89)  m,p-xylene
      0.787 0.809 0.862 0.833 0.793 0.798 0.714 0.801 0.801 0.861  0.806    5.24
 90)  o-xylene
      1.656 1.661 1.805 1.684 1.570 1.651 1.387 1.628 1.682 1.710  1.643    6.59
 91)  styrene
      1.109 1.179 1.031 1.315 1.278 1.021 1.138 1.230 1.086 0.980  1.137    9.93
 92)  n-amyl acetate
      0.259 0.273 0.244 0.291 0.288 0.309 0.279 0.270 0.259 0.229  0.270    8.65
 93)  bromoform
      0.279 0.290 0.301 0.328 0.335 0.300 0.325 0.297 0.274 0.237  0.296    9.85
 94)  butyl acrylate
      0.639 0.683 0.678 0.812 0.809 0.724 0.756 0.725 0.642        0.719    8.99
 95)  isopropylbenzene
      1.992 2.033 2.225 2.096 1.942 1.995 1.706 2.017 2.035 2.076  2.012    6.56
 96)  cis-1,4-dichloro-2-butene
      0.099 0.111       0.153 0.163       0.162 0.130              0.136   20.11
            ----- Linear regression -----  Coefficient =  0.9988
              Response Ratio = -0.00705 + 0.16329 *A


 97) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 98)  4-bromofluorobenzene (s)
      0.945 0.949 0.969 0.963 0.958 0.977 0.958 0.974 0.957 0.953  0.960    1.10
 99)  bromobenzene
      1.081 1.089 1.107 1.130 1.085 1.172 0.997 1.097 1.131 0.978  1.087    5.47
100)  1,1,2,2-tetrachloroethane
      0.907 0.919 1.043 0.956 0.945 1.163 0.874 0.926 0.927 0.903  0.956    8.91
101)  trans-1,4-dichloro-2-butene
      0.151 0.172       0.216 0.225       0.212 0.191              0.195   14.74
102)  1,2,3-trichloropropane
      0.231 0.224 0.214 0.240 0.236 0.250 0.222 0.231 0.239        0.232    4.71
103)  n-propylbenzene
      4.760 4.827 5.007 4.787 4.386 4.701 3.657 4.766 4.846 4.948  4.669    8.40
104)  2-chlorotoluene
      0.990 1.013 1.049 1.046 1.005 1.049 0.935 1.026 1.061 0.955  1.013    4.20
105)  4-chlorotoluene
      2.866 2.949 3.200 3.011 2.808 2.966 2.487 2.916 2.972 3.124  2.930    6.59
106)  1,3,5-trimethylbenzene
      3.284 3.377 3.545 3.436 3.185 3.346 2.768 3.323 3.404 3.309  3.298    6.35
107)  tert-butylbenzene
      2.801 2.885 2.974 3.006 2.788 2.743 2.493 2.863 2.773 2.712  2.804    5.18
108)  1,2,4-trimethylbenzene
      3.393 3.444 3.639 3.476 3.212 3.352 2.797 3.382 3.498 3.553  3.375    6.94
109)  sec-butylbenzene
      4.287 4.385 4.519 4.484 4.050 4.393 3.471 4.369 4.185 4.201  4.234    7.18
110)  1,3-dichlorobenzene
      1.983 2.029 2.263 2.080 1.954 2.081 1.767 1.986 2.084 2.012  2.024    6.20
111)  p-isopropyltoluene
      3.606 3.708 3.614 3.765 3.494 3.635 2.995 3.633 3.581 3.525  3.556    5.97
```

Initial Calibration Summary

Job Number: JD20919 **Sample:** V2A8967-ICC8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A206388.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

```
112)  benzyl chloride
       1.323 1.355 1.607 1.514 1.463 1.715 1.315 1.419 1.352 1.324  1.439    9.49
113)  1,2,3-trimethylbenzene
       3.364 3.468 3.818 3.524 3.212 3.694 2.714 3.435 3.524 3.336  3.409    8.79
114)  1,4-dichlorobenzene
       1.972 2.016 2.169 2.058 1.931 2.187 1.698 1.991 2.072 2.179  2.027    7.24
115)  1,2-dichlorobenzene
       1.929 1.937 2.213 2.004 1.893 2.216 1.704 1.925 1.930 1.927  1.968    7.68
116)  n-butylbenzene
       1.835 1.912 1.931 1.992 1.883 1.825 1.683 1.901 1.844 1.842  1.865    4.42
117)  1,2-dibromo-3-chloropropane
       0.164 0.179       0.209 0.207       0.201 0.185 0.144        0.184   13.20
118)  1,3,5-trichlorobenzene
       1.587 1.631 1.764 1.729 1.627 1.767 1.442 1.670 1.586 1.664  1.647    5.93
119)  1,2,4-trichlorobenzene
       1.399 1.448 1.534 1.563 1.490 1.688 1.337 1.491 1.378 1.488  1.482    6.82
120)  hexachlorobutadiene
       0.780 0.805 0.871 0.837 0.798 0.827 0.738 0.797 0.758        0.801    5.07
121)  naphthalene
       2.496 2.600 2.867 2.958 2.805 3.207 2.468 2.776 2.554        2.748    8.86
122)  1,2,3-trichlorobenzene
       1.202 1.258 1.434 1.407 1.333 1.560 1.207 1.319 1.214 1.441  1.337    9.04
123)  hexachloroethane
       0.575 0.604 0.558 0.707 0.704 0.579 0.675 0.645 0.584        0.626    9.34
124)  2-ethylhexyl acrylate   *This compound fails Initial Calibrtion criteria*
             0.212       0.439 0.567       0.674 0.285              0.435   44.03
125)  2-methylnaphthalene
             1.074       1.497 1.491       1.415 1.262              1.348   13.37

126)     pentafluorobenzene(a) ----------------ISTD---------------------
127)  allyl chloride
       0.324 0.329       0.327 0.349 0.300 0.337 0.331 0.288        0.323    6.17

128)     1,4-dichlorobenzene-d ----------------ISTD---------------------
129)  4-ethyltoluene
       3.818 3.898       3.714 3.664 3.928 3.099 3.709 3.701        3.691    7.00

130)     pentafluorobenzene(b) ----------------ISTD---------------------
131)  chlorotrifluoroethene
       0.350 0.402       0.395 0.404 0.372 0.384 0.374 0.370        0.381    4.79
132)  freon 123a
       0.710 0.729       0.704 0.729 0.740 0.694 0.691 0.719        0.715    2.51
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M2A8967.M         Fri Jan 08 14:01:40 2021   MS2A
```

Initial Calibration Verification

Job Number: JD20919 **Sample:** V2A8967-ICV8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A206393.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V2A8967\2A206393.D Vial: 26
Acq On : 11 Nov 2020 9:35 pm Operator: EddieH
Sample : ICV8967-50 Inst : Instrumen
Misc : MS46732,V2A8967,w,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8967.M (RTE Integrator)
Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 17:13:01 2020
Last Update : Fri Nov 13 17:13:01 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	107	0.00	7.29
2	ethanol	0.164	0.154	6.1	100	0.00	6.02
3	tertiary butyl alcohol	1.597	1.644	-2.9	106	0.00	7.41
4	1,4-dioxane	0.153	0.151	1.3	100	0.00	11.12
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	9.55
6	chlorodifluoromethane		----------NA----------				
7	dichlorodifluoromethane	0.770	0.801	-4.0	102	-0.01	4.00
8	chloromethane	0.833	0.797	4.3	99	0.00	4.38
9	vinyl chloride	0.813	0.776	4.6	99	0.00	4.61
10	1,3-butadiene	0.655	0.680	-3.8	105	0.00	4.64
11	bromomethane	0.575	0.593	-3.1	107	0.00	5.22
12	chloroethane	0.454	0.466	-2.6	102	0.00	5.39
13	vinyl bromide	0.445	0.578	-29.9	129	0.00	5.72
14	trichlorofluoromethane	1.014	1.017	-0.3	100	0.00	5.85
15	ethyl ether	0.302	0.326	-7.9	107	0.00	6.22
16	acrolein	0.065	0.073	-12.3	110	0.00	6.45
17	freon 113	0.490	0.547	-11.6	109	0.00	6.65
18	1,1-dichloroethene	0.553	0.566	-2.4	105	0.00	6.64
19	acetone	0.172	0.145	15.7	87	0.00	6.64
20	acetonitrile		----------NA----------				
21	iodomethane	1.185	1.129	4.7	94	0.00	6.89
22	carbon disulfide	1.792	1.956	-9.2	109	0.00	7.02
23	methylene chloride	0.649	0.651	-0.3	107	0.00	7.34
24	methyl acetate	0.412	0.429	-4.1	102	0.00	7.10
25	methyl tert butyl ether	1.539	1.526	0.8	102	0.00	7.70
26	trans-1,2-dichloroethene	0.607	0.618	-1.8	105	0.00	7.72
27	hexane	0.915	0.933	-2.0	102	0.00	8.07
28	di-isopropyl ether	1.865	1.823	2.3	98	0.00	8.29
29	ethyl tert-butyl ether	1.826	1.763	3.5	99	0.00	8.75
30	2-butanone	0.055	0.057	-3.6	100	0.00	8.95
31	1,1-dichloroethane	1.046	1.110	-6.1	107	0.00	8.30
32	chloroprene	0.826	0.878	-6.3	103	0.00	8.40
33	acrylonitrile		----------NA----------				
34	vinyl acetate	0.085	0.073	14.1	96	0.00	8.24
35	ethyl acetate	0.063	0.063	0.0	100	0.00	8.96
36	2,2-dichloropropane	0.774	0.691	10.7	94	0.00	9.04
37	cis-1,2-dichloroethene	0.658	0.675	-2.6	106	0.00	9.01
38	propionitrile	0.061	0.063	-3.3	102	0.00	9.03
39	bromochloromethane	0.413	0.441	-6.8	106	0.00	9.30
40	tetrahydrofuran	0.134	0.130	3.0	103	0.00	9.32
41	chloroform	1.086	1.214	-11.8	115	0.00	9.39

Initial Calibration Verification

Job Number: JD20919 **Sample:** V2A8967-ICV8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A206393.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tert-butyl formate	0.440	0.260	40.9#	62	0.00	9.43
43		isobutyl alcohol	0.020	0.020	0.0	98	0.00	9.79
44	S	dibromofluoromethane (s)	0.439	0.444	-1.1	105	0.00	9.58
45		methacrylonitrile	0.189	0.205	-8.5	102	0.00	9.22
46		1,1,1-trichloroethane	0.935	0.974	-4.2	103	0.00	9.65
47		cyclohexane	0.916	1.041	-13.6	112	0.00	9.76
48		1,1-dichloropropene	0.786	0.848	-7.9	105	0.00	9.82
49		tert-amyl alcohol	0.026	0.027	-3.8	106	0.00	9.95
50		carbon tetrachloride	0.842	0.907	-7.7	104	0.00	9.84
51	I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	10.48
52	S	1,2-dichloroethane-d4 (s)	0.311	0.307	1.3	103	0.00	10.00
53		2,2,4-trimethylpentane	1.605	1.583	1.4	98	0.00	10.17
54		tert-amyl methyl ether	1.213	1.119	7.7	96	0.00	10.15
55		n-butyl alcohol	0.009	0.009	0.0	98	0.00	10.54
56		benzene	1.582	1.616	-2.1	106	0.00	10.07
57		heptane	0.325	0.322	0.9	99	0.00	10.32
58		isopropyl acetate	0.073	0.075	-2.7	99	0.00	9.98
59		1,2-dichloroethane	0.515	0.510	1.0	104	0.00	10.09
60		trichloroethene	0.431	0.457	-6.0	106	0.00	10.79
61		ethyl acrylate	0.371	0.389	-4.9	100	0.00	10.78
62		2-nitropropane	0.070	0.073	-4.3	102	0.00	11.55
63		2-chloroethyl vinyl ether	0.220	0.220	0.0	97	0.00	11.58
64		methyl methacrylate	0.089	0.093	-4.5	100	0.00	11.05
65		1,2-dichloropropane	0.413	0.425	-2.9	104	0.00	11.08
66		methylcyclohexane	0.740	0.785	-6.1	104	0.00	11.09
67		dibromomethane	0.239	0.243	-1.7	104	0.00	11.19
68		bromodichloromethane	0.533	0.544	-2.1	103	0.00	11.34
69		epichlorohydrin	0.030	0.031	-3.3	103	0.00	11.67
70		cis-1,3-dichloropropene	0.647	0.649	-0.3	100	0.00	11.80
71		4-methyl-2-pentanone	0.126	0.127	-0.8	102	0.00	11.90
72		3-methyl-1-butanol	0.008	0.009	-12.5	105	0.00	11.91
73	I	chlorobenzene-d5	1.000	1.000	0.0	106	0.00	13.61
74	S	toluene-d8 (s)	1.266	1.265	0.1	104	0.00	12.10
75		toluene	1.138	1.162	-2.1	105	0.00	12.18
76		trans-1,3-dichloropropene	0.653	0.686	-5.1	104	0.00	12.36
77		ethyl methacrylate	0.502	0.514	-2.4	101	0.00	12.36
78		1,1,2-trichloroethane	0.332	0.346	-4.2	105	0.00	12.58
79		2-hexanone	0.151	0.143	5.3	99	0.00	12.75
80		tetrachloroethene		----------NA----------				
81		1,3-dichloropropane	0.634	0.658	-3.8	106	0.00	12.76
82		butyl acetate	0.240	0.254	-5.8	104	0.00	12.83
83		dibromochloromethane	0.465	0.506	-8.8	106	0.00	13.01
84		1,2-dibromoethane	0.465	0.504	-8.4	109	0.00	13.16
85		n-butyl ether	1.924	1.953	-1.5	103	0.00	13.60
86		chlorobenzene	1.254	1.290	-2.9	106	0.00	13.63
87		1,1,1,2-tetrachloroethane	0.462	0.496	-7.4	106	0.00	13.70
88		ethylbenzene	2.048	2.079	-1.5	105	0.00	13.70
89		m,p-xylene	0.806	0.830	-3.0	105	0.00	13.82
90		o-xylene	1.643	1.688	-2.7	106	0.00	14.22
91		styrene	1.137	1.319	-16.0	106	0.00	14.23
92		n-amyl acetate	0.270	0.274	-1.5	99	0.00	14.26
93		bromoform	0.296	0.330	-11.5	107	0.00	14.46
94		butyl acrylate	0.719	0.769	-7.0	100	0.00	14.05
95		isopropylbenzene	2.012	2.061	-2.4	104	0.00	14.57
		----------	True	Calc.	% Drift	----------		
96		cis-1,4-dichloro-2-butene	50.000	47.527	4.9	102	0.00	14.60

Initial Calibration Verification

Job Number: JD20919 **Sample:** V2A8967-ICV8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A206393.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

			AvgRF	CCRF	% Dev			
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.93
98	S	4-bromofluorobenzene (s)	0.960	0.950	1.0	105	0.00	14.76
99		bromobenzene	1.087	1.135	-4.4	107	0.00	14.95
100		1,1,2,2-tetrachloroethane	0.956	0.917	4.1	102	0.00	14.84
101		trans-1,4-dichloro-2-bute	0.195	0.212	-8.7	104	0.00	14.88
102		1,2,3-trichloropropane	0.232	0.243	-4.7	108	0.00	14.93
103		n-propylbenzene	4.669	4.754	-1.8	106	0.00	14.98
104		2-chlorotoluene	1.013	1.052	-3.8	107	0.00	15.11
105		4-chlorotoluene	2.930	2.939	-0.3	104	0.00	15.22
106		1,3,5-trimethylbenzene	3.298	3.421	-3.7	106	0.00	15.14
107		tert-butylbenzene	2.804	2.938	-4.8	104	0.00	15.48
108		1,2,4-trimethylbenzene	3.375	3.442	-2.0	105	0.00	15.53
109		sec-butylbenzene	4.234	4.387	-3.6	104	0.00	15.70
110		1,3-dichlorobenzene	2.024	2.045	-1.0	105	0.00	15.86
111		p-isopropyltoluene	3.556	3.746	-5.3	106	0.00	15.83
112		benzyl chloride	1.439	1.072	25.5	75	0.00	16.05
113		1,2,3-trimethylbenzene		----------NA----------				
114		1,4-dichlorobenzene	2.027	2.088	-3.0	108	0.00	15.95
115		1,2-dichlorobenzene	1.968	1.987	-1.0	105	0.00	16.33
116		n-butylbenzene	1.865	1.948	-4.5	104	0.00	16.23
117		1,2-dibromo-3-chloropropa	0.184	0.197	-7.1	100	0.00	17.09
118		1,3,5-trichlorobenzene	1.647	1.792	-8.8	110	0.00	17.28
119		1,2,4-trichlorobenzene	1.482	1.531	-3.3	104	0.00	17.92
120		hexachlorobutadiene	0.801	0.818	-2.1	104	0.00	18.04
121		naphthalene	2.748	2.834	-3.1	102	0.00	18.21
122		1,2,3-trichlorobenzene	1.337	1.370	-2.5	104	0.00	18.44
123		hexachloroethane	0.626	0.707	-12.9	106	0.00	16.62
124		2-ethylhexyl acrylate	0.435	0.486	-11.7	118	0.00	17.95
125		2-methylnaphthalene	1.348	1.457	-8.1	103	0.00	19.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2A206388.D M2A8967.M Wed Dec 23 08:33:57 2020 MS2A

Initial Calibration Verification

Job Number: JD20919 **Sample:** V2A8967-ICV8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A206394.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\V2A8967\2A206394.D         Vial: 27
Acq On    : 11 Nov 2020  10:04 pm                    Operator: EddieH
Sample    : ICV8967-50                               Inst    : Instrumen
Misc      : MS46732,V2A8967,w,,,,1                   Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M2A8967.M (RTE Integrator)
Title        : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 17:13:01 2020
Last Update  : Fri Nov 13 17:13:01 2020
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	107	0.00	7.29
2	ethanol		----------NA----------				
3	tertiary butyl alcohol		----------NA----------				
4	1,4-dioxane		----------NA----------				
5 I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	9.56
6	chlorodifluoromethane	0.763	0.796	-4.3	105	0.00	4.04
7	dichlorodifluoromethane		----------NA----------				
8	chloromethane		----------NA----------				
9	vinyl chloride		----------NA----------				
10	1,3-butadiene		----------NA----------				
11	bromomethane		----------NA----------				
12	chloroethane		----------NA----------				
13	vinyl bromide		----------NA----------				
14	trichlorofluoromethane		----------NA----------				
15	ethyl ether		----------NA----------				
16	acrolein		----------NA----------				
17	freon 113		----------NA----------				
18	1,1-dichloroethene		----------NA----------				
19	acetone		----------NA----------				
20	acetonitrile	0.056	0.054	3.6	102	0.00	7.06
21	iodomethane		----------NA----------				
22	carbon disulfide		----------NA----------				
23	methylene chloride		----------NA----------				
24	methyl acetate		----------NA----------				
25	methyl tert butyl ether		----------NA----------				
26	trans-1,2-dichloroethene		----------NA----------				
27	hexane		----------NA----------				
28	di-isopropyl ether		----------NA----------				
29	ethyl tert-butyl ether		----------NA----------				
30	2-butanone		----------NA----------				
31	1,1-dichloroethane		----------NA----------				
32	chloroprene		----------NA----------				
33	acrylonitrile	0.166	0.166	0.0	99	0.00	7.63
34	vinyl acetate		----------NA----------				
35	ethyl acetate		----------NA----------				
36	2,2-dichloropropane		----------NA----------				
37	cis-1,2-dichloroethene		----------NA----------				
38	propionitrile		----------NA----------				
39	bromochloromethane		----------NA----------				
40	tetrahydrofuran		----------NA----------				
41	chloroform		----------NA----------				

Initial Calibration Verification

Job Number: JD20919 **Sample:** V2A8967-ICV8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A206394.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tert-butyl formate		----------NA----------				
43		isobutyl alcohol		----------NA----------				
44	S	dibromofluoromethane (s)	0.439	0.432	1.6	103	0.00	9.59
45		methacrylonitrile		----------NA----------				
46		1,1,1-trichloroethane		----------NA----------				
47		cyclohexane		----------NA----------				
48		1,1-dichloropropene		----------NA----------				
49		tert-amyl alcohol		----------NA----------				
50		carbon tetrachloride		----------NA----------				
51	I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.48
52	S	1,2-dichloroethane-d4 (s)	0.311	0.312	-0.3	106	0.00	10.00
53		2,2,4-trimethylpentane		----------NA----------				
54		tert-amyl methyl ether		----------NA----------				
55		n-butyl alcohol		----------NA----------				
56		benzene		----------NA----------				
57		heptane		----------NA----------				
58		isopropyl acetate		----------NA----------				
59		1,2-dichloroethane		----------NA----------				
60		trichloroethene		----------NA----------				
61		ethyl acrylate		----------NA----------				
62		2-nitropropane		----------NA----------				
63		2-chloroethyl vinyl ether		----------NA----------				
64		methyl methacrylate		----------NA----------				
65		1,2-dichloropropane		----------NA----------				
66		methylcyclohexane		----------NA----------				
67		dibromomethane		----------NA----------				
68		bromodichloromethane		----------NA----------				
69		epichlorohydrin		----------NA----------				
70		cis-1,3-dichloropropene		----------NA----------				
71		4-methyl-2-pentanone		----------NA----------				
72		3-methyl-1-butanol		----------NA----------				
73	I	chlorobenzene-d5	1.000	1.000	0.0	107	0.00	13.60
74	S	toluene-d8 (s)	1.266	1.263	0.2	106	0.00	12.10
75		toluene		----------NA----------				
76		trans-1,3-dichloropropene		----------NA----------				
77		ethyl methacrylate		----------NA----------				
78		1,1,2-trichloroethane		----------NA----------				
79		2-hexanone		----------NA----------				
80		tetrachloroethene	0.530	0.582	-9.8	115	0.00	12.73
81		1,3-dichloropropane		----------NA----------				
82		butyl acetate		----------NA----------				
83		dibromochloromethane		----------NA----------				
84		1,2-dibromoethane		----------NA----------				
85		n-butyl ether		----------NA----------				
86		chlorobenzene		----------NA----------				
87		1,1,1,2-tetrachloroethane		----------NA----------				
88		ethylbenzene		----------NA----------				
89		m,p-xylene		----------NA----------				
90		o-xylene		----------NA----------				
91		styrene		----------NA----------				
92		n-amyl acetate		----------NA----------				
93		bromoform		----------NA----------				
94		butyl acrylate		----------NA----------				
95		isopropylbenzene		----------NA----------				
		----------	True	Calc.	% Drift	----------		
96		cis-1,4-dichloro-2-butene		----------NA----------				

Initial Calibration Verification

Job Number: JD20919 **Sample:** V2A8967-ICV8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A206394.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

			AvgRF	CCRF	% Dev			
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.93
98	S	4-bromofluorobenzene (s)	0.960	0.961	-0.1	106	0.00	14.76
99		bromobenzene		----------NA----------				
100		1,1,2,2-tetrachloroethane		----------NA----------				
101		trans-1,4-dichloro-2-bute		----------NA----------				
102		1,2,3-trichloropropane		----------NA----------				
103		n-propylbenzene		----------NA----------				
104		2-chlorotoluene		----------NA----------				
105		4-chlorotoluene		----------NA----------				
106		1,3,5-trimethylbenzene		----------NA----------				
107		tert-butylbenzene		----------NA----------				
108		1,2,4-trimethylbenzene		----------NA----------				
109		sec-butylbenzene		----------NA----------				
110		1,3-dichlorobenzene		----------NA----------				
111		p-isopropyltoluene		----------NA----------				
112		benzyl chloride		----------NA----------				
113		1,2,3-trimethylbenzene	3.409	3.415	-0.2	103	0.00	15.95
114		1,4-dichlorobenzene		----------NA----------				
115		1,2-dichlorobenzene		----------NA----------				
116		n-butylbenzene		----------NA----------				
117		1,2-dibromo-3-chloropropa		----------NA----------				
118		1,3,5-trichlorobenzene		----------NA----------				
119		1,2,4-trichlorobenzene		----------NA----------				
120		hexachlorobutadiene		----------NA----------				
121		naphthalene		----------NA----------				
122		1,2,3-trichlorobenzene		----------NA----------				
123		hexachloroethane		----------NA----------				
124		2-ethylhexyl acrylate		----------NA----------				
125		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2A206388.D M2A8967.M Fri Nov 13 17:29:49 2020 MS2A

6.9.3
6

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V2A9078-CC8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A208823.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...21\v2a9078\2a208823.d Vial: 1
Acq On : 5 Mar 2021 8:32 am Operator: krizhkac
Sample : cc8967-20 Inst : GCMS2A
Misc : MS49268,V2A9078,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8967.M (RTE Integrator)
Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	113	0.00	7.28
2	ethanol	0.164	0.162	1.2	117	-0.03	5.99
3	tertiary butyl alcohol	1.597	1.582	0.9	117	-0.02	7.39
4	1,4-dioxane	0.153	0.145	5.2	109	0.00	11.12
5 I	pentafluorobenzene	1.000	1.000	0.0	159	-0.01	9.54
6	chlorodifluoromethane	0.763	0.605	20.7#	129	0.00	4.03
7	dichlorodifluoromethane	0.770	0.889	-15.5	189	-0.02	4.00
8	chloromethane	0.833	0.939	-12.7	193	-0.02	4.37
9	vinyl chloride	0.813	0.865	-6.4	179	-0.02	4.60
10	1,3-butadiene	0.655	0.874	-33.4#	214#	-0.02	4.63
11	bromomethane	0.575	0.609	-5.9	180	0.00	5.21
12	chloroethane	0.454	0.467	-2.9	171	-0.01	5.38
13	vinyl bromide	0.445	0.483	-8.5	179	-0.03	5.71
14	trichlorofluoromethane	1.014	0.998	1.6	163	-0.02	5.84
15	ethyl ether	0.302	0.305	-1.0	161	-0.01	6.21
16	acrolein	0.065	0.060	7.7	152	-0.02	6.43
17	freon 113	0.490	0.495	-1.0	160	0.00	6.64
18	1,1-dichloroethene	0.553	0.504	8.9	152	-0.02	6.63
19	acetone	0.172	0.163	5.2	146	0.00	6.63
20	acetonitrile	0.056	0.052	7.1	153	-0.02	7.04
21	iodomethane	1.185	1.112	6.2	151	-0.02	6.87
22	carbon disulfide	1.792	1.791	0.1	163	-0.01	7.01
23	methylene chloride	0.649	0.619	4.6	161	-0.01	7.33
24	methyl acetate	0.412	0.319	22.6#	123	-0.02	7.09
25	methyl tert butyl ether	1.539	1.518	1.4	163	-0.01	7.69
26	trans-1,2-dichloroethene	0.607	0.594	2.1	161	0.00	7.72
27	hexane	0.915	0.941	-2.8	164	-0.01	8.07
28	di-isopropyl ether	1.865	2.062	-10.6	179	-0.01	8.28
29	ethyl tert-butyl ether	1.826	1.905	-4.3	169	0.00	8.74
30	2-butanone	0.055	0.053	3.6	153	-0.01	8.94
31	1,1-dichloroethane	1.046	1.059	-1.2	164	-0.01	8.29
32	chloroprene	0.826	0.833	-0.8	157	-0.01	8.39
33	acrylonitrile	0.166	0.148	10.8	141	-0.01	7.62
34	vinyl acetate	0.085	0.105	-23.5#	206#	0.00	8.23
35	ethyl acetate	0.063	0.066	-4.8	169	-0.01	8.96
36	2,2-dichloropropane	0.774	0.939	-21.3#	205#	0.00	9.03
37	cis-1,2-dichloroethene	0.658	0.658	0.0	165	0.00	9.01
38	propionitrile	0.061	0.056	8.2	146	-0.01	9.02
39	bromochloromethane	0.413	0.426	-3.1	165	0.00	9.30
40	tetrahydrofuran	0.134	0.114	14.9	141	0.00	9.31
41	chloroform	1.086	1.071	1.4	161	0.00	9.39

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V2A9078-CC8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A208823.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tert-butyl formate	0.440	0.421	4.3	158	0.00	9.42
43		isobutyl alcohol	0.020	0.016	20.0	125	0.00	9.79
44	S	dibromofluoromethane (s)	0.439	0.450	-2.5	164	-0.01	9.58
45		methacrylonitrile	0.189	0.174	7.9	145	0.00	9.22
46		1,1,1-trichloroethane	0.935	0.951	-1.7	164	0.00	9.64
47		cyclohexane	0.916	0.887	3.2	155	0.00	9.75
48		1,1-dichloropropene	0.786	0.806	-2.5	159	-0.01	9.81
49		tert-amyl alcohol	0.026	0.018	30.8#	119	0.00	9.94
50		carbon tetrachloride	0.842	0.866	-2.9	164	-0.01	9.84
51	I	1,4-difluorobenzene	1.000	1.000	0.0	154	0.00	10.48
52	S	1,2-dichloroethane-d4 (s)	0.311	0.322	-3.5	161	0.00	9.99
53		2,2,4-trimethylpentane	1.605	1.631	-1.6	159	-0.01	10.16
54		tert-amyl methyl ether	1.213	1.238	-2.1	163	-0.01	10.14
55		n-butyl alcohol	0.009	0.006	33.3#	105	0.00	10.53
56		benzene	1.582	1.651	-4.4	165	-0.01	10.06
57		heptane	0.325	0.331	-1.8	158	-0.01	10.31
58		isopropyl acetate	0.073	0.071	2.7	149	0.00	9.97
59		1,2-dichloroethane	0.515	0.529	-2.7	166	-0.01	10.08
60		trichloroethene	0.431	0.431	0.0	157	0.00	10.78
61		ethyl acrylate	0.371	0.388	-4.6	156	0.00	10.78
62		2-nitropropane	0.070	0.079	-12.9	173	0.00	11.54
63		2-chloroethyl vinyl ether	0.220	0.206	6.4	142	0.00	11.58
64		methyl methacrylate	0.089	0.078	12.4	134	0.00	11.05
65		1,2-dichloropropane	0.413	0.439	-6.3	168	-0.01	11.07
66		methylcyclohexane	0.740	0.768	-3.8	160	0.00	11.08
67		dibromomethane	0.239	0.246	-2.9	163	0.00	11.18
68		bromodichloromethane	0.533	0.564	-5.8	167	0.00	11.34
69		epichlorohydrin	0.030	0.027	10.0	143	0.00	11.66
70		cis-1,3-dichloropropene	0.647	0.701	-8.3	167	0.00	11.79
71		4-methyl-2-pentanone	0.126	0.118	6.3	146	0.00	11.90
72		3-methyl-1-butanol	0.008	0.006	25.0#	115	0.00	11.90
73	I	chlorobenzene-d5	1.000	1.000	0.0	159	0.00	13.60
74	S	toluene-d8 (s)	1.266	1.266	0.0	159	0.00	12.10
75		toluene	1.138	1.177	-3.4	168	0.00	12.18
76		trans-1,3-dichloropropene	0.653	0.670	-2.6	163	0.00	12.36
77		ethyl methacrylate	0.502	0.354	29.5#	118	0.00	12.35
78		1,1,2-trichloroethane	0.332	0.325	2.1	156	0.00	12.58
79		2-hexanone	0.151	0.139	7.9	149	0.00	12.75
80		tetrachloroethene	0.530	0.560	-5.7	169	0.00	12.72
81		1,3-dichloropropane	0.634	0.634	0.0	159	0.00	12.76
82		butyl acetate	0.240	0.248	-3.3	163	0.00	12.82
83		dibromochloromethane	0.465	0.482	-3.7	163	0.00	13.00
84		1,2-dibromoethane	0.465	0.468	-0.6	159	0.00	13.15
85		n-butyl ether	1.924	2.014	-4.7	166	0.00	13.60
86		chlorobenzene	1.254	1.312	-4.6	168	0.00	13.63
87		1,1,1,2-tetrachloroethane	0.462	0.499	-8.0	173	0.00	13.70
88		ethylbenzene	2.048	2.105	-2.8	165	0.00	13.70
89		m,p-xylene	0.806	0.853	-5.8	169	0.00	13.82
90		o-xylene	1.643	1.711	-4.1	167	0.00	14.22
91		styrene	1.137	1.202	-5.7	155	0.00	14.23
92		n-amyl acetate	0.270	0.282	-4.4	166	0.00	14.26
93		bromoform	0.296	0.310	-4.7	166	0.00	14.45
94		butyl acrylate	0.719	0.684	4.9	150	0.00	14.05
95		isopropylbenzene	2.012	2.130	-5.9	168	0.00	14.57
		----------	True	Calc.	% Drift	----------		
96		cis-1,4-dichloro-2-butene	20.000	5.962	70.2#	38	0.00	14.60

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V2A9078-CC8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A208823.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

			AvgRF	CCRF	% Dev			
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	167	0.00	15.93
98	S	4-bromofluorobenzene (s)	0.960	0.920	4.2	158	0.00	14.76
99		bromobenzene	1.087	1.162	-6.9	177	0.00	14.94
100		1,1,2,2-tetrachloroethane	0.956	0.888	7.1	160	0.00	14.84
101		trans-1,4-dichloro-2-bute	0.195	0.042	78.5#	37#	0.00	14.87
102		1,2,3-trichloropropane	0.232	0.213	8.2	154	0.00	14.93
103		n-propylbenzene	4.669	4.802	-2.8	168	0.00	14.98
104		2-chlorotoluene	1.013	1.045	-3.2	170	0.00	15.10
105		4-chlorotoluene	2.930	2.964	-1.2	170	0.00	15.22
106		1,3,5-trimethylbenzene	3.298	3.417	-3.6	172	0.00	15.14
107		tert-butylbenzene	2.804	2.880	-2.7	168	0.00	15.47
108		1,2,4-trimethylbenzene	3.375	3.440	-1.9	170	0.00	15.52
109		sec-butylbenzene	4.234	4.359	-3.0	167	0.00	15.69
110		1,3-dichlorobenzene	2.024	2.105	-4.0	177	0.00	15.86
111		p-isopropyltoluene	3.556	3.761	-5.8	173	0.00	15.82
112		benzyl chloride	1.439	1.670	-16.1	196	0.00	16.05
113		1,2,3-trimethylbenzene	3.409	3.448	-1.1	168	0.00	15.95
114		1,4-dichlorobenzene	2.027	2.121	-4.6	178	0.00	15.95
115		1,2-dichlorobenzene	1.968	2.015	-2.4	175	0.00	16.32
116		n-butylbenzene	1.865	1.946	-4.3	171	0.00	16.23
117		1,2-dibromo-3-chloropropa	0.184	0.169	8.2	152	0.00	17.09
118		1,3,5-trichlorobenzene	1.647	1.696	-3.0	170	0.00	17.28
119		1,2,4-trichlorobenzene	1.482	1.485	-0.2	166	0.00	17.92
120		hexachlorobutadiene	0.801	0.812	-1.4	170	0.00	18.04
121		naphthalene	2.748	2.490	9.4	150	0.00	18.21
122		1,2,3-trichlorobenzene	1.337	1.282	4.1	162	0.00	18.44
123		hexachloroethane	0.626	0.639	-2.1	165	0.00	16.62
124		2-ethylhexyl acrylate	0.435	0.223	48.7#	131	0.00	17.95
125		2-methylnaphthalene	1.348	1.144	15.1	151	0.00	19.45
126		pentafluorobenzene(a)	1.000	1.000	0.0	133	-0.01	9.54
127		allyl chloride		----------NA----------				
128		1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	130	0.00	15.93
129		4-ethyltoluene		----------NA----------				
130		pentafluorobenzene(b)	1.000	1.000	0.0	95	-0.01	9.54
131		chlorotrifluoroethene		----------NA----------				
132		freon 123a		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2A206387.D M2A8967.M Sun Mar 07 21:34:38 2021

6.9.4

6

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V2A9078-ECC8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A208847.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...21\v2a9078\2a208847.d Vial: 25
Acq On : 5 Mar 2021 8:13 pm Operator: krizhkac
Sample : ecc8967-50 Inst : GCMS2A
Misc : MS49207,V2A9078,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8967.M (RTE Integrator)
Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	119	0.00	7.28
2	ethanol	0.164	0.156	4.9	111	-0.02	6.00
3	tertiary butyl alcohol	1.597	1.605	-0.5	114	-0.01	7.39
4	1,4-dioxane	0.153	0.137	10.5	100	0.00	11.12
5 I	pentafluorobenzene	1.000	1.000	0.0	164	0.00	9.55
6	chlorodifluoromethane	0.763	0.586	23.2	121	0.00	4.04
7	dichlorodifluoromethane	0.770	0.859	-11.6	173	0.00	4.01
8	chloromethane	0.833	0.925	-11.0	181	0.00	4.38
9	vinyl chloride	0.813	0.839	-3.2	168	0.00	4.61
10	1,3-butadiene	0.655	0.791	-20.8	191	0.00	4.64
11	bromomethane	0.575	0.594	-3.3	168	0.00	5.22
12	chloroethane	0.454	0.472	-4.0	162	-0.01	5.38
13	vinyl bromide	0.445	0.480	-7.9	168	-0.01	5.72
14	trichlorofluoromethane	1.014	0.968	4.5	150	-0.01	5.84
15	ethyl ether	0.302	0.293	3.0	152	0.00	6.22
16	acrolein	0.065	0.060	7.7	140	0.00	6.44
17	freon 113	0.490	0.462	5.7	145	0.00	6.64
18	1,1-dichloroethene	0.553	0.475	14.1	139	-0.01	6.63
19	acetone	0.172	0.102	40.7	96	0.00	6.64
20	acetonitrile	0.056	0.049	12.5	143	0.00	7.05
21	iodomethane	1.185	1.075	9.3	141	0.00	6.88
22	carbon disulfide	1.792	1.740	2.9	153	0.00	7.02
23	methylene chloride	0.649	0.605	6.8	156	0.00	7.34
24	methyl acetate	0.412	0.310	24.8	116	-0.01	7.09
25	methyl tert butyl ether	1.539	1.478	4.0	156	0.00	7.69
26	trans-1,2-dichloroethene	0.607	0.564	7.1	150	0.00	7.72
27	hexane	0.915	0.790	13.7	136	0.00	8.07
28	di-isopropyl ether	1.865	1.986	-6.5	168	-0.01	8.28
29	ethyl tert-butyl ether	1.826	1.839	-0.7	162	0.00	8.74
30	2-butanone	0.055	0.043	21.8	118	0.00	8.94
31	1,1-dichloroethane	1.046	0.999	4.5	152	0.00	8.29
32	chloroprene	0.826	0.813	1.6	149	0.00	8.39
33	acrylonitrile	0.166	0.146	12.0	136	0.00	7.63
34	vinyl acetate	0.085	0.096	-12.9	199	0.00	8.23
35	ethyl acetate	0.063	0.064	-1.6	157	0.00	8.96
36	2,2-dichloropropane	0.774	0.761	1.7	163	0.00	9.04
37	cis-1,2-dichloroethene	0.658	0.623	5.3	154	0.00	9.01
38	propionitrile	0.061	0.053	13.1	136	-0.01	9.02
39	bromochloromethane	0.413	0.417	-1.0	158	0.00	9.30
40	tetrahydrofuran	0.134	0.111	17.2	139	0.00	9.32
41	chloroform	1.086	1.007	7.3	150	0.00	9.39

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V2A9078-ECC8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A208847.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tert-butyl formate	0.440	0.421	4.3	158	0.00	9.42
43		isobutyl alcohol	0.020	0.014	30.0	105	0.00	9.79
44	S	dibromofluoromethane (s)	0.439	0.452	-3.0	168	-0.01	9.58
45		methacrylonitrile	0.189	0.180	4.8	142	0.00	9.22
46		1,1,1-trichloroethane	0.935	0.917	1.9	153	0.00	9.65
47		cyclohexane	0.916	0.859	6.2	145	0.00	9.75
48		1,1-dichloropropene	0.786	0.757	3.7	148	0.00	9.82
49		tert-amyl alcohol	0.026	0.018	30.8	110	0.00	9.95
50		carbon tetrachloride	0.842	0.826	1.9	149	0.00	9.84
51	I	1,4-difluorobenzene	1.000	1.000	0.0	161	0.00	10.48
52	S	1,2-dichloroethane-d4 (s)	0.311	0.316	-1.6	163	0.00	9.99
53		2,2,4-trimethylpentane	1.605	1.438	10.4	136	0.00	10.16
54		tert-amyl methyl ether	1.213	1.194	1.6	156	0.00	10.15
55		n-butyl alcohol	0.009	0.007	22.2	105	0.00	10.54
56		benzene	1.582	1.550	2.0	155	0.00	10.06
57		heptane	0.325	0.273	16.0	129	0.00	10.32
58		isopropyl acetate	0.073	0.071	2.7	144	0.00	9.98
59		1,2-dichloroethane	0.515	0.507	1.6	158	0.00	10.09
60		trichloroethene	0.431	0.412	4.4	147	0.00	10.78
61		ethyl acrylate	0.371	0.390	-5.1	154	0.00	10.78
62		2-nitropropane	0.070	0.076	-8.6	163	0.00	11.54
63		2-chloroethyl vinyl ether	0.220	0.200	9.1	135	0.00	11.58
64		methyl methacrylate	0.089	0.088	1.1	145	0.00	11.05
65		1,2-dichloropropane	0.413	0.418	-1.2	157	0.00	11.08
66		methylcyclohexane	0.740	0.702	5.1	143	0.00	11.08
67		dibromomethane	0.239	0.236	1.3	155	0.00	11.18
68		bromodichloromethane	0.533	0.548	-2.8	158	0.00	11.34
69		epichlorohydrin	0.030	0.026	13.3	132	0.00	11.66
70		cis-1,3-dichloropropene	0.647	0.665	-2.8	156	0.00	11.79
71		4-methyl-2-pentanone	0.126	0.113	10.3	139	0.00	11.90
72		3-methyl-1-butanol	0.008	0.006	25.0	112	0.00	11.90
73	I	chlorobenzene-d5	1.000	1.000	0.0	167	0.00	13.60
74	S	toluene-d8 (s)	1.266	1.278	-0.9	166	0.00	12.10
75		toluene	1.138	1.120	1.6	159	0.00	12.18
76		trans-1,3-dichloropropene	0.653	0.639	2.1	153	0.00	12.36
77		ethyl methacrylate	0.502	0.444	11.6	138	0.00	12.35
78		1,1,2-trichloroethane	0.332	0.322	3.0	154	0.00	12.58
79		2-hexanone	0.151	0.118	21.9	128	0.00	12.75
80		tetrachloroethene	0.530	0.524	1.1	161	0.00	12.72
81		1,3-dichloropropane	0.634	0.612	3.5	156	0.00	12.76
82		butyl acetate	0.240	0.245	-2.1	158	0.00	12.82
83		dibromochloromethane	0.465	0.482	-3.7	160	0.00	13.00
84		1,2-dibromoethane	0.465	0.460	1.1	157	0.00	13.15
85		n-butyl ether	1.924	1.924	0.0	160	0.00	13.60
86		chlorobenzene	1.254	1.257	-0.2	163	0.00	13.63
87		1,1,1,2-tetrachloroethane	0.462	0.484	-4.8	163	0.00	13.70
88		ethylbenzene	2.048	1.969	3.9	157	0.00	13.70
89		m,p-xylene	0.806	0.811	-0.6	162	0.00	13.82
90		o-xylene	1.643	1.602	2.5	159	0.00	14.22
91		styrene	1.137	1.258	-10.6	159	0.00	14.23
92		n-amyl acetate	0.270	0.281	-4.1	161	0.00	14.26
93		bromoform	0.296	0.312	-5.4	159	0.00	14.45
94		butyl acrylate	0.719	0.754	-4.9	155	0.00	14.05
95		isopropylbenzene	2.012	1.960	2.6	156	0.00	14.57
		----------	True	Calc.	% Drift	----------		
96		cis-1,4-dichloro-2-butene	50.000	12.598	74.8#	37	0.00	14.60

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V2A9078-ECC8967
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 2A208847.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

			AvgRF	CCRF	% Dev			
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	174	0.00	15.93
98	S	4-bromofluorobenzene (s)	0.960	0.906	5.6	164	0.00	14.76
99		bromobenzene	1.087	1.092	-0.5	168	0.00	14.94
100		1,1,2,2-tetrachloroethane	0.956	0.845	11.6	154	0.00	14.84
101		trans-1,4-dichloro-2-bute	0.195	0.051	73.8#	41#	0.00	14.88
102		1,2,3-trichloropropane	0.232	0.207	10.8	150	0.00	14.93
103		n-propylbenzene	4.669	4.328	7.3	157	0.00	14.98
104		2-chlorotoluene	1.013	1.001	1.2	166	0.00	15.11
105		4-chlorotoluene	2.930	2.751	6.1	159	0.00	15.22
106		1,3,5-trimethylbenzene	3.298	3.134	5.0	159	0.00	15.14
107		tert-butylbenzene	2.804	2.678	4.5	155	0.00	15.47
108		1,2,4-trimethylbenzene	3.375	3.211	4.9	161	0.00	15.52
109		sec-butylbenzene	4.234	3.972	6.2	154	0.00	15.69
110		1,3-dichlorobenzene	2.024	1.971	2.6	165	0.00	15.86
111		p-isopropyltoluene	3.556	3.458	2.8	160	0.00	15.82
112		benzyl chloride	1.439	1.248	13.3	143	0.00	16.05
113		1,2,3-trimethylbenzene	3.409	3.221	5.5	159	0.00	15.95
114		1,4-dichlorobenzene	2.027	1.969	2.9	166	0.00	15.95
115		1,2-dichlorobenzene	1.968	1.883	4.3	163	0.00	16.32
116		n-butylbenzene	1.865	1.795	3.8	157	0.00	16.23
117		1,2-dibromo-3-chloropropa	0.184	0.174	5.4	145	0.00	17.09
118		1,3,5-trichlorobenzene	1.647	1.582	3.9	159	0.00	17.28
119		1,2,4-trichlorobenzene	1.482	1.418	4.3	158	0.00	17.92
120		hexachlorobutadiene	0.801	0.765	4.5	159	0.00	18.04
121		naphthalene	2.748	2.499	9.1	147	0.00	18.21
122		1,2,3-trichlorobenzene	1.337	1.244	7.0	154	0.00	18.44
123		hexachloroethane	0.626	0.625	0.2	154	0.00	16.62
124		2-ethylhexyl acrylate	0.435	0.441	-1.4	174	0.00	17.95
125		2-methylnaphthalene	1.348	1.328	1.5	154	0.00	19.45
126		pentafluorobenzene(a)	1.000	1.000	0.0	137	0.00	9.55
127		allyl chloride		----------NA----------				
128		1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	137	0.00	15.93
129		4-ethyltoluene		----------NA----------				
130		pentafluorobenzene(b)	1.000	1.000	0.0	98	0.00	9.55
131		chlorotrifluoroethene		----------NA----------				
132		freon 123a		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2A206388.D M2A8967.M Sun Mar 07 21:37:01 2021

Initial Calibration Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Sample: V3A6923-ICC6923
Lab FileID: 3A160434.D

```
                         Response Factor Report  MS3A

 Method       : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
 Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
 Last Update  : Thu Jul 19 08:25:27 2018
 Response via : Initial Calibration

 Calibration Files
 0.4 =3A160430.D  1   =3A160431.D  2   =3A160432.D  5   =3A160433.D
 0.25=3A160429.D  20  =3A160434.D  50  =3A160435.D  200 =3A160437.D
 100 =3A160436.D      =                =                =

 Compound
         0.4   1     2     5     0.25  20    50    200   100          Avg   %RSD
 ---------------------------------------------------------------------------

 1) I   4-bromofluorobenzene  ----------------ISTD---------------------
 2)  1,4-dioxane-d8
      0.048 0.049 0.051 0.052 0.050 0.051 0.052 0.057 0.051        0.051    4.92
 3)  1,4-dioxane
      0.053 0.051 0.049 0.049 0.069 0.044 0.046 0.052 0.044        0.051   14.72
---------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M3A6923.M         Thu Jul 19 08:29:15 2018   ACCUNJ
```

Initial Calibration Verification

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Sample: V3A6923-ICV6923
Lab FileID: 3A160443.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDChem\1\DATA\V3A6923\3A160443.D         Vial: 19
Acq On    : 18 Jul 2018  11:25 pm                    Operator: HueanhT
Sample    : icv6923-20                               Inst    : MS3A
Misc      : MS27832,V3A6923,5.0,,,,1                 Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Thu Jul 19 08:25:27 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	4-bromofluorobenzene	1.000	1.000	0.0	92	0.00	15.80
2 S	1,4-dioxane-d8	0.051	0.062	-21.6	111	0.00	12.09
3 M	1,4-dioxane	0.051	0.054	-5.9	113	0.01	12.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3A160434.D M3A6923.M Thu Jul 19 08:29:15 2018 ACCUNJ

Continuing Calibration Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Sample: V3A7169-CC6923
Lab FileID: 3A165035.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDChem\1\DATA\V3A7169\3A165035.D        Vial: 2
Acq On    :  3 Mar 2021   1:40 pm                   Operator: ROBERTS
Sample    : CC6923-5                                Inst    : MS3A
Misc      : MS49208,V3A7169,5,,,,1                  Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Wed Oct 21 09:38:56 2020
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	4-bromofluorobenzene	1.000	1.000	0.0	138	-0.03	15.77
2 S	1,4-dioxane-d8	0.051	0.047	7.8	124	-0.03	12.06
3 M	1,4-dioxane	0.051	0.043	15.7	121	-0.03	12.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3A160433.D M3A6923.M Thu Mar 04 09:16:14 2021 ACCUNJ

Continuing Calibration Summary

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Sample: V3A7170-CC6923
Lab FileID: 3A165057.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\V3A7170\3A165057.D        Vial: 2
Acq On    :  4 Mar 2021  10:45 am                   Operator: ROBERTS
Sample    : CC6923-5 C                              Inst    : MS3A
Misc      : MS49208,V3A7170,5,,,,1                  Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Wed Oct 21 09:38:56 2020
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	4-bromofluorobenzene	1.000	1.000	0.0	114	-0.03	15.77
2 S	1,4-dioxane-d8	0.051	0.046	9.8	101	-0.03	12.06
3 M	1,4-dioxane	0.051	0.046	9.8	106	0.00	12.15

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3A160433.D M3A6923.M Fri Mar 05 17:42:22 2021 ACCUNJ

Initial Calibration Summary

Job Number: JD20919 **Sample:** V4B4435-ICC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102503.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report MS4B

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Calibration Files
1 =4B102498.D 4 =4B102500.D 100 =4B102504.D 50 =4B102503.D
20 =4B102502.D 200 =4B102505.D 8 =4B102501.D 0.5 =4B102497.D
2 =4B102499.D 0.2 =4B102496.D = =

Compound

	1	4	100	50	20	200	8	0.5	2	0.2	Avg	%RSD
1) I tert butyl alcohol-d9 ----------ISTD----------												
2) ethanol											0.000	-1.00
3) tertiary butyl alcohol	1.107	1.198	1.157	1.124	1.188	1.005		0.941			1.103	8.74
4) 1,4-dioxane	0.073	0.094	0.088	0.087	0.093	0.077					0.085	9.99
5) I pentafluorobenzene ----------ISTD----------												
6) chlorodifluoromethane	0.845	0.821	0.898	0.904	0.863	0.873	0.822	0.817	0.802		0.849	4.35
7) dichlorodifluoromethane	1.145	1.142	1.339	1.332	1.260	1.217	1.130	1.096	1.144		1.201	7.55
8) chloromethane	1.264	0.966	0.999	0.983	0.961	0.904	0.953		0.985		1.002	10.95
9) vinyl chloride	0.903	0.859	0.950	0.944	0.891	0.868	0.843	0.879	0.859		0.888	4.25
10) 1,3-butadiene	0.532	0.567	0.616	0.621	0.582	0.569	0.576	0.529	0.573		0.574	5.49
11) bromomethane	0.736	0.644	0.657	0.657	0.649	0.581	0.634	0.758	0.705	0.736	0.675	8.28
12) chloroethane	0.325	0.385	0.395	0.402	0.393	0.354	0.372		0.409		0.379	7.43
13) trichlorofluoromethane	1.137	1.070	1.120	1.131	1.089	1.038	1.019	1.111	1.035		1.083	4.13
14) vinyl bromide	0.248	0.281	0.307	0.301	0.286	0.283	0.275		0.246		0.278	7.96
15) ethyl ether	0.166	0.170	0.170	0.166	0.161	0.152			0.188		0.167	6.62
16) acrolein	0.050	0.067	0.065	0.060	0.066	0.050					0.060	13.14
17) freon 113	0.534	0.596	0.593	0.607	0.582	0.568	0.542		0.595		0.577	4.64
18) 1,1-dichloroethene	0.794	0.848	0.780	0.806	0.793	0.740	0.750	0.837	0.834	0.880	0.806	5.46
19) acetone	0.030	0.035	0.034	0.034	0.033	0.034			0.031		0.033	5.34
20) acetonitrile	0.056	0.059	0.059	0.060	0.055	0.053			0.053		0.056	5.47
21) iodomethane	1.313	1.287	1.280	1.304	1.282	1.237	1.235	1.338	1.305	1.291	1.287	2.48
22) carbon disulfide	2.041	1.916	1.891	1.937	1.911	1.794	1.803	2.020	1.883	2.093	1.929	5.06
23) methylene chloride												

```
          0.710 0.565 0.534 0.548 0.540 0.511 0.538       0.584        0.566   10.93
24)  methyl acetate
          0.200 0.255 0.266 0.276 0.271 0.253 0.248       0.240        0.251    9.56
25)  methyl tert butyl ether
          1.533 1.420 1.433 1.471 1.440 1.319 1.384 1.437 1.499 1.492  1.443    4.25
26)  trans-1,2-dichloroethene
          0.728 0.692 0.671 0.676 0.688 0.637 0.643 0.694 0.678 0.546  0.665    7.37
27)  hexane
          0.299 0.315 0.327 0.322 0.314 0.327 0.300 0.293 0.305        0.311    4.03
28)  di-isopropyl ether
          1.909 1.740 1.829 1.836 1.806 1.720 1.742 1.777 1.784 1.764  1.791    3.15
29)  2-butanone
                0.027 0.034 0.035 0.031 0.034 0.029       0.024        0.031   12.72
30)  1,1-dichloroethane
          0.821 0.795 0.822 0.833 0.826 0.769 0.809 0.920 0.802        0.822    5.06
31)  chloroprene
          0.660 0.663 0.664 0.669 0.654 0.632 0.624 0.674 0.641        0.653    2.64
32)  acrylonitrile
                0.107 0.139 0.138 0.135 0.136 0.126                    0.130    9.54
33)  vinyl acetate
                      0.059 0.055 0.046 0.057 0.042                    0.052   14.09
34)  ethyl tert-butyl ether
          1.625 1.610 1.672 1.686 1.641 1.554 1.570 1.691 1.620 1.671  1.634    2.89
35)  ethyl acetate
                0.036 0.053 0.053 0.048 0.052 0.040                    0.047   15.35
36)  2,2-dichloropropane
          1.027 0.865 0.891 0.913 0.911 0.824 0.885 0.975 0.894 0.909  0.910    6.20
37)  cis-1,2-dichloroethene
          0.528 0.504 0.476 0.482 0.483 0.455 0.454 0.445 0.480        0.479    5.43
38)  propionitrile
          0.049 0.051 0.050 0.050 0.050 0.048 0.046 0.043 0.046        0.048    5.18
39)  methyl acrylate
                0.041 0.051 0.050 0.042 0.052 0.036                    0.045   14.76
40)  methacrylonitrile
          0.102 0.119 0.131 0.130 0.118 0.131 0.114       0.104        0.119    9.74
41)  bromochloromethane
          0.251 0.249 0.259 0.261 0.251 0.247 0.244 0.298 0.248        0.257    6.41
42)  tetrahydrofuran
                      0.046 0.043 0.041 0.044 0.038                    0.042    7.18
43)  chloroform
          1.029 0.880 0.843 0.859 0.865 0.808 0.819 1.055 0.899        0.895    9.84
44)  tert-butyl formate
          0.288 0.368 0.402 0.395 0.392 0.372 0.362       0.346        0.366   10.04
45)  dibromofluoromethane (s)
          0.500 0.501 0.495 0.493 0.497 0.485 0.497 0.488 0.497 0.512  0.496    1.49
46)  1,1,1-trichloroethane
          0.985 0.983 1.057 1.047 1.002 1.016 0.956 1.002 1.002 0.916  0.997    4.11
47)  cyclohexane
          0.829 0.825 0.883 0.864 0.832 0.843 0.763 0.823 0.768 0.888  0.832    5.06
48)  isobutyl alcohol
                                                                       0.000   -1.00
49)  1,1-dichloropropene
          0.577 0.598 0.575 0.576 0.567 0.548 0.559 0.638 0.588        0.581    4.46
50)  carbon tetrachloride
          0.967 0.893 0.935 0.937 0.922 0.894 0.859 0.831 0.906 0.867  0.901    4.56
51)  tert-amyl alcohol
                0.025 0.020 0.022 0.024 0.020 0.022       0.021        0.022    8.27
52)  isopropyl acetate
                0.057 0.076 0.071 0.069 0.075 0.063                    0.068   10.59
```

```
53) I   1,4-difluorobenzene   ----------------ISTD---------------------
54)  1,2-dichloroethane-d4 (s)
           0.388 0.392 0.369 0.371 0.400 0.353 0.393 0.375 0.383 0.411  0.383    4.39
55)  n-butyl alcohol
           0.005 0.006 0.006 0.006 0.007 0.005 0.006       0.006        0.006    9.16
56)  2,2,4-trimethylpentane
           1.277 1.266 1.539 1.531 1.373 1.533 1.260       1.242        1.378    9.83
57)  benzene
           1.274 1.249 1.209 1.239 1.226 1.164 1.186 1.344 1.192 1.393  1.248    5.80
58)  tert-amyl methyl ether
           1.116 1.073 1.115 1.162 1.143 1.010 1.056 1.113 1.126 1.155  1.107    4.30
59)  heptane
           0.230 0.230 0.238 0.242 0.233 0.233 0.217 0.210 0.228        0.229    4.28
60)  1,2-dichloroethane
           0.518 0.457 0.429 0.448 0.439 0.403 0.424       0.469        0.449    7.75
61)  ethyl acrylate
                 0.281 0.317 0.318 0.303 0.310 0.273       0.261        0.295    7.80
62)  trichloroethene
           0.339 0.331 0.331 0.331 0.327 0.322 0.306 0.319 0.318        0.325    3.04
63)  2-chloroethyl vinyl ether
           0.148 0.156 0.161 0.166 0.155 0.154 0.146 0.128 0.146        0.151    7.26
64)  methyl methacrylate
                 0.053 0.066 0.066 0.061 0.065 0.045                    0.059   14.76
65)  methylcyclohexane
           0.681 0.660 0.727 0.741 0.695 0.693 0.663 0.683 0.649 0.657  0.685    4.41
66)  1,2-dichloropropane
           0.333 0.329 0.330 0.336 0.328 0.310 0.307 0.339 0.324        0.326    3.34
67)  dibromomethane
           0.221 0.202 0.200 0.205 0.201 0.195 0.201 0.208 0.187        0.202    4.60
68)  bromodichloromethane
           0.501 0.453 0.476 0.475 0.446 0.467 0.449 0.491 0.450        0.468    4.21
69)  2-nitropropane
                 0.061 0.070 0.069 0.064 0.069 0.061       0.068        0.066    6.20
70)  epichlorohydrin
           0.019 0.024 0.026 0.025 0.024 0.026 0.024       0.024        0.024    9.54
71)  cis-1,3-dichloropropene
           0.539 0.488 0.519 0.522 0.495 0.521 0.478 0.528 0.485 0.546  0.512    4.66
72)  4-methyl-2-pentanone
           0.105 0.111 0.105 0.108 0.108 0.097 0.101 0.099 0.107        0.105    4.31
73)  isoamyl alcohol
           0.007 0.009 0.007 0.009 0.009 0.007 0.008       0.007        0.008   10.95

74) I   chlorobenzene-d5      ----------------ISTD---------------------
75)  toluene-d8 (s)
           1.125 1.087 1.203 1.167 1.156 1.212 1.159 1.109 1.113 1.090  1.142    3.88
76)  toluene
           0.737 0.684 0.753 0.740 0.716 0.759 0.687 0.702 0.693 0.645  0.712    5.07
77)  ethyl methacrylate
           0.269 0.336 0.349 0.357 0.342 0.332 0.317       0.307        0.326    8.64
78)  trans-1,3-dichloropropene
           0.430 0.419 0.449 0.450 0.428 0.436 0.417 0.442 0.402 0.355  0.423    6.69
79)  1,1,2-trichloroethane
           0.178 0.212 0.227 0.221 0.217 0.220 0.196 0.193 0.200        0.207    7.87
80)  tetrachloroethene
           0.325 0.278 0.315 0.310 0.296 0.315 0.288 0.278 0.277        0.298    6.23
81)  2-hexanone
           0.085 0.101 0.089 0.094 0.095 0.082 0.094 0.076 0.083        0.089    8.86
82)  1,3-dichloropropane
           0.392 0.417 0.411 0.419 0.401 0.395 0.395 0.443 0.409        0.409    3.95
83)  butyl acetate
```

```
                 0.166 0.162 0.178 0.176 0.152 0.175                    0.168    6.07
 84)  dibromochloromethane
           0.346 0.360 0.387 0.379 0.366 0.381 0.338 0.403 0.347 0.403  0.371    6.28
 85)  1,2-dibromoethane
           0.431 0.417 0.439 0.444 0.420 0.432 0.406 0.443 0.405        0.426    3.52
 86)  n-butyl ether
           1.551 1.491 1.462 1.533 1.535 1.368 1.468 1.593 1.497        1.500    4.31
 87)  chlorobenzene
           0.915 0.894 0.886 0.897 0.883 0.876 0.843 1.024 0.879 0.756  0.885    7.45
 88)  1,1,1,2-tetrachloroethane
           0.404 0.383 0.452 0.444 0.427 0.437 0.405 0.438 0.404        0.421    5.53
 89)  ethylbenzene
           1.644 1.547 1.554 1.594 1.568 1.500 1.548 1.632 1.561 1.339  1.549    5.48
 90)  m,p-xylene
           0.594 0.591 0.582 0.601 0.589 0.572 0.580 0.617 0.566 0.486  0.578    6.11
 91)  o-xylene
           1.402 1.303 1.368 1.391 1.378 1.332 1.326 1.341 1.289 1.112  1.324    6.28
 92)  styrene
           0.908 1.015 0.982 1.065 1.020 0.984 0.976 0.961 0.929        0.982    4.87
 93)  butyl acrylate
           0.565 0.644 0.611 0.699 0.693 0.590 0.636       0.592        0.629    7.72
 94)  isopropylbenzene
           1.836 1.719 1.871 1.870 1.816 1.841 1.781 1.830 1.708 1.789  1.806    3.15
 95)  bromoform
           0.307 0.304 0.299 0.321 0.305 0.306 0.293 0.285 0.306        0.303    3.27
 96)  cis-1,4-dichloro-2-butene
           0.133 0.151 0.144 0.163 0.153 0.145 0.138       0.126        0.144    8.33

 97) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 98)  4-bromofluorobenzene (s)
           0.760 0.763 0.744 0.726 0.730 0.723 0.736 0.764 0.746 0.720  0.741    2.29
 99)  1,1,2,2-tetrachloroethane
           0.571 0.549 0.610 0.563 0.552 0.558 0.529 0.543 0.586 0.512  0.557    5.00
100)  trans-1,4-dichloro-2-butene
                 0.147 0.164 0.164 0.151 0.158 0.143                    0.155    5.74
101)  1,2,3-trichloropropane
           0.123 0.141 0.160 0.155 0.146 0.148 0.138       0.140        0.144    7.96
102)  bromobenzene
           0.687 0.705 0.736 0.720 0.681 0.711 0.658 0.717 0.679 0.547  0.684    7.80
103)  n-propylbenzene
           2.905 2.938 3.132 2.936 2.907 2.870 2.788 3.058 2.882 2.353  2.877    7.23
104)  2-chlorotoluene
           0.673 0.622 0.666 0.619 0.611 0.621 0.587 0.594 0.586 0.554  0.613    5.89
105)  4-chlorotoluene
           1.852 1.823 1.821 1.800 1.770 1.738 1.701 1.957 1.796 1.661  1.792    4.61
106)  1,3,5-trimethylbenzene
           2.151 2.113 2.466 2.162 2.143 2.273 2.033 2.276 1.984        2.178    6.63
107)  tert-butylbenzene
           1.570 1.612 2.229 1.846 1.724 2.092 1.612 1.738 1.577        1.778   13.33
108)  1,2,4-trimethylbenzene
           2.165 2.213 2.488 2.290 2.252 2.304 2.179 2.362 2.128 1.936  2.232    6.65
109)  sec-butylbenzene
           2.887 2.766 3.435 2.953 2.869 3.167 2.724 2.931 2.716 2.587  2.903    8.46
110)  p-isopropyltoluene
           2.628 2.463 2.956 2.643 2.597 2.730 2.476 2.651 2.515 2.106  2.576    8.48
111)  1,3-dichlorobenzene
           1.517 1.422 1.458 1.447 1.429 1.431 1.374 1.459 1.421 1.299  1.426    4.03
112)  1,2,3-trimethylbenzene
           2.432 2.416 2.726 2.444 2.409 2.529 2.357 2.541 2.358 2.455  2.467    4.45
113)  1,4-dichlorobenzene
```

Initial Calibration Summary

Job Number: JD20919 **Sample:** V4B4435-ICC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102503.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

```
            1.631 1.492 1.513 1.479 1.450 1.479 1.420 1.656 1.413 1.431  1.496    5.62
114)  1,2-dichlorobenzene
            1.458 1.456 1.558 1.513 1.487 1.477 1.421 1.446 1.382        1.466    3.48
115)  benzyl chloride
            1.098 1.128 1.241 1.218 1.173 1.175 1.111 1.027 1.150        1.147    5.66
116)  n-butylbenzene
            1.184 1.261 1.459 1.376 1.326 1.361 1.266       1.181        1.302    7.43
117)  hexachloroethane
            0.434 0.396 0.642 0.521 0.474 0.618 0.416       0.367        0.484   21.13
             ---- Linear regression ----  Coefficient =  0.9924
               Response Ratio = -0.01003 + 0.60640 *A

118)  1,2-dibromo-3-chloropropane
            0.149 0.149 0.208 0.190 0.175 0.186 0.154       0.140        0.169   14.40
119)  1,3,5-trichlorobenzene
            1.203 1.231 1.683 1.523 1.424 1.551 1.313       1.250        1.397   12.58
120)  1,2,4-trichlorobenzene
            0.950 1.013 1.612 1.378 1.245 1.400 1.098       0.979        1.209   19.74
121)  2-ethylhexyl acrylate       *This compound fails Initial Calibration criteria*
                        0.588 0.376 0.221 0.614 0.118                    0.383   57.04
122)  hexachlorobutadiene
            0.621 0.655 0.807 0.717 0.690 0.730 0.657       0.639        0.690    8.76
123)  naphthalene
                  1.624 2.707 2.295 2.075 2.317 1.737                    2.126   18.91
124)  1,2,3-trichlorobenzene
            0.863 0.868 1.376 1.168 1.061 1.187 0.934       0.926        1.048   17.52
125)  2-methylnaphthalene     *This compound fails Initial Calibration criteria*
                        1.245 0.918 0.665 1.131 0.493                    0.890   35.20
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M4B4435.M         Sun Feb 21 11:45:11 2021   MS4B
```

Initial Calibration Verification

Job Number: JD20919 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102508.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\V4B4435\4B102508.D Vial: 16
Acq On : 18 Feb 2021 2:30 am Operator: brittank
Sample : icv4435-50 Inst : MS4B
Misc : MS48773,V4B4435,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update : Fri Feb 19 16:10:14 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	6.48
2	ethanol		----------NA----------				
3	tertiary butyl alcohol	1.103	1.179	-6.9	103	-0.03	6.55
4	1,4-dioxane	0.085	0.096	-12.9	109	0.00	9.93
5 I	pentafluorobenzene	1.000	1.000	0.0	111	0.00	8.45
6	chlorodifluoromethane		----------NA----------				
7	dichlorodifluoromethane	1.201	1.301	-8.3	109	0.00	3.69
8	chloromethane	1.002	0.857	14.5	97	0.00	4.00
9	vinyl chloride	0.888	0.922	-3.8	109	0.00	4.20
10	1,3-butadiene	0.574	0.589	-2.6	106	0.00	4.22
11	bromomethane	0.675	0.698	-3.4	118	0.00	4.71
12	chloroethane	0.379	0.398	-5.0	110	0.00	4.85
13	trichlorofluoromethane	1.083	1.091	-0.7	108	0.00	5.24
14	vinyl bromide	0.278	0.320	-15.1	119	0.00	5.13
15	ethyl ether	0.167	0.163	2.4	107	0.00	5.53
16	acrolein	0.060	0.068	-13.3	116	0.00	5.72
17	freon 113	0.577	0.620	-7.5	114	0.00	5.93
18	1,1-dichloroethene	0.806	0.764	5.2	106	0.00	5.90
19	acetone	0.033	0.034	-3.0	112	0.00	5.87
20	acetonitrile	0.056	0.046	17.9	87	0.01	6.23
21	iodomethane	1.287	1.122	12.8	96	0.00	6.12
22	carbon disulfide	1.929	2.107	-9.2	121	0.00	6.26
23	methylene chloride	0.566	0.530	6.4	108	0.00	6.49
24	methyl acetate	0.251	0.242	3.6	98	0.00	6.26
25	methyl tert butyl ether	1.443	1.348	6.6	102	0.00	6.82
26	trans-1,2-dichloroethene	0.665	0.642	3.5	106	0.00	6.84
27	hexane	0.311	0.349	-12.2	121	0.00	7.15
28	di-isopropyl ether	1.791	1.641	8.4	100	0.00	7.33
29	2-butanone	0.031	0.034	-9.7	110	0.00	7.89
30	1,1-dichloroethane	0.822	0.815	0.9	109	0.00	7.33
31	chloroprene	0.653	0.653	0.0	109	0.00	7.43
32	acrylonitrile	0.130	0.144	-10.8	116	0.01	6.72
33	vinyl acetate	0.052	0.052	0.0	106	0.00	7.26
34	ethyl tert-butyl ether	1.634	1.507	7.8	100	-0.01	7.74
35	ethyl acetate	0.047	0.047	0.0	99	0.01	7.91
36	2,2-dichloropropane	0.910	0.808	11.2	99	0.00	8.01
37	cis-1,2-dichloroethene	0.479	0.470	1.9	109	0.00	7.96
38	propionitrile	0.048	0.048	0.0	108	0.00	7.94
39	methyl acrylate	0.045	0.045	0.0	100	0.00	7.99
40	methacrylonitrile	0.119	0.125	-5.0	108	0.00	8.13
41	bromochloromethane	0.257	0.253	1.6	108	0.00	8.23

Initial Calibration Verification

Job Number: JD20919 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102508.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tetrahydrofuran	0.042	0.043	-2.4	112	0.00	8.26
43		chloroform	0.895	0.868	3.0	113	0.00	8.30
44		tert-butyl formate	0.366	0.310	15.3	87	0.00	8.35
45	S	dibromofluoromethane (s)	0.496	0.490	1.2	111	0.00	8.48
46		1,1,1-trichloroethane	0.997	0.978	1.9	104	0.00	8.57
47		cyclohexane	0.832	1.013	-21.8	131	0.00	8.69
48		isobutyl alcohol		----------NA----------				
49		1,1-dichloropropene	0.581	0.560	3.6	108	0.00	8.72
50		carbon tetrachloride	0.901	0.876	2.8	104	0.00	8.76
51		tert-amyl alcohol	0.022	0.020	9.1	106	0.00	8.81
52		isopropyl acetate	0.068	0.066	2.9	103	0.00	8.84
53	I	1,4-difluorobenzene	1.000	1.000	0.0	110	0.00	9.31
54	S	1,2-dichloroethane-d4 (s)	0.383	0.370	3.4	110	0.00	8.86
55		n-butyl alcohol	0.006	0.006	0.0	102	0.00	9.34
56		2,2,4-trimethylpentane	1.378	1.509	-9.5	109	-0.01	9.04
57		benzene	1.248	1.235	1.0	110	0.00	8.94
58		tert-amyl methyl ether	1.107	1.041	6.0	99	0.00	9.02
59		heptane	0.229	0.232	-1.3	106	0.00	9.19
60		1,2-dichloroethane	0.449	0.423	5.8	104	0.00	8.95
61		ethyl acrylate	0.295	0.291	1.4	101	0.00	9.59
62		trichloroethene	0.325	0.330	-1.5	110	0.00	9.62
63		2-chloroethyl vinyl ether	0.151	0.164	-8.6	108	0.00	10.36
64		methyl methacrylate	0.059	0.060	-1.7	100	0.00	9.85
65		methylcyclohexane	0.685	0.745	-8.8	111	0.00	9.92
66		1,2-dichloropropane	0.326	0.319	2.1	105	0.00	9.88
67		dibromomethane	0.202	0.195	3.5	105	0.00	9.99
68		bromodichloromethane	0.468	0.452	3.4	105	0.00	10.13
69		2-nitropropane	0.066	0.059	10.6	95	0.00	10.30
70		epichlorohydrin	0.024	0.026	-8.3	112	0.00	10.44
71		cis-1,3-dichloropropene	0.512	0.486	5.1	103	0.00	10.58
72		4-methyl-2-pentanone	0.105	0.101	3.8	103	0.00	10.68
73		isoamyl alcohol	0.008	0.008	0.0	104	0.00	10.68
74	I	chlorobenzene-d5	1.000	1.000	0.0	109	0.00	12.49
75	S	toluene-d8 (s)	1.142	1.145	-0.3	107	0.00	10.91
76		toluene	0.712	0.724	-1.7	107	0.00	10.99
77		ethyl methacrylate	0.326	0.330	-1.2	101	0.00	11.16
78		trans-1,3-dichloropropene	0.423	0.434	-2.6	105	0.00	11.16
79		1,1,2-trichloroethane	0.207	0.219	-5.8	108	0.00	11.39
80		tetrachloroethene	0.298	0.419	-40.6#	148	0.00	11.57
81		2-hexanone	0.089	0.092	-3.4	107	0.00	11.56
82		1,3-dichloropropane	0.409	0.404	1.2	105	0.00	11.58
83		butyl acetate	0.168	0.169	-0.6	104	0.00	11.65
84		dibromochloromethane	0.371	0.379	-2.2	109	0.00	11.85
85		1,2-dibromoethane	0.426	0.441	-3.5	108	0.00	12.01
86		n-butyl ether	1.500	1.491	0.6	106	0.00	12.50
87		chlorobenzene	0.885	0.889	-0.5	108	0.00	12.53
88		1,1,1,2-tetrachloroethane	0.421	0.443	-5.2	109	0.00	12.60
89		ethylbenzene	1.549	1.557	-0.5	107	0.00	12.60
90		m,p-xylene	0.578	0.596	-3.1	108	0.00	12.73
91		o-xylene	1.324	1.366	-3.2	107	0.00	13.17
92		styrene	0.982	1.027	-4.6	105	0.00	13.18
93		butyl acrylate	0.629	0.641	-1.9	100	0.00	12.99
94		isopropylbenzene	1.806	1.826	-1.1	107	0.00	13.56
95		bromoform	0.303	0.316	-4.3	108	0.00	13.42
96		cis-1,4-dichloro-2-butene	0.144	0.146	-1.4	98	0.00	13.58
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.07
98	S	4-bromofluorobenzene (s)	0.741	0.739	0.3	107	0.00	13.77

Initial Calibration Verification

Job Number: JD20919 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102508.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane	0.557	0.564	-1.3	106	0.00	13.84
100	trans-1,4-dichloro-2-bute	0.155	0.164	-5.8	105	0.00	13.88
101	1,2,3-trichloropropane	0.144	0.150	-4.2	102	0.00	13.94
102	bromobenzene	0.684	0.728	-6.4	107	0.00	13.97
103	n-propylbenzene	2.877	2.956	-2.7	106	0.00	14.01
104	2-chlorotoluene	0.613	0.627	-2.3	107	0.00	14.16
105	4-chlorotoluene	1.792	1.781	0.6	104	0.00	14.28
106	1,3,5-trimethylbenzene	2.178	2.179	-0.0	106	0.00	14.19
107	tert-butylbenzene	1.778	1.857	-4.4	106	0.00	14.56
108	1,2,4-trimethylbenzene	2.232	2.307	-3.4	106	0.00	14.62
109	sec-butylbenzene	2.903	2.978	-2.6	106	0.00	14.81
110	p-isopropyltoluene	2.576	2.655	-3.1	106	0.00	14.96
111	1,3-dichlorobenzene	1.426	1.464	-2.7	107	0.00	14.99
112	1,2,3-trimethylbenzene		----------NA----------				
113	1,4-dichlorobenzene	1.496	1.512	-1.1	108	0.00	15.10
114	1,2-dichlorobenzene	1.466	1.528	-4.2	107	0.00	15.51
115	benzyl chloride	1.147	1.182	-3.1	102	0.00	15.19
116	n-butylbenzene	1.302	1.365	-4.8	105	0.00	15.41
	----------	True	Calc.	% Drift	----------		
117	hexachloroethane	50.000	44.943	10.1	108	0.00	15.85
	----------	AvgRF	CCRF	% Dev	----------		
118	1,2-dibromo-3-chloropropa	0.169	0.180	-6.5	100	0.00	16.34
119	1,3,5-trichlorobenzene	1.397	1.558	-11.5	108	0.00	16.57
120	1,2,4-trichlorobenzene	1.209	1.343	-11.1	103	0.00	17.25
121	2-ethylhexyl acrylate	0.383	0.432	-12.8	121	0.00	17.26
122	hexachlorobutadiene	0.690	0.705	-2.2	104	0.00	17.37
123	naphthalene	2.126	2.227	-4.8	102	0.00	17.54
124	1,2,3-trichlorobenzene	1.048	1.163	-11.0	105	0.00	17.77
125	2-methylnaphthalene	0.890	0.969	-8.9	111	0.00	18.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B102503.D M4B4435.M Sun Feb 21 11:44:43 2021 MS4B

6.9.11

6

Initial Calibration Verification

Job Number: JD20919 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102509.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

```
Data File : C:\MSDChem\1\DATA\V4B4435\4B102509.D         Vial: 17
Acq On    : 18 Feb 2021   2:58 am                    Operator: brittank
Sample    : icv4435-50                               Inst    : MS4B
Misc      : MS48773,V4B4435,W,,,,1                   Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title        : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update  : Fri Feb 19 16:10:14 2021
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	122	-0.01	6.47
2	ethanol		----------NA----------				
3	tertiary butyl alcohol		----------NA----------				
4	1,4-dioxane		----------NA----------				
5 I	pentafluorobenzene	1.000	1.000	0.0	114	0.00	8.45
6	chlorodifluoromethane	0.849	1.053	-24.0	133	0.00	3.71
7	dichlorodifluoromethane		----------NA----------				
8	chloromethane		----------NA----------				
9	vinyl chloride		----------NA----------				
10	1,3-butadiene		----------NA----------				
11	bromomethane		----------NA----------				
12	chloroethane		----------NA----------				
13	trichlorofluoromethane		----------NA----------				
14	vinyl bromide		----------NA----------				
15	ethyl ether		----------NA----------				
16	acrolein		----------NA----------				
17	freon 113		----------NA----------				
18	1,1-dichloroethene		----------NA----------				
19	acetone		----------NA----------				
20	acetonitrile	0.056	0.058	-3.6	112	0.00	6.23
21	iodomethane		----------NA----------				
22	carbon disulfide		----------NA----------				
23	methylene chloride		----------NA----------				
24	methyl acetate		----------NA----------				
25	methyl tert butyl ether		----------NA----------				
26	trans-1,2-dichloroethene		----------NA----------				
27	hexane		----------NA----------				
28	di-isopropyl ether		----------NA----------				
29	2-butanone		----------NA----------				
30	1,1-dichloroethane		----------NA----------				
31	chloroprene		----------NA----------				
32	acrylonitrile	0.130	0.123	5.4	101	0.00	6.71
33	vinyl acetate		----------NA----------				
34	ethyl tert-butyl ether		----------NA----------				
35	ethyl acetate		----------NA----------				
36	2,2-dichloropropane		----------NA----------				
37	cis-1,2-dichloroethene		----------NA----------				
38	propionitrile		----------NA----------				
39	methyl acrylate		----------NA----------				
40	methacrylonitrile		----------NA----------				
41	bromochloromethane		----------NA----------				

Initial Calibration Verification

Job Number: JD20919 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102509.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tetrahydrofuran		----------NA----------				
43		chloroform		----------NA----------				
44		tert-butyl formate		----------NA----------				
45	S	dibromofluoromethane (s)	0.496	0.482	2.8	111	0.00	8.48
46		1,1,1-trichloroethane		----------NA----------				
47		cyclohexane		----------NA----------				
48		isobutyl alcohol		----------NA----------				
49		1,1-dichloropropene		----------NA----------				
50		carbon tetrachloride		----------NA----------				
51		tert-amyl alcohol		----------NA----------				
52		isopropyl acetate		----------NA----------				
53	I	1,4-difluorobenzene	1.000	1.000	0.0	115	0.00	9.31
54	S	1,2-dichloroethane-d4 (s)	0.383	0.356	7.0	110	0.00	8.86
55		n-butyl alcohol		----------NA----------				
56		2,2,4-trimethylpentane		----------NA----------				
57		benzene		----------NA----------				
58		tert-amyl methyl ether		----------NA----------				
59		heptane		----------NA----------				
60		1,2-dichloroethane		----------NA----------				
61		ethyl acrylate		----------NA----------				
62		trichloroethene		----------NA----------				
63		2-chloroethyl vinyl ether		----------NA----------				
64		methyl methacrylate		----------NA----------				
65		methylcyclohexane		----------NA----------				
66		1,2-dichloropropane		----------NA----------				
67		dibromomethane		----------NA----------				
68		bromodichloromethane		----------NA----------				
69		2-nitropropane		----------NA----------				
70		epichlorohydrin		----------NA----------				
71		cis-1,3-dichloropropene		----------NA----------				
72		4-methyl-2-pentanone		----------NA----------				
73		isoamyl alcohol		----------NA----------				
74	I	chlorobenzene-d5	1.000	1.000	0.0	119	0.00	12.50
75	S	toluene-d8 (s)	1.142	1.121	1.8	115	0.00	10.91
76		toluene		----------NA----------				
77		ethyl methacrylate		----------NA----------				
78		trans-1,3-dichloropropene		----------NA----------				
79		1,1,2-trichloroethane		----------NA----------				
80		tetrachloroethene	0.298	0.282	5.4	109	0.00	11.57
81		2-hexanone		----------NA----------				
82		1,3-dichloropropane		----------NA----------				
83		butyl acetate		----------NA----------				
84		dibromochloromethane		----------NA----------				
85		1,2-dibromoethane		----------NA----------				
86		n-butyl ether		----------NA----------				
87		chlorobenzene		----------NA----------				
88		1,1,1,2-tetrachloroethane		----------NA----------				
89		ethylbenzene		----------NA----------				
90		m,p-xylene		----------NA----------				
91		o-xylene		----------NA----------				
92		styrene		----------NA----------				
93		butyl acrylate		----------NA----------				
94		isopropylbenzene		----------NA----------				
95		bromoform		----------NA----------				
96		cis-1,4-dichloro-2-butene		----------NA----------				
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	118	0.00	15.07
98	S	4-bromofluorobenzene (s)	0.741	0.723	2.4	117	0.00	13.77

Initial Calibration Verification

Job Number: JD20919 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102509.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane		----------NA----------				
100	trans-1,4-dichloro-2-bute		----------NA----------				
101	1,2,3-trichloropropane		----------NA----------				
102	bromobenzene		----------NA----------				
103	n-propylbenzene		----------NA----------				
104	2-chlorotoluene		----------NA----------				
105	4-chlorotoluene		----------NA----------				
106	1,3,5-trimethylbenzene		----------NA----------				
107	tert-butylbenzene		----------NA----------				
108	1,2,4-trimethylbenzene		----------NA----------				
109	sec-butylbenzene		----------NA----------				
110	p-isopropyltoluene		----------NA----------				
111	1,3-dichlorobenzene		----------NA----------				
112	1,2,3-trimethylbenzene	2.467	2.926	-18.6	141	0.00	15.09
113	1,4-dichlorobenzene		----------NA----------				
114	1,2-dichlorobenzene		----------NA----------				
115	benzyl chloride		----------NA----------				
116	n-butylbenzene		----------NA----------				
	----------	True	Calc.	% Drift	----------		
117	hexachloroethane		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
118	1,2-dibromo-3-chloropropa		----------NA----------				
119	1,3,5-trichlorobenzene		----------NA----------				
120	1,2,4-trichlorobenzene		----------NA----------				
121	2-ethylhexyl acrylate		----------NA----------				
122	hexachlorobutadiene		----------NA----------				
123	naphthalene		----------NA----------				
124	1,2,3-trichlorobenzene		----------NA----------				
125	2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B102503.D M4B4435.M Sun Feb 21 11:44:45 2021 MS4B

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V4B4445-CC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102752.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kr...21\v4b4445\4b102752.d Vial: 1
Acq On : 4 Mar 2021 10:02 am Operator: brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49212,V4B4445,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update : Fri Feb 19 16:10:14 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	116	-0.02	6.47
2	ethanol		----------NA----------				
3	tertiary butyl alcohol	1.103	1.114	-1.0	115	-0.02	6.57
4	1,4-dioxane	0.085	0.085	0.0	112	0.00	9.93
5 I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	8.45
6	chlorodifluoromethane	0.849	0.952	-12.1	105	0.00	3.71
7	dichlorodifluoromethane	1.201	1.325	-10.3	100	0.00	3.70
8	chloromethane	1.002	1.079	-7.7	107	0.00	4.00
9	vinyl chloride	0.888	1.027	-15.7	110	0.01	4.20
10	1,3-butadiene	0.574	0.638	-11.1	104	0.01	4.22
11	bromomethane	0.675	0.753	-11.6	111	0.00	4.71
12	chloroethane	0.379	0.458	-20.8#	111	0.00	4.86
13	trichlorofluoromethane	1.083	1.218	-12.5	107	0.00	5.24
14	vinyl bromide	0.278	0.566	-103.6#	188	0.00	5.13
15	ethyl ether	0.167	0.177	-6.0	102	0.01	5.54
16	acrolein	0.060	0.069	-15.0	110	0.02	5.73
17	freon 113	0.577	0.619	-7.3	101	0.00	5.94
18	1,1-dichloroethene	0.806	0.822	-2.0	99	0.00	5.90
19	acetone	0.033	0.034	-3.0	96	0.00	5.88
20	acetonitrile	0.056	0.071	-26.8#	112	0.02	6.24
21	iodomethane	1.287	1.217	5.4	91	0.00	6.12
22	carbon disulfide	1.929	2.029	-5.2	101	0.00	6.26
23	methylene chloride	0.566	0.567	-0.2	100	0.00	6.49
24	methyl acetate	0.251	0.283	-12.7	100	0.00	6.26
25	methyl tert butyl ether	1.443	1.481	-2.6	98	0.00	6.82
26	trans-1,2-dichloroethene	0.665	0.701	-5.4	97	0.00	6.85
27	hexane	0.311	0.333	-7.1	101	0.00	7.15
28	di-isopropyl ether	1.791	1.798	-0.4	95	0.00	7.33
29	2-butanone	0.031	0.032	-3.2	98	0.01	7.89
30	1,1-dichloroethane	0.822	0.827	-0.6	95	0.00	7.34
31	chloroprene	0.653	0.664	-1.7	97	0.00	7.43
32	acrylonitrile	0.130	0.153	-17.7	108	0.02	6.72
33	vinyl acetate	0.052	0.054	-3.8	113	0.00	7.26
34	ethyl tert-butyl ether	1.634	1.662	-1.7	97	0.00	7.74
35	ethyl acetate	0.047	0.045	4.3	88	0.01	7.91
36	2,2-dichloropropane	0.910	1.010	-11.0	106	0.00	8.01
37	cis-1,2-dichloroethene	0.479	0.484	-1.0	96	0.00	7.96
38	propionitrile	0.048	0.055	-14.6	106	0.01	7.94
39	methyl acrylate	0.045	0.039	13.3	87	0.01	8.00
40	methacrylonitrile	0.119	0.123	-3.4	99	0.00	8.13
41	bromochloromethane	0.257	0.261	-1.6	99	0.00	8.23

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V4B4445-CC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102752.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tetrahydrofuran	0.042	0.044	-4.8	104	0.01	8.27
43		chloroform	0.895	0.830	7.3	91	0.00	8.31
44		tert-butyl formate	0.366	0.408	-11.5	99	0.00	8.35
45	S	dibromofluoromethane (s)	0.496	0.514	-3.6	98	0.00	8.48
46		1,1,1-trichloroethane	0.997	1.062	-6.5	101	0.00	8.57
47		cyclohexane	0.832	0.918	-10.3	105	0.00	8.69
48		isobutyl alcohol		----------NA----------				
49		1,1-dichloropropene	0.581	0.539	7.2	91	0.00	8.71
50		carbon tetrachloride	0.901	0.925	-2.7	96	0.00	8.76
51		tert-amyl alcohol	0.022	0.027	-22.7#	109	0.00	8.82
52		isopropyl acetate	0.068	0.069	-1.5	95	0.00	8.84
53	I	1,4-difluorobenzene	1.000	1.000	0.0	95	0.00	9.31
54	S	1,2-dichloroethane-d4 (s)	0.383	0.399	-4.2	94	0.00	8.86
55		n-butyl alcohol	0.006	0.008	-33.3#	107	0.00	9.34
56		2,2,4-trimethylpentane	1.378	1.445	-4.9	100	-0.01	9.04
57		benzene	1.248	1.210	3.0	93	0.00	8.94
58		tert-amyl methyl ether	1.107	1.204	-8.8	100	0.00	9.02
59		heptane	0.229	0.231	-0.9	94	0.00	9.19
60		1,2-dichloroethane	0.449	0.436	2.9	94	0.00	8.95
61		ethyl acrylate	0.295	0.299	-1.4	93	0.00	9.59
62		trichloroethene	0.325	0.317	2.5	92	0.00	9.62
63		2-chloroethyl vinyl ether	0.151	0.150	0.7	92	0.00	10.37
64		methyl methacrylate	0.059	0.063	-6.8	98	0.01	9.85
65		methylcyclohexane	0.685	0.771	-12.6	105	0.00	9.93
66		1,2-dichloropropane	0.326	0.309	5.2	89	0.00	9.88
67		dibromomethane	0.202	0.190	5.9	90	0.00	9.99
68		bromodichloromethane	0.468	0.429	8.3	91	0.00	10.14
69		2-nitropropane	0.066	0.059	10.6	87	0.00	10.30
70		epichlorohydrin	0.024	0.028	-16.7	107	0.00	10.44
71		cis-1,3-dichloropropene	0.512	0.457	10.7	87	0.00	10.59
72		4-methyl-2-pentanone	0.105	0.111	-5.7	98	0.00	10.68
73		isoamyl alcohol	0.008	0.010	-25.0#	97	0.00	10.68
74	I	chlorobenzene-d5	1.000	1.000	0.0	96	0.00	12.50
75	S	toluene-d8 (s)	1.142	1.127	1.3	94	0.00	10.91
76		toluene	0.712	0.667	6.3	90	0.00	10.99
77		ethyl methacrylate	0.326	0.343	-5.2	97	0.01	11.17
78		trans-1,3-dichloropropene	0.423	0.409	3.3	92	0.00	11.17
79		1,1,2-trichloroethane	0.207	0.203	1.9	90	0.00	11.39
80		tetrachloroethene	0.298	0.281	5.7	92	0.00	11.57
81		2-hexanone	0.089	0.100	-12.4	102	0.00	11.56
82		1,3-dichloropropane	0.409	0.384	6.1	92	0.00	11.58
83		butyl acetate	0.168	0.181	-7.7	99	0.01	11.66
84		dibromochloromethane	0.371	0.340	8.4	90	0.00	11.85
85		1,2-dibromoethane	0.426	0.326	23.5#	75	0.00	12.01
86		n-butyl ether	1.500	1.453	3.1	91	0.00	12.50
87		chlorobenzene	0.885	0.846	4.4	92	0.00	12.54
88		1,1,1,2-tetrachloroethane	0.421	0.413	1.9	93	0.00	12.60
89		ethylbenzene	1.549	1.520	1.9	94	0.00	12.60
90		m,p-xylene	0.578	0.571	1.2	94	0.00	12.74
91		o-xylene	1.324	1.341	-1.3	94	0.00	13.17
92		styrene	0.982	1.022	-4.1	97	0.00	13.18
93		butyl acrylate	0.629	0.695	-10.5	97	0.01	12.99
94		isopropylbenzene	1.806	1.786	1.1	95	0.00	13.56
95		bromoform	0.303	0.298	1.7	94	0.00	13.42
96		cis-1,4-dichloro-2-butene	0.144	0.154	-6.9	97	0.00	13.58
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	15.07
98	S	4-bromofluorobenzene (s)	0.741	0.724	2.3	101	0.00	13.78

Continuing Calibration Summary

Job Number: JD20919 **Sample:** V4B4445-CC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102752.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane	0.557	0.555	0.4	102	0.00	13.84
100	trans-1,4-dichloro-2-bute	0.155	0.152	1.9	102	0.00	13.89
101	1,2,3-trichloropropane	0.144	0.150	-4.2	105	0.00	13.94
102	bromobenzene	0.684	0.663	3.1	99	0.00	13.97
103	n-propylbenzene	2.877	2.775	3.5	97	0.00	14.02
104	2-chlorotoluene	0.613	0.567	7.5	94	0.00	14.16
105	4-chlorotoluene	1.792	1.707	4.7	98	0.00	14.28
106	1,3,5-trimethylbenzene	2.178	2.004	8.0	95	0.00	14.19
107	tert-butylbenzene	1.778	1.563	12.1	92	0.00	14.57
108	1,2,4-trimethylbenzene	2.232	2.170	2.8	98	0.00	14.62
109	sec-butylbenzene	2.903	2.685	7.5	95	0.00	14.81
110	p-isopropyltoluene	2.576	2.469	4.2	97	0.00	14.96
111	1,3-dichlorobenzene	1.426	1.354	5.0	96	0.00	14.99
112	1,2,3-trimethylbenzene	2.467	2.290	7.2	97	0.00	15.09
113	1,4-dichlorobenzene	1.496	1.381	7.7	97	0.00	15.10
114	1,2-dichlorobenzene	1.466	1.402	4.4	96	0.00	15.51
115	benzyl chloride	1.147	1.319	-15.0	114	0.00	15.19
116	n-butylbenzene	1.302	1.290	0.9	99	0.00	15.42
	----------	True	Calc.	% Drift	----------		
117	hexachloroethane	20.000	14.621	26.9#	90	0.00	15.85
	----------	AvgRF	CCRF	% Dev	----------		
118	1,2-dibromo-3-chloropropa	0.169	0.177	-4.7	103	0.00	16.34
119	1,3,5-trichlorobenzene	1.397	1.345	3.7	96	0.00	16.57
120	1,2,4-trichlorobenzene	1.209	1.233	-2.0	101	0.00	17.25
121	2-ethylhexyl acrylate	0.383	0.422	-10.2	194	0.00	17.27
122	hexachlorobutadiene	0.690	0.650	5.8	96	0.00	17.37
123	naphthalene	2.126	2.266	-6.6	111	0.00	17.55
124	1,2,3-trichlorobenzene	1.048	1.101	-5.1	105	0.00	17.78
125	2-methylnaphthalene	0.890	1.110	-24.7#	169	0.00	18.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B102502.D M4B4435.M Thu Mar 04 23:43:31 2021

Run Sequence Report

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V2A8967 **Method:** SW846 8260D **Instrument ID:** GCMS2A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2A8967-BFB	2A206380.D	11/11/20 15:06	n/a	BFB Tune
V2A8967-IC8967	2A206381.D	11/11/20 15:42	n/a	Initial cal 0.2
V2A8967-IC8967	2A206382.D	11/11/20 16:11	n/a	Initial cal 0.5
V2A8967-IC8967	2A206383.D	11/11/20 16:41	n/a	Initial cal 1
V2A8967-IC8967	2A206384.D	11/11/20 17:10	n/a	Initial cal 2
V2A8967-IC8967	2A206385.D	11/11/20 17:40	n/a	Initial cal 4
V2A8967-IC8967	2A206386.D	11/11/20 18:09	n/a	Initial cal 8
V2A8967-IC8967	2A206387.D	11/11/20 18:38	n/a	Initial cal 20
V2A8967-ICC8967	2A206388.D	11/11/20 19:08	n/a	Initial cal 50
V2A8967-IC8967	2A206389.D	11/11/20 19:37	n/a	Initial cal 100
V2A8967-IC8967	2A206390.D	11/11/20 20:06	n/a	Initial cal 200
V2A8967-ICV8967	2A206393.D	11/11/20 21:35	n/a	Initial cal verification 50
V2A8967-ICV8967	2A206394.D	11/11/20 22:04	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V2A9078 **Method:** SW846 8260C **Instrument ID:** GCMS2A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2A9078-BFB	2A208823.D	03/05/21 08:32	n/a	BFB Tune
V2A9078-CC8967	2A208823.D	03/05/21 08:32	n/a	Continuing cal 20
V2A9078-BS	2A208825.D	03/05/21 09:34	n/a	Blank Spike
V2A9078-MB	2A208827.D	03/05/21 10:31	n/a	Method Blank
JD20919-16	2A208828.D	03/05/21 11:05	n/a	HSSER-DUP01-022421
JD20919-18	2A208829.D	03/05/21 11:34	n/a	HSSER-SMW04-022521
ZZZZZZ	2A208830.D	03/05/21 12:03	n/a	(unrelated sample)
ZZZZZZ	2A208831.D	03/05/21 12:31	n/a	(unrelated sample)
ZZZZZZ	2A208833.D	03/05/21 13:35	n/a	(unrelated sample)
JD20919-18MS	2A208834.D	03/05/21 14:03	n/a	Matrix Spike
ZZZZZZ	2A208835.D	03/05/21 14:32	n/a	(unrelated sample)
JD20919-16DUP	2A208836.D	03/05/21 15:01	n/a	Duplicate
ZZZZZZ	2A208837.D	03/05/21 15:29	n/a	(unrelated sample)
ZZZZZZ	2A208838.D	03/05/21 15:58	n/a	(unrelated sample)
ZZZZZZ	2A208839.D	03/05/21 16:26	n/a	(unrelated sample)
ZZZZZZ	2A208840.D	03/05/21 16:54	n/a	(unrelated sample)
ZZZZZZ	2A208841.D	03/05/21 17:23	n/a	(unrelated sample)
ZZZZZZ	2A208842.D	03/05/21 17:51	n/a	(unrelated sample)
ZZZZZZ	2A208843.D	03/05/21 18:20	n/a	(unrelated sample)
ZZZZZZ	2A208844.D	03/05/21 18:48	n/a	(unrelated sample)
ZZZZZZ	2A208845.D	03/05/21 19:17	n/a	(unrelated sample)
ZZZZZZ	2A208846.D	03/05/21 19:45	n/a	(unrelated sample)
V2A9078-ECC8967	2A208847.D	03/05/21 20:13	n/a	Ending cal 50

Run Sequence Report

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V3A6923 **Method:** SW846 8260C BY SIM **Instrument ID:** GCMS3A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V3A6923-BFB	3A160428.D	07/18/18 16:55	n/a	BFB Tune
V3A6923-IC6923	3A160429.D	07/18/18 17:26	n/a	Initial cal 0.25
V3A6923-IC6923	3A160430.D	07/18/18 17:52	n/a	Initial cal 0.4
V3A6923-IC6923	3A160431.D	07/18/18 18:18	n/a	Initial cal 1
V3A6923-IC6923	3A160432.D	07/18/18 18:43	n/a	Initial cal 2
V3A6923-IC6923	3A160433.D	07/18/18 19:09	n/a	Initial cal 5
V3A6923-ICC6923	3A160434.D	07/18/18 19:35	n/a	Initial cal 20
V3A6923-IC6923	3A160435.D	07/18/18 20:00	n/a	Initial cal 50
V3A6923-IC6923	3A160436.D	07/18/18 20:26	n/a	Initial cal 100
V3A6923-IC6923	3A160437.D	07/18/18 20:52	n/a	Initial cal 200
V3A6923-ICV6923	3A160443.D	07/18/18 23:25	n/a	Initial cal verification 20

Run Sequence Report

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V3A7169 **Method:** SW846 8260C BY SIM **Instrument ID:** GCMS3A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V3A7169-BFB	3A165034.D	03/03/21 13:10	n/a	BFB Tune
V3A7169-CC6923	3A165035.D	03/03/21 13:40	n/a	Continuing cal 5
V3A7169-BS	3A165036.D	03/03/21 15:07	n/a	Blank Spike
V3A7169-MB	3A165037.D	03/03/21 15:36	n/a	Method Blank
JD20919-17	3A165038.D	03/03/21 16:15	n/a	HSSER-GMZ02-022521
JD20919-17MS	3A165039.D	03/03/21 16:51	n/a	Matrix Spike
JD20919-17MSD	3A165040.D	03/03/21 17:20	n/a	Matrix Spike Duplicate
JD20919-3	3A165041.D	03/03/21 17:49	n/a	HSSER-FBLK01-022321
JD20919-13	3A165042.D	03/03/21 18:34	n/a	HSSER-EBLK01-022421
JD20919-1	3A165043.D	03/03/21 19:02	n/a	HSSER-SMW08-022321
JD20919-2	3A165044.D	03/03/21 19:31	n/a	HSSER-GMZ01-022321
JD20919-4	3A165045.D	03/03/21 20:00	n/a	HSSER-SMW02-022321
JD20919-5	3A165046.D	03/03/21 20:28	n/a	HSSER-SMW01-022321
JD20919-6	3A165047.D	03/03/21 20:57	n/a	HSSER-MW203-022321
JD20919-7	3A165048.D	03/03/21 21:26	n/a	HSSER-MW07FGA-022321
JD20919-8	3A165049.D	03/03/21 21:54	n/a	HSSER-SMW19-022321
JD20919-9	3A165050.D	03/03/21 22:23	n/a	HSSER-GMZ04-022321
JD20919-10	3A165051.D	03/03/21 22:52	n/a	HSSER-SMW21-022321
JD20919-11	3A165052.D	03/03/21 23:20	n/a	HSSER-PMW01-022421
JD20919-12	3A165053.D	03/03/21 23:49	n/a	HSSER-PMW02-022421
JD20919-14	3A165054.D	03/04/21 00:18	n/a	HSSER-SMW20-022421
JD20919-15	3A165055.D	03/04/21 00:48	n/a	HSSER-GMZ03-022421

Run Sequence Report

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V3A7170 **Method:** SW846 8260C BY SIM **Instrument ID:** GCMS3A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V3A7170-BFB	3A165056.D	03/04/21 10:09	n/a	BFB Tune
V3A7170-CC6923	3A165057.D	03/04/21 10:45	n/a	Continuing cal 5
V3A7170-BS	3A165058.D	03/04/21 11:19	n/a	Blank Spike
V3A7170-MB	3A165059.D	03/04/21 11:48	n/a	Method Blank
JD20919-16	3A165060.D	03/04/21 12:49	n/a	HSSER-DUP01-022421
JD20919-18	3A165061.D	03/04/21 13:18	n/a	HSSER-SMW04-022521
JD20920-11	3A165062.D	03/04/21 13:47	n/a	(used for QC only; not part of job JD20919)
JD20920-11MS	3A165063.D	03/04/21 14:16	n/a	Matrix Spike
JD20920-11MSD	3A165064.D	03/04/21 14:45	n/a	Matrix Spike Duplicate
ZZZZZZ	3A165066.D	03/04/21 15:43	n/a	(unrelated sample)
ZZZZZZ	3A165067.D	03/04/21 16:11	n/a	(unrelated sample)
ZZZZZZ	3A165068.D	03/04/21 16:40	n/a	(unrelated sample)
ZZZZZZ	3A165069.D	03/04/21 17:09	n/a	(unrelated sample)
ZZZZZZ	3A165070.D	03/04/21 17:37	n/a	(unrelated sample)
ZZZZZZ	3A165071.D	03/04/21 18:06	n/a	(unrelated sample)
ZZZZZZ	3A165072.D	03/04/21 18:34	n/a	(unrelated sample)
ZZZZZZ	3A165073.D	03/04/21 19:03	n/a	(unrelated sample)
ZZZZZZ	3A165074.D	03/04/21 19:32	n/a	(unrelated sample)
ZZZZZZ	3A165075.D	03/04/21 20:01	n/a	(unrelated sample)

Run Sequence Report

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V4B4435 **Method:** SW846 8260D **Instrument ID:** GCMS4B

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V4B4435-BFB	4B102495.D	02/17/21 20:17	n/a	BFB Tune
V4B4435-IC4435	4B102496.D	02/17/21 20:52	n/a	Initial cal 0.2
V4B4435-IC4435	4B102497.D	02/17/21 21:20	n/a	Initial cal 0.5
V4B4435-IC4435	4B102498.D	02/17/21 21:48	n/a	Initial cal 1
V4B4435-IC4435	4B102499.D	02/17/21 22:17	n/a	Initial cal 2
V4B4435-IC4435	4B102500.D	02/17/21 22:45	n/a	Initial cal 4
V4B4435-IC4435	4B102501.D	02/17/21 23:13	n/a	Initial cal 8
V4B4435-IC4435	4B102502.D	02/17/21 23:41	n/a	Initial cal 20
V4B4435-ICC4435	4B102503.D	02/18/21 00:09	n/a	Initial cal 50
V4B4435-IC4435	4B102504.D	02/18/21 00:37	n/a	Initial cal 100
V4B4435-IC4435	4B102505.D	02/18/21 01:05	n/a	Initial cal 200
V4B4435-ICV4435	4B102508.D	02/18/21 02:30	n/a	Initial cal verification 50
V4B4435-ICV4435	4B102509.D	02/18/21 02:58	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD20919
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V4B4445 **Method:** SW846 8260C **Instrument ID:** GCMS4B

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V4B4445-BFB	4B102752.D	03/04/21 10:02	n/a	BFB Tune
V4B4445-CC4435	4B102752.D	03/04/21 10:02	n/a	Continuing cal 20
V4B4445-BS	4B102753.D	03/04/21 10:55	n/a	Blank Spike
V4B4445-MB	4B102755.D	03/04/21 11:51	n/a	Method Blank
JD20919-17	4B102756.D	03/04/21 12:21	n/a	HSSER-GMZ02-022521
JD20919-1	4B102757.D	03/04/21 12:49	n/a	HSSER-SMW08-022321
JD20919-2	4B102758.D	03/04/21 13:18	n/a	HSSER-GMZ01-022321
JD20919-4	4B102759.D	03/04/21 13:46	n/a	HSSER-SMW02-022321
JD20919-17MS	4B102760.D	03/04/21 14:14	n/a	Matrix Spike
JD20919-17MSD	4B102761.D	03/04/21 14:42	n/a	Matrix Spike Duplicate
JD20919-3	4B102763.D	03/04/21 15:38	n/a	HSSER-FBLK01-022321
JD20919-13	4B102764.D	03/04/21 16:07	n/a	HSSER-EBLK01-022421
JD20919-19	4B102765.D	03/04/21 16:35	n/a	HSSER-TBLK01-022321
JD20919-5	4B102766.D	03/04/21 17:03	n/a	HSSER-SMW01-022321
JD20919-6	4B102767.D	03/04/21 17:31	n/a	HSSER-MW203-022321
JD20919-7	4B102768.D	03/04/21 17:59	n/a	HSSER-MW07FGA-022321
JD20919-8	4B102769.D	03/04/21 18:27	n/a	HSSER-SMW19-022321
JD20919-9	4B102770.D	03/04/21 18:56	n/a	HSSER-GMZ04-022321
JD20919-10	4B102771.D	03/04/21 19:24	n/a	HSSER-SMW21-022321
JD20919-11	4B102772.D	03/04/21 19:52	n/a	HSSER-PMW01-022421
JD20919-12	4B102773.D	03/04/21 20:20	n/a	HSSER-PMW02-022421
JD20919-14	4B102774.D	03/04/21 20:48	n/a	HSSER-SMW20-022421
JD20919-15	4B102775.D	03/04/21 21:17	n/a	HSSER-GMZ03-022421

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102757.d
Acq On : 4 Mar 2021 12:49 pm
Operator : brittank
Sample : JD20919-1 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:25:07 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

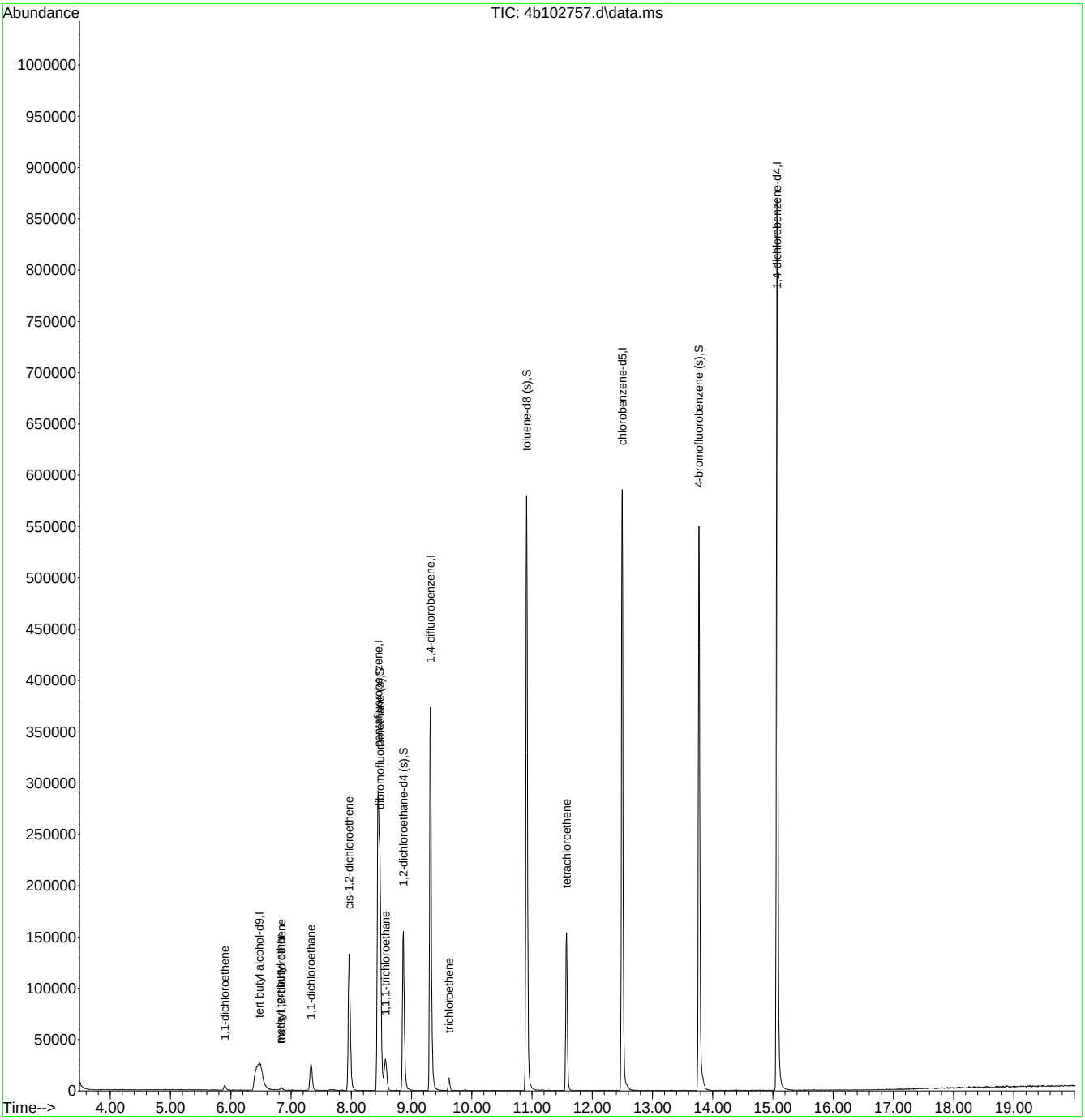
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	87888	500.00	ug/L	-0.01
5) pentafluorobenzene	8.446	168	250891	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	336296	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	362982	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	254874	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	126510	50.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.58%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	129340	50.15	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.30%			
75) toluene-d8 (s)	10.909	98	418082	50.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%			
98) 4-bromofluorobenzene (s)	13.770	95	194285	51.43	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.86%			
Target Compounds						Qvalue
18) 1,1-dichloroethene	5.898	61	4738	1.17	ug/L	88
25) methyl tert butyl ether	6.824	73	2889	0.40	ug/L	73
26) trans-1,2-dichloroethene	6.845	61	1467	0.44	ug/L	85
30) 1,1-dichloroethane	7.332	63	36954	8.96	ug/L	98
37) cis-1,2-dichloroethene	7.964	96	73704	30.70	ug/L	98
46) 1,1,1-trichloroethane	8.571	97	28772	5.75	ug/L	97
62) trichloroethene	9.622	95	4547	2.08	ug/L	95
80) tetrachloroethene	11.573	164	40394	18.67	ug/L	97

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

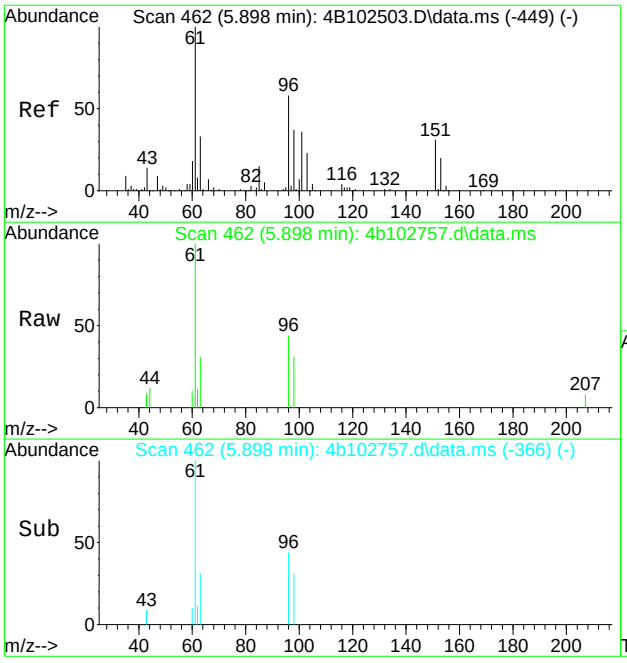
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102757.d
Acq On : 4 Mar 2021 12:49 pm
Operator : brittank
Sample : JD20919-1 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:25:07 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



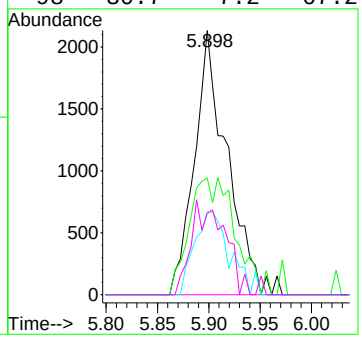
M4B4435.M Thu Mar 04 23:44:49 2021 Page: 2

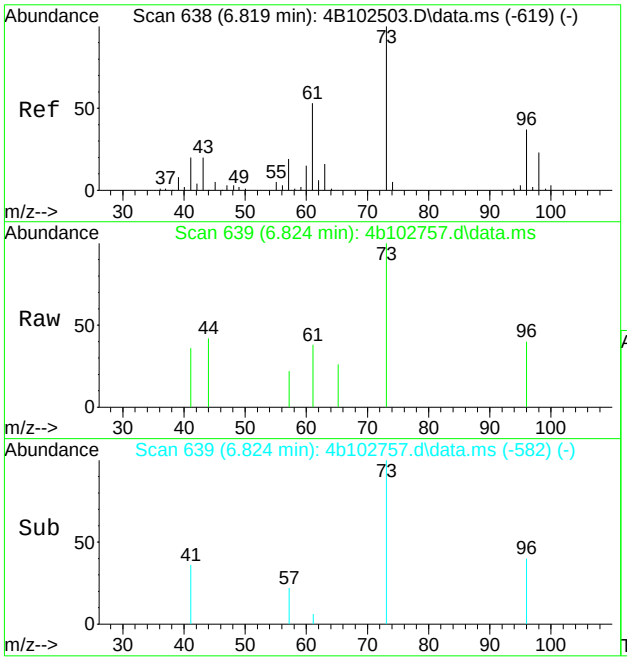


#18
1,1-dichloroethene
Concen: 1.17 ug/L
RT: 5.898 min Scan# 462
Delta R.T. 0.000 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 61 Resp: 4738

Ion	Ratio	Lower	Upper
61	100		
96	44.3	28.3	88.3
63	31.4	2.6	62.6
98	30.7	7.2	67.2

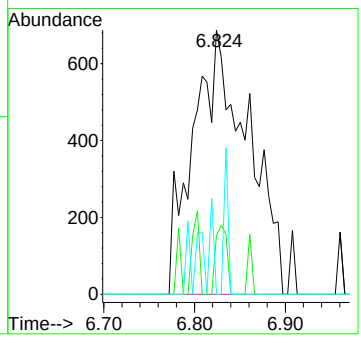


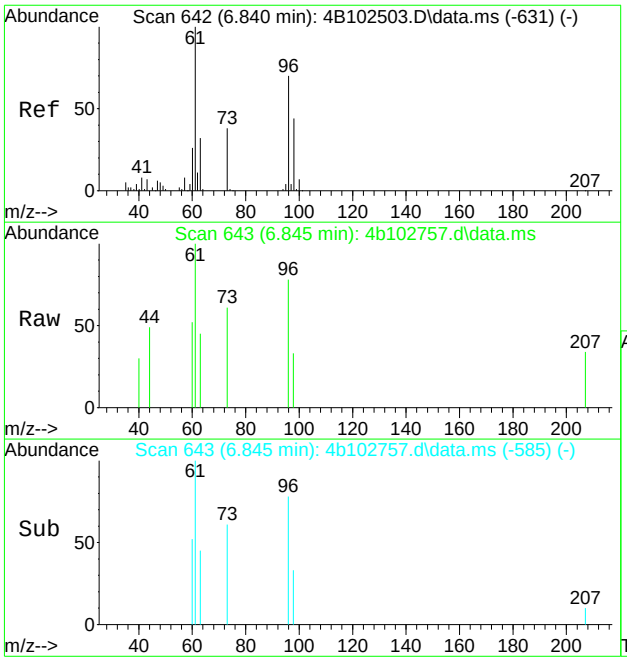


#25
methyl tert butyl ether
Concen: 0.40 ug/L
RT: 6.824 min Scan# 639
Delta R.T. 0.000 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 73 Resp: 2889

Ion	Ratio	Lower	Upper
73	100		
57	22.4	0.0	49.0
43	0.0	0.0	50.7

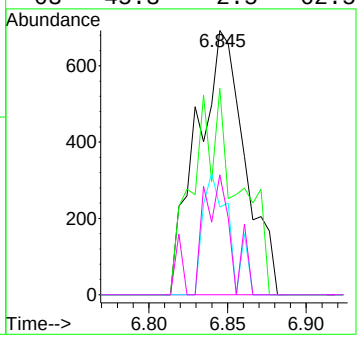


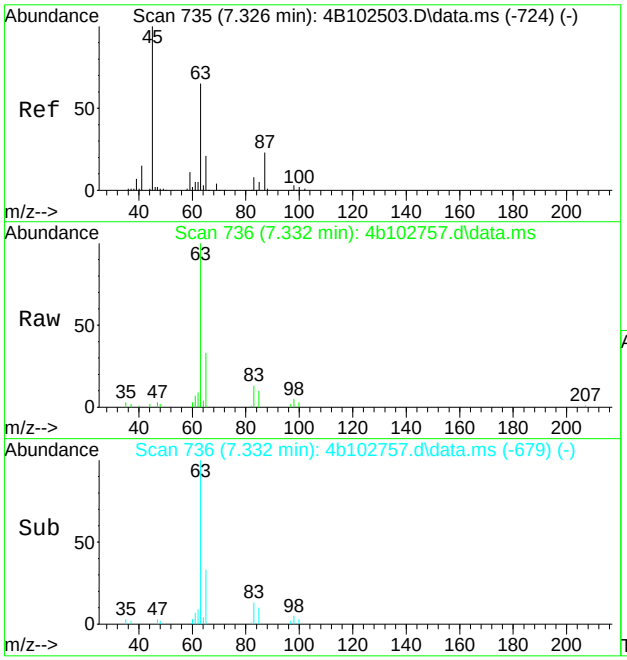


#26
trans-1,2-dichloroethene
Concen: 0.44 ug/L
RT: 6.845 min Scan# 643
Delta R.T. 0.005 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 61 Resp: 1467

Ion	Ratio	Lower	Upper
61	100		
96	78.1	39.6	99.6
98	33.2	14.2	74.2
63	45.3	2.5	62.5

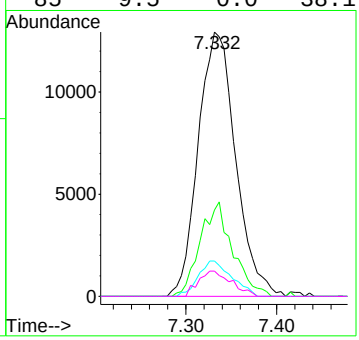


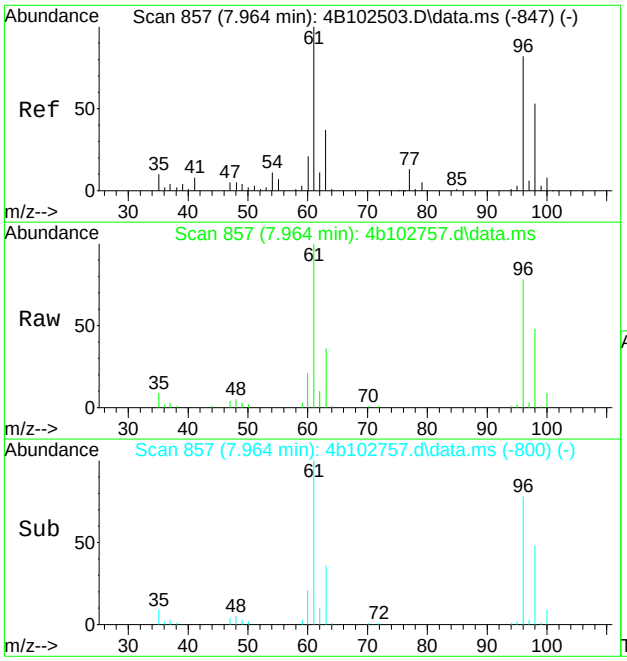


#30
1,1-dichloroethane
Concen: 8.96 ug/L
RT: 7.332 min Scan# 736
Delta R.T. 0.000 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 63 Resp: 36954

Ion	Ratio	Lower	Upper
63	100		
65	32.7	1.6	61.6
83	13.4	0.0	43.0
85	9.5	0.0	38.1

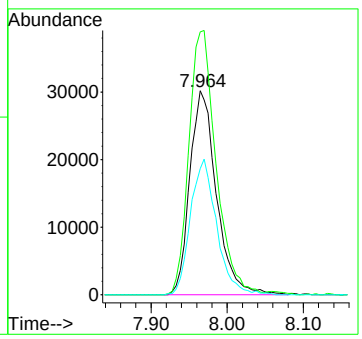


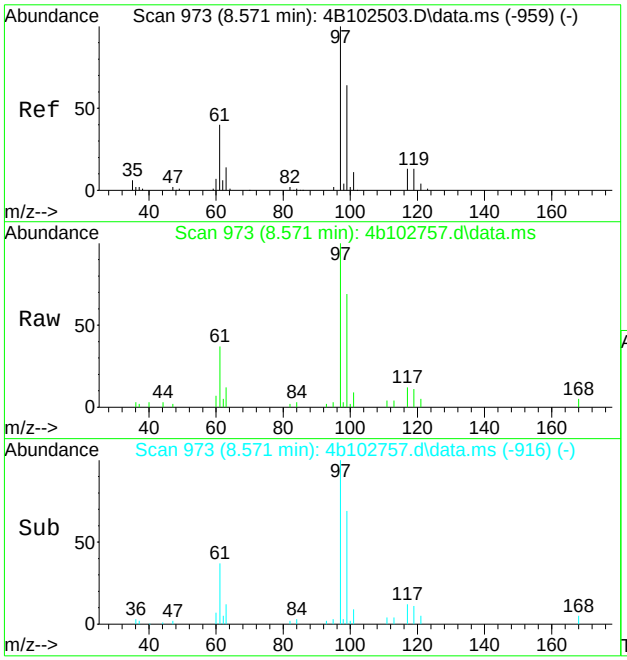


#37
cis-1,2-dichloroethene
Concen: 30.70 ug/L
RT: 7.964 min Scan# 857
Delta R.T. 0.000 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 96 Resp: 73704

Ion	Ratio	Lower	Upper
96	100		
61	128.8	100.5	160.5
98	61.8	34.4	94.4

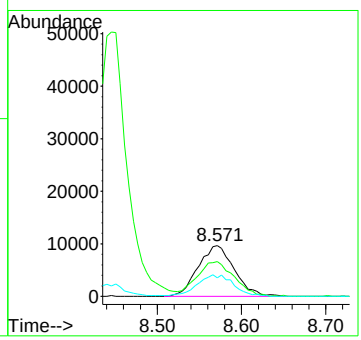


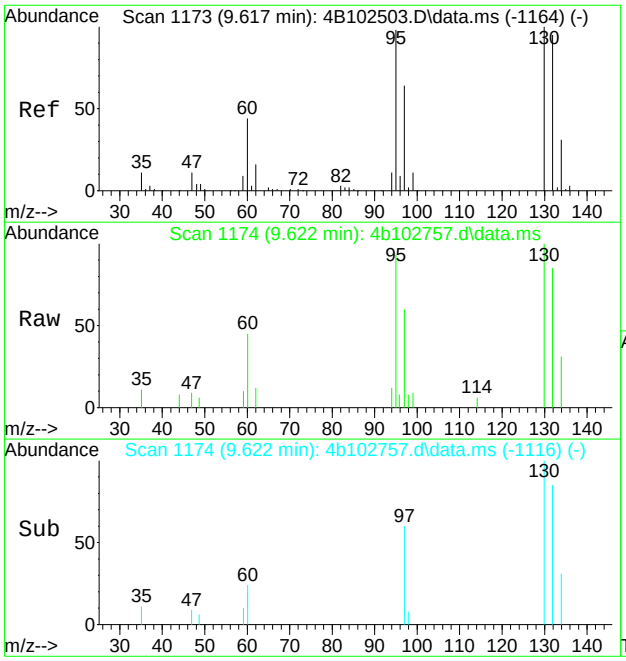


#46
1,1,1-trichloroethane
Concen: 5.75 ug/L
RT: 8.571 min Scan# 973
Delta R.T. 0.000 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 97 Resp: 28772

Ion	Ratio	Lower	Upper
97	100		
99	68.5	36.9	96.9
61	36.6	9.7	69.7

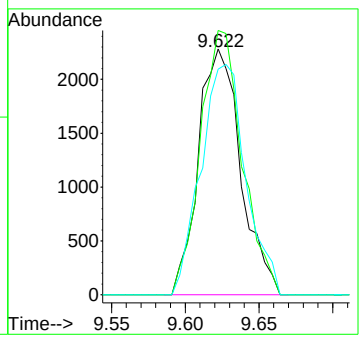


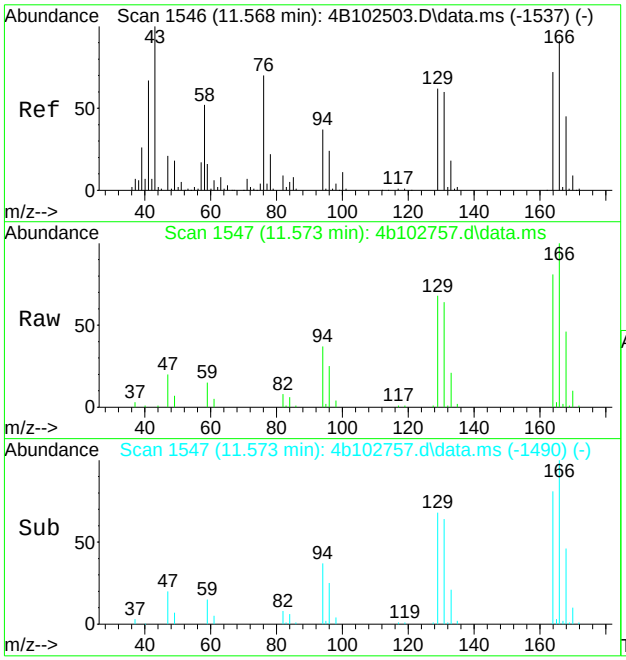


#62
trichloroethene
Concen: 2.08 ug/L
RT: 9.622 min Scan# 1174
Delta R.T. 0.005 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 95 Resp: 4547

Ion	Ratio	Lower	Upper
95	100		
130	107.6	72.4	132.4
132	91.9	67.1	127.1

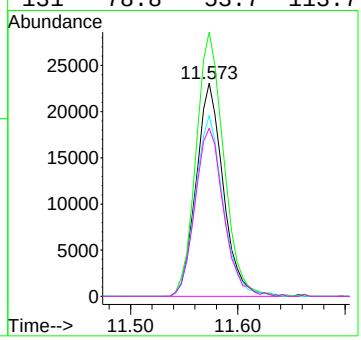




#80
tetrachloroethene
Concen: 18.67 ug/L
RT: 11.573 min Scan# 1547
Delta R.T. 0.000 min
Lab File: 4b102757.d
Acq: 4 Mar 2021 12:49 pm

Tgt Ion:164 Resp: 40394

Ion	Ratio	Lower	Upper
164	100		
166	124.0	96.6	156.6
129	84.9	56.4	116.4
131	78.8	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102758.d
Acq On : 4 Mar 2021 1:18 pm
Operator : brittank
Sample : JD20919-2 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:25:50 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

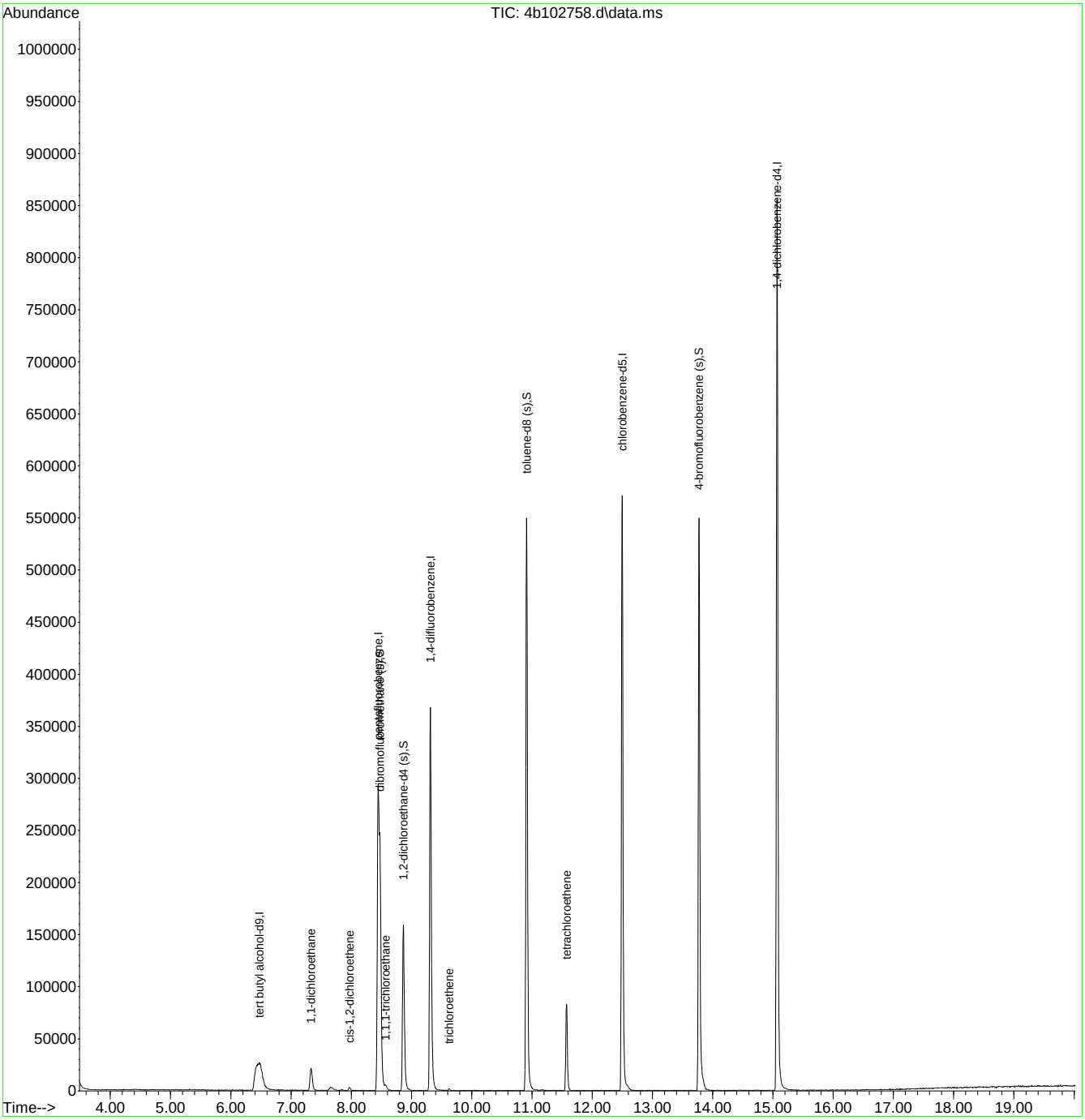
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	127734	500.00	ug/L	-0.01
5) pentafluorobenzene	8.446	168	253671	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	325817	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	347195	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	260400	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	128322	50.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.90%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	130680	52.30	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.60%			
75) toluene-d8 (s)	10.909	98	397409	50.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.22%			
98) 4-bromofluorobenzene (s)	13.770	95	192781	49.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.90%			
Target Compounds						Qvalue
30) 1,1-dichloroethane	7.332	63	30078	7.21	ug/L	99
37) cis-1,2-dichloroethene	7.970	96	1689	0.70	ug/L	85
46) 1,1,1-trichloroethane	8.566	97	3640	0.72	ug/L	93
62) trichloroethene	9.622	95	632	0.30	ug/L	94
80) tetrachloroethene	11.573	164	21683	10.48	ug/L	96

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

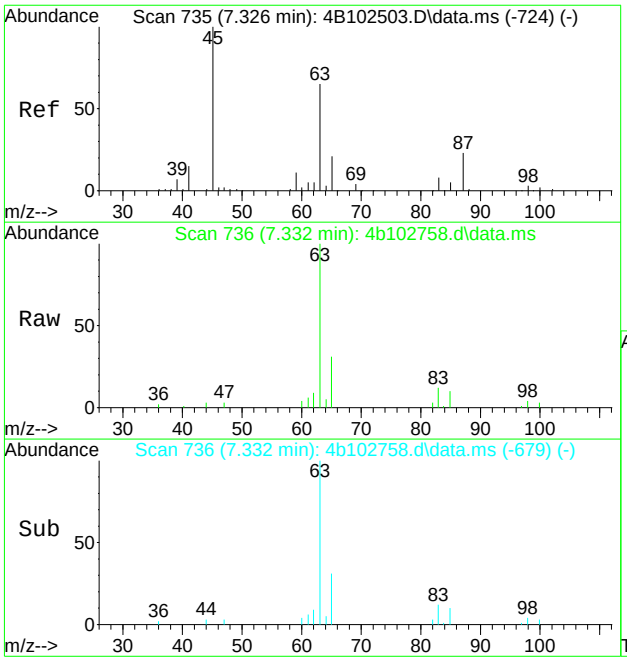
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102758.d
Acq On : 4 Mar 2021 1:18 pm
Operator : brittank
Sample : JD20919-2 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:25:50 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



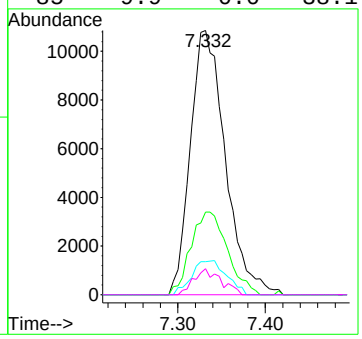
M4B4435.M Thu Mar 04 23:44:55 2021 Page: 2

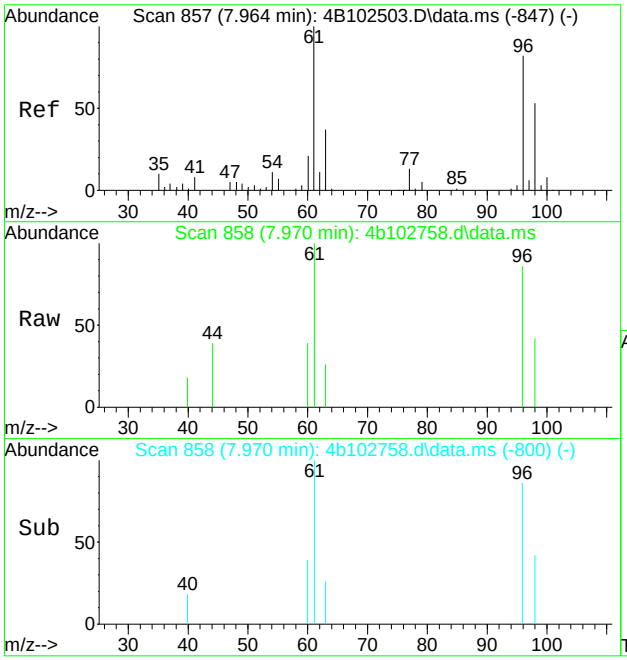


#30
1,1-dichloroethane
Concen: 7.21 ug/L
RT: 7.332 min Scan# 736
Delta R.T. -0.000 min
Lab File: 4b102758.d
Acq: 4 Mar 2021 1:18 pm

Tgt Ion: 63 Resp: 30078

Ion	Ratio	Lower	Upper
63	100		
65	31.3	1.6	61.6
83	12.5	0.0	43.0
85	9.9	0.0	38.1

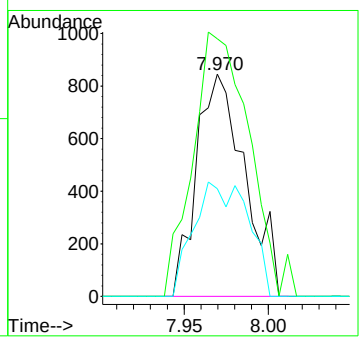


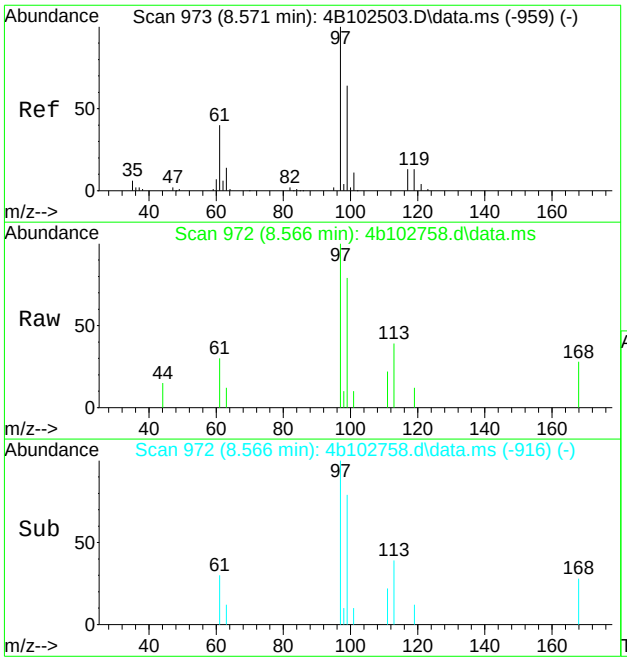


#37
cis-1,2-dichloroethene
Concen: 0.70 ug/L
RT: 7.970 min Scan# 858
Delta R.T. 0.005 min
Lab File: 4b102758.d
Acq: 4 Mar 2021 1:18 pm

Tgt Ion: 96 Resp: 1689

Ion	Ratio	Lower	Upper
96	100		
61	115.8	100.5	160.5
98	48.5	34.4	94.4

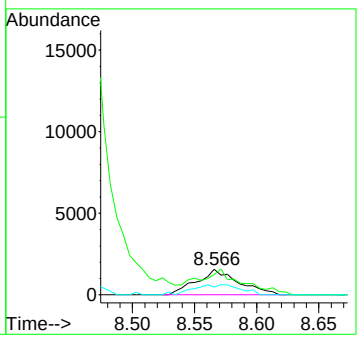


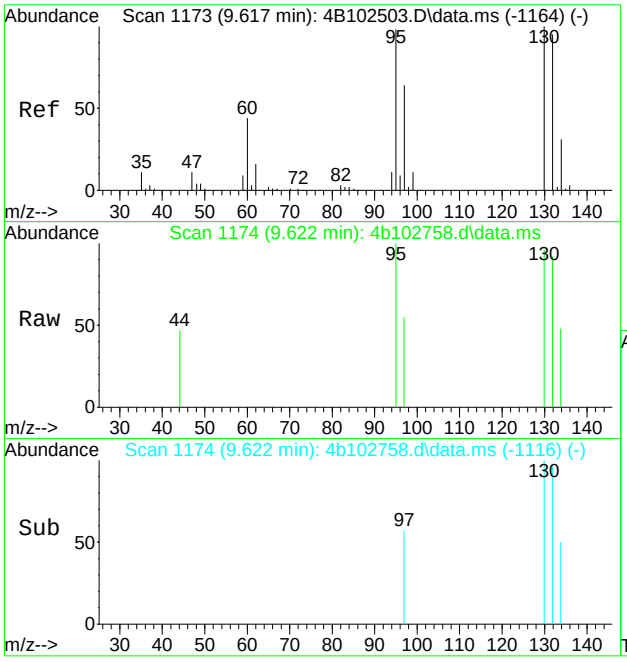


#46
1,1,1-trichloroethane
Concen: 0.72 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102758.d
Acq: 4 Mar 2021 1:18 pm

Tgt Ion: 97 Resp: 3640

Ion	Ratio	Lower	Upper
97	100		
99	68.3	36.9	96.9
61	29.6	9.7	69.7

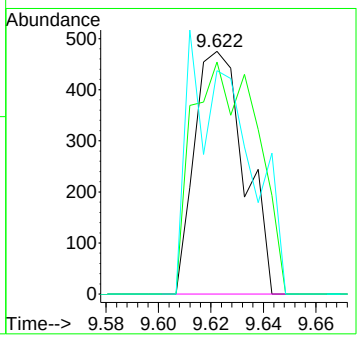


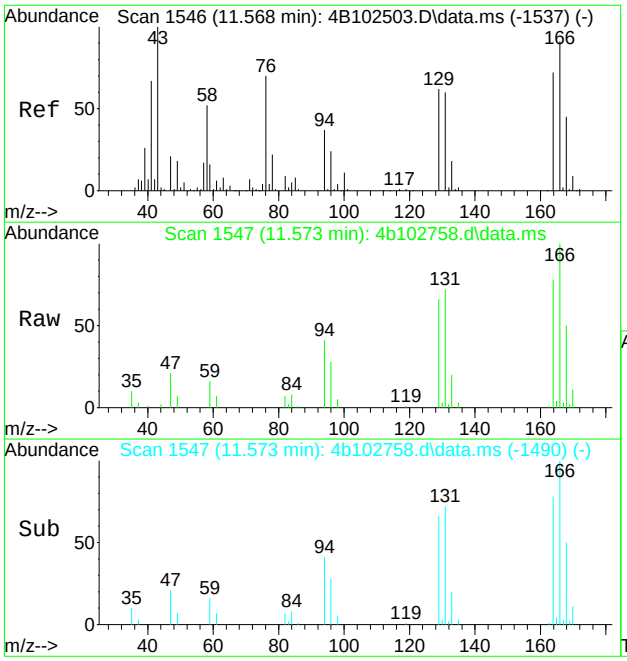


#62
trichloroethene
Concen: 0.30 ug/L
RT: 9.622 min Scan# 1174
Delta R.T. 0.005 min
Lab File: 4b102758.d
Acq: 4 Mar 2021 1:18 pm

Tgt Ion: 95 Resp: 632

Ion	Ratio	Lower	Upper
95	100		
130	95.6	72.4	132.4
132	92.0	67.1	127.1

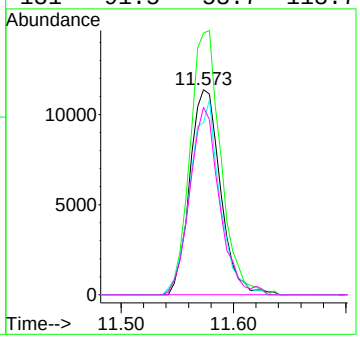




#80
tetrachloroethene
Concen: 10.48 ug/L
RT: 11.573 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 4b102758.d
Acq: 4 Mar 2021 1:18 pm

Tgt Ion:164 Resp: 21683

Ion	Ratio	Lower	Upper
164	100		
166	127.6	96.6	156.6
129	83.9	56.4	116.4
131	91.5	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102763.d
Acq On : 4 Mar 2021 3:38 pm
Operator : brittank
Sample : JD20919-3 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:28:14 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	115173	500.00	ug/L	-0.01
5) pentafluorobenzene	8.446	168	257395	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	335279	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	351338	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	260309	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	131160	51.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.64%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	132798	51.64	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.28%			
75) toluene-d8 (s)	10.909	98	404990	50.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.92%			
98) 4-bromofluorobenzene (s)	13.770	95	192546	49.90	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.80%			

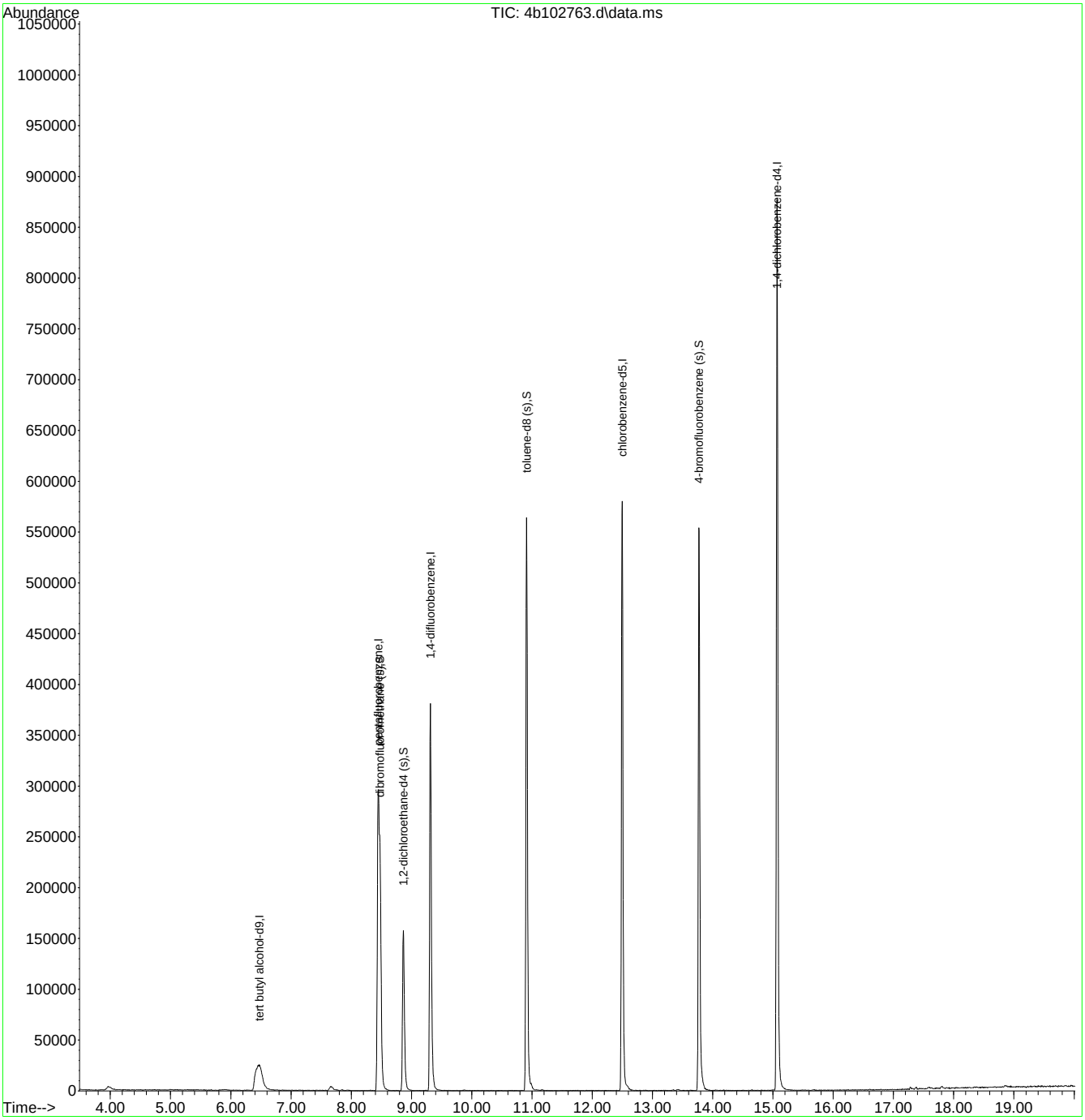
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102763.d
Acq On : 4 Mar 2021 3:38 pm
Operator : brittank
Sample : JD20919-3 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:28:14 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



M4B4435.M Thu Mar 04 23:45:03 2021 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102759.d
Acq On : 4 Mar 2021 1:46 pm
Operator : brittank
Sample : JD20919-4 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:26:37 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

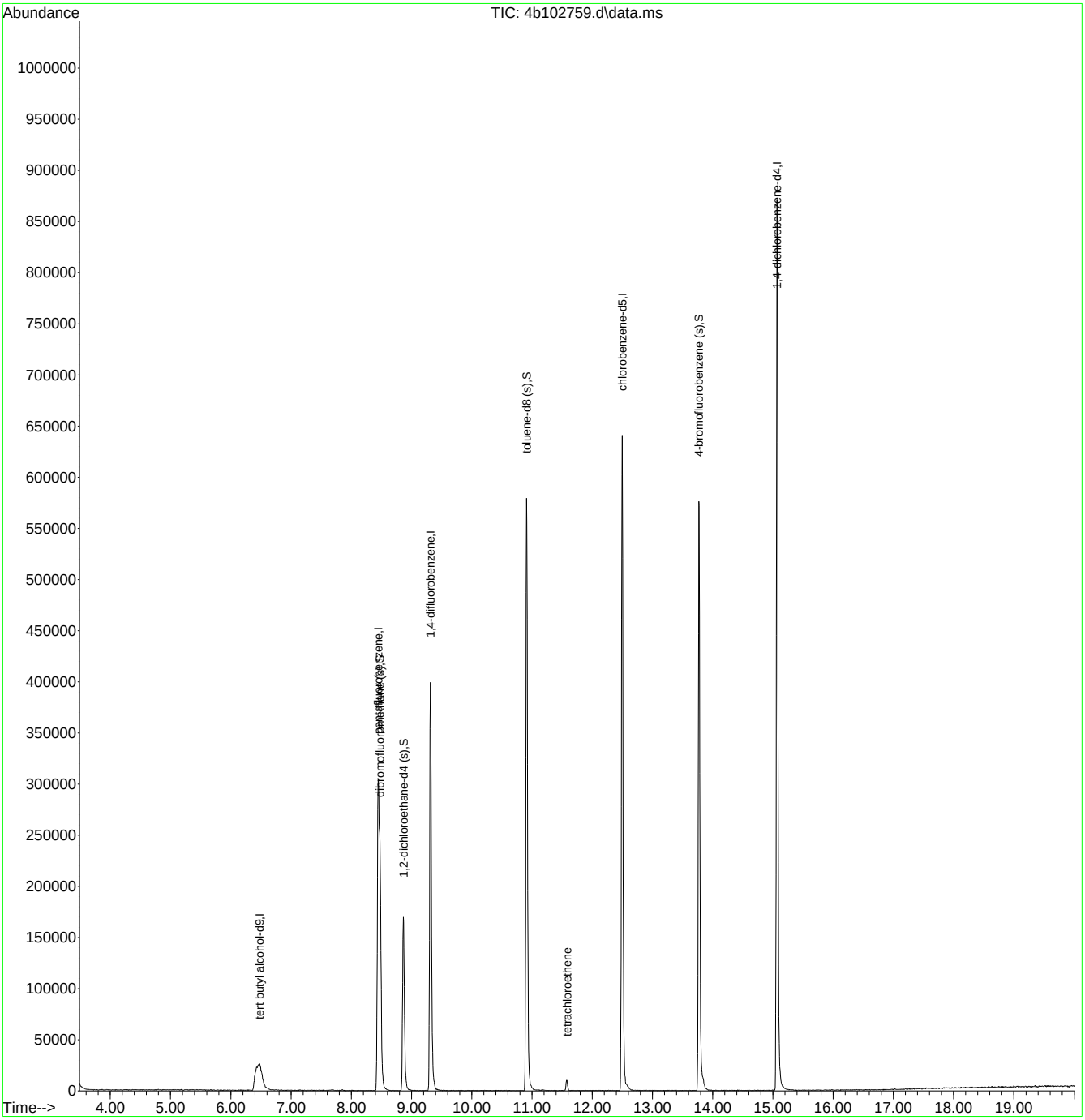
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.479	65	117773	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	259566	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	361920	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	376846	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	260051	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	129089	50.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.18%			
54) 1,2-dichloroethane-d4 (s)	8.869	65	137956	49.70	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.40%			
75) toluene-d8 (s)	10.909	98	424564	49.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.64%			
98) 4-bromofluorobenzene (s)	13.770	95	203039	52.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.36%			
Target Compounds						Qvalue
80) tetrachloroethene	11.584	164	2794	1.24	ug/L	90

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

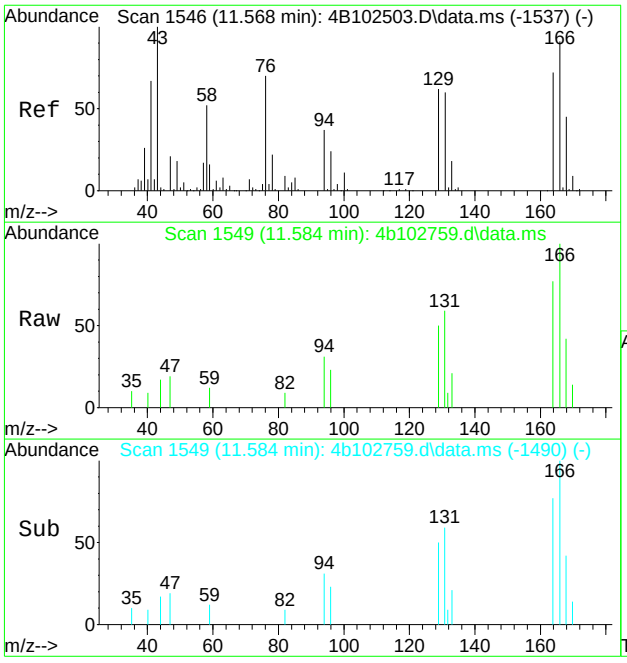
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102759.d
Acq On : 4 Mar 2021 1:46 pm
Operator : brittank
Sample : JD20919-4 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:26:37 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



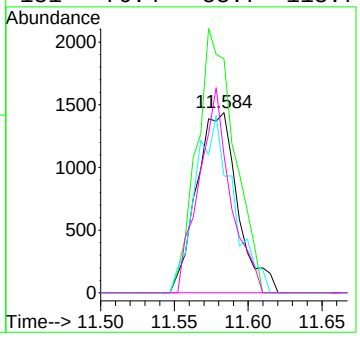
M4B4435.M Thu Mar 04 23:44:59 2021 Page: 2



#80
tetrachloroethene
Concen: 1.24 ug/L
RT: 11.584 min Scan# 1549
Delta R.T. 0.010 min
Lab File: 4b102759.d
Acq: 4 Mar 2021 1:46 pm

Tgt Ion:164 Resp: 2794

Ion	Ratio	Lower	Upper
164	100		
166	129.7	96.6	156.6
129	64.7	56.4	116.4
131	76.4	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102766.d
Acq On : 4 Mar 2021 5:03 pm
Operator : brittank
Sample : JD20919-5 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:30:25 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

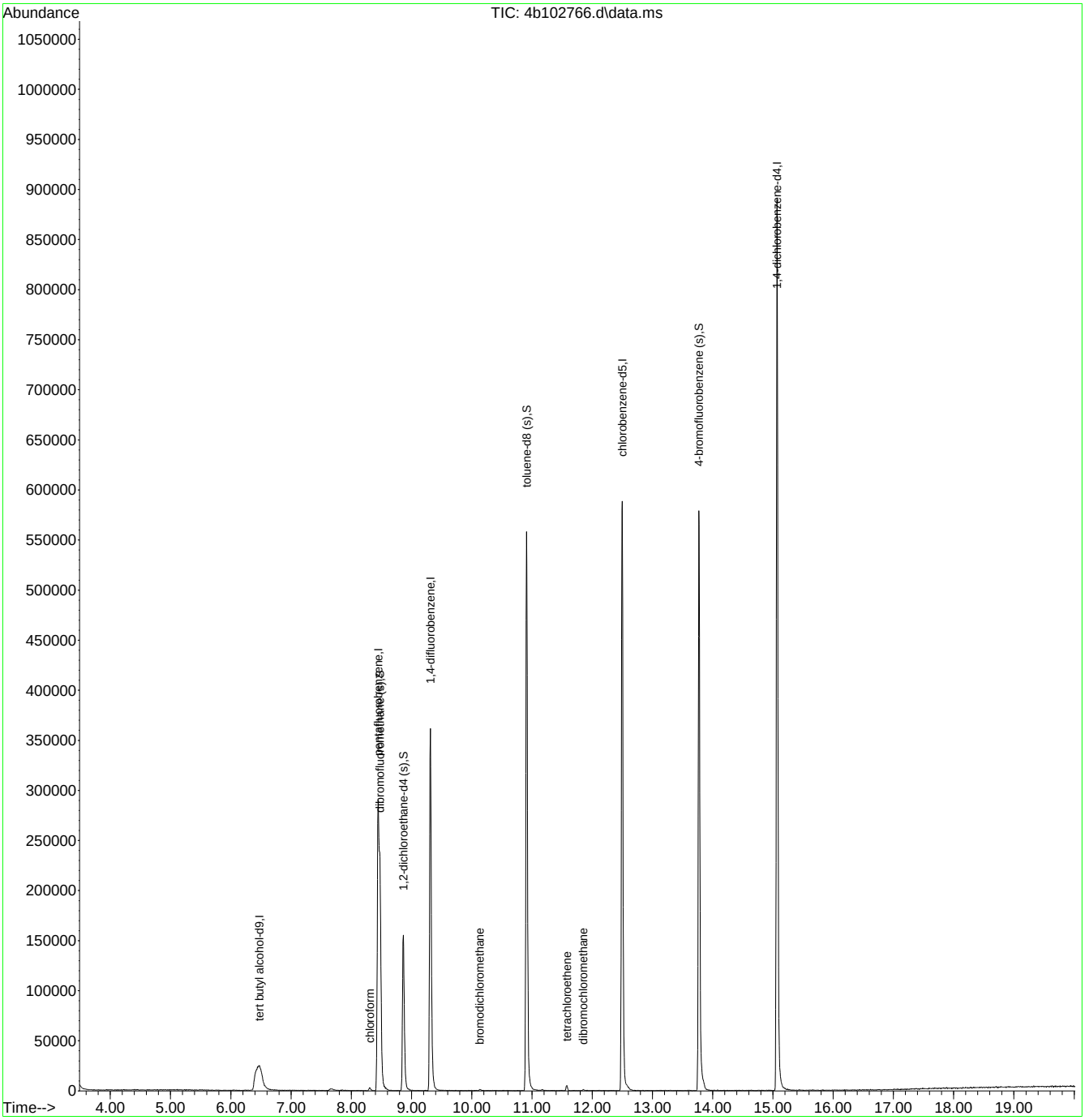
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	116468	500.00	ug/L	-0.01
5) pentafluorobenzene	8.446	168	243369	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	321284	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	355475	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	261886	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	124189	51.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.80%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	129490	52.55	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.10%			
75) toluene-d8 (s)	10.909	98	393489	48.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.92%			
98) 4-bromofluorobenzene (s)	13.770	95	201327	51.87	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.74%			
Target Compounds						Qvalue
43) chloroform	8.310	83	2668	0.61	ug/L	88
68) bromodichloromethane	10.130	83	1223	0.41	ug/L	85
80) tetrachloroethene	11.579	164	1332	0.63	ug/L	80
84) dibromochloromethane	11.851	129	757	0.29	ug/L	91

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

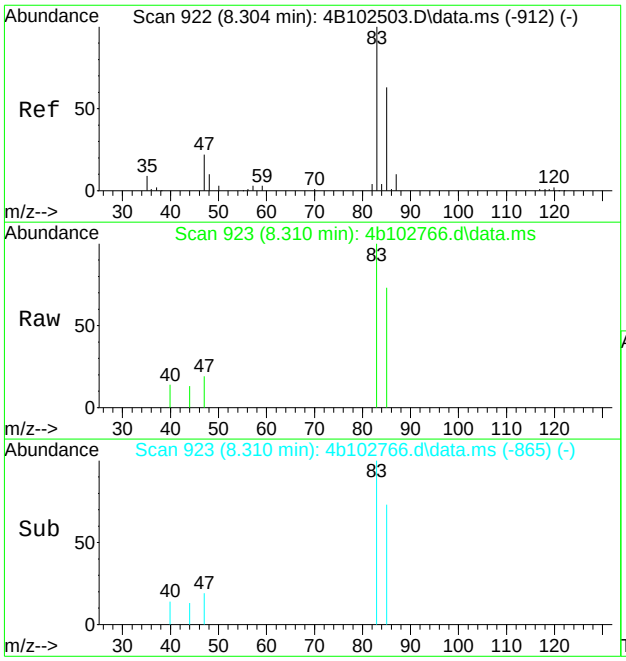
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102766.d
Acq On : 4 Mar 2021 5:03 pm
Operator : brittank
Sample : JD20919-5 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:30:25 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



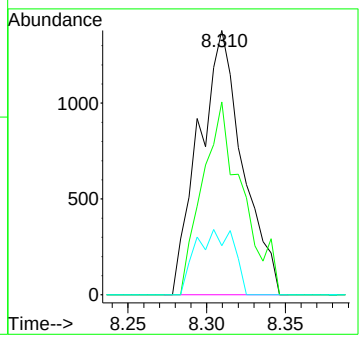
M4B4435.M Thu Mar 04 23:45:15 2021 Page: 2

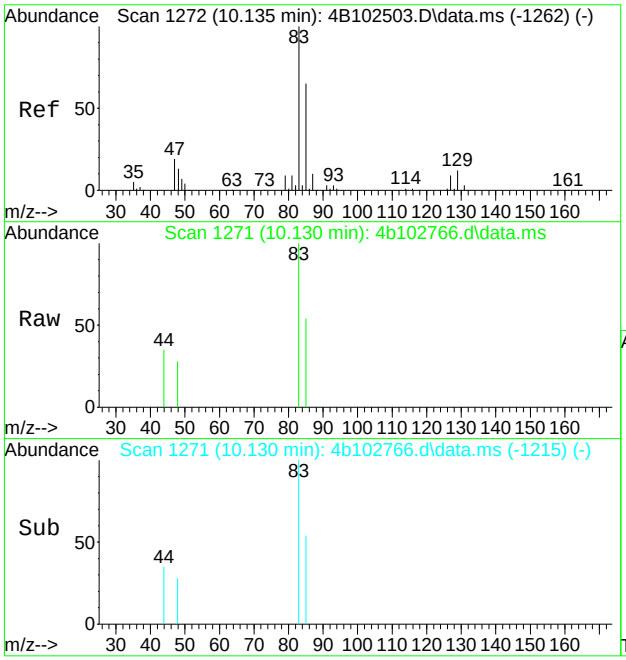


#43
chloroform
Concen: 0.61 ug/L
RT: 8.310 min Scan# 923
Delta R.T. 0.006 min
Lab File: 4b102766.d
Acq: 4 Mar 2021 5:03 pm

Tgt Ion: 83 Resp: 2668

Ion	Ratio	Lower	Upper
83	100		
85	72.9	33.3	93.3
47	18.6	0.0	54.3

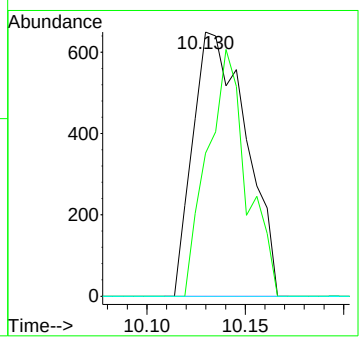


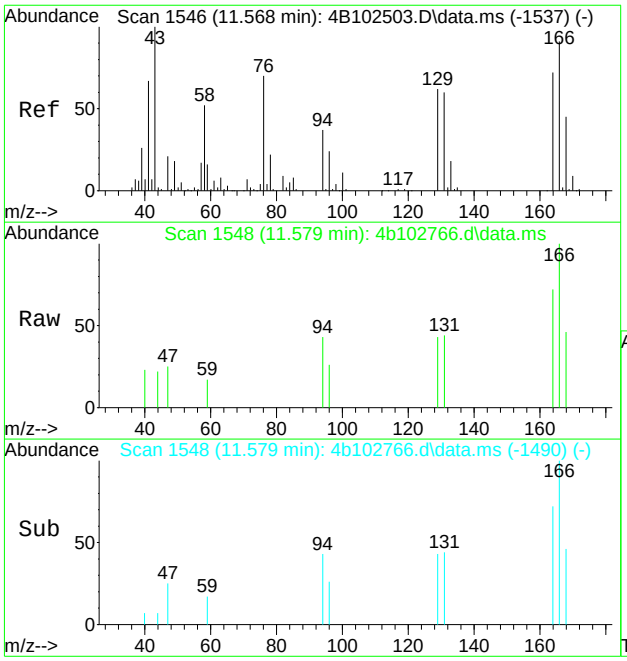


#68
bromodichloromethane
Concen: 0.41 ug/L
RT: 10.130 min Scan# 1271
Delta R.T. -0.005 min
Lab File: 4b102766.d
Acq: 4 Mar 2021 5:03 pm

Tgt Ion: 83 Resp: 1223

Ion	Ratio	Lower	Upper
83	100		
85	54.2	34.8	94.8
127	0.0	0.0	39.3

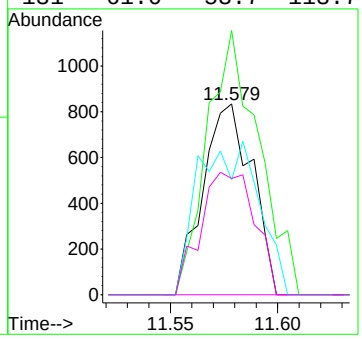


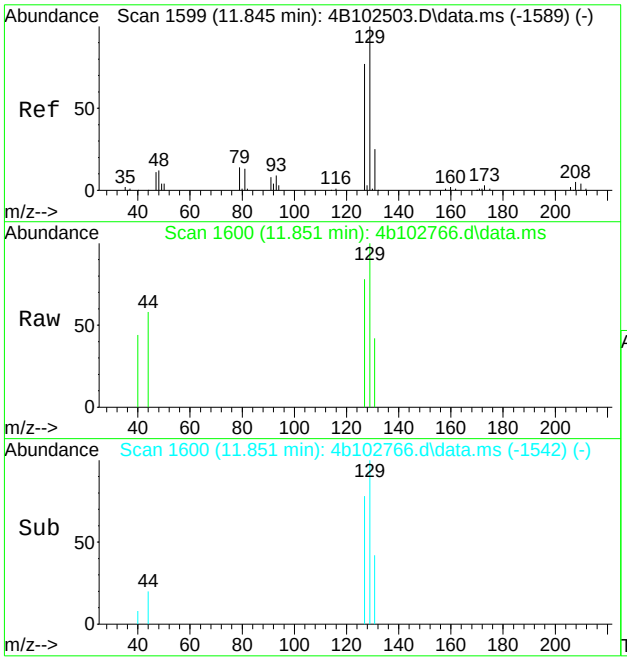


#80
tetrachloroethene
Concen: 0.63 ug/L
RT: 11.579 min Scan# 1548
Delta R.T. 0.005 min
Lab File: 4b102766.d
Acq: 4 Mar 2021 5:03 pm

Tgt Ion:164 Resp: 1332

Ion	Ratio	Lower	Upper
164	100		
166	138.6	96.6	156.6
129	60.2	56.4	116.4
131	61.0	53.7	113.7

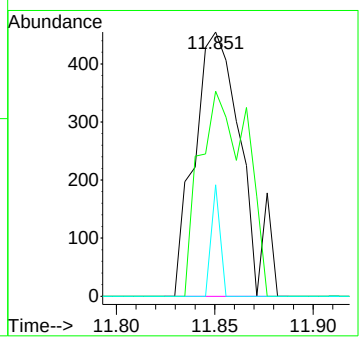




#84
dibromochloromethane
Concen: 0.29 ug/L
RT: 11.851 min Scan# 1600
Delta R.T. 0.005 min
Lab File: 4b102766.d
Acq: 4 Mar 2021 5:03 pm

Tgt Ion:129 Resp: 757

Ion	Ratio	Lower	Upper
129	100		
127	77.6	47.1	107.1
131	42.2	0.0	54.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102767.d
Acq On : 4 Mar 2021 5:31 pm
Operator : brittank
Sample : JD20919-6 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:37:08 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

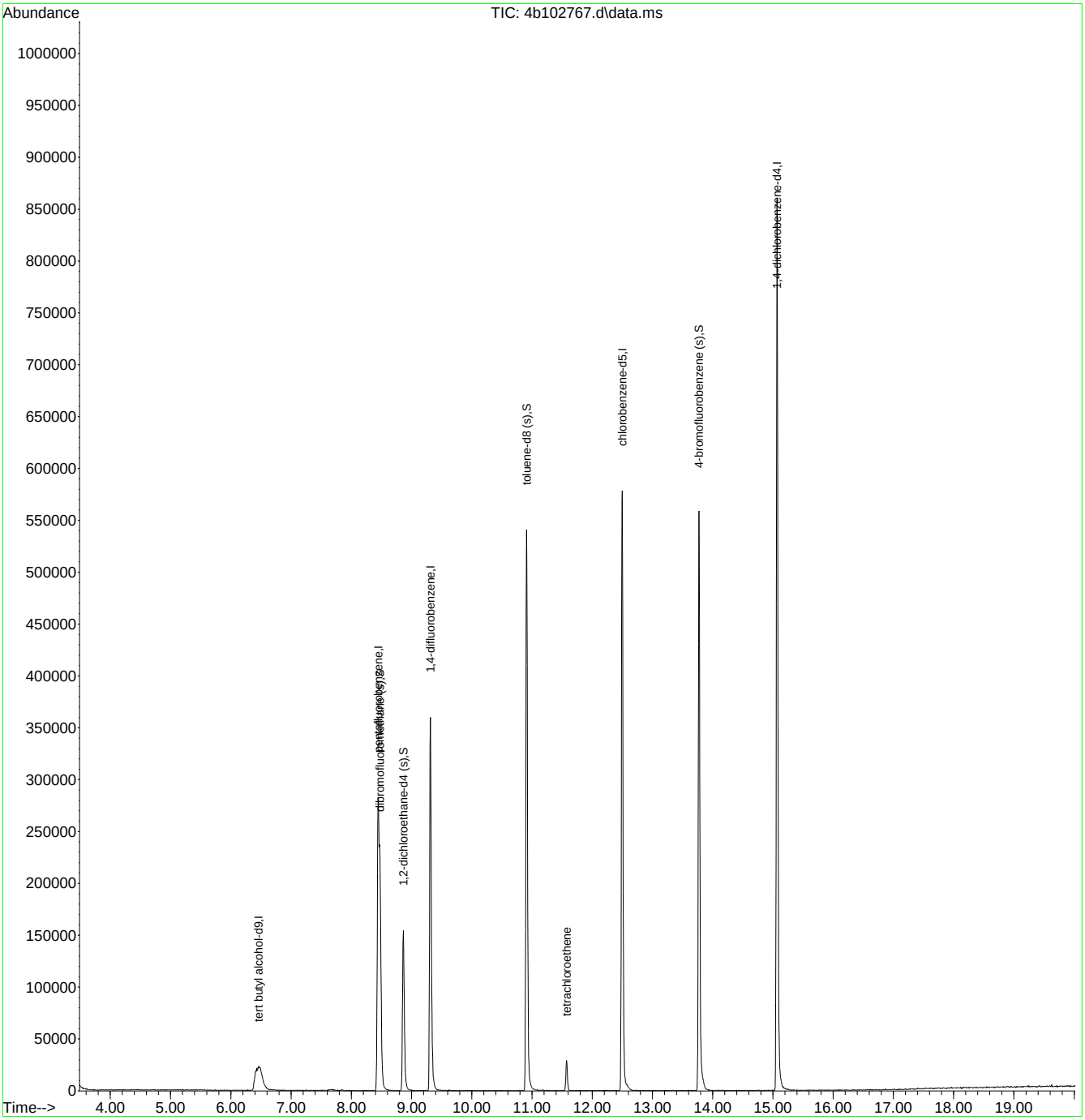
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.463	65	108277	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	236531	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	317374	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	346625	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	256574	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	121485	51.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.46%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	126795	52.09	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.18%			
75) toluene-d8 (s)	10.909	98	388930	49.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.24%			
98) 4-bromofluorobenzene (s)	13.770	95	197240	51.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.72%			
Target Compounds						Qvalue
80) tetrachloroethene	11.573	164	7184	3.48	ug/L	92

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

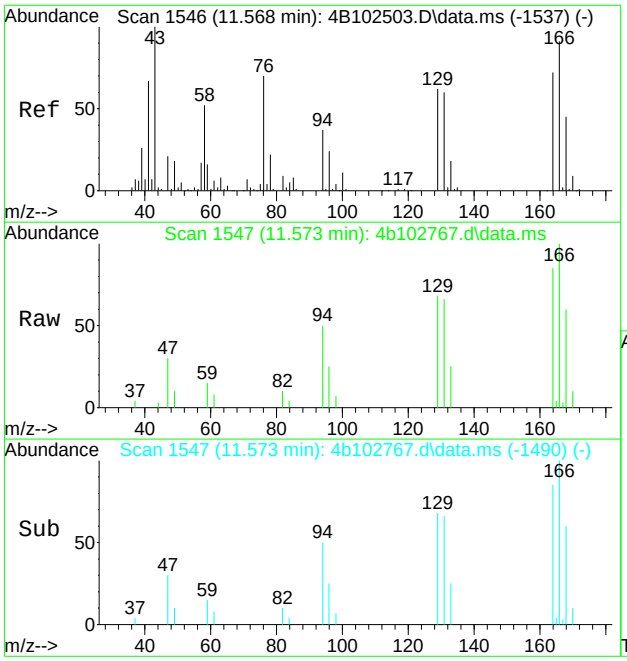
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102767.d
Acq On : 4 Mar 2021 5:31 pm
Operator : brittank
Sample : JD20919-6 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:37:08 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



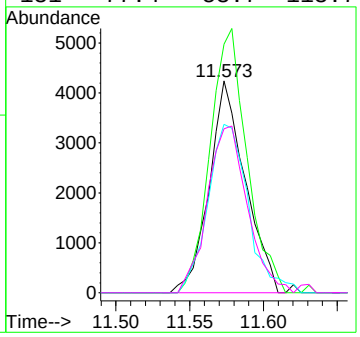
M4B4435.M Thu Mar 04 23:45:20 2021 Page: 2



#80
tetrachloroethene
Concen: 3.48 ug/L
RT: 11.573 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 4b102767.d
Acq: 4 Mar 2021 5:31 pm

Tgt Ion:164 Resp: 7184

Ion	Ratio	Lower	Upper
164	100		
166	117.4	96.6	156.6
129	79.5	56.4	116.4
131	77.4	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102768.d
Acq On : 4 Mar 2021 5:59 pm
Operator : brittank
Sample : JD20919-7 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:37:54 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

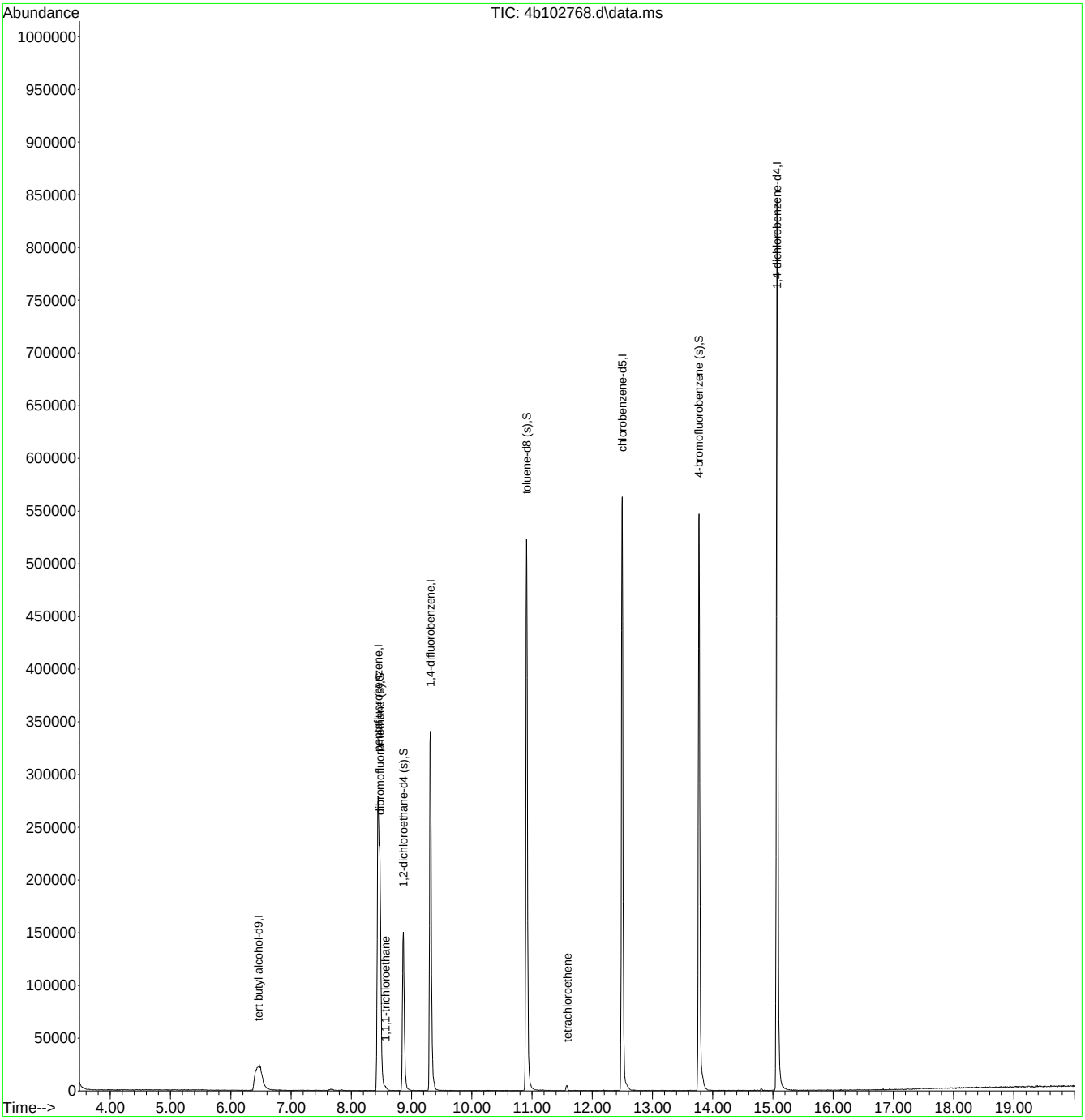
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.463	65	111034	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	231955	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	309252	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	340538	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	250739	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	117327	50.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.90%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	124563	52.52	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.04%			
75) toluene-d8 (s)	10.909	98	376150	48.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.70%			
98) 4-bromofluorobenzene (s)	13.770	95	189912	51.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.20%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.566	97	2584	0.56	ug/L	85
80) tetrachloroethene	11.589	164	1489	0.73	ug/L #	65

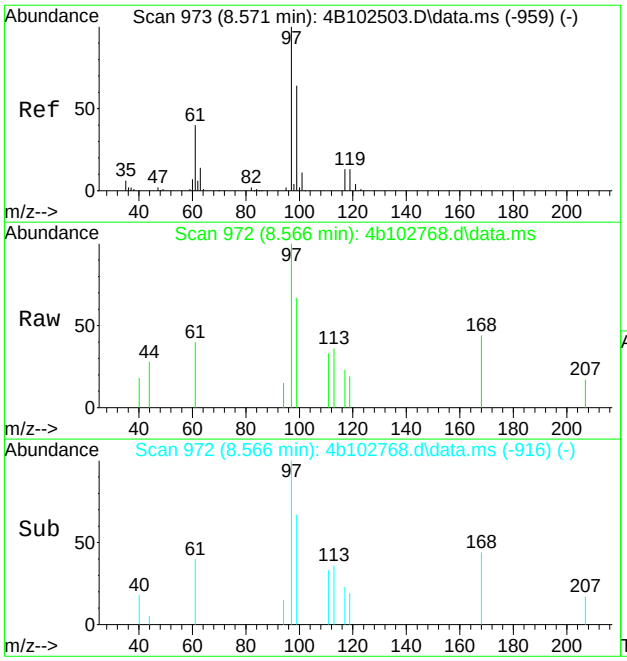
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102768.d
Acq On : 4 Mar 2021 5:59 pm
Operator : brittank
Sample : JD20919-7 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:37:54 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

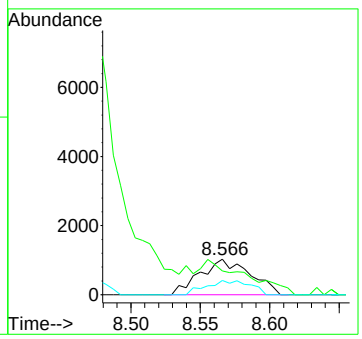


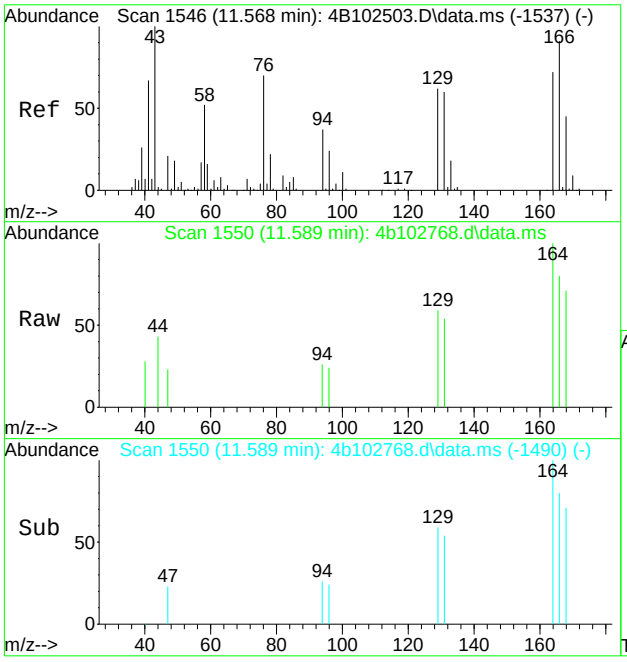


#46
1,1,1-trichloroethane
Concen: 0.56 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102768.d
Acq: 4 Mar 2021 5:59 pm

Tgt Ion: 97 Resp: 2584

Ion	Ratio	Lower	Upper
97	100		
99	47.7	36.9	96.9
61	40.1	9.7	69.7

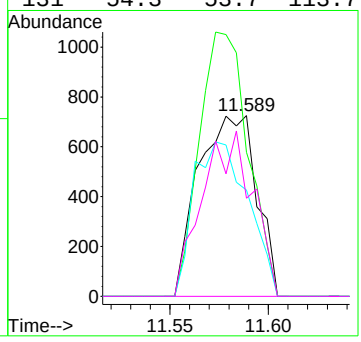




#80
tetrachloroethene
Concen: 0.73 ug/L
RT: 11.589 min Scan# 1550
Delta R.T. 0.016 min
Lab File: 4b102768.d
Acq: 4 Mar 2021 5:59 pm

Tgt Ion:164 Resp: 1489

Ion	Ratio	Lower	Upper
164	100		
166	79.7	96.6	156.6#
129	58.8	56.4	116.4
131	54.3	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102769.d
Acq On : 4 Mar 2021 6:27 pm
Operator : brittank
Sample : JD20919-8 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:39:05 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

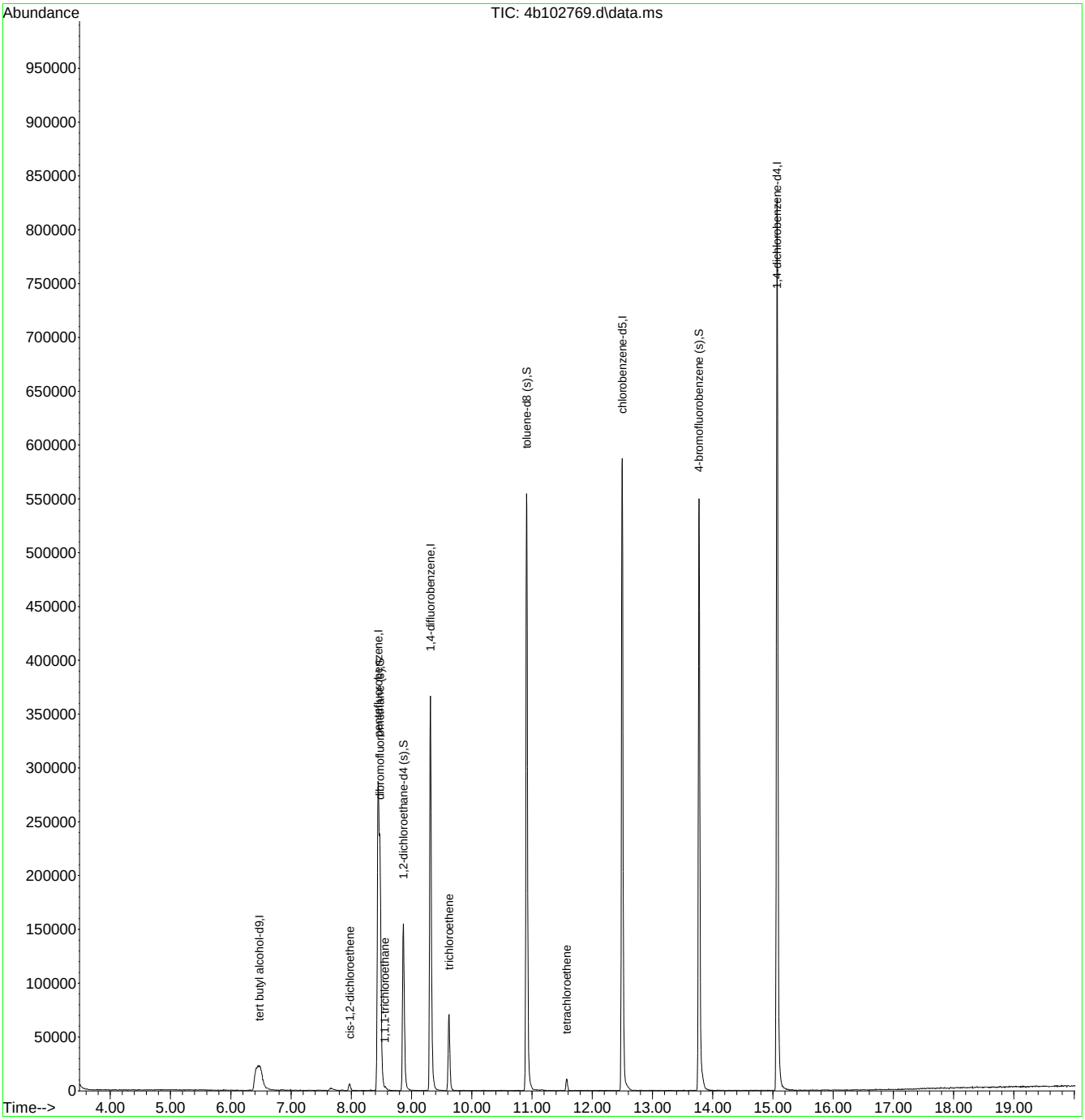
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	109491	500.00	ug/L	-0.01
5) pentafluorobenzene	8.445	168	239356	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	318998	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	357672	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	247139	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	121585	51.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.32%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	128878	52.68	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.36%			
75) toluene-d8 (s)	10.909	98	399513	48.90	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.80%			
98) 4-bromofluorobenzene (s)	13.770	95	190289	51.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.90%			
Target Compounds						Qvalue
37) cis-1,2-dichloroethene	7.975	96	3655	1.60	ug/L	79
46) 1,1,1-trichloroethane	8.555	97	1692	0.35	ug/L #	59
62) trichloroethene	9.622	95	25424	12.26	ug/L	92
80) tetrachloroethene	11.573	164	3085	1.45	ug/L	92

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

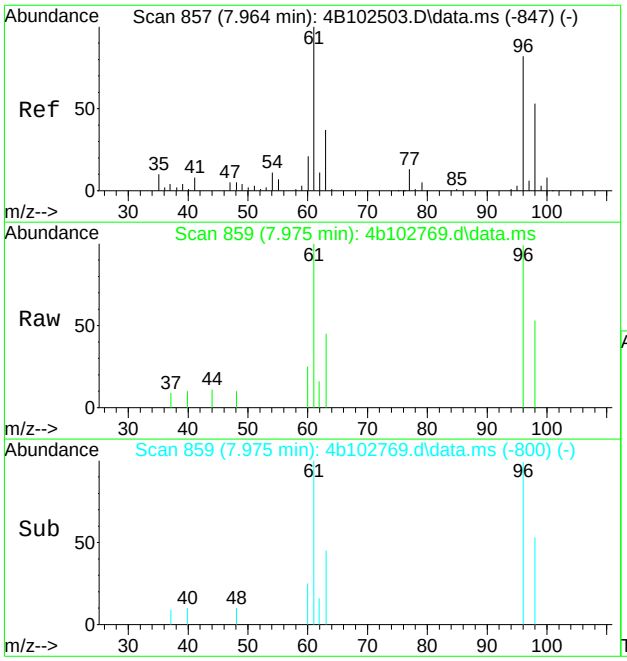
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102769.d
Acq On : 4 Mar 2021 6:27 pm
Operator : brittank
Sample : JD20919-8 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:39:05 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



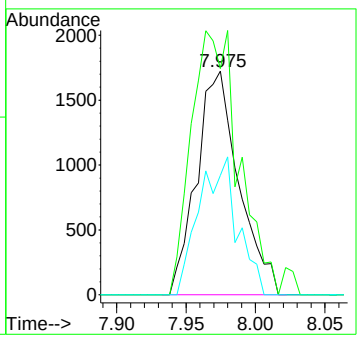
M4B4435.M Thu Mar 04 23:45:28 2021 Page: 2

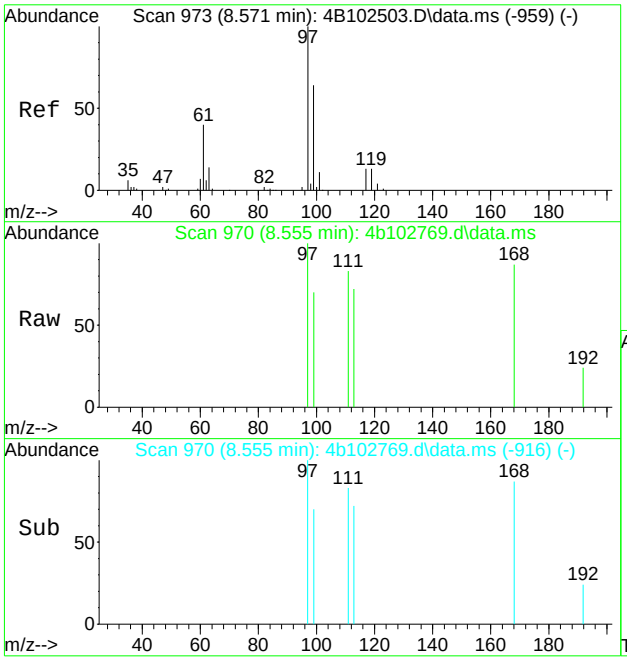


#37
cis-1,2-dichloroethene
Concen: 1.60 ug/L
RT: 7.975 min Scan# 859
Delta R.T. 0.010 min
Lab File: 4b102769.d
Acq: 4 Mar 2021 6:27 pm

Tgt Ion: 96 Resp: 3655

Ion	Ratio	Lower	Upper
96	100		
61	101.2	100.5	160.5
98	53.4	34.4	94.4

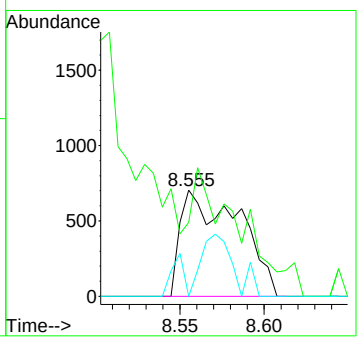




#46
1,1,1-trichloroethane
Concen: 0.35 ug/L
RT: 8.555 min Scan# 970
Delta R.T. -0.016 min
Lab File: 4b102769.d
Acq: 4 Mar 2021 6:27 pm

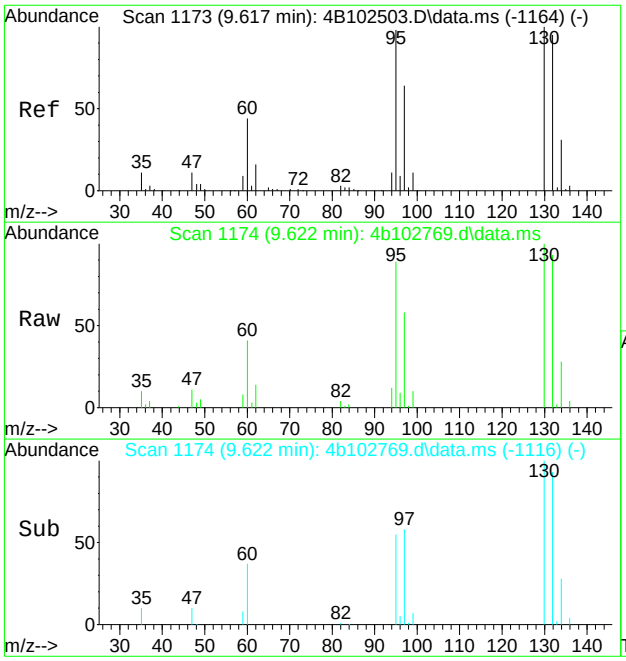
Tgt Ion: 97 Resp: 1692

Ion	Ratio	Lower	Upper
97	100		
99	45.2	36.9	96.9
61	0.0	9.7	69.7#



7.1.8

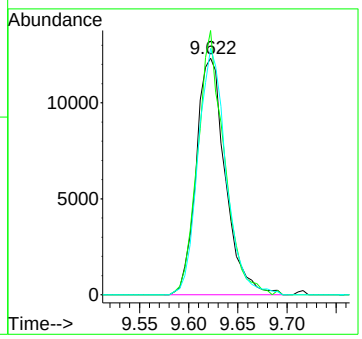
7

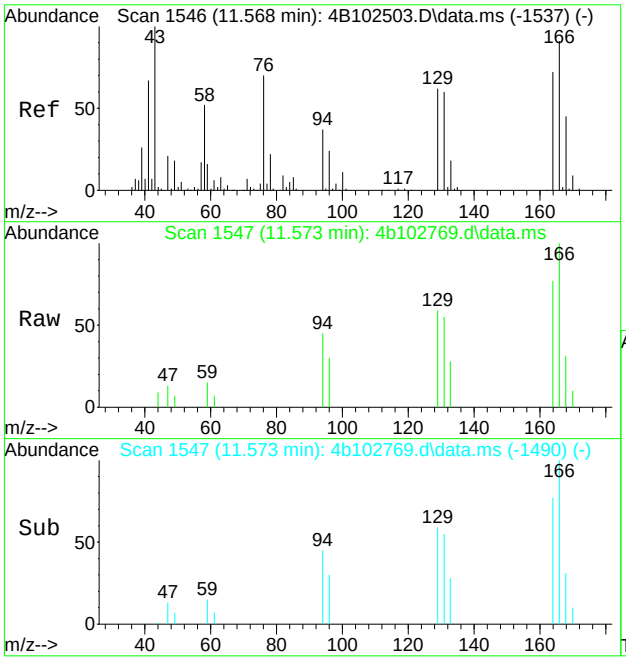


#62
trichloroethene
Concen: 12.26 ug/L
RT: 9.622 min Scan# 1174
Delta R.T. 0.005 min
Lab File: 4b102769.d
Acq: 4 Mar 2021 6:27 pm

Tgt Ion: 95 Resp: 25424

Ion	Ratio	Lower	Upper
95	100		
130	111.8	72.4	132.4
132	104.1	67.1	127.1

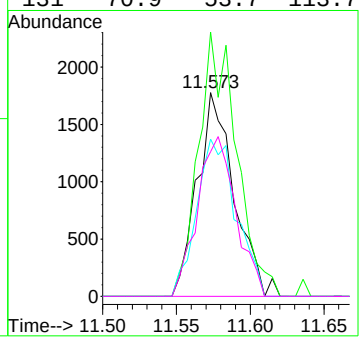




#80
tetrachloroethene
Concen: 1.45 ug/L
RT: 11.573 min Scan# 1547
Delta R.T. -0.000 min
Lab File: 4b102769.d
Acq: 4 Mar 2021 6:27 pm

Tgt Ion:164 Resp: 3085

Ion	Ratio	Lower	Upper
164	100		
166	129.7	96.6	156.6
129	77.1	56.4	116.4
131	70.9	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102770.d
Acq On : 4 Mar 2021 6:56 pm
Operator : brittank
Sample : JD20919-9 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:39:32 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	113795	500.00	ug/L	-0.02
5) pentafluorobenzene	8.445	168	234990	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	318719	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	342540	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	254586	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	123385	52.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.76%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	129049	52.79	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.58%			
75) toluene-d8 (s)	10.909	98	385733	49.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.60%			
98) 4-bromofluorobenzene (s)	13.775	95	188861	50.05	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.10%			

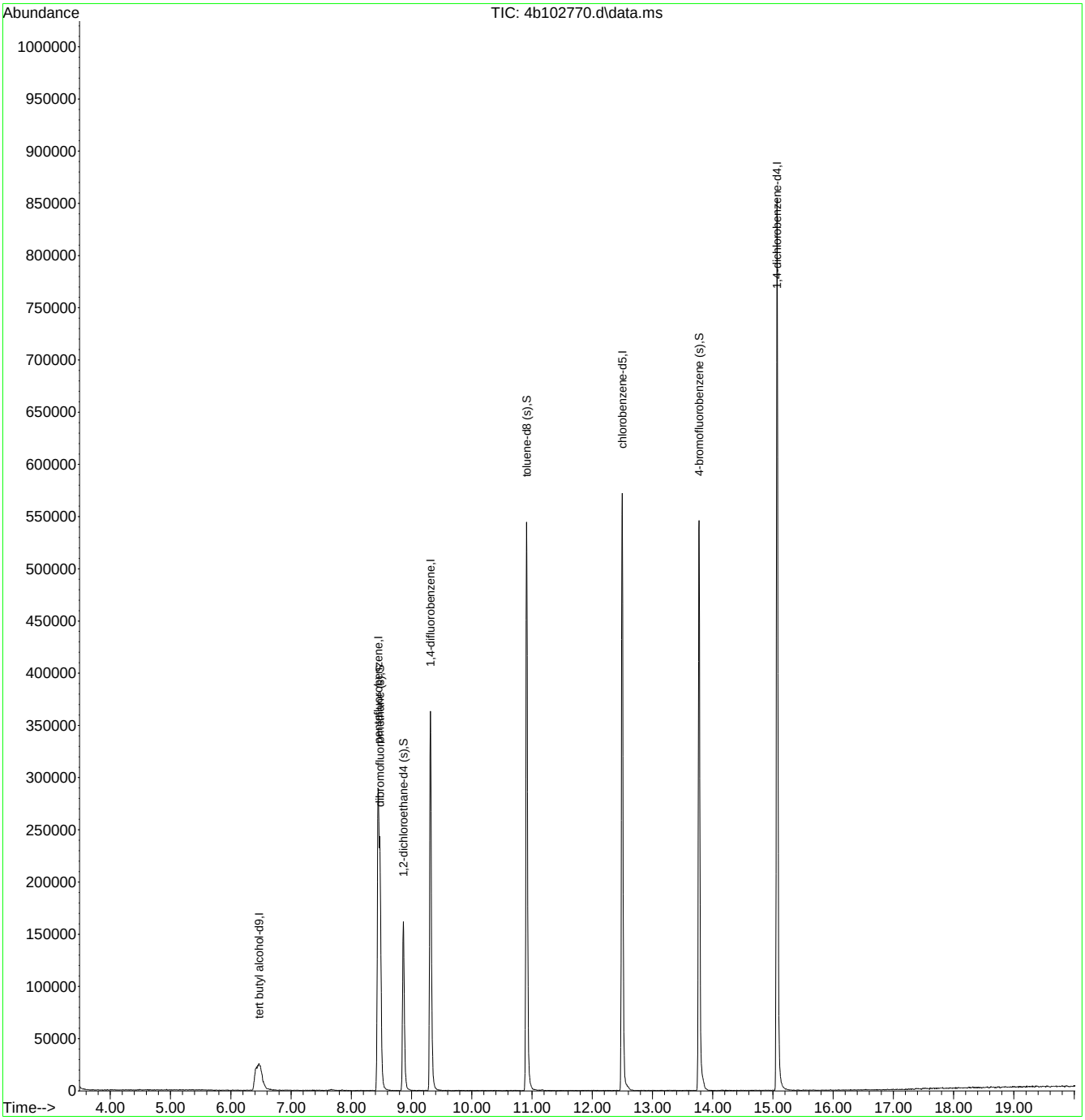
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102770.d
Acq On : 4 Mar 2021 6:56 pm
Operator : brittank
Sample : JD20919-9 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:39:32 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



M4B4435.M Thu Mar 04 23:45:32 2021 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102771.d
Acq On : 4 Mar 2021 7:24 pm
Operator : brittank
Sample : JD20919-10 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:40:04 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

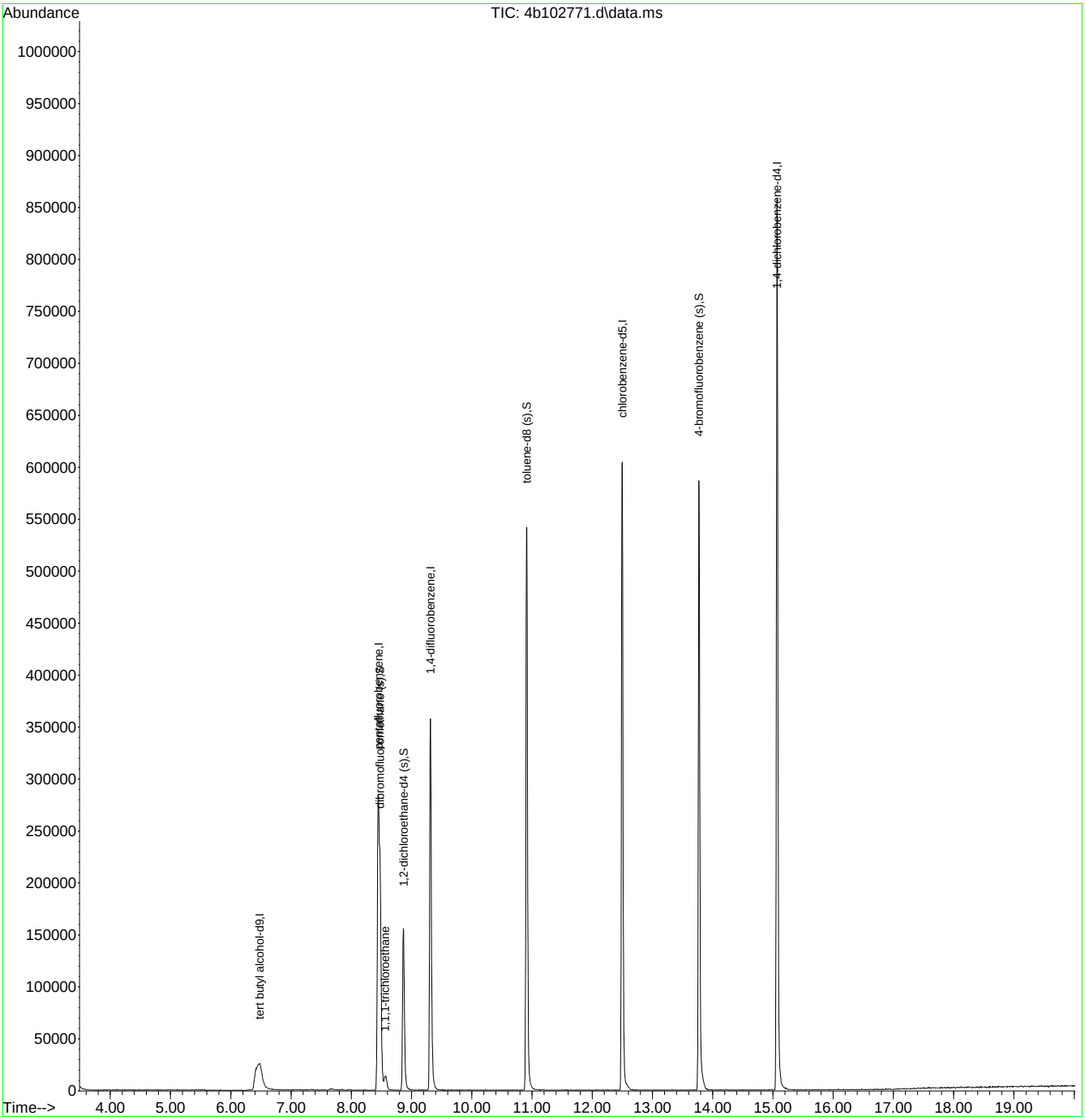
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.479	65	116700	500.00	ug/L	0.00
5) pentafluorobenzene	8.451	168	238474	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	318486	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	366546	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	250169	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	122164	51.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.20%			
54) 1,2-dichloroethane-d4 (s)	8.869	65	130283	53.34	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.68%			
75) toluene-d8 (s)	10.909	98	395801	47.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.54%			
98) 4-bromofluorobenzene (s)	13.770	95	202292	54.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.10%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.561	97	12343	2.60	ug/L	96

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

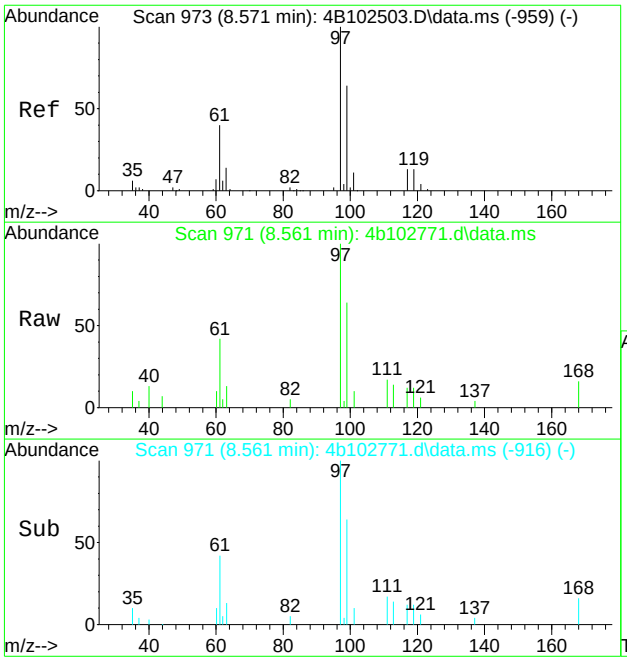
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102771.d
Acq On : 4 Mar 2021 7:24 pm
Operator : brittank
Sample : JD20919-10 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:40:04 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



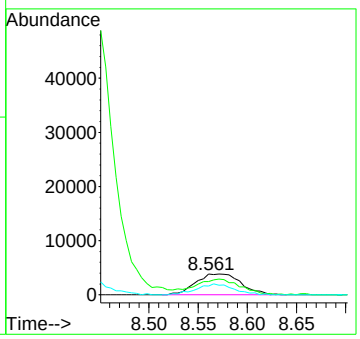
M4B4435.M Thu Mar 04 23:45:36 2021 Page: 2



#46
1,1,1-trichloroethane
Concen: 2.60 ug/L
RT: 8.561 min Scan# 971
Delta R.T. -0.011 min
Lab File: 4b102771.d
Acq: 4 Mar 2021 7:24 pm

Tgt Ion: 97 Resp: 12343

Ion	Ratio	Lower	Upper
97	100		
99	64.1	36.9	96.9
61	42.2	9.7	69.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102772.d
Acq On : 4 Mar 2021 7:52 pm
Operator : brittank
Sample : JD20919-11 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:40:28 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

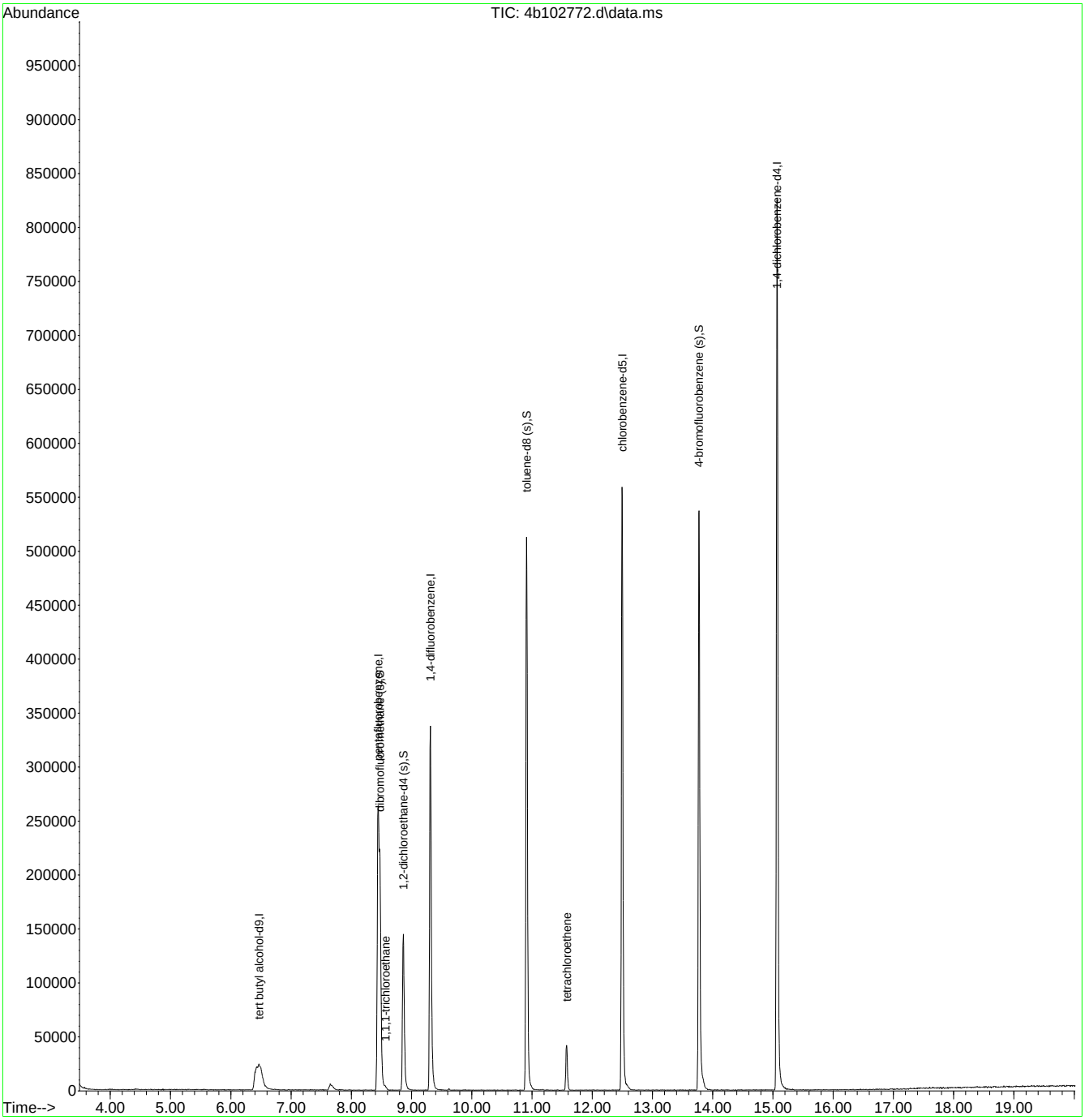
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.469	65	112759	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	220028	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	299189	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	334834	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	245736	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	113094	51.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.54%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	120040	52.31	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.62%			
75) toluene-d8 (s)	10.909	98	368018	48.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.22%			
98) 4-bromofluorobenzene (s)	13.770	95	188744	51.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.64%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.566	97	2470	0.56	ug/L	88
80) tetrachloroethene	11.579	164	11162	5.59	ug/L	93

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

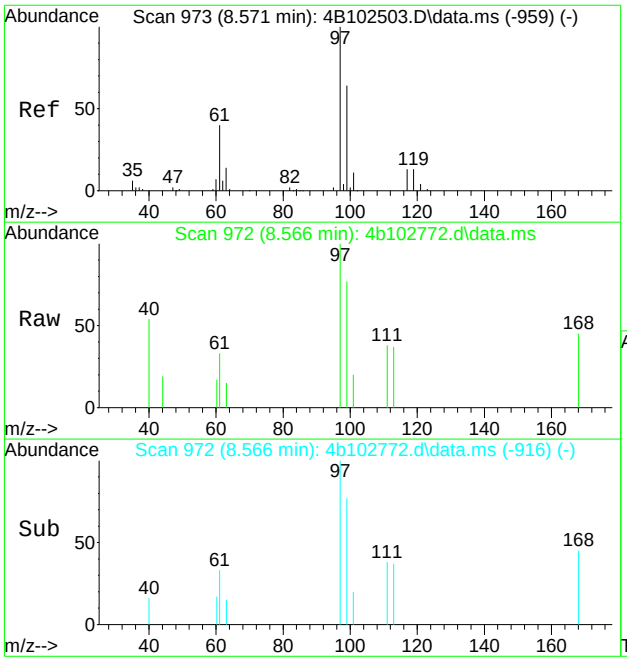
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102772.d
Acq On : 4 Mar 2021 7:52 pm
Operator : brittank
Sample : JD20919-11 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:40:28 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



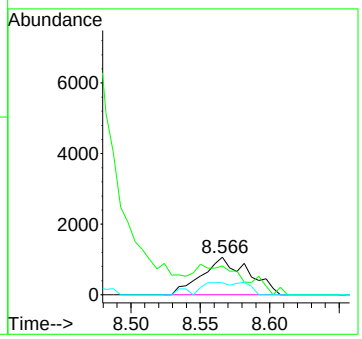
M4B4435.M Thu Mar 04 23:45:41 2021 Page: 2

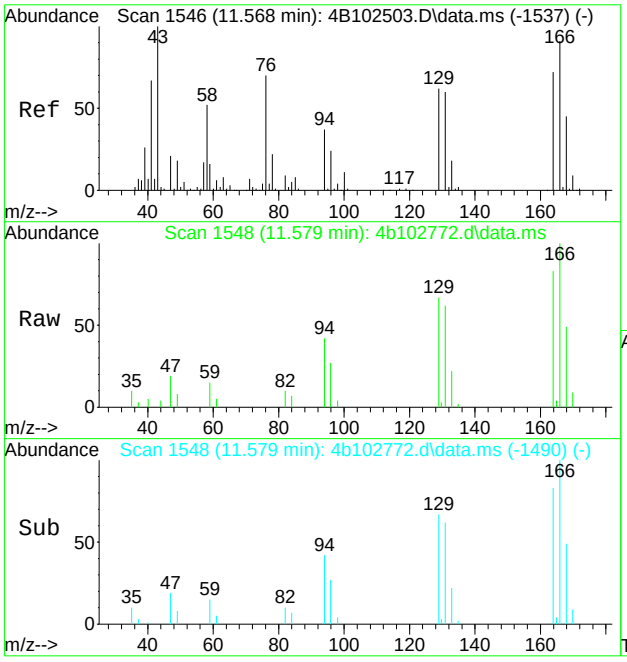


#46
1,1,1-trichloroethane
Concen: 0.56 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102772.d
Acq: 4 Mar 2021 7:52 pm

Tgt Ion: 97 Resp: 2470

Ion	Ratio	Lower	Upper
97	100		
99	76.8	36.9	96.9
61	32.6	9.7	69.7

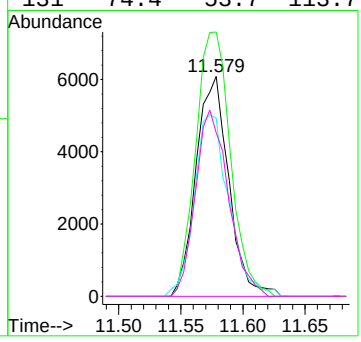




#80
tetrachloroethene
Concen: 5.59 ug/L
RT: 11.579 min Scan# 1548
Delta R.T. 0.005 min
Lab File: 4b102772.d
Acq: 4 Mar 2021 7:52 pm

Tgt Ion:164 Resp: 11162

Ion	Ratio	Lower	Upper
164	100		
166	120.2	96.6	156.6
129	81.1	56.4	116.4
131	74.4	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102773.d
Acq On : 4 Mar 2021 8:20 pm
Operator : brittank
Sample : JD20919-12 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:41:43 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

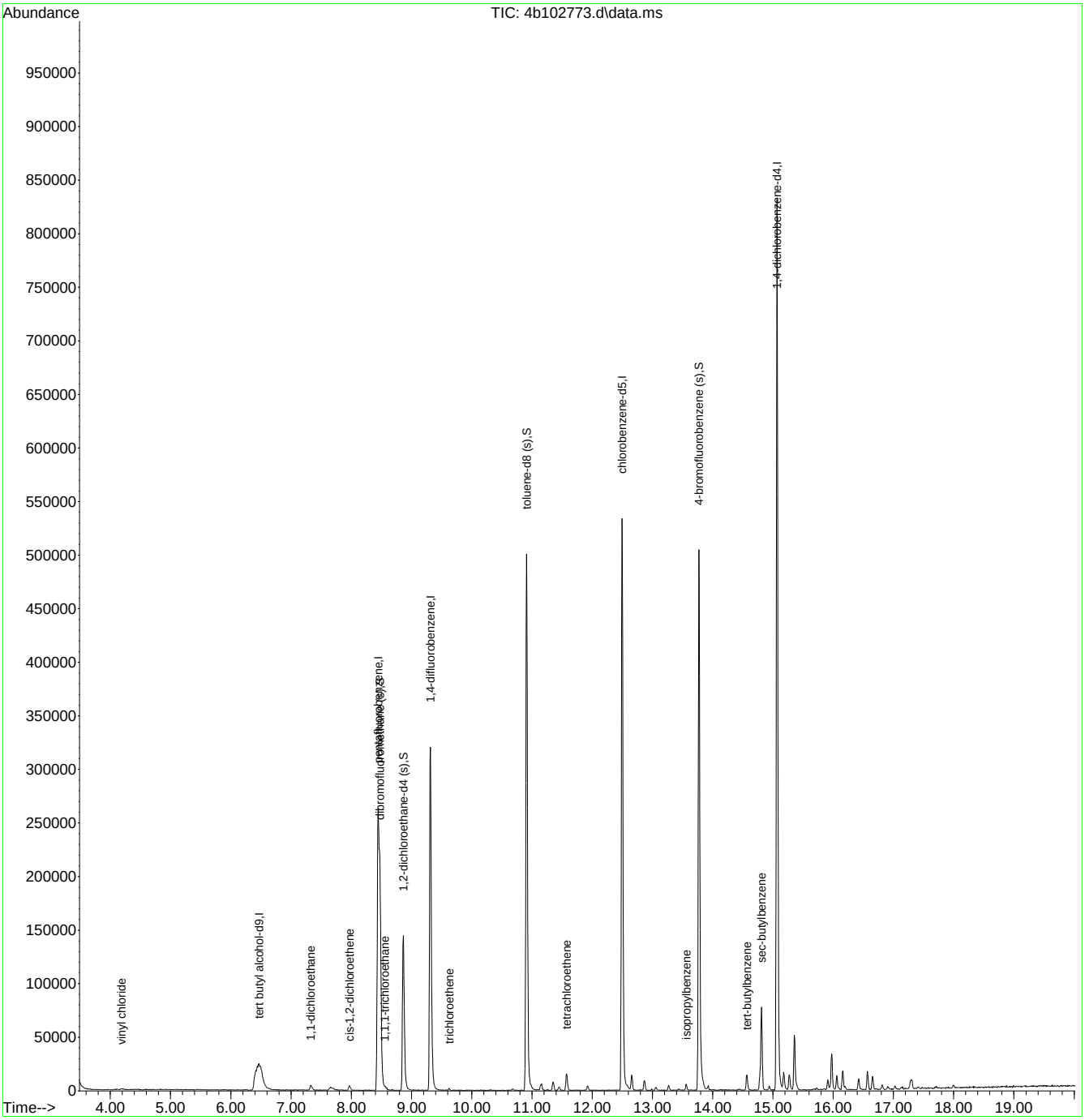
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.469	65	115262	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	219990	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	290661	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	319701	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	236597	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	114296	52.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.66%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	121066	54.31	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 108.62%			
75) toluene-d8 (s)	10.909	98	361071	49.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.88%			
98) 4-bromofluorobenzene (s)	13.770	95	176761	50.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.80%			
Target Compounds						Qvalue
9) vinyl chloride	4.188	62	1612	0.41	ug/L	87
30) 1,1-dichloroethane	7.326	63	6385	1.77	ug/L	92
37) cis-1,2-dichloroethene	7.970	96	2484	1.18	ug/L #	70
46) 1,1,1-trichloroethane	8.555	97	1957	0.45	ug/L	90
62) trichloroethene	9.628	95	637	0.34	ug/L #	64
80) tetrachloroethene	11.573	164	4569	2.40	ug/L	90
94) isopropylbenzene	13.561	105	4461	0.39	ug/L	83
107) tert-butylbenzene	14.570	119	7876	0.94	ug/L	97
109) sec-butylbenzene	14.811	105	55824	4.06	ug/L	97

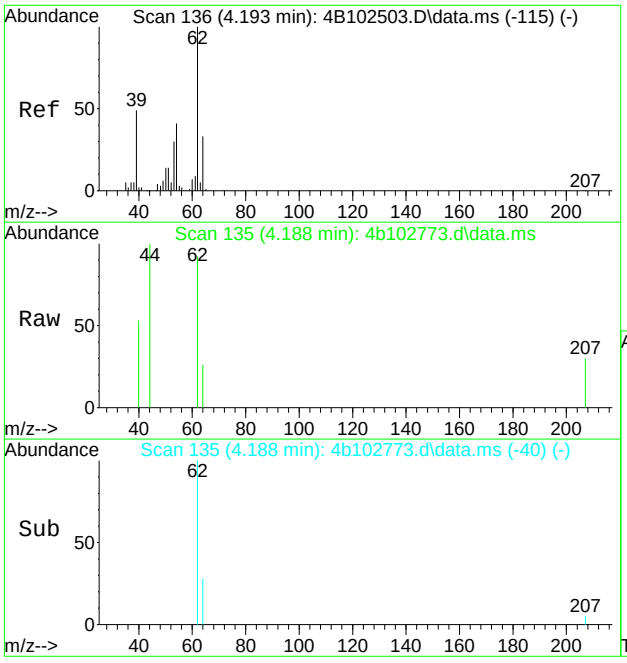
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102773.d
Acq On : 4 Mar 2021 8:20 pm
Operator : brittank
Sample : JD20919-12 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:41:43 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

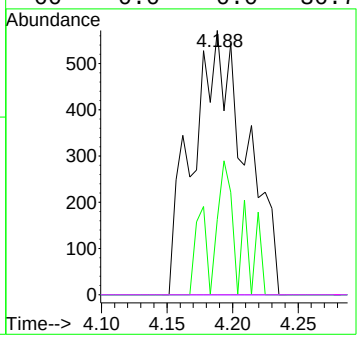


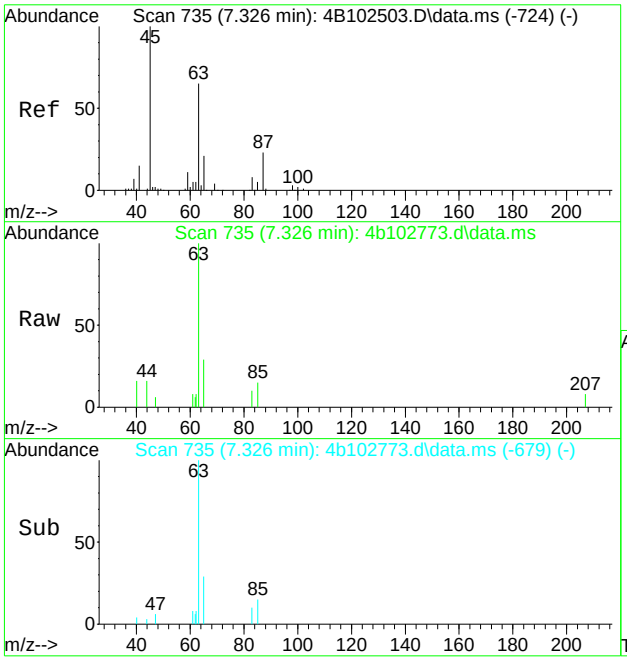


#9
vinyl chloride
Concen: 0.41 ug/L
RT: 4.188 min Scan# 135
Delta R.T. -0.005 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion: 62 Resp: 1612

Ion	Ratio	Lower	Upper
62	100		
64	28.5	2.9	62.9
61	0.0	0.0	39.2
60	0.0	0.0	36.7

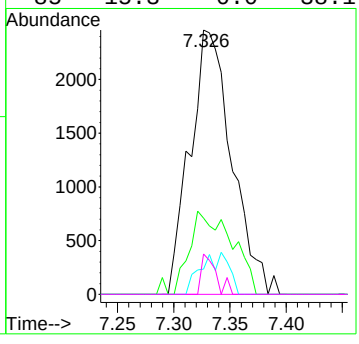


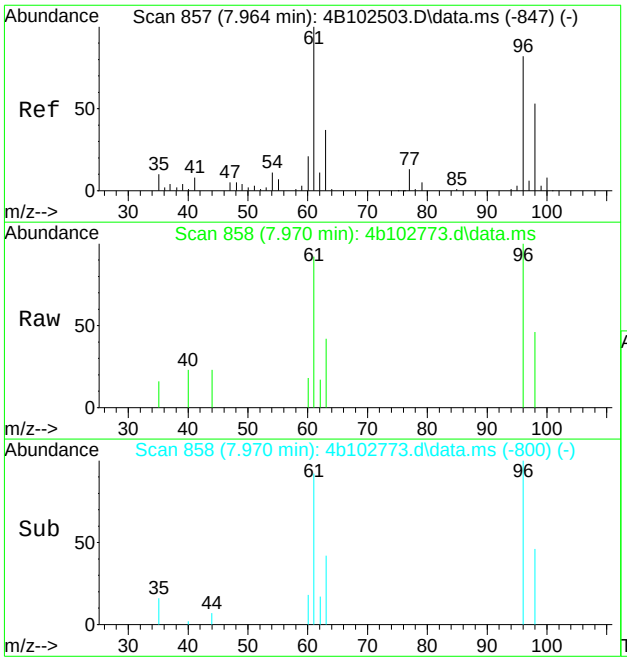


#30
1,1-dichloroethane
Concen: 1.77 ug/L
RT: 7.326 min Scan# 735
Delta R.T. -0.005 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion: 63 Resp: 6385

Ion	Ratio	Lower	Upper
63	100		
65	28.9	1.6	61.6
83	9.6	0.0	43.0
85	15.3	0.0	38.1

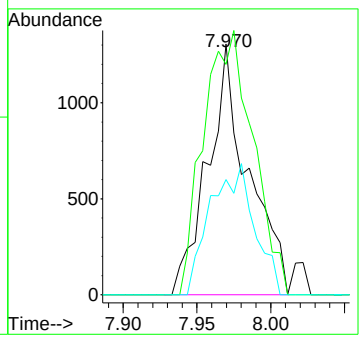


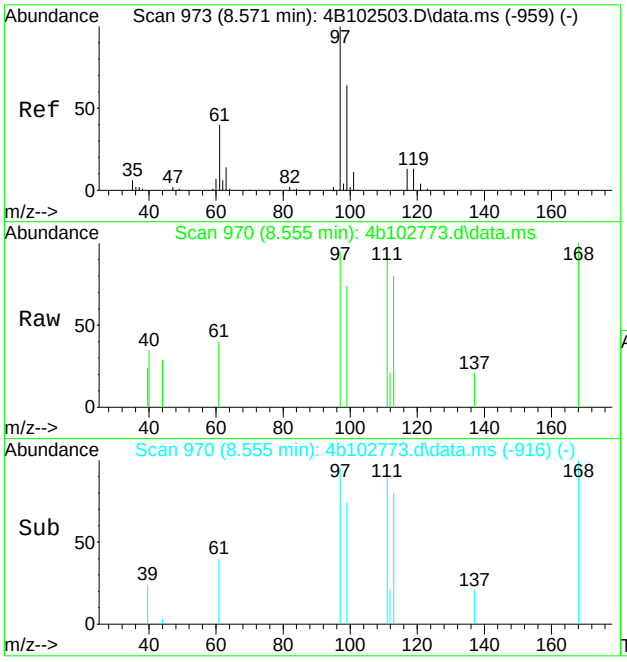


#37
cis-1,2-dichloroethene
Concen: 1.18 ug/L
RT: 7.970 min Scan# 858
Delta R.T. 0.005 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion: 96 Resp: 2484

Ion	Ratio	Lower	Upper
96	100		
61	91.9	100.5	160.5#
98	45.9	34.4	94.4

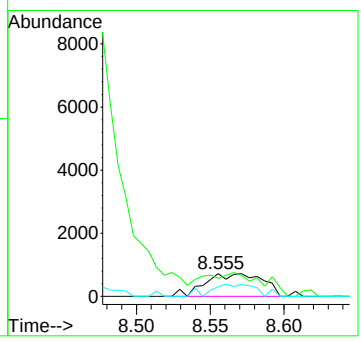


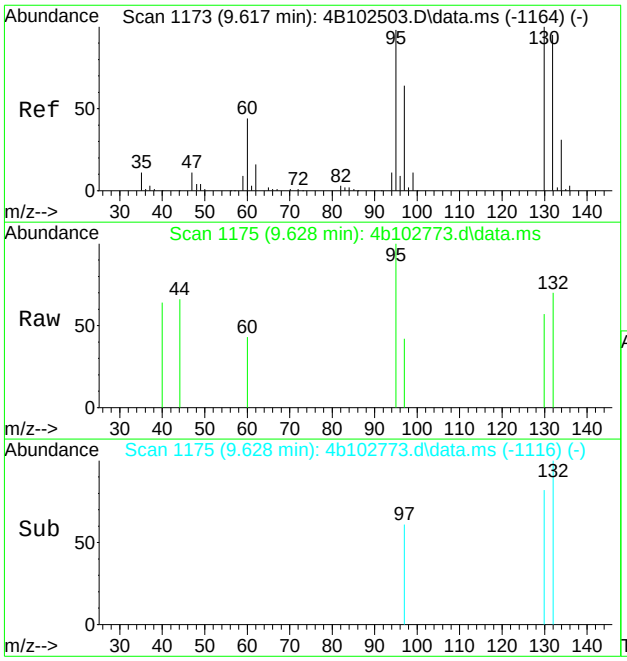


#46
1,1,1-trichloroethane
Concen: 0.45 ug/L
RT: 8.555 min Scan# 970
Delta R.T. -0.016 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion: 97 Resp: 1957

Ion	Ratio	Lower	Upper
97	100		
99	78.4	36.9	96.9
61	41.7	9.7	69.7

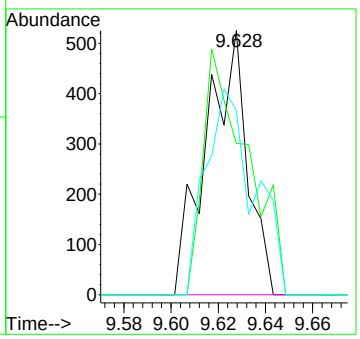


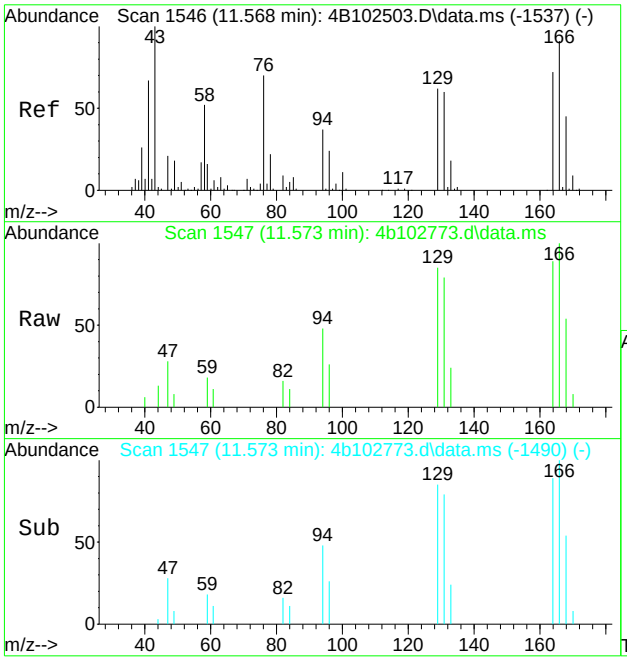


#62
trichloroethene
Concen: 0.34 ug/L
RT: 9.628 min Scan# 1175
Delta R.T. 0.011 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion: 95 Resp: 637

Ion	Ratio	Lower	Upper
95	100		
130	57.2	72.4	132.4#
132	69.6	67.1	127.1

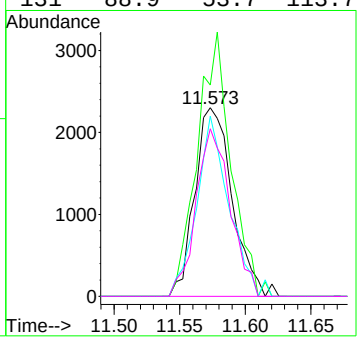


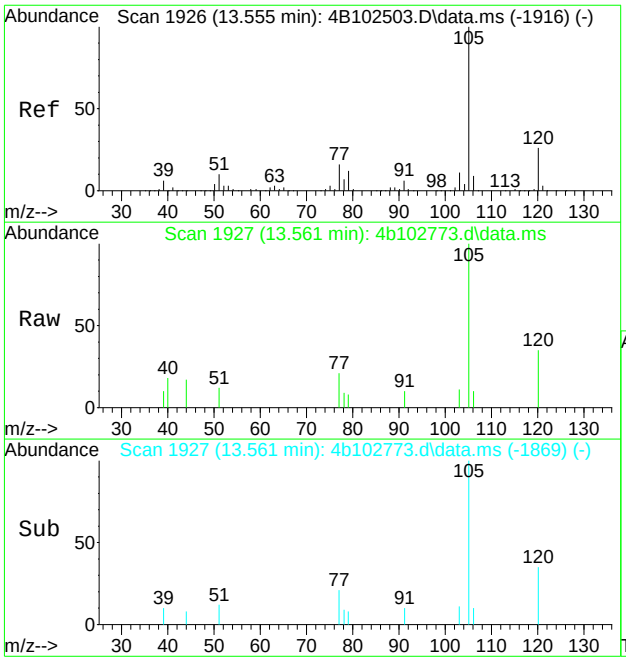


#80
tetrachloroethene
Concen: 2.40 ug/L
RT: 11.573 min Scan# 1547
Delta R.T. 0.000 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion:164 Resp: 4569

Ion	Ratio	Lower	Upper
164	100		
166	112.0	96.6	156.6
129	95.6	56.4	116.4
131	88.9	53.7	113.7

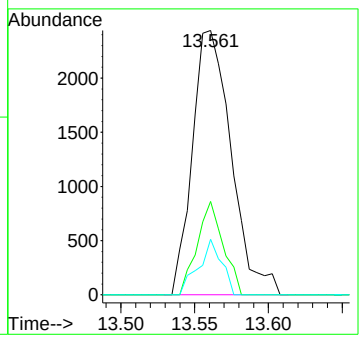


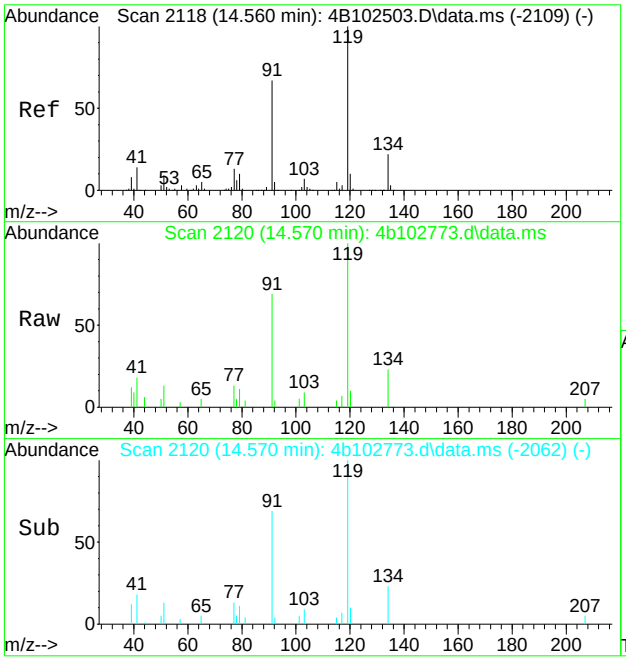


#94
isopropylbenzene
Concen: 0.39 ug/L
RT: 13.561 min Scan# 1927
Delta R.T. 0.005 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion:105 Resp: 4461

Ion	Ratio	Lower	Upper
105	100		
120	35.4	5.5	45.5
77	21.0	0.0	35.9

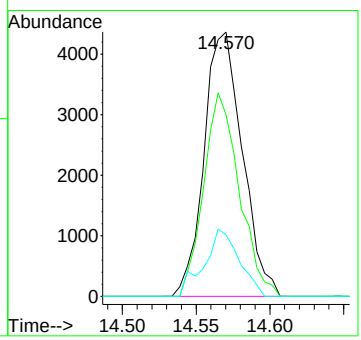


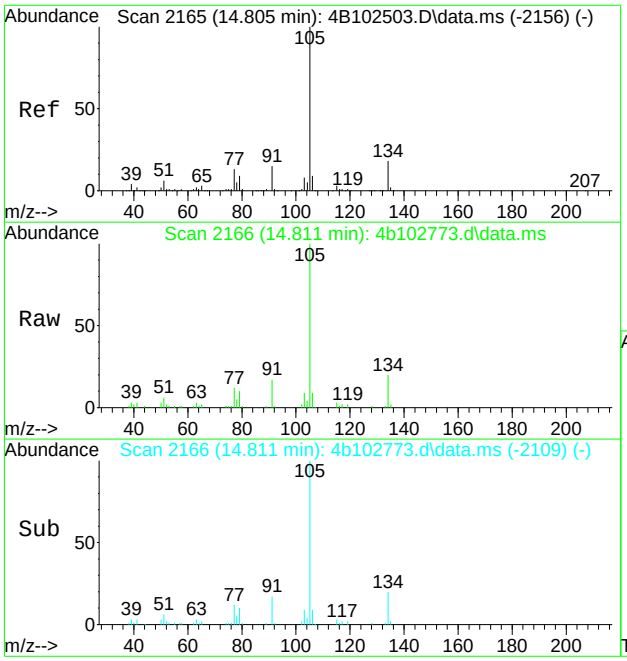


#107
tert-butylbenzene
Concen: 0.94 ug/L
RT: 14.570 min Scan# 2120
Delta R.T. 0.005 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion:119 Resp: 7876

Ion	Ratio	Lower	Upper
119	100		
91	68.7	36.6	96.6
134	23.4	0.0	51.8

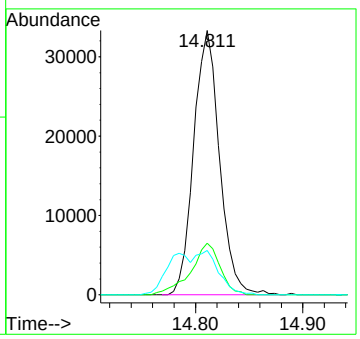




#109
sec-butylbenzene
Concen: 4.06 ug/L
RT: 14.811 min Scan# 2166
Delta R.T. 0.000 min
Lab File: 4b102773.d
Acq: 4 Mar 2021 8:20 pm

Tgt Ion:105 Resp: 55824

Ion	Ratio	Lower	Upper
105	100		
134	19.6	0.0	48.3
91	16.8	0.0	45.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102764.d
Acq On : 4 Mar 2021 4:07 pm
Operator : brittank
Sample : JD20919-13 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:28:56 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

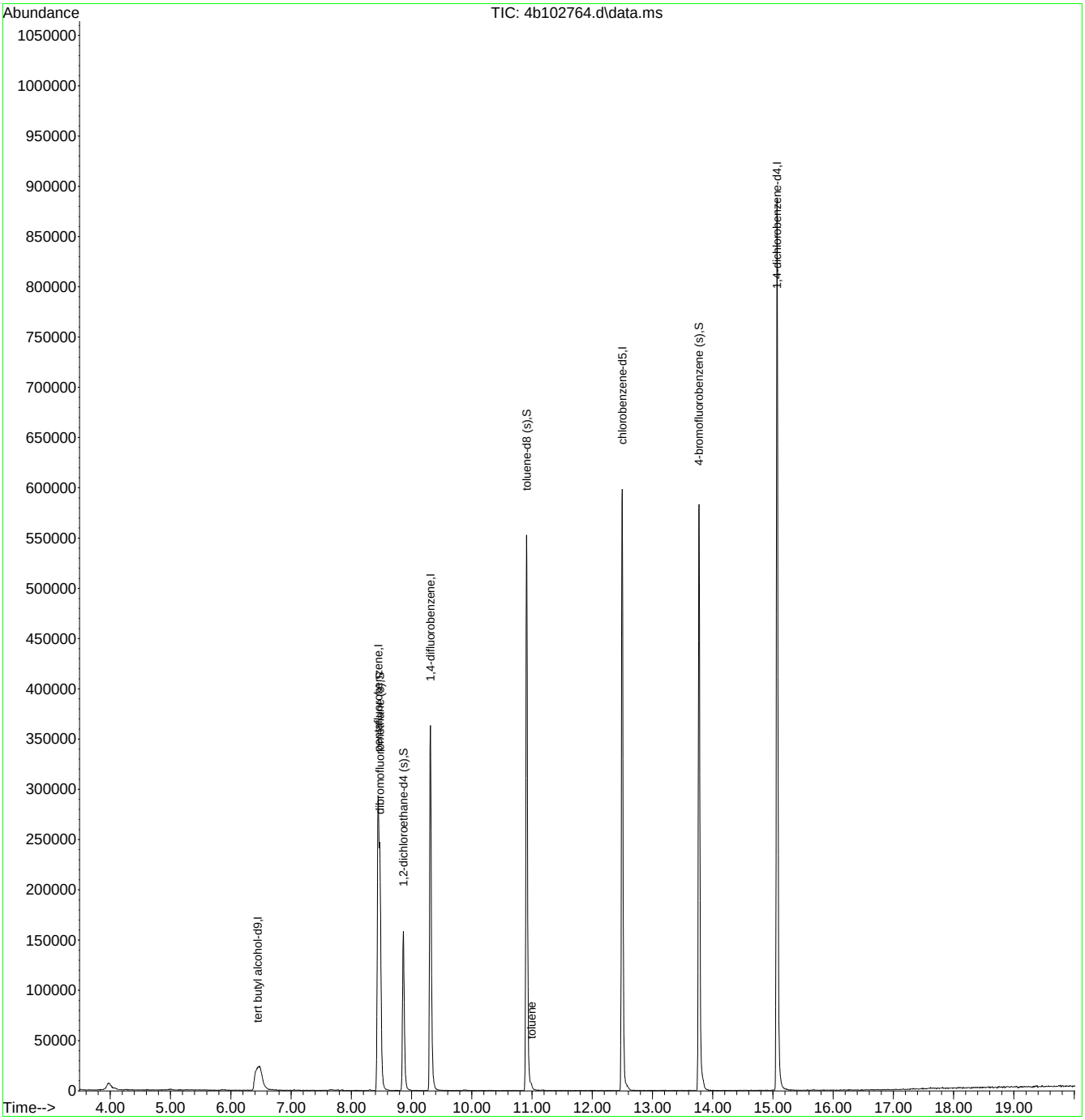
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.448	65	115214	500.00	ug/L	-0.04
5) pentafluorobenzene	8.446	168	244860	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	330493	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	356070	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	266217	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	123562	50.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.66%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	128087	50.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.06%			
75) toluene-d8 (s)	10.909	98	394215	48.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.94%			
98) 4-bromofluorobenzene (s)	13.770	95	205391	52.05	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.10%			
Target Compounds						Qvalue
76) toluene	10.993	92	1655	0.33	ug/L #	64

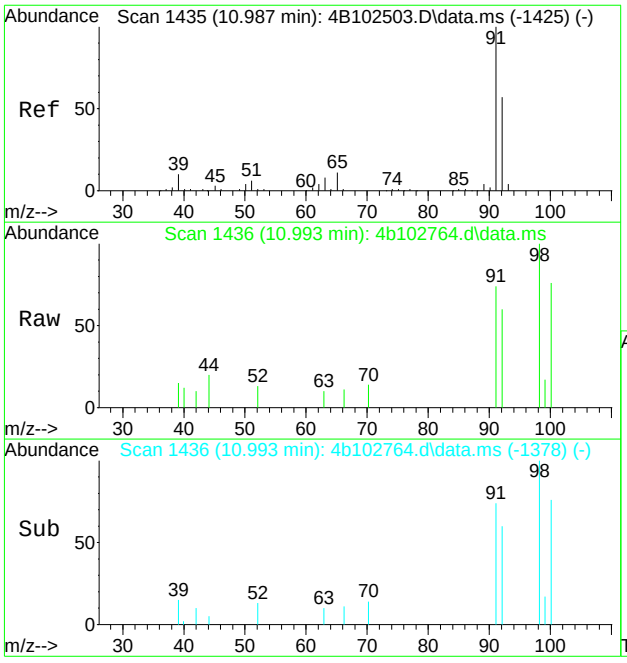
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102764.d
Acq On : 4 Mar 2021 4:07 pm
Operator : brittank
Sample : JD20919-13 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:28:56 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

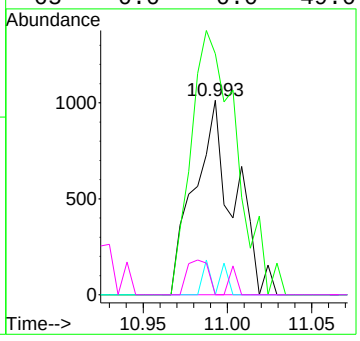




#76
toluene
Concen: 0.33 ug/L
RT: 10.993 min Scan# 1436
Delta R.T. 0.005 min
Lab File: 4b102764.d
Acq: 4 Mar 2021 4:07 pm

Tgt Ion: 92 Resp: 1655

Ion	Ratio	Lower	Upper
92	100		
91	123.9	154.4	194.4#
51	0.0	0.0	40.9
65	0.0	0.0	49.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102774.d
Acq On : 4 Mar 2021 8:48 pm
Operator : brittank
Sample : JD20919-14 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:42:18 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

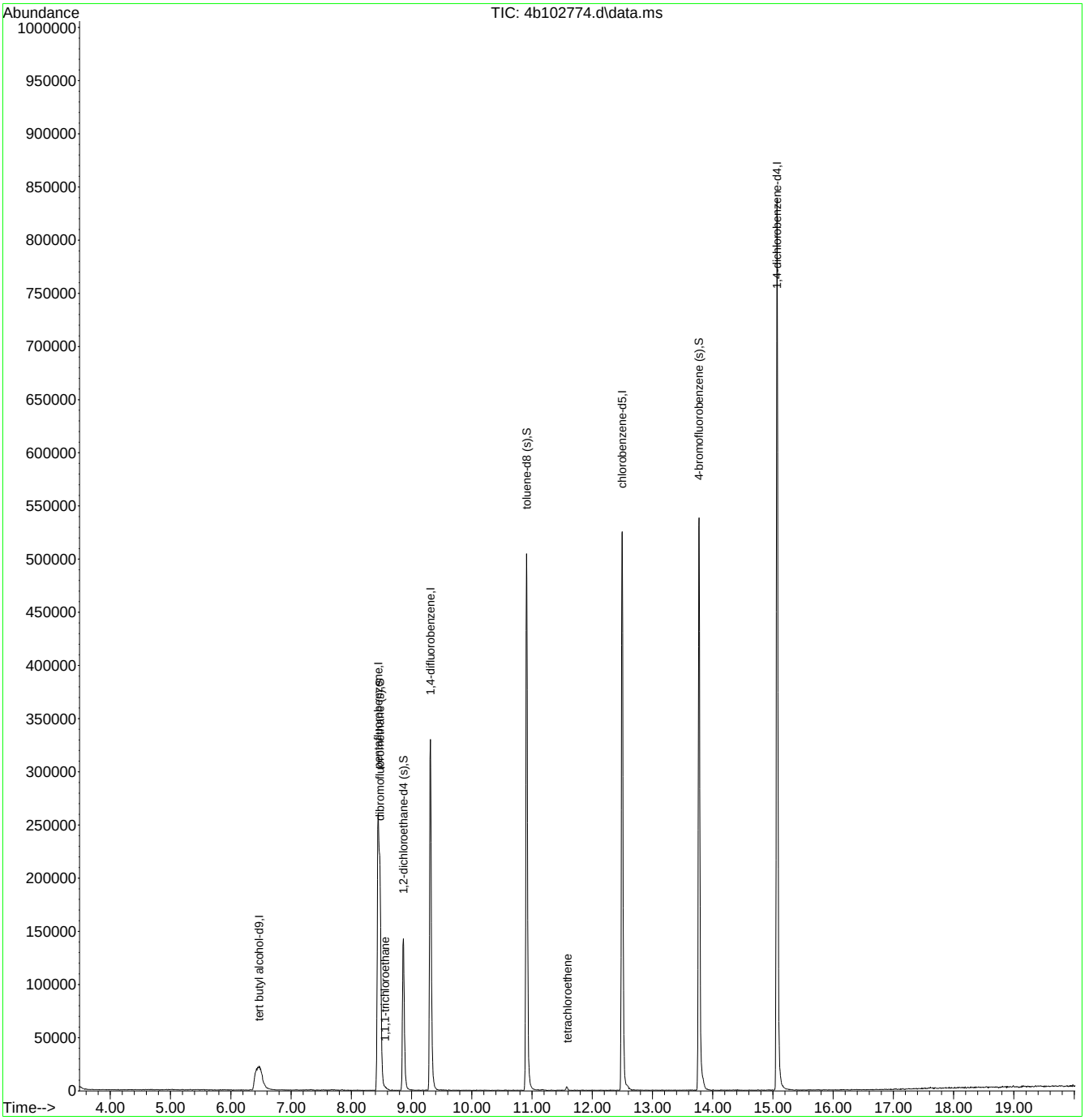
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.469	65	106755	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	217645	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	289638	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	324288	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	247769	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	115354	53.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.76%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	121361	54.63	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 109.26%			
75) toluene-d8 (s)	10.909	98	361331	48.78	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.56%			
98) 4-bromofluorobenzene (s)	13.770	95	187408	51.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.561	97	1910	0.44	ug/L	68
80) tetrachloroethene	11.589	164	1032	0.53	ug/L #	76

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

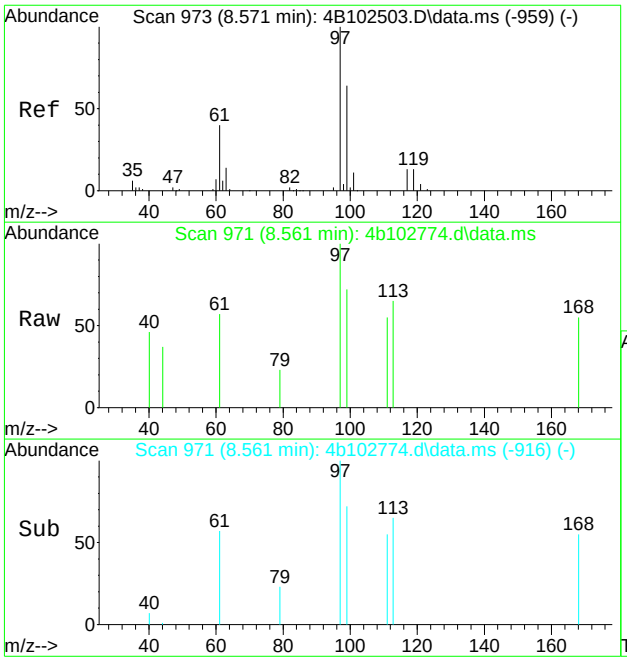
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102774.d
Acq On : 4 Mar 2021 8:48 pm
Operator : brittank
Sample : JD20919-14 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:42:18 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



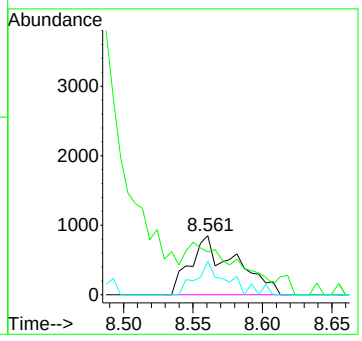
M4B4435.M Thu Mar 04 23:45:49 2021 Page: 2

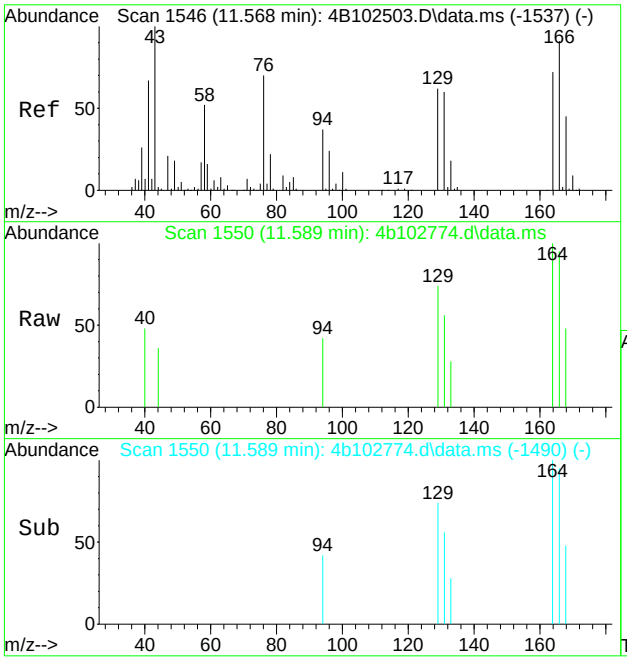


#46
1,1,1-trichloroethane
Concen: 0.44 ug/L
RT: 8.561 min Scan# 971
Delta R.T. -0.010 min
Lab File: 4b102774.d
Acq: 4 Mar 2021 8:48 pm

Tgt Ion: 97 Resp: 1910

Ion	Ratio	Lower	Upper
97	100		
99	39.8	36.9	96.9
61	57.1	9.7	69.7

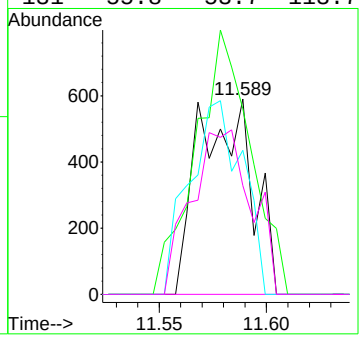




#80
tetrachloroethene
Concen: 0.53 ug/L
RT: 11.589 min Scan# 1550
Delta R.T. 0.016 min
Lab File: 4b102774.d
Acq: 4 Mar 2021 8:48 pm

Tgt Ion:164 Resp: 1032

Ion	Ratio	Lower	Upper
164	100		
166	95.1	96.6	156.6#
129	73.7	56.4	116.4
131	55.8	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102775.d
Acq On : 4 Mar 2021 9:17 pm
Operator : brittank
Sample : JD20919-15 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:42:48 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

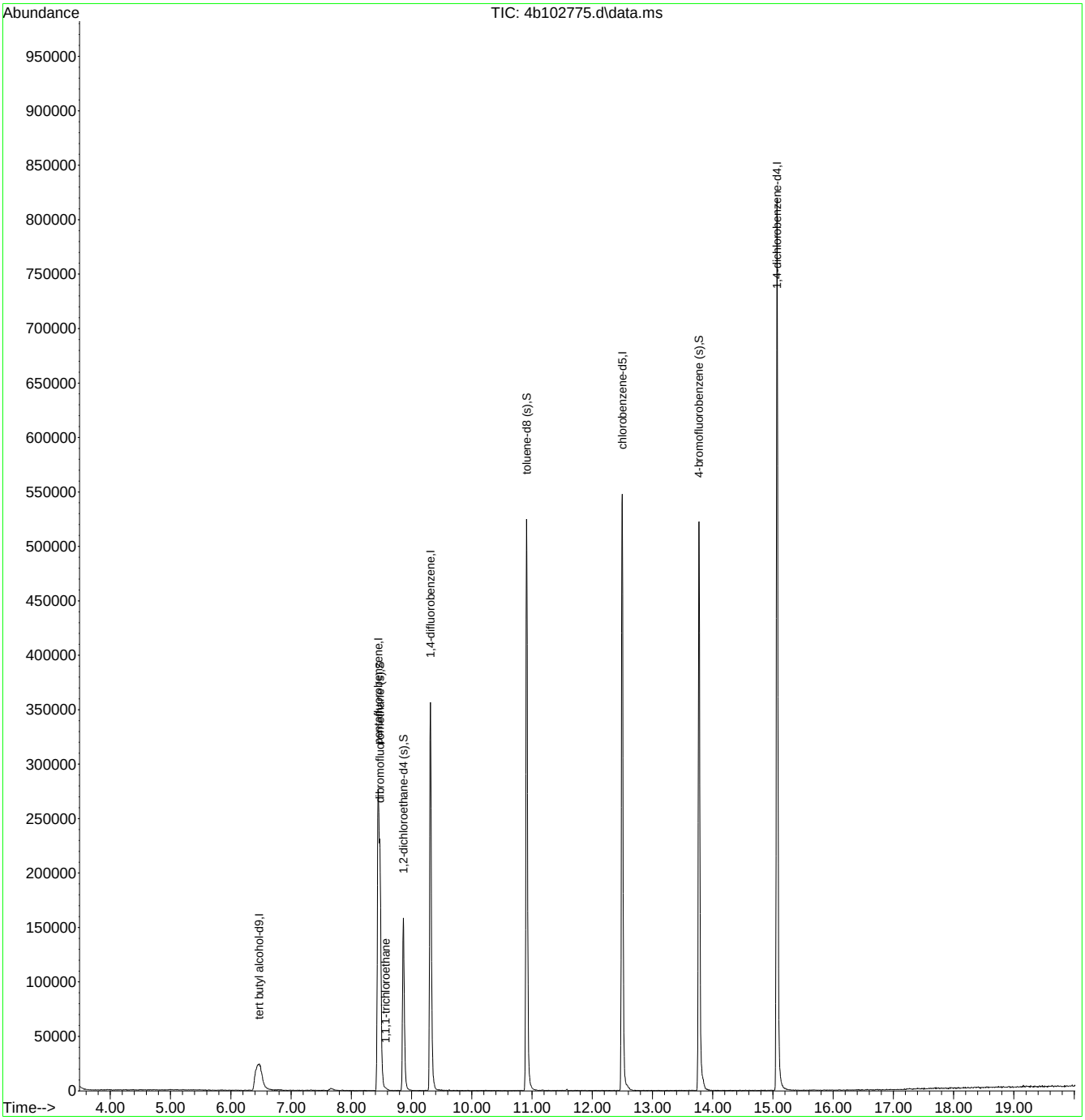
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	106500	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	226070	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	307030	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	328895	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	239233	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	118912	52.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.96%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	128658	54.64	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 109.28%			
75) toluene-d8 (s)	10.909	98	371794	49.49	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.98%			
98) 4-bromofluorobenzene (s)	13.770	95	185972	52.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.90%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.566	97	1383	0.31	ug/L	96

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

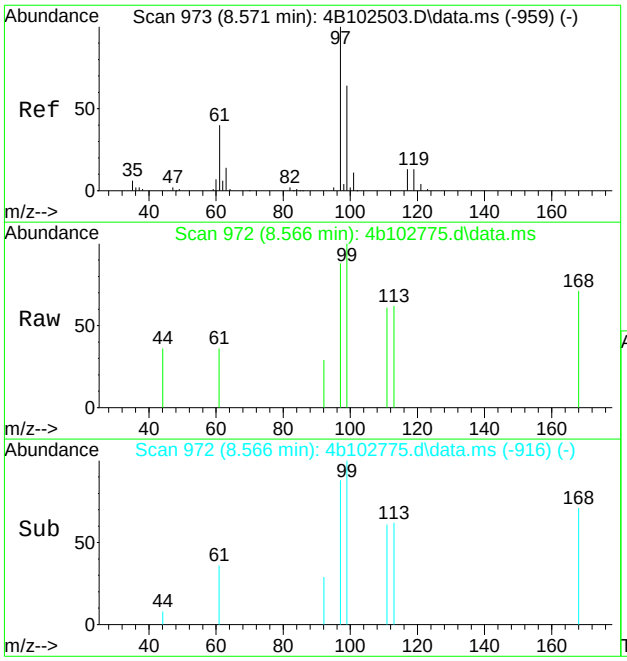
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102775.d
Acq On : 4 Mar 2021 9:17 pm
Operator : brittank
Sample : JD20919-15 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:42:48 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



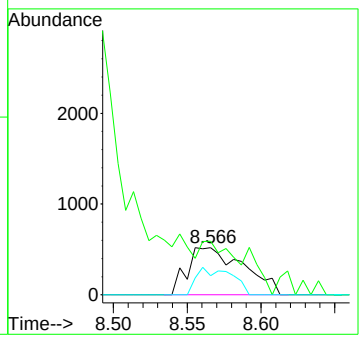
M4B4435.M Thu Mar 04 23:45:53 2021 Page: 2



#46
1,1,1-trichloroethane
Concen: 0.31 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102775.d
Acq: 4 Mar 2021 9:17 pm

Tgt Ion: 97 Resp: 1383

Ion	Ratio	Lower	Upper
97	100		
99	62.6	36.9	96.9
61	40.3	9.7	69.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208828.d
Acq On : 5 Mar 2021 11:05 am
Operator : krizhkac
Sample : jd20919-16 c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:38:20 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

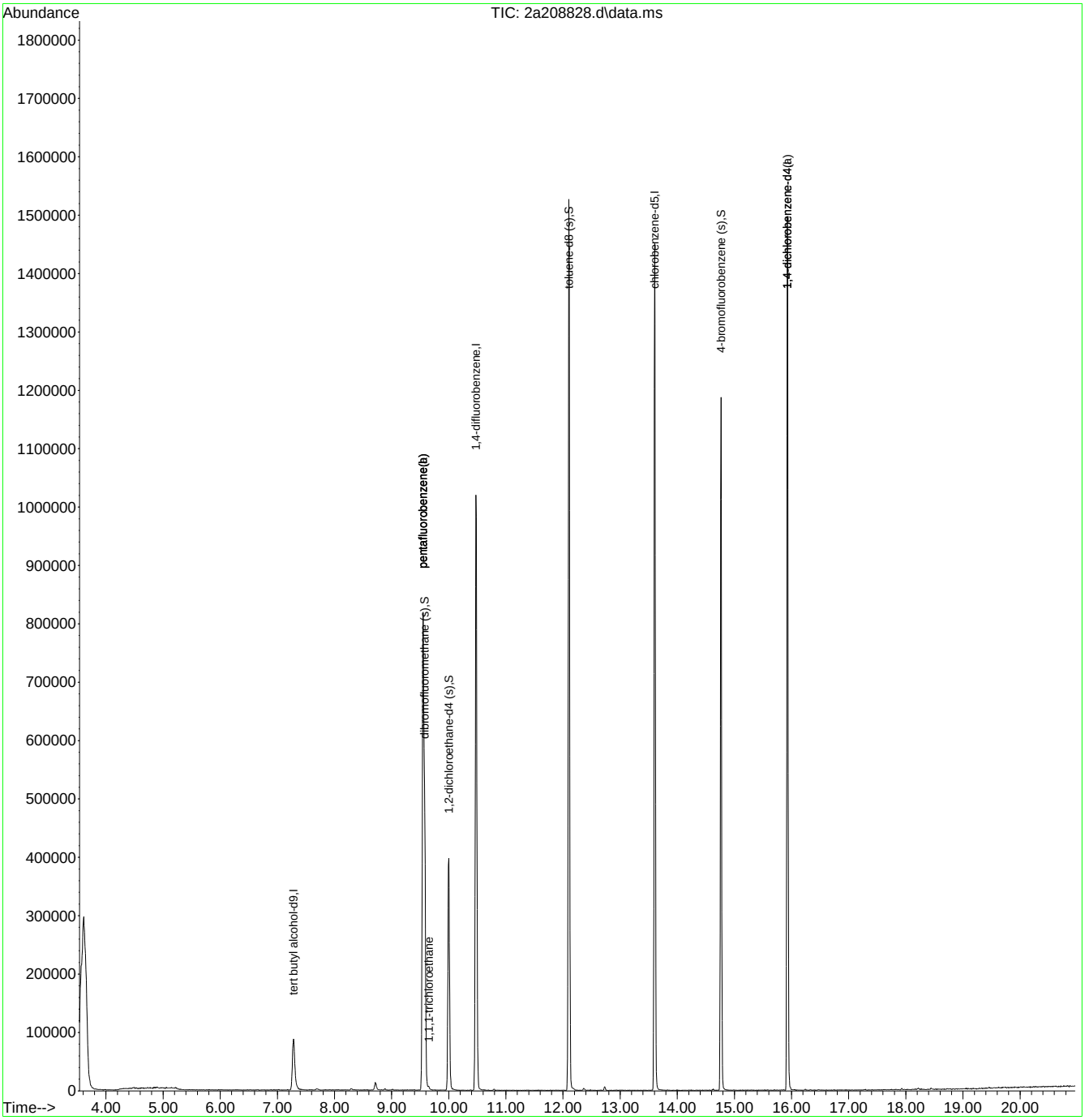
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.280	65	158527	500.00	ug/L	0.00
5) pentafluorobenzene	9.550	168	592003	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.476	114	850403	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	744049	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.926	152	375005	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.550	168	592003	50.00	ug/L	0.00
128) 1,4-dichlorobenzene-d4(a)	15.926	152	375005	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.550	168	592003	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	263235	50.65	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.30%			
52) 1,2-dichloroethane-d4 (s)	10.000	65	280281	53.01	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.02%			
74) toluene-d8 (s)	12.102	98	942881	50.05	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.10%			
98) 4-bromofluorobenzene (s)	14.764	95	348726	48.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.82%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	9.649	97	3674	0.33	ug/L	97

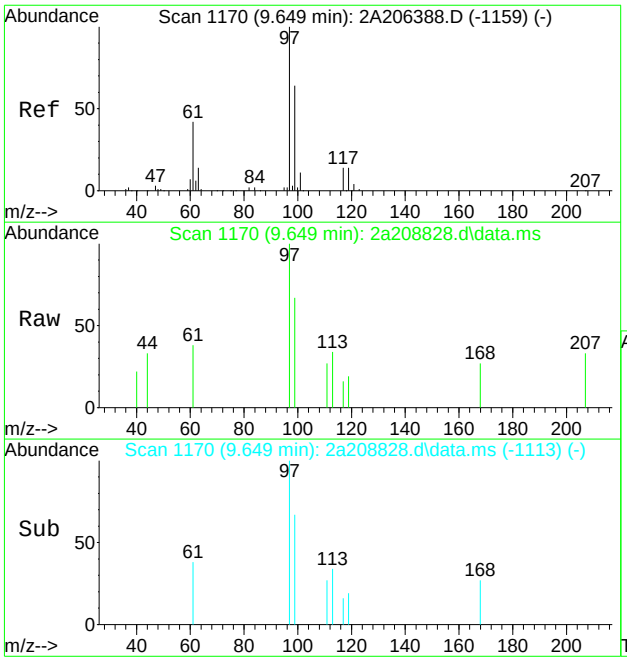
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208828.d
Acq On : 5 Mar 2021 11:05 am
Operator : krizhkac
Sample : jd20919-16 c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:38:20 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

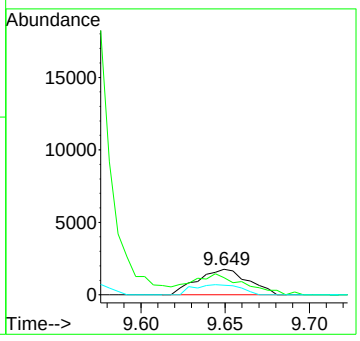




#46
1,1,1-trichloroethane
Concen: 0.33 ug/L
RT: 9.649 min Scan# 1170
Delta R.T. 0.000 min
Lab File: 2a208828.d
Acq: 5 Mar 2021 11:05 am

Tgt Ion: 97 Resp: 3674

Ion	Ratio	Lower	Upper
97	100		
99	66.6	35.8	95.8
61	37.9	12.1	72.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102756.d
Acq On : 4 Mar 2021 12:21 pm
Operator : brittank
Sample : JD20919-17 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:24:24 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

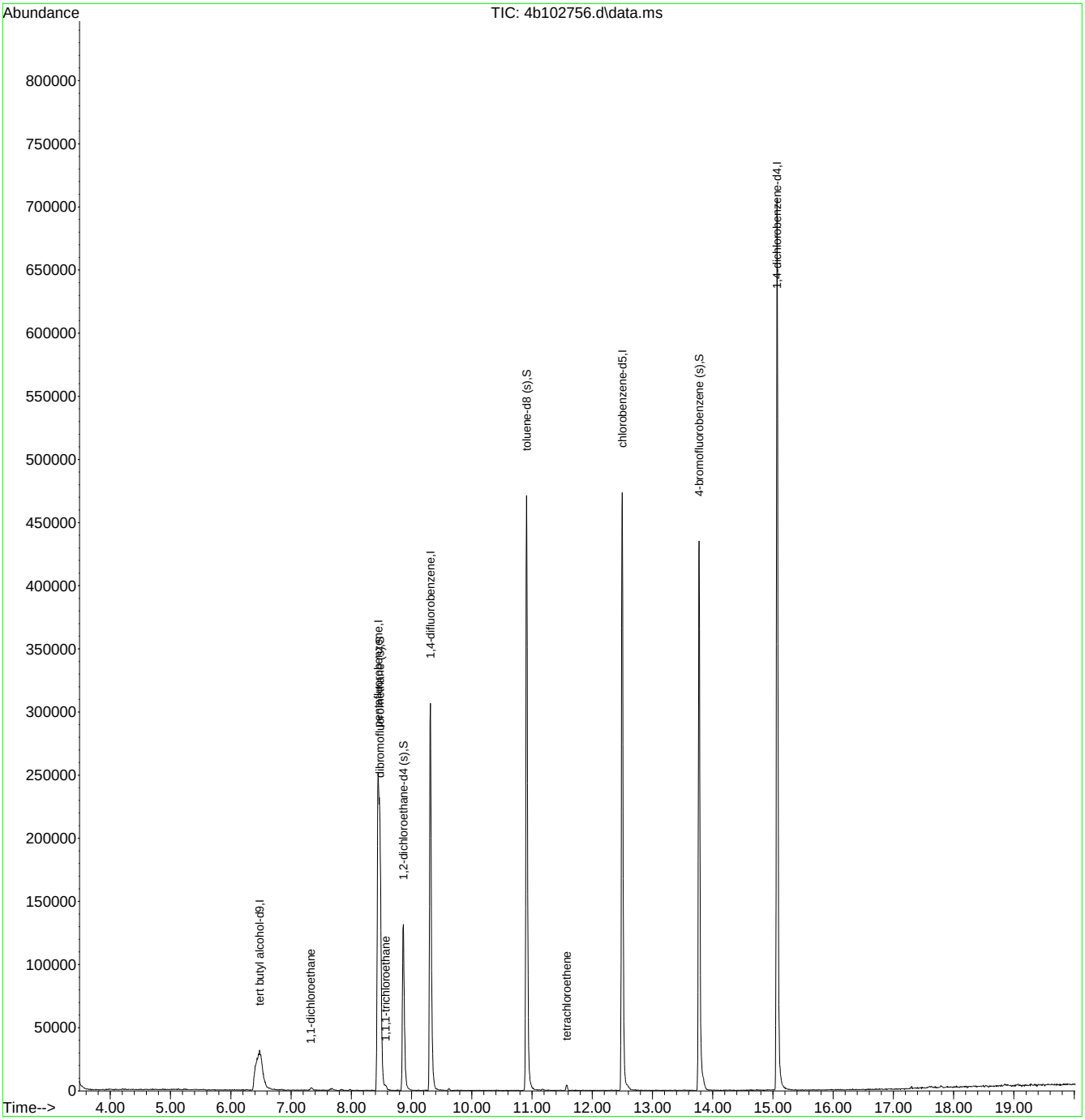
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.479	65	142022	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	234221	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	281949	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	299094	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	215360	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	115643	49.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.46%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	112474	52.01	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.02%			
75) toluene-d8 (s)	10.909	98	345000	50.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.00%			
98) 4-bromofluorobenzene (s)	13.775	95	157890	49.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.92%			
Target Compounds						Qvalue
30) 1,1-dichloroethane	7.326	63	3332	0.87	ug/L	87
46) 1,1,1-trichloroethane	8.571	97	2901	0.62	ug/L	84
80) tetrachloroethene	11.573	164	1136	0.64	ug/L #	82

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

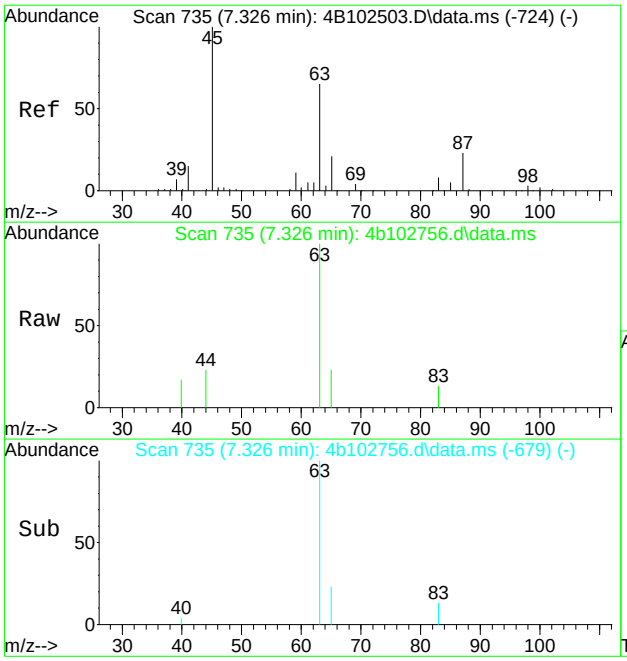
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102756.d
Acq On : 4 Mar 2021 12:21 pm
Operator : brittank
Sample : JD20919-17 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:24:24 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



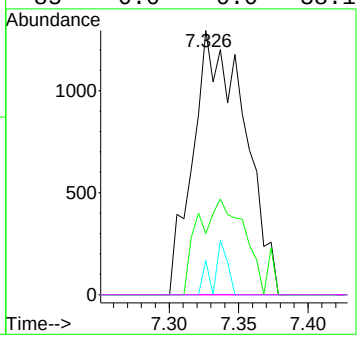
M4B4435.M Thu Mar 04 23:44:45 2021 Page: 2

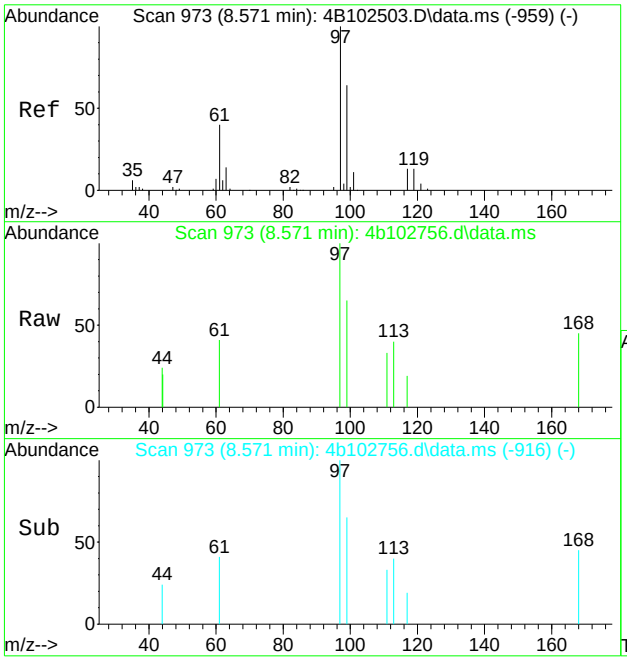


#30
1,1-dichloroethane
Concen: 0.87 ug/L
RT: 7.326 min Scan# 735
Delta R.T. -0.005 min
Lab File: 4b102756.d
Acq: 4 Mar 2021 12:21 pm

Tgt Ion: 63 Resp: 3332

Ion	Ratio	Lower	Upper
63	100		
65	23.1	1.6	61.6
83	13.0	0.0	43.0
85	0.0	0.0	38.1

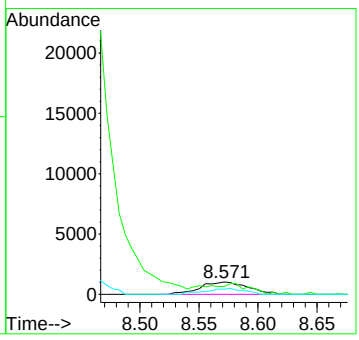


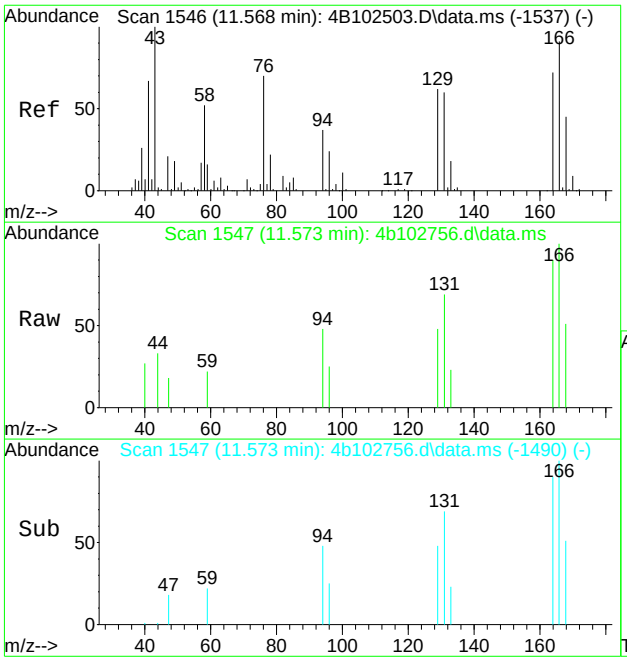


#46
1,1,1-trichloroethane
Concen: 0.62 ug/L
RT: 8.571 min Scan# 973
Delta R.T. 0.000 min
Lab File: 4b102756.d
Acq: 4 Mar 2021 12:21 pm

Tgt Ion: 97 Resp: 2901

Ion	Ratio	Lower	Upper
97	100		
99	47.6	36.9	96.9
61	41.4	9.7	69.7

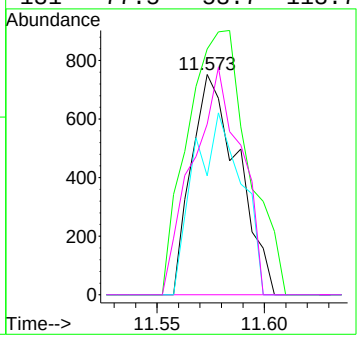




#80
tetrachloroethene
Concen: 0.64 ug/L
RT: 11.573 min Scan# 1547
Delta R.T. 0.000 min
Lab File: 4b102756.d
Acq: 4 Mar 2021 12:21 pm

Tgt Ion:164 Resp: 1136

Ion	Ratio	Lower	Upper
164	100		
166	111.6	96.6	156.6
129	54.0	56.4	116.4#
131	77.5	53.7	113.7



7.1.17

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208829.d
Acq On : 5 Mar 2021 11:34 am
Operator : krizhkac
Sample : jd20919-18 c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:38:59 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

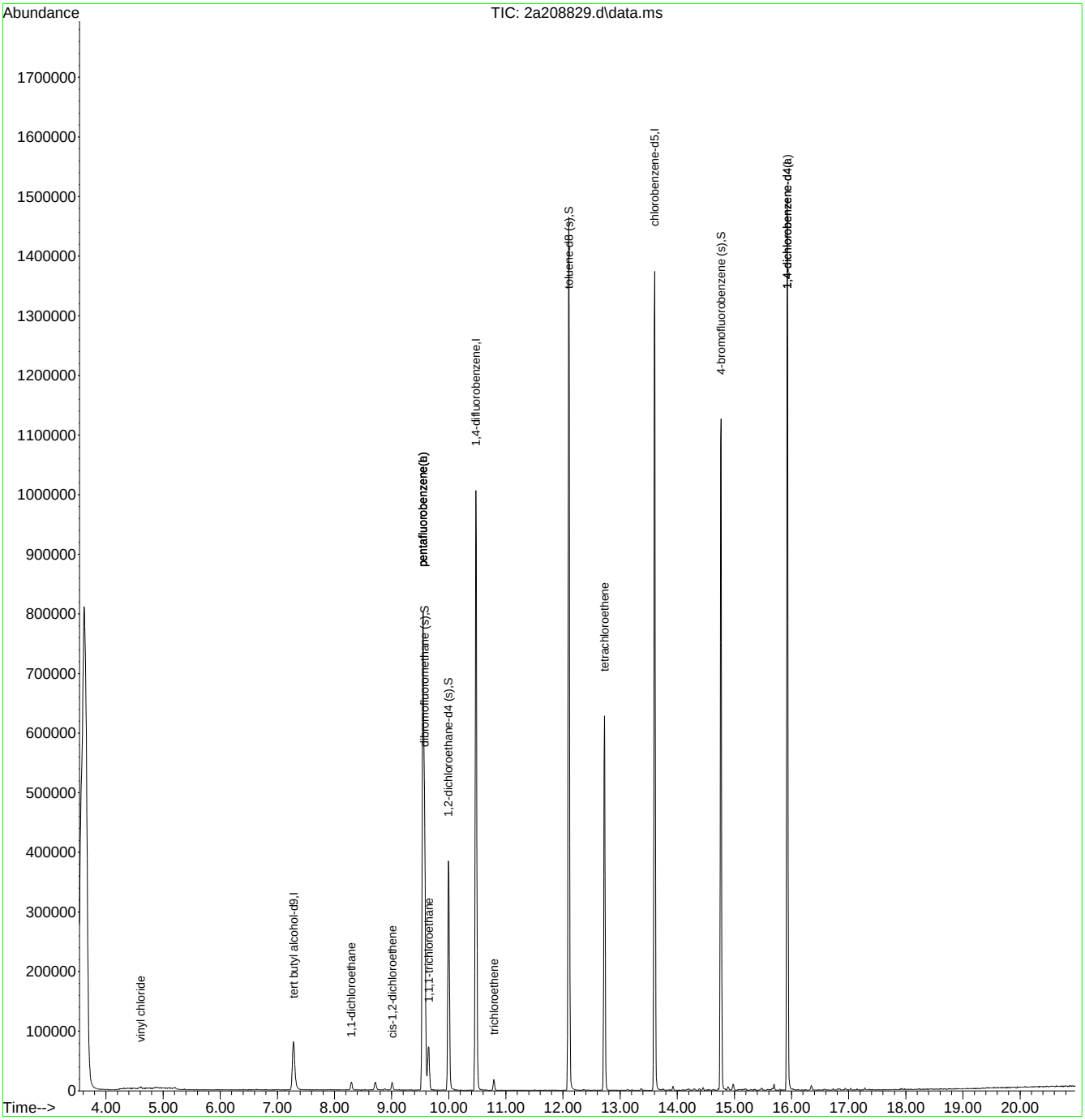
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.285	65	146939	500.00	ug/L	0.00
5) pentafluorobenzene	9.550	168	573718	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.476	114	828902	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	721027	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.926	152	363042	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.550	168	573718	50.00	ug/L	0.00
128) 1,4-dichlorobenzene-d4(a)	15.926	152	363042	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.550	168	573718	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	257188	51.07	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.14%			
52) 1,2-dichloroethane-d4 (s)	9.995	65	269566	52.31	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.62%			
74) toluene-d8 (s)	12.102	98	918751	50.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.66%			
98) 4-bromofluorobenzene (s)	14.765	95	337295	48.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.74%			
Target Compounds						Qvalue
9) vinyl chloride	4.607	62	3335	0.36	ug/L	85
31) 1,1-dichloroethane	8.295	63	14930	1.24	ug/L	93
37) cis-1,2-dichloroethene	9.011	96	6474	0.86	ug/L	90
46) 1,1,1-trichloroethane	9.649	97	53846	5.02	ug/L	94
60) trichloroethene	10.790	95	6089	0.85	ug/L	93
80) tetrachloroethene	12.725	166	177678	23.25	ug/L	99

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

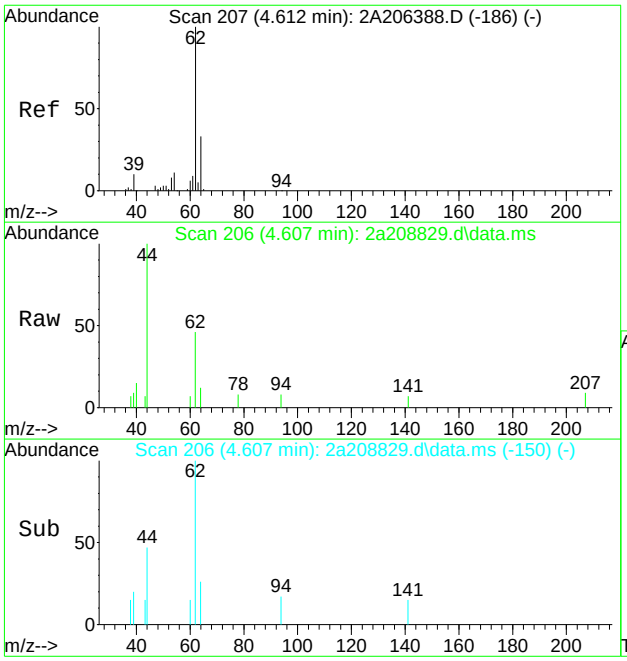
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208829.d
Acq On : 5 Mar 2021 11:34 am
Operator : krizhkac
Sample : jd20919-18 c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:38:59 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration



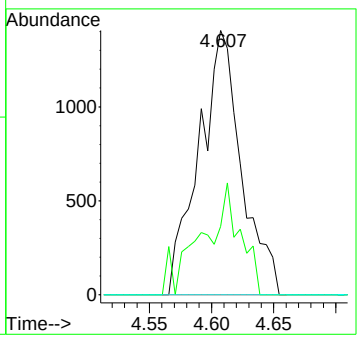
M2A8967.M Sun Mar 07 22:14:46 2021 Page: 2

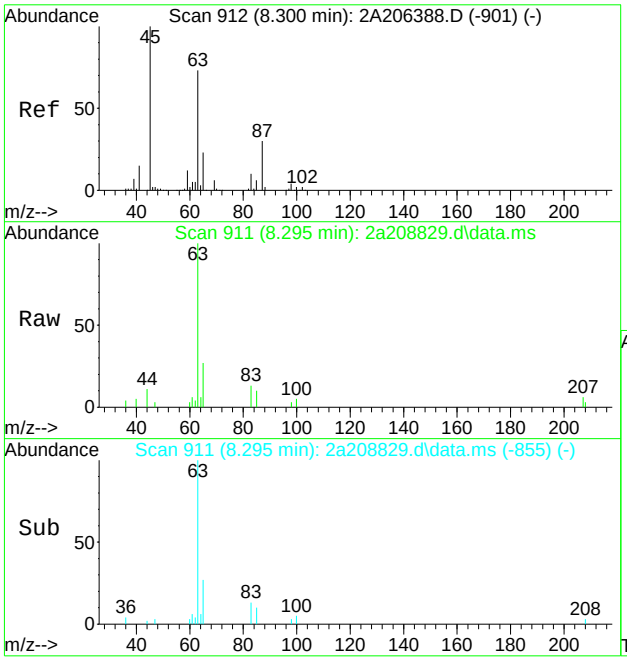


#9
vinyl chloride
Concen: 0.36 ug/L
RT: 4.607 min Scan# 206
Delta R.T. -0.005 min
Lab File: 2a208829.d
Acq: 5 Mar 2021 11:34 am

Tgt Ion: 62 Resp: 3335

Ion	Ratio	Lower	Upper
62	100		
64	25.9	3.1	63.1
61	0.0	0.0	38.6

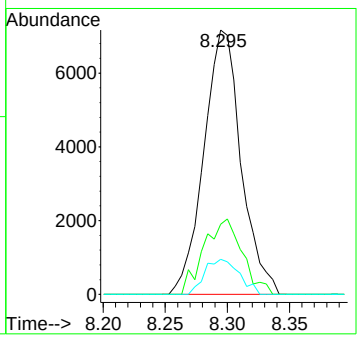


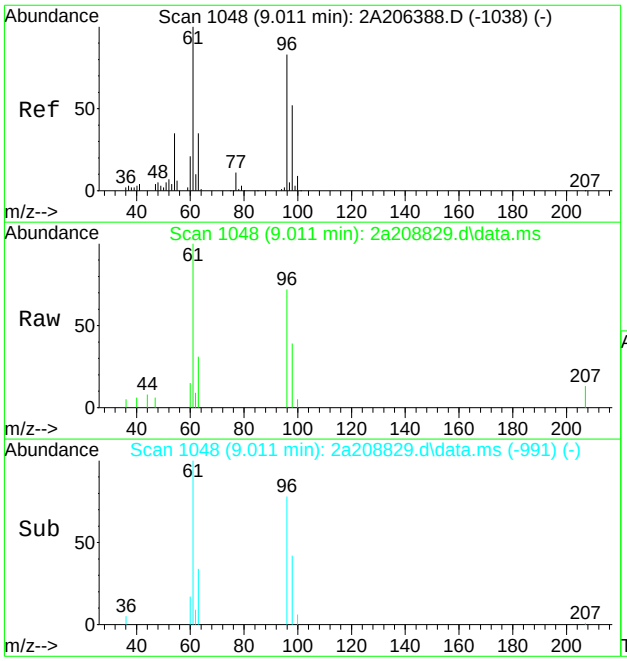


#31
1,1-dichloroethane
Concen: 1.24 ug/L
RT: 8.295 min Scan# 911
Delta R.T. -0.005 min
Lab File: 2a208829.d
Acq: 5 Mar 2021 11:34 am

Tgt Ion: 63 Resp: 14930

Ion	Ratio	Lower	Upper
63	100		
65	26.5	1.6	61.6
83	13.3	0.0	43.4

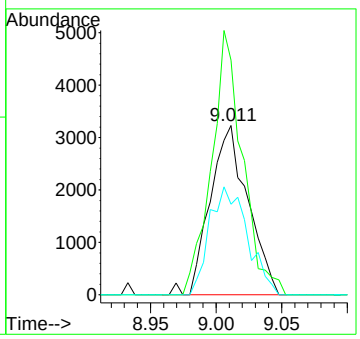


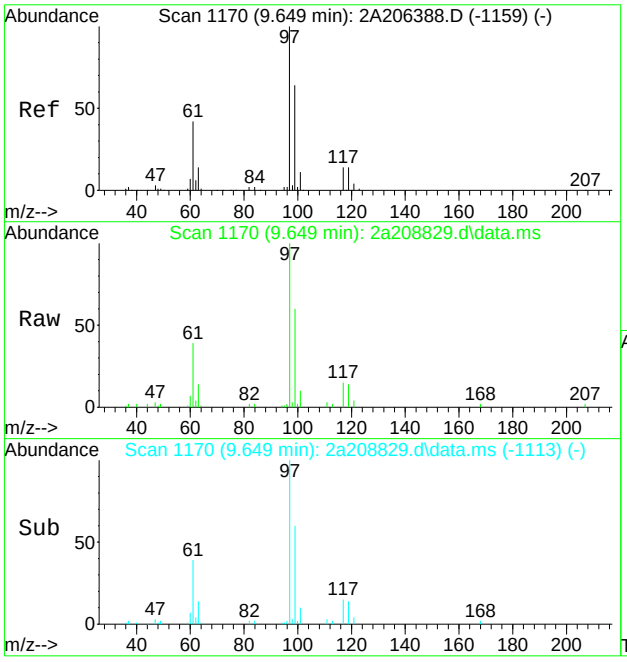


#37
cis-1,2-dichloroethene
Concen: 0.86 ug/L
RT: 9.011 min Scan# 1048
Delta R.T. 0.000 min
Lab File: 2a208829.d
Acq: 5 Mar 2021 11:34 am

Tgt Ion: 96 Resp: 6474

Ion	Ratio	Lower	Upper
96	100		
61	138.7	98.6	158.6
98	53.5	33.3	93.3

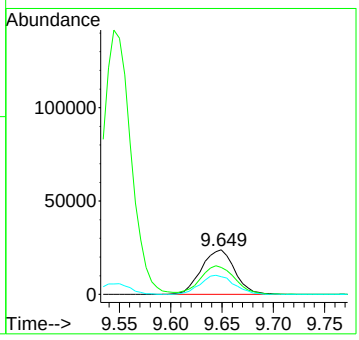


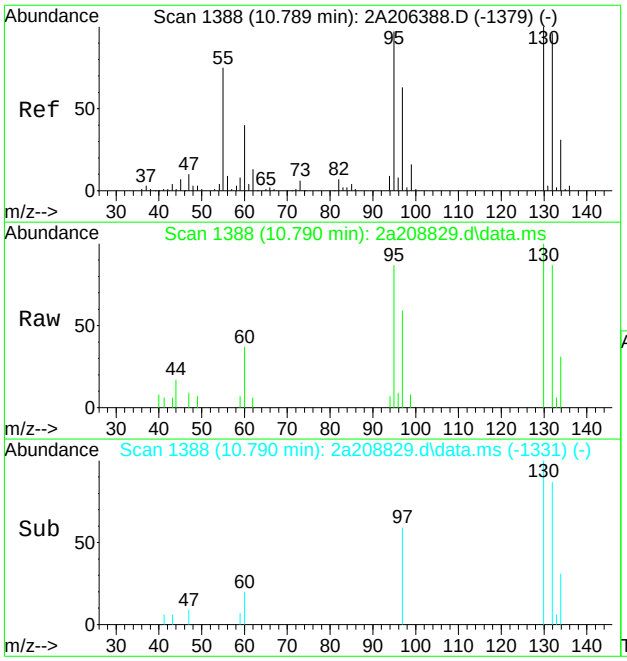


#46
1,1,1-trichloroethane
Concen: 5.02 ug/L
RT: 9.649 min Scan# 1170
Delta R.T. 0.000 min
Lab File: 2a208829.d
Acq: 5 Mar 2021 11:34 am

Tgt Ion: 97 Resp: 53846

Ion	Ratio	Lower	Upper
97	100		
99	60.4	35.8	95.8
61	39.5	12.1	72.1

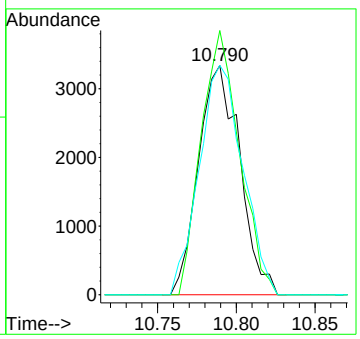


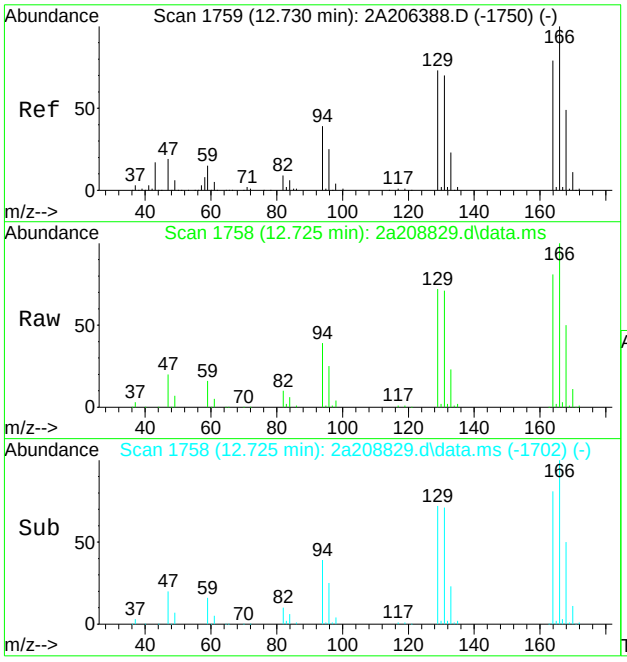


#60
trichloroethene
Concen: 0.85 ug/L
RT: 10.790 min Scan# 1388
Delta R.T. 0.000 min
Lab File: 2a208829.d
Acq: 5 Mar 2021 11:34 am

Tgt Ion: 95 Resp: 6089

Ion	Ratio	Lower	Upper
95	100		
130	115.3	72.7	132.7
132	100.1	68.2	128.2

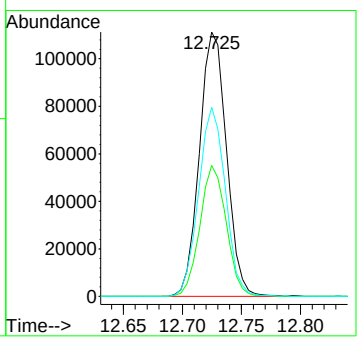




#80
tetrachloroethene
Concen: 23.25 ug/L
RT: 12.725 min Scan# 1758
Delta R.T. -0.005 min
Lab File: 2a208829.d
Acq: 5 Mar 2021 11:34 am

Tgt Ion:166 Resp: 177678

Ion	Ratio	Lower	Upper
166	100		
168	49.5	19.1	79.1
129	71.5	43.0	103.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102765.d
Acq On : 4 Mar 2021 4:35 pm
Operator : brittank
Sample : JD20919-19 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:29:49 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

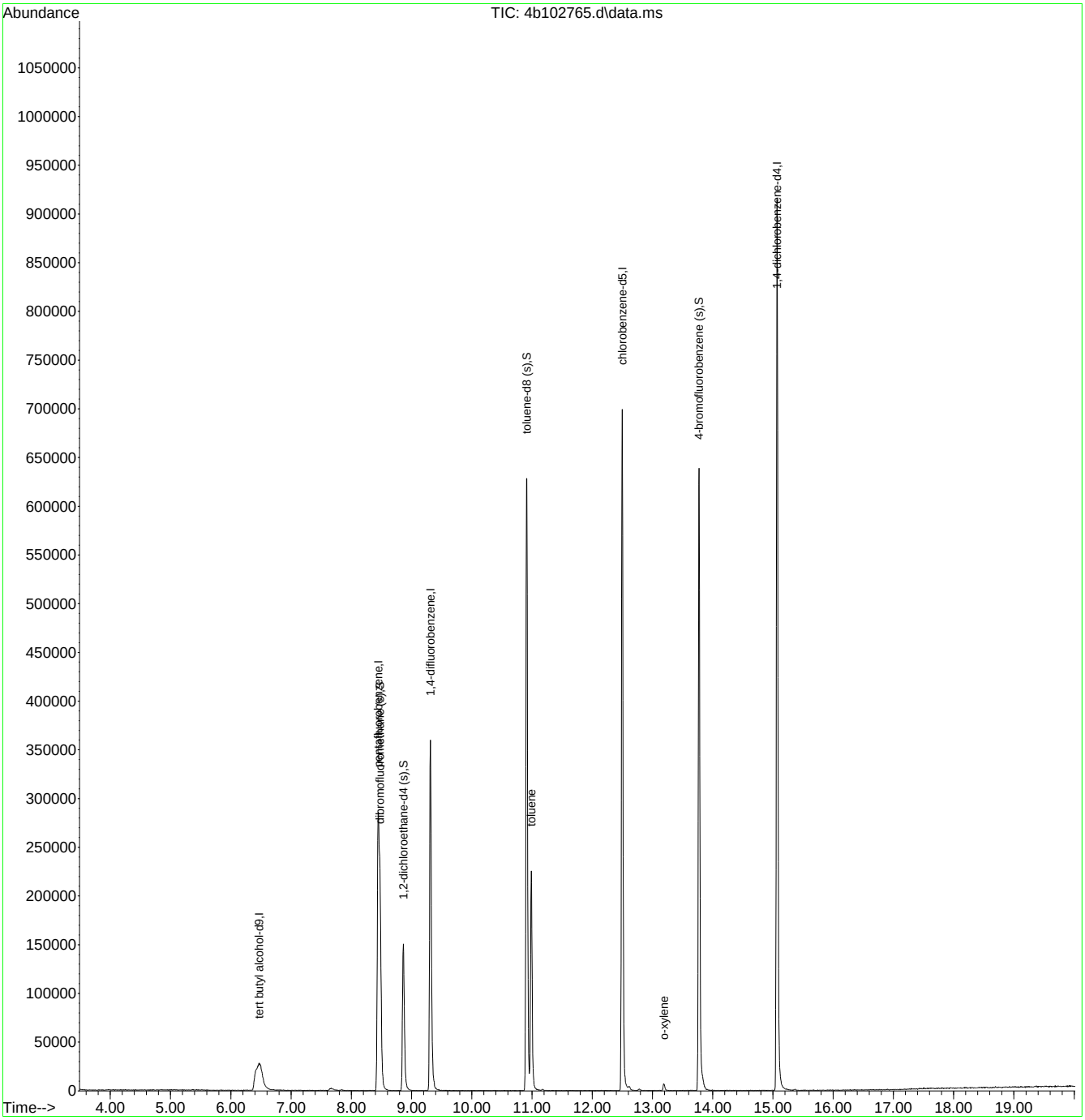
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	127051	500.00	ug/L	-0.02
5) pentafluorobenzene	8.445	168	247281	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	328601	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	410991	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	272066	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	123531	50.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.64%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	130547	51.80	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.60%			
75) toluene-d8 (s)	10.909	98	447631	47.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.36%			
98) 4-bromofluorobenzene (s)	13.770	95	218333	54.14	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.28%			
Target Compounds						Qvalue
76) toluene	10.987	92	100870	17.25	ug/L	98
91) o-xylene	13.189	91	6228	0.57	ug/L	92

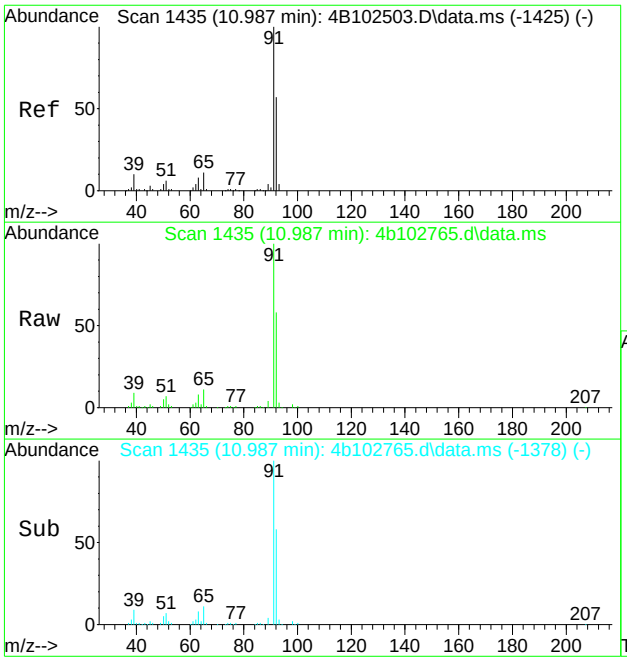
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102765.d
Acq On : 4 Mar 2021 4:35 pm
Operator : brittank
Sample : JD20919-19 c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:29:49 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

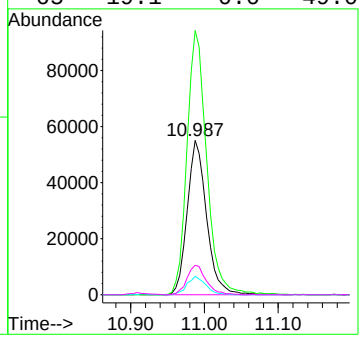


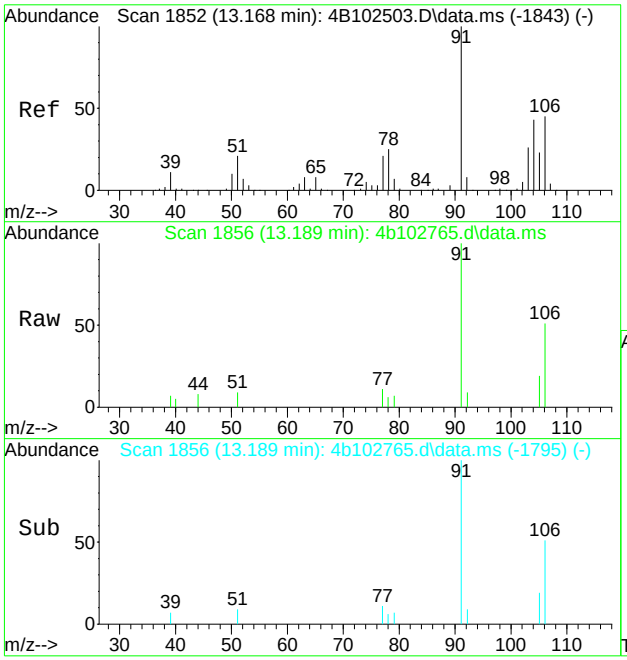


#76
toluene
Concen: 17.25 ug/L
RT: 10.987 min Scan# 1435
Delta R.T. -0.000 min
Lab File: 4b102765.d
Acq: 4 Mar 2021 4:35 pm

Tgt Ion: 92 Resp: 100870

Ion	Ratio	Lower	Upper
92	100		
91	171.1	154.4	194.4
51	12.1	0.0	40.9
65	19.1	0.0	49.0

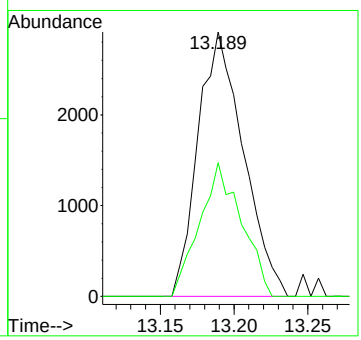




#91
o-xylene
Concen: 0.57 ug/L
RT: 13.189 min Scan# 1856
Delta R.T. 0.021 min
Lab File: 4b102765.d
Acq: 4 Mar 2021 4:35 pm

Tgt Ion: 91 Resp: 6228

Ion	Ratio	Lower	Upper
91	100		
106	50.6	15.4	75.4



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165043.D
Acq On : 3 Mar 2021 7:02 pm
Operator : ROBERTS
Sample : JD20919-1 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 04 09:08:21 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

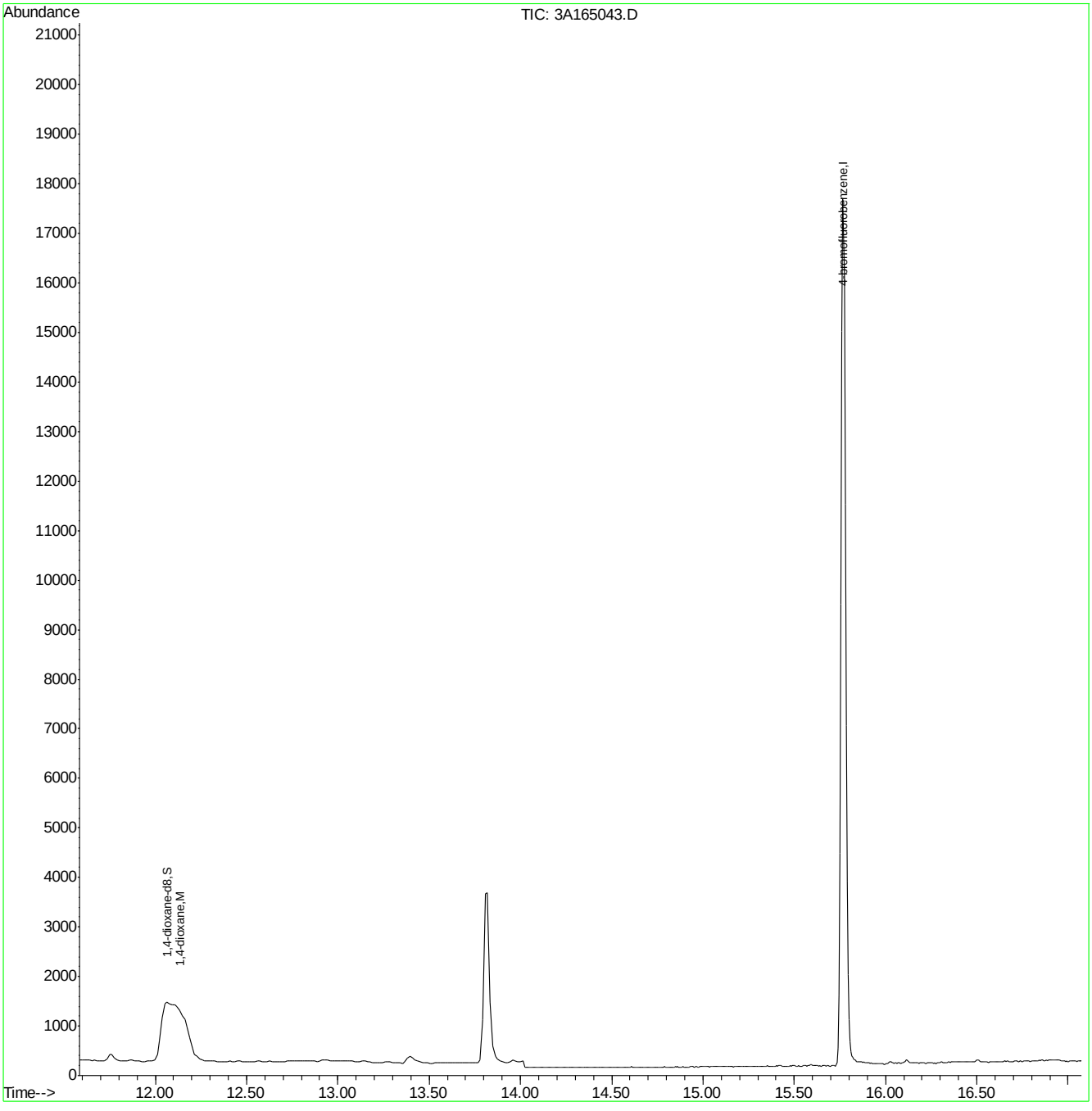
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10119	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	5639	10.88	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 108.80%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.13	88	696	1.36	ug/L	98

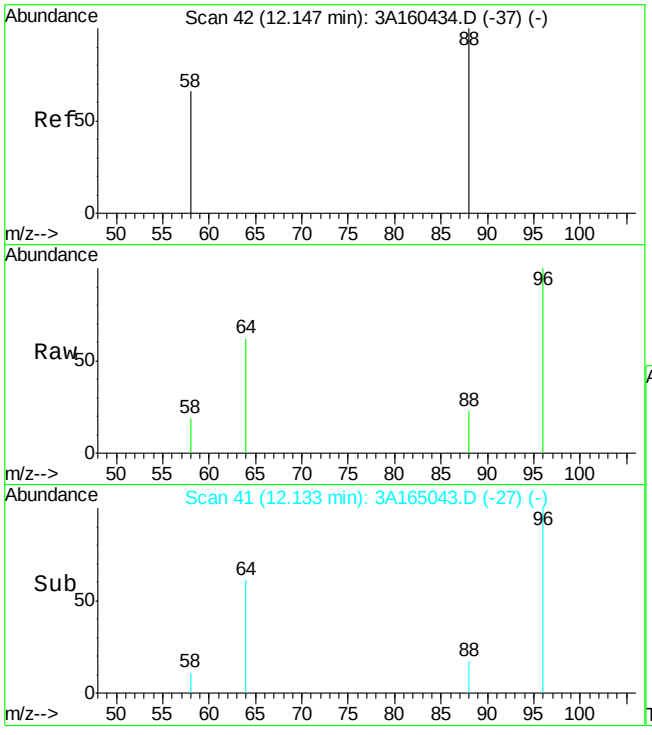
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165043.D
Acq On : 3 Mar 2021 7:02 pm
Operator : ROBERTS
Sample : JD20919-1 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 04 09:08:21 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

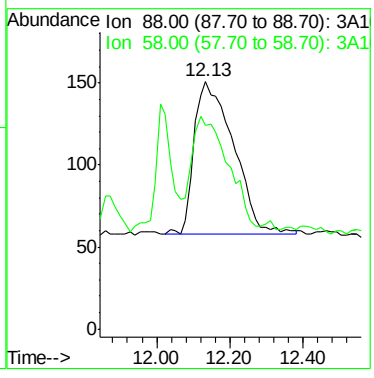




#3
1,4-dioxane
Concen: 1.36 ug/L
RT: 12.13 min Scan# 41
Delta R.T. -0.01 min
Lab File: 3A165043.D
Acq: 3 Mar 2021 7:02 pm

Tgt Ion: 88 Resp: 696

Ion	Ratio	Lower	Upper
88	100		
58	67.7	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165044.D
Acq On : 3 Mar 2021 7:31 pm
Operator : ROBERTS
Sample : JD20919-2 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 04 09:08:22 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11498	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	5605	9.52 ug/L	0.00
Spiked Amount 10.000	Range 39 - 174		Recovery = 95.20%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	392	0.67 ug/L	99

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

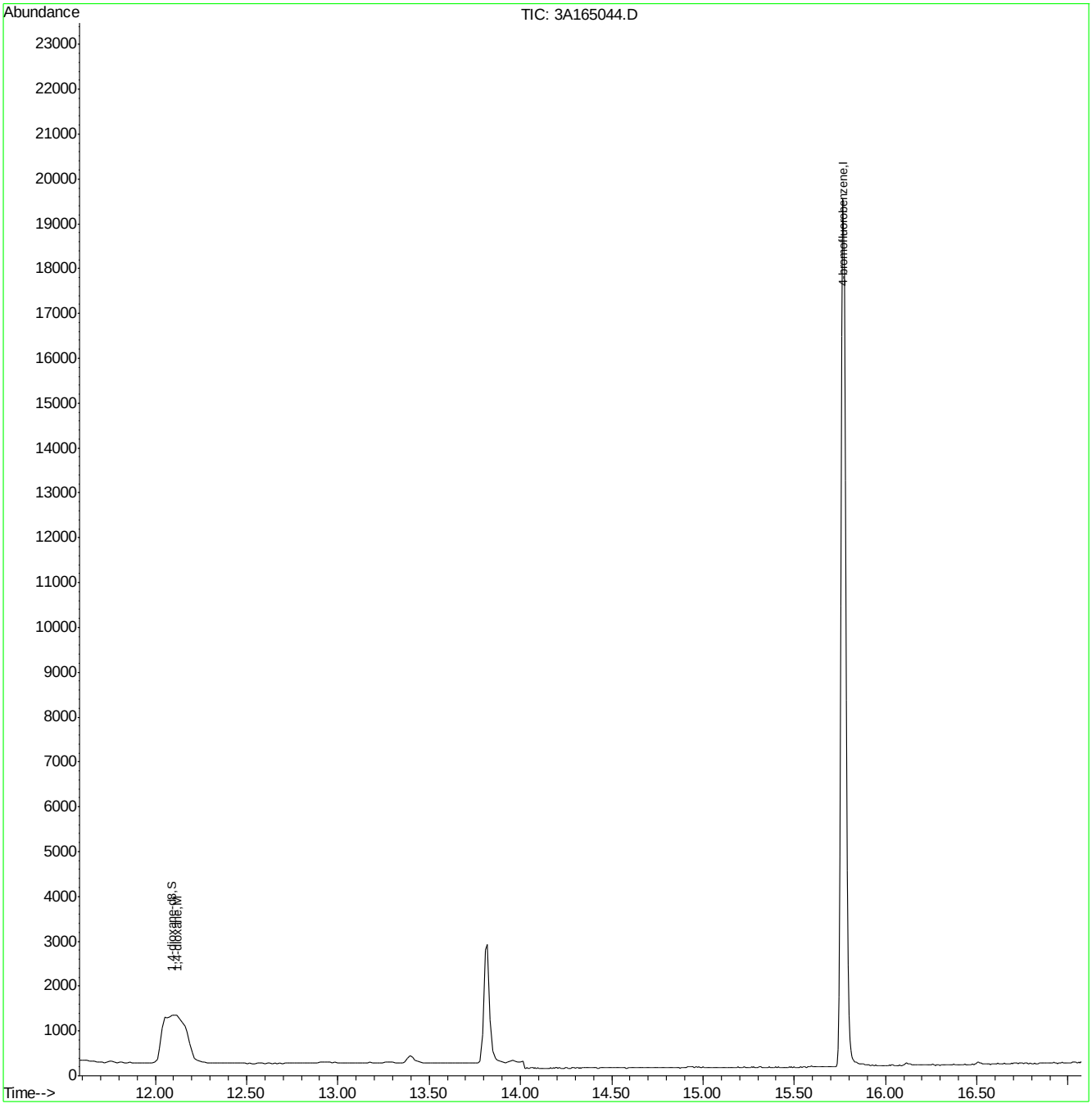
7.1.21

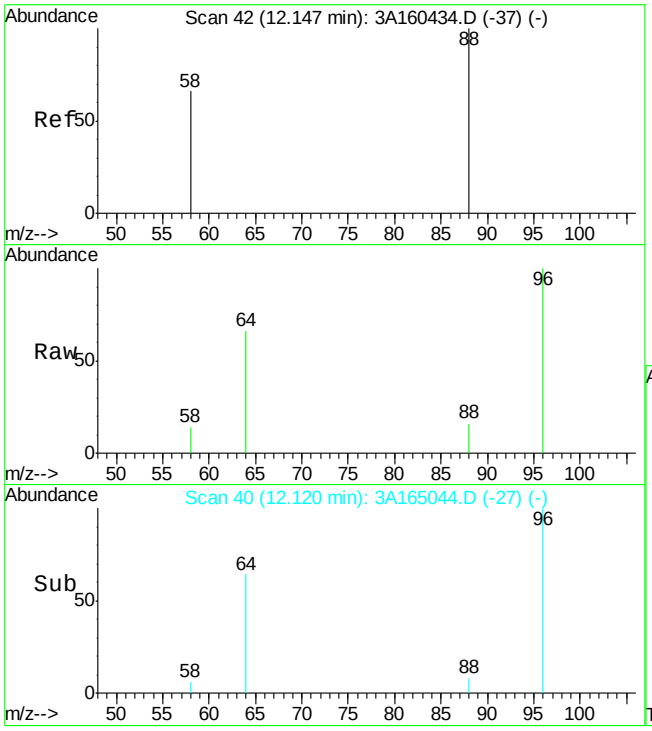
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165044.D
Acq On : 3 Mar 2021 7:31 pm
Operator : ROBERTS
Sample : JD20919-2 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 04 09:08:22 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

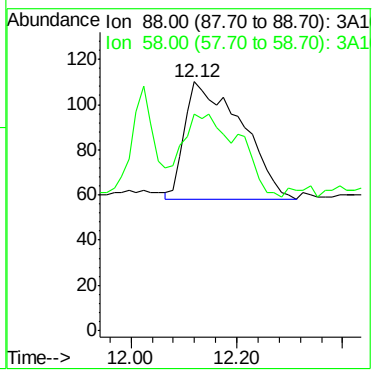




#3
1,4-dioxane
Concen: 0.67 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165044.D
Acq: 3 Mar 2021 7:31 pm

Tgt Ion: 88 Resp: 392

Ion	Ratio	Lower	Upper
88	100		
58	65.4	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165041.D
Acq On : 3 Mar 2021 5:49 pm
Operator : ROBERTS
Sample : JD20919-3 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 04 09:08:19 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11735	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.08	96	5114	8.51	ug/L	-0.01

Spiked Amount 10.000 Range 39 - 174 Recovery = 85.10%

Target Compounds Qvalue

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

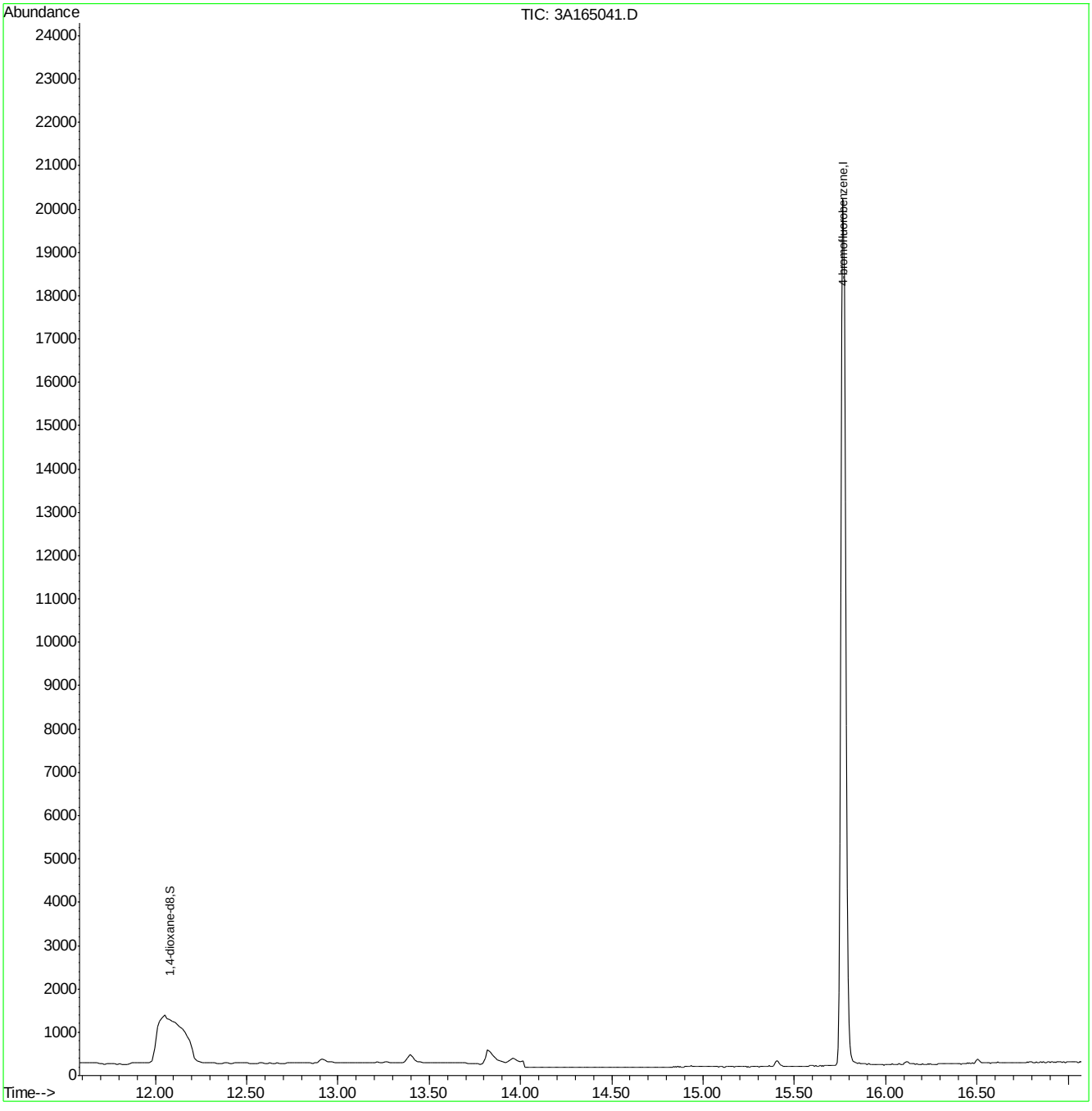
7.1.22

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165041.D
Acq On : 3 Mar 2021 5:49 pm
Operator : ROBERTS
Sample : JD20919-3 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 04 09:08:19 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165045.D
Acq On : 3 Mar 2021 8:00 pm
Operator : ROBERTS
Sample : JD20919-4 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 04 09:08:23 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11575	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	5549	9.36	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 93.60%			

Target Compounds	Qvalue

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

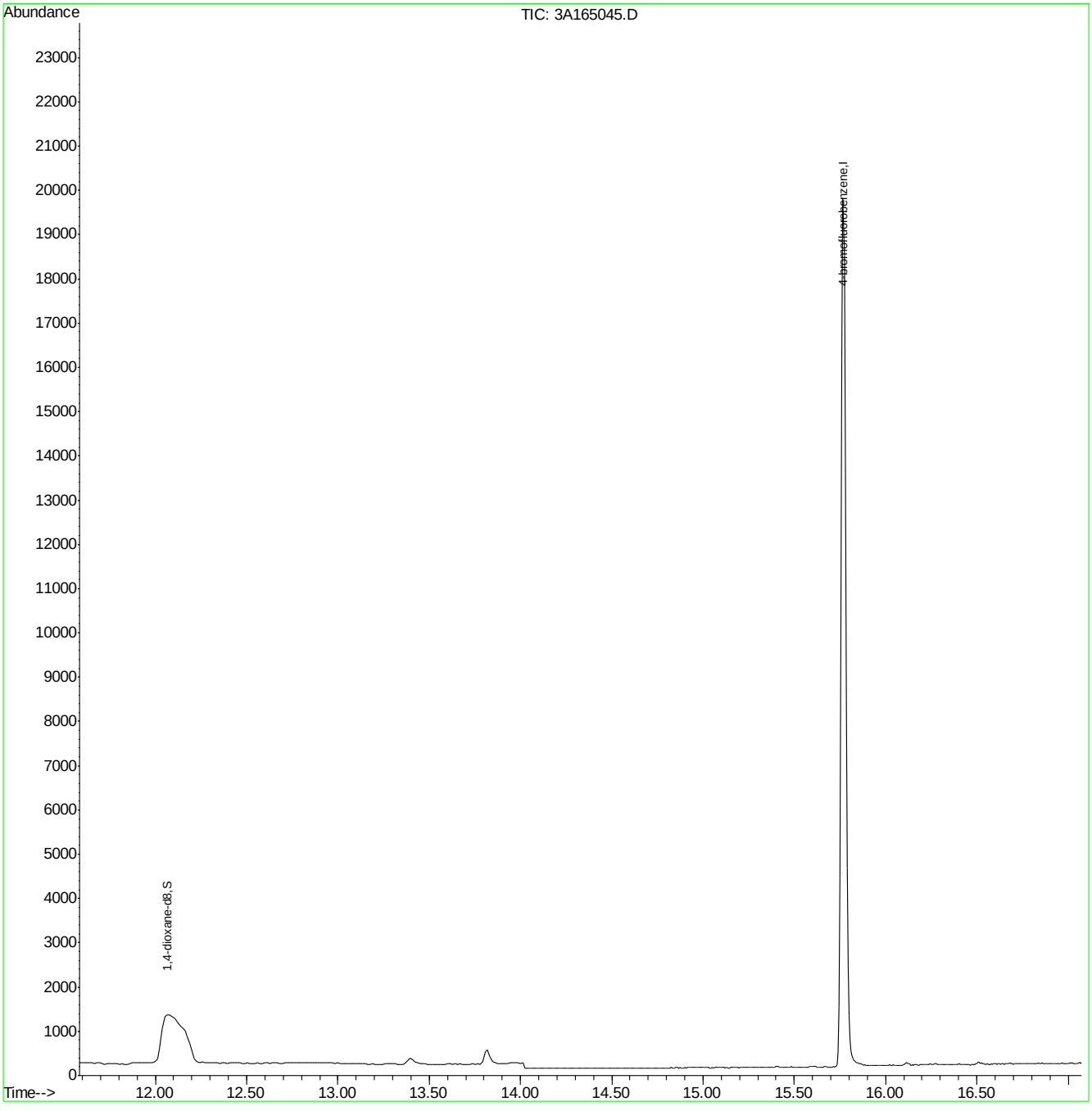
7.1.23

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165045.D
Acq On : 3 Mar 2021 8:00 pm
Operator : ROBERTS
Sample : JD20919-4 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 04 09:08:23 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165046.D
Acq On : 3 Mar 2021 8:28 pm
Operator : ROBERTS
Sample : JD20919-5 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 04 09:08:24 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10502	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.08	96	5183	9.64 ug/L	-0.01
Spiked Amount 10.000	Range 39 - 174		Recovery = 96.40%		

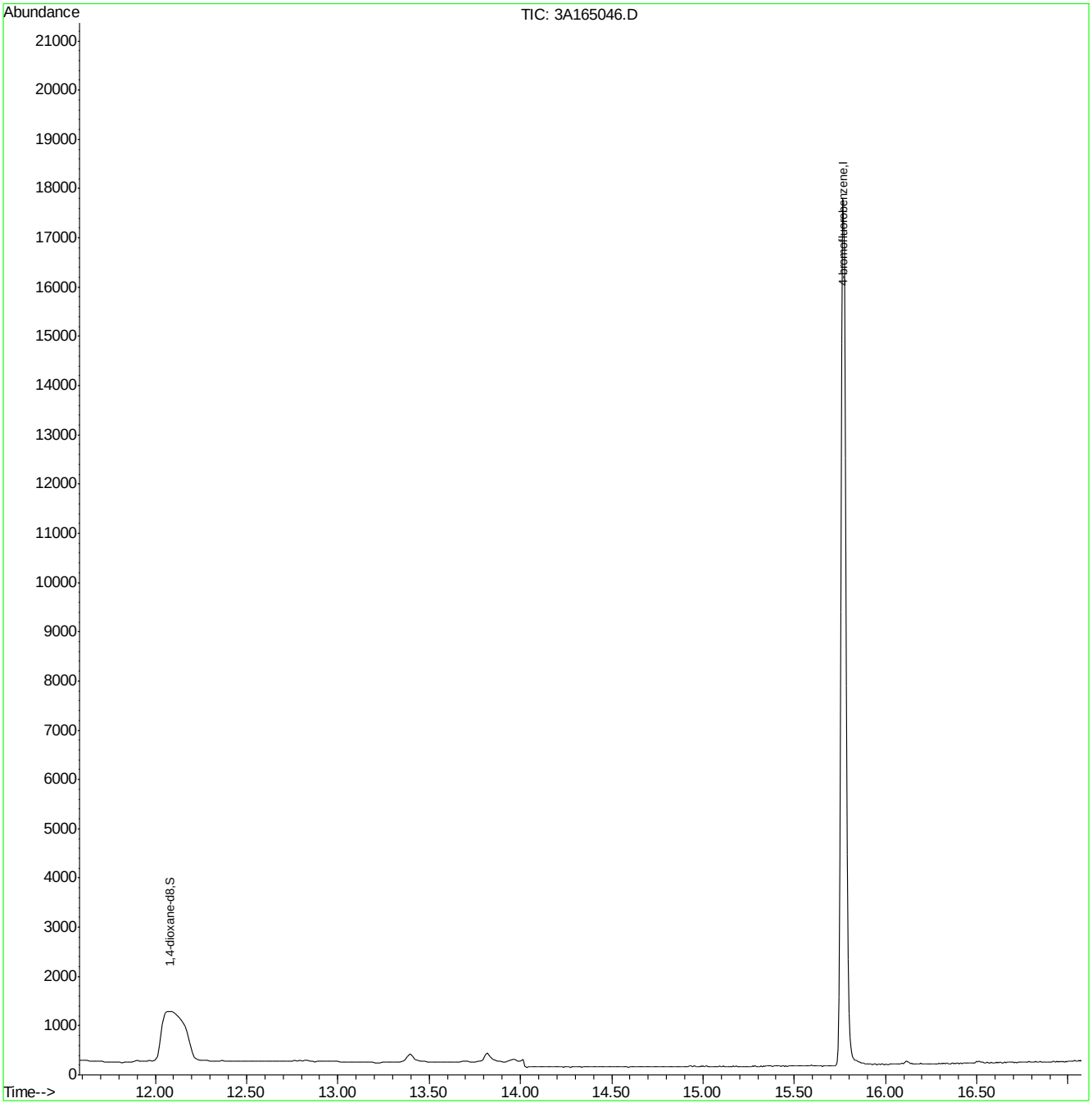
Target Compounds	Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165046.D
Acq On : 3 Mar 2021 8:28 pm
Operator : ROBERTS
Sample : JD20919-5 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 04 09:08:24 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165047.D
Acq On : 3 Mar 2021 8:57 pm
Operator : ROBERTS
Sample : JD20919-6 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 09:08:25 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10694	1.00 ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.09	96	5118	9.35 ug/L	0.00

Spiked Amount 10.000 Range 39 - 174 Recovery = 93.50%

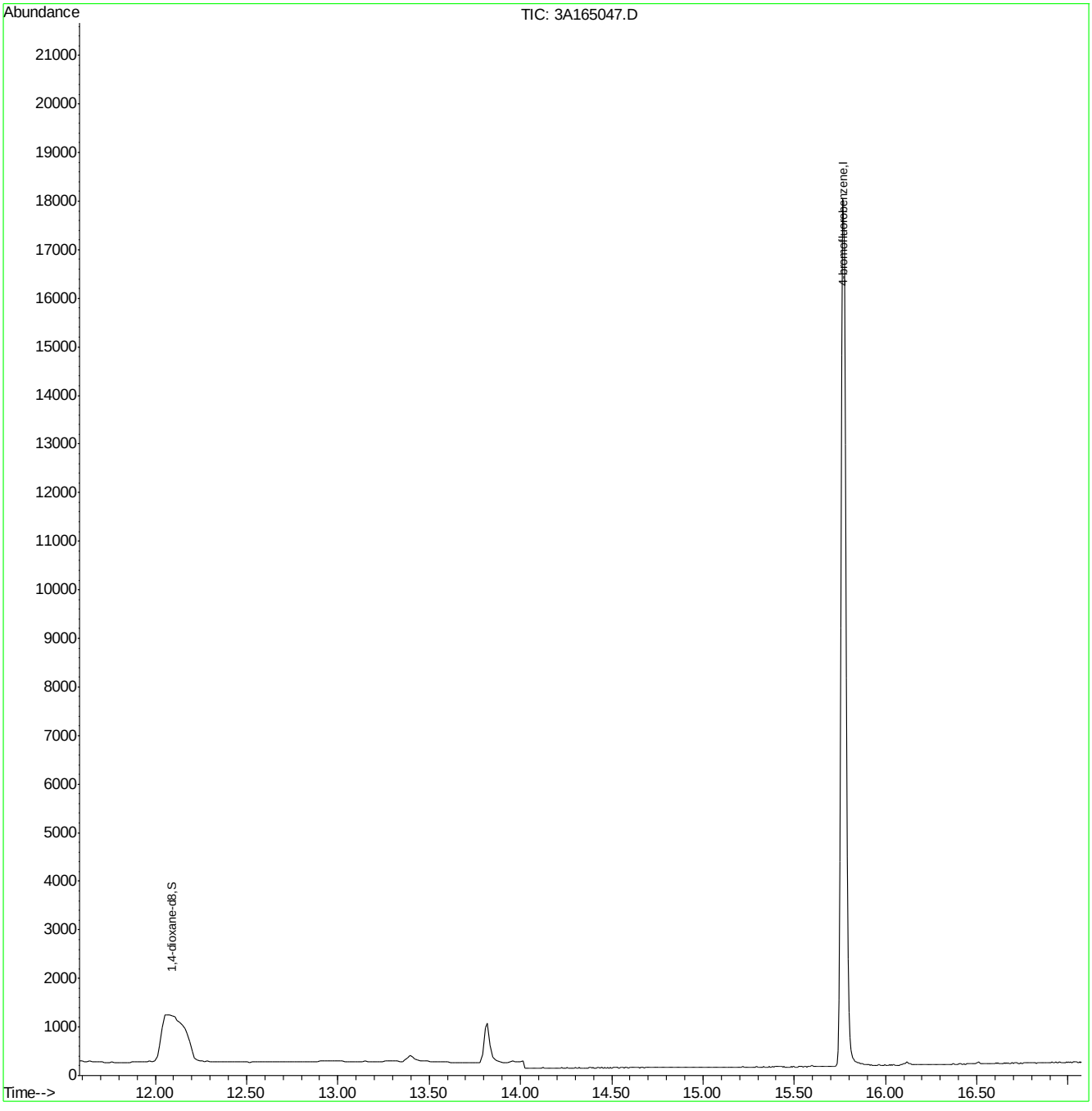
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165047.D
Acq On : 3 Mar 2021 8:57 pm
Operator : ROBERTS
Sample : JD20919-6 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 09:08:25 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165048.D
Acq On : 3 Mar 2021 9:26 pm
Operator : ROBERTS
Sample : JD20919-7 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 04 09:08:26 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11109	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	5546	9.75	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 97.50%

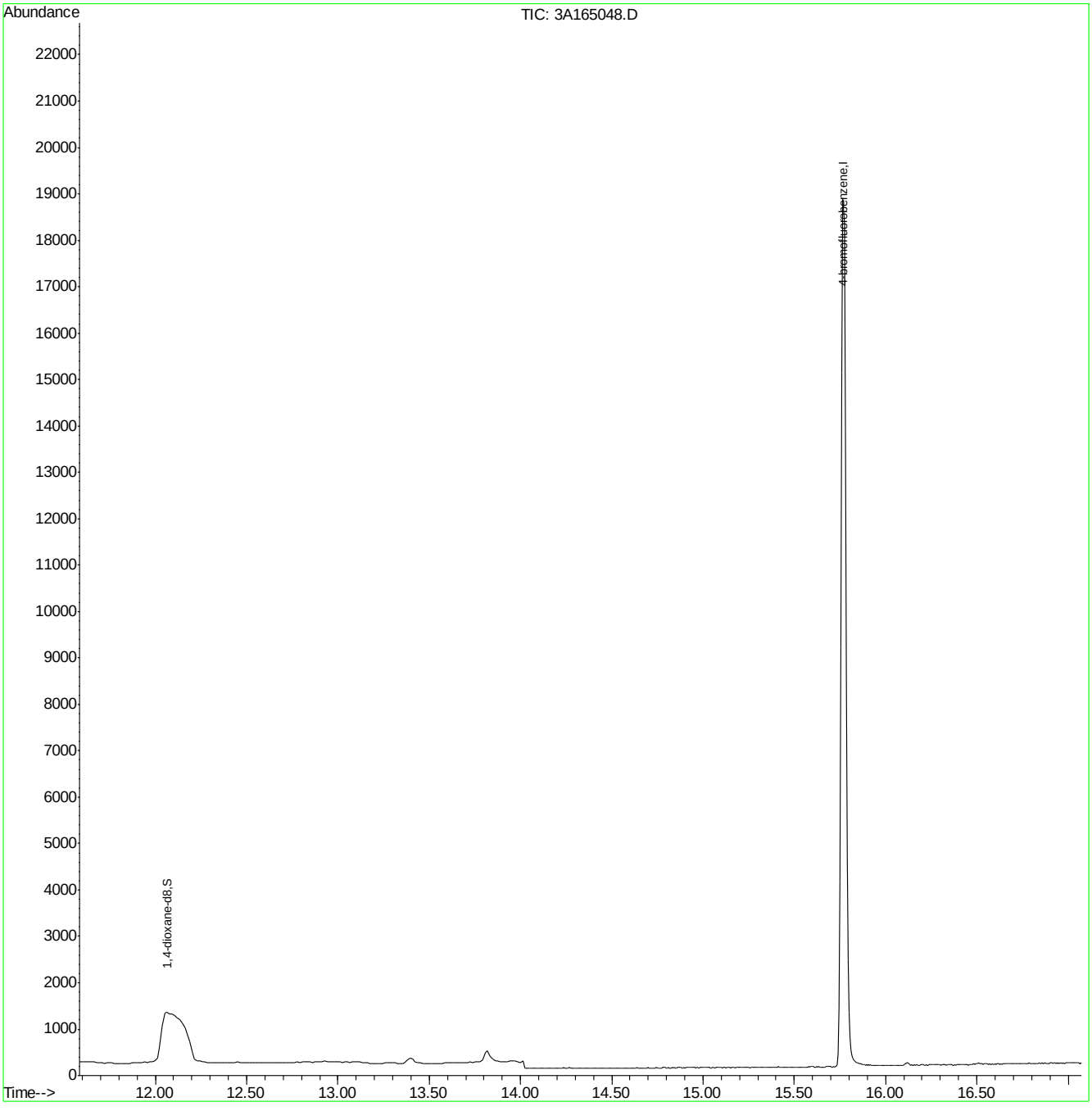
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165048.D
Acq On : 3 Mar 2021 9:26 pm
Operator : ROBERTS
Sample : JD20919-7 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 04 09:08:26 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165049.D
Acq On : 3 Mar 2021 9:54 pm
Operator : ROBERTS
Sample : JD20919-8 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 04 09:08:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

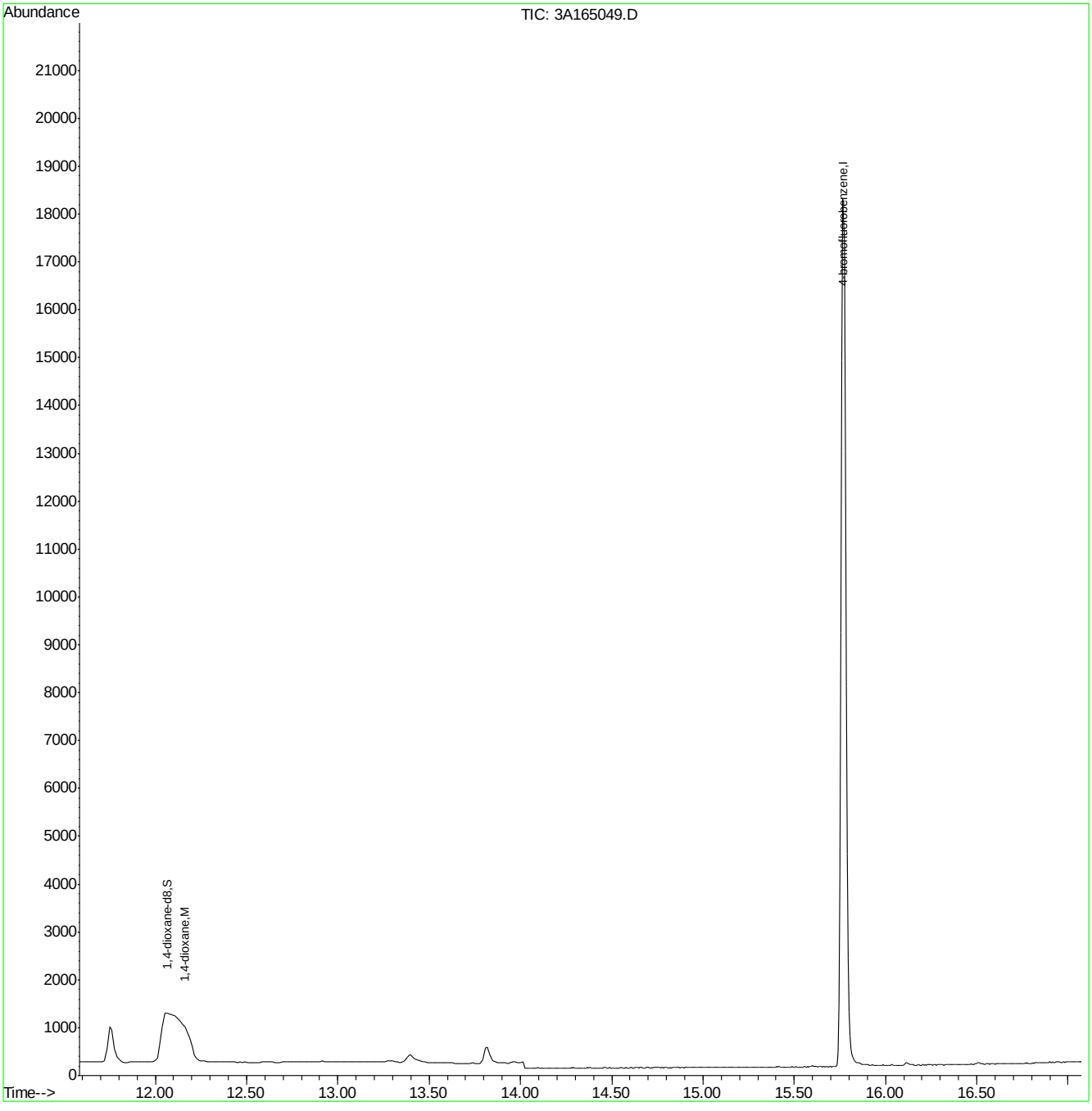
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10735	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5295	9.63 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 96.30%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.16	88	163	0.30 ug/L	86

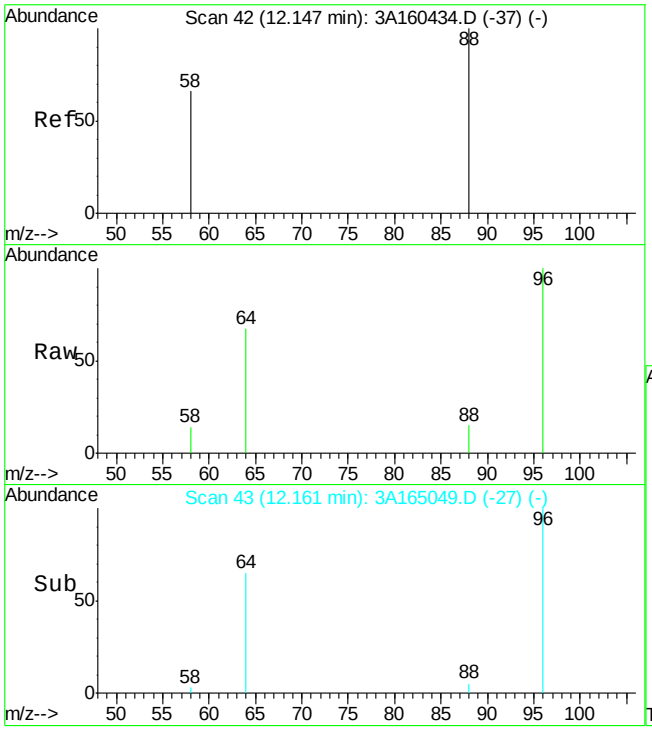
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165049.D
Acq On : 3 Mar 2021 9:54 pm
Operator : ROBERTS
Sample : JD20919-8 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 04 09:08:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

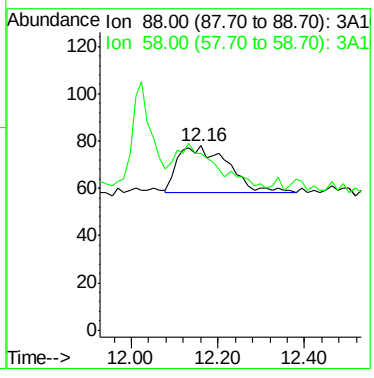




#3
1,4-dioxane
Concen: 0.30 ug/L
RT: 12.16 min Scan# 43
Delta R.T. 0.01 min
Lab File: 3A165049.D
Acq: 3 Mar 2021 9:54 pm

Tgt Ion: 88 Resp: 163

Ion	Ratio	Lower	Upper
88	100		
58	55.0	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165050.D
Acq On : 3 Mar 2021 10:23 pm
Operator : ROBERTS
Sample : JD20919-9 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 04 09:08:28 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10828	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5490	9.90 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 99.00%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	2603	4.74 ug/L	98

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

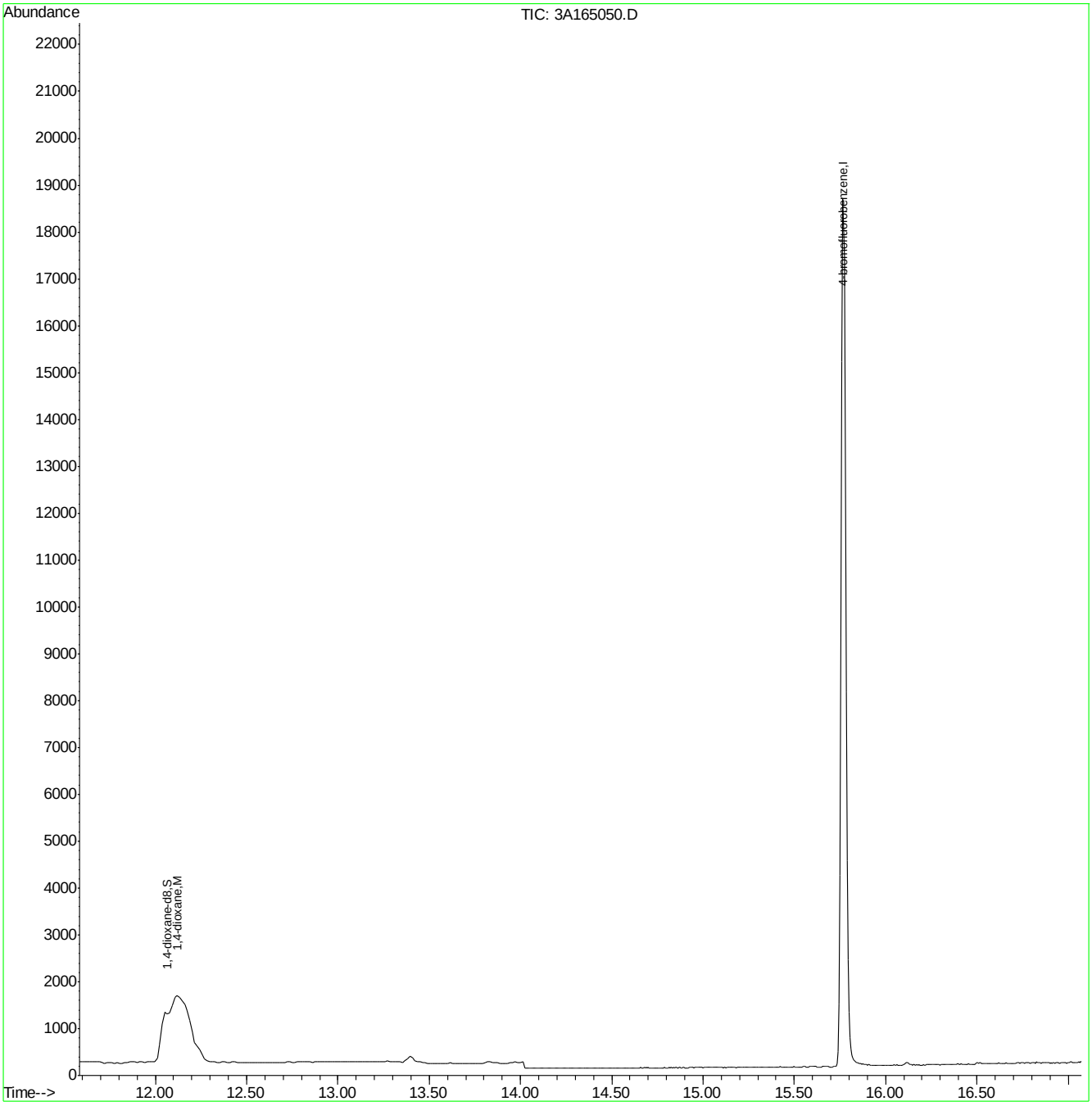
7.1.28

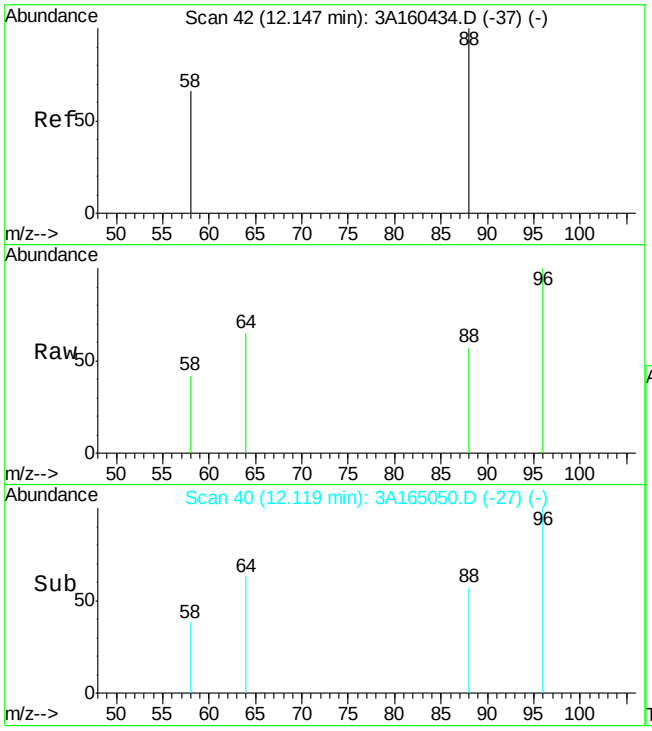
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165050.D
Acq On : 3 Mar 2021 10:23 pm
Operator : ROBERTS
Sample : JD20919-9 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 04 09:08:28 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

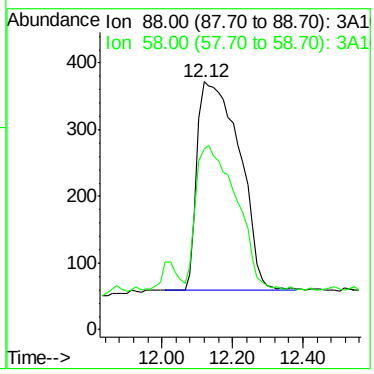




#3
1,4-dioxane
Concen: 4.74 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165050.D
Acq: 3 Mar 2021 10:23 pm

Tgt Ion: 88 Resp: 2603

Ion	Ratio	Lower	Upper
88	100		
58	68.1	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165051.D
Acq On : 3 Mar 2021 10:52 pm
Operator : ROBERTS
Sample : JD20919-10 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 04 09:08:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

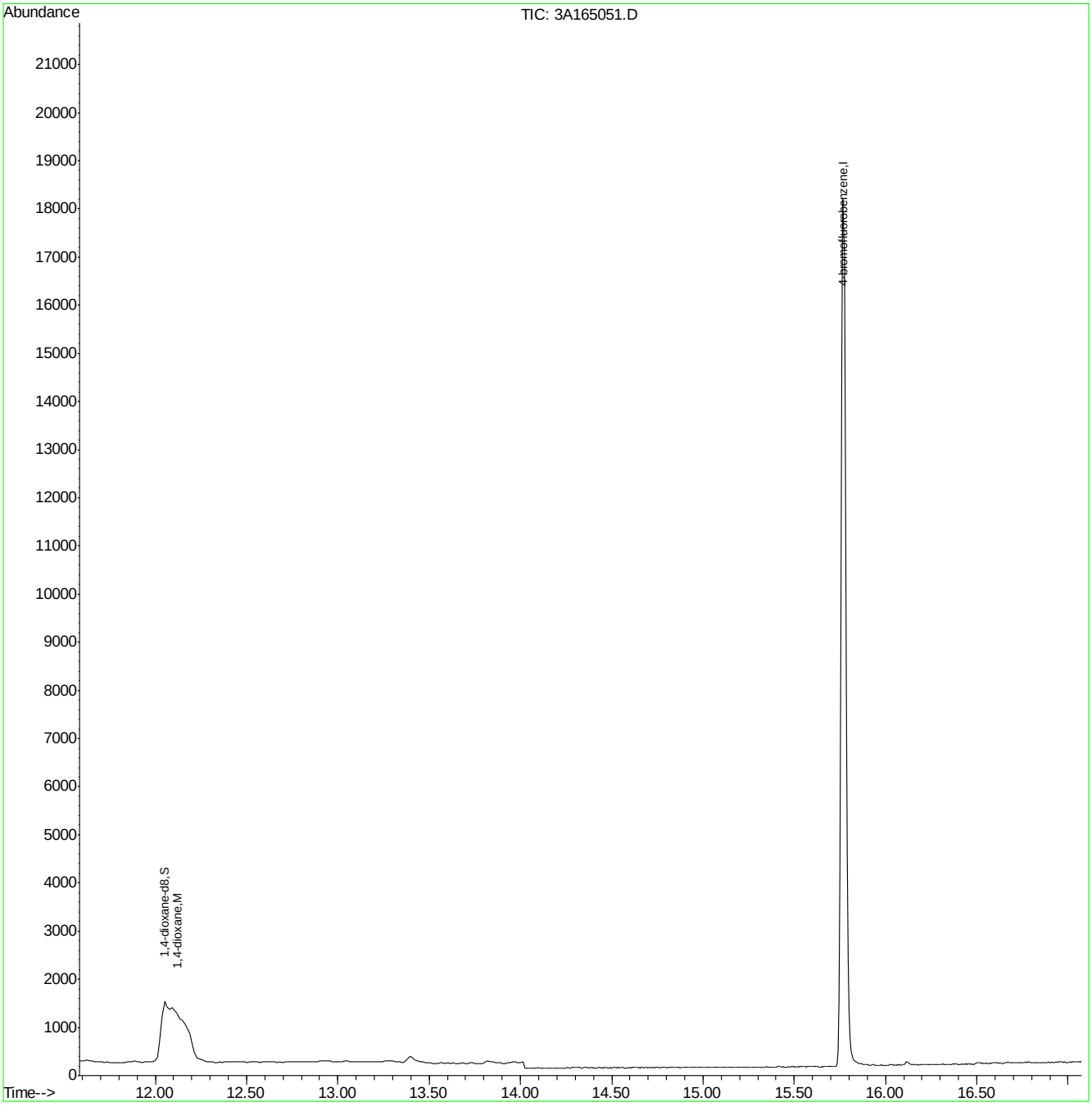
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10606	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.05	96	5996	11.04	ug/L	-0.04
Spiked Amount 10.000	Range 39 - 174		Recovery = 110.40%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	305	0.57	ug/L	95

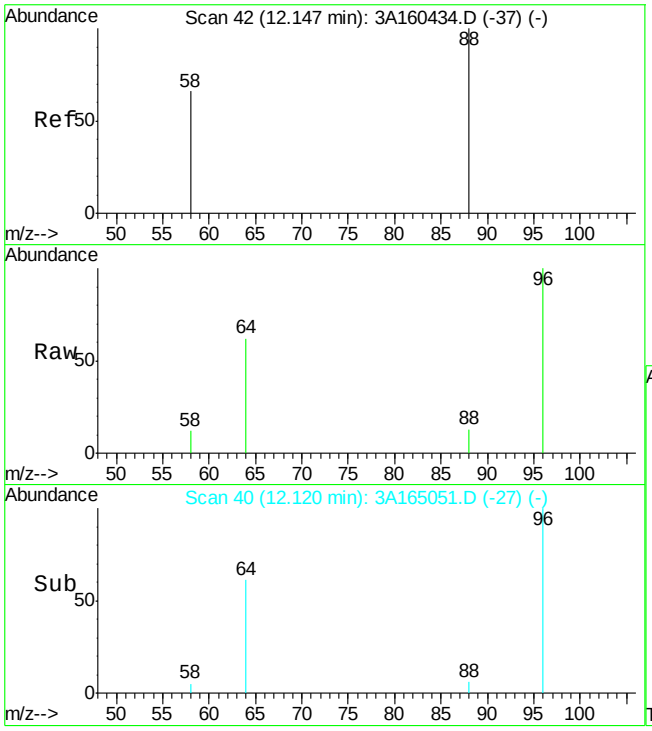
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165051.D
Acq On : 3 Mar 2021 10:52 pm
Operator : ROBERTS
Sample : JD20919-10 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 04 09:08:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

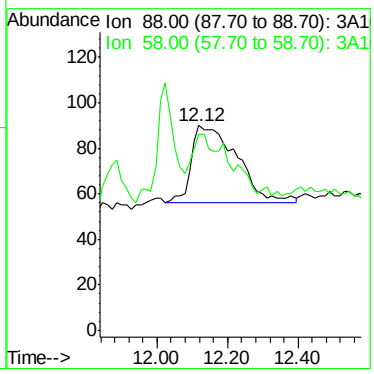




#3
1,4-dioxane
Concen: 0.57 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165051.D
Acq: 3 Mar 2021 10:52 pm

Tgt Ion: 88 Resp: 305

Ion	Ratio	Lower	Upper
88	100		
58	70.6	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165052.D
Acq On : 3 Mar 2021 11:20 pm
Operator : ROBERTS
Sample : JD20919-11 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Mar 04 09:08:30 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9464	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	5443	11.23	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 112.30%

Target Compounds	Qvalue

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

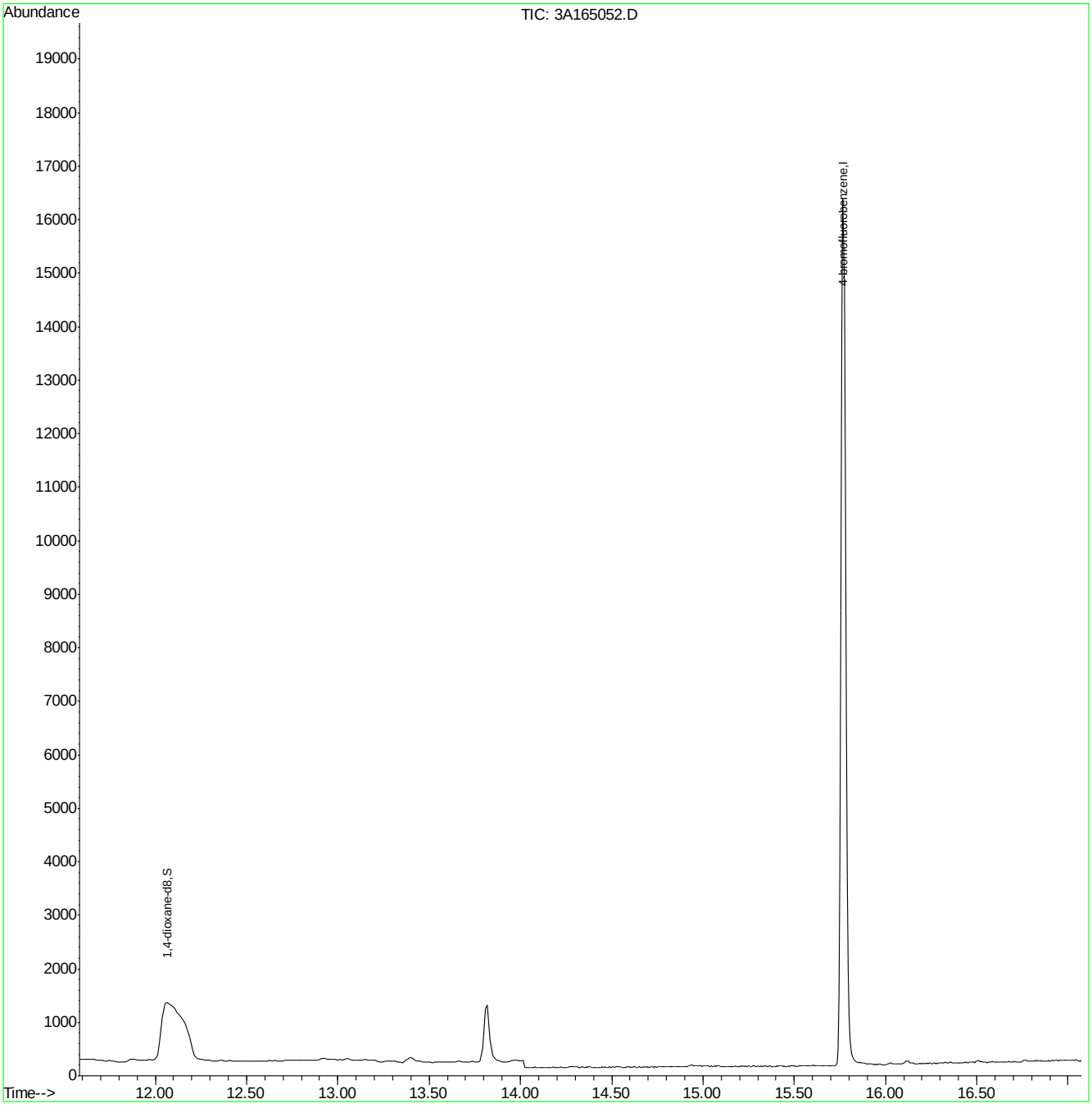
7.1.30

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165052.D
Acq On : 3 Mar 2021 11:20 pm
Operator : ROBERTS
Sample : JD20919-11 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Mar 04 09:08:30 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165053.D
Acq On : 3 Mar 2021 11:49 pm
Operator : ROBERTS
Sample : JD20919-12 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Mar 04 09:08:31 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9061	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.08	96	5322	11.47	ug/L	-0.01
Spiked Amount 10.000	Range 39 - 174		Recovery = 114.70%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.13	88	270	0.59	ug/L	82

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

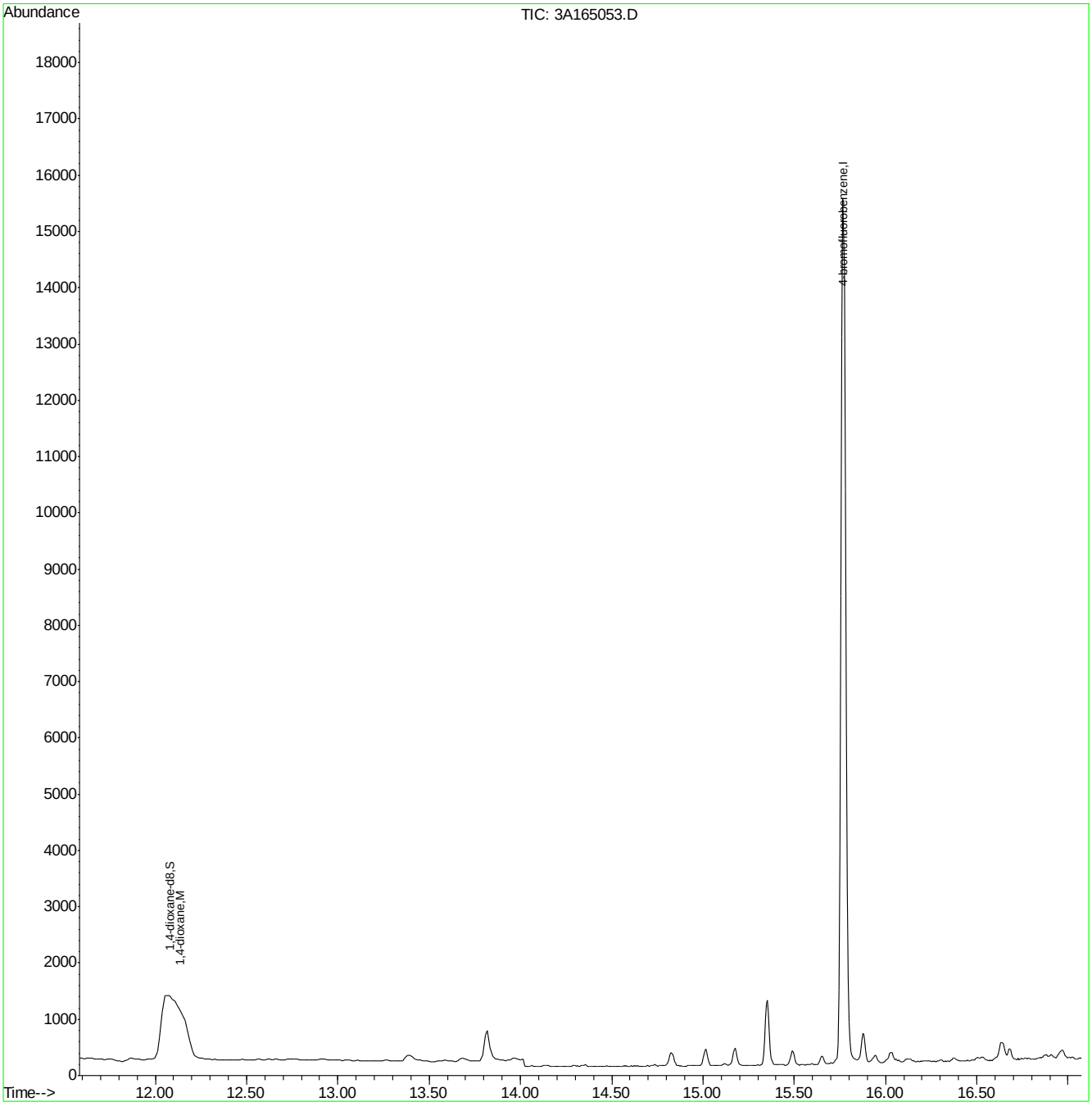
7.1.31

7

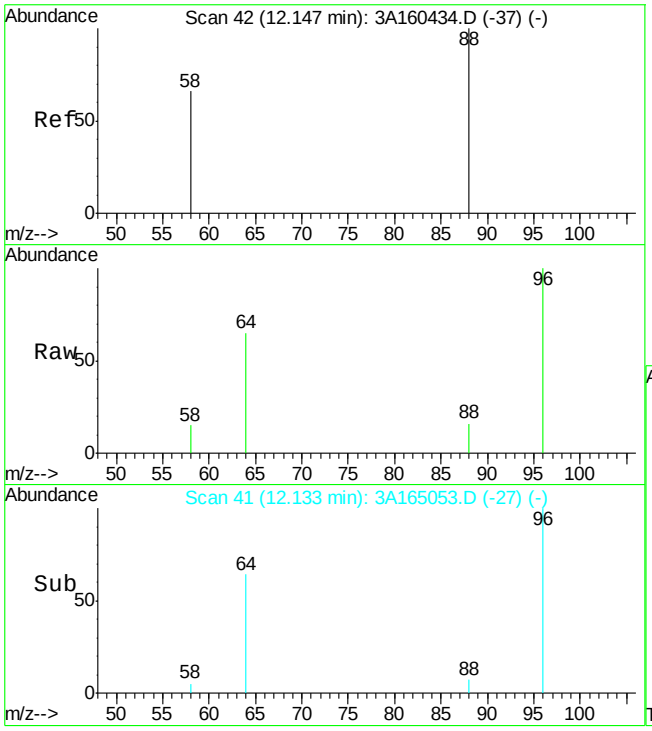
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165053.D
Acq On : 3 Mar 2021 11:49 pm
Operator : ROBERTS
Sample : JD20919-12 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Mar 04 09:08:31 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



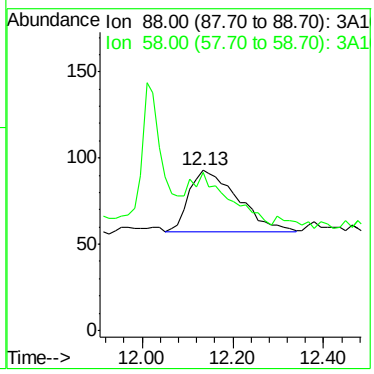
M3A6923.M Thu Mar 04 09:20:03 2021 ACCUNJ Page: 2



#3
1,4-dioxane
Concen: 0.59 ug/L
RT: 12.13 min Scan# 41
Delta R.T. -0.01 min
Lab File: 3A165053.D
Acq: 3 Mar 2021 11:49 pm

Tgt Ion: 88 Resp: 270

Ion	Ratio	Lower	Upper
88	100		
58	80.6	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165042.D
Acq On : 3 Mar 2021 6:34 pm
Operator : ROBERTS
Sample : JD20919-13 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 04 09:08:20 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	12923	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	5211	7.87	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 78.70%

Target Compounds	Qvalue

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

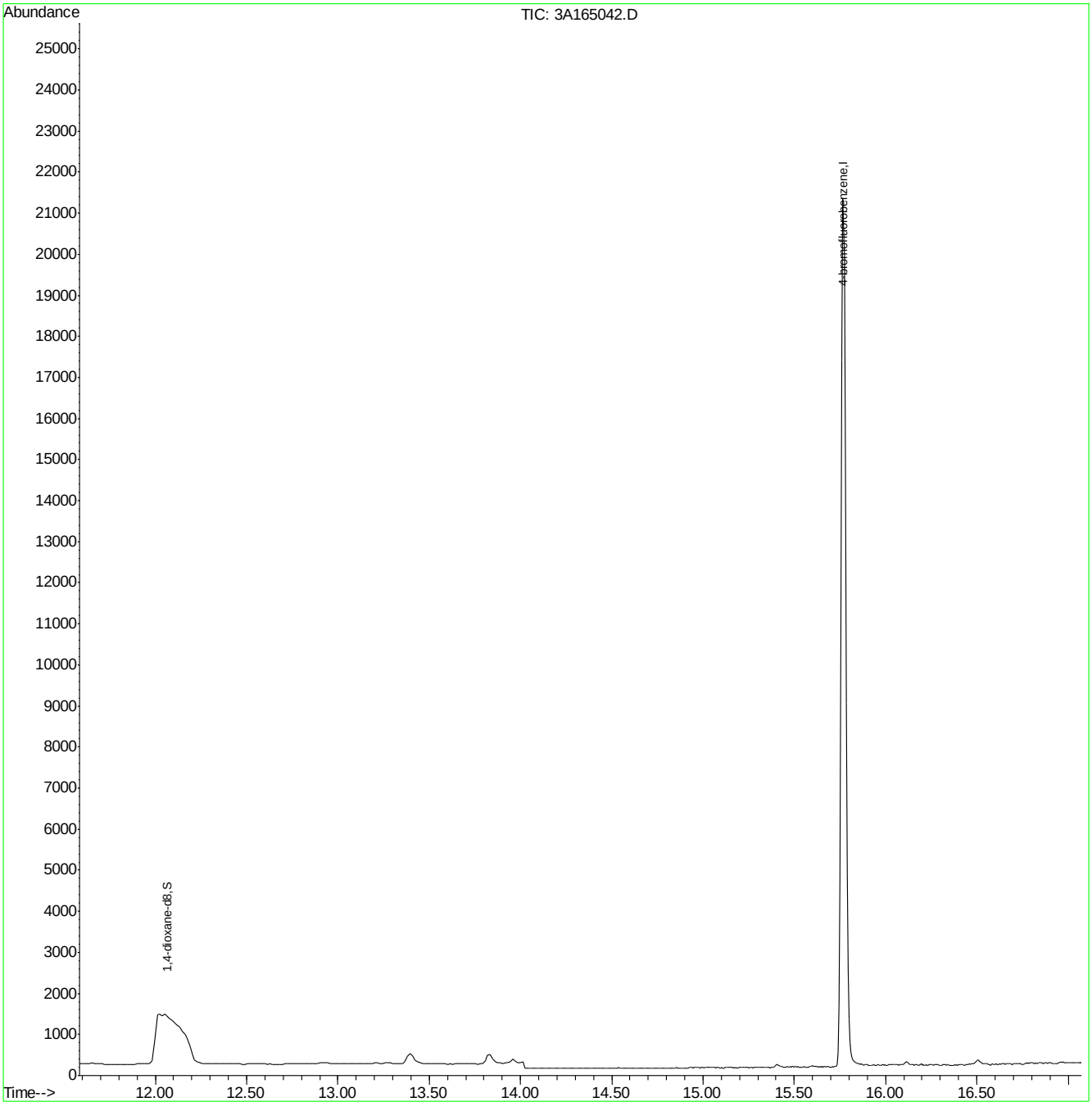
7.1.32

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165042.D
Acq On : 3 Mar 2021 6:34 pm
Operator : ROBERTS
Sample : JD20919-13 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 04 09:08:20 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165054.D
Acq On : 4 Mar 2021 12:18 am
Operator : ROBERTS
Sample : JD20919-14 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Mar 04 09:08:32 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10445	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	5575	10.42	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 104.20%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	700	1.32	ug/L	91

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

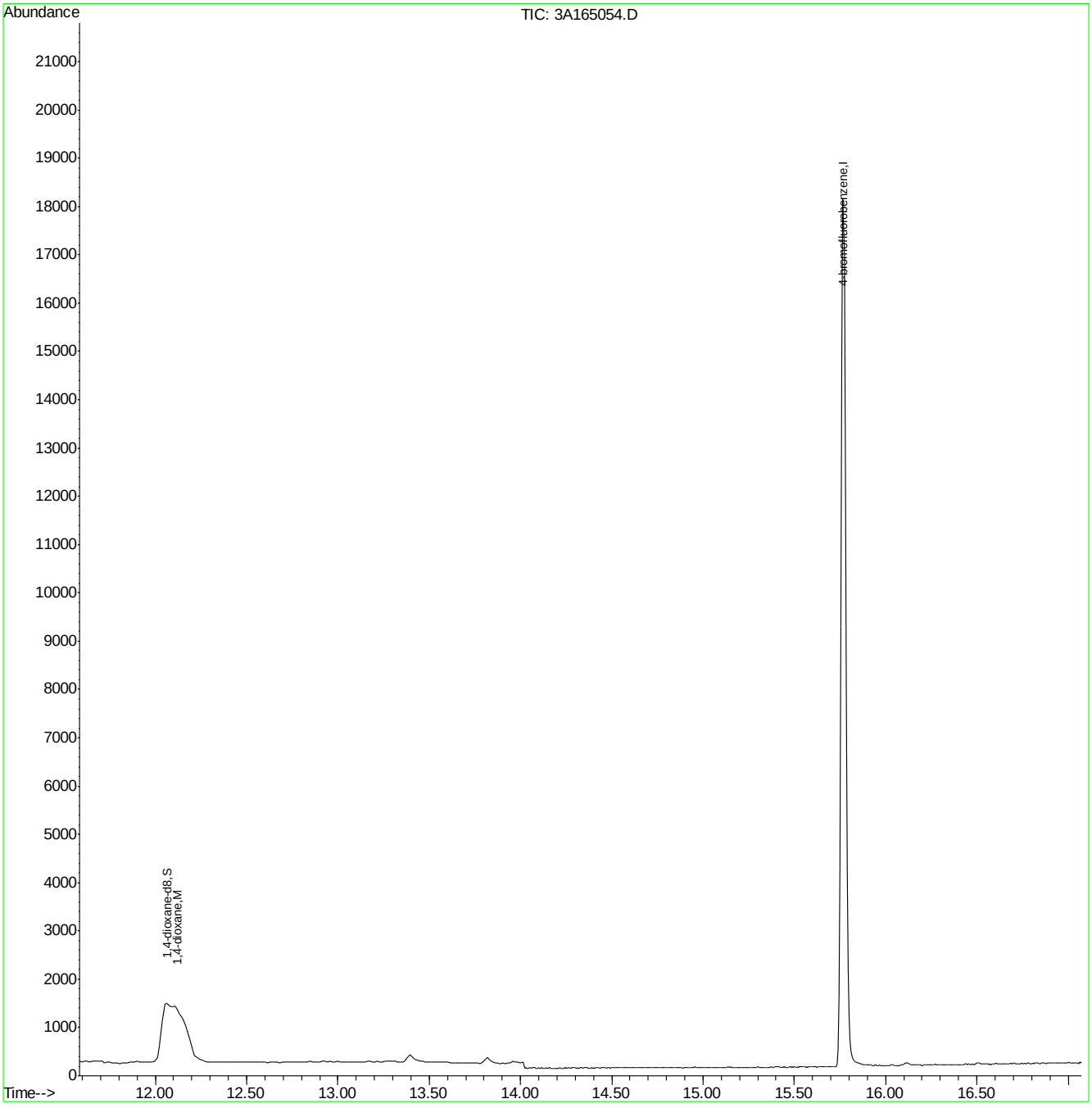
7.1.33

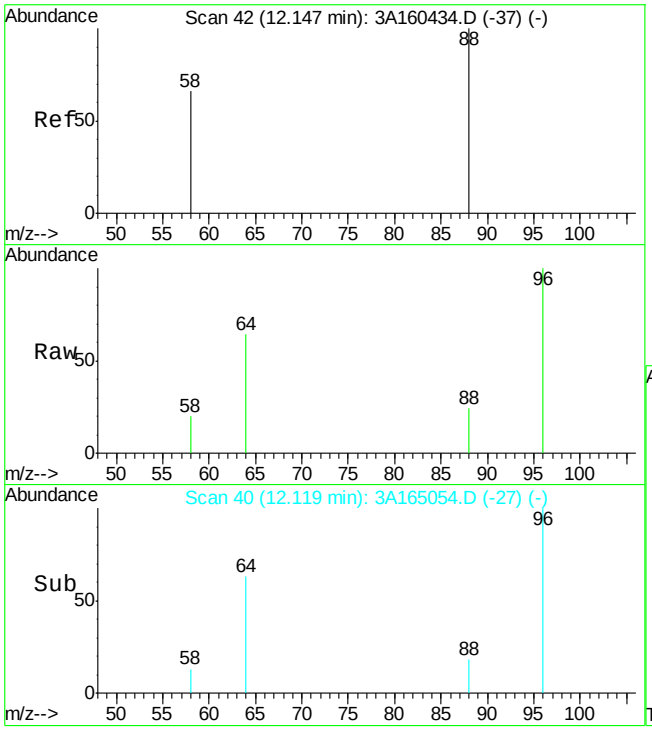
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165054.D
Acq On : 4 Mar 2021 12:18 am
Operator : ROBERTS
Sample : JD20919-14 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Mar 04 09:08:32 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

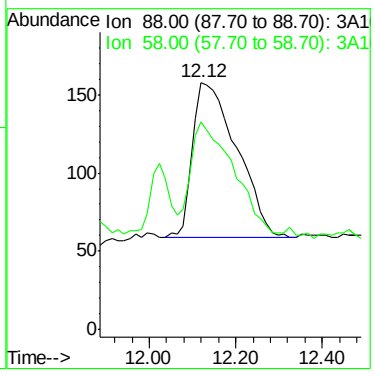




#3
1,4-dioxane
Concen: 1.32 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165054.D
Acq: 4 Mar 2021 12:18 am

Tgt Ion: 88 Resp: 700

Ion	Ratio	Lower	Upper
88	100		
58	73.7	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165055.D
Acq On : 4 Mar 2021 12:48 am
Operator : ROBERTS
Sample : JD20919-15 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Mar 04 09:08:33 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

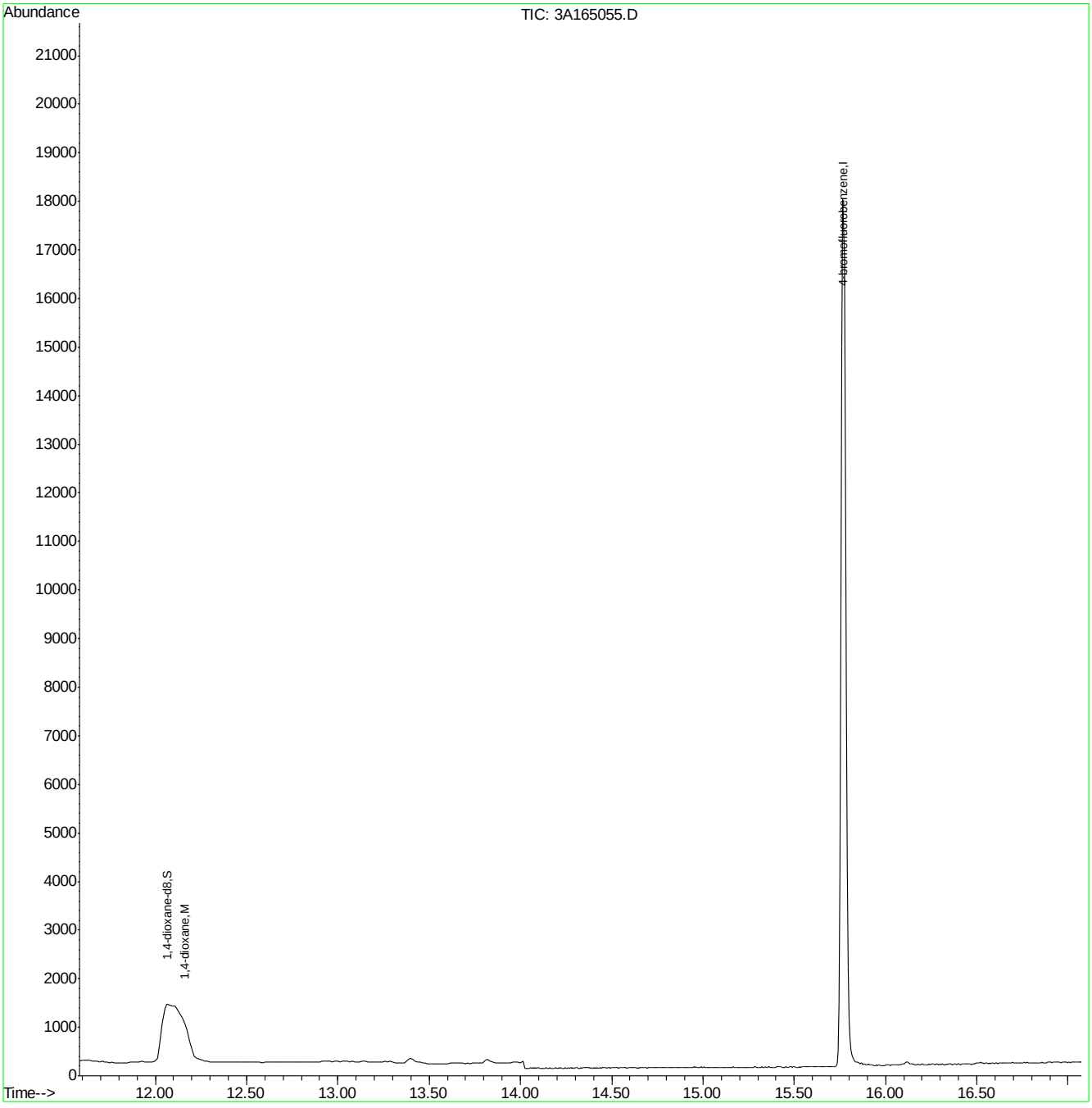
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10436	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	5575	10.43	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 104.30%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.16	88	520	0.98	ug/L	97

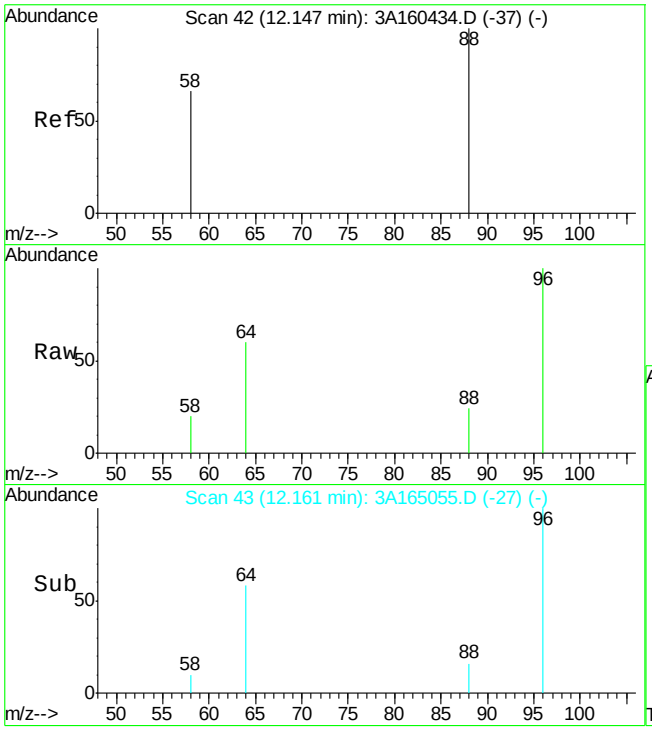
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165055.D
Acq On : 4 Mar 2021 12:48 am
Operator : ROBERTS
Sample : JD20919-15 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Mar 04 09:08:33 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

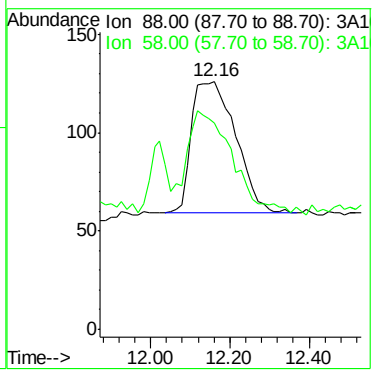




#3
1,4-dioxane
Concen: 0.98 ug/L
RT: 12.16 min Scan# 43
Delta R.T. 0.01 min
Lab File: 3A165055.D
Acq: 4 Mar 2021 12:48 am

Tgt Ion: 88 Resp: 520

Ion	Ratio	Lower	Upper
88	100		
58	64.2	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165060.D
Acq On : 4 Mar 2021 12:49 pm
Operator : ROBERTS
Sample : JD20919-16 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 04 14:30:39 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10889	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5883	10.55 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 105.50%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.13	88	547	0.99 ug/L	97

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

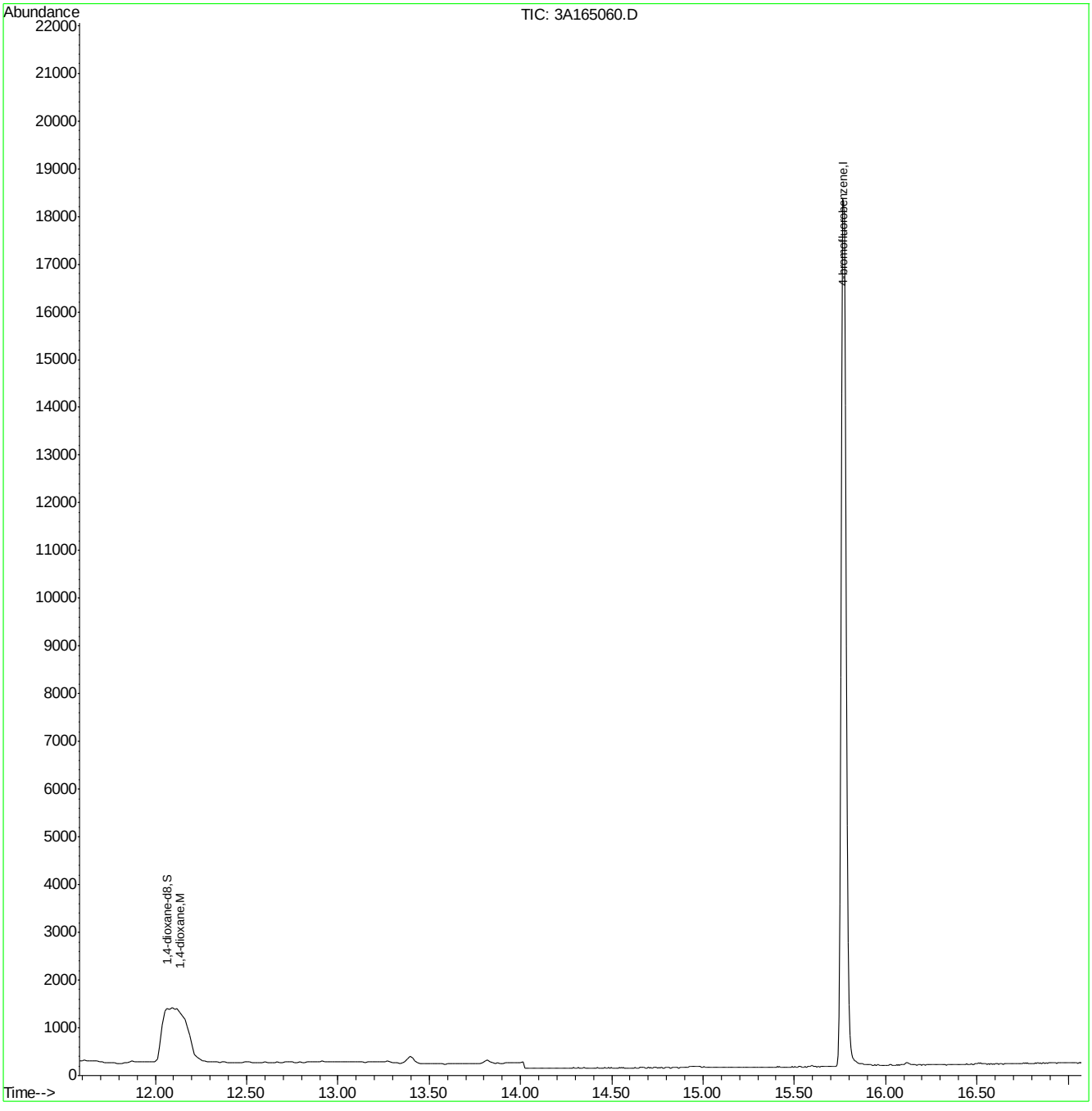
7.1.35

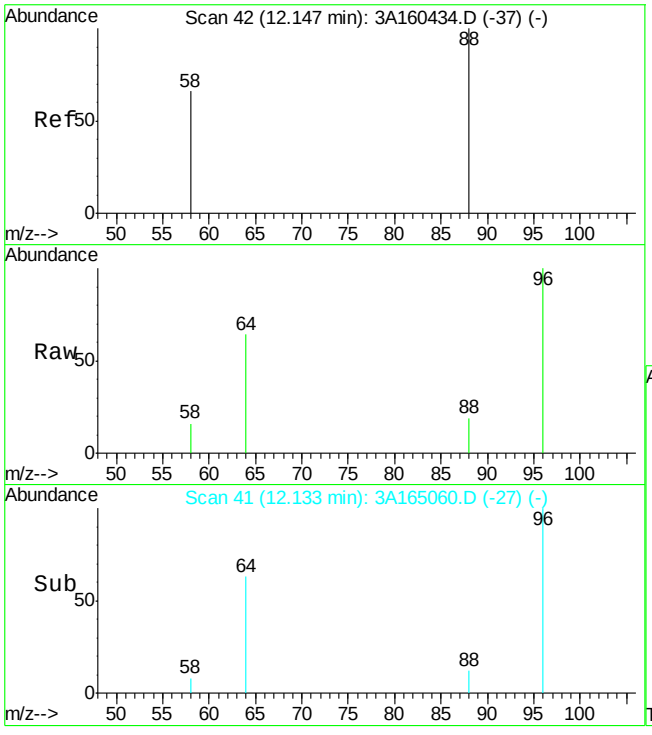
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165060.D
Acq On : 4 Mar 2021 12:49 pm
Operator : ROBERTS
Sample : JD20919-16 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 04 14:30:39 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

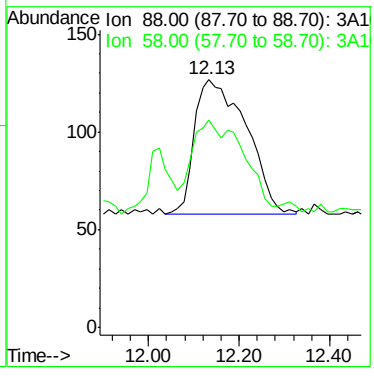




#3
1,4-dioxane
Concen: 0.99 ug/L
RT: 12.13 min Scan# 41
Delta R.T. -0.01 min
Lab File: 3A165060.D
Acq: 4 Mar 2021 12:49 pm

Tgt Ion: 88 Resp: 547

Ion	Ratio	Lower	Upper
88	100		
58	63.8	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165038.D
Acq On : 3 Mar 2021 4:15 pm
Operator : ROBERTS
Sample : JD20919-17 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 04 09:08:16 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	12174	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5290	8.49 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 84.90%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.13	88	499	0.81 ug/L	95

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

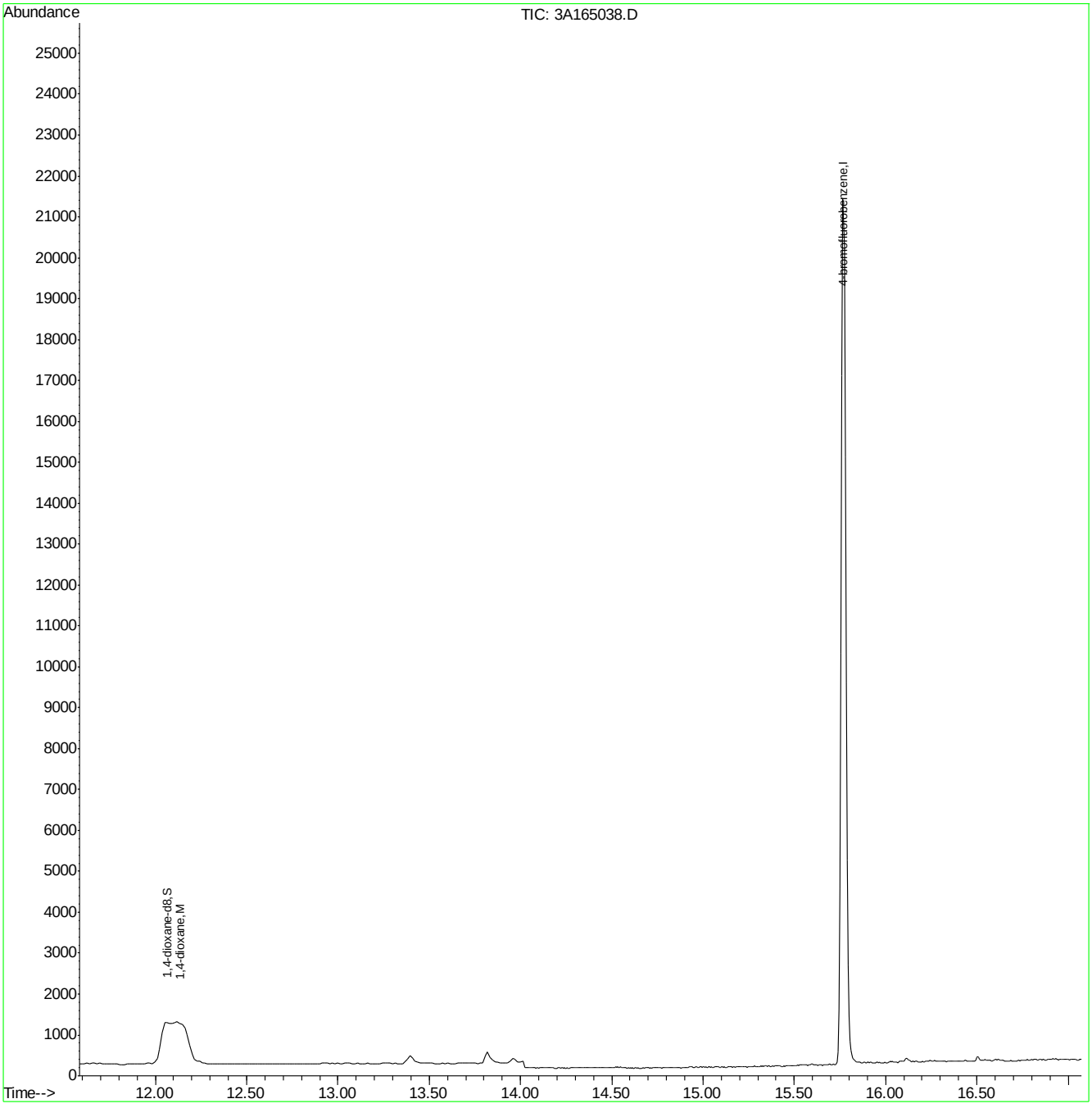
7.1.36

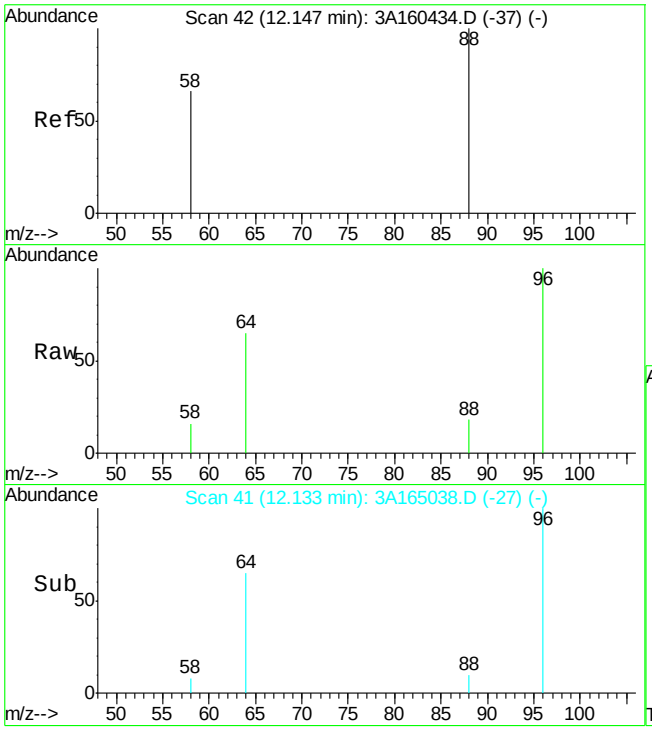
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165038.D
Acq On : 3 Mar 2021 4:15 pm
Operator : ROBERTS
Sample : JD20919-17 C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 04 09:08:16 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

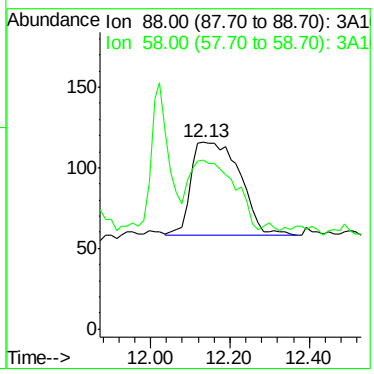




#3
1,4-dioxane
Concen: 0.81 ug/L
RT: 12.13 min Scan# 41
Delta R.T. -0.01 min
Lab File: 3A165038.D
Acq: 3 Mar 2021 4:15 pm

Tgt Ion: 88 Resp: 499

Ion	Ratio	Lower	Upper
88	100		
58	70.7	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165061.D
Acq On : 4 Mar 2021 1:18 pm
Operator : ROBERTS
Sample : JD20919-18 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 04 14:30:44 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10165	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	6317	12.14	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 121.40%

Target Compounds Qvalue

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

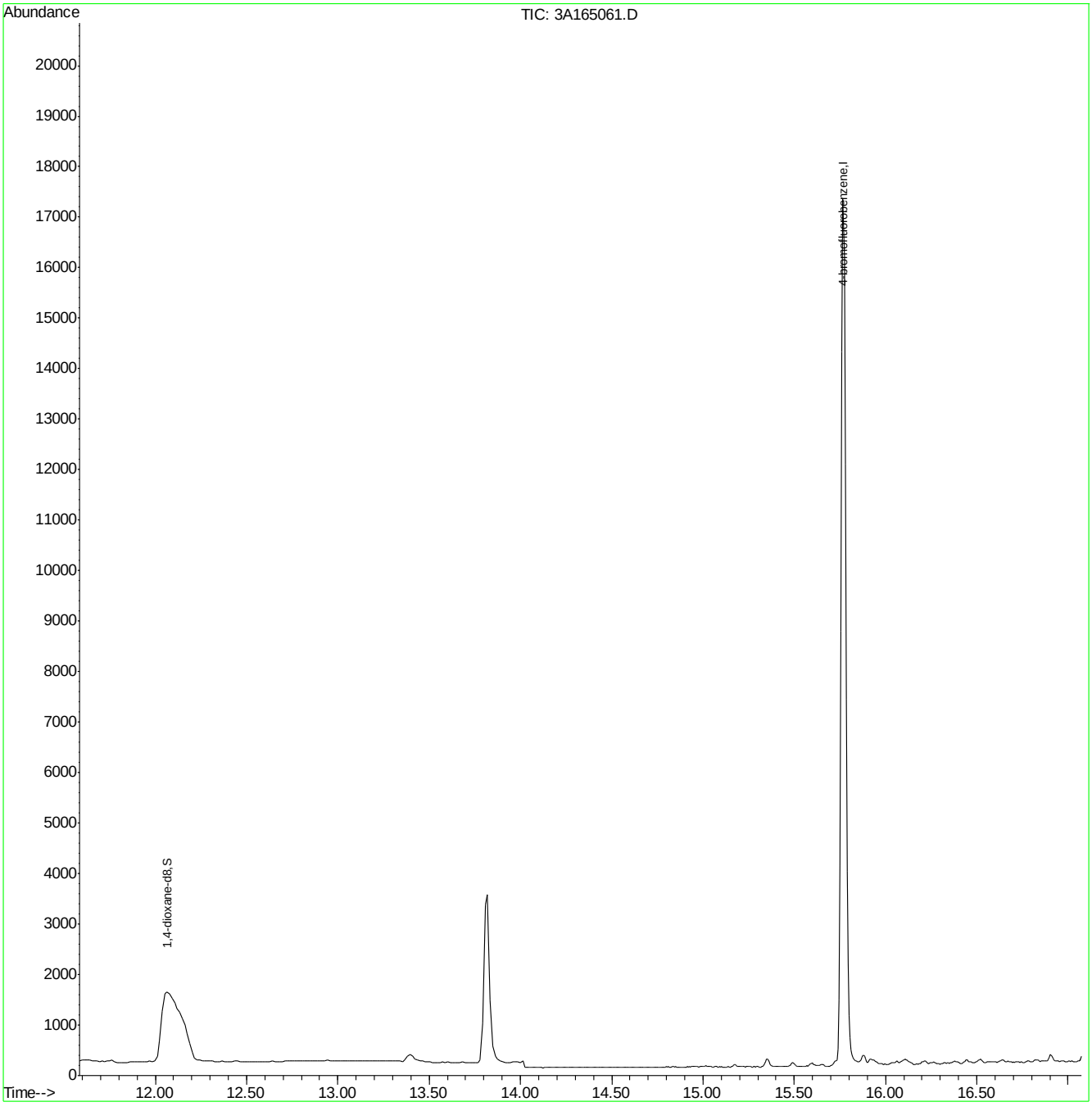
7.1.37

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165061.D
Acq On : 4 Mar 2021 1:18 pm
Operator : ROBERTS
Sample : JD20919-18 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 04 14:30:44 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Fri Mar 05 17:39:22 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102755.d
Acq On : 4 Mar 2021 11:51 am
Operator : brittank
Sample : mb c Inst : MS4B
Misc : MS46075,V4B4445,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:21:20 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.458	65	129454	500.00	ug/L	-0.03
5) pentafluorobenzene	8.446	168	273559	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	369306	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	394186	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	289992	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.482	113	137571	50.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.30%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	139270	49.17	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.34%			
75) toluene-d8 (s)	10.909	98	443124	49.21	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.42%			
98) 4-bromofluorobenzene (s)	13.770	95	216799	50.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.88%			

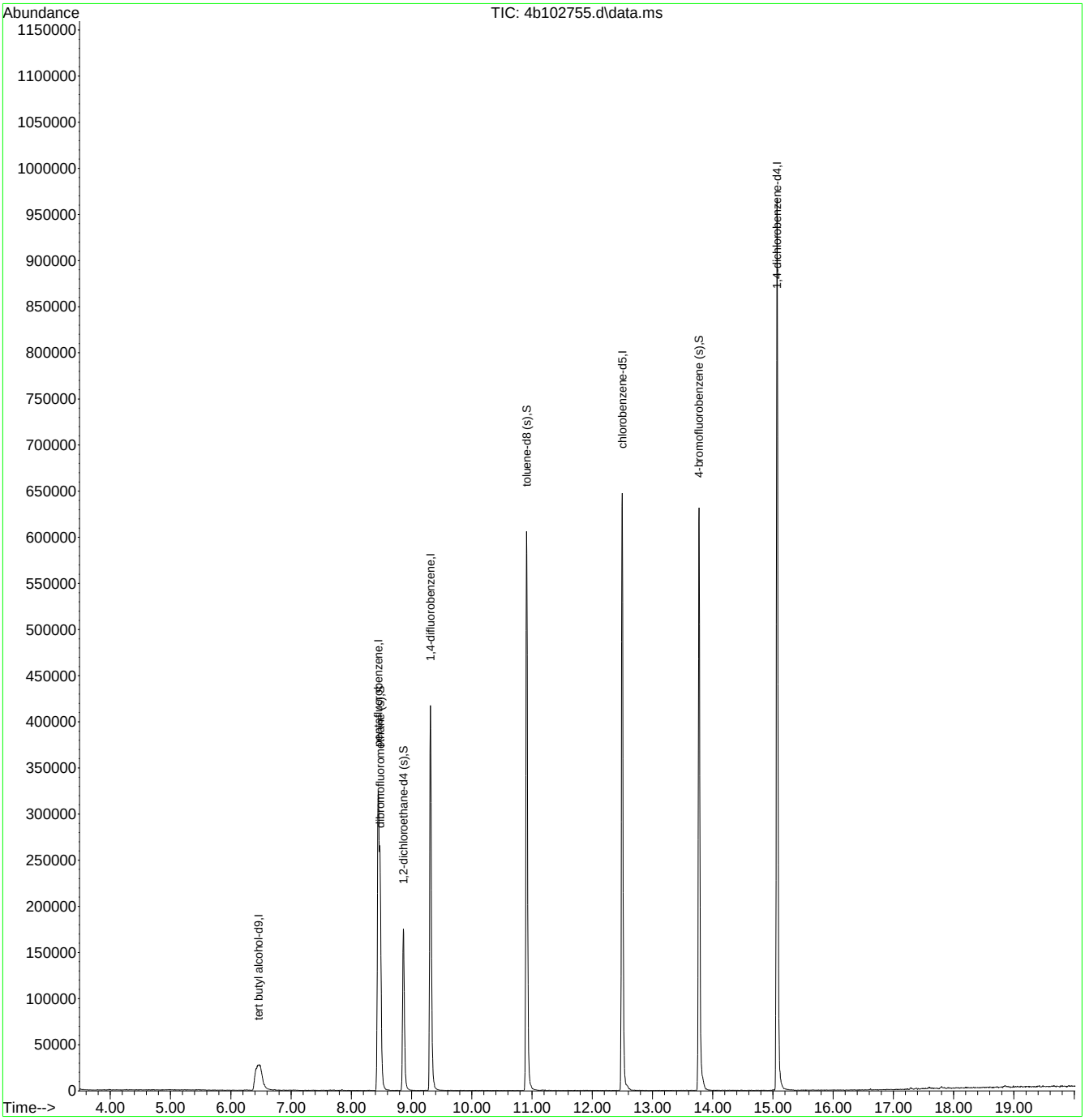
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102755.d
Acq On : 4 Mar 2021 11:51 am
Operator : brittank
Sample : mb c Inst : MS4B
Misc : MS46075,V4B4445,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:21:20 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



M4B4435.M Thu Mar 04 23:44:41 2021 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208827.d
Acq On : 5 Mar 2021 10:31 am
Operator : krizhkac
Sample : mb c Inst : GCMS2A
Misc : MS46075,V2A9078,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:25:07 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

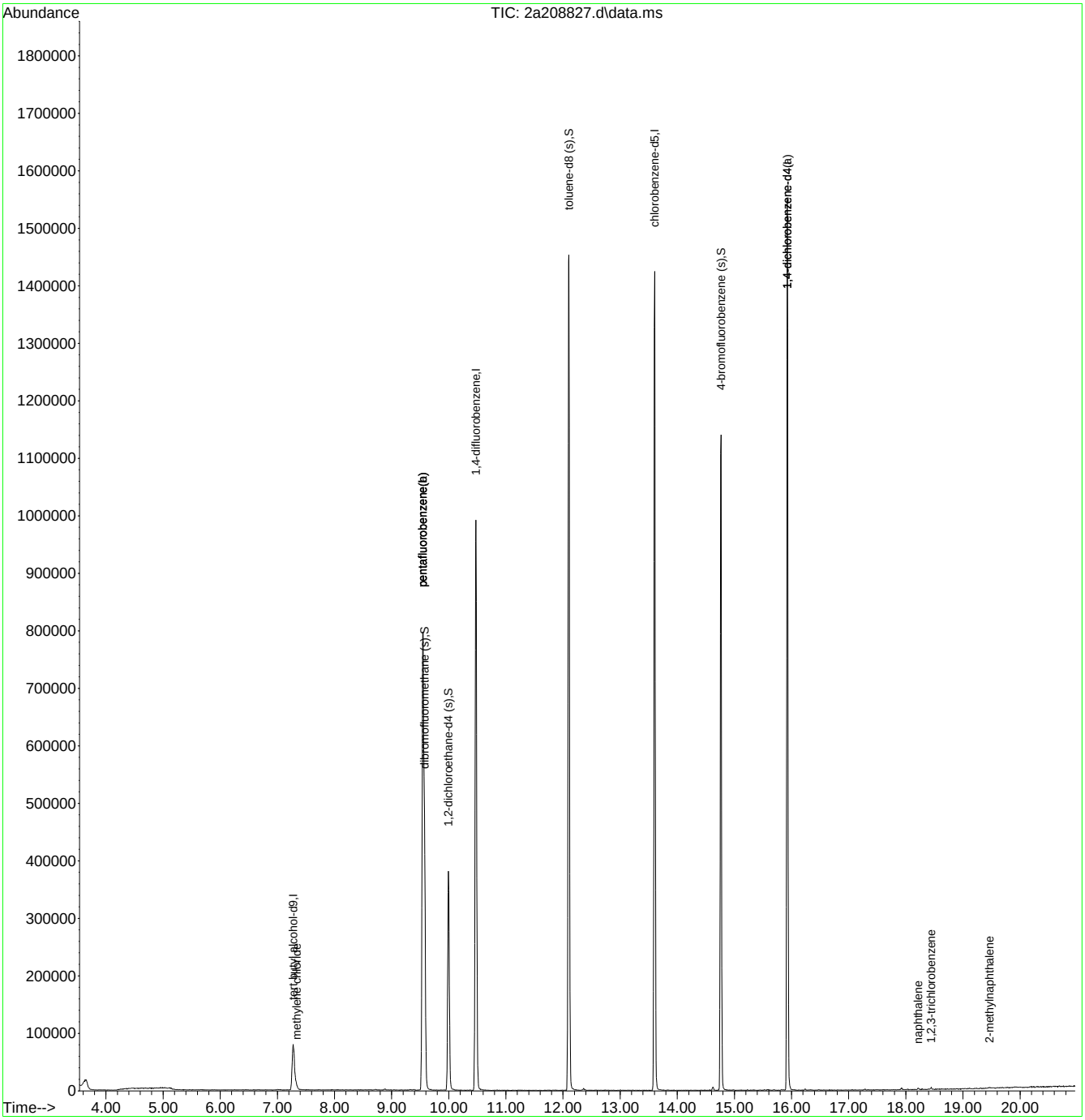
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.275	65	145713	500.00	ug/L	-0.01
5) pentafluorobenzene	9.545	168	580221	50.00	ug/L	-0.01
51) 1,4-difluorobenzene	10.476	114	840471	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	738770	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.926	152	373406	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.545	168	579166	50.00	ug/L	-0.01
128) 1,4-dichlorobenzene-d4(a)	15.926	152	373406	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.545	168	579166	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	259707	50.99	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.98%			
52) 1,2-dichloroethane-d4 (s)	9.994	65	267809	51.25	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.50%			
74) toluene-d8 (s)	12.102	98	930137	49.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.46%			
98) 4-bromofluorobenzene (s)	14.764	95	349684	48.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.52%			
Target Compounds						Qvalue
23) methylene chloride	7.337	84	1527	0.20	ug/L #	67
121) naphthalene	18.211	128	2977	0.15	ug/L	79
122) 1,2,3-trichlorobenzene	18.441	180	1327	0.13	ug/L	77
125) 2-methylnaphthalene	19.461	142	1084	0.11	ug/L #	62

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

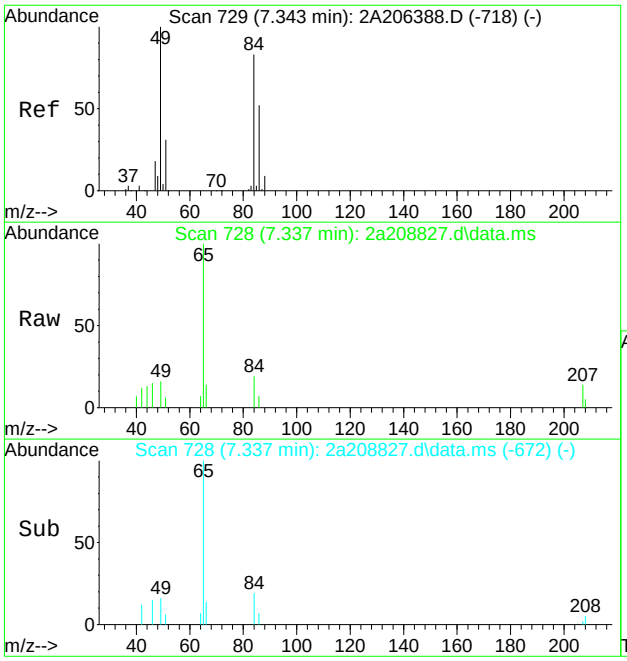
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208827.d
Acq On : 5 Mar 2021 10:31 am
Operator : krizhkac
Sample : mb c Inst : GCMS2A
Misc : MS46075,V2A9078,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:25:07 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration



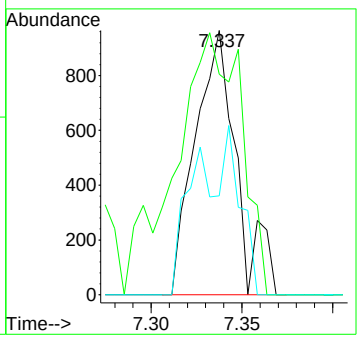
M2A8967.M Sun Mar 07 22:14:40 2021 Page: 2

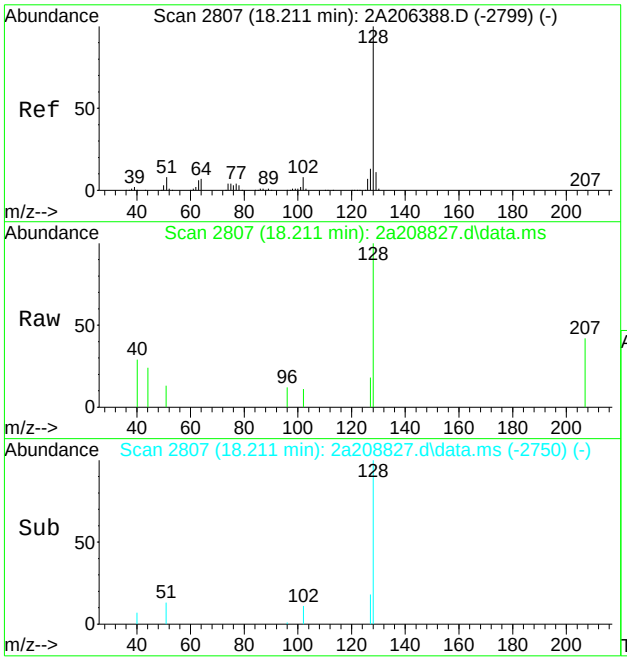


#23
methylene chloride
Concen: 0.20 ug/L
RT: 7.337 min Scan# 728
Delta R.T. -0.005 min
Lab File: 2a208827.d
Acq: 5 Mar 2021 10:31 am

Tgt Ion: 84 Resp: 1527

Ion	Ratio	Lower	Upper
84	100		
49	83.4	90.2	150.2#
86	37.4	32.7	92.7

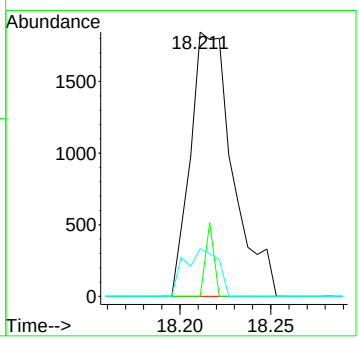


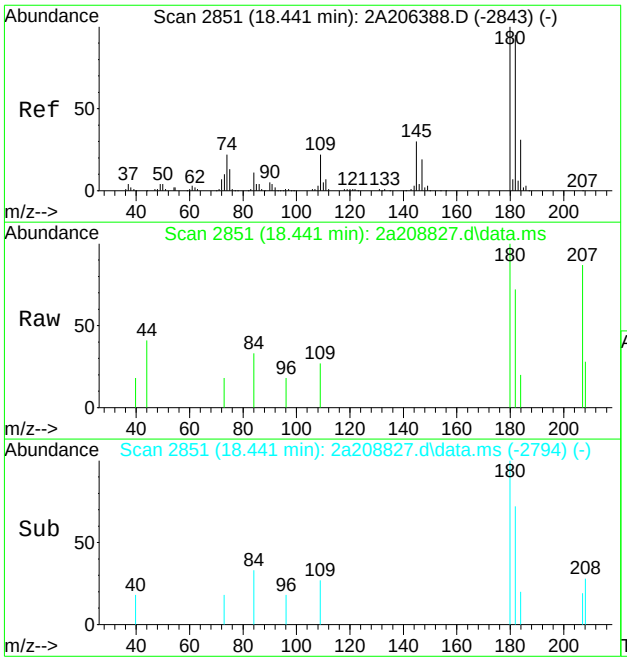


#121
naphthalene
Concen: 0.15 ug/L
RT: 18.211 min Scan# 2807
Delta R.T. 0.000 min
Lab File: 2a208827.d
Acq: 5 Mar 2021 10:31 am

Tgt Ion:128 Resp: 2977

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	41.3
127	18.0	0.0	43.0

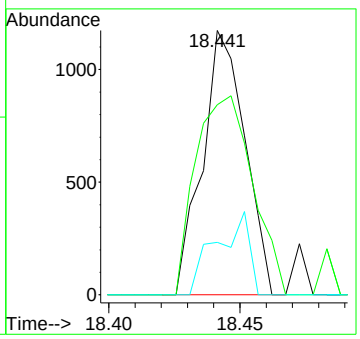


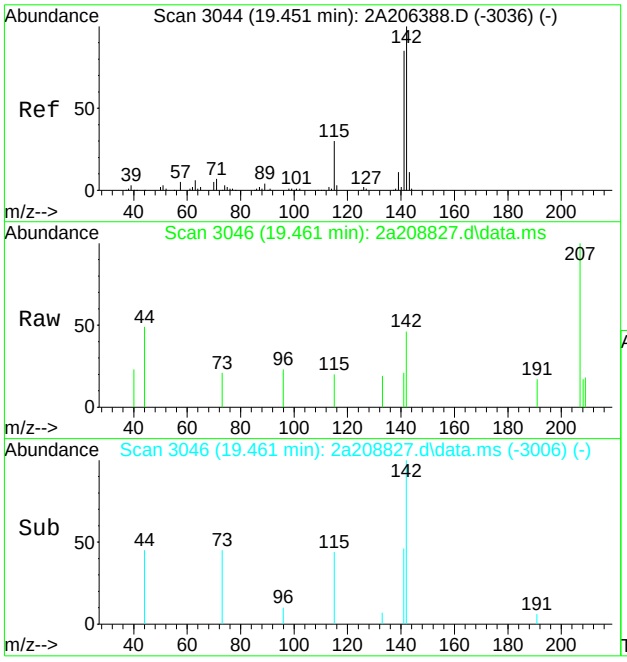


#122
1,2,3-trichlorobenzene
Concen: 0.13 ug/L
RT: 18.441 min Scan# 2851
Delta R.T. 0.000 min
Lab File: 2a208827.d
Acq: 5 Mar 2021 10:31 am

Tgt Ion:180 Resp: 1327

Ion	Ratio	Lower	Upper
180	100		
182	71.9	65.2	125.2
184	19.8	1.3	61.3

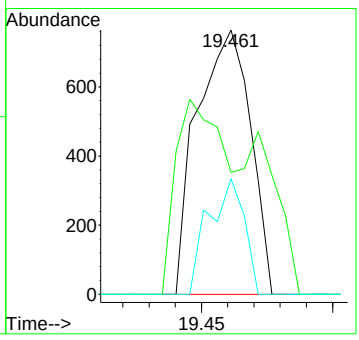




#125
2-methylnaphthalene
Concen: 0.11 ug/L
RT: 19.461 min Scan# 3046
Delta R.T. 0.011 min
Lab File: 2a208827.d
Acq: 5 Mar 2021 10:31 am

Tgt Ion:142 Resp: 1084

Ion	Ratio	Lower	Upper
142	100		
141	46.1	65.2	105.2#
115	43.7	10.0	50.0



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165037.D
Acq On : 3 Mar 2021 3:36 pm
Operator : ROBERTS
Sample : MB C
Misc : MS48788,V3A7169,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 04 09:08:15 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	12178	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	6391	10.25	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 102.50%

Target Compounds	Qvalue

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

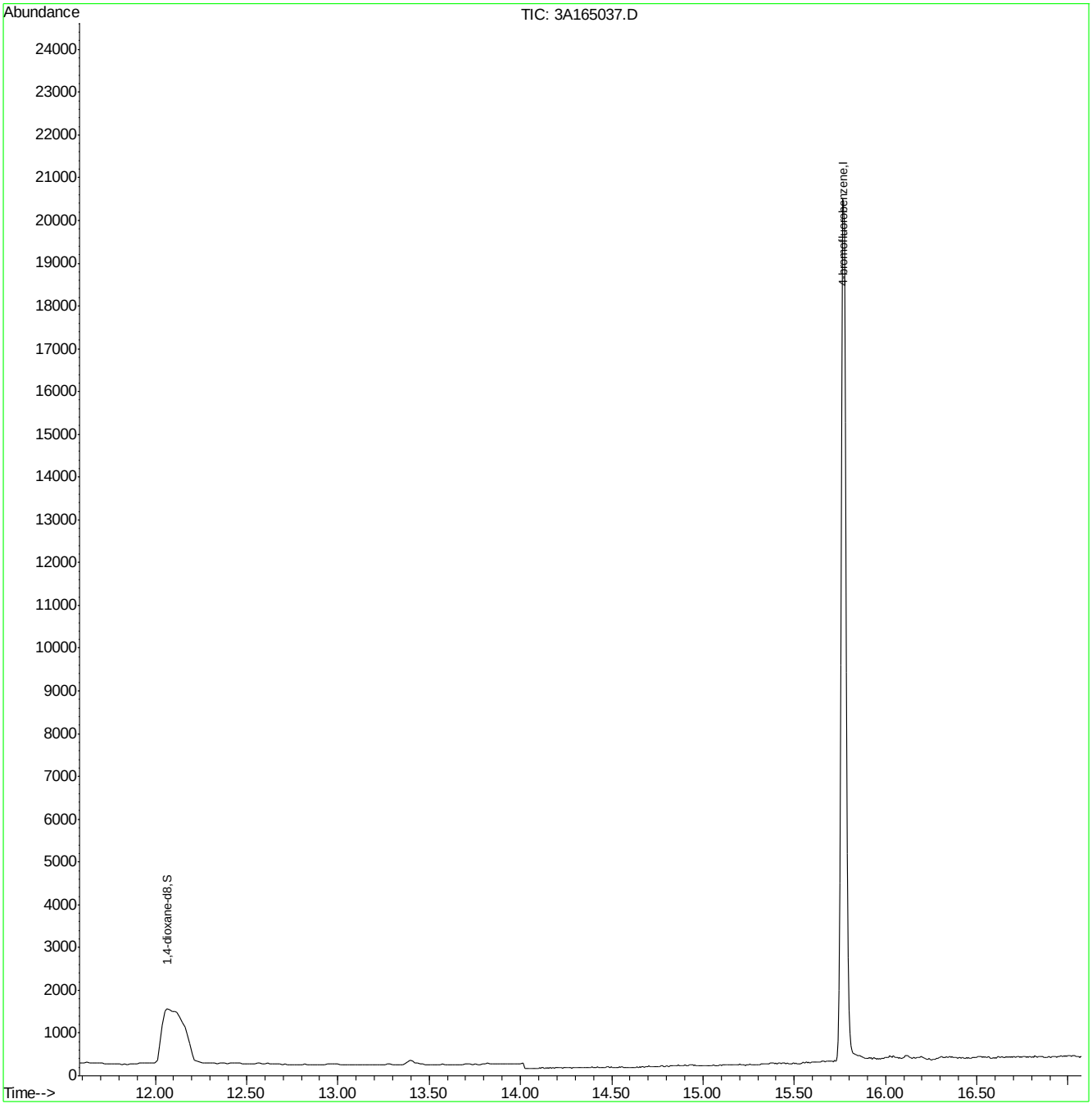
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165037.D
Acq On : 3 Mar 2021 3:36 pm
Operator : ROBERTS
Sample : MB C
Misc : MS48788,V3A7169,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 04 09:08:15 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Thu Mar 04 09:22:34 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165059.D
Acq On : 4 Mar 2021 11:48 am
Operator : ROBERTS
Sample : MB C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 04 12:08:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10902	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5183	9.28 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 92.80%		

Target Compounds	Qvalue

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

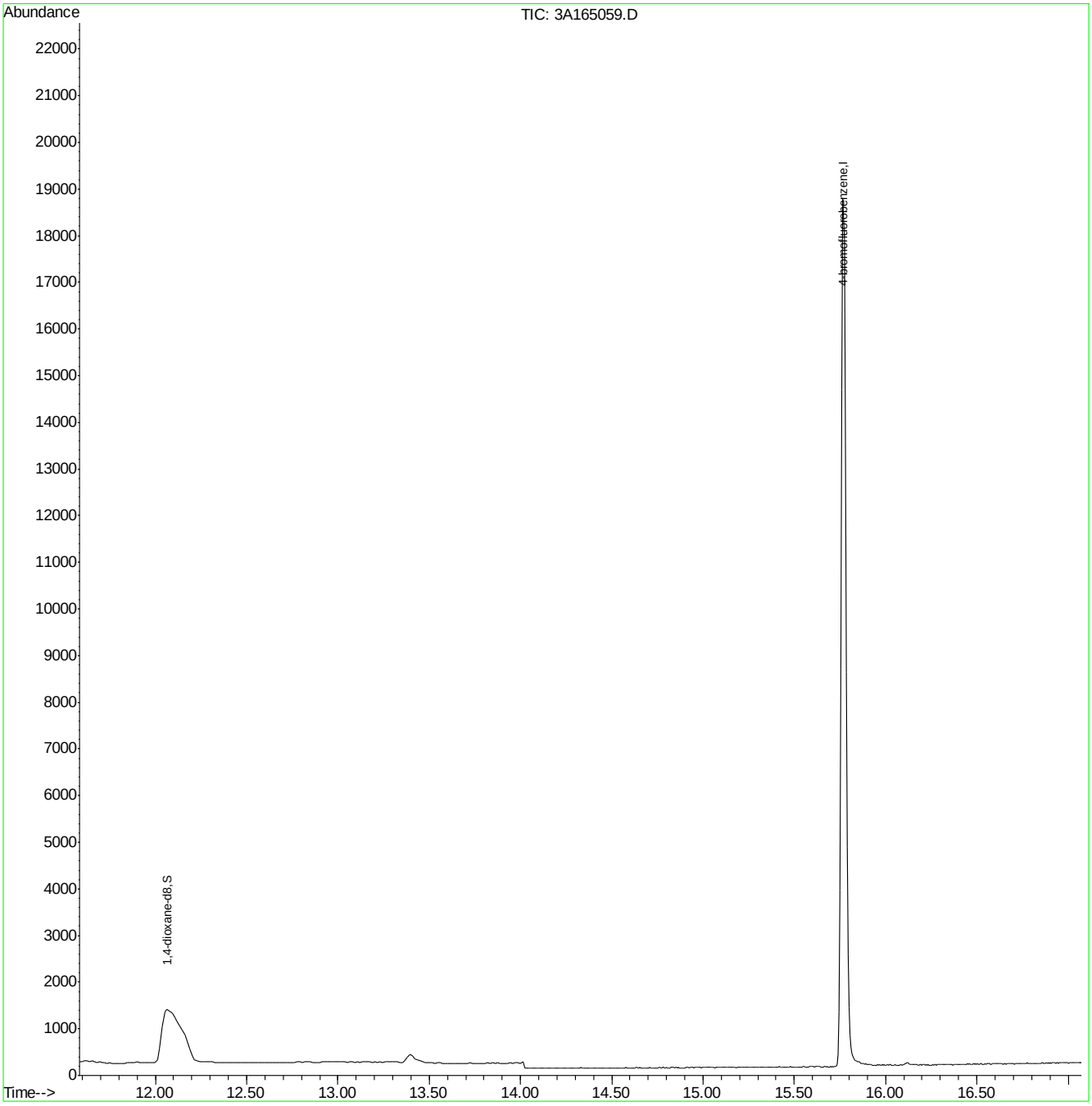
7.2.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165059.D
Acq On : 4 Mar 2021 11:48 am
Operator : ROBERTS
Sample : MB C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 04 12:08:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102753.d
Acq On : 4 Mar 2021 10:55 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4445,W,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:20:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.469	65	132195	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	239391	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	305153	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	307469	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	215935	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	121096	50.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.90%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	117524	50.22	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.44%			
75) toluene-d8 (s)	10.909	98	365929	52.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.20%			
98) 4-bromofluorobenzene (s)	13.770	95	157440	49.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.38%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.573	59	74151	254.31	ug/L	97
4) 1,4-dioxane	9.931	88	28947	1281.01	ug/L	94
6) chlorodifluoromethane	3.707	51	212211	52.18	ug/L	98
7) dichlorodifluoromethane	3.691	85	315799	54.94	ug/L	98
8) chloromethane	4.000	50	252976	52.75	ug/L	97
9) vinyl chloride	4.193	62	241535	56.79	ug/L	99
10) 1,3-butadiene	4.214	54	142673	51.94	ug/L	99
11) bromomethane	4.706	94	176729	54.64	ug/L	98
12) chloroethane	4.847	64	106960	58.90	ug/L	96
13) trichlorofluoromethane	5.245	101	289097	55.74	ug/L	97
14) vinyl bromide	5.135	106	132143	99.15	ug/L	95
15) ethyl ether	5.527	74	41123	51.30	ug/L	93
16) acrolein	5.710	56	15095	52.90	ug/L	98
17) freon 113	5.930	151	137350	49.72	ug/L	98
18) 1,1-dichloroethene	5.899	61	180274	46.71	ug/L	100
19) acetone	5.883	58	31346	197.69	ug/L	93
20) acetonitrile	6.244	41	159871	592.14	ug/L	98
21) iodomethane	6.123	142	276508	44.87	ug/L	99
22) carbon disulfide	6.265	76	454608	49.22	ug/L	100
23) methylene chloride	6.490	84	129116	47.63	ug/L	97
24) methyl acetate	6.265	43	65232	54.24	ug/L	98
25) methyl tert butyl ether	6.829	73	344953	49.93	ug/L	95
26) trans-1,2-dichloroethene	6.840	61	160397	50.34	ug/L	97
27) hexane	7.154	56	75800	50.85	ug/L	92
28) di-isopropyl ether	7.337	45	436553	50.91	ug/L	98
29) 2-butanone	7.891	72	30701	209.15	ug/L #	82
30) 1,1-dichloroethane	7.332	63	193805	49.24	ug/L	98
31) chloroprene	7.426	53	151858	48.54	ug/L	97
32) acrylonitrile	6.720	53	34817	55.88	ug/L	98
33) vinyl acetate	7.264	86	14511	58.62	ug/L #	90
34) ethyl tert-butyl ether	7.750	59	389238	49.76	ug/L	98
35) ethyl acetate	7.907	45	12083	53.44	ug/L #	78
36) 2,2-dichloropropane	8.012	77	229570	52.71	ug/L	99
37) cis-1,2-dichloroethene	7.964	96	112657	49.17	ug/L	96
38) propionitrile	7.938	54	123582	537.07	ug/L	98
39) methyl acrylate	7.985	85	10891	50.25	ug/L #	49
40) methacrylonitrile	8.127	67	29915	52.64	ug/L	97
41) bromochloromethane	8.231	128	60667	49.40	ug/L	97
42) tetrahydrofuran	8.263	72	10615	52.22	ug/L #	71

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102753.d
Acq On : 4 Mar 2021 10:55 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4445,W,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:20:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	8.310	83	195256	45.55	ug/L		96
44)	tert-butyl formate	8.346	59	97427	55.65	ug/L		98
46)	1,1,1-trichloroethane	8.571	97	240614	50.42	ug/L		98
47)	cyclohexane	8.691	84	223678	56.17	ug/L		98
49)	1,1-dichloropropene	8.712	75	123315	44.35	ug/L		99
50)	carbon tetrachloride	8.759	117	214241	49.66	ug/L		98
51)	tert-amyl alcohol	8.817	73	28144	269.90	ug/L		93
52)	isopropyl acetate	8.838	87	16371	50.01	ug/L	#	82
55)	n-butyl alcohol	9.335	41	102496	2810.10	ug/L		90
56)	2,2,4-trimethylpentane	9.042	57	450897	53.62	ug/L		99
57)	benzene	8.943	78	359857	47.26	ug/L		99
58)	tert-amyl methyl ether	9.021	73	361879	53.56	ug/L		99
59)	heptane	9.188	57	67973	48.65	ug/L		97
60)	1,2-dichloroethane	8.948	62	125798	45.94	ug/L		99
61)	ethyl acrylate	9.586	55	91966	51.12	ug/L		99
62)	trichloroethene	9.617	95	91189	45.98	ug/L		98
63)	2-chloroethyl vinyl ether	10.360	63	234553	253.99	ug/L		98
64)	methyl methacrylate	9.842	100	18891	52.33	ug/L		92
65)	methylcyclohexane	9.926	83	231361	55.34	ug/L		98
66)	1,2-dichloropropane	9.879	63	94414	47.44	ug/L		99
67)	dibromomethane	9.983	93	58213	47.21	ug/L		96
68)	bromodichloromethane	10.135	83	133405	46.75	ug/L		100
69)	2-nitropropane	10.308	41	19512	48.47	ug/L		97
70)	epichlorohydrin	10.444	57	39378	268.20	ug/L		94
71)	cis-1,3-dichloropropene	10.590	75	144208	46.14	ug/L		98
72)	4-methyl-2-pentanone	10.679	58	133454	209.13	ug/L		97
73)	isoamyl alcohol	10.684	70	53475	1111.33	ug/L		91
76)	toluene	10.988	92	212028	48.46	ug/L		97
77)	ethyl methacrylate	11.160	69	106177	52.96	ug/L		97
78)	trans-1,3-dichloropropene	11.160	75	132305	50.87	ug/L		96
79)	1,1,2-trichloroethane	11.390	83	63966	50.23	ug/L		96
80)	tetrachloroethene	11.573	164	88129	48.09	ug/L		98
81)	2-hexanone	11.558	58	114317	209.81	ug/L		98
82)	1,3-dichloropropane	11.579	76	120097	47.73	ug/L		98
83)	butyl acetate	11.657	56	51776	50.13	ug/L		98
84)	dibromochloromethane	11.845	129	110116	48.23	ug/L		98
85)	1,2-dibromoethane	12.007	107	101937	38.88	ug/L		98
86)	n-butyl ether	12.504	57	445583	48.32	ug/L		99
87)	chlorobenzene	12.530	112	257342	47.27	ug/L		98
88)	1,1,1,2-tetrachloroethane	12.598	131	137471	53.06	ug/L		99
89)	ethylbenzene	12.604	91	456617	47.94	ug/L		100
90)	m,p-xylene	12.734	106	343909	96.78	ug/L		98
91)	o-xylene	13.169	91	412588	50.67	ug/L		97
92)	styrene	13.179	104	296527	49.10	ug/L		97
93)	butyl acrylate	12.985	55	201201	52.05	ug/L		97
94)	isopropylbenzene	13.556	105	551150	49.63	ug/L		99
95)	bromoform	13.425	173	89560	48.11	ug/L		95
96)	cis-1,4-dichloro-2-butene	13.576	88	44911	50.71	ug/L		96
99)	1,1,2,2-tetrachloroethane	13.843	83	126706	52.65	ug/L		97
100)	trans-1,4-dichloro-2-b...	13.880	53	34604	51.82	ug/L		94
101)	1,2,3-trichloropropane	13.937	110	32646	52.53	ug/L		93
102)	bromobenzene	13.969	156	145548	49.27	ug/L		94
103)	n-propylbenzene	14.016	91	621024	49.99	ug/L		99
104)	2-chlorotoluene	14.157	126	129997	49.09	ug/L		96
105)	4-chlorotoluene	14.277	91	366167	47.32	ug/L		97
106)	1,3,5-trimethylbenzene	14.194	105	477196	50.74	ug/L		99
107)	tert-butylbenzene	14.565	119	401243	52.26	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102753.d
Acq On : 4 Mar 2021 10:55 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4445,W,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:20:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

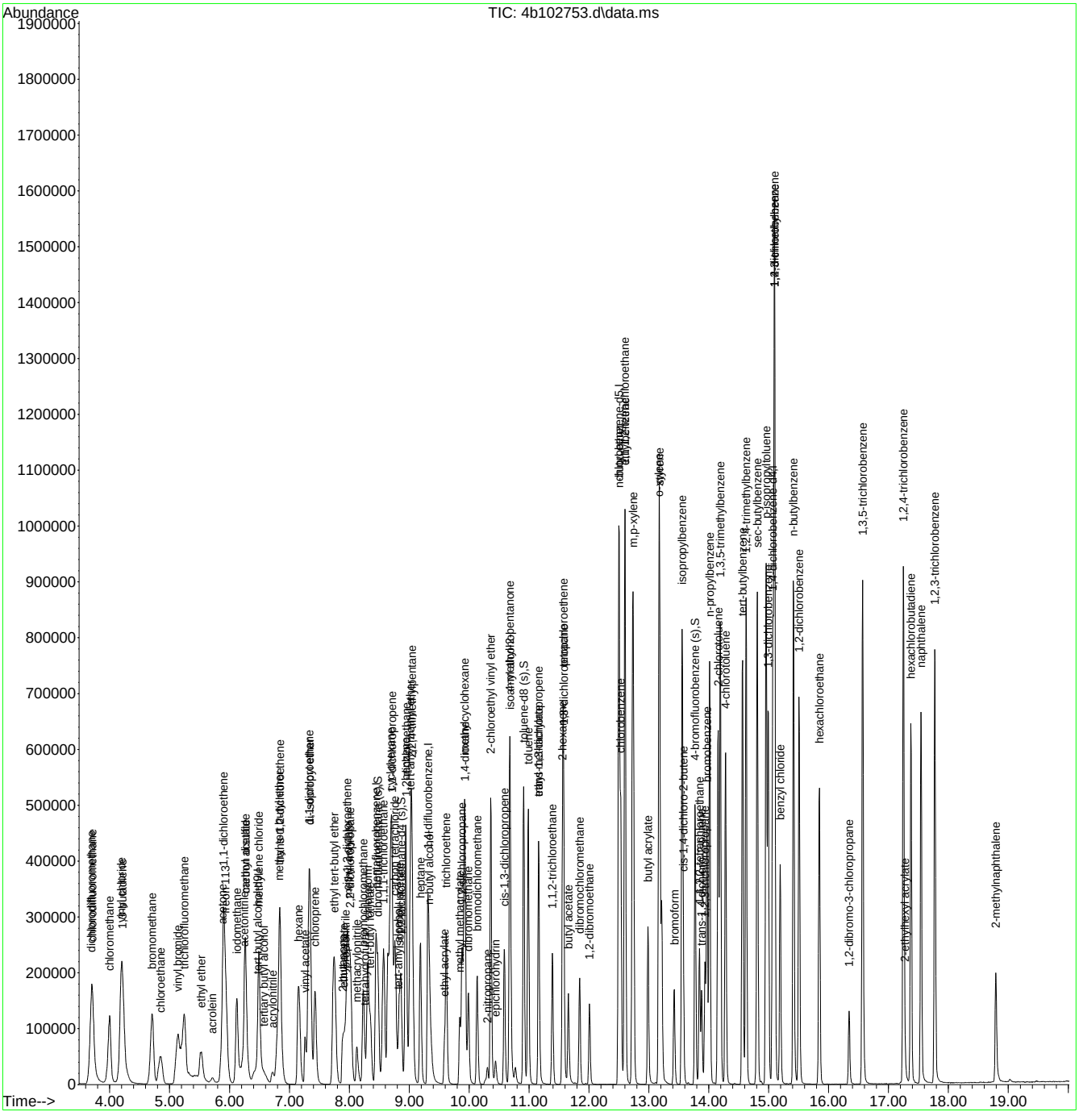
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	14.623	105	496104	51.47	ug/L	97
109) sec-butylbenzene	14.811	105	644283	51.38	ug/L	98
110) p-isopropyltoluene	14.957	119	572794	51.48	ug/L	99
111) 1,3-dichlorobenzene	14.994	146	294085	47.77	ug/L	99
112) 1,2,3-trimethylbenzene	15.099	105	540503	50.74	ug/L	99
113) 1,4-dichlorobenzene	15.099	146	302530	46.81	ug/L	99
114) 1,2-dichlorobenzene	15.506	146	313603	49.52	ug/L	99
115) benzyl chloride	15.193	91	294571	59.48	ug/L	99
116) n-butylbenzene	15.412	92	287878	51.20	ug/L	99
117) hexachloroethane	15.846	201	111316	43.33	ug/L	98
118) 1,2-dibromo-3-chloropr...	16.343	157	42315	58.05	ug/L	93
119) 1,3,5-trichlorobenzene	16.568	180	323241	53.57	ug/L	97
120) 1,2,4-trichlorobenzene	17.248	180	311758	59.69	ug/L	99
121) 2-ethylhexyl acrylate	17.274	70	24600	14.85	ug/L	85
122) hexachlorobutadiene	17.374	225	145945	49.01	ug/L	98
123) naphthalene	17.541	128	549725	59.87	ug/L	99
124) 1,2,3-trichlorobenzene	17.771	180	269613	59.58	ug/L	97
125) 2-methylnaphthalene	18.791	142	125948	32.76	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102753.d
Acq On : 4 Mar 2021 10:55 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4445,W,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:20:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208825.d
Acq On : 5 Mar 2021 9:34 am
Operator : krizhkac
Sample : bs c Inst : GCMS2A
Misc : MS46075,V2A9078,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:26:21 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.275	65	150874	500.00	ug/L	-0.01
5) pentafluorobenzene	9.545	168	603809	50.00	ug/L	-0.01
51) 1,4-difluorobenzene	10.476	114	875406	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	751544	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.926	152	386715	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.545	168	603809	50.00	ug/L	-0.01
128) 1,4-dichlorobenzene-d4(a)	15.926	152	386715	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.545	168	603809	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	271201	51.17	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.34%			
52) 1,2-dichloroethane-d4 (s)	9.995	65	275400	50.60	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.20%			
74) toluene-d8 (s)	12.102	98	961520	50.53	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.06%			
98) 4-bromofluorobenzene (s)	14.759	95	361776	48.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.42%			
Target Compounds						Qvalue
2) ethanol	5.993	45	227273	4580.30	ug/L	97
3) tertiary butyl alcohol	7.395	59	117876	244.55	ug/L	93
4) 1,4-dioxane	11.119	88	51556	1117.69	ug/L	97
6) chlorodifluoromethane	4.032	51	325242	35.29	ug/L	100
7) dichlorodifluoromethane	4.001	85	493417	53.06	ug/L	97
8) chloromethane	4.367	50	519951	51.71	ug/L	97
9) vinyl chloride	4.597	62	477583	48.65	ug/L	97
10) 1,3-butadiene	4.639	54	439728	55.63	ug/L	98
11) bromomethane	5.214	94	339784	48.90	ug/L	98
12) chloroethane	5.376	64	269607	49.22	ug/L	96
13) vinyl bromide	5.711	106	273213	50.81	ug/L	98
14) trichlorofluoromethane	5.836	101	561284	45.83	ug/L	99
15) ethyl ether	6.213	74	175604	48.13	ug/L	98
16) acrolein	6.438	56	36638	46.67	ug/L	95
17) freon 113	6.647	151	275948	46.63	ug/L	96
18) 1,1-dichloroethene	6.631	96	281446	42.11	ug/L	99
19) acetone	6.631	43	385322	185.35	ug/L	94
20) acetonitrile	7.045	41	294987	437.28	ug/L	99
21) iodomethane	6.877	142	622292	43.50	ug/L	99
22) carbon disulfide	7.013	76	999221	46.17	ug/L	97
23) methylene chloride	7.332	84	347175	44.32	ug/L	93
24) methyl acetate	7.092	43	181666	36.52	ug/L	97
25) methyl tert butyl ether	7.688	73	857071	46.12	ug/L	98
26) trans-1,2-dichloroethene	7.719	96	330464	45.08	ug/L	97
27) hexane	8.075	57	516631	46.78	ug/L	98
28) di-isopropyl ether	8.284	45	1146413	50.89	ug/L	98
29) ethyl tert-butyl ether	8.745	59	1061864	48.15	ug/L	100
30) 2-butanone	8.938	72	122181	185.35	ug/L	95
31) 1,1-dichloroethane	8.289	63	589905	46.71	ug/L	99
32) chloroprene	8.394	53	475520	47.65	ug/L	98
33) acrylonitrile	7.620	53	86218	42.93	ug/L	97
34) vinyl acetate	8.232	86	55524	54.17	ug/L #	74
35) ethyl acetate	8.959	45	37722	49.65	ug/L	94
36) 2,2-dichloropropane	9.037	77	518113	55.46	ug/L	98
37) cis-1,2-dichloroethene	9.006	96	366836	46.15	ug/L	97
38) propionitrile	9.016	54	316750	427.67	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208825.d
Acq On : 5 Mar 2021 9:34 am
Operator : krizhkac
Sample : bs c Inst : GCMS2A
Misc : MS46075,V2A9078,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:26:21 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) bromochloromethane	9.299	130	244913	49.14	ug/L	97
40) tetrahydrofuran	9.320	42	66580	41.05	ug/L	90
41) chloroform	9.388	83	594127	45.29	ug/L	99
42) tert-butyl formate	9.424	59	243917	45.91	ug/L	99
43) isobutyl alcohol	9.785	43	90426	376.10	ug/L	98
45) methacrylonitrile	9.215	67	105863	46.31	ug/L	90
46) 1,1,1-trichloroethane	9.644	97	530693	47.01	ug/L	98
47) cyclohexane	9.754	84	497038	44.91	ug/L	95
48) 1,1-dichloropropene	9.811	75	447024	47.12	ug/L	99
49) tert-amyl alcohol	9.942	73	54028	173.76	ug/L	98
50) carbon tetrachloride	9.838	117	477908	46.99	ug/L	99
53) 2,2,4-trimethylpentane	10.157	57	1316569	46.85	ug/L	97
54) tert-amyl methyl ether	10.141	73	995664	46.89	ug/L	99
55) n-butyl alcohol	10.533	56	288024	1754.20	ug/L	97
56) benzene	10.063	78	1290738	46.61	ug/L	99
57) heptane	10.319	57	263324	46.26	ug/L	97
58) isopropyl acetate	9.979	87	59996	46.81	ug/L #	87
59) 1,2-dichloroethane	10.083	62	432375	47.98	ug/L	99
60) trichloroethene	10.784	95	346891	46.00	ug/L	97
61) ethyl acrylate	10.779	55	330013	50.87	ug/L	99
62) 2-nitropropane	11.543	41	66204	53.90	ug/L	93
63) 2-chloroethyl vinyl ether	11.579	63	855225	222.32	ug/L	99
64) methyl methacrylate	11.041	100	72991	46.93	ug/L	90
65) 1,2-dichloropropane	11.077	63	351160	48.57	ug/L	97
66) methylcyclohexane	11.082	83	605281	46.70	ug/L	97
67) dibromomethane	11.182	93	199398	47.62	ug/L	99
68) bromodichloromethane	11.339	83	461078	49.39	ug/L	97
69) epichlorohydrin	11.663	57	115060	222.09	ug/L	97
70) cis-1,3-dichloropropene	11.794	75	572551	50.51	ug/L	95
71) 4-methyl-2-pentanone	11.904	58	387911	176.31	ug/L	98
72) 3-methyl-1-butanol	11.904	70	108008	733.52	ug/L	91
75) toluene	12.176	92	820280	47.97	ug/L	97
76) trans-1,3-dichloropropene	12.359	75	486599	49.59	ug/L	99
77) ethyl methacrylate	12.353	69	307842	40.77	ug/L	93
78) 1,1,2-trichloroethane	12.578	83	235576	47.14	ug/L	96
79) 2-hexanone	12.746	58	404243	178.56	ug/L	94
80) tetrachloroethene	12.725	166	388362	48.77	ug/L	96
81) 1,3-dichloropropane	12.761	76	450861	47.29	ug/L	99
82) butyl acetate	12.824	56	179992	49.85	ug/L	94
83) dibromochloromethane	13.002	129	356935	51.12	ug/L	99
84) 1,2-dibromoethane	13.154	107	334297	47.83	ug/L	99
85) n-butyl ether	13.598	57	1399225	48.39	ug/L	99
86) chlorobenzene	13.635	112	918393	48.73	ug/L	99
87) 1,1,1,2-tetrachloroethane	13.698	131	353232	50.89	ug/L	98
88) ethylbenzene	13.698	91	1438728	46.75	ug/L	98
89) m,p-xylene	13.818	106	1175391	97.05	ug/L	93
90) o-xylene	14.215	91	1165772	47.20	ug/L	97
91) styrene	14.226	104	901861	52.78	ug/L	100
92) n-amyl acetate	14.262	70	199901	49.25	ug/L	95
93) bromoform	14.451	173	227054	50.96	ug/L	100
94) butyl acrylate	14.053	55	540644	50.06	ug/L	98
95) isopropylbenzene	14.566	105	1435240	47.47	ug/L	98
96) cis-1,4-dichloro-2-butene	14.602	88	48005	21.72	ug/L	94
99) bromobenzene	14.942	156	416199	49.52	ug/L	90
100) 1,1,2,2-tetrachloroethane	14.843	83	325560	44.01	ug/L	99
101) trans-1,4-dichloro-2-b...	14.874	53	35576	23.64	ug/L	94
102) 1,2,3-trichloropropane	14.927	110	79120	44.09	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208825.d
Acq On : 5 Mar 2021 9:34 am
Operator : krizhkac
Sample : bs c Inst : GCMS2A
Misc : MS46075,V2A9078,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:26:21 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

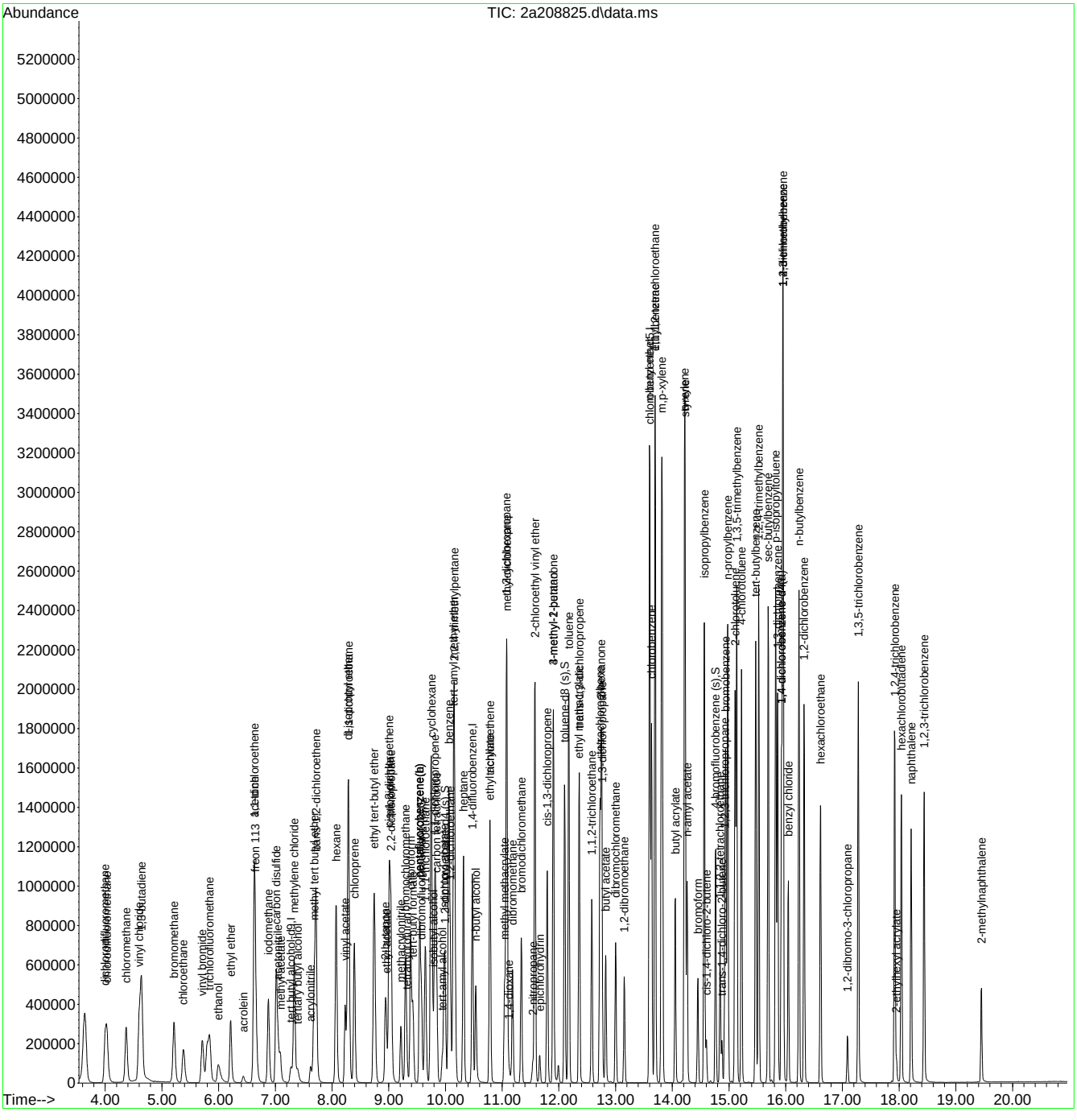
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
103) n-propylbenzene	14.979	91	1663410	46.07	ug/L	98
104) 2-chlorotoluene	15.110	126	382600	48.84	ug/L	91
105) 4-chlorotoluene	15.220	91	1050498	46.36	ug/L	99
106) 1,3,5-trimethylbenzene	15.136	105	1191633	46.72	ug/L	95
107) tert-butylbenzene	15.471	119	1022360	47.15	ug/L	99
108) 1,2,4-trimethylbenzene	15.523	105	1225288	46.95	ug/L	99
109) sec-butylbenzene	15.690	105	1530632	46.74	ug/L	99
110) 1,3-dichlorobenzene	15.858	146	754664	48.21	ug/L	98
111) p-isopropyltoluene	15.821	119	1336360	48.59	ug/L	99
112) benzyl chloride	16.046	91	642509	57.75	ug/L	100
113) 1,2,3-trimethylbenzene	15.952	105	1220738	46.30	ug/L	97
114) 1,4-dichlorobenzene	15.952	146	755278	48.17	ug/L	98
115) 1,2-dichlorobenzene	16.323	146	720509	47.34	ug/L	98
116) n-butylbenzene	16.234	92	698867	48.45	ug/L	99
117) 1,2-dibromo-3-chloropr...	17.087	157	64975	45.60	ug/L	93
118) 1,3,5-trichlorobenzene	17.280	180	612643	48.10	ug/L	99
119) 1,2,4-trichlorobenzene	17.924	180	544455	47.51	ug/L	97
120) hexachlorobutadiene	18.039	225	297539	48.01	ug/L	96
121) naphthalene	18.211	128	947259	44.57	ug/L	100
122) 1,2,3-trichlorobenzene	18.441	180	478353	46.24	ug/L	99
123) hexachloroethane	16.616	201	247843	51.23	ug/L	97
124) 2-ethylhexyl acrylate	17.950	70	21999	6.53	ug/L	99
125) 2-methylnaphthalene	19.451	142	243168	23.32	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208825.d
Acq On : 5 Mar 2021 9:34 am
Operator : krizhkac
Sample : bs c Inst : GCMS2A
Misc : MS46075,V2A9078,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:26:21 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165036.D
Acq On : 3 Mar 2021 3:07 pm
Operator : ROBERTS
Sample : BS C
Misc : MS48788,V3A7169,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 04 09:08:14 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	14467	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5496	7.42 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 74.20%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	10105	13.77 ug/L	100

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

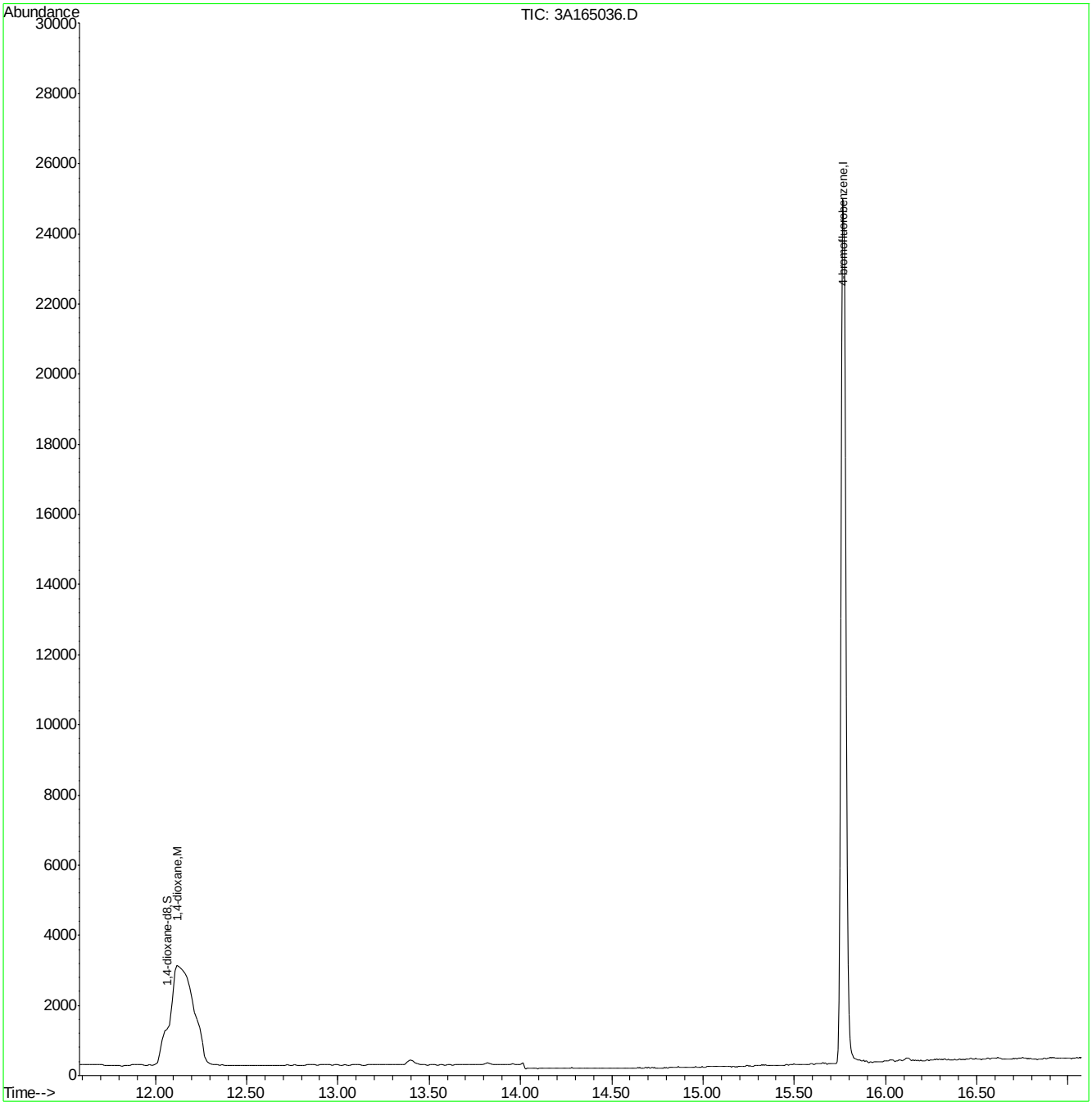
7.3.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165036.D
Acq On : 3 Mar 2021 3:07 pm
Operator : ROBERTS
Sample : BS C
Misc : MS48788,V3A7169,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 04 09:08:14 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Thu Mar 04 09:22:34 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165058.D
Acq On : 4 Mar 2021 11:19 am
Operator : ROBERTS
Sample : BS C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 04 15:46:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11514	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	5363	9.10	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 91.00%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	10207	17.48	ug/L	97

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

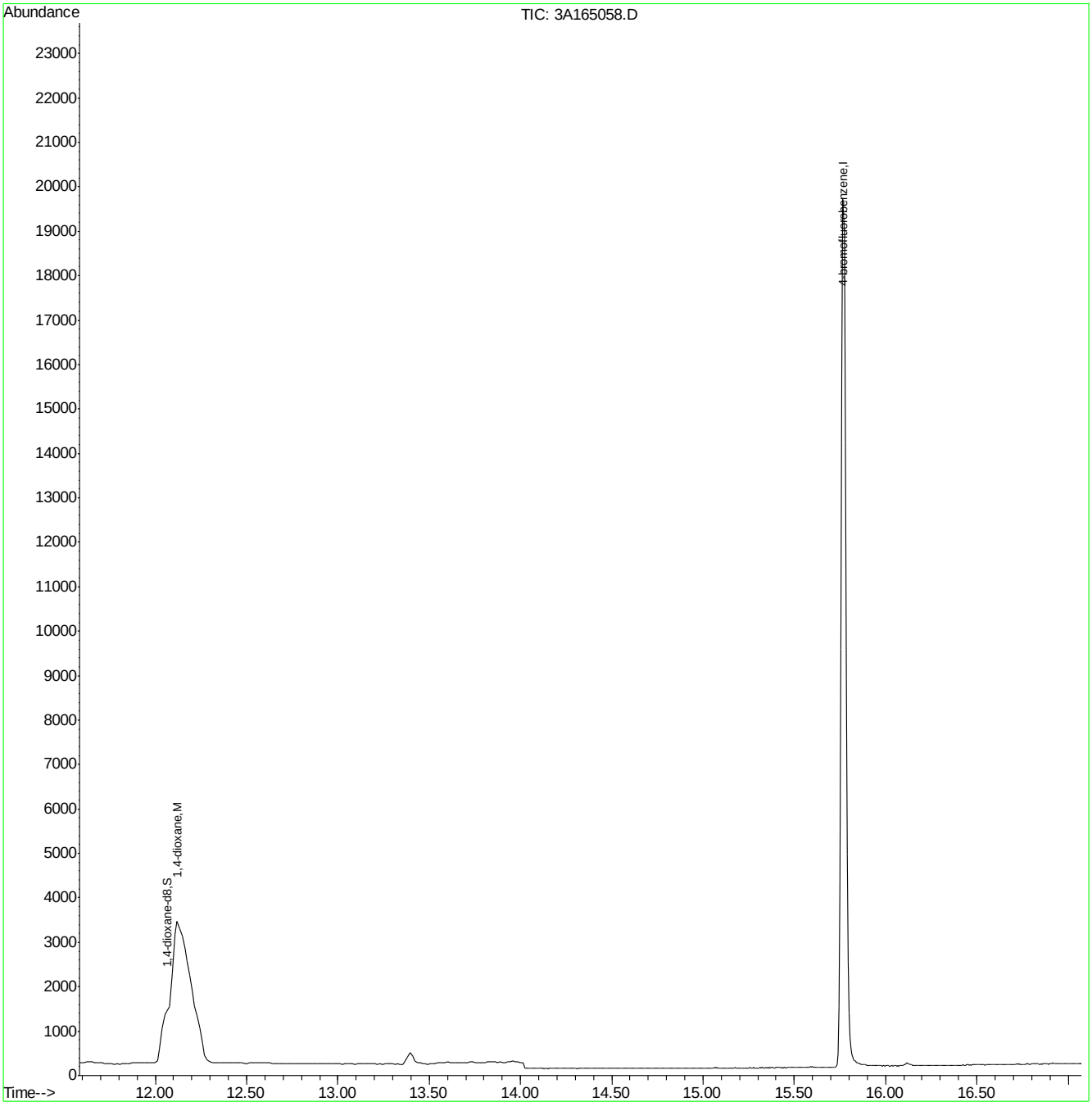
7.3.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165058.D
Acq On : 4 Mar 2021 11:19 am
Operator : ROBERTS
Sample : BS C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 04 15:46:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102760.d
Acq On : 4 Mar 2021 2:14 pm
Operator : brittank
Sample : JD20919-17ms c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	114104	500.00	ug/L	0.00
5) pentafluorobenzene	8.451	168	250008	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	350114	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	353853	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	245327	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	125001	50.36	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.72%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	134076	49.93	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.86%			
75) toluene-d8 (s)	10.909	98	412168	50.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.98%			
98) 4-bromofluorobenzene (s)	13.770	95	186458	51.28	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.56%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.578	59	68113	270.64	ug/L	95
4) 1,4-dioxane	9.941	88	26900	1379.16	ug/L	76
6) chlorodifluoromethane	3.707	51	179942	42.36	ug/L	99
7) dichlorodifluoromethane	3.691	85	309780	51.60	ug/L	97
8) chloromethane	4.000	50	233082	46.53	ug/L	96
9) vinyl chloride	4.193	62	233418	52.55	ug/L	97
10) 1,3-butadiene	4.219	54	129708	45.21	ug/L	99
11) bromomethane	4.716	94	159573	47.24	ug/L	95
12) chloroethane	4.852	64	98077	51.72	ug/L	96
13) trichlorofluoromethane	5.245	101	292504	54.00	ug/L	99
14) vinyl bromide	5.135	106	124398	89.37	ug/L	98
15) ethyl ether	5.522	74	35633	42.56	ug/L	90
16) acrolein	5.715	56	12232	41.05	ug/L	88
17) freon 113	5.935	151	131359	45.54	ug/L	98
18) 1,1-dichloroethene	5.898	61	171914	42.65	ug/L	98
19) acetone	5.867	58	27157	164.00	ug/L	92
20) acetonitrile	6.223	41	130616	463.24	ug/L	98
21) iodomethane	6.123	142	238781	37.10	ug/L	96
22) carbon disulfide	6.264	76	379751	39.37	ug/L	100
23) methylene chloride	6.489	84	110760	39.12	ug/L	94
24) methyl acetate	6.270	43	58862	46.86	ug/L	98
25) methyl tert butyl ether	6.824	73	293987	40.75	ug/L	96
26) trans-1,2-dichloroethene	6.840	61	147977	44.47	ug/L	99
27) hexane	7.154	56	81533	52.37	ug/L	91
28) di-isopropyl ether	7.337	45	379452	42.38	ug/L	98
29) 2-butanone	7.896	72	30191	196.95	ug/L #	69
30) 1,1-dichloroethane	7.331	63	184065	44.78	ug/L	98
31) chloroprene	7.426	53	152840	46.78	ug/L	98
32) acrylonitrile	6.714	53	29739	45.70	ug/L	93
33) vinyl acetate	7.269	86	12731	49.25	ug/L #	93
34) ethyl tert-butyl ether	7.745	59	342306	41.90	ug/L	98
35) ethyl acetate	7.907	45	11913	50.45	ug/L	97
36) 2,2-dichloropropane	8.017	77	213012	46.83	ug/L	99
37) cis-1,2-dichloroethene	7.970	96	104690	43.76	ug/L	98
38) propionitrile	7.933	54	116391	484.34	ug/L	98
39) methyl acrylate	7.996	85	11918	52.65	ug/L #	76
40) methacrylonitrile	8.126	67	29781	50.18	ug/L	95
41) bromochloromethane	8.231	128	54527	42.51	ug/L	98
42) tetrahydrofuran	8.268	72	9228	43.47	ug/L #	67

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102760.d
Acq On : 4 Mar 2021 2:14 pm
Operator : brittank
Sample : JD20919-17ms c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	8.304	83	189867	42.41	ug/L	99
44) tert-butyl formate	8.351	59	54195	29.64	ug/L	98
46) 1,1,1-trichloroethane	8.566	97	232852	46.72	ug/L	95
47) cyclohexane	8.691	84	219041	52.67	ug/L	98
49) 1,1-dichloropropene	8.717	75	131346	45.23	ug/L	97
50) carbon tetrachloride	8.759	117	209501	46.50	ug/L	97
51) tert-amyl alcohol	8.817	73	25580	234.89	ug/L	93
52) isopropyl acetate	8.838	87	16571	48.47	ug/L #	88
55) n-butyl alcohol	9.340	41	106396	2542.43	ug/L	97
56) 2,2,4-trimethylpentane	9.042	57	464432	48.14	ug/L	98
57) benzene	8.942	78	366268	41.93	ug/L	98
58) tert-amyl methyl ether	9.016	73	323272	41.70	ug/L	98
59) heptane	9.188	57	76471	47.71	ug/L	94
60) 1,2-dichloroethane	8.948	62	135991	43.29	ug/L	99
61) ethyl acrylate	9.591	55	95007	46.03	ug/L	99
62) trichloroethene	9.617	95	104346	45.85	ug/L	97
64) methyl methacrylate	9.842	100	19139	46.21	ug/L #	86
65) methylcyclohexane	9.926	83	227033	47.33	ug/L	98
66) 1,2-dichloropropane	9.884	63	99127	43.41	ug/L	98
67) dibromomethane	9.988	93	62265	44.01	ug/L	96
68) bromodichloromethane	10.135	83	148918	45.48	ug/L	99
69) 2-nitropropane	10.307	41	21924	47.46	ug/L	97
70) epichlorohydrin	10.443	57	38581	229.02	ug/L	97
71) cis-1,3-dichloropropene	10.590	75	157185	43.84	ug/L	98
72) 4-methyl-2-pentanone	10.679	58	133804	182.75	ug/L	98
73) isoamyl alcohol	10.684	70	55685	1008.65	ug/L	90
76) toluene	10.987	92	225620	44.81	ug/L	97
77) ethyl methacrylate	11.160	69	111274	48.23	ug/L	95
78) trans-1,3-dichloropropene	11.160	75	140597	46.97	ug/L	94
79) 1,1,2-trichloroethane	11.390	83	68579	46.79	ug/L	95
80) tetrachloroethene	11.573	164	99544	47.20	ug/L	97
81) 2-hexanone	11.557	58	120635	192.38	ug/L	98
82) 1,3-dichloropropane	11.578	76	126914	43.83	ug/L	99
83) butyl acetate	11.657	56	56043	47.14	ug/L	95
84) dibromochloromethane	11.845	129	116628	44.39	ug/L	97
85) 1,2-dibromoethane	12.007	107	109152	36.17	ug/L	93
86) n-butyl ether	12.504	57	468532	44.15	ug/L	99
87) chlorobenzene	12.530	112	281479	44.93	ug/L	98
88) 1,1,1,2-tetrachloroethane	12.598	131	135005	45.28	ug/L	96
89) ethylbenzene	12.598	91	501709	45.77	ug/L	99
90) m,p-xylene	12.734	106	373070	91.22	ug/L	93
91) o-xylene	13.168	91	431996	46.10	ug/L	96
92) styrene	13.179	104	325142	46.78	ug/L	98
93) butyl acrylate	12.985	55	221395	49.77	ug/L	98
94) isopropylbenzene	13.555	105	585550	45.81	ug/L	100
95) bromoform	13.419	173	96847	45.21	ug/L	98
96) cis-1,4-dichloro-2-butene	13.576	88	49342	48.41	ug/L	96
99) 1,1,2,2-tetrachloroethane	13.843	83	131200	47.98	ug/L	99
100) trans-1,4-dichloro-2-b...	13.880	53	37469	49.39	ug/L	93
101) 1,2,3-trichloropropane	13.937	110	35583	50.40	ug/L	100
102) bromobenzene	13.969	156	161338	48.07	ug/L	93
103) n-propylbenzene	14.010	91	679244	48.12	ug/L	99
104) 2-chlorotoluene	14.157	126	141160	46.92	ug/L	99
105) 4-chlorotoluene	14.277	91	413698	47.06	ug/L	98
106) 1,3,5-trimethylbenzene	14.188	105	500746	46.86	ug/L	100
107) tert-butylbenzene	14.565	119	433439	49.69	ug/L	99
108) 1,2,4-trimethylbenzene	14.622	105	520021	47.49	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102760.d
Acq On : 4 Mar 2021 2:14 pm
Operator : brittank
Sample : JD20919-17ms c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

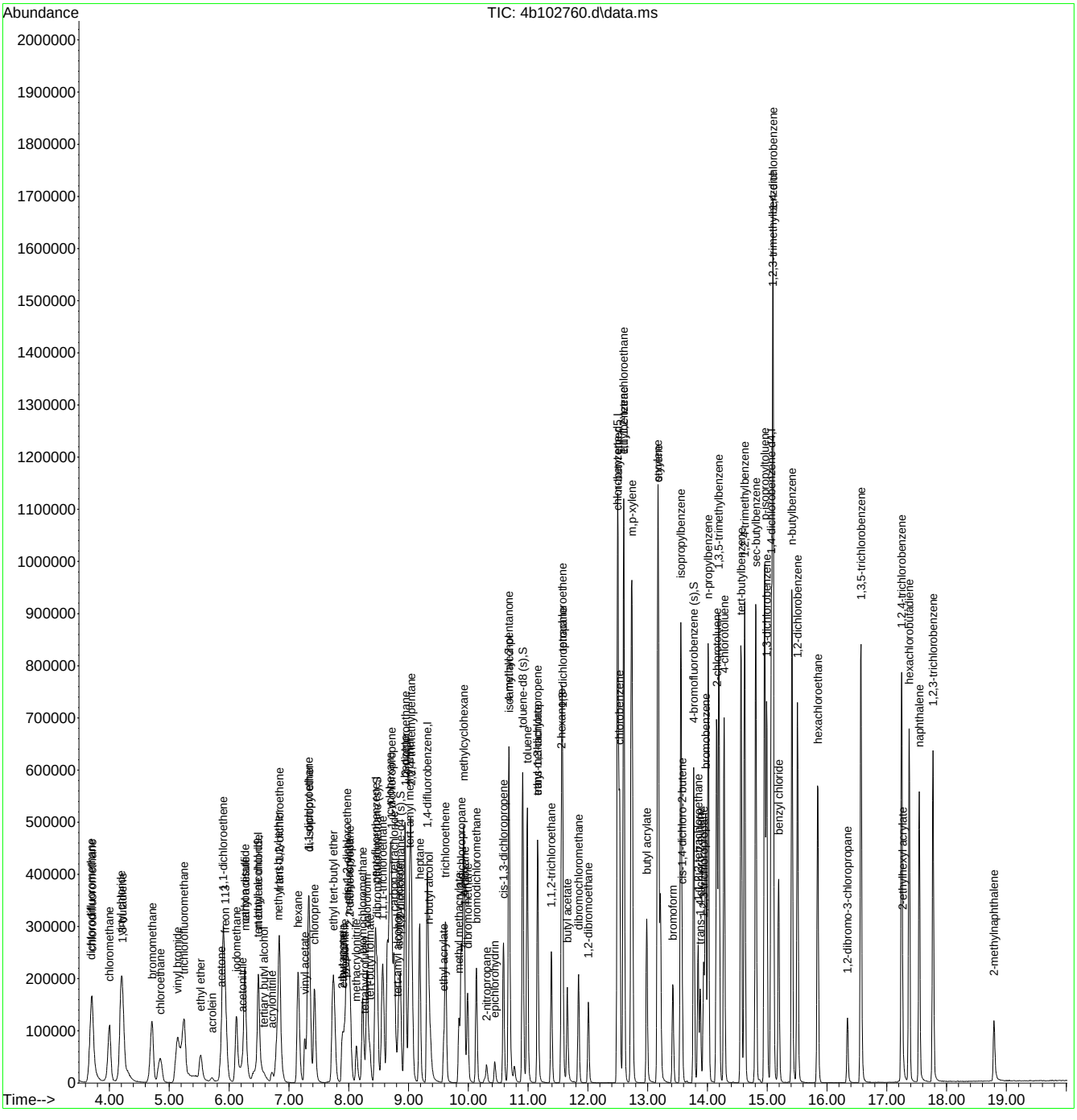
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	14.811	105	676728	47.50	ug/L	99
110) p-isopropyltoluene	14.957	119	604729	47.84	ug/L	99
111) 1,3-dichlorobenzene	14.989	146	315383	45.09	ug/L	99
112) 1,2,3-trimethylbenzene	15.093	105	545427	45.07	ug/L	100
113) 1,4-dichlorobenzene	15.098	146	326127	44.42	ug/L	99
114) 1,2-dichlorobenzene	15.506	146	323696	44.99	ug/L	99
115) benzyl chloride	15.192	91	305936	54.37	ug/L	100
116) n-butylbenzene	15.412	92	304808	47.72	ug/L	98
117) hexachloroethane	15.846	201	116326	39.92	ug/L	98
118) 1,2-dibromo-3-chloropr...	16.343	157	40571	48.99	ug/L	98
119) 1,3,5-trichlorobenzene	16.568	180	305205	44.52	ug/L	99
120) 1,2,4-trichlorobenzene	17.248	180	267825	45.13	ug/L	99
121) 2-ethylhexyl acrylate	17.264	70	14725	7.83	ug/L	95
122) hexachlorobutadiene	17.373	225	153585	45.39	ug/L	98
123) naphthalene	17.541	128	449993	43.14	ug/L	100
124) 1,2,3-trichlorobenzene	17.771	180	225491	43.86	ug/L	96
125) 2-methylnaphthalene	18.791	142	80456	18.42	ug/L	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102760.d
Acq On : 4 Mar 2021 2:14 pm
Operator : brittank
Sample : JD20919-17ms c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:03 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102761.d
Acq On : 4 Mar 2021 2:42 pm
Operator : brittank
Sample : JD20919-17msd c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.469	65	122172	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	241667	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	317290	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	322874	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	222232	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	121101	50.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.94%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	125480	51.56	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.12%			
75) toluene-d8 (s)	10.909	98	380777	51.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.26%			
98) 4-bromofluorobenzene (s)	13.770	95	166107	50.43	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.86%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.584	59	72986	270.85	ug/L	95
4) 1,4-dioxane	9.931	88	26785	1282.57	ug/L	95
6) chlorodifluoromethane	3.707	51	186961	45.54	ug/L	99
7) dichlorodifluoromethane	3.697	85	316432	54.53	ug/L	100
8) chloromethane	4.000	50	237818	49.12	ug/L	98
9) vinyl chloride	4.199	62	236104	54.99	ug/L	99
10) 1,3-butadiene	4.220	54	134427	48.48	ug/L	98
11) bromomethane	4.711	94	162652	49.82	ug/L	99
12) chloroethane	4.852	64	100557	54.85	ug/L	97
13) trichlorofluoromethane	5.239	101	295212	56.38	ug/L	99
14) vinyl bromide	5.130	106	126539	94.05	ug/L	98
15) ethyl ether	5.522	74	37029	45.76	ug/L	97
16) acrolein	5.721	56	12493	43.37	ug/L	92
17) freon 113	5.930	151	135850	48.72	ug/L	97
18) 1,1-dichloroethene	5.898	61	178135	45.72	ug/L	96
19) acetone	5.872	58	27698	173.04	ug/L	93
20) acetonitrile	6.228	41	135844	498.41	ug/L	95
21) iodomethane	6.118	142	248609	39.96	ug/L	96
22) carbon disulfide	6.259	76	396368	42.51	ug/L	99
23) methylene chloride	6.489	84	114103	41.69	ug/L	99
24) methyl acetate	6.265	43	59560	49.06	ug/L	97
25) methyl tert butyl ether	6.814	73	309794	44.42	ug/L	98
26) trans-1,2-dichloroethene	6.840	61	152279	47.35	ug/L	99
27) hexane	7.154	56	81792	54.35	ug/L	96
28) di-isopropyl ether	7.337	45	397841	45.96	ug/L	96
29) 2-butanone	7.886	72	29471	198.88	ug/L	92
30) 1,1-dichloroethane	7.332	63	187594	47.22	ug/L	98
31) chloroprene	7.426	53	156887	49.67	ug/L	99
32) acrylonitrile	6.709	53	29892	47.52	ug/L	95
33) vinyl acetate	7.264	86	13114	52.48	ug/L	98
34) ethyl tert-butyl ether	7.745	59	357337	45.25	ug/L	97
35) ethyl acetate	7.907	45	11990	52.53	ug/L #	72
36) 2,2-dichloropropane	8.011	77	224029	50.96	ug/L	99
37) cis-1,2-dichloroethene	7.964	96	107351	46.42	ug/L	92
38) propionitrile	7.933	54	117347	505.17	ug/L	96
39) methyl acrylate	7.996	85	11001	50.28	ug/L #	88
40) methacrylonitrile	8.127	67	29520	51.45	ug/L	97
41) bromochloromethane	8.236	128	57150	46.09	ug/L	90
42) tetrahydrofuran	8.268	72	9958	48.53	ug/L	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102761.d
Acq On : 4 Mar 2021 2:42 pm
Operator : brittank
Sample : JD20919-17msd c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	8.304	83	193513	44.72	ug/L	99
44) tert-butyl formate	8.351	59	48661	27.53	ug/L	98
46) 1,1,1-trichloroethane	8.571	97	244328	50.72	ug/L	98
47) cyclohexane	8.686	84	219304	54.56	ug/L	99
49) 1,1-dichloropropene	8.718	75	134425	47.89	ug/L	97
50) carbon tetrachloride	8.759	117	217118	49.86	ug/L	97
51) tert-amyl alcohol	8.822	73	27130	257.73	ug/L #	86
52) isopropyl acetate	8.838	87	16417	49.67	ug/L #	88
55) n-butyl alcohol	9.340	41	105971	2794.24	ug/L	97
56) 2,2,4-trimethylpentane	9.042	57	478581	54.74	ug/L	100
57) benzene	8.942	78	362678	45.81	ug/L	99
58) tert-amyl methyl ether	9.016	73	339705	48.36	ug/L	98
59) heptane	9.183	57	76108	52.39	ug/L	97
60) 1,2-dichloroethane	8.948	62	132274	46.46	ug/L	96
61) ethyl acrylate	9.586	55	93102	49.77	ug/L	99
62) trichloroethene	9.622	95	99541	48.27	ug/L	98
64) methyl methacrylate	9.842	100	19347	51.54	ug/L	93
65) methylcyclohexane	9.926	83	237737	54.69	ug/L	99
66) 1,2-dichloropropane	9.879	63	96692	46.72	ug/L	98
67) dibromomethane	9.983	93	59395	46.32	ug/L	96
68) bromodichloromethane	10.135	83	141379	47.65	ug/L	100
69) 2-nitropropane	10.308	41	20934	50.01	ug/L	100
70) epichlorohydrin	10.444	57	35802	234.51	ug/L	99
71) cis-1,3-dichloropropene	10.585	75	148057	45.56	ug/L	99
72) 4-methyl-2-pentanone	10.679	58	133730	201.54	ug/L	97
73) isoamyl alcohol	10.679	70	56994	1139.16	ug/L	89
76) toluene	10.988	92	218409	47.54	ug/L	98
77) ethyl methacrylate	11.160	69	109067	51.81	ug/L	96
78) trans-1,3-dichloropropene	11.160	75	135227	49.51	ug/L	93
79) 1,1,2-trichloroethane	11.390	83	66112	49.43	ug/L	97
80) tetrachloroethene	11.568	164	94597	49.16	ug/L	99
81) 2-hexanone	11.558	58	117445	205.26	ug/L	98
82) 1,3-dichloropropane	11.579	76	123179	46.62	ug/L	99
83) butyl acetate	11.652	56	53092	48.95	ug/L	96
84) dibromochloromethane	11.845	129	113263	47.25	ug/L	99
85) 1,2-dibromoethane	12.007	107	102703	37.30	ug/L	99
86) n-butyl ether	12.504	57	461880	47.70	ug/L	99
87) chlorobenzene	12.530	112	267295	46.76	ug/L	97
88) 1,1,1,2-tetrachloroethane	12.598	131	138691	50.98	ug/L	98
89) ethylbenzene	12.604	91	481720	48.17	ug/L	100
90) m,p-xylene	12.734	106	361171	96.79	ug/L	95
91) o-xylene	13.169	91	422476	49.41	ug/L	100
92) styrene	13.179	104	304205	47.96	ug/L	95
93) butyl acrylate	12.985	55	210402	51.83	ug/L	98
94) isopropylbenzene	13.556	105	575791	49.37	ug/L	99
95) bromoform	13.420	173	91272	46.69	ug/L	98
96) cis-1,4-dichloro-2-butene	13.571	88	47415	50.98	ug/L	97
99) 1,1,2,2-tetrachloroethane	13.843	83	127331	51.41	ug/L	99
100) trans-1,4-dichloro-2-b...	13.880	53	35118	51.10	ug/L	96
101) 1,2,3-trichloropropane	13.932	110	33530	52.43	ug/L	94
102) bromobenzene	13.969	156	150441	49.48	ug/L	97
103) n-propylbenzene	14.011	91	652430	51.03	ug/L	100
104) 2-chlorotoluene	14.152	126	136605	50.13	ug/L	97
105) 4-chlorotoluene	14.277	91	386305	48.51	ug/L	99
106) 1,3,5-trimethylbenzene	14.188	105	491822	50.81	ug/L	97
107) tert-butylbenzene	14.560	119	422672	53.49	ug/L	100
108) 1,2,4-trimethylbenzene	14.623	105	504772	50.89	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102761.d
Acq On : 4 Mar 2021 2:42 pm
Operator : brittank
Sample : JD20919-17msd c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

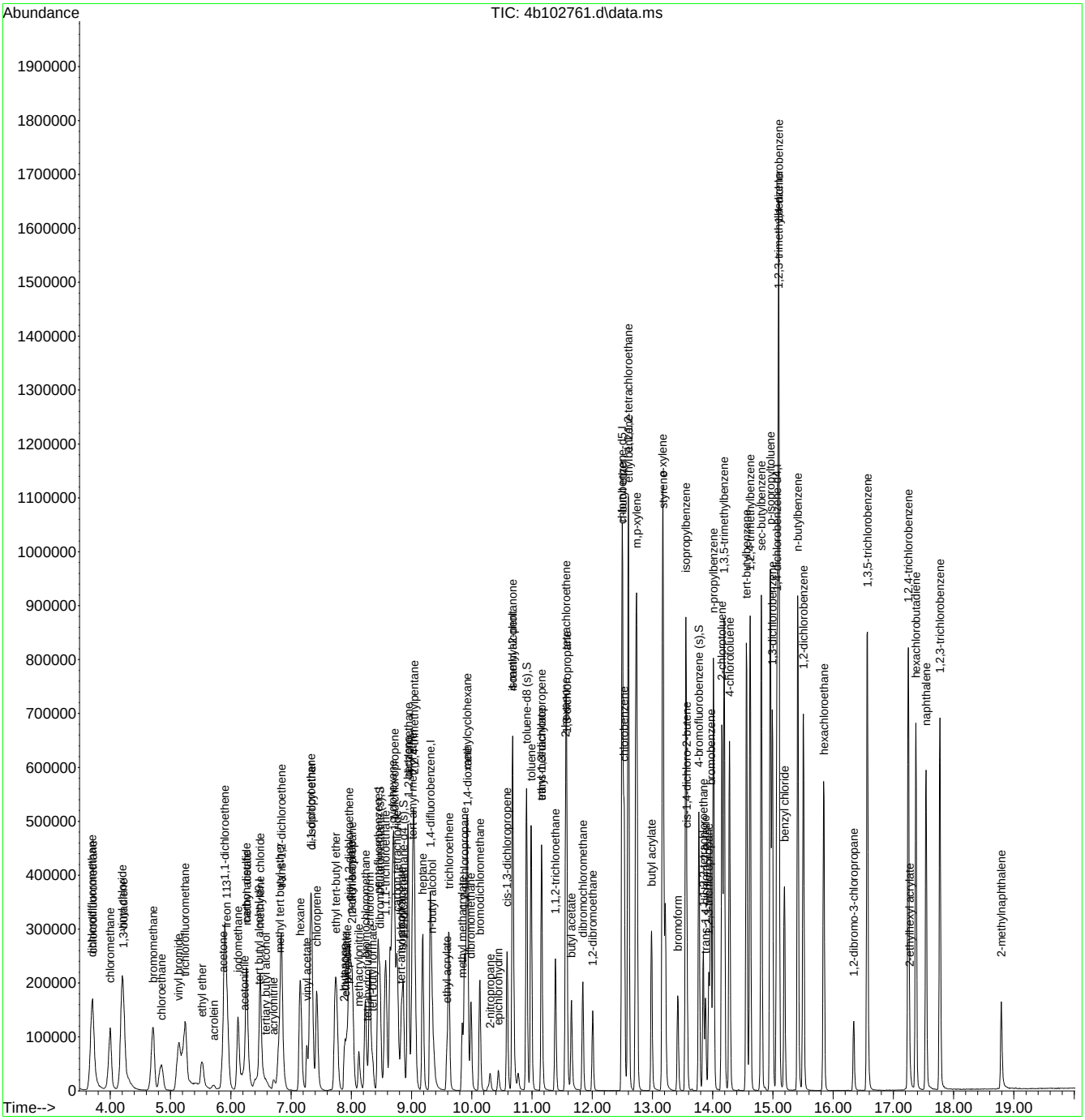
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	14.806	105	677164	52.47	ug/L	100
110) p-isopropyltoluene	14.957	119	588995	51.44	ug/L	98
111) 1,3-dichlorobenzene	14.989	146	305190	48.17	ug/L	99
112) 1,2,3-trimethylbenzene	15.093	105	535404	48.83	ug/L	99
113) 1,4-dichlorobenzene	15.098	146	311421	46.82	ug/L	98
114) 1,2-dichlorobenzene	15.506	146	318844	48.92	ug/L	99
115) benzyl chloride	15.193	91	298415	58.55	ug/L	99
116) n-butylbenzene	15.412	92	297406	51.40	ug/L	100
117) hexachloroethane	15.846	201	114750	43.40	ug/L	99
118) 1,2-dibromo-3-chloropr...	16.343	157	41277	55.02	ug/L	98
119) 1,3,5-trichlorobenzene	16.568	180	312814	50.37	ug/L	98
120) 1,2,4-trichlorobenzene	17.248	180	284112	52.85	ug/L	98
121) 2-ethylhexyl acrylate	17.269	70	15667	9.19	ug/L	99
122) hexachlorobutadiene	17.374	225	154805	50.51	ug/L	99
123) naphthalene	17.541	128	491507	52.01	ug/L	100
124) 1,2,3-trichlorobenzene	17.771	180	240735	51.69	ug/L	97
125) 2-methylnaphthalene	18.791	142	102292	25.85	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102761.d
Acq On : 4 Mar 2021 2:42 pm
Operator : brittank
Sample : JD20919-17msd c Inst : MS4B
Misc : MS49209,V4B4445,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:27:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208834.d
Acq On : 5 Mar 2021 2:03 pm
Operator : krizhkac
Sample : jd20919-18ms c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:40:46 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.280	65	151694	500.00	ug/L	0.00
5) pentafluorobenzene	9.545	168	592661	50.00	ug/L	-0.01
51) 1,4-difluorobenzene	10.476	114	851453	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	742104	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.926	152	383720	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.545	168	592104	50.00	ug/L	-0.01
128) 1,4-dichlorobenzene-d4(a)	15.926	152	383720	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.545	168	592104	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	269893	51.88	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.76%			
52) 1,2-dichloroethane-d4 (s)	9.995	65	275376	52.02	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.04%			
74) toluene-d8 (s)	12.102	98	950191	50.57	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.14%			
98) 4-bromofluorobenzene (s)	14.759	95	354010	48.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.06%			
Target Compounds						Qvalue
2) ethanol	5.999	45	216261	4334.81	ug/L	97
3) tertiary butyl alcohol	7.395	59	115657	238.64	ug/L	98
4) 1,4-dioxane	11.119	88	47901	1032.84	ug/L	98
6) chlorodifluoromethane	4.032	51	346586	38.31	ug/L	99
7) dichlorodifluoromethane	4.006	85	533605	58.46	ug/L	97
8) chloromethane	4.372	50	520561	52.74	ug/L	98
9) vinyl chloride	4.602	62	504007	52.30	ug/L	98
10) 1,3-butadiene	4.639	54	407024	52.47	ug/L	99
11) bromomethane	5.214	94	327242	47.98	ug/L	98
12) chloroethane	5.381	64	265967	49.47	ug/L	97
13) vinyl bromide	5.716	106	275033	52.11	ug/L	99
14) trichlorofluoromethane	5.836	101	602992	50.16	ug/L	99
15) ethyl ether	6.218	74	160815	44.90	ug/L	95
16) acrolein	6.443	56	33849	43.93	ug/L	86
17) freon 113	6.647	151	298605	51.41	ug/L	96
18) 1,1-dichloroethene	6.631	96	294744	44.93	ug/L	98
19) acetone	6.631	43	223509	109.54	ug/L	94
20) acetonitrile	7.050	41	271959	410.73	ug/L	97
21) iodomethane	6.877	142	614356	43.75	ug/L	99
22) carbon disulfide	7.013	76	1036659	48.80	ug/L	98
23) methylene chloride	7.332	84	338672	44.05	ug/L	95
24) methyl acetate	7.092	43	168210	34.45	ug/L	96
25) methyl tert butyl ether	7.688	73	798957	43.80	ug/L	98
26) trans-1,2-dichloroethene	7.719	96	333477	46.35	ug/L	97
27) hexane	8.075	57	567252	52.33	ug/L	98
28) di-isopropyl ether	8.284	45	1096612	49.60	ug/L	97
29) ethyl tert-butyl ether	8.744	59	999804	46.18	ug/L	99
30) 2-butanone	8.943	72	94625	146.25	ug/L #	83
31) 1,1-dichloroethane	8.295	63	592146	47.77	ug/L	99
32) chloroprene	8.394	53	490348	50.06	ug/L	99
33) acrylonitrile	7.625	53	72269	36.66	ug/L	96
34) vinyl acetate	8.232	86	56058	55.72	ug/L	100
35) ethyl acetate	8.959	45	33821	45.35	ug/L	92
36) 2,2-dichloropropane	9.037	77	513156	55.96	ug/L	98
37) cis-1,2-dichloroethene	9.006	96	361888	46.39	ug/L	98
38) propionitrile	9.016	54	294420	404.99	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208834.d
Acq On : 5 Mar 2021 2:03 pm
Operator : krizhkac
Sample : jd20919-18ms c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:40:46 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) bromochloromethane	9.299	130	233344	47.70	ug/L	100
40) tetrahydrofuran	9.320	42	62009	38.96	ug/L	93
41) chloroform	9.388	83	572872	44.49	ug/L	99
42) tert-butyl formate	9.424	59	123775	23.73	ug/L	97
43) isobutyl alcohol	9.785	43	68939	292.13	ug/L	94
45) methacrylonitrile	9.215	67	96822	43.15	ug/L	87
46) 1,1,1-trichloroethane	9.644	97	593783	53.59	ug/L	100
47) cyclohexane	9.754	84	538652	49.58	ug/L	97
48) 1,1-dichloropropene	9.817	75	463614	49.78	ug/L	99
49) tert-amyl alcohol	9.942	73	51350	168.25	ug/L	92
50) carbon tetrachloride	9.843	117	506021	50.69	ug/L	98
53) 2,2,4-trimethylpentane	10.157	57	1398961	51.19	ug/L	97
54) tert-amyl methyl ether	10.146	73	932903	45.17	ug/L	97
55) n-butyl alcohol	10.533	56	266748	1670.32	ug/L	95
56) benzene	10.063	78	1276740	47.40	ug/L	99
57) heptane	10.319	57	284678	51.42	ug/L	96
58) isopropyl acetate	9.979	87	56006	44.93	ug/L #	89
59) 1,2-dichloroethane	10.089	62	401570	45.82	ug/L	99
60) trichloroethene	10.784	95	351262	47.89	ug/L	98
61) ethyl acrylate	10.779	55	305897	48.48	ug/L	99
62) 2-nitropropane	11.543	41	56529	47.32	ug/L	94
64) methyl methacrylate	11.041	100	65790	43.49	ug/L #	88
65) 1,2-dichloropropane	11.077	63	338730	48.17	ug/L	98
66) methylcyclohexane	11.082	83	663084	52.60	ug/L	99
67) dibromomethane	11.182	93	186121	45.70	ug/L	99
68) bromodichloromethane	11.339	83	436833	48.11	ug/L	95
69) epichlorohydrin	11.663	57	95554	189.62	ug/L	97
70) cis-1,3-dichloropropene	11.794	75	543093	49.26	ug/L	94
71) 4-methyl-2-pentanone	11.904	58	361120	168.75	ug/L	95
72) 3-methyl-1-butanol	11.904	70	103697	724.05	ug/L #	85
75) toluene	12.176	92	805288	47.70	ug/L	96
76) trans-1,3-dichloropropene	12.359	75	455464	47.01	ug/L	99
77) ethyl methacrylate	12.353	69	297032	39.84	ug/L	96
78) 1,1,2-trichloroethane	12.578	83	218462	44.27	ug/L	97
79) 2-hexanone	12.746	58	326535	146.07	ug/L	93
80) tetrachloroethene	12.725	166	550072	69.95	ug/L	99
81) 1,3-dichloropropane	12.761	76	422435	44.87	ug/L	99
82) butyl acetate	12.824	56	169023	47.40	ug/L	92
83) dibromochloromethane	13.002	129	331159	48.03	ug/L	100
84) 1,2-dibromoethane	13.154	107	312387	45.27	ug/L	99
85) n-butyl ether	13.598	57	1357181	47.54	ug/L	99
86) chlorobenzene	13.635	112	888689	47.75	ug/L	100
87) 1,1,1,2-tetrachloroethane	13.698	131	335489	48.95	ug/L	98
88) ethylbenzene	13.698	91	1417728	46.65	ug/L	99
89) m,p-xylene	13.818	106	1161384	97.11	ug/L	95
90) o-xylene	14.215	91	1132453	46.43	ug/L	98
91) styrene	14.226	104	871105	51.63	ug/L	99
92) n-amyl acetate	14.262	70	198722	49.58	ug/L	97
93) bromoform	14.451	173	212944	48.40	ug/L	99
94) butyl acrylate	14.053	55	519457	48.71	ug/L	99
95) isopropylbenzene	14.566	105	1430019	47.90	ug/L	99
96) cis-1,4-dichloro-2-butene	14.602	88	60194	27.00	ug/L	97
99) bromobenzene	14.942	156	396036	47.49	ug/L	90
100) 1,1,2,2-tetrachloroethane	14.843	83	301490	41.08	ug/L	98
101) trans-1,4-dichloro-2-b...	14.874	53	43266	28.97	ug/L	95
102) 1,2,3-trichloropropane	14.927	110	75304	42.29	ug/L	95
103) n-propylbenzene	14.979	91	1661081	46.36	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208834.d
Acq On : 5 Mar 2021 2:03 pm
Operator : krizhkac
Sample : jd20919-18ms c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:40:46 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

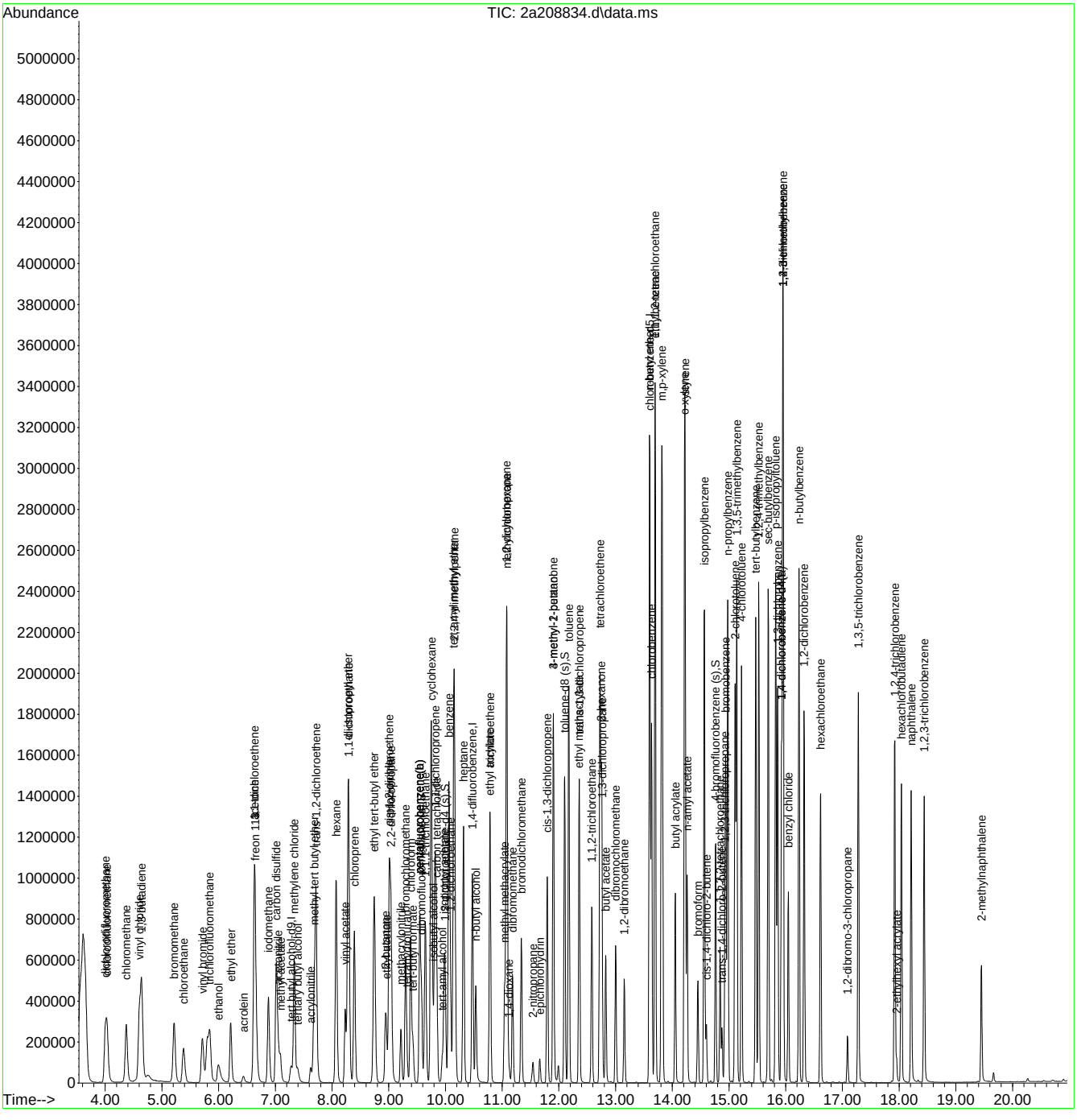
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
104) 2-chlorotoluene	15.110	126	368496	47.41 ug/L	93
105) 4-chlorotoluene	15.220	91	1019311	45.33 ug/L	99
106) 1,3,5-trimethylbenzene	15.136	105	1166947	46.11 ug/L	97
107) tert-butylbenzene	15.471	119	1029611	47.85 ug/L	99
108) 1,2,4-trimethylbenzene	15.523	105	1192490	46.05 ug/L	98
109) sec-butylbenzene	15.690	105	1546475	47.59 ug/L	99
110) 1,3-dichlorobenzene	15.858	146	722938	46.54 ug/L	98
111) p-isopropyltoluene	15.821	119	1327276	48.64 ug/L	99
112) benzyl chloride	16.046	91	592058	53.63 ug/L	99
113) 1,2,3-trimethylbenzene	15.952	105	1185136	45.30 ug/L	98
114) 1,4-dichlorobenzene	15.952	146	719837	46.27 ug/L	98
115) 1,2-dichlorobenzene	16.323	146	685437	45.39 ug/L	99
116) n-butylbenzene	16.234	92	702970	49.12 ug/L	99
117) 1,2-dibromo-3-chloropr...	17.092	157	61559	43.54 ug/L	99
118) 1,3,5-trichlorobenzene	17.280	180	582259	46.08 ug/L	98
119) 1,2,4-trichlorobenzene	17.924	180	518444	45.60 ug/L	99
120) hexachlorobutadiene	18.039	225	299838	48.76 ug/L	99
121) naphthalene	18.211	128	1050032	49.80 ug/L	100
122) 1,2,3-trichlorobenzene	18.441	180	448078	43.66 ug/L	98
123) hexachloroethane	16.616	201	248920	51.85 ug/L	98
124) 2-ethylhexyl acrylate	17.955	70	22974	6.87 ug/L	99
125) 2-methylnaphthalene	19.451	142	291248	28.15 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208834.d
Acq On : 5 Mar 2021 2:03 pm
Operator : krizhkac
Sample : jd20919-18ms c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:40:46 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165039.D
Acq On : 3 Mar 2021 4:51 pm
Operator : ROBERTS
Sample : JD20919-17MS C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 04 09:08:17 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	12374	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.05	96	6358	10.03 ug/L	-0.04
Spiked Amount 10.000	Range 39 - 174		Recovery = 100.30%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	10660	16.99 ug/L	97

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

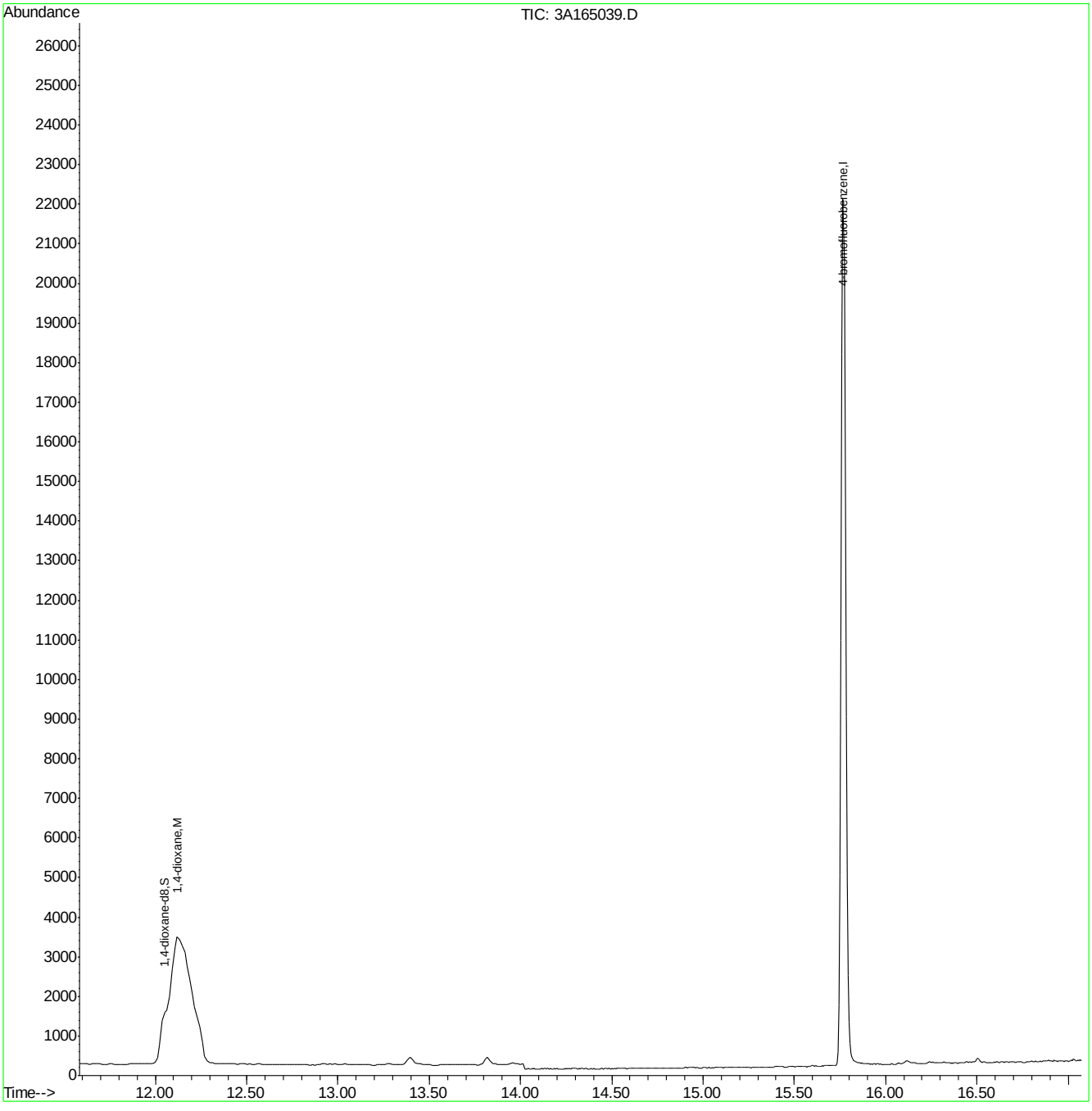
7.4.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165039.D
Acq On : 3 Mar 2021 4:51 pm
Operator : ROBERTS
Sample : JD20919-17MS C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 04 09:08:17 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Thu Mar 04 09:22:35 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165040.D
Acq On : 3 Mar 2021 5:20 pm
Operator : ROBERTS
Sample : JD20919-17MSD C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 04 09:08:18 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11802	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5631	9.32 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 93.20%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.13	88	9994	16.70 ug/L	96

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

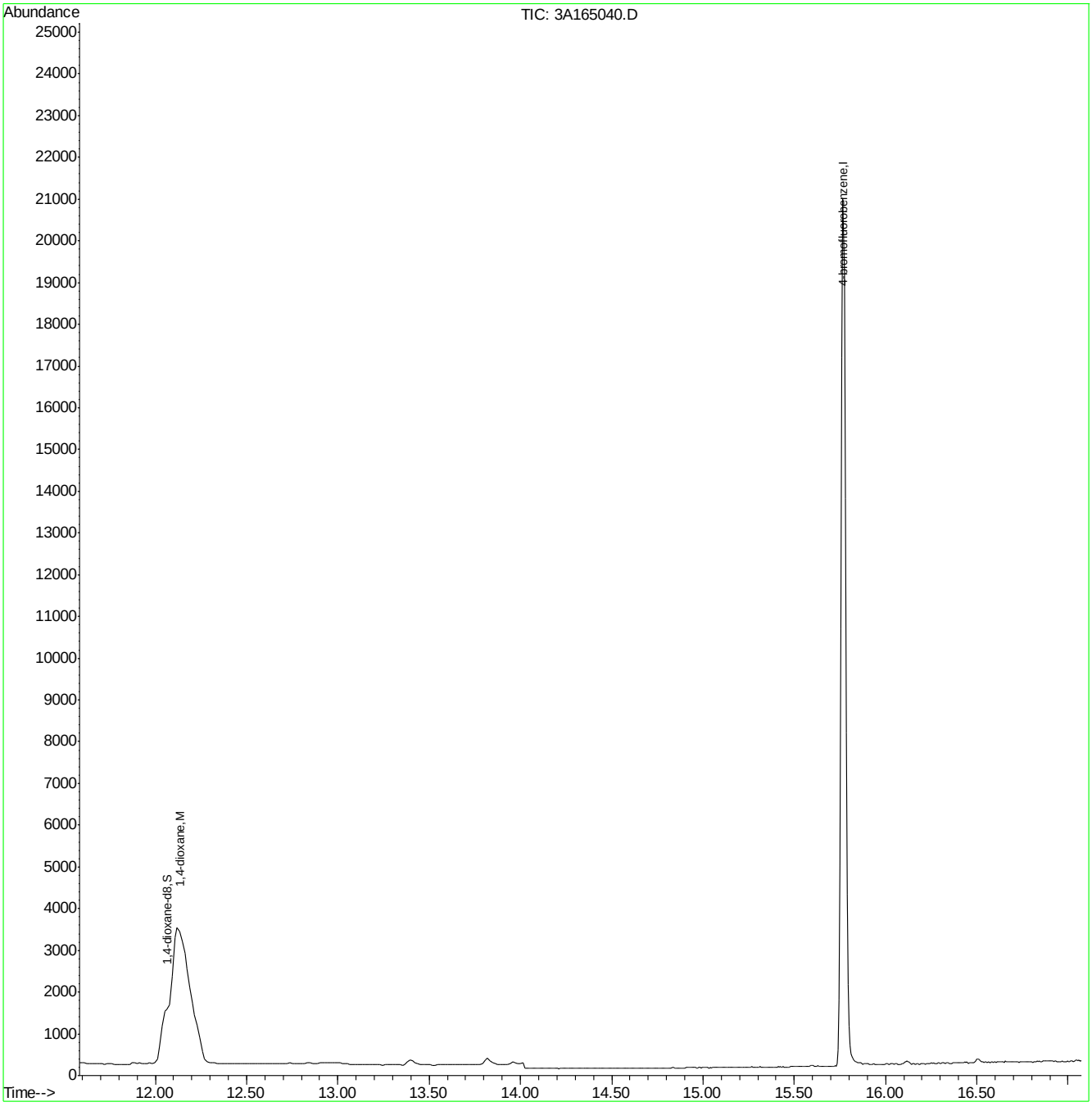
7.4.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165040.D
Acq On : 3 Mar 2021 5:20 pm
Operator : ROBERTS
Sample : JD20919-17MSD C
Misc : MS49208,V3A7169,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 04 09:08:18 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Thu Mar 04 09:22:35 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165063.D
Acq On : 4 Mar 2021 2:16 pm
Operator : ROBERTS
Sample : JD20920-11MS C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 04 14:46:08 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9997	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	6035	11.79 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 117.90%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	10513	20.74 ug/L	97

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

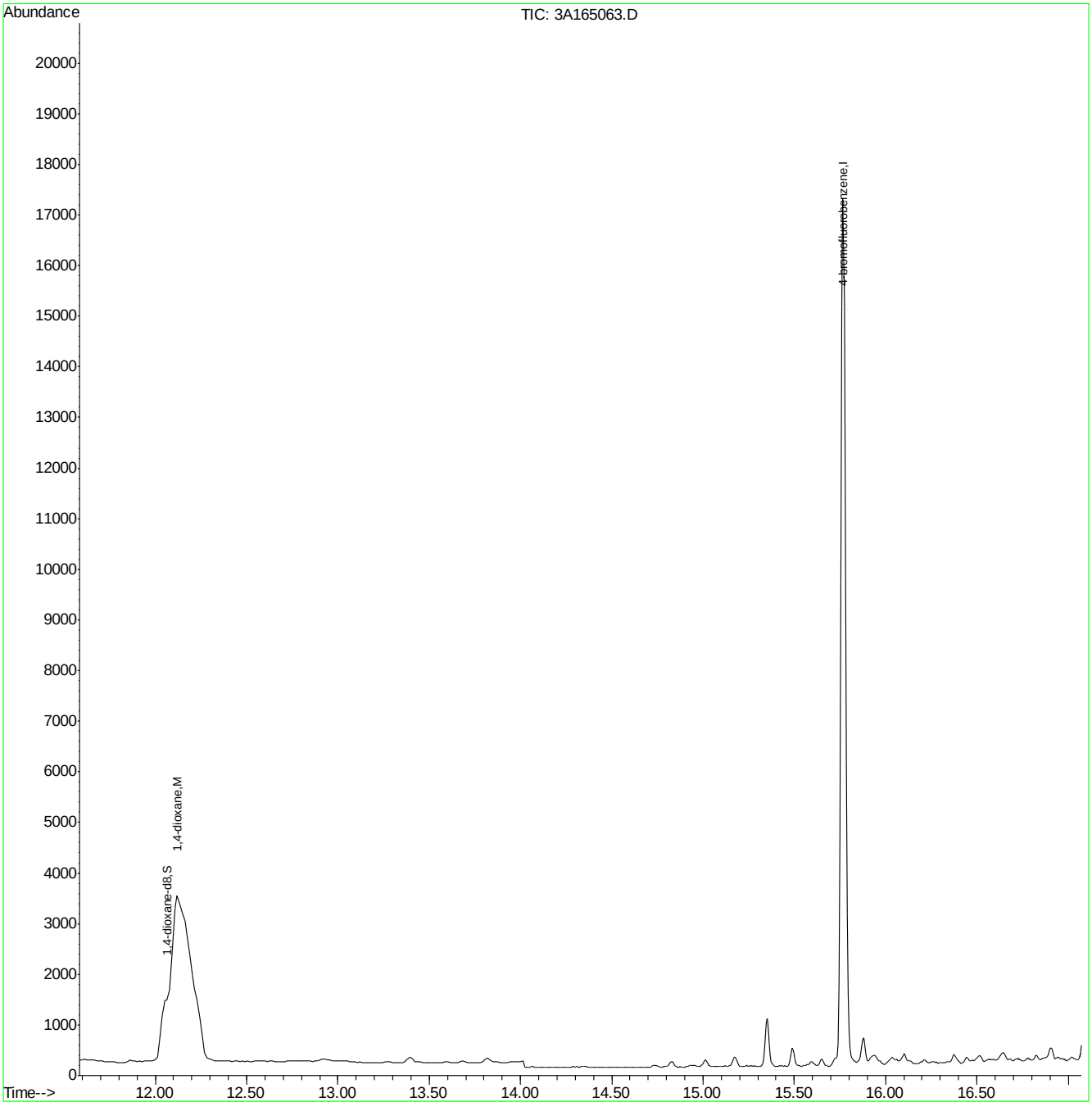
7.4.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165063.D
Acq On : 4 Mar 2021 2:16 pm
Operator : ROBERTS
Sample : JD20920-11MS C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 04 14:46:08 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Fri Mar 05 17:40:17 2021 ACCUNJ

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165064.D
Acq On : 4 Mar 2021 2:45 pm
Operator : ROBERTS
Sample : JD20920-11MSD C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 04 15:29:50 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9697	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.05	96	7110	14.32 ug/L	-0.04
Spiked Amount 10.000	Range 39 - 174		Recovery = 143.20%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	10665	21.69 ug/L	99

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

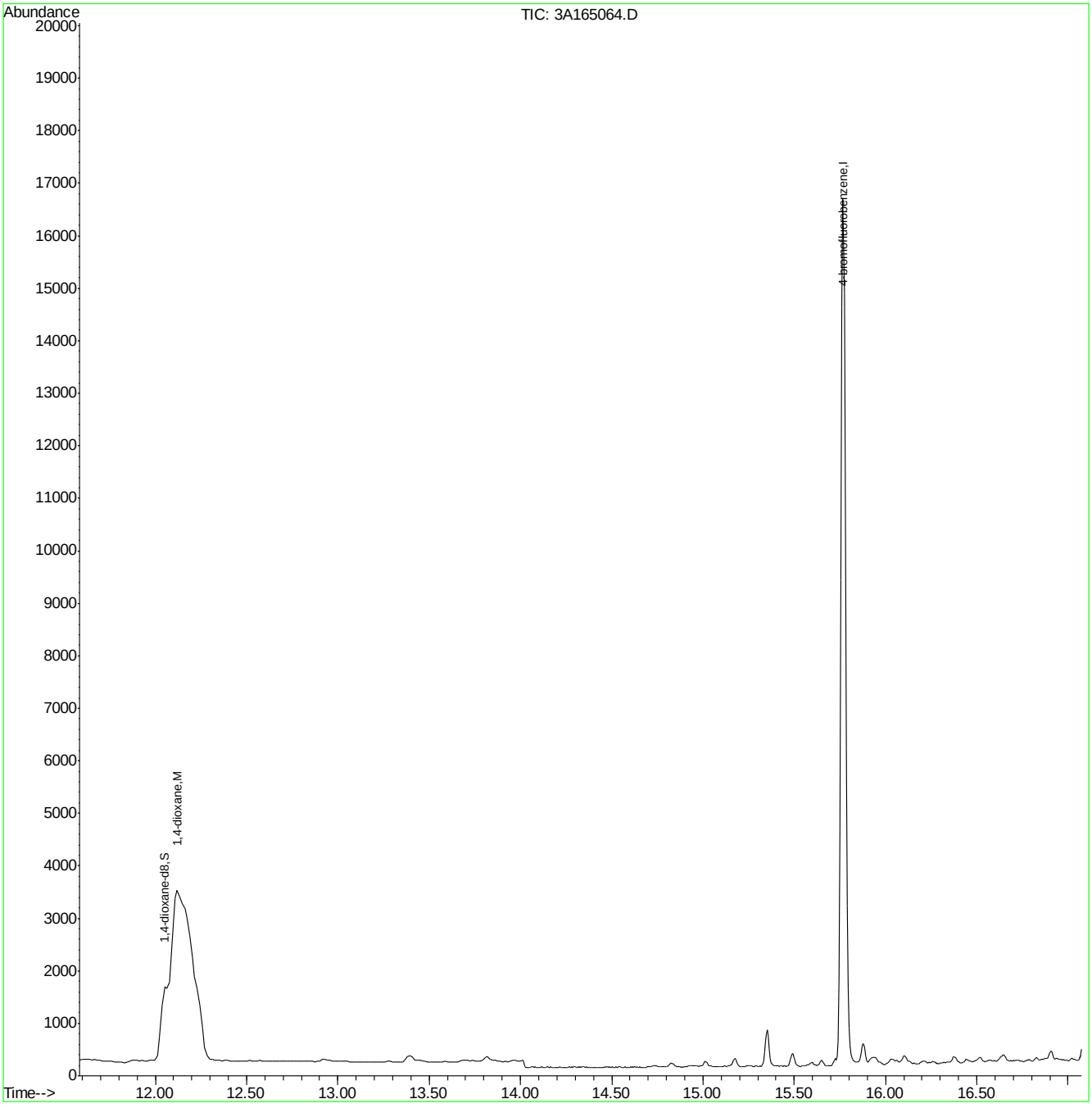
7.4.7

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165064.D
Acq On : 4 Mar 2021 2:45 pm
Operator : ROBERTS
Sample : JD20920-11MSD C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 04 15:29:50 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208836.d
Acq On : 5 Mar 2021 3:01 pm
Operator : krizhkac
Sample : jd20919-16dup c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:43:08 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

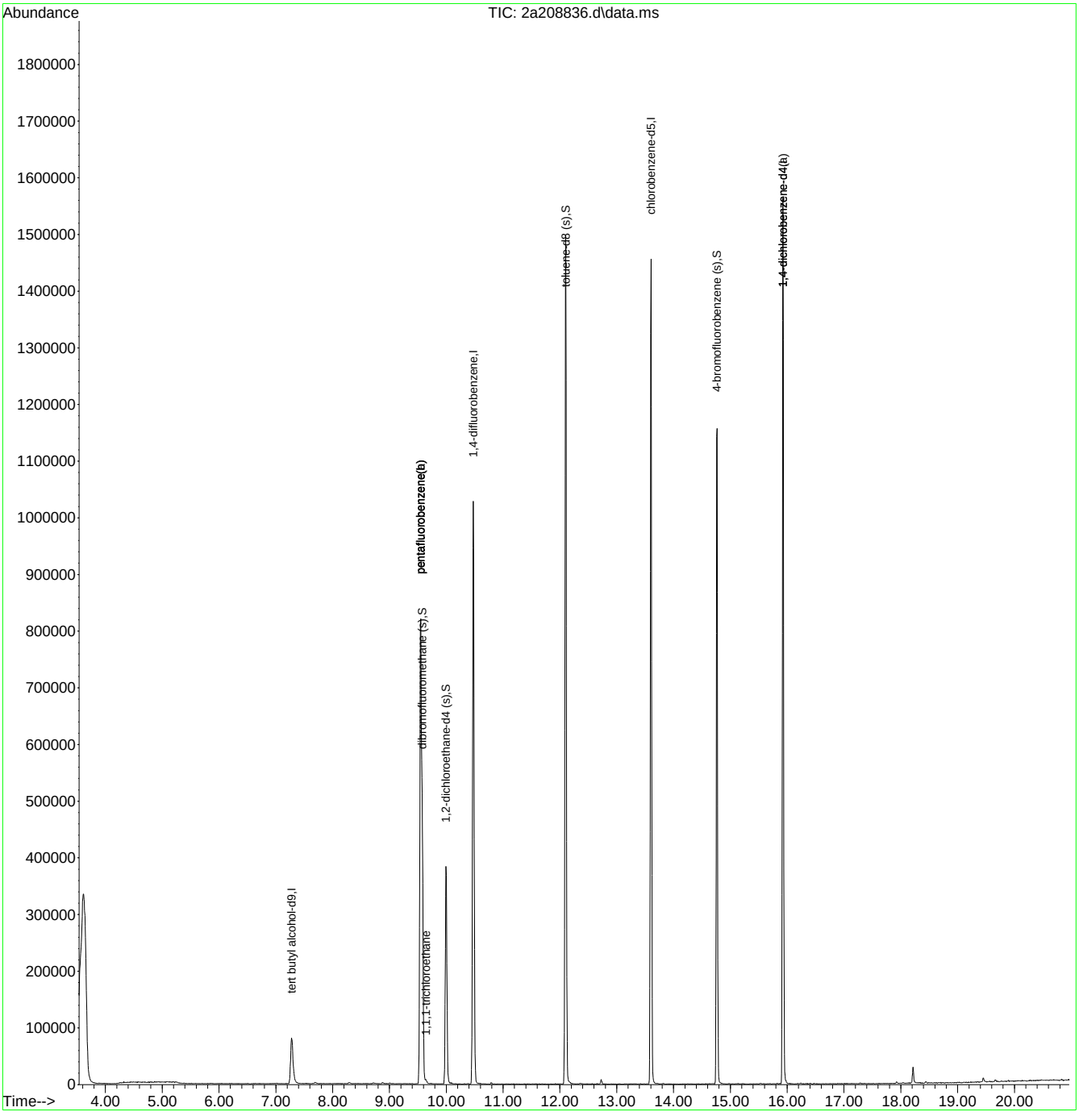
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.275	65	146959	500.00	ug/L	-0.01
5) pentafluorobenzene	9.550	168	595535	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.476	114	853976	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	749847	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.926	152	378424	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.550	168	595535	50.00	ug/L	0.00
128) 1,4-dichlorobenzene-d4(a)	15.926	152	378424	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.550	168	595535	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	266136	50.91	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.82%			
52) 1,2-dichloroethane-d4 (s)	9.994	65	268105	50.50	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.00%			
74) toluene-d8 (s)	12.102	98	946217	49.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.68%			
98) 4-bromofluorobenzene (s)	14.759	95	352652	48.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.04%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	9.639	97	3501	0.31	ug/L	93

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

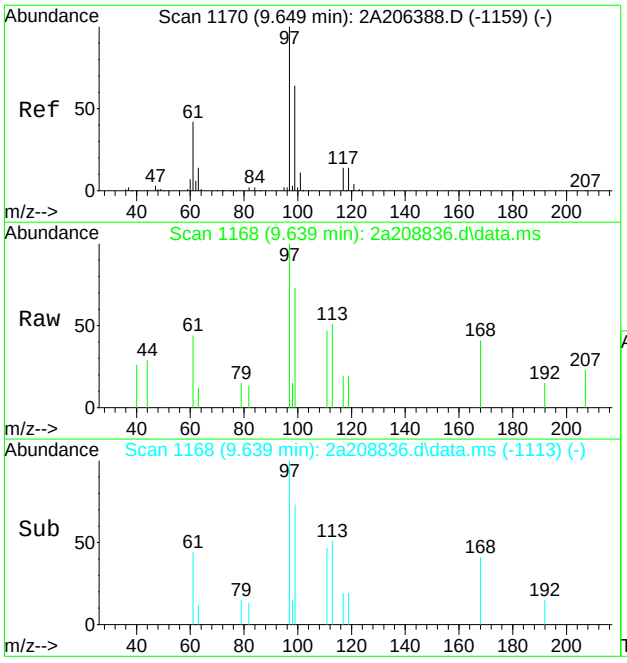
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208836.d
Acq On : 5 Mar 2021 3:01 pm
Operator : krizhkac
Sample : jd20919-16dup c Inst : GCMS2A
Misc : MS49209,V2A9078,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:43:08 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration



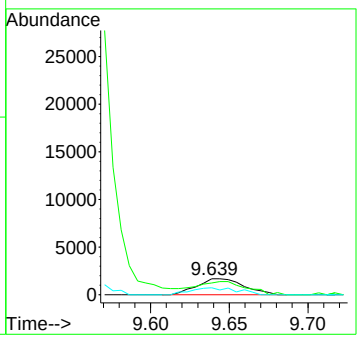
M2A8967.M Sun Mar 07 22:15:11 2021 Page: 2



#46
1,1,1-trichloroethane
Concen: 0.31 ug/L
RT: 9.639 min Scan# 1168
Delta R.T. -0.010 min
Lab File: 2a208836.d
Acq: 5 Mar 2021 3:01 pm

Tgt Ion: 97 Resp: 3501

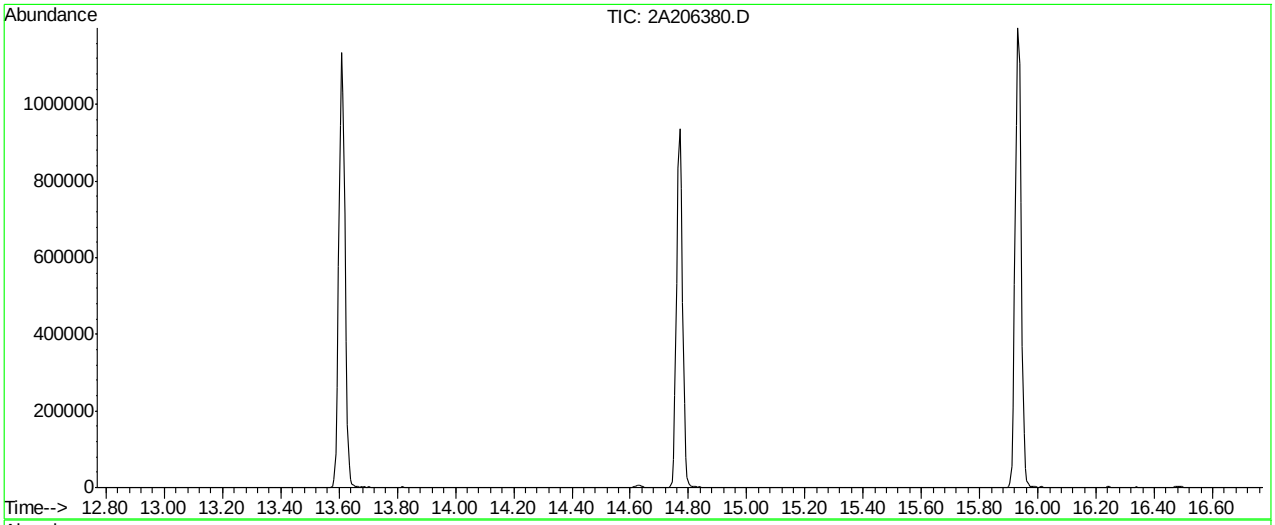
Ion	Ratio	Lower	Upper
97	100		
99	72.8	35.8	95.8
61	44.5	12.1	72.1

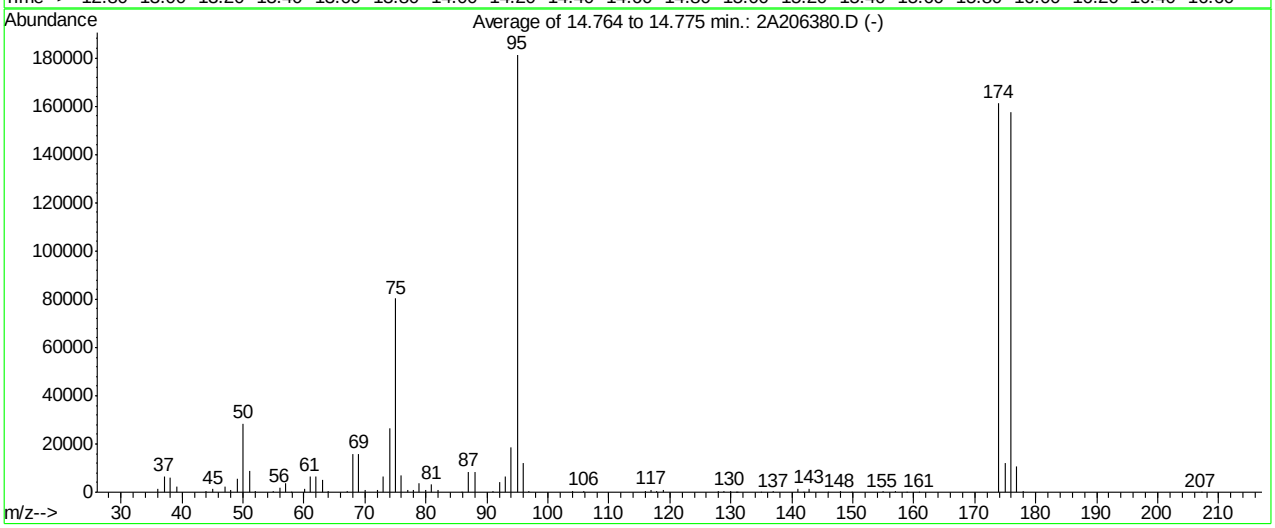


SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\V2A8967\2A206380.D Vial: 13
Acq On : 11 Nov 2020 3:06 pm Operator: EddieH
Sample : bfb Inst : Instrumen
Misc : MS46732,V2A8967,w,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8967.M (RTE Integrator)
Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 17:13:01 2020





AutoFind: Scans 2148, 2149, 2150; Background Corrected with Scan 2140

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.6	28360	PASS
75	95	30	60	44.2	80296	PASS
95	95	100	100	100.0	181461	PASS
96	95	5	9	6.7	12072	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	88.9	161344	PASS
175	174	5	9	7.4	11891	PASS
176	174	95	101	97.7	157568	PASS
177	176	5	9	6.7	10598	PASS

2A206380.D M2A8967.M Fri Nov 13 17:24:33 2020 MS2A

Average of 14.764 to 14.775 min.: 2A206380.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	1290	52.10	376	68.00	15866	80.00	1021
37.05	6677	55.00	403	69.00	15936	80.95	3430
38.10	6035	56.00	2061	70.05	1108	81.90	769
39.10	2411	57.05	3794	72.00	748	85.90	95
44.00	606	57.90	74	73.00	6669	87.00	8386
45.05	1254	60.05	1267	74.00	26474	88.00	8196
47.00	2279	61.00	6704	75.00	80296	90.95	513
48.00	877	62.00	6613	76.00	6858	92.00	4290
49.00	5759	63.05	4995	77.05	1051	93.00	6723
50.00	28360	64.05	485	77.95	852	94.00	18703
51.05	8816	67.05	353	78.90	3537	95.00	181461

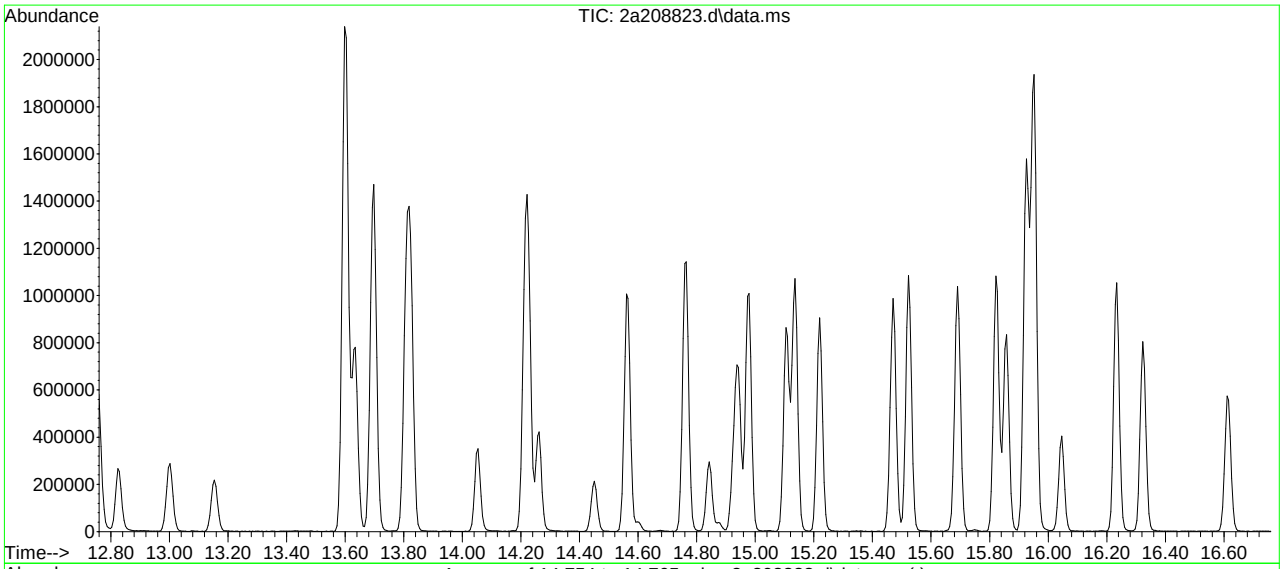
Average of 14.764 to 14.775 min.: 2A206380.D
bfb
Modified:subtracted

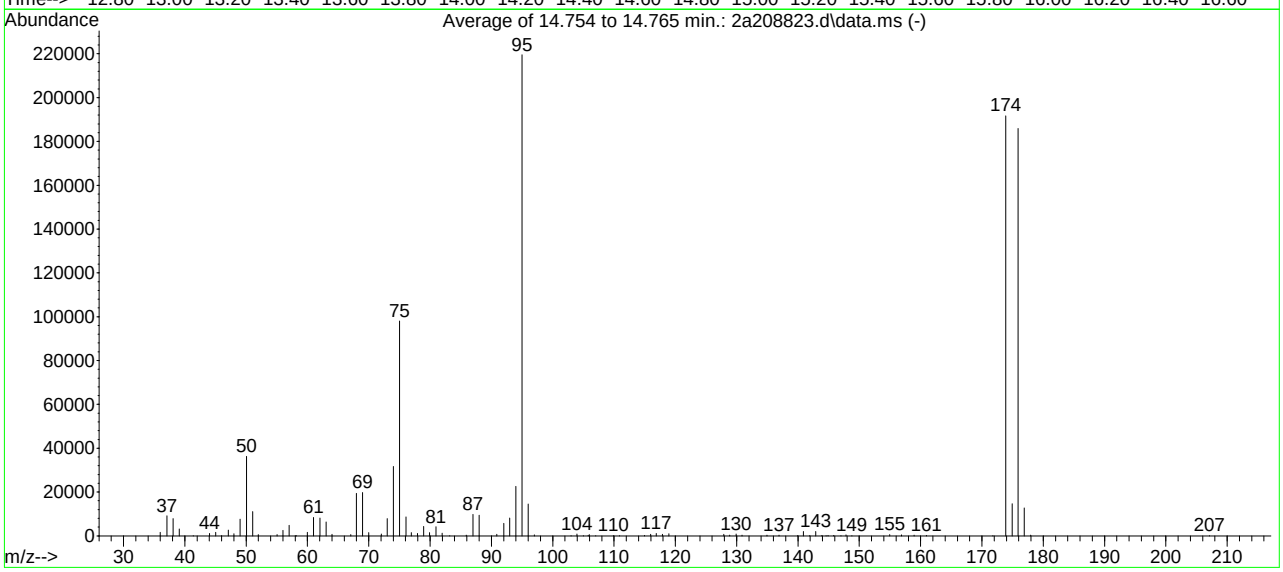
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	12072	130.80	95	156.95	285		
96.95	384	131.00	148	158.90	70		
103.95	614	134.90	222	160.85	136		
105.90	626	136.95	274	173.90	161344		
115.90	494	140.90	1409	174.95	11891		
116.95	951	141.95	222	175.90	157568		
117.90	548	142.90	1638	176.90	10598		
118.90	850	145.90	180	177.90	332		
127.95	589	147.90	367	207.10	68		
128.90	282	149.90	165				
129.95	650	154.95	438				

SW-846 Method 8260

Data File : C:\msdchem\1\data\da...21\v2a9078\2a208823.d Vial: 1
Acq On : 5 Mar 2021 8:32 am Operator: krizhkac
Sample : bfb Inst : GCMS2A
Misc : MS49268,V2A9078,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8967.M (RTE Integrator)
Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021





AutoFind: Scans 2146, 2147, 2148; Background Corrected with Scan 2138

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.5	36317	PASS
75	95	30	60	44.6	97984	PASS
95	95	100	100	100.0	219499	PASS
96	95	5	9	6.6	14549	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	87.3	191723	PASS
175	174	5	9	7.6	14654	PASS
176	174	95	101	97.0	185920	PASS
177	176	5	9	6.9	12750	PASS

2a208823.d M2A8967.M Sun Mar 07 21:33:59 2021

Average of 14.754 to 14.765 min.: 2a208823.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1663	50.05	36317	63.05	6277	76.95	1456
37.10	9129	51.05	11124	64.00	719	77.95	1040
38.10	7912	52.00	534	67.05	585	78.95	4352
39.10	3123	55.05	531	68.00	19381	79.90	1426
41.40	67	56.00	2534	69.00	19803	80.95	4215
44.05	1132	57.00	4821	70.00	1486	81.95	1173
45.05	1662	58.00	103	72.05	883	83.20	114
46.00	75	58.20	104	73.00	7865	85.90	310
47.10	2646	60.00	1638	74.00	31725	87.00	9764
48.00	983	61.00	8373	75.00	97984	88.00	9368
49.00	7666	62.05	8080	76.05	8646	90.90	656

Average of 14.754 to 14.765 min.: 2a208823.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.00	5688	107.00	114	130.85	266	147.00	68
93.00	8086	109.90	87	134.95	279	147.85	442
94.00	22571	110.90	71	136.90	361	148.80	96
95.00	219499	114.95	162	139.90	75	154.95	645
96.00	14549	115.95	688	140.90	1943	156.90	495
97.00	512	116.90	1152	141.90	134	158.95	293
103.00	89	117.90	772	142.90	1982	160.95	171
103.95	790	118.95	1029	143.90	155	171.80	82
105.00	76	127.90	698	144.60	82	173.90	191723
105.80	199	128.85	371	144.90	166	174.95	14654
105.95	560	129.90	809	145.80	203	175.90	185920

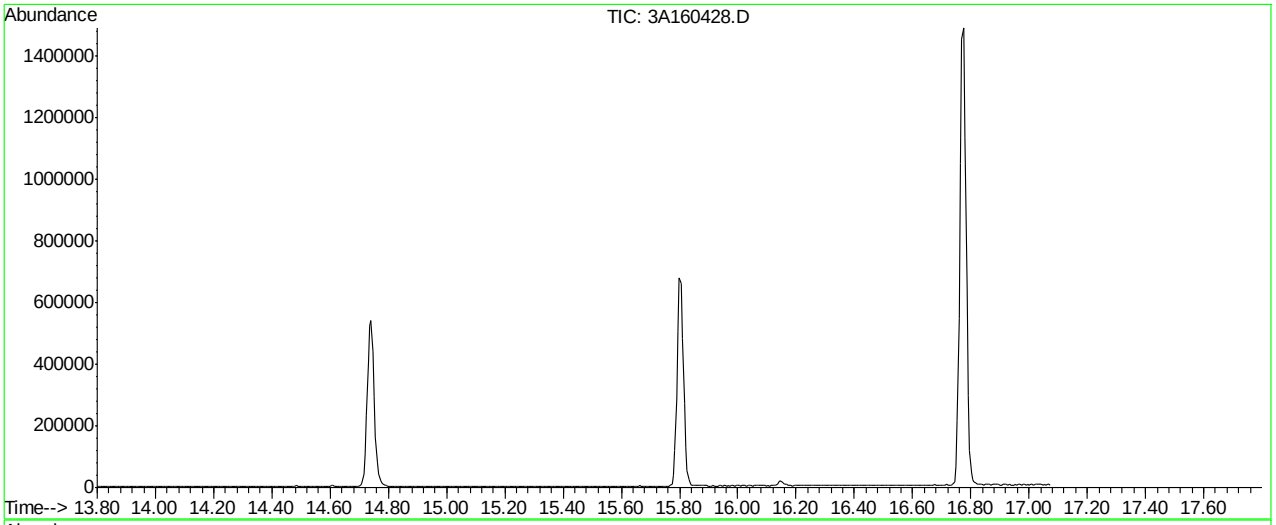
Average of 14.754 to 14.765 min.: 2a208823.d\data.ms
bfb
Modified:subtracted

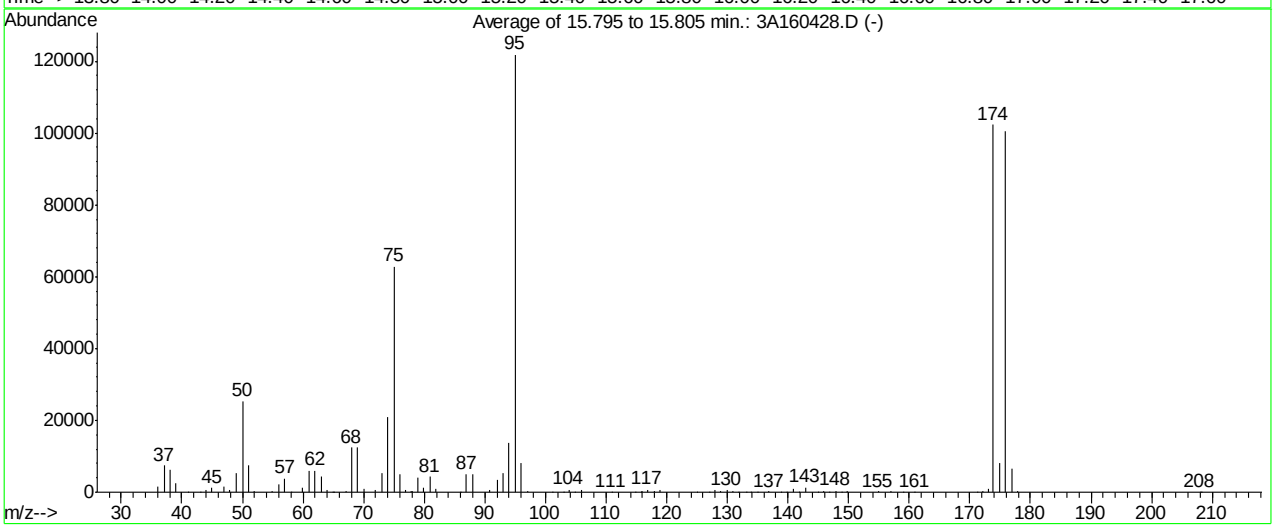
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.90	12750						
177.95	320						
207.10	89						

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\V3A6923\3A160428.D Vial: 4
Acq On : 18 Jul 2018 4:55 pm Operator: HueanhT
Sample : bfb Inst : MS3A
Misc : MS27832,V3A6923,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 804, 805, 806; Background Corrected with Scan 796

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.8	25408	PASS
75	95	30	60	51.6	62880	PASS
95	95	100	100	100.0	121864	PASS
96	95	5	9	6.6	8101	PASS
173	174	0.00	2	0.8	826	PASS
174	95	50	120	84.0	102317	PASS
175	174	5	9	8.0	8168	PASS
176	174	95	101	98.1	100370	PASS
177	176	5	9	6.7	6691	PASS

3A160428.D M3A6923.M Thu Jul 19 08:26:25 2018 ACCUNJ

Average of 15.795 to 15.805 min.: 3A160428.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1432	50.00	25408	64.00	520	76.00	4978
37.05	7421	51.05	7612	64.80	63	76.95	723
38.00	6169	52.00	338	65.10	112	77.80	180
39.05	2412	54.95	437	67.05	263	78.00	432
41.00	106	56.00	2197	68.00	12455	78.90	4012
43.10	71	57.00	3821	69.00	12406	79.90	1292
44.00	637	58.00	158	70.05	989	80.90	4344
45.00	1170	59.95	1370	72.00	664	81.90	1023
46.95	1477	61.00	5857	73.00	5289	86.00	119
47.95	663	62.00	5999	74.00	20858	86.95	5016
49.00	5192	63.00	4472	75.00	62880	87.95	4994

Average of 15.795 to 15.805 min.: 3A160428.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.85	638	105.85	495	128.85	226	141.80	56
92.00	3515	110.90	162	129.90	531	142.90	1285
93.00	5228	114.80	53	130.90	236	145.00	54
94.00	13688	115.70	114	131.90	51	145.95	175
95.00	121864	115.85	344	133.10	62	146.85	149
96.00	8101	116.85	707	133.90	50	147.85	335
97.00	299	117.90	430	134.95	166	148.80	50
101.20	52	118.95	660	136.85	246	149.85	192
102.90	62	125.00	115	138.80	64	154.95	303
103.90	629	127.10	53	139.80	51	156.95	212
104.90	143	127.95	498	140.95	998	158.95	139

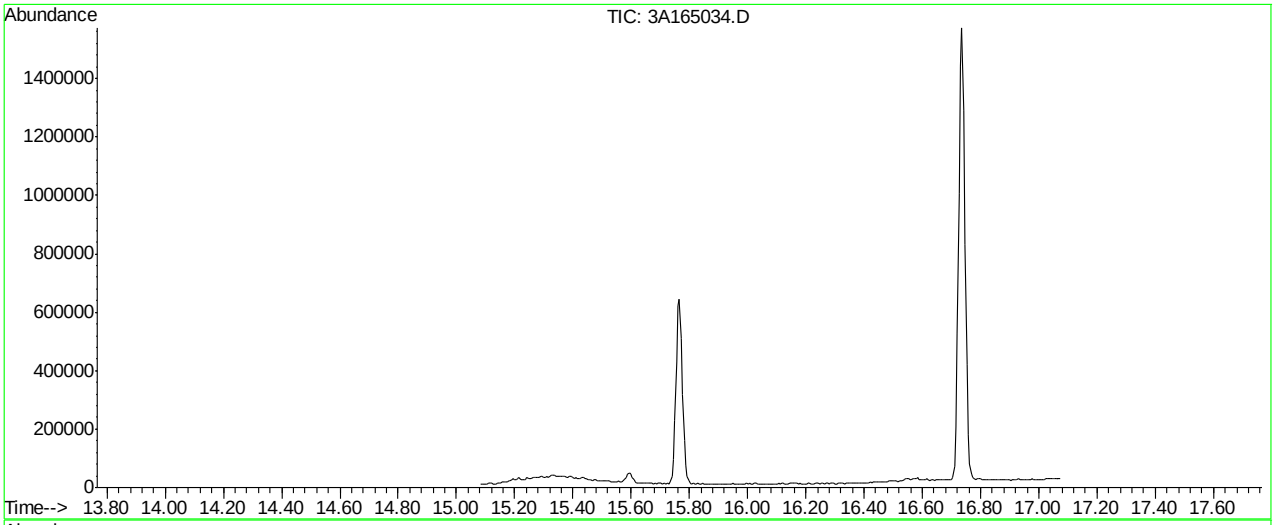
Average of 15.795 to 15.805 min.: 3A160428.D
bfb
Modified:subtracted

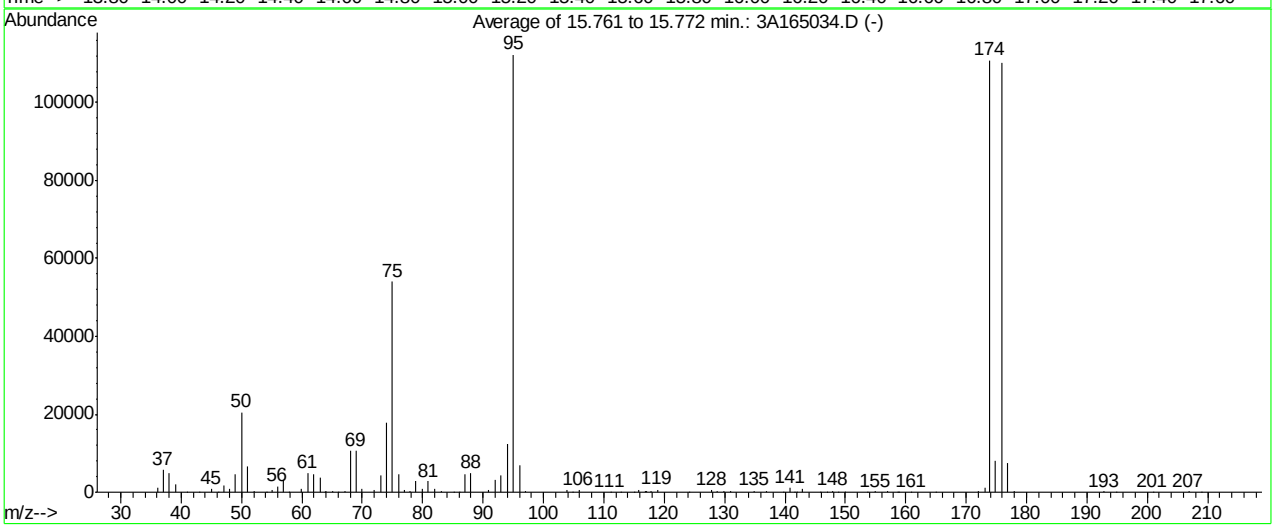
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
160.95	122						
171.20	56						
172.10	335						
173.05	826						
173.90	102317						
174.95	8168						
175.90	100370						
176.90	6691						
177.80	200						
207.95	105						
208.20	52						

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\V3A7169\3A165034.D Vial: 1
Acq On : 3 Mar 2021 1:10 pm Operator: ROBERTS
Sample : BFB Inst : MS3A
Misc : MS48788,V3A7169,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 130, 131, 132; Background Corrected with Scan 121

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	20520	PASS
75	95	30	60	48.1	54061	PASS
95	95	100	100	100.0	112330	PASS
96	95	5	9	6.1	6834	PASS
173	174	0.00	2	1.1	1212	PASS
174	95	50	120	98.7	110842	PASS
175	174	5	9	7.3	8060	PASS
176	174	95	101	99.4	110176	PASS
177	176	5	9	6.7	7384	PASS

3A165034.D M3A6923.M Thu Mar 04 09:15:25 2021 ACCUNJ

Average of 15.761 to 15.772 min.: 3A165034.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	1050	50.00	20520	63.00	3892	74.00	17886
37.00	5696	50.95	6665	63.80	97	75.00	54061
38.00	4999	52.00	299	63.95	195	76.00	4575
39.05	1887	54.10	51	65.10	225	76.95	704
41.00	134	55.00	448	66.00	59	77.95	365
43.05	46	55.95	1560	67.10	420	78.90	2992
45.00	783	57.00	3177	68.00	10588	79.95	976
46.15	136	57.90	50	68.95	10612	80.90	2867
47.05	1622	59.95	821	69.95	881	81.90	755
48.00	764	61.00	5027	71.95	559	83.00	168
49.00	4621	62.00	4703	73.00	4402	85.10	127

Average of 15.761 to 15.772 min.: 3A165034.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.10	60	104.90	84	127.85	446	145.85	147
87.00	4625	105.85	479	128.80	158	146.95	81
87.95	4926	111.10	72	129.85	353	147.90	317
90.95	489	112.80	72	130.90	285	148.90	64
92.00	3035	115.00	87	134.95	292	149.90	140
93.00	4361	115.85	483	136.85	214	153.70	58
94.00	12339	116.80	438	139.80	55	154.95	257
95.00	112330	117.00	176	140.85	1054	156.90	220
96.00	6834	117.90	343	141.60	56	158.60	70
97.05	238	118.90	597	141.95	131	158.90	98
103.90	451	124.10	73	142.90	994	160.90	94

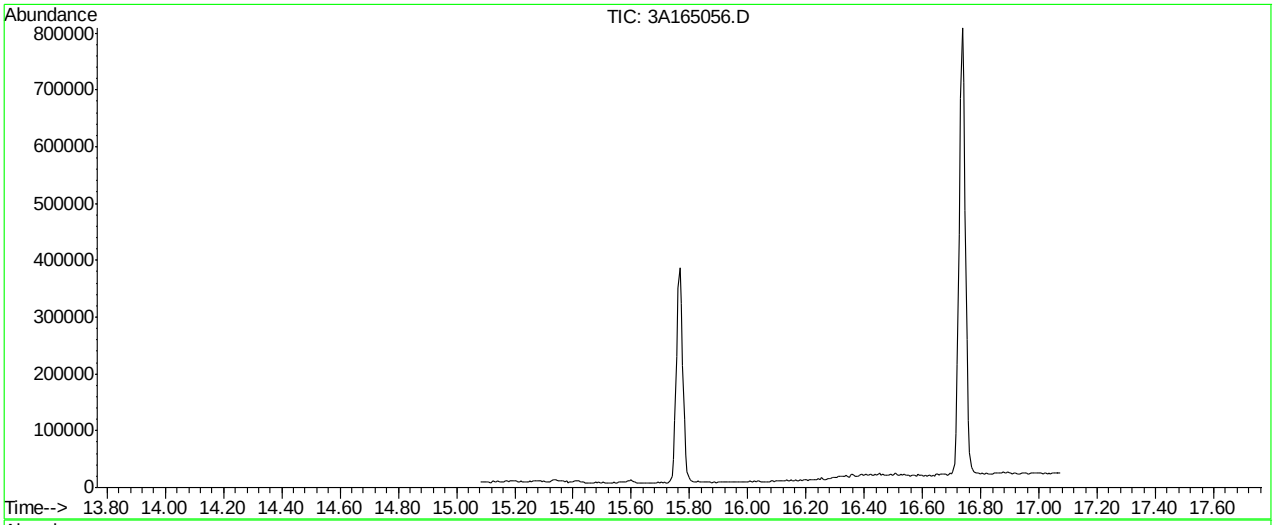
Average of 15.761 to 15.772 min.: 3A165034.D
BFB
Modified:subtracted

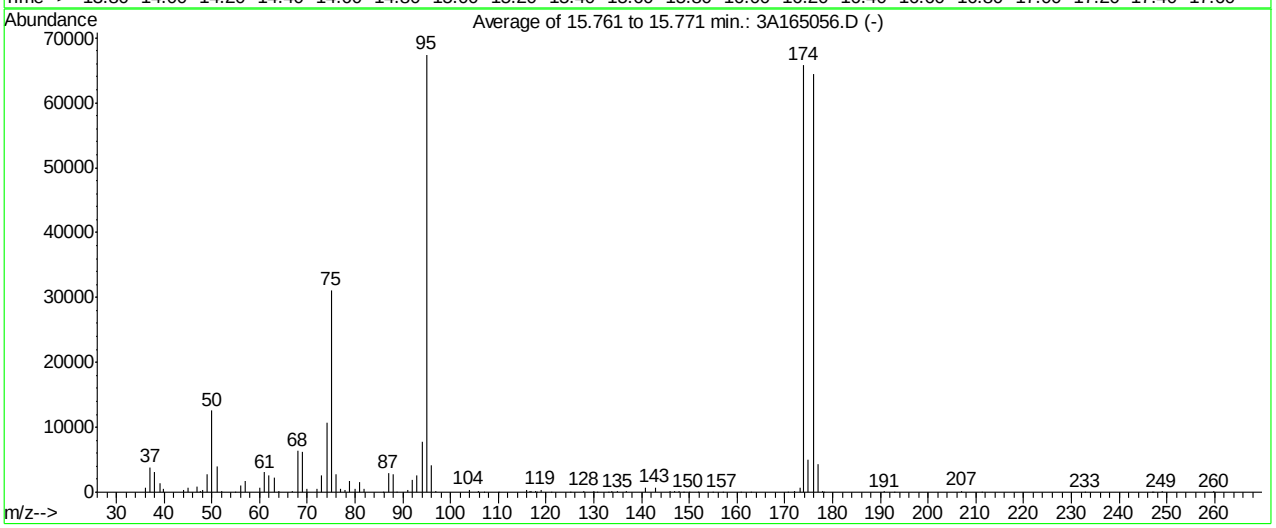
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
164.90	50	206.90	274				
171.95	175	209.00	13				
173.05	1212						
173.90	110842						
174.90	8060						
175.90	110176						
176.90	7384						
177.90	298						
192.85	228						
194.90	53						
200.90	57						

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\V3A7170\3A165056.D Vial: 1
Acq On : 4 Mar 2021 10:09 am Operator: ROBERTS
Sample : BFB Inst : MS3A
Misc : MS49208,V3A7170,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 130, 131, 132; Background Corrected with Scan 122

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	12600	PASS
75	95	30	60	46.2	31168	PASS
95	95	100	100	100.0	67437	PASS
96	95	5	9	6.3	4218	PASS
173	174	0.00	2	1.0	669	PASS
174	95	50	120	97.6	65834	PASS
175	174	5	9	7.5	4956	PASS
176	174	95	101	97.8	64389	PASS
177	176	5	9	6.6	4246	PASS

3A165056.D M3A6923.M Fri Mar 05 17:42:53 2021 ACCUNJ

Average of 15.761 to 15.771 min.: 3A165056.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	700	50.00	12600	66.95	247	78.90	1730
37.05	3848	51.00	3936	68.00	6386	79.95	557
38.00	3105	52.05	142	69.00	6310	80.90	1628
39.10	1371	54.90	74	70.00	510	81.95	537
39.95	442	56.00	965	71.95	482	85.90	76
44.00	363	57.00	1709	73.00	2641	86.95	3021
45.00	661	59.95	697	74.00	10660	87.95	2740
47.00	868	61.00	3076	75.00	31168	88.70	65
47.60	167	62.00	2610	76.00	2819	90.90	325
48.00	358	63.05	2278	77.00	505	92.00	1841
49.05	2715	64.00	233	77.95	438	93.00	2656

Average of 15.761 to 15.771 min.: 3A165056.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.00	7758	117.70	146	136.90	123	160.80	51
95.00	67437	117.90	72	140.85	710	162.90	56
96.00	4218	118.85	379	142.90	724	170.60	50
96.95	132	121.00	61	145.90	144	172.00	138
103.90	352	125.00	77	147.00	190	173.10	669
105.85	235	127.95	218	147.90	129	173.90	65834
106.90	54	129.90	215	148.80	51	174.90	4956
110.00	72	130.80	59	149.90	57	175.90	64389
115.90	282	133.00	79	151.90	52	176.95	4246
116.70	202	133.70	101	154.80	67	177.95	156
116.95	246	134.95	120	156.90	76	178.20	57

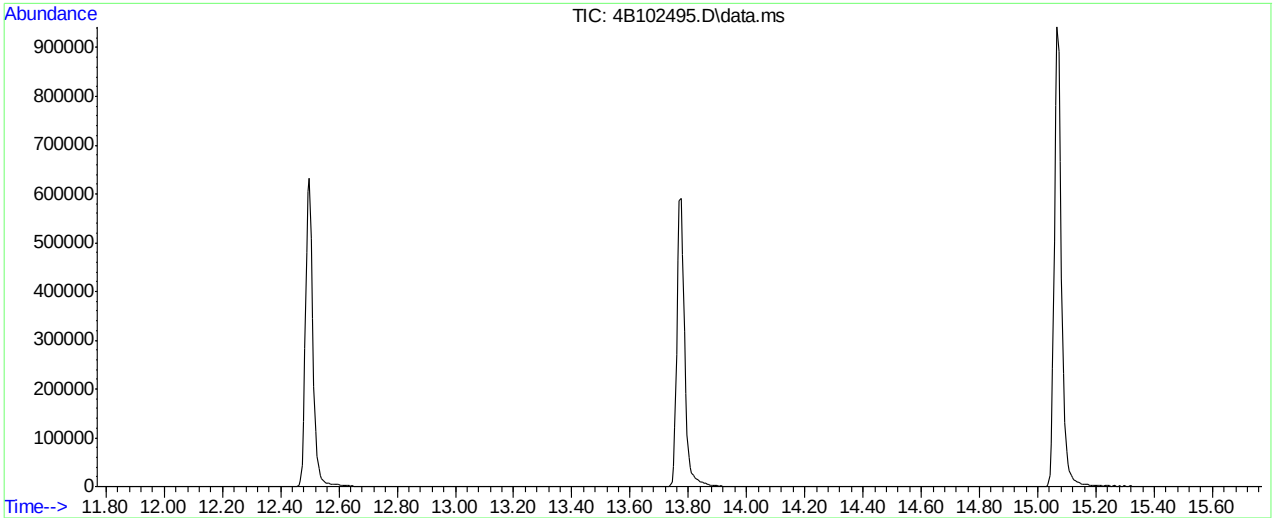
Average of 15.761 to 15.771 min.: 3A165056.D
BFB
Modified:subtracted

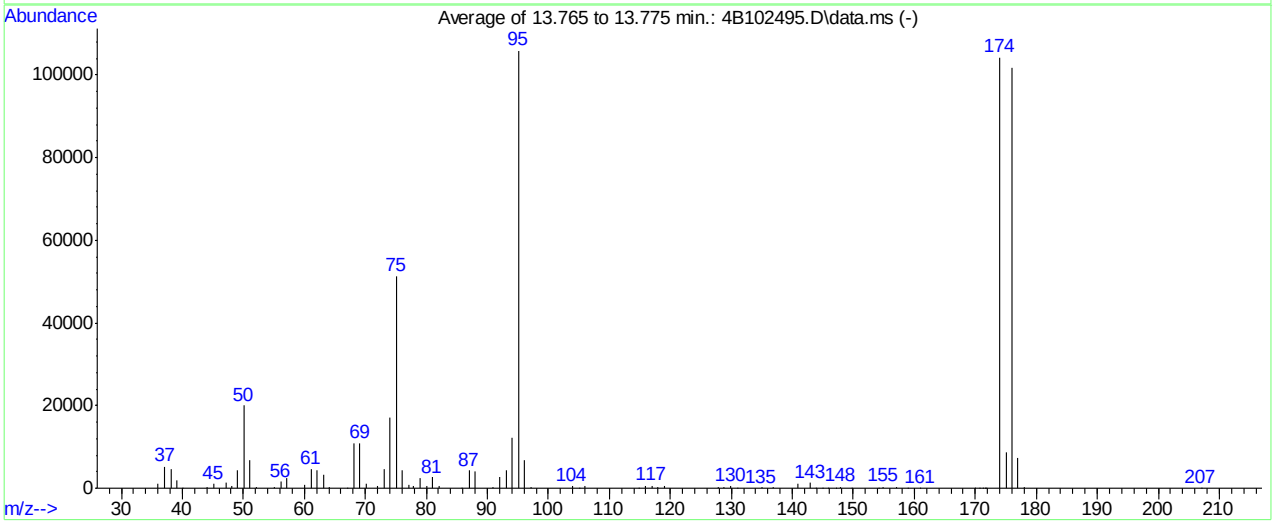
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
190.80	136						
192.90	6						
207.00	211						
211.10	54						
232.90	53						
246.80	58						
247.20	67						
248.95	113						
259.90	121						

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\V4B4435\4B102495.D Vial: 3
Acq On : 17 Feb 2021 8:17 pm Operator: brittank
Sample : bfb Inst : MS4B
Misc : MS48773,V4B4435,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021





AutoFind: Scans 1966, 1967, 1968; Background Corrected with Scan 1958

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.9	19973	PASS
75	95	30	60	48.5	51397	PASS
95	95	100	100	100.0	105933	PASS
96	95	5	9	6.5	6912	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	98.4	104266	PASS
175	174	5	9	8.4	8799	PASS
176	174	95	101	97.6	101728	PASS
177	176	5	9	7.1	7225	PASS

4B102495.D M4B4435.M Sun Feb 21 11:38:44 2021 MS4B

Average of 13.765 to 13.775 min.: 4B102495.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1001	51.10	6662	68.05	10783	80.00	648
37.10	5296	52.05	267	69.10	10981	81.00	2665
38.10	4573	55.05	237	70.10	967	82.05	572
39.10	1913	56.10	1520	72.05	486	85.85	139
40.05	100	57.10	2530	73.10	4584	87.00	4287
44.10	356	60.05	778	74.10	17208	88.00	4083
45.10	1021	61.10	4707	75.10	51397	90.95	390
47.10	1478	62.10	4475	76.05	4414	92.05	2842
48.05	613	63.10	3334	77.05	693	93.05	4219
49.10	4372	64.10	259	77.95	527	94.10	12167
50.10	19973	67.10	137	79.00	2512	95.10	105933

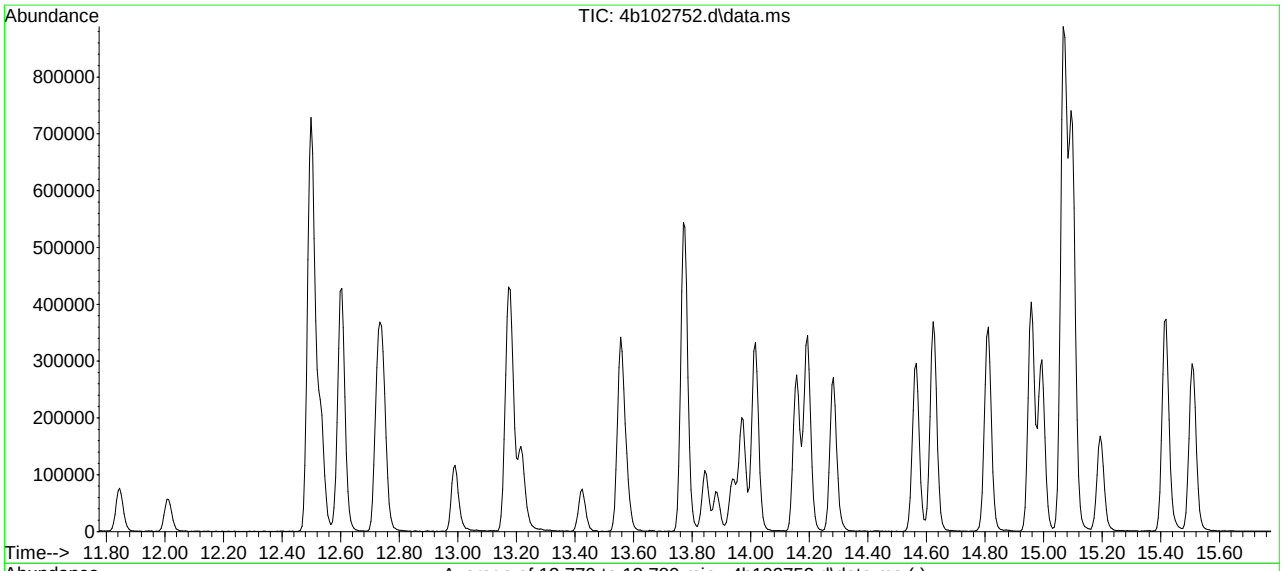
Average of 13.765 to 13.775 min.: 4B102495.D\data.ms
bfb
Modified:subtracted

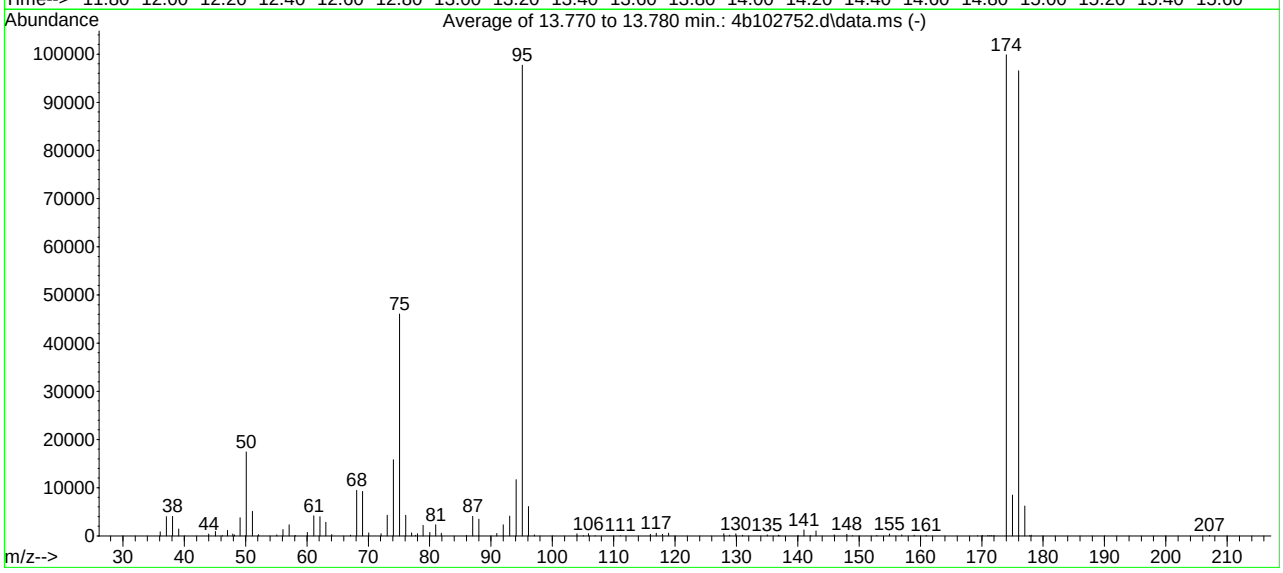
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.10	6912	128.85	161	147.95	306	171.80	79
97.10	186	129.95	432	149.80	67	174.00	104266
103.95	527	130.90	120	154.10	62	175.00	8799
105.00	81	135.00	207	154.95	326	176.00	101728
105.95	431	136.85	170	157.05	211	177.00	7225
114.80	54	140.90	1190	159.00	56	177.95	200
116.00	444	142.95	1291	161.00	63	207.00	112
116.95	653	143.90	52	169.90	50		
117.95	400	145.00	50	170.70	60		
118.95	521	145.85	119	171.30	80		
127.85	394	147.10	64	171.60	80		

SW-846 Method 8260

Data File : C:\msdchem\1\data\kr...21\v4b4445\4b102752.d Vial: 1
Acq On : 4 Mar 2021 10:02 am Operator: brittank
Sample : bfb Inst : MS4B
Misc : MS49212,V4B4445,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021





AutoFind: Scans 1967, 1968, 1969; Background Corrected with Scan 1958

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	17409	PASS
75	95	30	60	47.1	46032	PASS
95	95	100	100	100.0	97712	PASS
96	95	5	9	6.2	6081	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	102.2	99848	PASS
175	174	5	9	8.5	8469	PASS
176	174	95	101	96.7	96555	PASS
177	176	5	9	6.4	6174	PASS

4b102752.d M4B4435.M Thu Mar 04 23:18:05 2021

Average of 13.770 to 13.780 min.: 4b102752.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	849	50.10	17409	64.05	239	77.70	106
37.10	3978	51.10	5118	67.10	160	78.00	416
38.10	4032	52.10	247	68.10	9433	78.95	2205
39.10	1438	55.10	210	69.05	9243	80.05	724
44.00	370	56.10	1293	70.05	637	81.00	2272
45.10	880	57.10	2294	72.10	427	81.90	561
46.20	55	58.10	64	73.10	4257	86.00	71
47.05	1136	60.05	738	74.10	15783	87.00	4057
47.90	383	61.10	4183	75.10	46032	88.00	3473
48.20	216	62.10	3966	76.10	4254	90.95	469
49.10	3739	63.10	2849	77.05	612	92.00	2315

Average of 13.770 to 13.780 min.: 4b102752.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.05	4089	116.95	552	141.00	1242	169.30	50
94.10	11680	117.95	304	142.10	55	170.10	108
95.10	97712	118.95	534	143.00	1049	171.00	67
96.10	6081	127.95	425	145.95	205	171.30	67
97.05	204	128.90	140	148.00	320	171.60	64
104.00	438	129.90	427	148.90	58	172.00	104
105.05	29	131.00	141	152.90	86	174.00	99848
105.90	455	135.05	196	154.95	397	175.00	8469
107.00	53	136.85	153	156.95	228	176.00	96555
111.10	58	137.10	51	158.95	137	177.00	6174
116.00	311	140.10	55	160.95	104	177.80	52

Average of 13.770 to 13.780 min.: 4b102752.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
178.05	121						
207.10	71						

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206381.D
Acq On : 11 Nov 2020 3:42 pm
Operator : EddieH
Sample : IC8967-0.2
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 13 17:25:28 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	135444	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	369418	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	543042	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	468500	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	241176	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.59	113	161241	49.31	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.62%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	173855	51.37	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.74%			
74) toluene-d8 (s)	12.11	98	579688	48.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.54%			
98) 4-bromofluorobenzene (s)	14.76	95	229775	49.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.90%			

Target Compounds						Qvalue
6) chlorodifluoromethane	4.05	51	1181	0.20	ug/L	61
9) vinyl chloride	4.63	62	1355	0.22	ug/L	93
10) 1,3-butadiene	4.66	54	871	0.17	ug/L	87
12) chloroethane	5.39	64	668	0.19	ug/L #	47
18) 1,1-dichloroethene	6.64	96	901	0.22	ug/L #	47
21) iodomethane	6.89	142	1697	0.18	ug/L	77
25) methyl tert butyl ether	7.70	73	2632	0.23	ug/L	72
26) trans-1,2-dichloroethene	7.73	96	906	0.20	ug/L	76
27) hexane	8.07	57	1179	0.17	ug/L	90
28) di-isopropyl ether	8.29	45	2701	0.19	ug/L #	59
29) ethyl tert-butyl ether	8.75	59	2874	0.21	ug/L	89
31) 1,1-dichloroethane	8.31	63	1509	0.19	ug/L #	50
32) chloroprene	8.41	53	1142	0.17	ug/L #	57
37) cis-1,2-dichloroethene	9.02	96	1001	0.20	ug/L	84
46) 1,1,1-trichloroethane	9.65	97	1246	0.17	ug/L	80
47) cyclohexane	9.76	84	1109	0.15	ug/L #	74
48) 1,1-dichloropropene	9.83	75	1090	0.18	ug/L #	53
50) carbon tetrachloride	9.84	117	1118	0.17	ug/L #	68
53) 2,2,4-trimethylpentane	10.16	57	3250	0.18	ug/L	88
54) tert-amyl methyl ether	10.16	73	2823	0.21	ug/L	93
56) benzene	10.07	78	3768	0.22	ug/L	95
57) heptane	10.32	57	661	0.18	ug/L #	58
59) 1,2-dichloroethane	10.10	62	1383	0.25	ug/L	87
60) trichloroethene	10.79	95	936	0.19	ug/L #	64
63) 2-chloroethyl vinyl ether	11.59	63	2312	0.90	ug/L	92
65) 1,2-dichloropropane	11.08	63	852	0.18	ug/L	97
66) methylcyclohexane	11.09	83	1330	0.15	ug/L	93
67) dibromomethane	11.19	93	566	0.21	ug/L	78
68) bromodichloromethane	11.34	83	1288	0.21	ug/L	94
70) cis-1,3-dichloropropene	11.80	75	1393	0.19	ug/L	84
71) 4-methyl-2-pentanone	11.91	58	1017	0.72	ug/L #	70
75) toluene	12.18	92	2233	0.20	ug/L #	85
76) trans-1,3-dichloropropene	12.37	75	1342	0.21	ug/L #	68

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206381.D
Acq On : 11 Nov 2020 3:42 pm
Operator : EddieH
Sample : IC8967-0.2
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 13 17:25:28 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

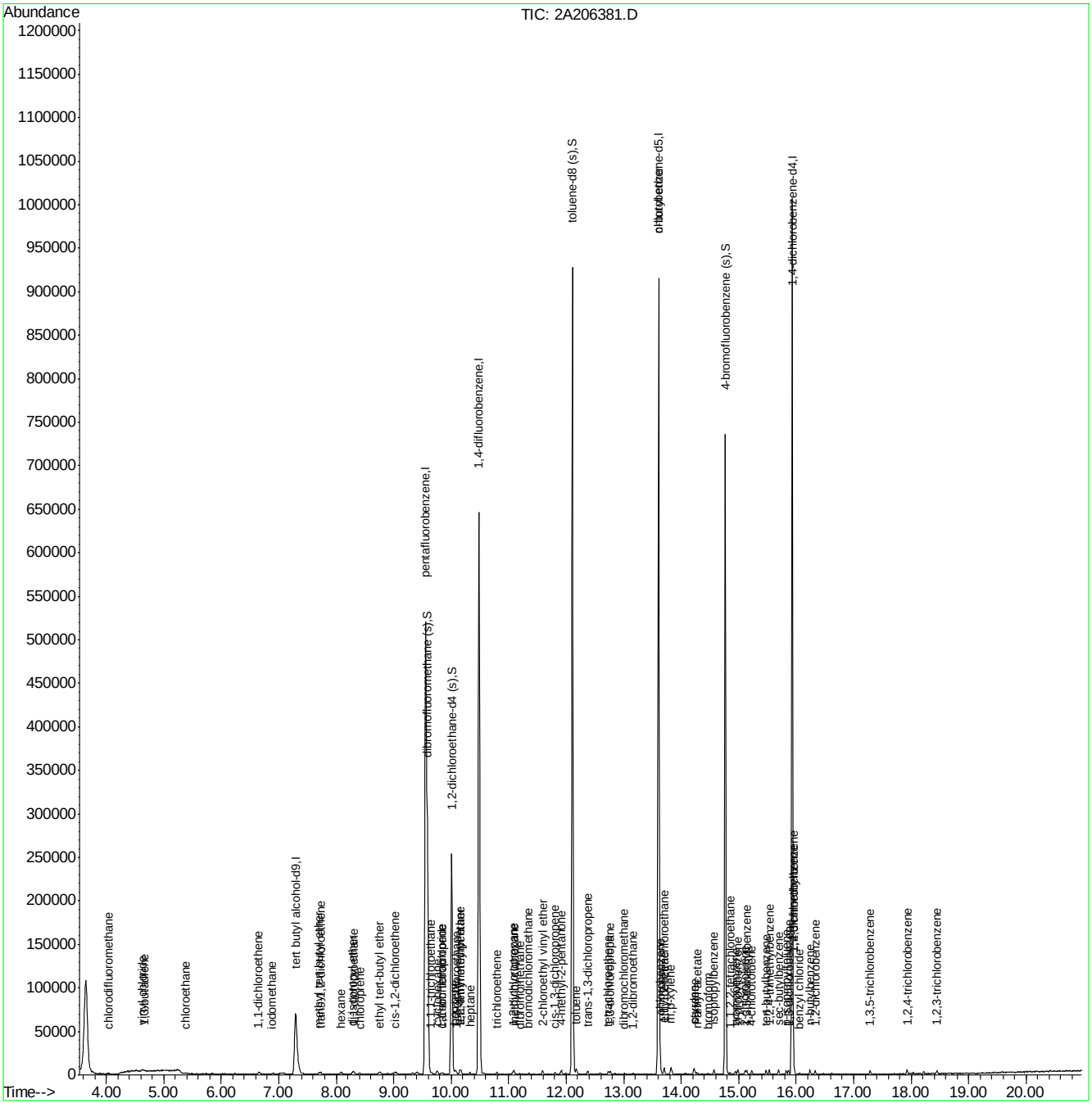
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) tetrachloroethene	12.74	166	902	0.18 ug/L #	65
81) 1,3-dichloropropane	12.77	76	1080	0.18 ug/L	88
83) dibromochloromethane	13.01	129	881	0.19 ug/L	76
84) 1,2-dibromoethane	13.16	107	834	0.18 ug/L	88
85) n-butyl ether	13.60	57	3755	0.20 ug/L #	1
86) chlorobenzene	13.65	112	2329	0.19 ug/L	95
87) 1,1,1,2-tetrachloroethane	13.71	131	892	0.19 ug/L #	69
88) ethylbenzene	13.70	91	4230	0.22 ug/L	95
89) m,p-xylene	13.82	106	3227	0.41 ug/L	85
90) o-xylene	14.22	91	3204	0.20 ug/L	95
91) styrene	14.24	104	1837	0.15 ug/L	88
92) n-amyl acetate	14.27	70	429	0.16 ug/L	97
93) bromoform	14.46	173	445	0.14 ug/L #	57
95) isopropylbenzene	14.57	105	3890	0.20 ug/L	97
99) bromobenzene	14.95	156	943	0.17 ug/L #	77
100) 1,1,2,2-tetrachloroethane	14.85	83	871	0.19 ug/L	85
103) n-propylbenzene	14.98	91	4773	0.21 ug/L	92
104) 2-chlorotoluene	15.11	126	921	0.18 ug/L	87
105) 4-chlorotoluene	15.23	91	3014	0.21 ug/L	86
106) 1,3,5-trimethylbenzene	15.15	105	3192	0.19 ug/L	95
107) tert-butylbenzene	15.48	119	2616	0.18 ug/L	88
108) 1,2,4-trimethylbenzene	15.53	105	3428	0.20 ug/L	90
109) sec-butylbenzene	15.70	105	4053	0.19 ug/L	94
110) 1,3-dichlorobenzene	15.87	146	1941	0.19 ug/L	91
111) p-isopropyltoluene	15.83	119	3401	0.19 ug/L	94
112) benzyl chloride	16.06	91	1277	0.17 ug/L #	59
113) 1,2,3-trimethylbenzene	15.96	105	3218	0.19 ug/L	89
114) 1,4-dichlorobenzene	15.96	146	2102	0.21 ug/L	83
115) 1,2-dichlorobenzene	16.33	146	1859	0.19 ug/L	90
116) n-butylbenzene	16.24	92	1777	0.18 ug/L	92
118) 1,3,5-trichlorobenzene	17.29	180	1605	0.19 ug/L	92
119) 1,2,4-trichlorobenzene	17.93	180	1435	0.19 ug/L	96
122) 1,2,3-trichlorobenzene	18.45	180	1390	0.20 ug/L	91

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206381.D
Acq On : 11 Nov 2020 3:42 pm
Operator : EddieH
Sample : IC8967-0.2
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 13 17:25:28 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



M2A8967.M Mon Nov 16 16:46:47 2020 MS2A

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206382.D
Acq On : 11 Nov 2020 4:11 pm
Operator : EddieH
Sample : IC8967-0.5
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 13 17:26:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	128198	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	363784	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	538503	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	463422	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	229219	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.58	113	159607	49.57	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.14%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	168173	50.11	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.22%			
74) toluene-d8 (s)	12.10	98	585418	49.29	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.58%			
98) 4-bromofluorobenzene (s)	14.76	95	222022	50.28	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.56%			

Target Compounds						Qvalue
2) ethanol	6.02	45	2449	57.52	ug/L #	37
3) tertiary butyl alcohol	7.41	59	952	2.23	ug/L #	36
6) chlorodifluoromethane	4.04	51	2858	0.49	ug/L	61
7) dichlorodifluoromethane	4.02	85	2536	0.43	ug/L	82
8) chloromethane	4.38	50	3362	0.55	ug/L	90
9) vinyl chloride	4.61	62	3263	0.54	ug/L	74
10) 1,3-butadiene	4.64	54	2634	0.53	ug/L	96
12) chloroethane	5.39	64	1683	0.48	ug/L #	47
13) vinyl bromide	5.74	106	1418	0.42	ug/L	74
14) trichlorofluoromethane	5.85	101	3799	0.49	ug/L	93
15) ethyl ether	6.22	74	1048	0.45	ug/L #	77
17) freon 113	6.65	151	1644	0.43	ug/L #	78
18) 1,1-dichloroethene	6.65	96	2200	0.54	ug/L #	75
21) iodomethane	6.88	142	4362	0.48	ug/L	97
22) carbon disulfide	7.03	76	7267	0.53	ug/L	94
23) methylene chloride	7.35	84	2871	0.62	ug/L	97
24) methyl acetate	7.11	43	1542	0.48	ug/L	83
25) methyl tert butyl ether	7.70	73	5956	0.52	ug/L	95
26) trans-1,2-dichloroethene	7.72	96	2528	0.56	ug/L #	55
27) hexane	8.08	57	3862	0.55	ug/L	95
28) di-isopropyl ether	8.28	45	7051	0.50	ug/L	92
29) ethyl tert-butyl ether	8.75	59	6836	0.50	ug/L	93
30) 2-butanone	8.96	72	689	1.58	ug/L #	59
31) 1,1-dichloroethane	8.30	63	4026	0.51	ug/L	96
32) chloroprene	8.40	53	2893	0.44	ug/L	94
36) 2,2-dichloropropane	9.05	77	3427	0.62	ug/L	95
37) cis-1,2-dichloroethene	9.02	96	2705	0.56	ug/L	90
38) propionitrile	9.03	54	2287	4.86	ug/L #	71
39) bromochloromethane	9.30	130	1434	0.45	ug/L	93
42) tert-butyl formate	9.43	59	1651	0.52	ug/L	91
46) 1,1,1-trichloroethane	9.65	97	3676	0.51	ug/L	90
47) cyclohexane	9.76	84	3469	0.49	ug/L	84
48) 1,1-dichloropropene	9.82	75	2782	0.45	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206382.D
Acq On : 11 Nov 2020 4:11 pm
Operator : EddieH
Sample : IC8967-0.5
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 13 17:26:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
50) carbon tetrachloride	9.84	117	3188	0.48	ug/L		87
53) 2,2,4-trimethylpentane	10.16	57	9996	0.55	ug/L		95
54) tert-amyl methyl ether	10.15	73	7272	0.55	ug/L		93
56) benzene	10.07	78	9436	0.55	ug/L		96
57) heptane	10.32	57	1995	0.54	ug/L		82
59) 1,2-dichloroethane	10.09	62	2907	0.52	ug/L		80
60) trichloroethene	10.79	95	2537	0.52	ug/L		97
61) ethyl acrylate	10.79	55	1856	0.42	ug/L		72
63) 2-chloroethyl vinyl ether	11.59	63	6077	2.38	ug/L		89
65) 1,2-dichloropropane	11.08	63	2543	0.55	ug/L		88
66) methylcyclohexane	11.08	83	4498	0.53	ug/L		91
67) dibromomethane	11.19	93	1297	0.49	ug/L		86
68) bromodichloromethane	11.34	83	3111	0.52	ug/L		95
69) epichlorohydrin	11.67	57	859	2.57	ug/L	#	57
70) cis-1,3-dichloropropene	11.80	75	3779	0.51	ug/L		94
71) 4-methyl-2-pentanone	11.91	58	2908	2.06	ug/L		96
75) toluene	12.18	92	5780	0.53	ug/L	#	85
76) trans-1,3-dichloropropene	12.37	75	2961	0.46	ug/L		91
78) 1,1,2-trichloroethane	12.59	83	1661	0.51	ug/L		92
79) 2-hexanone	12.76	58	2940	2.07	ug/L		95
80) tetrachloroethene	12.73	166	2768	0.55	ug/L		88
81) 1,3-dichloropropane	12.77	76	3298	0.54	ug/L		89
82) butyl acetate	12.83	56	997	0.42	ug/L		84
83) dibromochloromethane	13.01	129	2059	0.44	ug/L		97
84) 1,2-dibromoethane	13.16	107	2238	0.49	ug/L		96
85) n-butyl ether	13.60	57	9597	0.51	ug/L	#	16
86) chlorobenzene	13.63	112	6476	0.54	ug/L		96
87) 1,1,1,2-tetrachloroethane	13.71	131	2107	0.46	ug/L		96
88) ethylbenzene	13.70	91	10464	0.54	ug/L		93
89) m,p-xylene	13.82	106	7993	1.04	ug/L		90
90) o-xylene	14.22	91	8365	0.54	ug/L		99
91) styrene	14.24	104	4780	0.39	ug/L		96
92) n-amyl acetate	14.26	70	1130	0.42	ug/L		93
93) bromoform	14.46	173	1393	0.46	ug/L		91
94) butyl acrylate	14.06	55	3143	0.42	ug/L		92
95) isopropylbenzene	14.57	105	10310	0.53	ug/L		97
99) bromobenzene	14.95	156	2537	0.49	ug/L		83
100) 1,1,2,2-tetrachloroethane	14.85	83	2390	0.55	ug/L		88
102) 1,2,3-trichloropropane	14.93	110	490	0.45	ug/L	#	28
103) n-propylbenzene	14.98	91	11476	0.52	ug/L		98
104) 2-chlorotoluene	15.11	126	2404	0.50	ug/L		93
105) 4-chlorotoluene	15.22	91	7336	0.53	ug/L		92
106) 1,3,5-trimethylbenzene	15.14	105	8125	0.52	ug/L		97
107) tert-butylbenzene	15.48	119	6817	0.49	ug/L		94
108) 1,2,4-trimethylbenzene	15.53	105	8342	0.52	ug/L		94
109) sec-butylbenzene	15.70	105	10358	0.50	ug/L		98
110) 1,3-dichlorobenzene	15.86	146	5188	0.54	ug/L		87
111) p-isopropyltoluene	15.83	119	8285	0.48	ug/L		93
112) benzyl chloride	16.05	91	3683	0.53	ug/L		94
113) 1,2,3-trimethylbenzene	15.95	105	8751	0.54	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206382.D
Acq On : 11 Nov 2020 4:11 pm
Operator : EddieH
Sample : IC8967-0.5
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 13 17:26:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

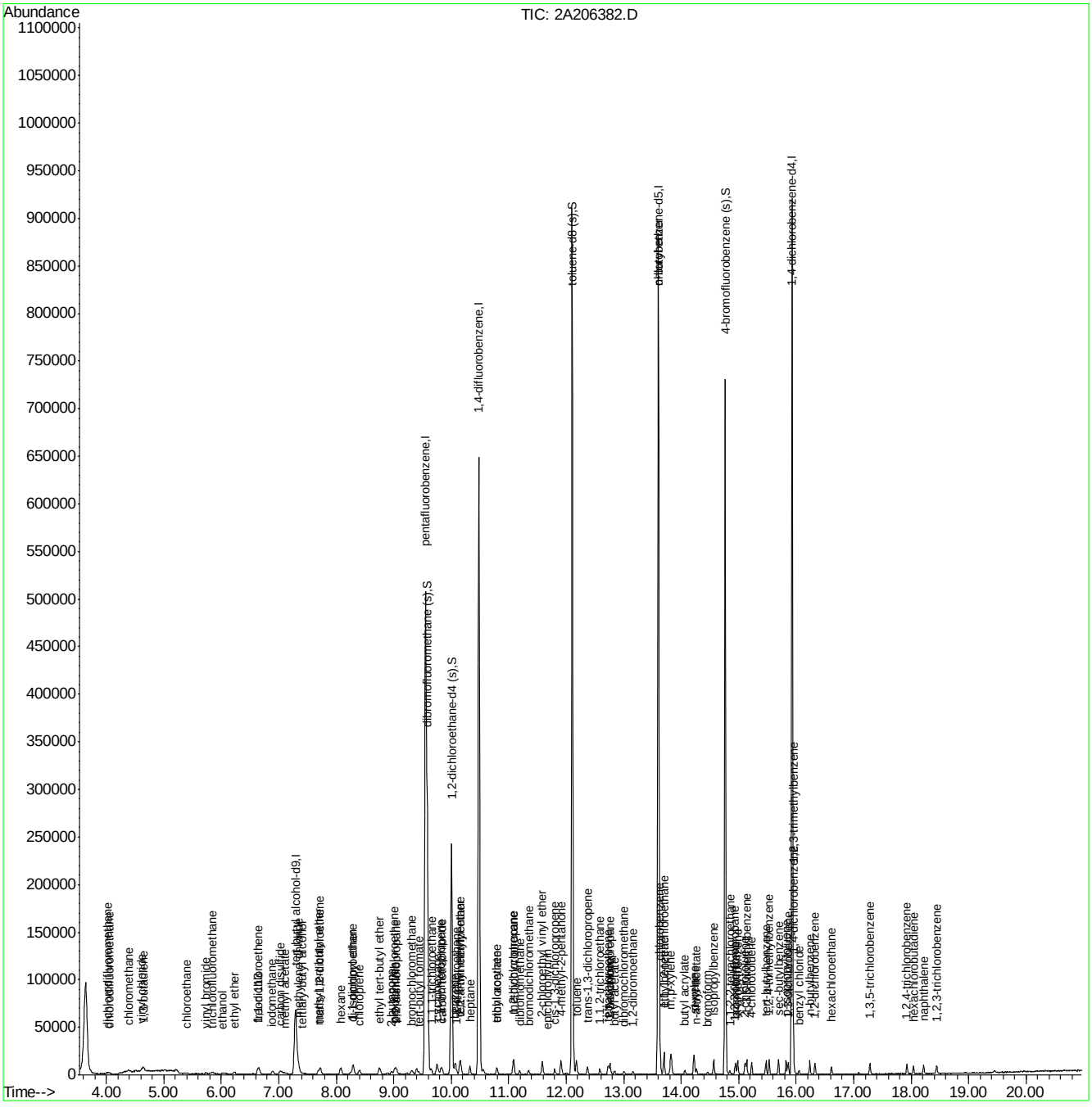
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
114) 1,4-dichlorobenzene	15.96	146	4972	0.53	ug/L	95
115) 1,2-dichlorobenzene	16.33	146	5072	0.55	ug/L	98
116) n-butylbenzene	16.24	92	4426	0.48	ug/L	97
118) 1,3,5-trichlorobenzene	17.29	180	4044	0.51	ug/L	86
119) 1,2,4-trichlorobenzene	17.93	180	3516	0.49	ug/L	93
120) hexachlorobutadiene	18.04	225	1997	0.52	ug/L	89
121) naphthalene	18.22	128	6572	0.48	ug/L	98
122) 1,2,3-trichlorobenzene	18.44	180	3286	0.51	ug/L	93
123) hexachloroethane	16.62	201	1278	0.39	ug/L	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206382.D
Acq On : 11 Nov 2020 4:11 pm
Operator : EddieH
Sample : IC8967-0.5
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 13 17:26:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206383.D
Acq On : 11 Nov 2020 4:41 pm
Operator : EddieH
Sample : IC8967-1
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 13 17:27:22 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	123420	500.00	ug/L	0.00
5) pentafluorobenzene	9.55	168	361635	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	537439	50.00	ug/L	0.00
73) chlorobenzene-d5	13.60	117	461138	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	228617	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.58	113	158869	49.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.28%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	166918	49.84	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.68%			
74) toluene-d8 (s)	12.10	98	577537	48.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.72%			
98) 4-bromofluorobenzene (s)	14.76	95	223472	50.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.48%			

Target Compounds						Qvalue
2) ethanol	6.01	45	4195	102.34	ug/L	96
3) tertiary butyl alcohol	7.40	59	2488	6.04	ug/L	73
4) 1,4-dioxane	11.13	88	1024	25.66	ug/L	96
6) chlorodifluoromethane	4.03	51	5354	0.93	ug/L	94
7) dichlorodifluoromethane	4.01	85	5408	0.91	ug/L	85
8) chloromethane	4.38	50	6329	1.04	ug/L	89
9) vinyl chloride	4.61	62	5559	0.93	ug/L	93
10) 1,3-butadiene	4.64	54	4688	0.95	ug/L	94
11) bromomethane	5.22	94	4720	1.13	ug/L	93
12) chloroethane	5.39	64	3115	0.90	ug/L	97
13) vinyl bromide	5.73	106	3042	0.90	ug/L	72
14) trichlorofluoromethane	5.84	101	7184	0.94	ug/L	93
15) ethyl ether	6.22	74	2225	0.97	ug/L #	68
17) freon 113	6.65	151	3173	0.84	ug/L #	85
18) 1,1-dichloroethene	6.64	96	3945	0.97	ug/L	95
19) acetone	6.65	43	5305	4.21	ug/L	89
20) acetonitrile	7.07	41	4183	10.28	ug/L	74
21) iodomethane	6.89	142	8423	0.93	ug/L	96
22) carbon disulfide	7.02	76	12749	0.94	ug/L	97
23) methylene chloride	7.34	84	5178	1.12	ug/L	86
24) methyl acetate	7.10	43	2846	0.90	ug/L	90
25) methyl tert butyl ether	7.70	73	10757	0.95	ug/L	95
26) trans-1,2-dichloroethene	7.72	96	4388	0.98	ug/L	84
27) hexane	8.08	57	6385	0.92	ug/L	94
28) di-isopropyl ether	8.29	45	13552	0.97	ug/L	93
29) ethyl tert-butyl ether	8.75	59	13352	0.99	ug/L	94
30) 2-butanone	8.96	72	1396	3.22	ug/L #	68
31) 1,1-dichloroethane	8.30	63	7517	0.96	ug/L	89
32) chloroprene	8.40	53	5757	0.89	ug/L	89
36) 2,2-dichloropropane	9.04	77	5961	1.08	ug/L	96
37) cis-1,2-dichloroethene	9.01	96	5041	1.05	ug/L	86
38) propionitrile	9.04	54	4300	9.20	ug/L	84
39) bromochloromethane	9.31	130	2924	0.93	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206383.D
Acq On : 11 Nov 2020 4:41 pm
Operator : EddieH
Sample : IC8967-1
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 13 17:27:22 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
41) chloroform	9.39	83	8865	1.11 ug/L	89
42) tert-butyl formate	9.42	59	3410	1.08 ug/L	84
45) methacrylonitrile	9.23	67	1154	0.76 ug/L	85
46) 1,1,1-trichloroethane	9.65	97	7011	0.98 ug/L	90
47) cyclohexane	9.76	84	6532	0.93 ug/L	94
48) 1,1-dichloropropene	9.82	75	5518	0.91 ug/L	97
50) carbon tetrachloride	9.85	117	6045	0.92 ug/L	94
53) 2,2,4-trimethylpentane	10.16	57	16644	0.91 ug/L	97
54) tert-amyl methyl ether	10.15	73	13640	1.03 ug/L	95
56) benzene	10.06	78	16966	0.98 ug/L	97
57) heptane	10.32	57	3455	0.94 ug/L	84
59) 1,2-dichloroethane	10.09	62	5613	1.01 ug/L	96
60) trichloroethene	10.79	95	4511	0.93 ug/L	96
61) ethyl acrylate	10.78	55	3543	0.81 ug/L	80
62) 2-nitropropane	11.55	41	738	0.91 ug/L #	65
63) 2-chloroethyl vinyl ether	11.58	63	11493	4.50 ug/L	98
65) 1,2-dichloropropane	11.08	63	4480	0.97 ug/L	86
66) methylcyclohexane	11.08	83	8077	0.95 ug/L	96
67) dibromomethane	11.19	93	2640	1.00 ug/L	93
68) bromodichloromethane	11.34	83	5259	0.88 ug/L	85
69) epichlorohydrin	11.68	57	1450	4.34 ug/L #	57
70) cis-1,3-dichloropropene	11.80	75	6801	0.93 ug/L	97
71) 4-methyl-2-pentanone	11.91	58	5725	4.07 ug/L	90
75) toluene	12.18	92	10281	0.95 ug/L	97
76) trans-1,3-dichloropropene	12.36	75	5682	0.89 ug/L	94
78) 1,1,2-trichloroethane	12.58	83	2943	0.91 ug/L	94
79) 2-hexanone	12.76	58	6447	4.56 ug/L	93
80) tetrachloroethene	12.74	166	4727	0.95 ug/L	90
81) 1,3-dichloropropane	12.76	76	5643	0.93 ug/L	100
82) butyl acetate	12.83	56	2170	0.91 ug/L	89
83) dibromochloromethane	13.01	129	4009	0.86 ug/L	97
84) 1,2-dibromoethane	13.15	107	4047	0.90 ug/L	93
85) n-butyl ether	13.60	57	17272	0.93 ug/L #	56
86) chlorobenzene	13.64	112	11428	0.96 ug/L	96
87) 1,1,1,2-tetrachloroethane	13.70	131	4152	0.91 ug/L	96
88) ethylbenzene	13.70	91	19367	1.00 ug/L	96
89) m,p-xylene	13.82	106	14714	1.92 ug/L	91
90) o-xylene	14.22	91	15227	0.98 ug/L	95
91) styrene	14.23	104	9415	0.78 ug/L	96
92) n-amyl acetate	14.27	70	2846	1.06 ug/L	96
93) bromoform	14.46	173	2770	0.92 ug/L	87
94) butyl acrylate	14.06	55	6674	0.89 ug/L	91
95) isopropylbenzene	14.57	105	18404	0.95 ug/L	94
99) bromobenzene	14.95	156	5360	1.04 ug/L	87
100) 1,1,2,2-tetrachloroethane	14.85	83	5317	1.22 ug/L	89
102) 1,2,3-trichloropropane	14.93	110	1145	1.04 ug/L	91
103) n-propylbenzene	14.98	91	21494	0.98 ug/L	94
104) 2-chlorotoluene	15.11	126	4798	1.00 ug/L	95
105) 4-chlorotoluene	15.22	91	13561	0.99 ug/L	98
106) 1,3,5-trimethylbenzene	15.14	105	15297	0.97 ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206383.D
Acq On : 11 Nov 2020 4:41 pm
Operator : EddieH
Sample : IC8967-1
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 13 17:27:22 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.48	119	12542	0.91	ug/L	97
108) 1,2,4-trimethylbenzene	15.53	105	15327	0.96	ug/L	97
109) sec-butylbenzene	15.70	105	20088	0.98	ug/L	96
110) 1,3-dichlorobenzene	15.86	146	9514	1.00	ug/L	95
111) p-isopropyltoluene	15.83	119	16621	0.97	ug/L	97
112) benzyl chloride	16.05	91	7842	1.13	ug/L	97
113) 1,2,3-trimethylbenzene	15.96	105	16889	1.05	ug/L	97
114) 1,4-dichlorobenzene	15.95	146	9999	1.06	ug/L	97
115) 1,2-dichlorobenzene	16.33	146	10134	1.11	ug/L	93
116) n-butylbenzene	16.23	92	8343	0.92	ug/L	94
118) 1,3,5-trichlorobenzene	17.29	180	8078	1.02	ug/L	97
119) 1,2,4-trichlorobenzene	17.92	180	7720	1.08	ug/L	92
120) hexachlorobutadiene	18.04	225	3782	0.99	ug/L	97
121) naphthalene	18.22	128	14662	1.08	ug/L	97
122) 1,2,3-trichlorobenzene	18.44	180	7132	1.11	ug/L	92
123) hexachloroethane	16.62	201	2647	0.82	ug/L	94

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

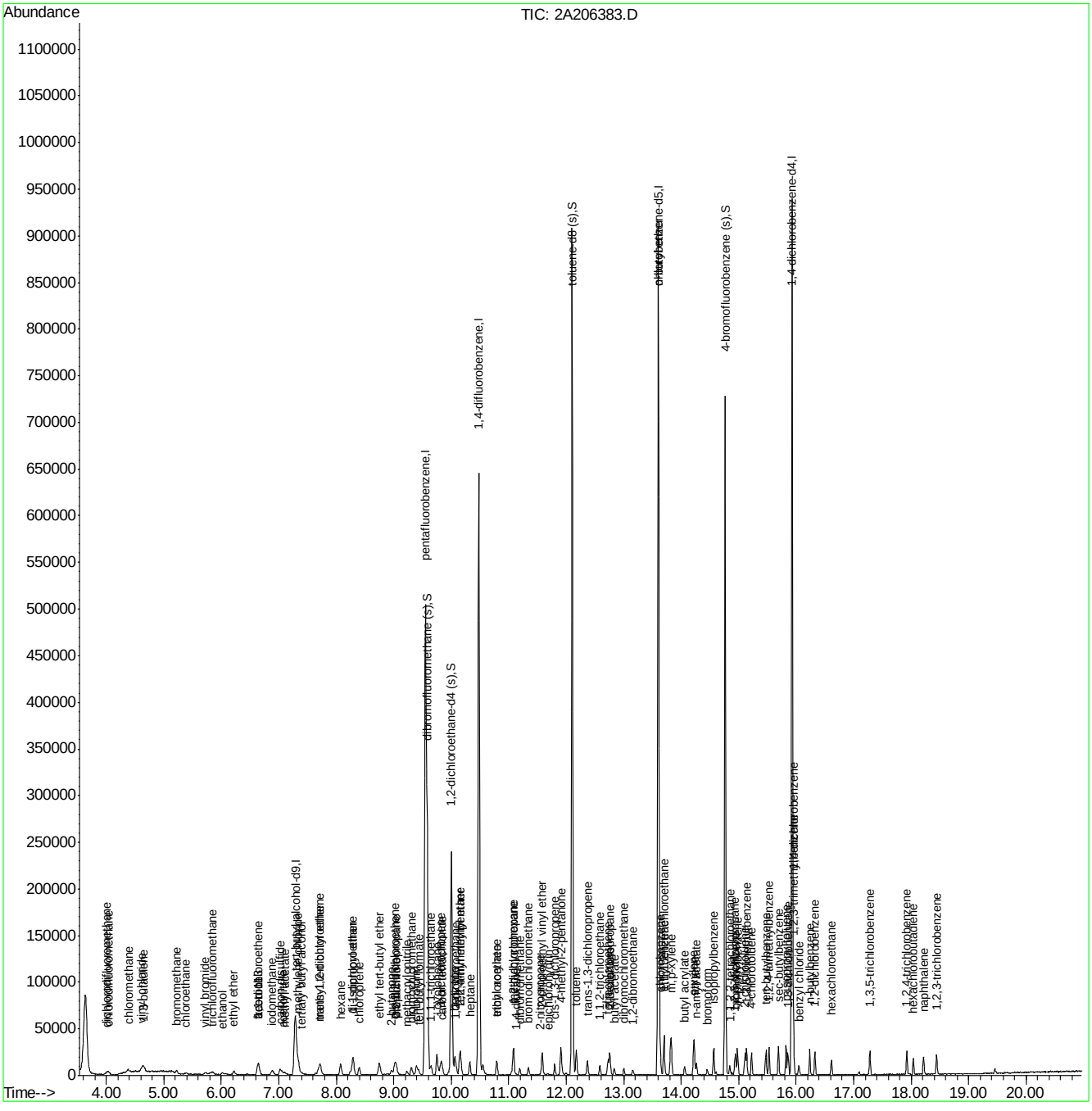
7.7.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206383.D
Acq On : 11 Nov 2020 4:41 pm
Operator : EddieH
Sample : IC8967-1
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 13 17:27:22 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206384.D
Acq On : 11 Nov 2020 5:10 pm
Operator : EddieH
Sample : IC8967-2
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 13 17:28:00 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	124333	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	358480	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	526175	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	450648	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	224848	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.59	113	155538	49.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.04%			
52) 1,2-dichloroethane-d4 (s)	10.01	65	165446	50.45	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.90%			
74) toluene-d8 (s)	12.10	98	567690	49.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.30%			
98) 4-bromofluorobenzene (s)	14.76	95	215212	49.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.36%			

Target Compounds						Qvalue
2) ethanol	6.02	45	8369	202.67	ug/L	99
3) tertiary butyl alcohol	7.40	59	3846	9.27	ug/L	80
4) 1,4-dioxane	11.13	88	1657	41.22	ug/L	97
6) chlorodifluoromethane	4.04	51	10606	1.86	ug/L	96
7) dichlorodifluoromethane	4.02	85	11565	1.97	ug/L	99
8) chloromethane	4.38	50	12408	2.06	ug/L	96
9) vinyl chloride	4.62	62	11749	1.99	ug/L	95
10) 1,3-butadiene	4.65	54	9466	1.94	ug/L	89
11) bromomethane	5.22	94	8962	2.16	ug/L	99
12) chloroethane	5.40	64	6692	1.95	ug/L	95
13) vinyl bromide	5.73	106	6424	1.91	ug/L	93
14) trichlorofluoromethane	5.86	101	14558	1.92	ug/L	97
15) ethyl ether	6.22	74	4112	1.81	ug/L	94
16) acrolein	6.44	56	836	1.67	ug/L	81
17) freon 113	6.67	151	6798	1.81	ug/L	92
18) 1,1-dichloroethene	6.65	96	7622	1.89	ug/L	84
19) acetone	6.65	43	10025	8.03	ug/L	96
20) acetonitrile	7.07	41	8553	21.21	ug/L	98
21) iodomethane	6.89	142	16758	1.87	ug/L	94
22) carbon disulfide	7.03	76	24469	1.83	ug/L	96
23) methylene chloride	7.35	84	9404	2.06	ug/L	96
24) methyl acetate	7.10	43	5651	1.80	ug/L	84
25) methyl tert butyl ether	7.71	73	22205	1.99	ug/L	97
26) trans-1,2-dichloroethene	7.73	96	8754	1.98	ug/L	93
27) hexane	8.08	57	12061	1.75	ug/L	95
28) di-isopropyl ether	8.30	45	27629	1.99	ug/L	96
29) ethyl tert-butyl ether	8.76	59	26668	1.99	ug/L	99
30) 2-butanone	8.96	72	3145	7.33	ug/L #	81
31) 1,1-dichloroethane	8.31	63	14949	1.93	ug/L	96
32) chloroprene	8.40	53	11560	1.80	ug/L	95
33) acrylonitrile	7.65	53	2012	1.58	ug/L	97
36) 2,2-dichloropropane	9.04	77	11030	2.01	ug/L	97
37) cis-1,2-dichloroethene	9.02	96	9097	1.91	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206384.D
Acq On : 11 Nov 2020 5:10 pm
Operator : EddieH
Sample : IC8967-2
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 13 17:28:00 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) propionitrile	9.03	54	9021	19.47	ug/L		84
39) bromochloromethane	9.31	130	5886	1.89	ug/L		92
40) tetrahydrofuran	9.34	42	2202	2.33	ug/L		97
41) chloroform	9.40	83	16265	2.06	ug/L		95
42) tert-butyl formate	9.43	59	5977	1.90	ug/L		98
43) isobutyl alcohol	9.79	43	2718	17.63	ug/L		93
45) methacrylonitrile	9.23	67	2518	1.68	ug/L		94
46) 1,1,1-trichloroethane	9.65	97	12490	1.76	ug/L		91
47) cyclohexane	9.76	84	13593	1.95	ug/L		94
48) 1,1-dichloropropene	9.82	75	11392	1.88	ug/L		98
49) tert-amyl alcohol	9.96	73	1959	10.26	ug/L	#	83
50) carbon tetrachloride	9.84	117	11515	1.76	ug/L		98
53) 2,2,4-trimethylpentane	10.16	57	31808	1.78	ug/L		97
54) tert-amyl methyl ether	10.15	73	26234	2.03	ug/L		97
55) n-butyl alcohol	10.55	56	8854	84.01	ug/L		92
56) benzene	10.07	78	33532	1.99	ug/L		98
57) heptane	10.32	57	6309	1.75	ug/L		95
58) isopropyl acetate	9.99	87	1436	1.72	ug/L	#	47
59) 1,2-dichloroethane	10.09	62	10761	1.99	ug/L		100
60) trichloroethene	10.79	95	9254	1.95	ug/L		91
61) ethyl acrylate	10.79	55	7594	1.77	ug/L		96
62) 2-nitropropane	11.55	41	1620	2.05	ug/L		89
63) 2-chloroethyl vinyl ether	11.58	63	22740	9.10	ug/L		95
64) methyl methacrylate	11.05	100	1601	1.56	ug/L		89
65) 1,2-dichloropropane	11.08	63	8643	1.92	ug/L		86
66) methylcyclohexane	11.08	83	15080	1.81	ug/L		97
67) dibromomethane	11.19	93	5018	1.95	ug/L		95
68) bromodichloromethane	11.34	83	10762	1.84	ug/L		97
69) epichlorohydrin	11.67	57	2934	8.98	ug/L		83
70) cis-1,3-dichloropropene	11.80	75	13152	1.83	ug/L		97
71) 4-methyl-2-pentanone	11.91	58	10883	7.90	ug/L		95
72) 3-methyl-1-butanol	11.91	70	3659	38.64	ug/L		90
75) toluene	12.18	92	20598	1.95	ug/L		96
76) trans-1,3-dichloropropene	12.37	75	11732	1.87	ug/L		96
78) 1,1,2-trichloroethane	12.58	83	6027	1.92	ug/L		94
79) 2-hexanone	12.76	58	10484	7.59	ug/L		93
80) tetrachloroethene	12.73	166	9784	2.01	ug/L		94
81) 1,3-dichloropropane	12.77	76	11473	1.94	ug/L		99
82) butyl acetate	12.83	56	4071	1.75	ug/L	#	80
83) dibromochloromethane	13.01	129	7896	1.74	ug/L		93
84) 1,2-dibromoethane	13.16	107	8101	1.84	ug/L		93
85) n-butyl ether	13.60	57	36065	1.99	ug/L		80
86) chlorobenzene	13.64	112	23132	1.99	ug/L		98
87) 1,1,1,2-tetrachloroethane	13.70	131	8377	1.88	ug/L		90
88) ethylbenzene	13.70	91	36759	1.95	ug/L		97
89) m,p-xylene	13.82	106	28870	3.85	ug/L		96
90) o-xylene	14.22	91	30311	2.00	ug/L		99
91) styrene	14.23	104	19580	1.65	ug/L		96
92) n-amyl acetate	14.26	70	4676	1.78	ug/L		93
93) bromoform	14.46	173	4931	1.67	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206384.D
Acq On : 11 Nov 2020 5:10 pm
Operator : EddieH
Sample : IC8967-2
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 13 17:28:00 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
94) butyl acrylate	14.06	55	11569	1.58	ug/L	95
95) isopropylbenzene	14.57	105	36686	1.94	ug/L	97
99) bromobenzene	14.95	156	10176	2.00	ug/L	87
100) 1,1,2,2-tetrachloroethane	14.85	83	8341	1.94	ug/L	89
102) 1,2,3-trichloropropane	14.93	110	2150	1.99	ug/L	87
103) n-propylbenzene	14.98	91	43586	2.02	ug/L	97
104) 2-chlorotoluene	15.11	126	9542	2.03	ug/L	98
105) 4-chlorotoluene	15.22	91	26726	1.97	ug/L	98
106) 1,3,5-trimethylbenzene	15.14	105	30615	1.98	ug/L	97
107) tert-butylbenzene	15.48	119	24939	1.84	ug/L	96
108) 1,2,4-trimethylbenzene	15.53	105	31463	2.01	ug/L	97
109) sec-butylbenzene	15.70	105	37639	1.87	ug/L	99
110) 1,3-dichlorobenzene	15.86	146	18745	2.00	ug/L	93
111) p-isopropyltoluene	15.83	119	32203	1.90	ug/L	98
112) benzyl chloride	16.05	91	12158	1.79	ug/L	99
113) 1,2,3-trimethylbenzene	15.95	105	31696	2.00	ug/L	99
114) 1,4-dichlorobenzene	15.95	146	18634	2.01	ug/L	99
115) 1,2-dichlorobenzene	16.33	146	17356	1.93	ug/L	99
116) n-butylbenzene	16.23	92	16586	1.85	ug/L	98
117) 1,2-dibromo-3-chloropropan	17.09	157	1291	1.37	ug/L	82
118) 1,3,5-trichlorobenzene	17.28	180	14266	1.83	ug/L	98
119) 1,2,4-trichlorobenzene	17.92	180	12391	1.76	ug/L	99
120) hexachlorobutadiene	18.04	225	6816	1.81	ug/L	97
121) naphthalene	18.22	128	22966	1.73	ug/L	95
122) 1,2,3-trichlorobenzene	18.45	180	10918	1.73	ug/L	99
123) hexachloroethane	16.62	201	5251	1.65	ug/L	98

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

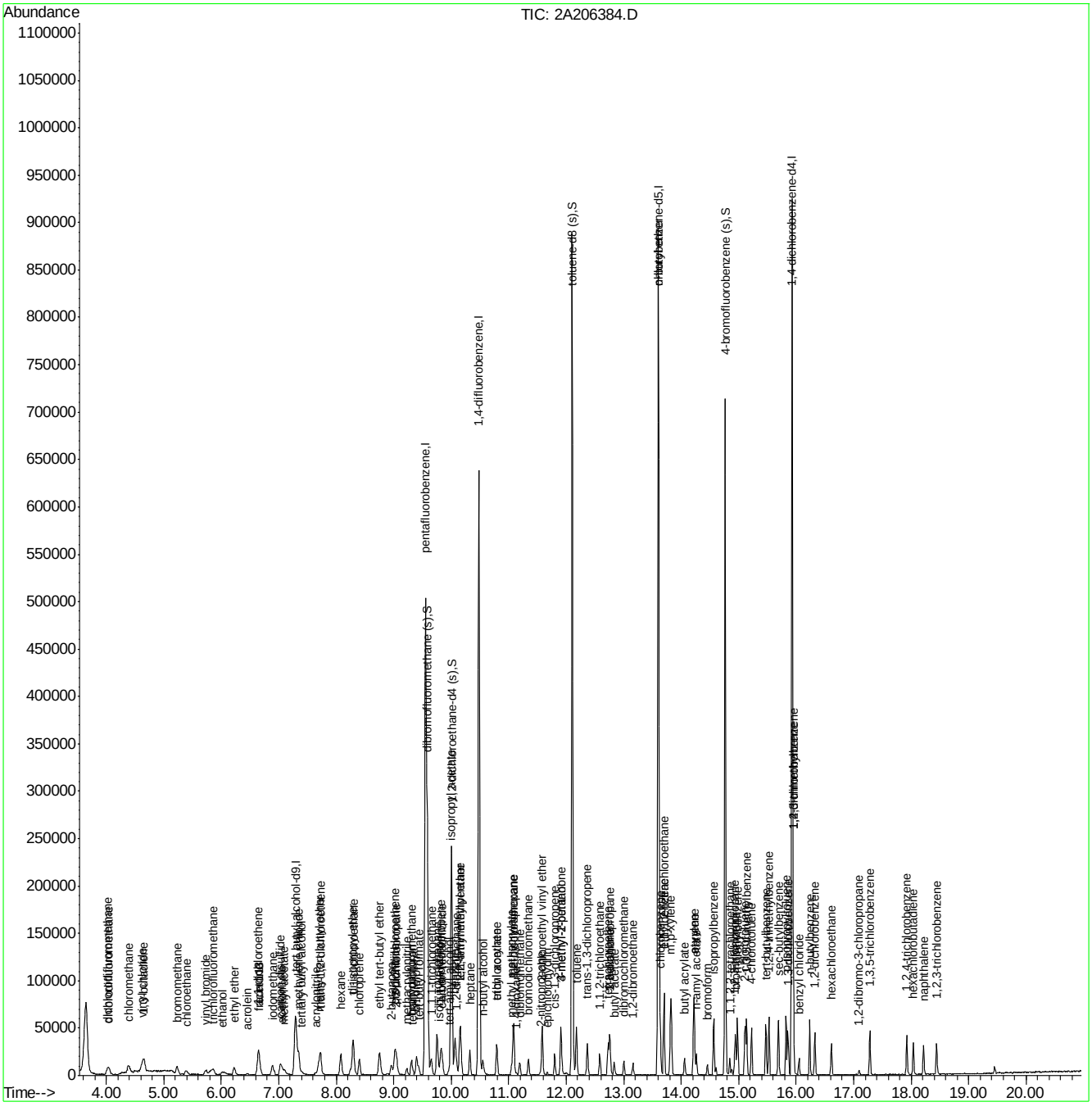
7.7.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206384.D
Acq On : 11 Nov 2020 5:10 pm
Operator : EddieH
Sample : IC8967-2
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 13 17:28:00 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206385.D
Acq On : 11 Nov 2020 5:40 pm
Operator : EddieH
Sample : IC8967-4
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 13 17:28:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	125358	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	356375	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	523959	50.00	ug/L	0.00
73) chlorobenzene-d5	13.60	117	448250	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	225772	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.58	113	155346	49.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.50%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	162763	49.85	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.70%			
74) toluene-d8 (s)	12.10	98	563008	49.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.00%			
98) 4-bromofluorobenzene (s)	14.76	95	213428	49.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.14%			

Target Compounds						Qvalue
2) ethanol	6.02	45	15558	373.68	ug/L	84
3) tertiary butyl alcohol	7.41	59	7239	17.31	ug/L	90
4) 1,4-dioxane	11.13	88	3595	88.69	ug/L	91
6) chlorodifluoromethane	4.05	51	21723	3.82	ug/L	97
7) dichlorodifluoromethane	4.02	85	22268	3.82	ug/L	96
8) chloromethane	4.39	50	24293	4.06	ug/L	97
9) vinyl chloride	4.62	62	22748	3.88	ug/L	95
10) 1,3-butadiene	4.65	54	18773	3.88	ug/L	92
11) bromomethane	5.22	94	16973	4.11	ug/L	97
12) chloroethane	5.40	64	12772	3.75	ug/L	93
13) vinyl bromide	5.73	106	12843	3.84	ug/L	96
14) trichlorofluoromethane	5.86	101	28871	3.82	ug/L	97
15) ethyl ether	6.23	74	8452	3.74	ug/L	93
16) acrolein	6.46	56	1660	3.34	ug/L #	62
17) freon 113	6.66	151	14086	3.77	ug/L	87
18) 1,1-dichloroethene	6.65	96	15358	3.84	ug/L	94
19) acetone	6.65	43	20792	16.75	ug/L	100
20) acetonitrile	7.07	41	15716	39.20	ug/L	95
21) iodomethane	6.89	142	33699	3.78	ug/L	99
22) carbon disulfide	7.03	76	50307	3.77	ug/L	98
23) methylene chloride	7.35	84	17238	3.80	ug/L	98
24) methyl acetate	7.11	43	10863	3.48	ug/L	98
25) methyl tert butyl ether	7.70	73	42696	3.84	ug/L	98
26) trans-1,2-dichloroethene	7.73	96	16595	3.77	ug/L	96
27) hexane	8.08	57	25737	3.77	ug/L	98
28) di-isopropyl ether	8.29	45	52871	3.82	ug/L	96
29) ethyl tert-butyl ether	8.75	59	51424	3.87	ug/L	97
30) 2-butanone	8.95	72	6325	14.83	ug/L	98
31) 1,1-dichloroethane	8.31	63	29885	3.89	ug/L	95
32) chloroprene	8.40	53	23191	3.64	ug/L	95
33) acrylonitrile	7.64	53	4684	3.71	ug/L	81
35) ethyl acetate	8.97	45	1438	3.03	ug/L	94
36) 2,2-dichloropropane	9.04	77	21980	4.03	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206385.D
Acq On : 11 Nov 2020 5:40 pm
Operator : EddieH
Sample : IC8967-4
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 13 17:28:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.02	96	17994	3.80	ug/L		96
38) propionitrile	9.03	54	16689	36.23	ug/L		94
39) bromochloromethane	9.31	130	11717	3.78	ug/L		90
40) tetrahydrofuran	9.33	42	3966	4.23	ug/L		91
41) chloroform	9.40	83	30906	3.93	ug/L		96
42) tert-butyl formate	9.43	59	11533	3.70	ug/L		94
43) isobutyl alcohol	9.80	43	5403	35.26	ug/L	#	76
45) methacrylonitrile	9.23	67	5223	3.51	ug/L		90
46) 1,1,1-trichloroethane	9.65	97	27029	3.84	ug/L		99
47) cyclohexane	9.76	84	26275	3.79	ug/L		96
48) 1,1-dichloropropene	9.82	75	21996	3.66	ug/L		99
49) tert-amyl alcohol	9.95	73	3344	17.61	ug/L		97
50) carbon tetrachloride	9.84	117	23995	3.70	ug/L		99
53) 2,2,4-trimethylpentane	10.16	57	66359	3.73	ug/L		99
54) tert-amyl methyl ether	10.15	73	49882	3.87	ug/L		98
55) n-butyl alcohol	10.54	56	18674	177.94	ug/L		92
56) benzene	10.07	78	64791	3.86	ug/L		99
57) heptane	10.32	57	12692	3.54	ug/L		92
58) isopropyl acetate	9.98	87	2864	3.45	ug/L	#	84
59) 1,2-dichloroethane	10.09	62	20265	3.76	ug/L		97
60) trichloroethene	10.79	95	17439	3.68	ug/L		93
61) ethyl acrylate	10.78	55	15171	3.56	ug/L		93
62) 2-nitropropane	11.55	41	2381	3.02	ug/L		93
63) 2-chloroethyl vinyl ether	11.58	63	44745	17.98	ug/L		100
64) methyl methacrylate	11.05	100	3427	3.35	ug/L	#	89
65) 1,2-dichloropropane	11.08	63	16936	3.77	ug/L		99
66) methylcyclohexane	11.09	83	30935	3.73	ug/L		94
67) dibromomethane	11.19	93	9740	3.79	ug/L		93
68) bromodichloromethane	11.34	83	21555	3.70	ug/L		91
69) epichlorohydrin	11.67	57	6074	18.66	ug/L		95
70) cis-1,3-dichloropropene	11.80	75	26225	3.66	ug/L		93
71) 4-methyl-2-pentanone	11.91	58	20318	14.81	ug/L		92
72) 3-methyl-1-butanol	11.91	70	6240	66.18	ug/L		96
75) toluene	12.18	92	39082	3.71	ug/L		97
76) trans-1,3-dichloropropene	12.36	75	21997	3.53	ug/L		96
78) 1,1,2-trichloroethane	12.58	83	11102	3.55	ug/L		95
79) 2-hexanone	12.76	58	20443	14.89	ug/L		98
80) tetrachloroethene	12.73	166	18762	3.87	ug/L		95
81) 1,3-dichloropropane	12.76	76	22458	3.82	ug/L		99
82) butyl acetate	12.83	56	8195	3.53	ug/L		97
83) dibromochloromethane	13.01	129	15650	3.47	ug/L		98
84) 1,2-dibromoethane	13.16	107	16384	3.73	ug/L		96
85) n-butyl ether	13.60	57	67326	3.73	ug/L		92
86) chlorobenzene	13.64	112	44659	3.86	ug/L		93
87) 1,1,1,2-tetrachloroethane	13.70	131	16011	3.62	ug/L		99
88) ethylbenzene	13.70	91	73133	3.90	ug/L		97
89) m,p-xylene	13.82	106	56425	7.56	ug/L		96
90) o-xylene	14.22	91	59367	3.93	ug/L		96
91) styrene	14.23	104	39761	3.37	ug/L		96
92) n-amyl acetate	14.27	70	9305	3.57	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206385.D
Acq On : 11 Nov 2020 5:40 pm
Operator : EddieH
Sample : IC8967-4
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 13 17:28:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

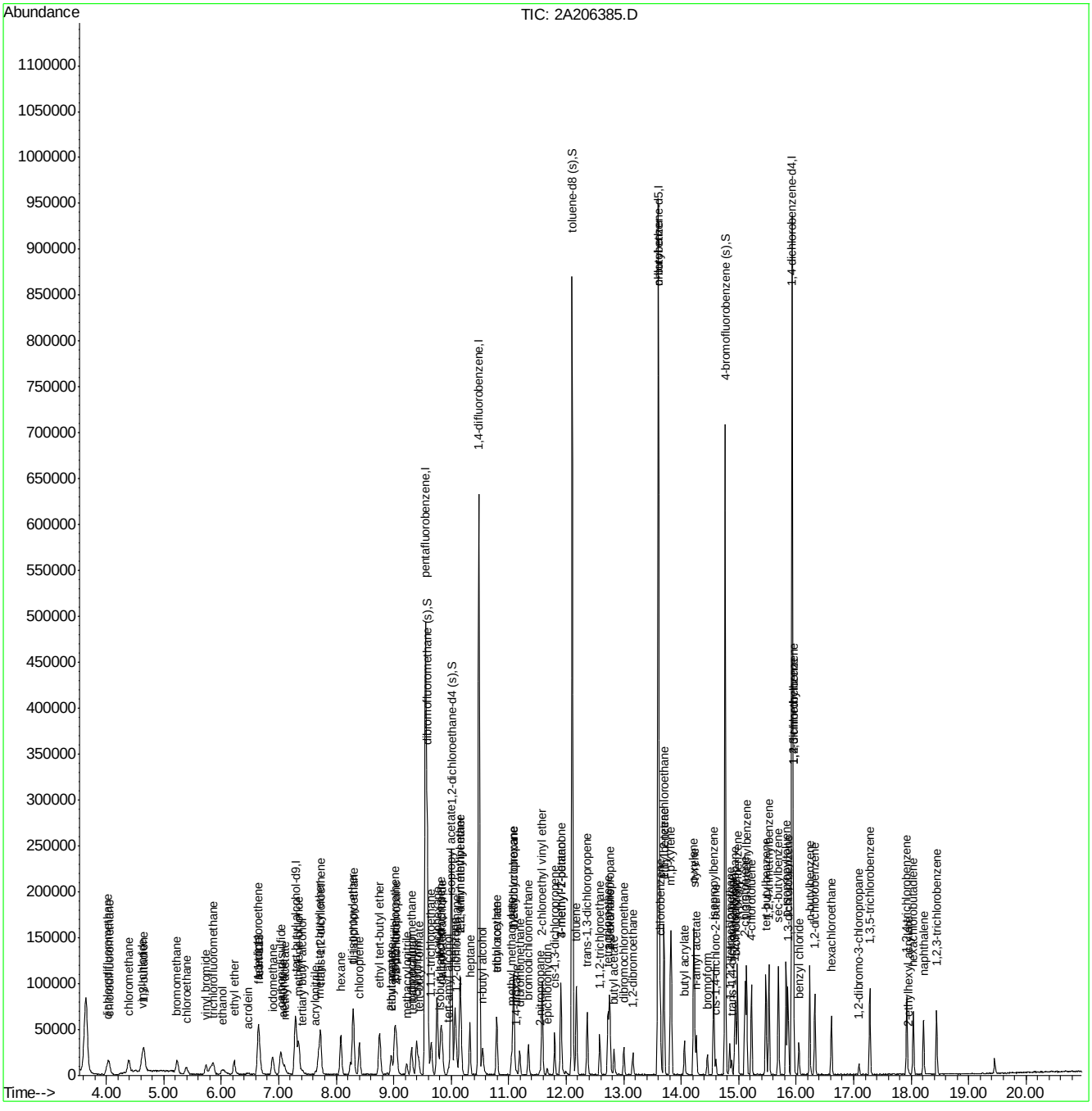
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	14.45	173	9991	3.40	ug/L	97
94) butyl acrylate	14.06	55	22932	3.15	ug/L	96
95) isopropylbenzene	14.57	105	71442	3.80	ug/L	97
96) cis-1,4-dichloro-2-butene	14.60	88	3534	2.58	ug/L	93
99) bromobenzene	14.94	156	19526	3.83	ug/L	92
100) 1,1,2,2-tetrachloroethane	14.85	83	16387	3.79	ug/L	98
101) trans-1,4-dichloro-2-buten	14.88	53	2729	2.79	ug/L #	78
102) 1,2,3-trichloropropane	14.93	110	4177	3.86	ug/L	96
103) n-propylbenzene	14.98	91	85981	3.98	ug/L	98
104) 2-chlorotoluene	15.11	126	17879	3.78	ug/L	98
105) 4-chlorotoluene	15.22	91	51757	3.81	ug/L	98
106) 1,3,5-trimethylbenzene	15.14	105	59307	3.82	ug/L	98
107) tert-butylbenzene	15.47	119	50588	3.73	ug/L	97
108) 1,2,4-trimethylbenzene	15.53	105	61278	3.90	ug/L	98
109) sec-butylbenzene	15.70	105	77423	3.82	ug/L	96
110) 1,3-dichlorobenzene	15.86	146	35823	3.81	ug/L	99
111) p-isopropyltoluene	15.83	119	65129	3.83	ug/L	98
112) benzyl chloride	16.05	91	23898	3.50	ug/L	98
113) 1,2,3-trimethylbenzene	15.95	105	60757	3.82	ug/L	94
114) 1,4-dichlorobenzene	15.95	146	35611	3.83	ug/L	94
115) 1,2-dichlorobenzene	16.33	146	34837	3.85	ug/L	99
116) n-butylbenzene	16.23	92	33151	3.69	ug/L	92
117) 1,2-dibromo-3-chloropropan	17.09	157	2955	3.12	ug/L	88
118) 1,3,5-trichlorobenzene	17.28	180	28665	3.67	ug/L	97
119) 1,2,4-trichlorobenzene	17.92	180	25270	3.58	ug/L	96
120) hexachlorobutadiene	18.04	225	14095	3.73	ug/L	93
121) naphthalene	18.22	128	45075	3.37	ug/L	99
122) 1,2,3-trichlorobenzene	18.44	180	21703	3.42	ug/L	97
123) hexachloroethane	16.62	201	10381	3.25	ug/L	93
124) 2-ethylhexyl acrylate	17.95	70	648	0.33	ug/L	84

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206385.D
Acq On : 11 Nov 2020 5:40 pm
Operator : EddieH
Sample : IC8967-4
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 13 17:28:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



M2A8967.M Mon Nov 16 16:46:51 2020 MS2A Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206386.D
Acq On : 11 Nov 2020 6:09 pm
Operator : EddieH
Sample : IC8967-8
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 13 15:23:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	126100	500.00	ug/L	0.00
5) pentafluorobenzene	9.55	168	367001	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	540215	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	463553	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	232490	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.58	113	160191	49.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.64%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	168893	50.17	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.34%			
74) toluene-d8 (s)	12.10	98	585729	49.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.60%			
98) 4-bromofluorobenzene (s)	14.76	95	220607	49.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.50%			

Target Compounds						Qvalue
2) ethanol	6.01	45	31644	755.58	ug/L	90
3) tertiary butyl alcohol	7.40	59	15310	36.39	ug/L	92
4) 1,4-dioxane	11.13	88	7692	188.65	ug/L	87
6) chlorodifluoromethane	4.04	51	44888	7.67	ug/L	99
7) dichlorodifluoromethane	4.00	85	47298	7.87	ug/L	97
8) chloromethane	4.38	50	47131	7.65	ug/L	96
9) vinyl chloride	4.61	62	46762	7.74	ug/L	99
10) 1,3-butadiene	4.65	54	41527	8.33	ug/L	96
11) bromomethane	5.22	94	33317	7.83	ug/L	98
12) chloroethane	5.39	64	26522	7.56	ug/L	99
13) vinyl bromide	5.73	106	25575	7.42	ug/L	96
14) trichlorofluoromethane	5.85	101	59892	7.70	ug/L	100
15) ethyl ether	6.22	74	17463	7.50	ug/L	91
16) acrolein	6.45	56	3474	6.78	ug/L	68
17) freon 113	6.65	151	31189	8.10	ug/L	97
18) 1,1-dichloroethene	6.64	96	32249	7.82	ug/L	97
19) acetone	6.64	43	40097	31.37	ug/L	91
20) acetonitrile	7.07	41	32687	79.17	ug/L	98
21) iodomethane	6.89	142	70575	7.69	ug/L	99
22) carbon disulfide	7.02	76	105249	7.67	ug/L	98
23) methylene chloride	7.34	84	36401	7.79	ug/L	96
24) methyl acetate	7.10	43	23885	7.43	ug/L	99
25) methyl tert butyl ether	7.69	73	88796	7.76	ug/L	100
26) trans-1,2-dichloroethene	7.72	96	35188	7.77	ug/L	93
27) hexane	8.08	57	58023	8.25	ug/L	98
28) di-isopropyl ether	8.29	45	111175	7.80	ug/L	97
29) ethyl tert-butyl ether	8.75	59	107894	7.88	ug/L	98
30) 2-butanone	8.95	72	12742	29.00	ug/L #	85
31) 1,1-dichloroethane	8.30	63	62738	7.92	ug/L	99
32) chloroprene	8.40	53	49593	7.55	ug/L	99
33) acrylonitrile	7.64	53	9323	7.17	ug/L	94
34) vinyl acetate	8.24	86	4683	8.07	ug/L #	88
35) ethyl acetate	8.96	45	3788	7.74	ug/L	84

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206386.D
Acq On : 11 Nov 2020 6:09 pm
Operator : EddieH
Sample : IC8967-8
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 13 15:23:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 2,2-dichloropropane	9.04	77	45480	8.09	ug/L	98
37) cis-1,2-dichloroethene	9.01	96	37739	7.74	ug/L	89
38) propionitrile	9.03	54	35682	75.22	ug/L	98
39) bromochloromethane	9.30	130	24755	7.76	ug/L	97
40) tetrahydrofuran	9.33	42	7900	8.18	ug/L	85
41) chloroform	9.39	83	62412	7.71	ug/L	99
42) tert-butyl formate	9.43	59	26173	8.14	ug/L	97
43) isobutyl alcohol	9.80	43	10423	66.05	ug/L #	86
45) methacrylonitrile	9.23	67	10992	7.17	ug/L	99
46) 1,1,1-trichloroethane	9.65	97	56246	7.76	ug/L	96
47) cyclohexane	9.76	84	57997	8.12	ug/L	95
48) 1,1-dichloropropene	9.82	75	47449	7.67	ug/L	97
49) tert-amyl alcohol	9.95	73	7489	38.30	ug/L #	88
50) carbon tetrachloride	9.84	117	50986	7.63	ug/L	96
53) 2,2,4-trimethylpentane	10.16	57	150712	8.21	ug/L	99
54) tert-amyl methyl ether	10.15	73	103281	7.78	ug/L	99
55) n-butyl alcohol	10.54	56	41437	382.96	ug/L	98
56) benzene	10.06	78	136585	7.89	ug/L	98
57) heptane	10.32	57	30557	8.28	ug/L	98
58) isopropyl acetate	9.98	87	6258	7.31	ug/L	92
59) 1,2-dichloroethane	10.09	62	42869	7.71	ug/L	99
60) trichloroethene	10.79	95	37200	7.62	ug/L	99
61) ethyl acrylate	10.78	55	31863	7.24	ug/L	98
62) 2-nitropropane	11.55	41	5569	6.86	ug/L	84
63) 2-chloroethyl vinyl ether	11.58	63	96511	37.62	ug/L	98
64) methyl methacrylate	11.05	100	7348	6.97	ug/L #	89
65) 1,2-dichloropropane	11.08	63	35671	7.71	ug/L	95
66) methylcyclohexane	11.09	83	67140	7.85	ug/L	99
67) dibromomethane	11.19	93	19889	7.51	ug/L	96
68) bromodichloromethane	11.34	83	45418	7.56	ug/L	100
69) epichlorohydrin	11.67	57	13165	39.24	ug/L	96
70) cis-1,3-dichloropropene	11.80	75	55655	7.54	ug/L	97
71) 4-methyl-2-pentanone	11.91	58	43131	30.48	ug/L	93
72) 3-methyl-1-butanol	11.91	70	14143	145.47	ug/L	87
75) toluene	12.18	92	84386	7.75	ug/L	97
76) trans-1,3-dichloropropene	12.36	75	47637	7.39	ug/L	100
77) ethyl methacrylate	12.36	69	32449	6.50	ug/L	98
78) 1,1,2-trichloroethane	12.58	83	24542	7.58	ug/L	96
79) 2-hexanone	12.76	58	43897	30.91	ug/L	96
80) tetrachloroethene	12.72	166	40310	8.03	ug/L	96
81) 1,3-dichloropropane	12.77	76	47855	7.87	ug/L	98
82) butyl acetate	12.83	56	18014	7.51	ug/L	98
83) dibromochloromethane	13.00	129	34439	7.38	ug/L	98
84) 1,2-dibromoethane	13.16	107	34973	7.70	ug/L	96
85) n-butyl ether	13.60	57	144781	7.77	ug/L	97
86) chlorobenzene	13.63	112	92437	7.73	ug/L	98
87) 1,1,1,2-tetrachloroethane	13.70	131	33651	7.35	ug/L	97
88) ethylbenzene	13.70	91	153696	7.92	ug/L	98
89) m,p-xylene	13.82	106	119934	15.53	ug/L	95
90) o-xylene	14.22	91	123172	7.89	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206386.D
Acq On : 11 Nov 2020 6:09 pm
Operator : EddieH
Sample : IC8967-8
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 13 15:23:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

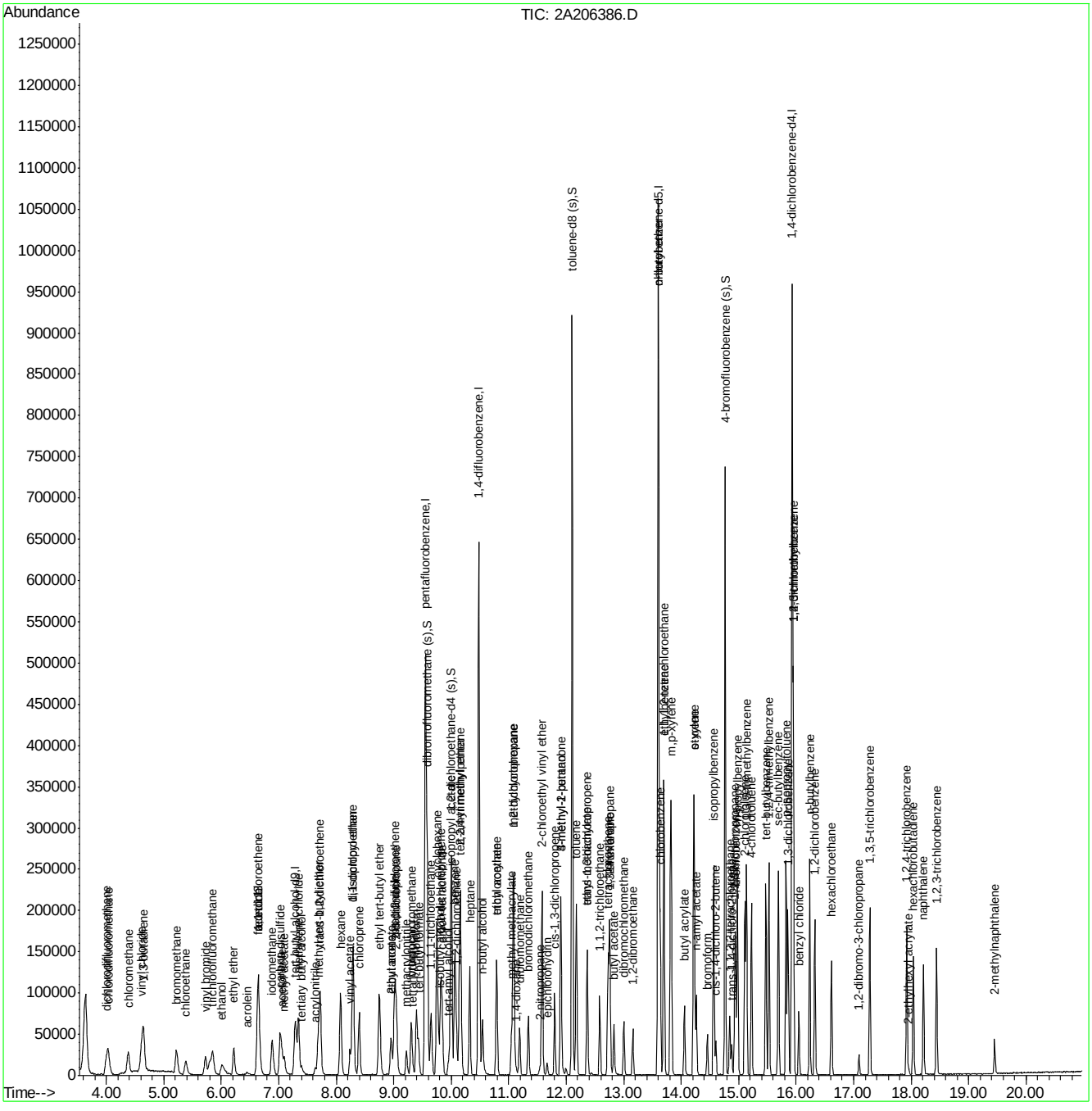
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
91) styrene	14.23	104	87435	7.17 ug/L	99
92) n-amyl acetate	14.27	70	20228	7.50 ug/L	97
93) bromoform	14.46	173	21484	7.07 ug/L	98
94) butyl acrylate	14.05	55	50621	6.72 ug/L	97
95) isopropylbenzene	14.57	105	150809	7.76 ug/L	98
96) cis-1,4-dichloro-2-butene	14.61	88	8253	5.82 ug/L	95
99) bromobenzene	14.95	156	40499	7.71 ug/L	92
100) 1,1,2,2-tetrachloroethane	14.85	83	34186	7.69 ug/L	96
101) trans-1,4-dichloro-2-buten	14.88	53	6400	6.36 ug/L	87
102) 1,2,3-trichloropropane	14.93	110	8330	7.47 ug/L	97
103) n-propylbenzene	14.98	91	179559	8.07 ug/L	96
104) 2-chlorotoluene	15.11	126	37665	7.74 ug/L	95
105) 4-chlorotoluene	15.22	91	109715	7.84 ug/L	99
106) 1,3,5-trimethylbenzene	15.14	105	125625	7.86 ug/L	97
107) tert-butylbenzene	15.48	119	107323	7.68 ug/L	98
108) 1,2,4-trimethylbenzene	15.53	105	128102	7.93 ug/L	97
109) sec-butylbenzene	15.70	105	163125	7.82 ug/L	97
110) 1,3-dichlorobenzene	15.86	146	75472	7.80 ug/L	96
111) p-isopropyltoluene	15.83	119	137940	7.88 ug/L	99
112) benzyl chloride	16.05	91	50397	7.16 ug/L	97
113) 1,2,3-trimethylbenzene	15.95	105	128999	7.88 ug/L	98
114) 1,4-dichlorobenzene	15.95	146	75008	7.84 ug/L	100
115) 1,2-dichlorobenzene	16.33	146	72049	7.73 ug/L	99
116) n-butylbenzene	16.23	92	71120	7.68 ug/L	96
117) 1,2-dibromo-3-chloropropan	17.09	157	6675	6.85 ug/L	95
118) 1,3,5-trichlorobenzene	17.28	180	60663	7.55 ug/L	99
119) 1,2,4-trichlorobenzene	17.92	180	53856	7.41 ug/L	99
120) hexachlorobutadiene	18.04	225	29951	7.70 ug/L	99
121) naphthalene	18.21	128	96698	7.03 ug/L	99
122) 1,2,3-trichlorobenzene	18.44	180	46814	7.15 ug/L	95
123) hexachloroethane	16.62	201	22453	6.83 ug/L	95
124) 2-ethylhexyl acrylate	17.96	70	1577	0.77 ug/L	85
125) 2-methylnaphthalene	19.45	142	19969	2.87 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206386.D
Acq On : 11 Nov 2020 6:09 pm
Operator : EddieH
Sample : IC8967-8
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 13 15:23:24 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206387.D
Acq On : 11 Nov 2020 6:38 pm
Operator : EddieH
Sample : IC8967-20
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 13 15:23:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	124825	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	364394	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	540033	50.00	ug/L	0.00
73) chlorobenzene-d5	13.60	117	461182	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	227561	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.58	113	159738	49.53	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.06%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	167149	49.67	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.34%			
74) toluene-d8 (s)	12.10	98	582055	49.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.48%			
98) 4-bromofluorobenzene (s)	14.76	95	221685	50.57	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.14%			

Target Compounds						Qvalue
2) ethanol	6.01	45	78425	1891.71	ug/L	98
3) tertiary butyl alcohol	7.40	59	38177	91.67	ug/L	97
4) 1,4-dioxane	11.13	88	18942	469.31	ug/L	95
6) chlorodifluoromethane	4.03	51	108664	18.70	ug/L	100
7) dichlorodifluoromethane	4.00	85	109156	18.30	ug/L	99
8) chloromethane	4.38	50	112856	18.45	ug/L	98
9) vinyl chloride	4.61	62	112366	18.73	ug/L	95
10) 1,3-butadiene	4.65	54	94790	19.15	ug/L	99
11) bromomethane	5.22	94	78567	18.60	ug/L	95
12) chloroethane	5.39	64	63283	18.16	ug/L	96
13) vinyl bromide	5.73	106	62867	18.38	ug/L	99
14) trichlorofluoromethane	5.84	101	142010	18.40	ug/L	99
15) ethyl ether	6.22	74	43898	18.98	ug/L	96
16) acrolein	6.45	56	9109	17.91	ug/L	98
17) freon 113	6.65	151	71874	18.80	ug/L	99
18) 1,1-dichloroethene	6.64	96	77172	18.86	ug/L	96
19) acetone	6.64	43	103287	81.39	ug/L	97
20) acetonitrile	7.06	41	78487	191.45	ug/L	98
21) iodomethane	6.89	142	170675	18.72	ug/L	97
22) carbon disulfide	7.02	76	254546	18.68	ug/L	99
23) methylene chloride	7.34	84	89260	19.24	ug/L	97
24) methyl acetate	7.10	43	60170	18.86	ug/L	98
25) methyl tert butyl ether	7.70	73	215661	18.97	ug/L	99
26) trans-1,2-dichloroethene	7.72	96	85635	19.05	ug/L	96
27) hexane	8.08	57	133169	19.06	ug/L	99
28) di-isopropyl ether	8.29	45	268055	18.95	ug/L	99
29) ethyl tert-butyl ether	8.75	59	261501	19.24	ug/L	98
30) 2-butanone	8.95	72	32179	73.77	ug/L	100
31) 1,1-dichloroethane	8.30	63	150179	19.09	ug/L	98
32) chloroprene	8.40	53	123076	18.87	ug/L	97
33) acrylonitrile	7.63	53	24398	18.90	ug/L	95
34) vinyl acetate	8.24	86	11811	20.50	ug/L	97
35) ethyl acetate	8.97	45	9124	18.79	ug/L	86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206387.D
Acq On : 11 Nov 2020 6:38 pm
Operator : EddieH
Sample : IC8967-20
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 13 15:23:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 2,2-dichloropropane	9.04	77	106646	19.11	ug/L	99
37) cis-1,2-dichloroethene	9.01	96	92443	19.09	ug/L	98
38) propionitrile	9.03	54	88953	188.85	ug/L	94
39) bromochloromethane	9.30	130	59957	18.93	ug/L	98
40) tetrahydrofuran	9.33	42	18813	19.61	ug/L	94
41) chloroform	9.39	83	154530	19.22	ug/L	100
42) tert-butyl formate	9.43	59	61909	19.40	ug/L	95
43) isobutyl alcohol	9.79	43	29421	187.77	ug/L	94
45) methacrylonitrile	9.22	67	27930	18.34	ug/L	93
46) 1,1,1-trichloroethane	9.65	97	134980	18.75	ug/L	99
47) cyclohexane	9.76	84	132914	18.75	ug/L	99
48) 1,1-dichloropropene	9.82	75	117564	19.14	ug/L	98
49) tert-amyl alcohol	9.95	73	17873	92.07	ug/L	93
50) carbon tetrachloride	9.84	117	122479	18.46	ug/L	100
53) 2,2,4-trimethylpentane	10.16	57	342623	18.67	ug/L	98
54) tert-amyl methyl ether	10.15	73	253573	19.10	ug/L	99
55) n-butyl alcohol	10.54	56	103327	955.27	ug/L	99
56) benzene	10.06	78	333406	19.26	ug/L	99
57) heptane	10.32	57	69538	18.84	ug/L	99
58) isopropyl acetate	9.98	87	15795	18.46	ug/L	98
59) 1,2-dichloroethane	10.09	62	106394	19.13	ug/L	100
60) trichloroethene	10.79	95	91618	18.77	ug/L	99
61) ethyl acrylate	10.78	55	82639	18.79	ug/L	99
62) 2-nitropropane	11.55	41	15200	18.73	ug/L	84
63) 2-chloroethyl vinyl ether	11.58	63	241221	94.06	ug/L	99
64) methyl methacrylate	11.05	100	19328	18.33	ug/L	97
65) 1,2-dichloropropane	11.08	63	86879	18.79	ug/L	100
66) methylcyclohexane	11.08	83	160461	18.76	ug/L	97
67) dibromomethane	11.19	93	50282	19.00	ug/L	97
68) bromodichloromethane	11.34	83	112587	18.75	ug/L	97
69) epichlorohydrin	11.67	57	31313	93.36	ug/L	94
70) cis-1,3-dichloropropene	11.80	75	139790	18.95	ug/L	99
71) 4-methyl-2-pentanone	11.90	58	107581	76.06	ug/L	96
72) 3-methyl-1-butanol	11.91	70	36230	372.79	ug/L	96
75) toluene	12.18	92	205764	18.99	ug/L	99
76) trans-1,3-dichloropropene	12.36	75	120504	18.79	ug/L	98
77) ethyl methacrylate	12.36	69	87614	17.65	ug/L	98
78) 1,1,2-trichloroethane	12.58	83	61094	18.97	ug/L	98
79) 2-hexanone	12.75	58	109674	77.62	ug/L	95
80) tetrachloroethene	12.73	166	97333	19.50	ug/L	97
81) 1,3-dichloropropane	12.76	76	117094	19.36	ug/L	99
82) butyl acetate	12.83	56	44540	18.66	ug/L	94
83) dibromochloromethane	13.01	129	86820	18.70	ug/L	97
84) 1,2-dibromoethane	13.16	107	86467	19.14	ug/L	99
85) n-butyl ether	13.60	57	355498	19.17	ug/L	98
86) chlorobenzene	13.63	112	228460	19.21	ug/L	97
87) 1,1,1,2-tetrachloroethane	13.70	131	84495	18.55	ug/L	98
88) ethylbenzene	13.70	91	374841	19.42	ug/L	98
89) m,p-xylene	13.82	106	295368	38.44	ug/L	99
90) o-xylene	14.22	91	300356	19.34	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206387.D
Acq On : 11 Nov 2020 6:38 pm
Operator : EddieH
Sample : IC8967-20
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 13 15:23:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

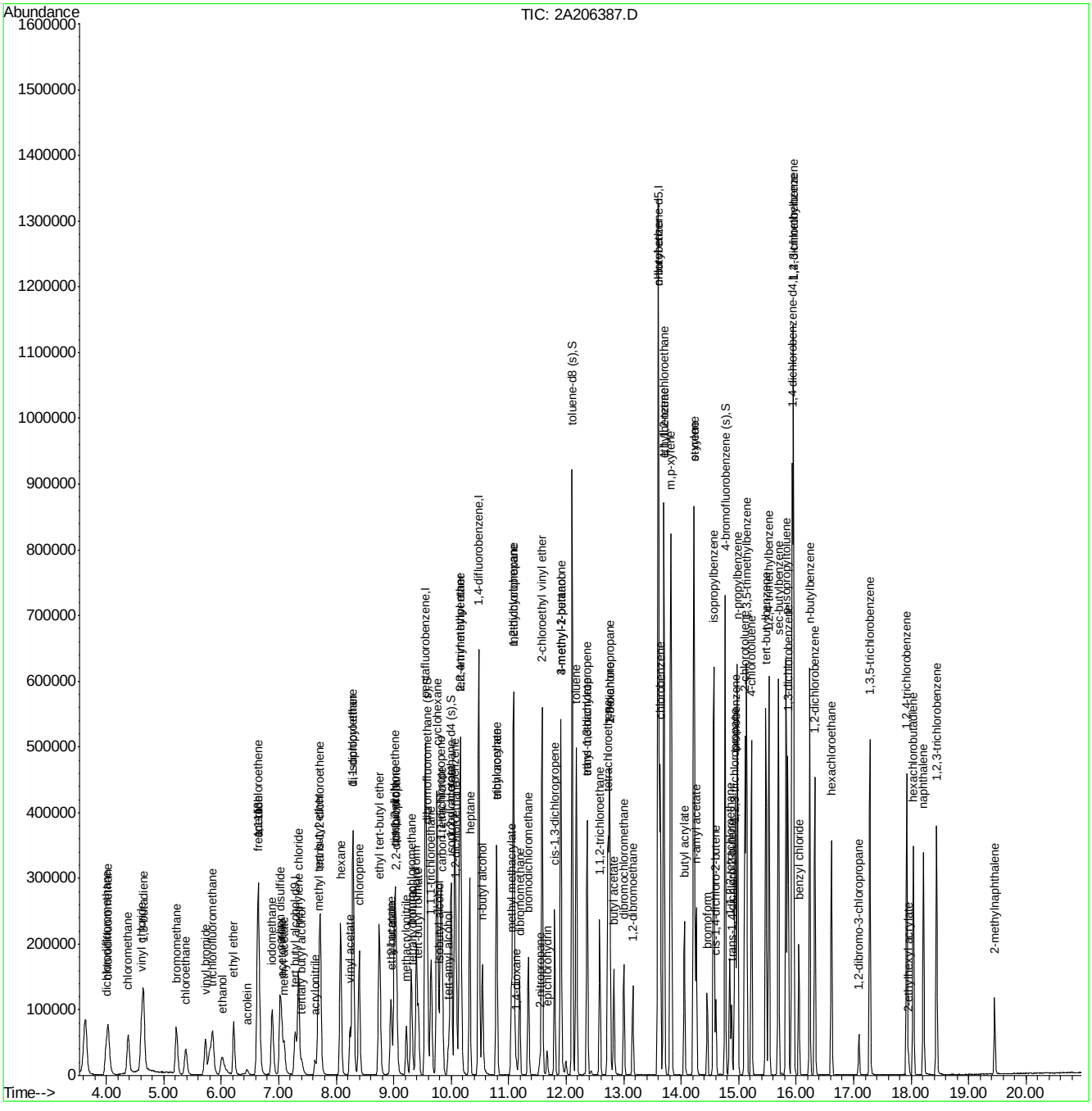
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
91) styrene	14.23	104	226937	18.70 ug/L	100
92) n-amyl acetate	14.26	70	49867	18.58 ug/L	97
93) bromoform	14.45	173	54702	18.09 ug/L	100
94) butyl acrylate	14.05	55	133665	17.84 ug/L	99
95) isopropylbenzene	14.57	105	372036	19.25 ug/L	98
96) cis-1,4-dichloro-2-butene	14.60	88	23918	16.96 ug/L	96
99) bromobenzene	14.95	156	99827	19.40 ug/L	90
100) 1,1,2,2-tetrachloroethane	14.84	83	84318	19.37 ug/L	99
101) trans-1,4-dichloro-2-buten	14.88	53	17373	17.65 ug/L	92
102) 1,2,3-trichloropropane	14.93	110	21042	19.28 ug/L	99
103) n-propylbenzene	14.98	91	433837	19.91 ug/L	98
104) 2-chlorotoluene	15.11	126	93403	19.61 ug/L	99
105) 4-chlorotoluene	15.22	91	265468	19.37 ug/L	100
106) 1,3,5-trimethylbenzene	15.14	105	302498	19.34 ug/L	99
107) tert-butylbenzene	15.48	119	260564	19.05 ug/L	99
108) 1,2,4-trimethylbenzene	15.53	105	307865	19.46 ug/L	98
109) sec-butylbenzene	15.70	105	397694	19.49 ug/L	97
110) 1,3-dichlorobenzene	15.86	146	180762	19.09 ug/L	98
111) p-isopropyltoluene	15.83	119	330717	19.30 ug/L	99
112) benzyl chloride	16.05	91	129138	18.74 ug/L	97
113) 1,2,3-trimethylbenzene	15.95	105	312687	19.51 ug/L	97
114) 1,4-dichlorobenzene	15.95	146	181214	19.34 ug/L	99
115) 1,2-dichlorobenzene	16.33	146	175249	19.22 ug/L	99
116) n-butylbenzene	16.23	92	173082	19.09 ug/L	94
117) 1,2-dibromo-3-chloropropan	17.09	157	16871	17.70 ug/L	93
118) 1,3,5-trichlorobenzene	17.28	180	152043	19.32 ug/L	100
119) 1,2,4-trichlorobenzene	17.92	180	135737	19.08 ug/L	99
120) hexachlorobutadiene	18.04	225	72581	19.06 ug/L	99
121) naphthalene	18.21	128	252687	18.77 ug/L	99
122) 1,2,3-trichlorobenzene	18.44	180	120063	18.75 ug/L	99
123) hexachloroethane	16.62	201	58702	18.23 ug/L	95
124) 2-ethylhexyl acrylate	17.95	70	5184	2.59 ug/L	98
125) 2-methylnaphthalene	19.45	142	57455	8.43 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206387.D
Acq On : 11 Nov 2020 6:38 pm
Operator : EddieH
Sample : IC8967-20
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 13 15:23:25 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206388.D
Acq On : 11 Nov 2020 7:08 pm
Operator : EddieH
Sample : ICC8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 13 15:23:26 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	121460	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	359104	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	529199	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	444922	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	223662	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.59	113	158917	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	164898	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.00%			
74) toluene-d8 (s)	12.11	98	570196	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
98) 4-bromofluorobenzene (s)	14.76	95	215446	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			

Target Compounds						Qvalue
2) ethanol	6.02	45	201698	5000.00	ug/L	100
3) tertiary butyl alcohol	7.41	59	101309	250.01	ug/L	99
4) 1,4-dioxane	11.13	88	49092	1250.00	ug/L	100
6) chlorodifluoromethane	4.04	51	286299	50.00	ug/L	100
7) dichlorodifluoromethane	4.01	85	293849	50.00	ug/L	100
8) chloromethane	4.38	50	301331	50.00	ug/L	100
9) vinyl chloride	4.61	62	295608	50.00	ug/L	100
10) 1,3-butadiene	4.65	54	243864	50.00	ug/L	100
11) bromomethane	5.22	94	208108	50.00	ug/L	100
12) chloroethane	5.39	64	171668	50.00	ug/L	100
13) vinyl bromide	5.73	106	168563	50.00	ug/L	100
14) trichlorofluoromethane	5.85	101	380358	50.00	ug/L	100
15) ethyl ether	6.22	74	113973	50.00	ug/L	100
16) acrolein	6.45	56	25063	50.00	ug/L	100
17) freon 113	6.65	151	188381	50.00	ug/L	100
18) 1,1-dichloroethene	6.64	96	201653	50.00	ug/L	100
19) acetone	6.64	43	250645	200.41	ug/L	100
20) acetonitrile	7.06	41	202005	500.00	ug/L	100
21) iodomethane	6.89	142	449233	50.00	ug/L	100
22) carbon disulfide	7.03	76	671445	50.00	ug/L	100
23) methylene chloride	7.34	84	228655	50.00	ug/L	100
24) methyl acetate	7.10	43	157233	50.00	ug/L	100
25) methyl tert butyl ether	7.70	73	560158	50.00	ug/L	100
26) trans-1,2-dichloroethene	7.72	96	221497	50.00	ug/L	100
27) hexane	8.08	57	344267	50.00	ug/L	100
28) di-isopropyl ether	8.29	45	697009	50.00	ug/L	100
29) ethyl tert-butyl ether	8.75	59	669621	50.00	ug/L	100
30) 2-butanone	8.95	72	85971	200.00	ug/L	100
31) 1,1-dichloroethane	8.30	63	387541	50.00	ug/L	100
32) chloroprene	8.40	53	321324	50.00	ug/L	100
33) acrylonitrile	7.63	53	63610	50.00	ug/L	100
34) vinyl acetate	8.24	86	28394	50.00	ug/L	100
35) ethyl acetate	8.97	45	23929	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206388.D
Acq On : 11 Nov 2020 7:08 pm
Operator : EddieH
Sample : ICC8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 13 15:23:26 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 2,2-dichloropropane	9.04	77	274983	50.00	ug/L	100
37) cis-1,2-dichloroethene	9.01	96	238581	50.00	ug/L	100
38) propionitrile	9.03	54	232095	500.00	ug/L	100
39) bromochloromethane	9.30	130	156094	50.00	ug/L	100
40) tetrahydrofuran	9.32	42	47269	50.00	ug/L	100
41) chloroform	9.39	83	396255	50.00	ug/L	100
42) tert-butyl formate	9.43	59	157255	50.00	ug/L	100
43) isobutyl alcohol	9.79	43	76809	497.43	ug/L	100
45) methacrylonitrile	9.23	67	75027	50.00	ug/L	100
46) 1,1,1-trichloroethane	9.65	97	354769	50.00	ug/L	100
47) cyclohexane	9.76	84	349374	50.00	ug/L	100
48) 1,1-dichloropropene	9.82	75	302721	50.00	ug/L	100
49) tert-amyl alcohol	9.95	73	47828	250.00	ug/L	100
50) carbon tetrachloride	9.85	117	326861	50.00	ug/L	100
53) 2,2,4-trimethylpentane	10.17	57	899169	50.00	ug/L	100
54) tert-amyl methyl ether	10.15	73	650330	50.00	ug/L	100
55) n-butyl alcohol	10.54	56	264988	2500.00	ug/L	100
56) benzene	10.07	78	848306	50.00	ug/L	100
57) heptane	10.32	57	180843	50.00	ug/L	100
58) isopropyl acetate	9.98	87	41915	50.00	ug/L	100
59) 1,2-dichloroethane	10.09	62	272441	50.00	ug/L	100
60) trichloroethene	10.79	95	239197	50.00	ug/L	100
61) ethyl acrylate	10.78	55	215463	50.00	ug/L	100
62) 2-nitropropane	11.55	41	39755	50.00	ug/L	100
63) 2-chloroethyl vinyl ether	11.58	63	628246	250.00	ug/L	100
64) methyl methacrylate	11.05	100	51670	50.00	ug/L	100
65) 1,2-dichloropropane	11.08	63	226584	50.00	ug/L	100
66) methylcyclohexane	11.09	83	419168	50.00	ug/L	100
67) dibromomethane	11.19	93	129635	50.00	ug/L	100
68) bromodichloromethane	11.34	83	294142	50.00	ug/L	100
69) epichlorohydrin	11.67	57	82171	250.00	ug/L	100
70) cis-1,3-dichloropropene	11.80	75	361428	50.00	ug/L	100
71) 4-methyl-2-pentanone	11.91	58	277214	200.00	ug/L	100
72) 3-methyl-1-butanol	11.91	70	95237	1000.00	ug/L	100
75) toluene	12.18	92	522563	50.00	ug/L	100
76) trans-1,3-dichloropropene	12.36	75	309410	50.00	ug/L	100
77) ethyl methacrylate	12.36	69	239426	50.00	ug/L	100
78) 1,1,2-trichloroethane	12.58	83	155363	50.00	ug/L	100
79) 2-hexanone	12.75	58	272618	200.00	ug/L	100
80) tetrachloroethene	12.73	166	240831	50.00	ug/L	100
81) 1,3-dichloropropane	12.76	76	291733	50.00	ug/L	100
82) butyl acetate	12.83	56	115116	50.00	ug/L	100
83) dibromochloromethane	13.01	129	223958	50.00	ug/L	100
84) 1,2-dibromoethane	13.16	107	217922	50.00	ug/L	100
85) n-butyl ether	13.60	57	894645	50.00	ug/L	100
86) chlorobenzene	13.64	112	573597	50.00	ug/L	100
87) 1,1,1,2-tetrachloroethane	13.70	131	219767	50.00	ug/L	100
88) ethylbenzene	13.70	91	930976	50.00	ug/L	100
89) m,p-xylene	13.82	106	741210	100.00	ug/L	100
90) o-xylene	14.22	91	749274	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206388.D
Acq On : 11 Nov 2020 7:08 pm
Operator : EddieH
Sample : ICC8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 13 15:23:26 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

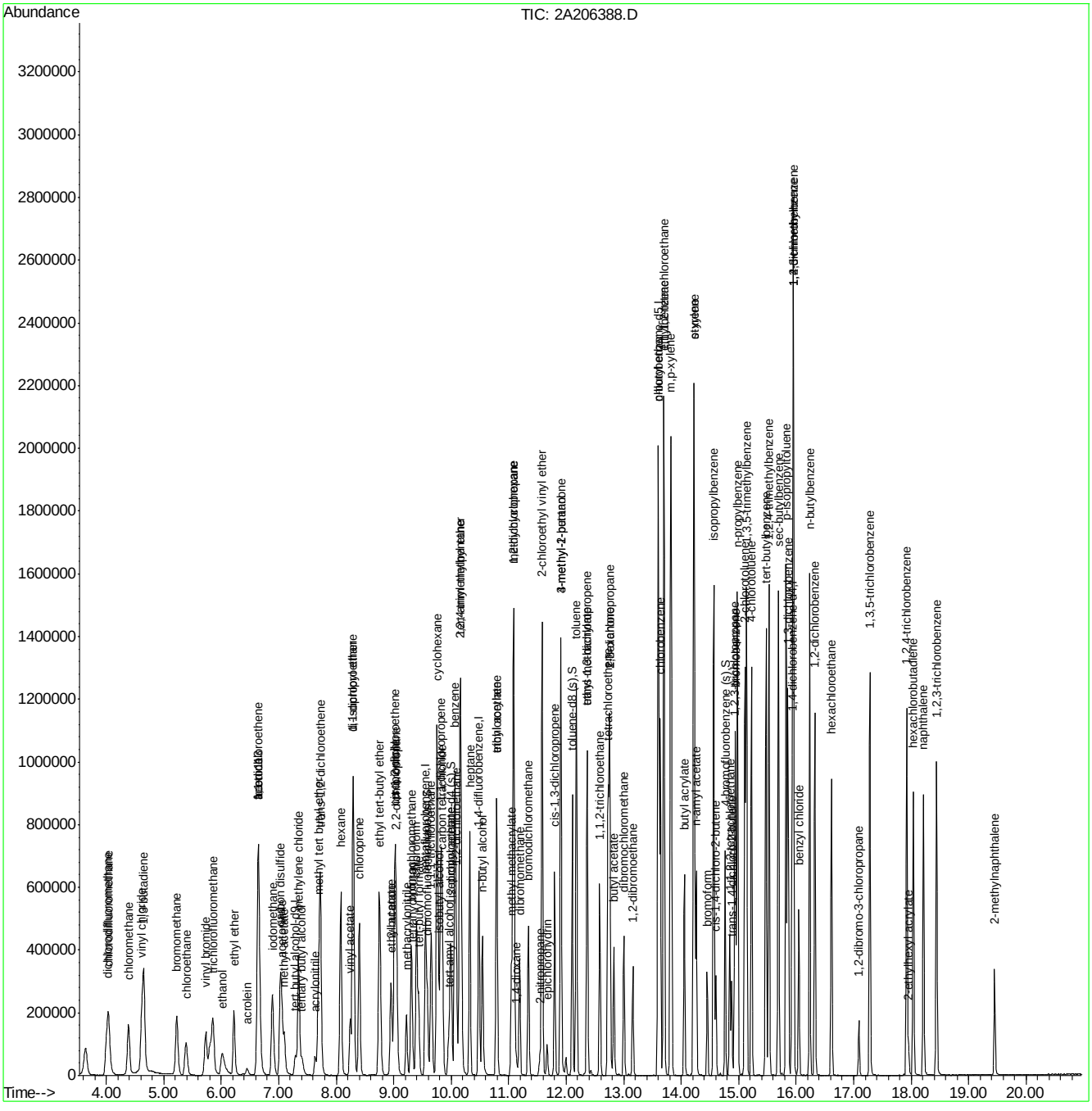
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) styrene	14.23	104	585234	50.00	ug/L	100
92) n-amyl acetate	14.26	70	129437	50.00	ug/L	100
93) bromoform	14.46	173	145845	50.00	ug/L	100
94) butyl acrylate	14.05	55	361351	50.00	ug/L	100
95) isopropylbenzene	14.57	105	932435	50.00	ug/L	100
96) cis-1,4-dichloro-2-butene	14.60	88	68041	50.00	ug/L	100
99) bromobenzene	14.94	156	252823	50.00	ug/L	100
100) 1,1,2,2-tetrachloroethane	14.84	83	213932	50.00	ug/L	100
101) trans-1,4-dichloro-2-buten	14.88	53	48383	50.00	ug/L	100
102) 1,2,3-trichloropropane	14.93	110	53621	50.00	ug/L	100
103) n-propylbenzene	14.98	91	1070690	50.00	ug/L	100
104) 2-chlorotoluene	15.11	126	234028	50.00	ug/L	100
105) 4-chlorotoluene	15.22	91	673438	50.00	ug/L	100
106) 1,3,5-trimethylbenzene	15.14	105	768561	50.00	ug/L	100
107) tert-butylbenzene	15.48	119	672289	50.00	ug/L	100
108) 1,2,4-trimethylbenzene	15.53	105	777517	50.00	ug/L	100
109) sec-butylbenzene	15.70	105	1002896	50.00	ug/L	100
110) 1,3-dichlorobenzene	15.86	146	465225	50.00	ug/L	100
111) p-isopropyltoluene	15.83	119	842185	50.00	ug/L	100
112) benzyl chloride	16.05	91	338676	50.00	ug/L	100
113) 1,2,3-trimethylbenzene	15.95	105	788137	50.04	ug/L	100
114) 1,4-dichlorobenzene	15.95	146	460401	50.00	ug/L	100
115) 1,2-dichlorobenzene	16.33	146	448184	50.00	ug/L	100
116) n-butylbenzene	16.23	92	445555	50.00	ug/L	100
117) 1,2-dibromo-3-chloropropan	17.09	157	46853	50.00	ug/L	100
118) 1,3,5-trichlorobenzene	17.28	180	386709	50.00	ug/L	100
119) 1,2,4-trichlorobenzene	17.92	180	349604	50.00	ug/L	100
120) hexachlorobutadiene	18.04	225	187172	50.00	ug/L	100
121) naphthalene	18.21	128	661540	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	18.44	180	314758	50.00	ug/L	100
123) hexachloroethane	16.62	201	158223	50.00	ug/L	100
124) 2-ethylhexyl acrylate	17.95	70	19649	10.00	ug/L	100
125) 2-methylnaphthalene	19.45	142	167440	25.00	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206388.D
Acq On : 11 Nov 2020 7:08 pm
Operator : EddieH
Sample : ICC8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 13 15:23:26 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206389.D
Acq On : 11 Nov 2020 7:37 pm
Operator : EddieH
Sample : IC8967-100
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 13 15:23:27 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	121697	500.00	ug/L	0.01
5) pentafluorobenzene	9.56	168	364395	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	544647	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	454238	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	231505	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.59	113	161081	49.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.88%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	164891	48.58	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.16%			
74) toluene-d8 (s)	12.11	98	584109	50.17	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.34%			
98) 4-bromofluorobenzene (s)	14.76	95	221788	49.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.46%			

Target Compounds						Qvalue
2) ethanol	6.02	45	401882	9943.07	ug/L	98
3) tertiary butyl alcohol	7.41	59	200329	493.41	ug/L	98
4) 1,4-dioxane	11.13	88	100724	2559.68	ug/L	100
6) chlorodifluoromethane	4.05	51	555777	95.65	ug/L	100
7) dichlorodifluoromethane	4.01	85	562391	94.30	ug/L	96
8) chloromethane	4.39	50	574972	94.02	ug/L	97
9) vinyl chloride	4.62	62	566523	94.43	ug/L	100
10) 1,3-butadiene	4.65	54	457463	92.43	ug/L	100
11) bromomethane	5.22	94	397061	94.01	ug/L	100
12) chloroethane	5.39	64	334241	95.94	ug/L	98
13) vinyl bromide	5.73	106	332702	97.25	ug/L	98
14) trichlorofluoromethane	5.85	101	741049	96.00	ug/L	99
15) ethyl ether	6.23	74	230853	99.80	ug/L	97
16) acrolein	6.45	56	53089	104.37	ug/L	97
17) freon 113	6.66	151	368795	96.46	ug/L	96
18) 1,1-dichloroethene	6.64	96	390351	95.38	ug/L	99
19) acetone	6.65	43	481843	379.68	ug/L	98
20) acetonitrile	7.06	41	403755	984.86	ug/L	99
21) iodomethane	6.89	142	872137	95.66	ug/L	98
22) carbon disulfide	7.03	76	1293394	94.92	ug/L	99
23) methylene chloride	7.35	84	441252	95.09	ug/L	98
24) methyl acetate	7.10	43	320066	100.30	ug/L	99
25) methyl tert butyl ether	7.70	73	1075945	94.64	ug/L	99
26) trans-1,2-dichloroethene	7.73	96	426276	94.83	ug/L	96
27) hexane	8.08	57	674547	96.55	ug/L	99
28) di-isopropyl ether	8.29	45	1341011	94.80	ug/L	98
29) ethyl tert-butyl ether	8.75	59	1298387	95.54	ug/L	99
30) 2-butanone	8.95	72	174290	399.58	ug/L	96
31) 1,1-dichloroethane	8.30	63	754952	95.99	ug/L	99
32) chloroprene	8.40	53	629805	96.58	ug/L	98
33) acrylonitrile	7.63	53	130390	101.00	ug/L	99
34) vinyl acetate	8.24	86	67563	117.25	ug/L	98
35) ethyl acetate	8.97	45	50146	103.26	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206389.D
Acq On : 11 Nov 2020 7:37 pm
Operator : EddieH
Sample : IC8967-100
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 13 15:23:27 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 2,2-dichloropropane	9.05	77	516621	92.57	ug/L	99
37) cis-1,2-dichloroethene	9.02	96	468347	96.73	ug/L	98
38) propionitrile	9.03	54	458052	972.45	ug/L	98
39) bromochloromethane	9.31	130	306603	96.78	ug/L	97
40) tetrahydrofuran	9.32	42	94991	99.02	ug/L	94
41) chloroform	9.39	83	761317	94.67	ug/L	98
42) tert-butyl formate	9.43	59	335575	105.15	ug/L	98
43) isobutyl alcohol	9.80	43	156390	998.10	ug/L	92
45) methacrylonitrile	9.23	67	152388	100.08	ug/L	96
46) 1,1,1-trichloroethane	9.65	97	679877	94.43	ug/L	100
47) cyclohexane	9.76	84	667865	94.19	ug/L	90
48) 1,1-dichloropropene	9.82	75	588707	95.82	ug/L	99
49) tert-amyl alcohol	9.95	73	97343	501.43	ug/L	96
50) carbon tetrachloride	9.85	117	626871	94.50	ug/L	99
53) 2,2,4-trimethylpentane	10.17	57	1714102	92.61	ug/L	99
54) tert-amyl methyl ether	10.15	73	1239706	92.61	ug/L	98
55) n-butyl alcohol	10.54	56	540794	4957.35	ug/L	99
56) benzene	10.07	78	1649839	94.49	ug/L	99
57) heptane	10.32	57	356926	95.88	ug/L	98
58) isopropyl acetate	9.98	87	84554	98.00	ug/L #	92
59) 1,2-dichloroethane	10.09	62	536899	95.74	ug/L	100
60) trichloroethene	10.79	95	463030	94.04	ug/L	97
61) ethyl acrylate	10.78	55	439720	99.15	ug/L	99
62) 2-nitropropane	11.55	41	82636	100.98	ug/L	93
63) 2-chloroethyl vinyl ether	11.58	63	1239671	479.31	ug/L	98
64) methyl methacrylate	11.05	100	107735	101.30	ug/L	100
65) 1,2-dichloropropane	11.08	63	445811	95.59	ug/L	99
66) methylcyclohexane	11.09	83	802260	92.98	ug/L	99
67) dibromomethane	11.19	93	262002	98.19	ug/L	98
68) bromodichloromethane	11.34	83	585648	96.73	ug/L	98
69) epichlorohydrin	11.67	57	167897	496.33	ug/L	98
70) cis-1,3-dichloropropene	11.80	75	715695	96.20	ug/L	100
71) 4-methyl-2-pentanone	11.91	58	542915	380.58	ug/L	98
72) 3-methyl-1-butanol	11.91	70	190985	1948.49	ug/L	95
75) toluene	12.18	92	1023730	95.94	ug/L	96
76) trans-1,3-dichloropropene	12.36	75	620541	98.22	ug/L	100
77) ethyl methacrylate	12.36	69	499056	102.08	ug/L	99
78) 1,1,2-trichloroethane	12.58	83	309081	97.43	ug/L	99
79) 2-hexanone	12.75	58	542772	390.03	ug/L	98
80) tetrachloroethene	12.73	166	481912	98.00	ug/L	100
81) 1,3-dichloropropane	12.77	76	588111	98.73	ug/L	98
82) butyl acetate	12.83	56	239278	101.80	ug/L	99
83) dibromochloromethane	13.01	129	457587	100.06	ug/L	99
84) 1,2-dibromoethane	13.16	107	443833	99.74	ug/L	100
85) n-butyl ether	13.60	57	1712452	93.74	ug/L	98
86) chlorobenzene	13.64	112	1121823	95.78	ug/L	98
87) 1,1,1,2-tetrachloroethane	13.70	131	430830	96.01	ug/L	99
88) ethylbenzene	13.70	91	1757911	92.48	ug/L	98
89) m,p-xylene	13.82	106	1440618	190.37	ug/L	94
90) o-xylene	14.22	91	1425920	93.20	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206389.D
Acq On : 11 Nov 2020 7:37 pm
Operator : EddieH
Sample : IC8967-100
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 13 15:23:27 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

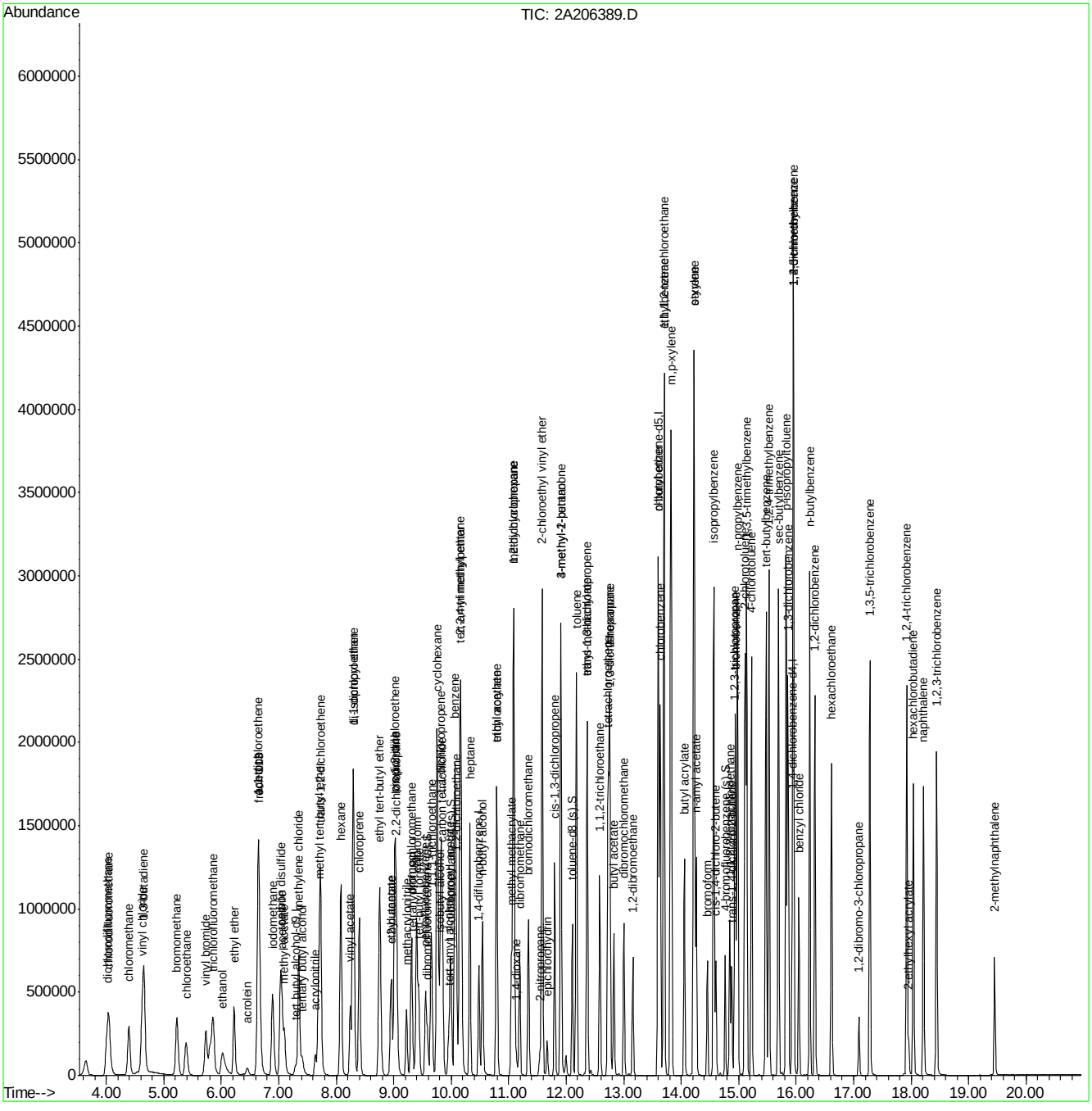
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
91) styrene	14.23	104	1160661	97.13 ug/L	99
92) n-amyl acetate	14.26	70	261262	98.85 ug/L	99
93) bromoform	14.46	173	304051	102.10 ug/L	99
94) butyl acrylate	14.05	55	734543	99.55 ug/L	99
95) isopropylbenzene	14.57	105	1764020	92.65 ug/L	97
96) cis-1,4-dichloro-2-butene	14.60	88	148010	106.53 ug/L	97
99) bromobenzene	14.95	156	502419	96.00 ug/L	92
100) 1,1,2,2-tetrachloroethane	14.85	83	437606	98.81 ug/L	100
101) trans-1,4-dichloro-2-buten	14.88	53	104020	103.85 ug/L	97
102) 1,2,3-trichloropropane	14.93	110	109353	98.51 ug/L	97
103) n-propylbenzene	14.98	91	2030929	91.63 ug/L	97
104) 2-chlorotoluene	15.11	126	465205	96.02 ug/L	96
105) 4-chlorotoluene	15.22	91	1300105	93.26 ug/L	98
106) 1,3,5-trimethylbenzene	15.14	105	1474479	92.67 ug/L	97
107) tert-butylbenzene	15.48	119	1290854	92.75 ug/L	99
108) 1,2,4-trimethylbenzene	15.53	105	1486981	92.38 ug/L	98
109) sec-butylbenzene	15.70	105	1875347	90.33 ug/L	97
110) 1,3-dichlorobenzene	15.86	146	904847	93.95 ug/L	98
111) p-isopropyltoluene	15.83	119	1617910	92.80 ug/L	97
112) benzyl chloride	16.05	91	677473	96.63 ug/L	99
113) 1,2,3-trimethylbenzene	15.95	105	1487166	91.22 ug/L	98
114) 1,4-dichlorobenzene	15.96	146	894166	93.82 ug/L	98
115) 1,2-dichlorobenzene	16.33	146	876452	94.47 ug/L	98
116) n-butylbenzene	16.23	92	871971	94.54 ug/L	96
117) 1,2-dibromo-3-chloropropan	17.09	157	95847	98.82 ug/L	95
118) 1,3,5-trichlorobenzene	17.28	180	753165	94.08 ug/L	98
119) 1,2,4-trichlorobenzene	17.92	180	689998	95.34 ug/L	97
120) hexachlorobutadiene	18.04	225	369286	95.31 ug/L	97
121) naphthalene	18.22	128	1298619	94.83 ug/L	99
122) 1,2,3-trichlorobenzene	18.44	180	617164	94.72 ug/L	99
123) hexachloroethane	16.62	201	326087	99.56 ug/L	99
124) 2-ethylhexyl acrylate	17.95	70	52513	25.82 ug/L	98
125) 2-methylnaphthalene	19.45	142	345260	49.80 ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206389.D
Acq On : 11 Nov 2020 7:37 pm
Operator : EddieH
Sample : IC8967-100
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 13 15:23:27 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206390.D
Acq On : 11 Nov 2020 8:06 pm
Operator : EddieH
Sample : IC8967-200
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 13 15:23:28 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	127301	500.00	ug/L	0.02
5) pentafluorobenzene	9.56	168	364291	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	542869	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	458648	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	237000	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.59	113	162285	50.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.66%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	164956	48.76	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.52%			
74) toluene-d8 (s)	12.11	98	595020	50.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.24%			
98) 4-bromofluorobenzene (s)	14.76	95	227068	49.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.46%			

Target Compounds						Qvalue
2) ethanol	6.03	45	766287	18124.30	ug/L	99
3) tertiary butyl alcohol	7.42	59	388089	913.79	ug/L	92
4) 1,4-dioxane	11.13	88	189531	4604.48	ug/L	97
6) chlorodifluoromethane	4.04	51	1071456	184.46	ug/L	100
7) dichlorodifluoromethane	4.01	85	1098259	184.21	ug/L	98
8) chloromethane	4.39	50	1126116	184.20	ug/L	99
9) vinyl chloride	4.62	62	1110166	185.10	ug/L	99
10) 1,3-butadiene	4.65	54	874942	176.84	ug/L	98
11) bromomethane	5.22	94	728007	172.42	ug/L	99
12) chloroethane	5.39	64	660781	189.72	ug/L	97
13) vinyl bromide	5.73	106	656010	191.82	ug/L	98
14) trichlorofluoromethane	5.85	101	1444714	187.21	ug/L	98
15) ethyl ether	6.22	74	448159	193.81	ug/L	97
16) acrolein	6.45	56	108209	212.80	ug/L	96
17) freon 113	6.66	151	723535	189.31	ug/L	97
18) 1,1-dichloroethene	6.64	96	769750	188.14	ug/L	97
19) acetone	6.65	43	868874	684.85	ug/L	98
20) acetonitrile	7.06	41	774031	1888.59	ug/L	99
21) iodomethane	6.89	142	1696401	186.12	ug/L	97
22) carbon disulfide	7.03	76	2497576	183.34	ug/L	98
23) methylene chloride	7.35	84	871243	187.80	ug/L	98
24) methyl acetate	7.10	43	608822	190.85	ug/L	99
25) methyl tert butyl ether	7.70	73	2053067	180.65	ug/L	98
26) trans-1,2-dichloroethene	7.73	96	837223	186.30	ug/L	95
27) hexane	8.08	57	1272252	182.15	ug/L	99
28) di-isopropyl ether	8.29	45	2504759	177.12	ug/L	97
29) ethyl tert-butyl ether	8.75	59	2407513	177.21	ug/L	98
30) 2-butanone	8.95	72	328118	752.45	ug/L	99
31) 1,1-dichloroethane	8.31	63	1435920	182.62	ug/L	97
32) chloroprene	8.40	53	1212156	185.93	ug/L	98
33) acrylonitrile	7.64	53	258447	200.26	ug/L	97
34) vinyl acetate	8.24	86	133772	232.21	ug/L #	85
35) ethyl acetate	8.97	45	93985	193.59	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206390.D
Acq On : 11 Nov 2020 8:06 pm
Operator : EddieH
Sample : IC8967-200
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 13 15:23:28 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.05	77	984019	176.38	ug/L		98
37) cis-1,2-dichloroethene	9.02	96	895234	184.94	ug/L		98
38) propionitrile	9.03	54	858800	1823.76	ug/L		77
39) bromochloromethane	9.31	130	591566	186.79	ug/L		96
40) tetrahydrofuran	9.32	42	177467	185.05	ug/L		95
41) chloroform	9.39	83	1422351	176.92	ug/L		96
42) tert-butyl formate	9.43	59	647678	203.00	ug/L		99
43) isobutyl alcohol	9.80	43	301277	1923.34	ug/L		93
45) methacrylonitrile	9.23	67	290303	190.71	ug/L		96
46) 1,1,1-trichloroethane	9.65	97	1312861	182.40	ug/L		99
47) cyclohexane	9.76	84	1310371	184.86	ug/L		99
48) 1,1-dichloropropene	9.82	75	1107459	180.31	ug/L		98
49) tert-amyl alcohol	9.96	73	189929	978.64	ug/L		96
50) carbon tetrachloride	9.85	117	1209935	182.45	ug/L		99
53) 2,2,4-trimethylpentane	10.17	57	3152328	170.88	ug/L		98
54) tert-amyl methyl ether	10.16	73	2253436	168.89	ug/L		97
55) n-butyl alcohol	10.54	56	1001461	9210.26	ug/L		99
56) benzene	10.07	78	2976473	171.02	ug/L		96
57) heptane	10.32	57	668264	180.11	ug/L		99
58) isopropyl acetate	9.98	87	159598	185.59	ug/L	#	91
59) 1,2-dichloroethane	10.09	62	993239	177.70	ug/L		99
60) trichloroethene	10.79	95	864396	176.14	ug/L		97
61) ethyl acrylate	10.78	55	816200	184.64	ug/L		100
62) 2-nitropropane	11.55	41	158633	194.49	ug/L		95
63) 2-chloroethyl vinyl ether	11.58	63	2208973	856.89	ug/L		95
64) methyl methacrylate	11.05	100	201805	190.37	ug/L		99
65) 1,2-dichloropropane	11.08	63	826974	177.89	ug/L		97
66) methylcyclohexane	11.09	83	1521381	176.91	ug/L		99
67) dibromomethane	11.19	93	489531	184.06	ug/L		98
68) bromodichloromethane	11.34	83	1099428	182.18	ug/L		99
69) epichlorohydrin	11.67	57	317490	941.62	ug/L		97
70) cis-1,3-dichloropropene	11.80	75	1338670	180.53	ug/L		97
71) 4-methyl-2-pentanone	11.91	58	1008916	709.57	ug/L		89
72) 3-methyl-1-butanol	11.91	70	364964	3735.67	ug/L		93
75) toluene	12.18	92	1898677	176.23	ug/L		89
76) trans-1,3-dichloropropene	12.36	75	1135777	178.05	ug/L		97
77) ethyl methacrylate	12.36	69	938519	190.13	ug/L		98
78) 1,1,2-trichloroethane	12.58	83	585428	182.77	ug/L		98
79) 2-hexanone	12.75	58	991613	705.70	ug/L		95
80) tetrachloroethene	12.73	166	914275	184.14	ug/L		99
81) 1,3-dichloropropane	12.77	76	1096699	182.34	ug/L		98
82) butyl acetate	12.83	56	460346	193.96	ug/L		96
83) dibromochloromethane	13.01	129	879804	190.54	ug/L		98
84) 1,2-dibromoethane	13.16	107	840077	186.98	ug/L		98
85) n-butyl ether	13.60	57	3001303	162.72	ug/L		93
86) chlorobenzene	13.64	112	2059404	174.14	ug/L		94
87) 1,1,1,2-tetrachloroethane	13.70	131	818424	180.63	ug/L		99
88) ethylbenzene	13.70	91	3027721	157.74	ug/L		92
89) m,p-xylene	13.82	106	2620490	342.96	ug/L		83
90) o-xylene	14.22	91	2544813	164.74	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206390.D
Acq On : 11 Nov 2020 8:06 pm
Operator : EddieH
Sample : IC8967-200
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 13 15:23:28 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration

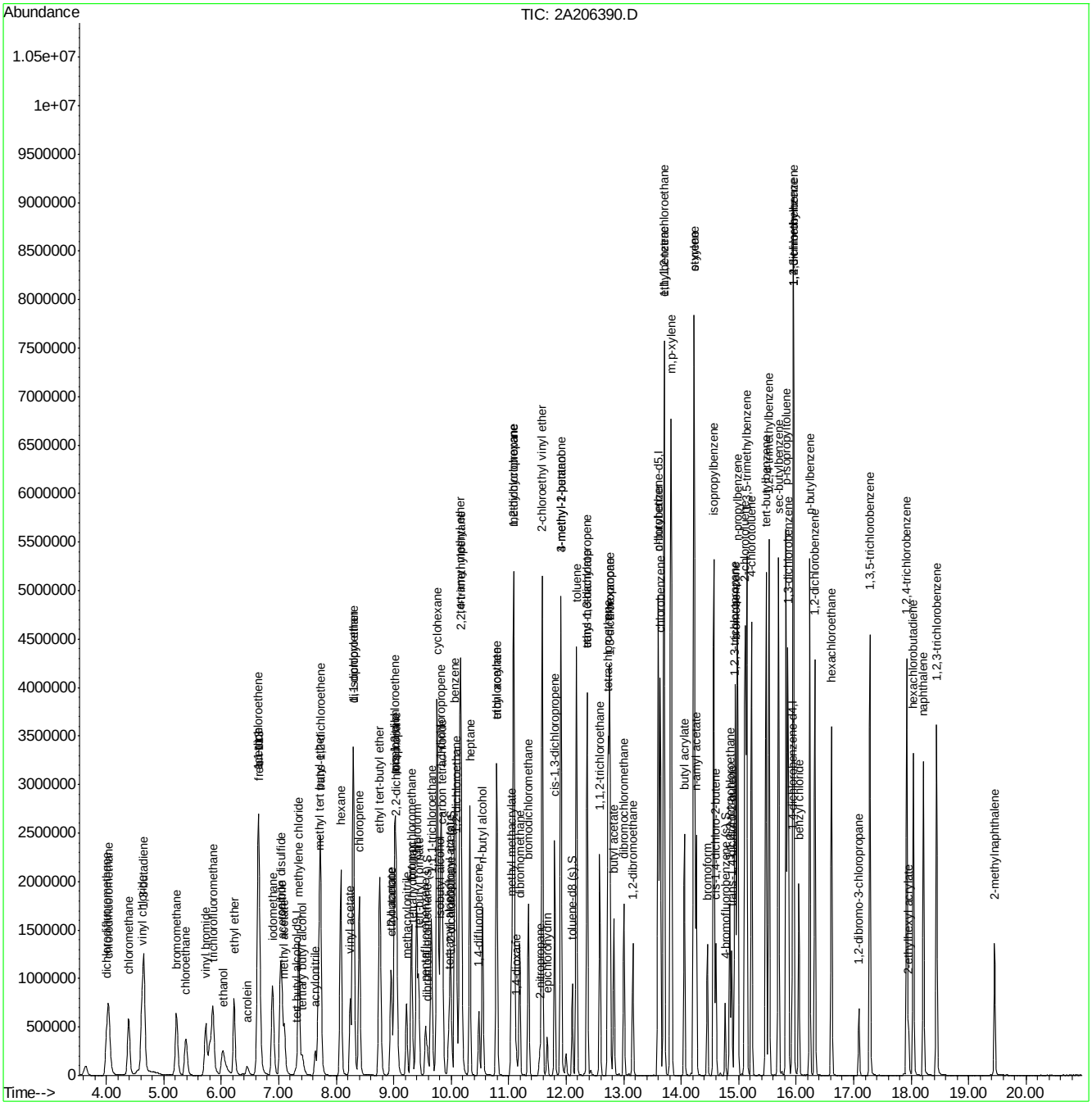
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
91) styrene	14.23	104	2086854	172.96 ug/L	94
92) n-amyl acetate	14.26	70	511588	191.71 ug/L	96
93) bromoform	14.46	173	596451	198.36 ug/L	98
94) butyl acrylate	14.05	55	1387122	186.19 ug/L	96
95) isopropylbenzene	14.57	105	3128910	162.76 ug/L	91
96) cis-1,4-dichloro-2-butene	14.60	88	297624	212.16 ug/L	98
99) bromobenzene	14.95	156	945093	176.39 ug/L	90
100) 1,1,2,2-tetrachloroethane	14.85	83	828568	182.75 ug/L	97
101) trans-1,4-dichloro-2-buten	14.88	53	201432	196.45 ug/L	99
102) 1,2,3-trichloropropane	14.93	110	210909	185.60 ug/L	98
103) n-propylbenzene	14.98	91	3466992	152.79 ug/L	89
104) 2-chlorotoluene	15.11	126	886182	178.68 ug/L	89
105) 4-chlorotoluene	15.22	91	2358093	165.23 ug/L	94
106) 1,3,5-trimethylbenzene	15.14	105	2624063	161.11 ug/L	91
107) tert-butylbenzene	15.48	119	2363746	165.90 ug/L	95
108) 1,2,4-trimethylbenzene	15.53	105	2651168	160.89 ug/L	92
109) sec-butylbenzene	15.70	105	3290409	154.81 ug/L	91
110) 1,3-dichlorobenzene	15.86	146	1674835	169.87 ug/L	96
111) p-isopropyltoluene	15.83	119	2838794	159.05 ug/L	90
112) benzyl chloride	16.05	91	1246265	173.64 ug/L	99
113) 1,2,3-trimethylbenzene	15.96	105	2572715	154.15 ug/L	91
114) 1,4-dichlorobenzene	15.96	146	1609758	164.98 ug/L	97
115) 1,2-dichlorobenzene	16.33	146	1615383	170.07 ug/L	94
116) n-butylbenzene	16.23	92	1595146	168.93 ug/L	90
117) 1,2-dibromo-3-chloropropan	17.09	157	190688	192.04 ug/L	98
118) 1,3,5-trichlorobenzene	17.28	180	1366856	166.78 ug/L	97
119) 1,2,4-trichlorobenzene	17.92	180	1267768	171.11 ug/L	97
120) hexachlorobutadiene	18.04	225	699442	176.33 ug/L	97
121) naphthalene	18.21	128	2339856	166.90 ug/L	97
122) 1,2,3-trichlorobenzene	18.44	180	1143923	171.49 ug/L	98
123) hexachloroethane	16.62	201	639516	190.72 ug/L	99
124) 2-ethylhexyl acrylate	17.95	70	127867	61.41 ug/L	99
125) 2-methylnaphthalene	19.45	142	670790	94.52 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206390.D
Acq On : 11 Nov 2020 8:06 pm
Operator : EddieH
Sample : IC8967-200
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 13 15:23:28 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 15:22:58 2020
QLast Update : Fri Nov 13 15:22:58 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206393.D
Acq On : 11 Nov 2020 9:35 pm
Operator : EddieH
Sample : ICV8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 23 08:32:18 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Wed Dec 23 08:30:35 2020
QLast Update : Wed Dec 23 08:30:35 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	130413	500.00	ug/L	0.00
5) pentafluorobenzene	9.55	168	375170	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	556095	50.00	ug/L	0.00
73) chlorobenzene-d5	13.61	117	470140	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	237778	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	9.58	113	166692	50.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.22%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	170647	49.36	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.72%			
74) toluene-d8 (s)	12.10	98	594554	49.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.90%			
98) 4-bromofluorobenzene (s)	14.76	95	225896	49.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.92%			

Target Compounds						Qvalue
2) ethanol	6.02	45	200736	4680.20	ug/L	100
3) tertiary butyl alcohol	7.41	59	107221	257.34	ug/L	96
4) 1,4-dioxane	11.12	88	49308	1236.67	ug/L	99
7) dichlorodifluoromethane	4.00	85	300523	52.01	ug/L	98
8) chloromethane	4.38	50	299072	47.87	ug/L	97
9) vinyl chloride	4.61	62	291213	47.74	ug/L	98
10) 1,3-butadiene	4.64	54	255191	51.96	ug/L	98
11) bromomethane	5.22	94	222486	51.53	ug/L	98
12) chloroethane	5.39	64	174854	51.37	ug/L	99
13) vinyl bromide	5.72	106	216815	64.90	ug/L	98
14) trichlorofluoromethane	5.85	101	381594	50.15	ug/L	100
15) ethyl ether	6.22	74	122171	53.89	ug/L	97
16) acrolein	6.45	56	27528	56.43	ug/L	98
17) freon 113	6.65	151	205387	55.86	ug/L	96
18) 1,1-dichloroethene	6.64	96	212178	51.10	ug/L	99
19) acetone	6.64	43	217552	168.42	ug/L	100
21) iodomethane	6.89	142	423555	47.65	ug/L	100
22) carbon disulfide	7.02	76	733981	54.59	ug/L	99
23) methylene chloride	7.34	84	244225	50.18	ug/L	96
24) methyl acetate	7.10	43	160898	52.06	ug/L	97
25) methyl tert butyl ether	7.70	73	1144866	99.15	ug/L	99
26) trans-1,2-dichloroethene	7.72	96	231865	50.91	ug/L	96
27) hexane	8.07	57	349905	50.99	ug/L	98
28) di-isopropyl ether	8.29	45	684002	48.87	ug/L	98
29) ethyl tert-butyl ether	8.75	59	661535	48.27	ug/L	99
30) 2-butanone	8.95	72	86171	210.39	ug/L	94
31) 1,1-dichloroethane	8.30	63	416416	53.07	ug/L	99
32) chloroprene	8.40	53	329458	53.13	ug/L	98
34) vinyl acetate	8.24	86	27219	42.74	ug/L #	84
35) ethyl acetate	8.96	45	23811	50.44	ug/L	95
36) 2,2-dichloropropane	9.04	77	259371	44.68	ug/L	98
37) cis-1,2-dichloroethene	9.01	96	253064	51.24	ug/L	99
38) propionitrile	9.03	54	237823	516.79	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206393.D
Acq On : 11 Nov 2020 9:35 pm
Operator : EddieH
Sample : ICV8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 23 08:32:18 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Wed Dec 23 08:30:35 2020
QLast Update : Wed Dec 23 08:30:35 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) bromochloromethane	9.30	130	165576	53.47	ug/L	95
40) tetrahydrofuran	9.32	42	48799	48.43	ug/L	94
41) chloroform	9.39	83	455545	55.88	ug/L	98
42) tert-butyl formate	9.43	59	97526	29.54	ug/L	99
43) isobutyl alcohol	9.79	43	75064	502.48	ug/L	96
45) methacrylonitrile	9.22	67	76787	54.06	ug/L	90
46) 1,1,1-trichloroethane	9.65	97	365442	52.10	ug/L	98
47) cyclohexane	9.76	84	390450	56.78	ug/L	94
48) 1,1-dichloropropene	9.82	75	317990	53.94	ug/L	99
49) tert-amyl alcohol	9.95	73	50675	262.30	ug/L	96
50) carbon tetrachloride	9.84	117	340452	53.87	ug/L	98
53) 2,2,4-trimethylpentane	10.17	57	880536	49.33	ug/L	99
54) tert-amyl methyl ether	10.15	73	622446	46.14	ug/L	99
55) n-butyl alcohol	10.54	56	260928	2501.67	ug/L	99
56) benzene	10.07	78	898578	51.08	ug/L	99
57) heptane	10.32	57	178857	49.46	ug/L	98
58) isopropyl acetate	9.98	87	41482	50.95	ug/L #	91
59) 1,2-dichloroethane	10.09	62	283712	49.56	ug/L	99
60) trichloroethene	10.79	95	253862	53.00	ug/L	98
61) ethyl acrylate	10.78	55	216208	52.46	ug/L	98
62) 2-nitropropane	11.55	41	40660	52.11	ug/L	93
63) 2-chloroethyl vinyl ether	11.58	63	610439	249.81	ug/L	98
64) methyl methacrylate	11.05	100	51894	52.53	ug/L	99
65) 1,2-dichloropropane	11.08	63	236075	51.41	ug/L	99
66) methylcyclohexane	11.09	83	436599	53.03	ug/L	99
67) dibromomethane	11.19	93	135092	50.79	ug/L	99
68) bromodichloromethane	11.34	83	302499	51.01	ug/L	98
69) epichlorohydrin	11.67	57	84943	258.10	ug/L	97
70) cis-1,3-dichloropropene	11.80	75	360938	50.13	ug/L	100
71) 4-methyl-2-pentanone	11.90	58	283528	202.87	ug/L	99
72) 3-methyl-1-butanol	11.91	70	100048	1069.60	ug/L	96
75) toluene	12.18	92	546256	51.07	ug/L	99
76) trans-1,3-dichloropropene	12.36	75	322608	52.55	ug/L	98
77) ethyl methacrylate	12.36	69	241520	51.14	ug/L	98
78) 1,1,2-trichloroethane	12.58	83	162513	51.99	ug/L	98
79) 2-hexanone	12.75	58	268649	189.69	ug/L	99
81) 1,3-dichloropropane	12.76	76	309515	51.89	ug/L	99
82) butyl acetate	12.83	56	119346	52.83	ug/L	99
83) dibromochloromethane	13.01	129	238109	54.52	ug/L	99
84) 1,2-dibromoethane	13.16	107	236867	54.18	ug/L	98
85) n-butyl ether	13.60	57	917950	50.75	ug/L	99
86) chlorobenzene	13.63	112	606326	51.43	ug/L	98
87) 1,1,1,2-tetrachloroethane	13.70	131	233166	53.70	ug/L	99
88) ethylbenzene	13.70	91	977428	50.77	ug/L	100
89) m,p-xylene	13.82	106	780303	102.99	ug/L	98
90) o-xylene	14.22	91	793380	51.35	ug/L	98
91) styrene	14.23	104	620162	58.02	ug/L	99
92) n-amyl acetate	14.26	70	128633	50.66	ug/L	98
93) bromoform	14.46	173	155361	55.74	ug/L	99
94) butyl acrylate	14.05	55	361406	53.49	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206393.D
Acq On : 11 Nov 2020 9:35 pm
Operator : EddieH
Sample : ICV8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 23 08:32:18 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Wed Dec 23 08:30:35 2020
QLast Update : Wed Dec 23 08:30:35 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) isopropylbenzene	14.57	105	968902	51.22	ug/L	100
96) cis-1,4-dichloro-2-butene	14.60	88	69657	47.53	ug/L	97
99) bromobenzene	14.95	156	269974	52.24	ug/L	91
100) 1,1,2,2-tetrachloroethane	14.84	83	218141	47.96	ug/L	99
101) trans-1,4-dichloro-2-buten	14.88	53	50346	54.41	ug/L	96
102) 1,2,3-trichloropropane	14.93	110	57791	52.38	ug/L	94
103) n-propylbenzene	14.98	91	1130445	50.92	ug/L	100
104) 2-chlorotoluene	15.11	126	250077	51.92	ug/L	99
105) 4-chlorotoluene	15.22	91	698832	50.15	ug/L	99
106) 1,3,5-trimethylbenzene	15.14	105	813501	51.88	ug/L	99
107) tert-butylbenzene	15.48	119	698485	52.39	ug/L	99
108) 1,2,4-trimethylbenzene	15.53	105	818502	51.00	ug/L	99
109) sec-butylbenzene	15.70	105	1043205	51.80	ug/L	100
110) 1,3-dichlorobenzene	15.86	146	486369	50.53	ug/L	99
111) p-isopropyltoluene	15.83	119	890661	52.67	ug/L	100
112) benzyl chloride	16.05	91	254926	37.26	ug/L	99
114) 1,4-dichlorobenzene	15.95	146	496401	51.49	ug/L	100
115) 1,2-dichlorobenzene	16.33	146	472510	50.49	ug/L	99
116) n-butylbenzene	16.23	92	463092	52.22	ug/L	99
117) 1,2-dibromo-3-chloropropan	17.09	157	46725	53.33	ug/L	97
118) 1,3,5-trichlorobenzene	17.28	180	426169	54.42	ug/L	99
119) 1,2,4-trichlorobenzene	17.92	180	363943	51.65	ug/L	98
120) hexachlorobutadiene	18.04	225	194593	51.07	ug/L	98
121) naphthalene	18.21	128	673976	51.58	ug/L	100
122) 1,2,3-trichlorobenzene	18.44	180	325777	51.22	ug/L	100
123) hexachloroethane	16.62	201	168165	56.53	ug/L	99
124) 2-ethylhexyl acrylate	17.95	70	23095	11.15	ug/L	95
125) 2-methylnaphthalene	19.45	142	173165	27.01	ug/L	100

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

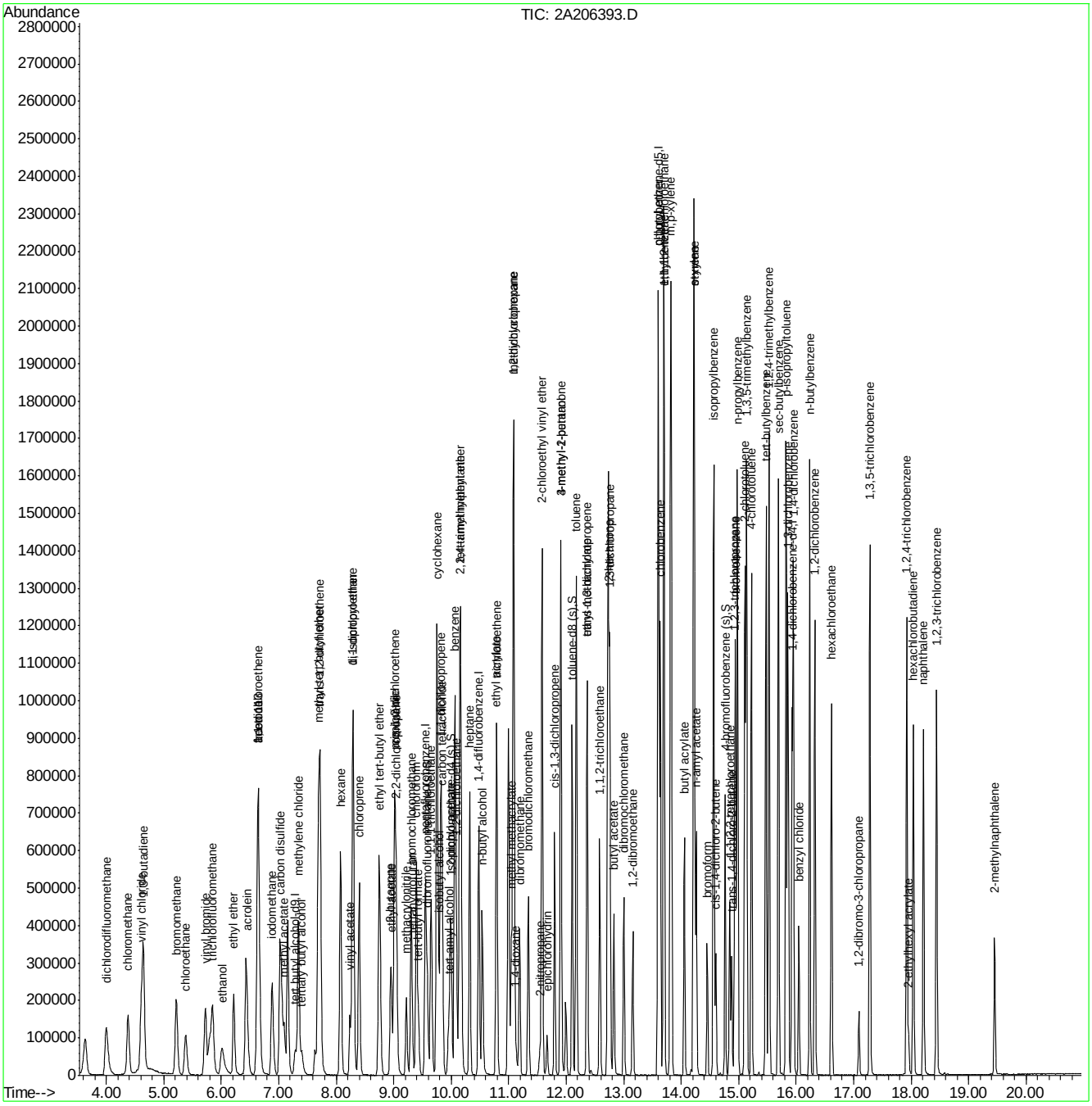
7.7.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206393.D
Acq On : 11 Nov 2020 9:35 pm
Operator : EddieH
Sample : ICV8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 23 08:32:18 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Wed Dec 23 08:30:35 2020
QLast Update : Wed Dec 23 08:30:35 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206394.D
Acq On : 11 Nov 2020 10:04 pm
Operator : EddieH
Sample : ICV8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Nov 13 17:29:17 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 17:13:01 2020
QLast Update : Fri Nov 13 17:13:01 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.29	65	130056	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	378681	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.48	114	559830	50.00	ug/L	0.00
73) chlorobenzene-d5	13.60	117	476448	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.93	152	236785	50.00	ug/L	0.00

System Monitoring Compounds

44) dibromofluoromethane (s)	9.59	113	163539	49.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.40%			
52) 1,2-dichloroethane-d4 (s)	10.00	65	174566	50.16	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.32%			
74) toluene-d8 (s)	12.10	98	601952	49.90	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.80%			
98) 4-bromofluorobenzene (s)	14.76	95	227528	50.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.06%			

Target Compounds

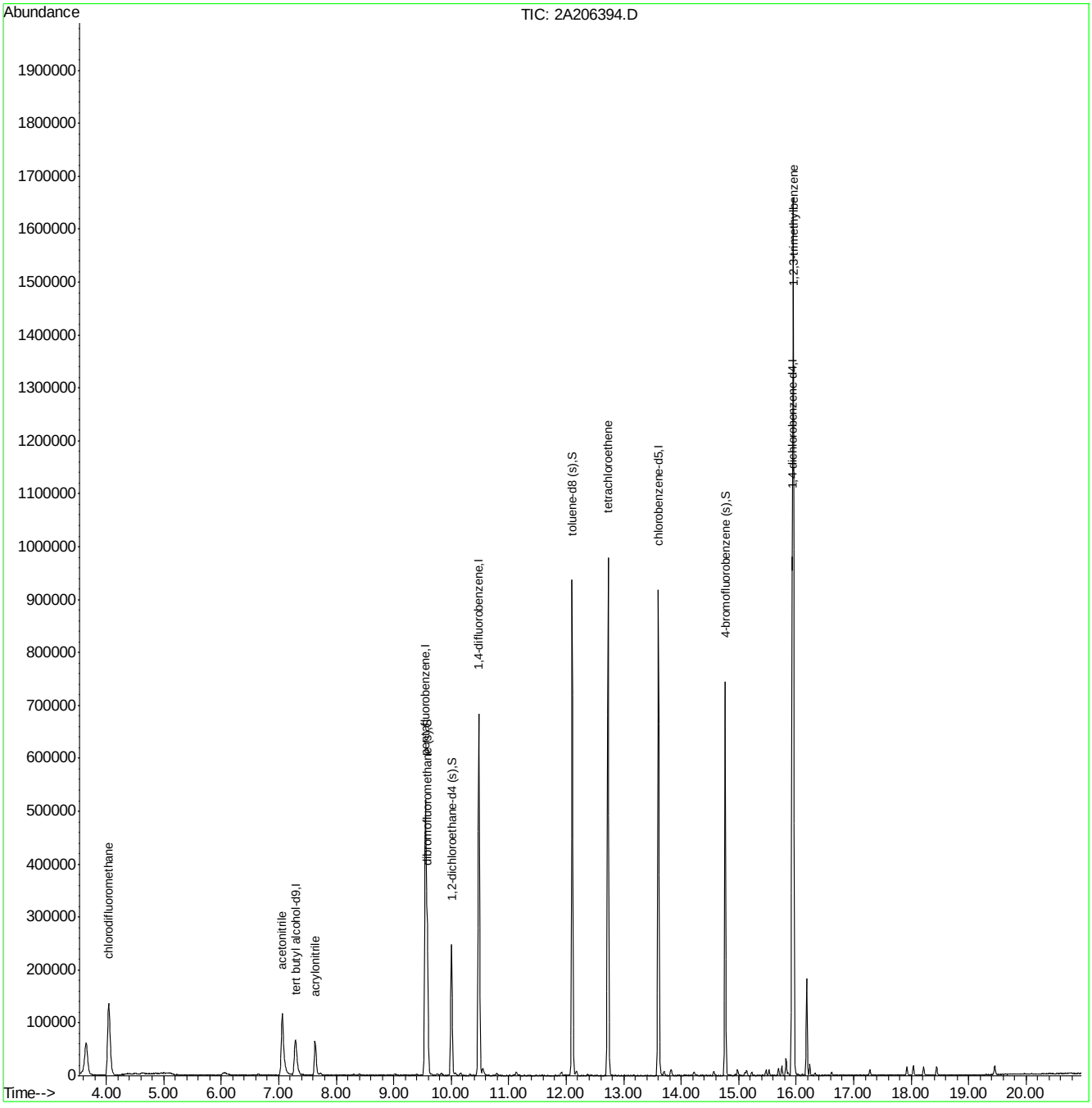
						Qvalue
6) chlorodifluoromethane	4.04	51	301461	52.16	ug/L	98
20) acetonitrile	7.06	41	206113	487.18	ug/L	98
33) acrylonitrile	7.63	53	62920	49.95	ug/L	96
80) tetrachloroethene	12.73	166	277148	54.89	ug/L	98
113) 1,2,3-trimethylbenzene	15.95	105	808598	50.09	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8967\
Data File : 2A206394.D
Acq On : 11 Nov 2020 10:04 pm
Operator : EddieH
Sample : ICV8967-50
Misc : MS46732,V2A8967,w,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Nov 13 17:29:17 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Nov 13 17:13:01 2020
QLast Update : Fri Nov 13 17:13:01 2020
Response via : Initial Calibration



M2A8967.M Mon Nov 16 16:47:02 2020 MS2A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208823.d
Acq On : 5 Mar 2021 8:32 am
Operator : krizhkac
Sample : cc8967-20 Inst : GCMS2A
Misc : MS49268,V2A9078,5,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:27:56 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.280	65	141557	500.00	ug/L	0.00
5) pentafluorobenzene	9.545	168	580664	50.00	ug/L	-0.01
51) 1,4-difluorobenzene	10.476	114	833071	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	733083	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.926	152	379834	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.545	168	580582	50.00	ug/L	-0.01
128) 1,4-dichlorobenzene-d4(a)	15.926	152	379834	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.545	168	580582	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	261481	51.30	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.60%			
52) 1,2-dichloroethane-d4 (s)	9.995	65	268466	51.84	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.68%			
74) toluene-d8 (s)	12.102	98	927915	49.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.98%			
98) 4-bromofluorobenzene (s)	14.759	95	349564	47.91	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.82%			
Target Compounds						Qvalue
2) ethanol	5.988	45	91851	1972.93	ug/L	99
3) tertiary butyl alcohol	7.390	59	44789	99.03	ug/L	90
4) 1,4-dioxane	11.119	88	20570	475.29	ug/L	100
6) chlorodifluoromethane	4.032	51	140417	15.84	ug/L	95
7) dichlorodifluoromethane	3.995	85	206557	23.10	ug/L	100
8) chloromethane	4.367	50	218010	22.54	ug/L	95
9) vinyl chloride	4.597	62	200972	21.29	ug/L	99
10) 1,3-butadiene	4.634	54	202899	26.69	ug/L	99
11) bromomethane	5.214	94	141344	21.15	ug/L	97
12) chloroethane	5.381	64	108483	20.59	ug/L	97
13) vinyl bromide	5.706	106	112263	21.71	ug/L	96
14) trichlorofluoromethane	5.836	101	231819	19.68	ug/L	93
15) ethyl ether	6.213	74	70828	20.19	ug/L	97
16) acrolein	6.433	56	13846	18.34	ug/L	91
17) freon 113	6.642	151	114945	20.20	ug/L	94
18) 1,1-dichloroethene	6.626	96	116947	18.20	ug/L	94
19) acetone	6.631	43	151025	75.54	ug/L	94
20) acetonitrile	7.045	41	119746	184.58	ug/L	97
21) iodomethane	6.872	142	258271	18.77	ug/L	99
22) carbon disulfide	7.013	76	416072	19.99	ug/L	98
23) methylene chloride	7.332	84	143658	19.07	ug/L	97
24) methyl acetate	7.087	43	74151	15.50	ug/L	94
25) methyl tert butyl ether	7.688	73	352582	19.73	ug/L	98
26) trans-1,2-dichloroethene	7.719	96	137859	19.56	ug/L	97
27) hexane	8.070	57	218613	20.58	ug/L	99
28) di-isopropyl ether	8.284	45	478833	22.10	ug/L	97
29) ethyl tert-butyl ether	8.744	59	442414	20.86	ug/L	100
30) 2-butanone	8.938	72	49188	77.59	ug/L	95
31) 1,1-dichloroethane	8.289	63	245989	20.26	ug/L	100
32) chloroprene	8.389	53	193469	20.16	ug/L	95
33) acrylonitrile	7.620	53	34480	17.85	ug/L	97
34) vinyl acetate	8.232	86	24361	24.72	ug/L #	84
35) ethyl acetate	8.959	45	15382	21.05	ug/L	82
36) 2,2-dichloropropane	9.032	77	218109	24.28	ug/L	99
37) cis-1,2-dichloroethene	9.006	96	152811	19.99	ug/L	98
38) propionitrile	9.016	54	130293	182.93	ug/L	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208823.d
Acq On : 5 Mar 2021 8:32 am
Operator : krizhkac
Sample : cc8967-20 Inst : GCMS2A
Misc : MS49268,V2A9078,5,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:27:56 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) bromochloromethane	9.299	130	98876	20.63	ug/L	97
40) tetrahydrofuran	9.315	42	26532	17.01	ug/L	90
41) chloroform	9.388	83	248768	19.72	ug/L	99
42) tert-butyl formate	9.424	59	97739	19.13	ug/L	95
43) isobutyl alcohol	9.785	43	36683	158.66	ug/L	95
45) methacrylonitrile	9.215	67	40490	18.42	ug/L	85
46) 1,1,1-trichloroethane	9.644	97	220842	20.34	ug/L	98
47) cyclohexane	9.754	84	205992	19.35	ug/L	98
48) 1,1-dichloropropene	9.811	75	187106	20.51	ug/L	99
49) tert-amyl alcohol	9.942	73	21358	71.43	ug/L	94
50) carbon tetrachloride	9.838	117	201171	20.57	ug/L	100
53) 2,2,4-trimethylpentane	10.157	57	543519	20.33	ug/L	97
54) tert-amyl methyl ether	10.141	73	412623	20.42	ug/L	99
55) n-butyl alcohol	10.533	56	108036	691.43	ug/L	94
56) benzene	10.057	78	550284	20.88	ug/L	99
57) heptane	10.314	57	110149	20.33	ug/L	95
58) isopropyl acetate	9.974	87	23580	19.33	ug/L #	71
59) 1,2-dichloroethane	10.083	62	176405	20.57	ug/L	97
60) trichloroethene	10.784	95	143749	20.03	ug/L	95
61) ethyl acrylate	10.779	55	129271	20.94	ug/L	99
62) 2-nitropropane	11.543	41	26364	22.55	ug/L	95
63) 2-chloroethyl vinyl ether	11.579	63	343377	93.80	ug/L	98
64) methyl methacrylate	11.046	100	25993	17.56	ug/L	90
65) 1,2-dichloropropane	11.072	63	146232	21.26	ug/L	95
66) methylcyclohexane	11.082	83	256072	20.76	ug/L	97
67) dibromomethane	11.182	93	81841	20.54	ug/L	97
68) bromodichloromethane	11.339	83	188069	21.17	ug/L	95
69) epichlorohydrin	11.663	57	44687	90.64	ug/L	95
70) cis-1,3-dichloropropene	11.794	75	233703	21.67	ug/L	94
71) 4-methyl-2-pentanone	11.904	58	157354	75.15	ug/L	97
72) 3-methyl-1-butanol	11.904	70	41812	298.39	ug/L #	81
75) toluene	12.176	92	345149	20.69	ug/L	97
76) trans-1,3-dichloropropene	12.359	75	196606	20.54	ug/L	98
77) ethyl methacrylate	12.353	69	103818	14.10	ug/L	96
78) 1,1,2-trichloroethane	12.578	83	95221	19.54	ug/L	98
79) 2-hexanone	12.746	58	163563	74.07	ug/L	95
80) tetrachloroethene	12.725	166	164256	21.14	ug/L	94
81) 1,3-dichloropropane	12.761	76	185971	20.00	ug/L	97
82) butyl acetate	12.824	56	72627	20.62	ug/L	86
83) dibromochloromethane	13.002	129	141287	20.75	ug/L	96
84) 1,2-dibromoethane	13.154	107	137102	20.11	ug/L	96
85) n-butyl ether	13.598	57	590533	20.94	ug/L	99
86) chlorobenzene	13.635	112	384623	20.92	ug/L	100
87) 1,1,1,2-tetrachloroethane	13.698	131	146340	21.61	ug/L	100
88) ethylbenzene	13.698	91	617265	20.56	ug/L	98
89) m,p-xylene	13.818	106	500399	42.36	ug/L	95
90) o-xylene	14.215	91	501686	20.82	ug/L	99
91) styrene	14.226	104	352562	21.15	ug/L	99
92) n-amyl acetate	14.262	70	82658	20.88	ug/L	93
93) bromoform	14.451	173	90986	20.93	ug/L	99
94) butyl acrylate	14.053	55	200695	19.05	ug/L	99
95) isopropylbenzene	14.566	105	624458	21.17	ug/L	97
96) cis-1,4-dichloro-2-butene	14.602	88	9105	5.96	ug/L	89
99) bromobenzene	14.942	156	176523	21.38	ug/L	92
100) 1,1,2,2-tetrachloroethane	14.843	83	134905	18.57	ug/L	99
101) trans-1,4-dichloro-2-b...	14.874	53	6356	4.30	ug/L	88
102) 1,2,3-trichloropropane	14.927	110	32422	18.40	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208823.d
Acq On : 5 Mar 2021 8:32 am
Operator : krizhkac
Sample : cc8967-20 Inst : GCMS2A
Misc : MS49268,V2A9078,5,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:27:56 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

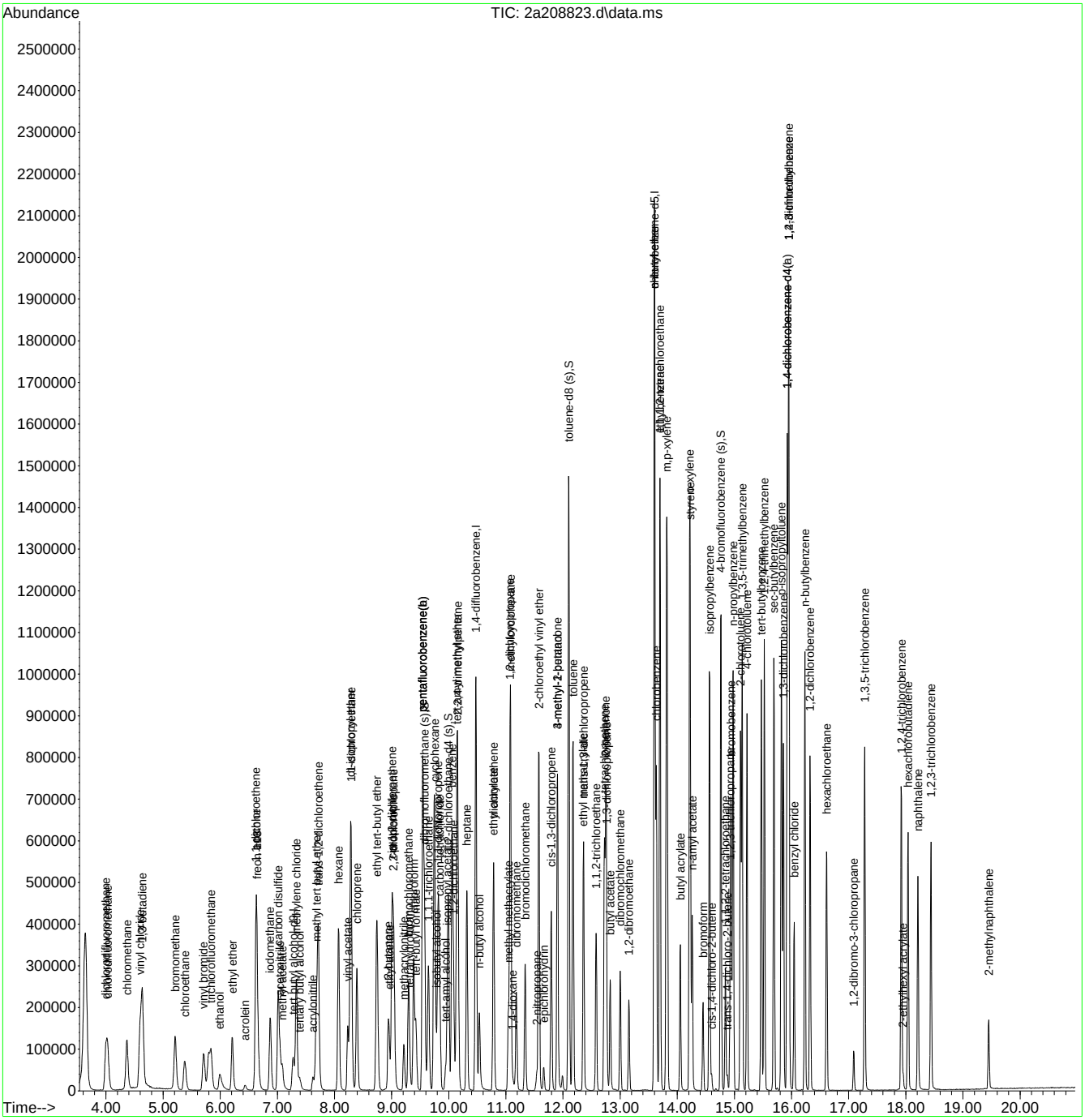
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
103) n-propylbenzene	14.979	91	729619	20.57	ug/L	99
104) 2-chlorotoluene	15.104	126	158841	20.64	ug/L	100
105) 4-chlorotoluene	15.220	91	450374	20.23	ug/L	99
106) 1,3,5-trimethylbenzene	15.136	105	519146	20.72	ug/L	99
107) tert-butylbenzene	15.471	119	437537	20.54	ug/L	98
108) 1,2,4-trimethylbenzene	15.523	105	522666	20.39	ug/L	99
109) sec-butylbenzene	15.690	105	662236	20.59	ug/L	99
110) 1,3-dichlorobenzene	15.858	146	319755	20.80	ug/L	97
111) p-isopropyltoluene	15.821	119	571492	21.16	ug/L	99
112) benzyl chloride	16.046	91	253680	23.21	ug/L	98
113) 1,2,3-trimethylbenzene	15.952	105	523849	20.23	ug/L	98
114) 1,4-dichlorobenzene	15.952	146	322313	20.93	ug/L	97
115) 1,2-dichlorobenzene	16.323	146	306213	20.48	ug/L	99
116) n-butylbenzene	16.234	92	295684	20.87	ug/L	96
117) 1,2-dibromo-3-chloropr...	17.087	157	25715	18.37	ug/L	97
118) 1,3,5-trichlorobenzene	17.280	180	257728	20.60	ug/L	98
119) 1,2,4-trichlorobenzene	17.924	180	225619	20.05	ug/L	98
120) hexachlorobutadiene	18.039	225	123333	20.26	ug/L	95
121) naphthalene	18.211	128	378278	18.12	ug/L	99
122) 1,2,3-trichlorobenzene	18.441	180	194761	19.17	ug/L	99
123) hexachloroethane	16.616	201	97141	20.44	ug/L	99
124) 2-ethylhexyl acrylate	17.950	70	6790	2.05	ug/L	94
125) 2-methylnaphthalene	19.451	142	86914	8.49	ug/L	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208823.d
Acq On : 5 Mar 2021 8:32 am
Operator : krizhkac
Sample : cc8967-20 Inst : GCMS2A
Misc : MS49268,V2A9078,5,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:27:56 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208847.d
Acq On : 5 Mar 2021 8:13 pm
Operator : krizhkac
Sample : ecc8967-50 Inst : GCMS2A
Misc : MS49207,V2A9078,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:36:22 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.280	65	144161	500.00	ug/L	0.00
5) pentafluorobenzene	9.550	168	590244	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.476	114	850507	50.00	ug/L	0.00
73) chlorobenzene-d5	13.603	117	741808	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.925	152	388868	50.00	ug/L	0.00
126) pentafluorobenzene(a)	9.550	168	590244	50.00	ug/L	0.00
128) 1,4-dichlorobenzene-d4(a)	15.925	152	388868	50.00	ug/L	0.00
130) pentafluorobenzene(b)	9.550	168	590244	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.576	113	266651	51.46	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.92%			
52) 1,2-dichloroethane-d4 (s)	9.994	65	268800	50.84	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.68%			
74) toluene-d8 (s)	12.102	98	948389	50.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.00%			
98) 4-bromofluorobenzene (s)	14.759	95	352452	47.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.38%			
Target Compounds						Qvalue
2) ethanol	5.998	45	224302	4730.92	ug/L	95
3) tertiary butyl alcohol	7.395	59	115705	251.22	ug/L	91
4) 1,4-dioxane	11.124	88	49226	1116.87	ug/L	92
6) chlorodifluoromethane	4.042	51	345971	38.40	ug/L	99
7) dichlorodifluoromethane	4.006	85	507198	55.80	ug/L	99
8) chloromethane	4.377	50	546149	55.56	ug/L	99
9) vinyl chloride	4.607	62	495287	51.61	ug/L	98
10) 1,3-butadiene	4.644	54	466589	60.39	ug/L	97
11) bromomethane	5.219	94	350619	51.62	ug/L	100
12) chloroethane	5.381	64	278618	52.03	ug/L	96
13) vinyl bromide	5.716	106	283312	53.90	ug/L	100
14) trichlorofluoromethane	5.842	101	571244	47.72	ug/L	99
15) ethyl ether	6.218	74	172692	48.42	ug/L	91
16) acrolein	6.443	56	35175	45.83	ug/L	95
17) freon 113	6.642	151	272516	47.11	ug/L	98
18) 1,1-dichloroethene	6.631	96	280365	42.91	ug/L	98
19) acetone	6.637	43	241536	118.85	ug/L	97
20) acetonitrile	7.055	41	289550	439.09	ug/L	97
21) iodomethane	6.882	142	634647	45.38	ug/L	97
22) carbon disulfide	7.018	76	1027033	48.55	ug/L	97
23) methylene chloride	7.337	84	357014	46.62	ug/L	96
24) methyl acetate	7.092	43	183097	37.66	ug/L	98
25) methyl tert butyl ether	7.693	73	872314	48.02	ug/L	98
26) trans-1,2-dichloroethene	7.719	96	332826	46.45	ug/L	98
27) hexane	8.075	57	466498	43.21	ug/L	97
28) di-isopropyl ether	8.284	45	1172349	53.24	ug/L	97
29) ethyl tert-butyl ether	8.744	59	1085233	50.34	ug/L	99
30) 2-butanone	8.943	72	101679	157.79	ug/L #	76
31) 1,1-dichloroethane	8.295	63	589528	47.76	ug/L	100
32) chloroprene	8.394	53	479868	49.19	ug/L	98
33) acrylonitrile	7.625	53	86238	43.93	ug/L	95
34) vinyl acetate	8.232	86	56445	56.34	ug/L #	89
35) ethyl acetate	8.964	45	37544	50.55	ug/L	88
36) 2,2-dichloropropane	9.037	77	449354	49.20	ug/L	99
37) cis-1,2-dichloroethene	9.006	96	367712	47.33	ug/L	98
38) propionitrile	9.016	54	315662	435.99	ug/L	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208847.d
Acq On : 5 Mar 2021 8:13 pm
Operator : krizhkac
Sample : ecc8967-50 Inst : GCMS2A
Misc : MS49207,V2A9078,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:36:22 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) bromochloromethane	9.299	130	246273	50.55	ug/L	96
40) tetrahydrofuran	9.320	42	65485	41.31	ug/L	94
41) chloroform	9.388	83	594610	46.36	ug/L	98
42) tert-butyl formate	9.424	59	248289	47.80	ug/L	99
43) isobutyl alcohol	9.785	43	80529	342.64	ug/L	98
45) methacrylonitrile	9.215	67	106198	47.52	ug/L #	77
46) 1,1,1-trichloroethane	9.649	97	541490	49.07	ug/L	98
47) cyclohexane	9.754	84	507281	46.89	ug/L	93
48) 1,1-dichloropropene	9.817	75	446760	48.17	ug/L	100
49) tert-amyl alcohol	9.947	73	52823	173.79	ug/L	95
50) carbon tetrachloride	9.843	117	487394	49.02	ug/L	98
53) 2,2,4-trimethylpentane	10.162	57	1222604	44.78	ug/L	98
54) tert-amyl methyl ether	10.146	73	1015309	49.21	ug/L	99
55) n-butyl alcohol	10.538	56	279259	1750.61	ug/L	95
56) benzene	10.062	78	1318375	49.00	ug/L	99
57) heptane	10.319	57	232582	42.05	ug/L	97
58) isopropyl acetate	9.979	87	60427	48.53	ug/L #	91
59) 1,2-dichloroethane	10.089	62	431352	49.27	ug/L	100
60) trichloroethene	10.784	95	350683	47.87	ug/L	99
61) ethyl acrylate	10.779	55	331322	52.57	ug/L	99
62) 2-nitropropane	11.543	41	64951	54.42	ug/L	90
63) 2-chloroethyl vinyl ether	11.579	63	850998	227.70	ug/L	98
64) methyl methacrylate	11.046	100	74723	49.45	ug/L	88
65) 1,2-dichloropropane	11.077	63	355190	50.57	ug/L	96
66) methylcyclohexane	11.082	83	597399	47.44	ug/L	98
67) dibromomethane	11.182	93	201070	49.43	ug/L	98
68) bromodichloromethane	11.339	83	465806	51.36	ug/L	96
69) epichlorohydrin	11.663	57	108542	215.64	ug/L	99
70) cis-1,3-dichloropropene	11.794	75	565266	51.33	ug/L	95
71) 4-methyl-2-pentanone	11.903	58	386034	180.60	ug/L	95
72) 3-methyl-1-butanol	11.903	70	106777	746.39	ug/L	88
75) toluene	12.175	92	830944	49.24	ug/L	95
76) trans-1,3-dichloropropene	12.364	75	473911	48.93	ug/L	98
77) ethyl methacrylate	12.353	69	329721	44.25	ug/L	97
78) 1,1,2-trichloroethane	12.578	83	238867	48.43	ug/L	99
79) 2-hexanone	12.745	58	349509	156.41	ug/L	93
80) tetrachloroethene	12.725	166	388846	49.47	ug/L	99
81) 1,3-dichloropropane	12.761	76	453821	48.22	ug/L	98
82) butyl acetate	12.824	56	181770	51.00	ug/L	96
83) dibromochloromethane	13.002	129	357299	51.85	ug/L	98
84) 1,2-dibromoethane	13.153	107	341170	49.46	ug/L	99
85) n-butyl ether	13.598	57	1427011	50.00	ug/L	100
86) chlorobenzene	13.635	112	932595	50.13	ug/L	99
87) 1,1,1,2-tetrachloroethane	13.697	131	358740	52.36	ug/L	99
88) ethylbenzene	13.697	91	1460953	48.09	ug/L	98
89) m,p-xylene	13.818	106	1203848	100.70	ug/L	91
90) o-xylene	14.215	91	1188572	48.75	ug/L	96
91) styrene	14.226	104	933251	55.34	ug/L	99
92) n-amyl acetate	14.262	70	208802	52.11	ug/L	96
93) bromoform	14.451	173	231718	52.69	ug/L	99
94) butyl acrylate	14.053	55	559427	52.48	ug/L	98
95) isopropylbenzene	14.566	105	1453993	48.72	ug/L	98
96) cis-1,4-dichloro-2-butene	14.602	88	25289	12.60	ug/L	95
99) bromobenzene	14.942	156	424496	50.23	ug/L	90
100) 1,1,2,2-tetrachloroethane	14.843	83	328489	44.16	ug/L	99
101) trans-1,4-dichloro-2-b...	14.879	53	19721	13.03	ug/L	90
102) 1,2,3-trichloropropane	14.926	110	80456	44.59	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208847.d
Acq On : 5 Mar 2021 8:13 pm
Operator : krizhkac
Sample : ecc8967-50 Inst : GCMS2A
Misc : MS49207,V2A9078,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:36:22 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration

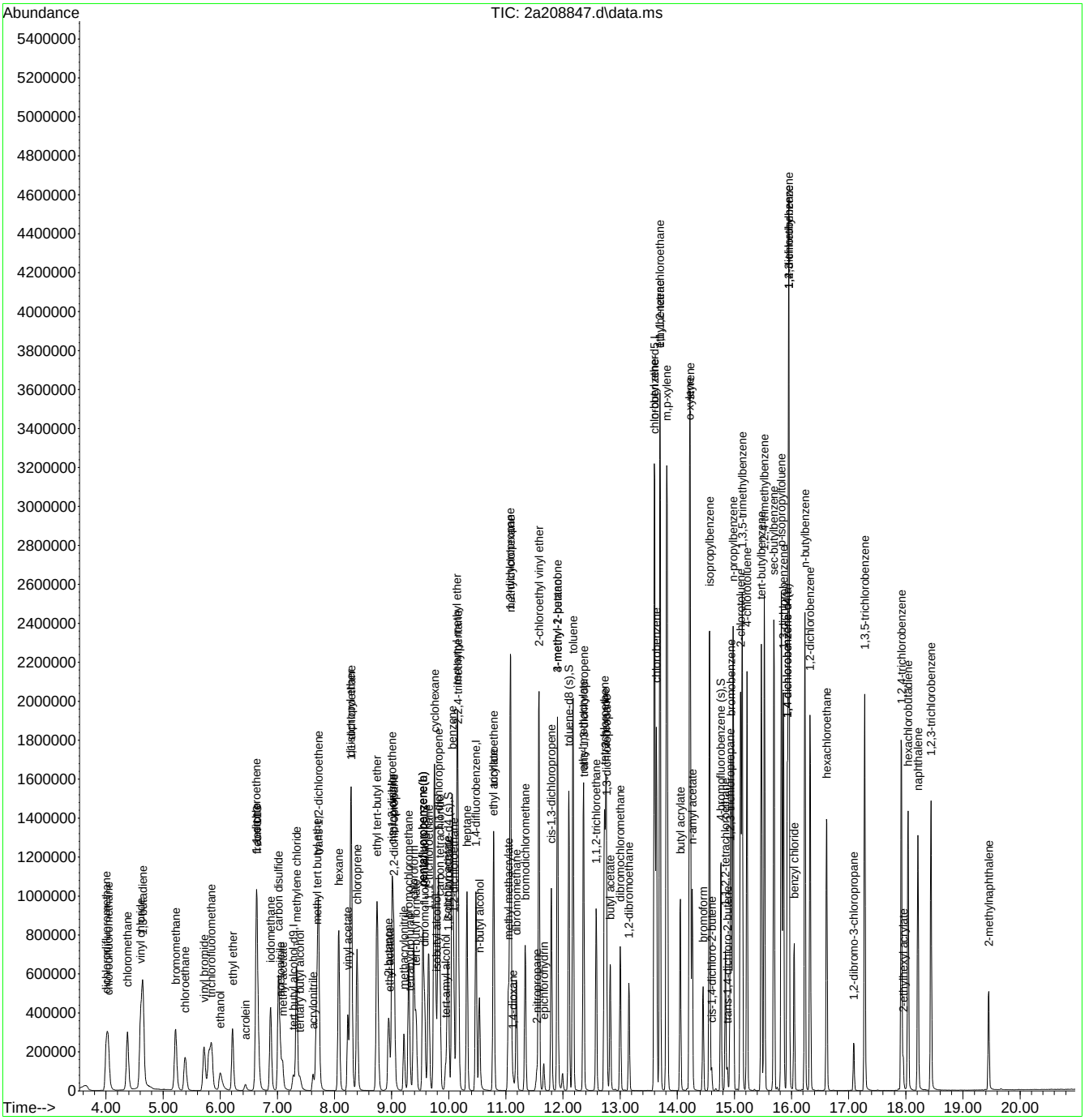
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
103) n-propylbenzene	14.979	91	1683089	46.35	ug/L	97
104) 2-chlorotoluene	15.110	126	389078	49.39	ug/L	91
105) 4-chlorotoluene	15.219	91	1069834	46.95	ug/L	99
106) 1,3,5-trimethylbenzene	15.136	105	1218873	47.53	ug/L	95
107) tert-butylbenzene	15.470	119	1041540	47.76	ug/L	99
108) 1,2,4-trimethylbenzene	15.523	105	1248611	47.57	ug/L	99
109) sec-butylbenzene	15.690	105	1544504	46.90	ug/L	99
110) 1,3-dichlorobenzene	15.857	146	766586	48.70	ug/L	98
111) p-isopropyltoluene	15.821	119	1344676	48.62	ug/L	99
112) benzyl chloride	16.046	91	485140	43.36	ug/L	99
113) 1,2,3-trimethylbenzene	15.952	105	1252723	47.25	ug/L	96
114) 1,4-dichlorobenzene	15.952	146	765872	48.57	ug/L	98
115) 1,2-dichlorobenzene	16.323	146	732394	47.86	ug/L	99
116) n-butylbenzene	16.234	92	698155	48.14	ug/L	98
117) 1,2-dibromo-3-chloropr...	17.092	157	67800	47.32	ug/L	97
118) 1,3,5-trichlorobenzene	17.280	180	615079	48.03	ug/L	97
119) 1,2,4-trichlorobenzene	17.923	180	551607	47.87	ug/L	97
120) hexachlorobutadiene	18.038	225	297401	47.72	ug/L	97
121) naphthalene	18.211	128	971598	45.47	ug/L	99
122) 1,2,3-trichlorobenzene	18.441	180	483905	46.52	ug/L	98
123) hexachloroethane	16.616	201	243235	50.00	ug/L	98
124) 2-ethylhexyl acrylate	17.955	70	34283	10.12	ug/L	94
125) 2-methylnaphthalene	19.451	142	258283	24.64	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\03-08-21\v2a9078\
Data File : 2a208847.d
Acq On : 5 Mar 2021 8:13 pm
Operator : krizhkac
Sample : ecc8967-50 Inst : GCMS2A
Misc : MS49207,V2A9078,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8967.M
Quant Results File: M2A8967.RES
Quant Time: Mar 07 21:36:22 2021
Quant Title : Method SW846 8260D, ZB624.1 60m x 0.25mm xFri May Fri Jan 08 14:01:18 2021
QLast Update : Fri Jan 08 14:01:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160429.D
Acq On : 18 Jul 2018 5:26 pm
Operator : HueanhT
Sample : ic6923-0.25
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 19 08:25:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:24:21 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.81	95	11428	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.11	96	5765	9.85 ug/L	0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 98.50%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.16	88	196	0.34 ug/L	97

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

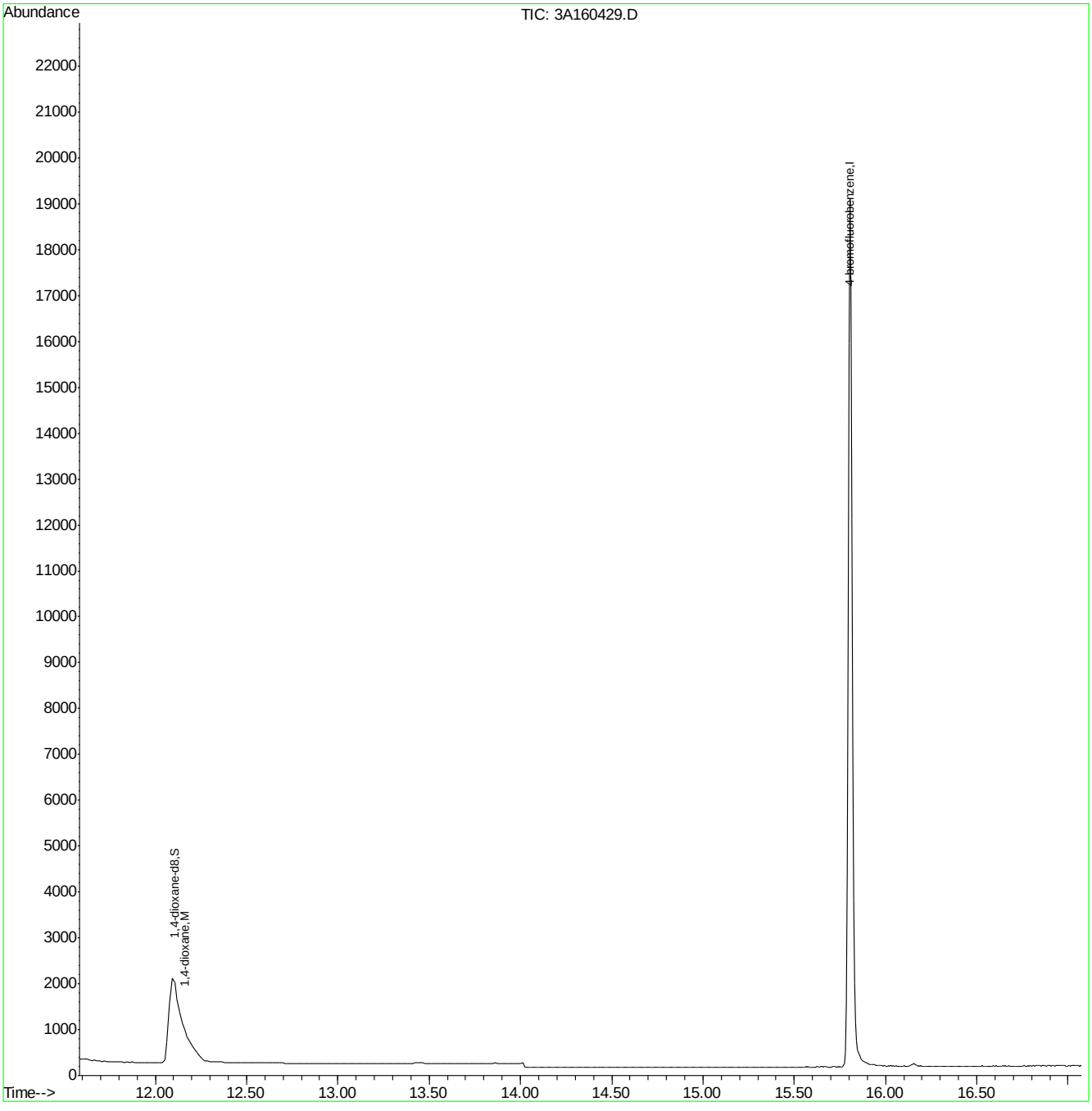
7.7.15

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160429.D
Acq On : 18 Jul 2018 5:26 pm
Operator : HueanhT
Sample : ic6923-0.25
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 19 08:25:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:24:21 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:31 2018 ACCUNJ

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160430.D
Acq On : 18 Jul 2018 5:52 pm
Operator : HueanhT
Sample : ic6923-0.4
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 19 08:22:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	10021	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4844	7.41 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 74.10%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.16	88	212	0.35 ug/L	98

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

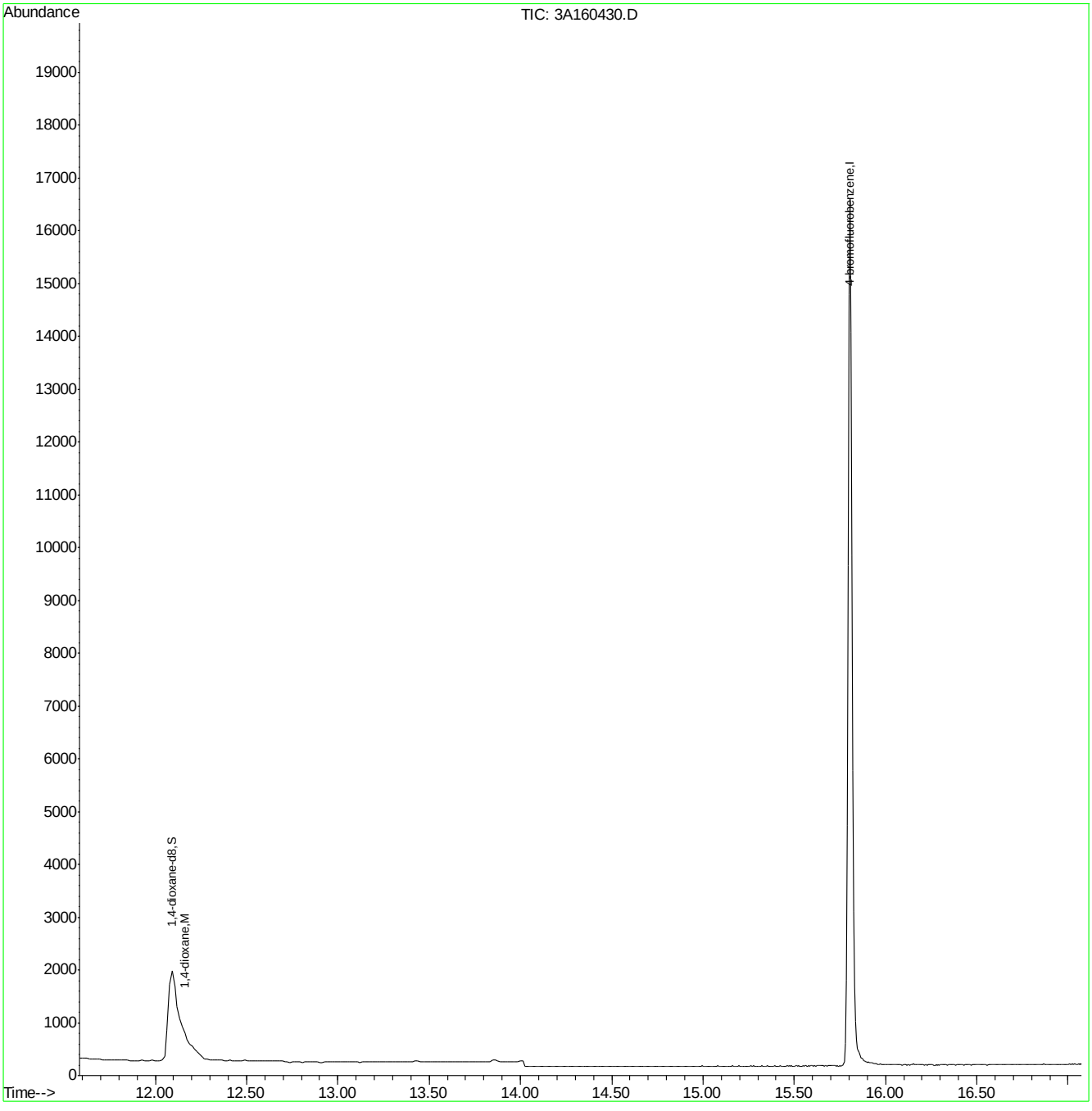
7.7.16

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160430.D
Acq On : 18 Jul 2018 5:52 pm
Operator : HueanhT
Sample : ic6923-0.4
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 19 08:22:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:32 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160431.D
Acq On : 18 Jul 2018 6:18 pm
Operator : HueanhT
Sample : ic6923-1
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 19 08:16:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.81	95	9887	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4804	7.45 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 74.50%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.16	88	507	0.84 ug/L	94

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

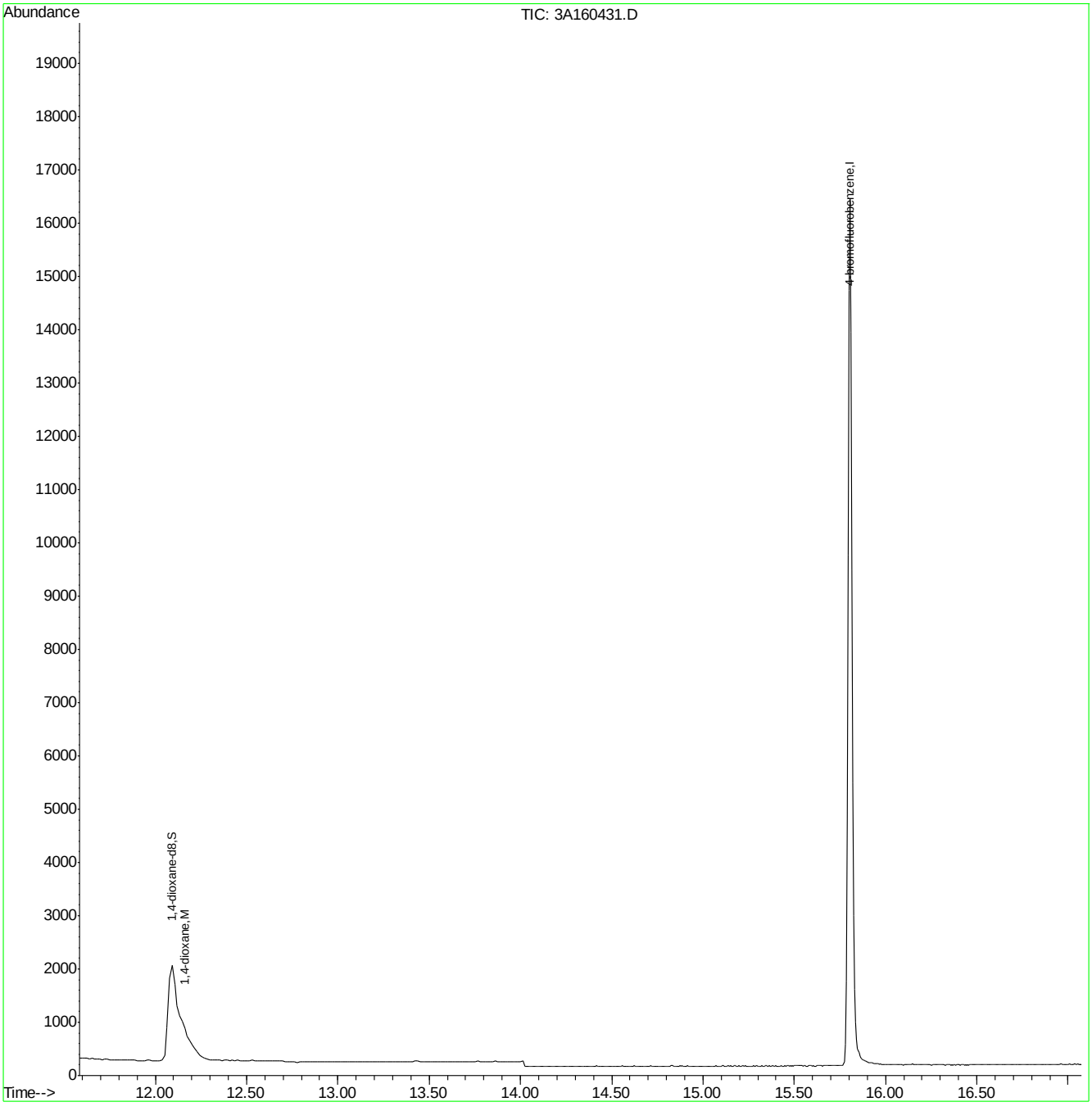
7.1.17

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160431.D
Acq On : 18 Jul 2018 6:18 pm
Operator : HueanhT
Sample : ic6923-1
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 19 08:16:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:33 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160432.D
Acq On : 18 Jul 2018 6:43 pm
Operator : HueanhT
Sample : ic6923-2
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:16:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	10152	1.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.09	96	5154	7.78	ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 77.80%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.16	88	986	1.59	ug/L	94

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

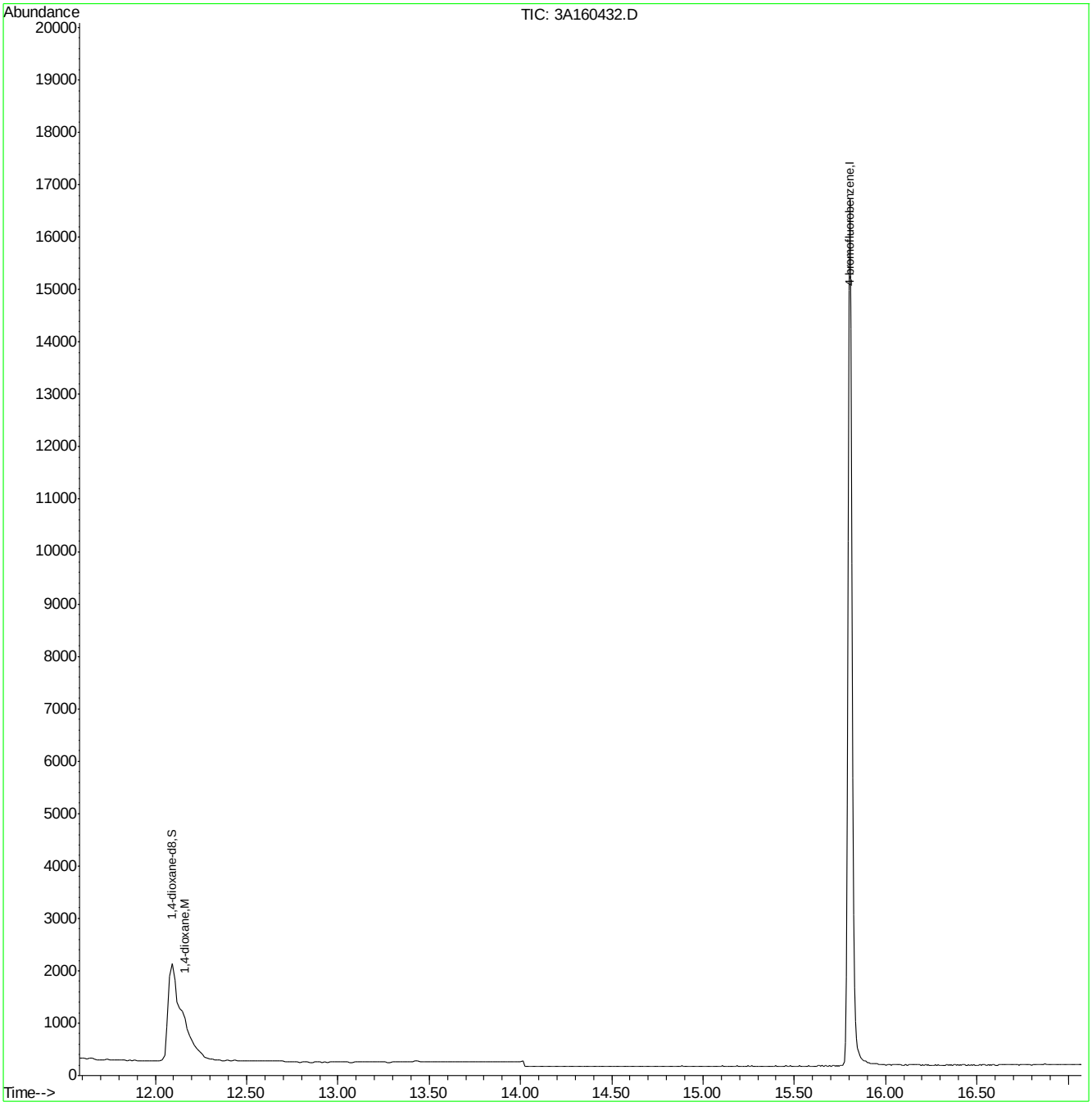
7.7.18

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160432.D
Acq On : 18 Jul 2018 6:43 pm
Operator : HueanhT
Sample : ic6923-2
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:16:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160433.D
Acq On : 18 Jul 2018 7:09 pm
Operator : HueanhT
Sample : ic6923-5
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 19 08:16:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	10530	1.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.09	96	5454	7.94	ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 79.40%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.15	88	2558	3.99	ug/L	99

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

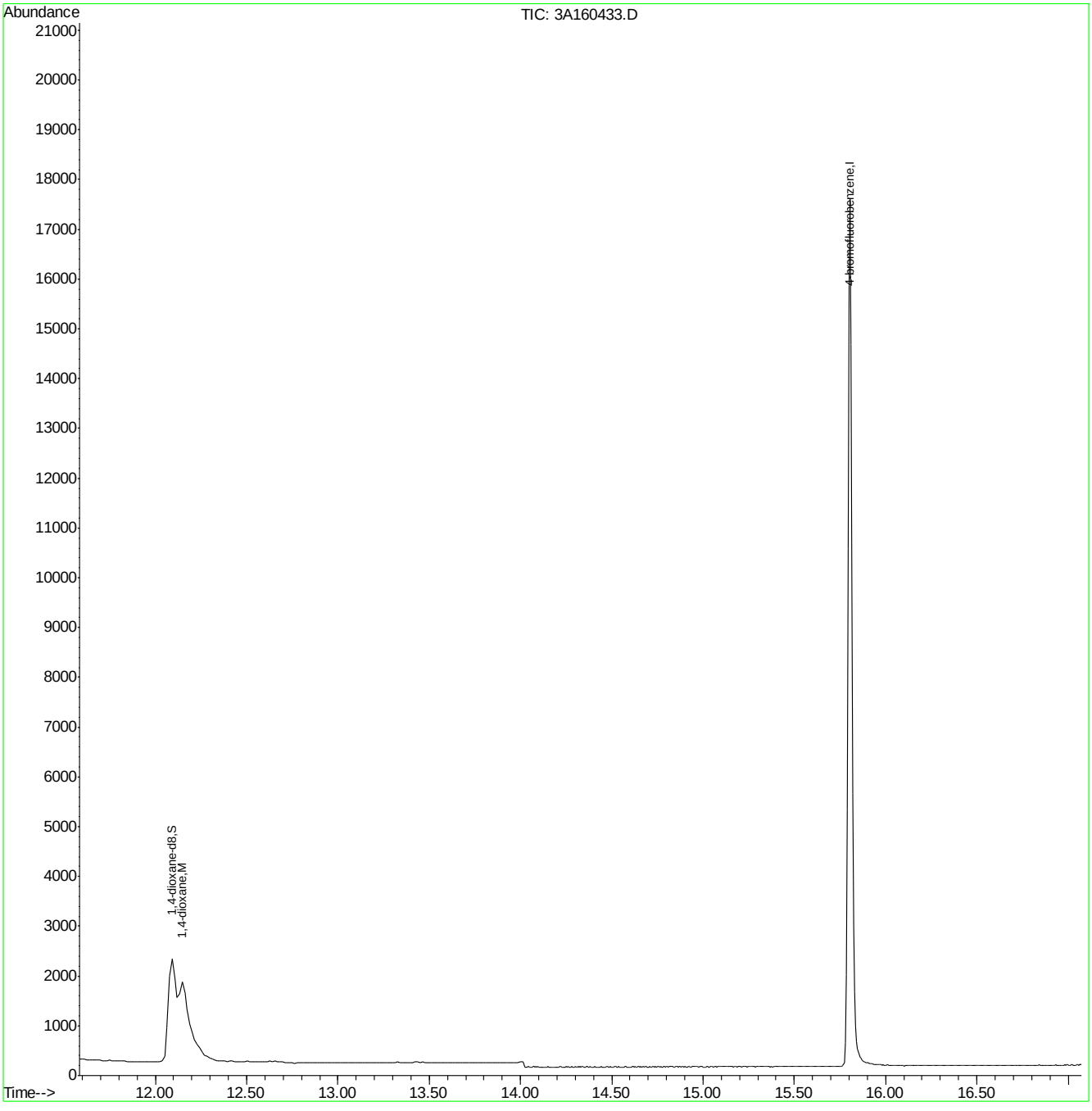
7.7.19

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160433.D
Acq On : 18 Jul 2018 7:09 pm
Operator : HueanhT
Sample : ic6923-5
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 19 08:16:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:35 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160434.D
Acq On : 18 Jul 2018 7:35 pm
Operator : HueanhT
Sample : icc6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 19 08:16:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9699	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4983	7.88 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 78.80%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	8526	14.43 ug/L	98

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

7.7.20

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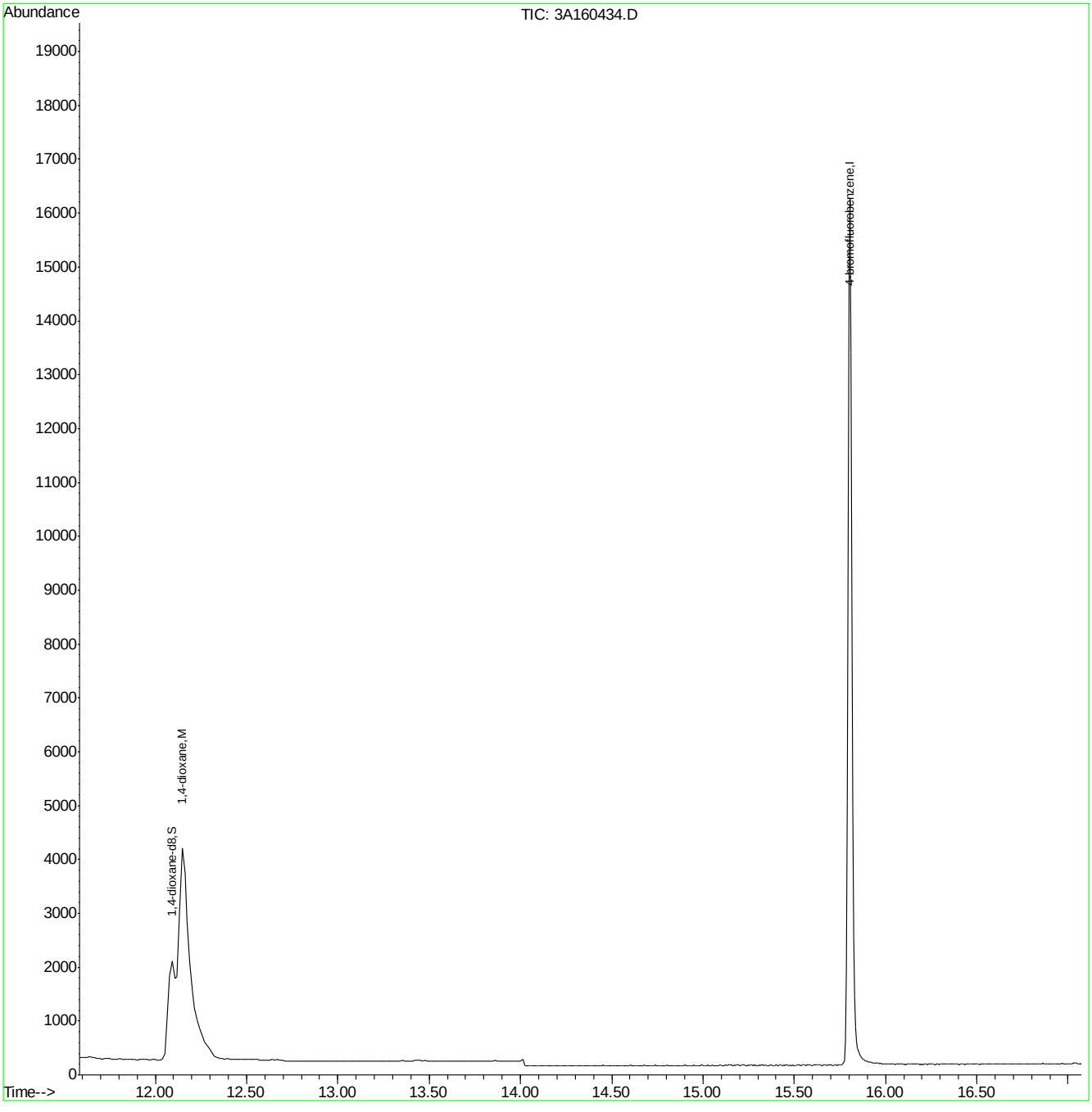
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160434.D
Acq On : 18 Jul 2018 7:35 pm
Operator : HueanhT
Sample : icc6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 19 08:16:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:36 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160435.D
Acq On : 18 Jul 2018 8:00 pm
Operator : HueanhT
Sample : ic6923-50
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 19 08:16:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9594	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4993	7.98 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 79.80%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	22016	37.68 ug/L	99

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

7.7.21

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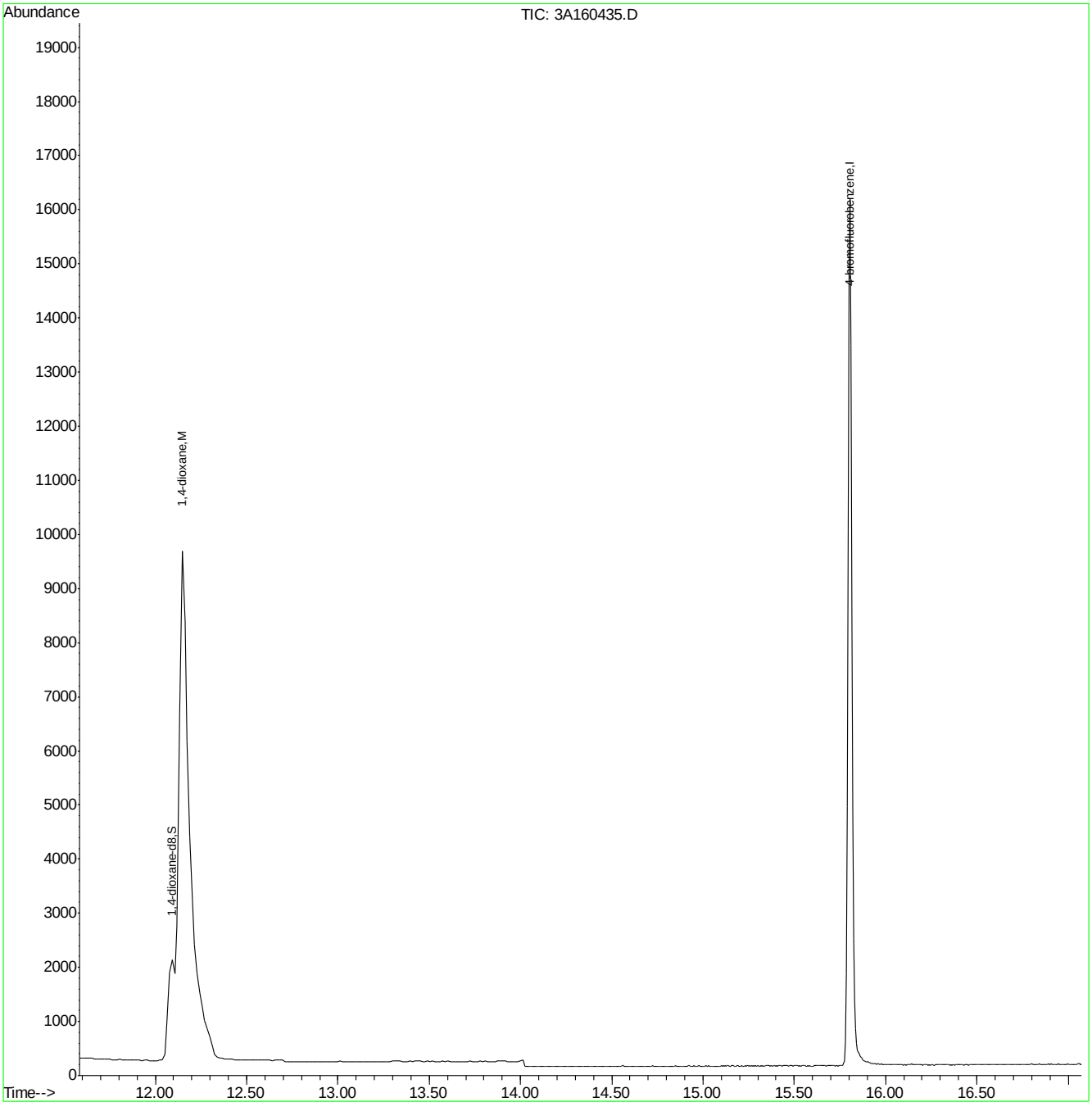
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160435.D
Acq On : 18 Jul 2018 8:00 pm
Operator : HueanhT
Sample : ic6923-50
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 19 08:16:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:37 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160436.D
Acq On : 18 Jul 2018 8:26 pm
Operator : HueanhT
Sample : ic6923-100
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 19 08:16:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9290	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4696	7.75 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 77.50%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	41236	72.88 ug/L	99

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

7.7.22

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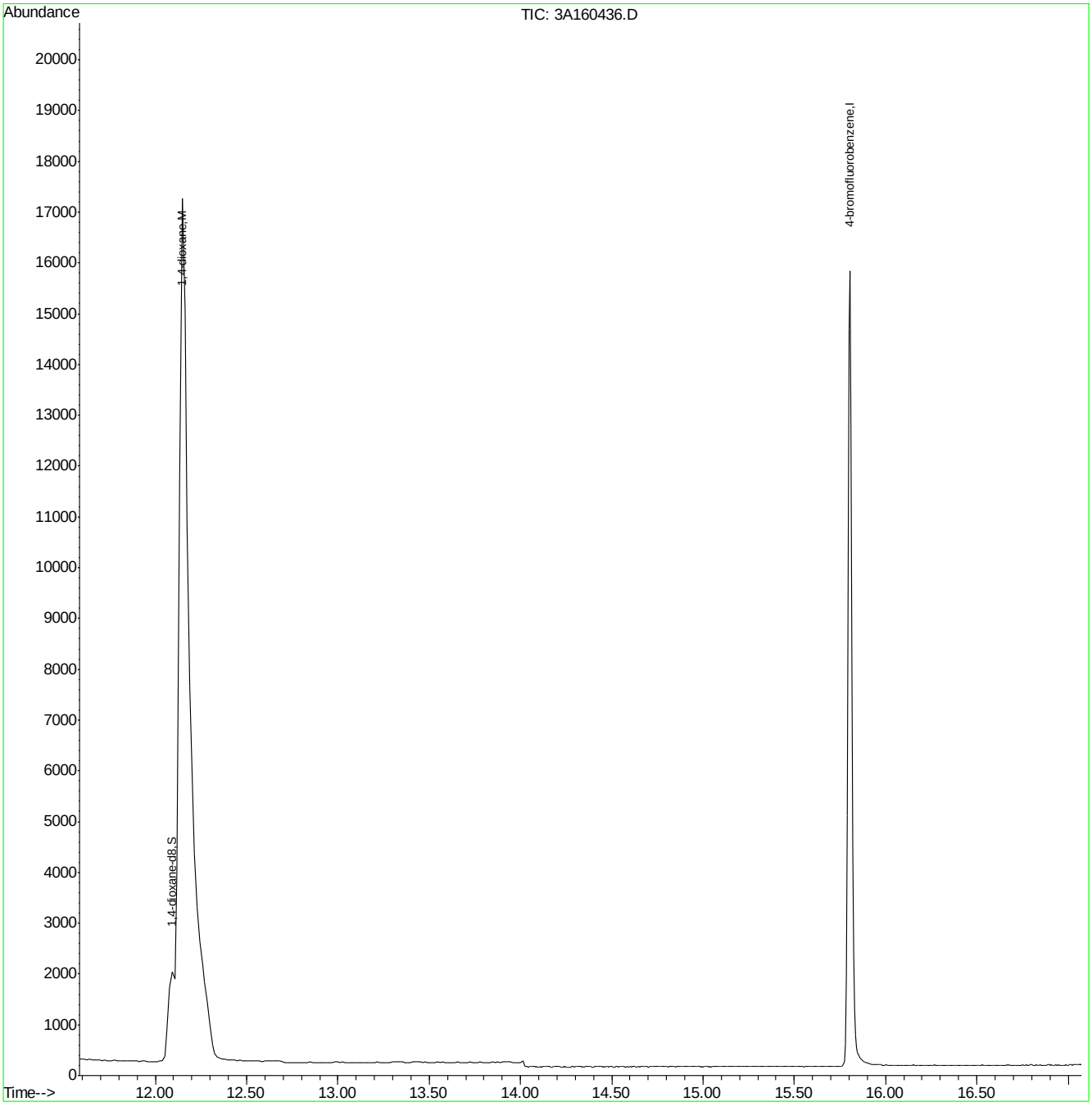
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160436.D
Acq On : 18 Jul 2018 8:26 pm
Operator : HueanhT
Sample : ic6923-100
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 19 08:16:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:38 2018 ACCUNJ Page: 2

7.7.22
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160437.D
Acq On : 18 Jul 2018 8:52 pm
Operator : HueanhT
Sample : ic6923-200
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 19 08:16:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9766	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	5566	8.74 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 87.40%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	102005	171.50 ug/L	99

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

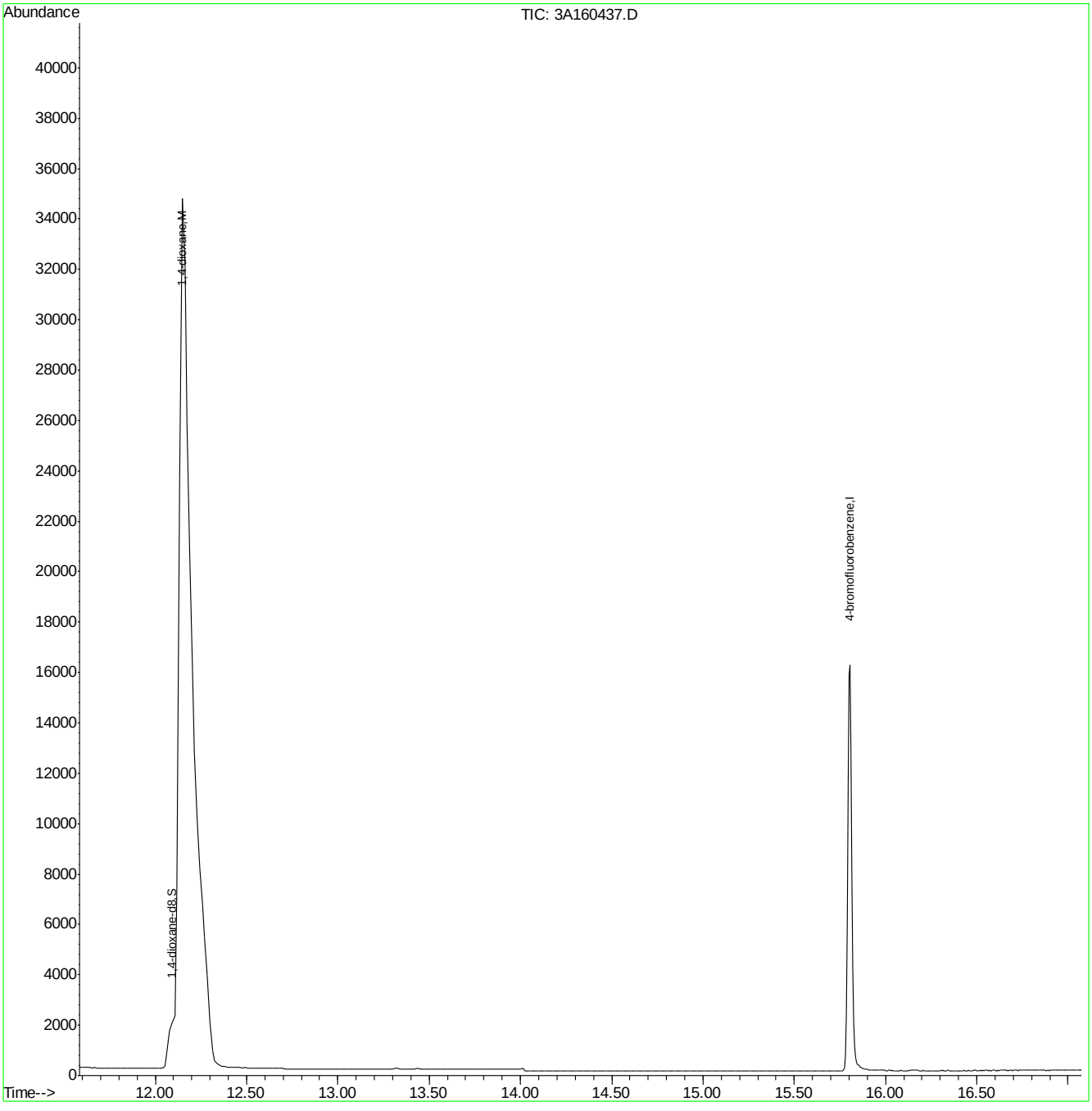
7.7.23

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160437.D
Acq On : 18 Jul 2018 8:52 pm
Operator : HueanhT
Sample : ic6923-200
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 19 08:16:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:39 2018 ACCUNJ

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160443.D
Acq On : 18 Jul 2018 11:25 pm
Operator : HueanhT
Sample : icv6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 19 08:26:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:25:27 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	8921	1.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.09	96	5512	12.07	ug/L	0.00
Spiked Amount 10.000	Range 51 - 175		Recovery = 120.70%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.16	88	9667	21.37	ug/L	91

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

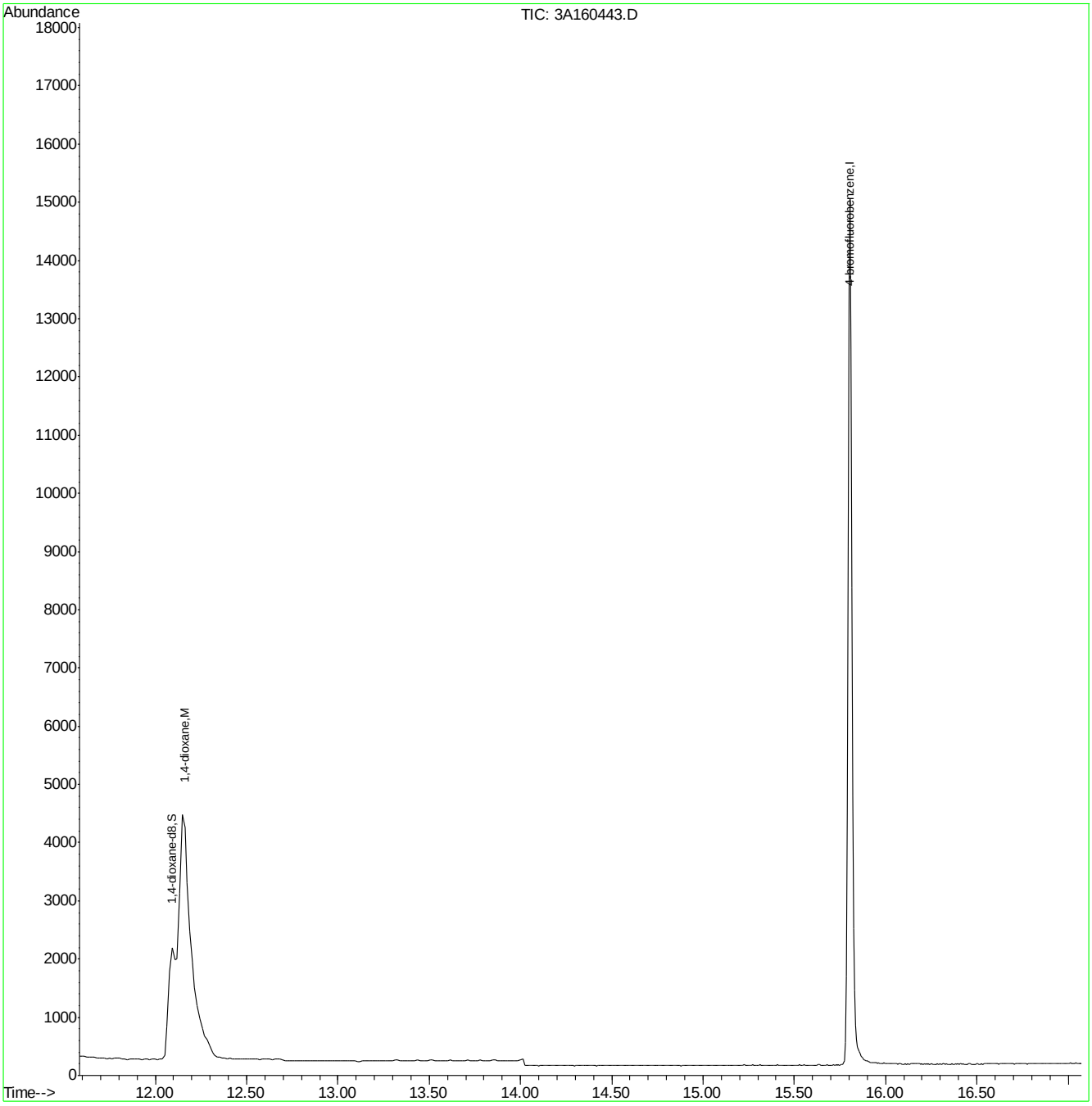
7.7.24

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160443.D
Acq On : 18 Jul 2018 11:25 pm
Operator : HueanhT
Sample : icv6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 19 08:26:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:25:27 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:40 2018 ACCUNJ

Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165035.D
Acq On : 3 Mar 2021 1:40 pm
Operator : ROBERTS
Sample : CC6923-5
Misc : MS48788,V3A7169,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 14:33:17 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

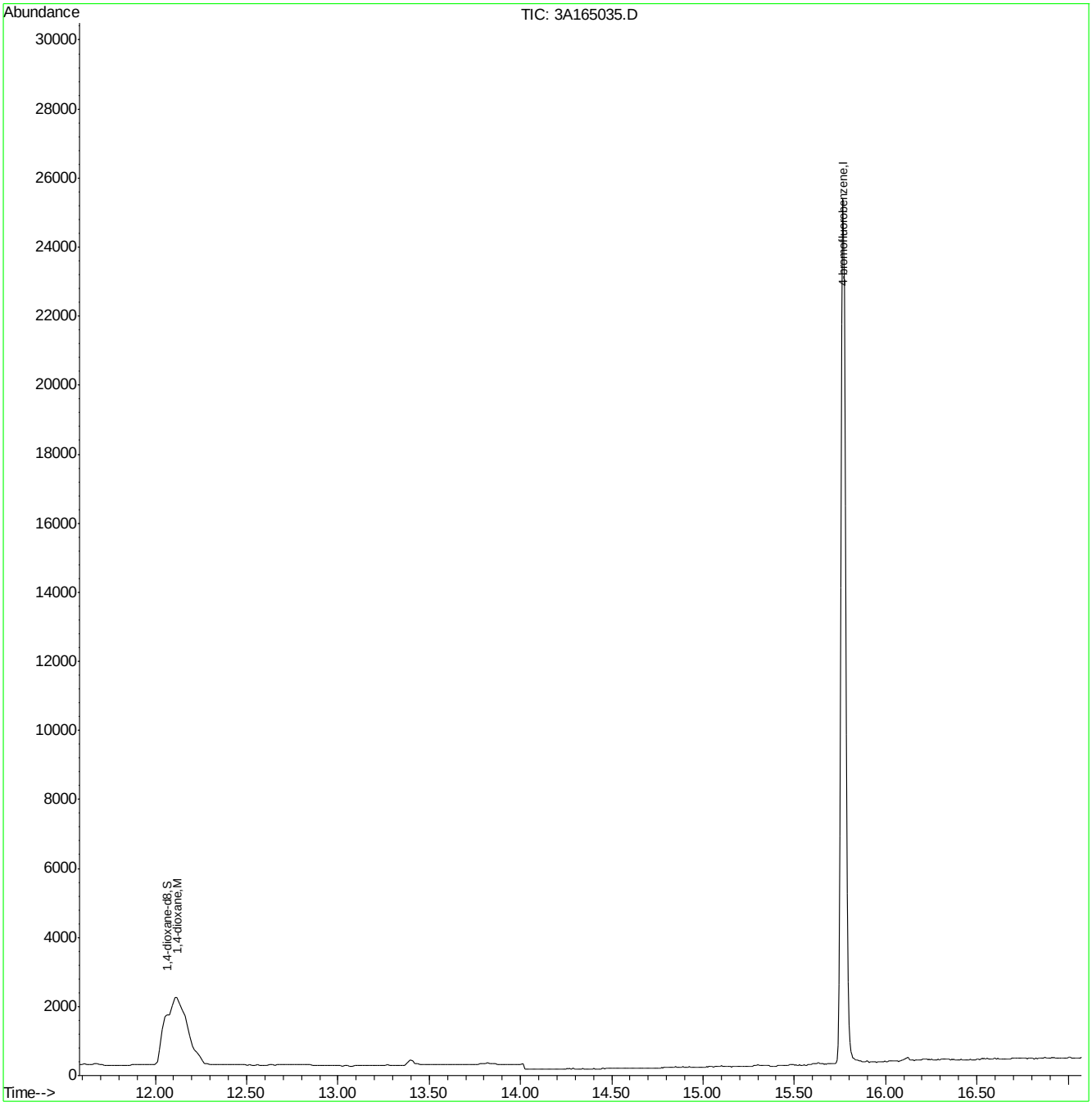
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	14500	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	6765	9.11 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 91.10%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	3084	4.19 ug/L	93

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7169\
Data File : 3A165035.D
Acq On : 3 Mar 2021 1:40 pm
Operator : ROBERTS
Sample : CC6923-5
Misc : MS48788,V3A7169,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 03 14:33:17 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Thu Mar 04 09:22:34 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165057.D
Acq On : 4 Mar 2021 10:45 am
Operator : ROBERTS
Sample : CC6923-5 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 04 11:03:35 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11964	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5486	8.95 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 89.50%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	2723	4.49 ug/L	92

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

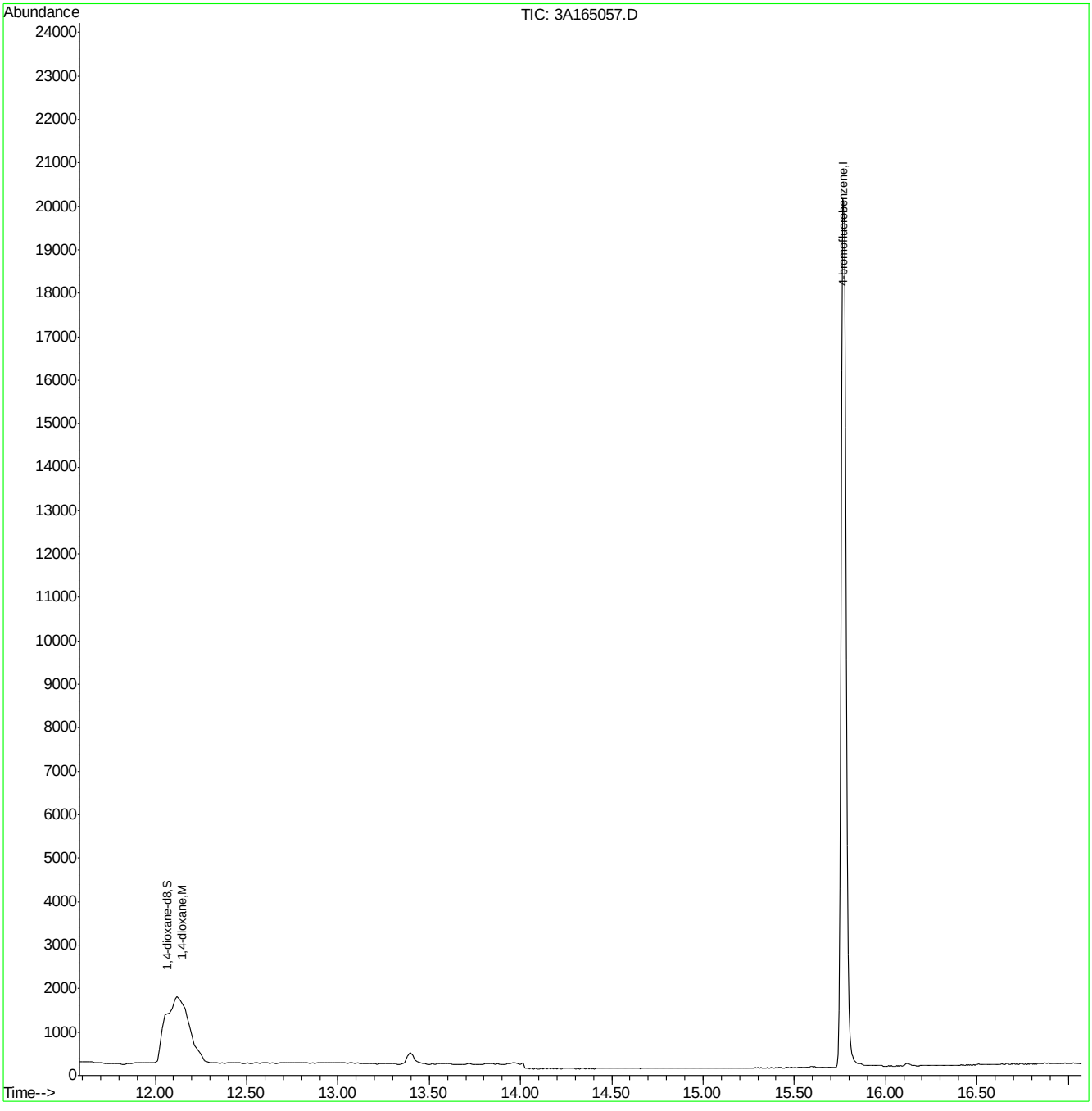
7.7.26

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165057.D
Acq On : 4 Mar 2021 10:45 am
Operator : ROBERTS
Sample : CC6923-5 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 04 11:03:35 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Fri Mar 05 17:40:16 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102496.D
Acq On : 17 Feb 2021 8:52 pm
Operator : brittank
Sample : ic4435-0.2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 11:39:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	152226	500.00	ug/L	0.01
5) pentafluorobenzene	8.445	168	241999	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	302283	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	333356	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	255733	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.482	113	123873	51.87	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 103.74%						
54) 1,2-dichloroethane-d4 (s)	8.864	65	124108	55.30	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 110.60%						
75) toluene-d8 (s)	10.914	98	363441	46.70	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 93.40%						
98) 4-bromofluorobenzene (s)	13.770	95	184024	49.56	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.12%						
Target Compounds						Qvalue
11) bromomethane	4.706	94	712	0.22	ug/L #	18
18) 1,1-dichloroethene	5.909	61	852	0.22	ug/L #	41
21) iodomethane	6.113	142	1250	0.20	ug/L #	46
22) carbon disulfide	6.259	76	2026	0.22	ug/L	78
25) methyl tert butyl ether	6.829	73	1444	0.20	ug/L	57
26) trans-1,2-dichloroethene	6.850	61	529	0.16	ug/L #	70
28) di-isopropyl ether	7.342	45	1708	0.19	ug/L	79
34) ethyl tert-butyl ether	7.745	59	1618	0.20	ug/L #	60
36) 2,2-dichloropropane	8.037	77	880	0.20	ug/L	85
46) 1,1,1-trichloroethane	8.560	97	887	0.17	ug/L #	72
47) cyclohexane	8.686	84	860	0.21	ug/L	87
50) carbon tetrachloride	8.775	117	839	0.18	ug/L #	69
57) benzene	8.942	78	1684	0.22	ug/L #	61
58) tert-amyl methyl ether	9.021	73	1397	0.20	ug/L	61
65) methylcyclohexane	9.931	83	795	0.18	ug/L	91
71) cis-1,3-dichloropropene	10.595	75	660	0.21	ug/L #	75
76) toluene	10.982	92	860	0.17	ug/L #	57
78) trans-1,3-dichloropropene	11.176	75	473	0.16	ug/L #	22
84) dibromochloromethane	11.845	129	538	0.21	ug/L #	20
87) chlorobenzene	12.541	112	1008	0.17	ug/L #	63
89) ethylbenzene	12.624	91	1786	0.17	ug/L	81
90) m,p-xylene	12.766	106	1297	0.32	ug/L #	56
91) o-xylene	13.194	91	1483	0.16	ug/L	87
94) isopropylbenzene	13.561	105	2385	0.19	ug/L	94
99) 1,1,2,2-tetrachloroethane	13.859	83	524	0.18	ug/L #	33
102) bromobenzene	13.969	156	560	0.15	ug/L #	79
103) n-propylbenzene	14.042	91	2407	0.16	ug/L	84
104) 2-chlorotoluene	14.188	126	567	0.18	ug/L #	34
105) 4-chlorotoluene	14.319	91	1699	0.18	ug/L #	47
108) 1,2,4-trimethylbenzene	14.638	105	1980	0.17	ug/L	87
109) sec-butylbenzene	14.816	105	2646	0.18	ug/L	90
110) p-isopropyltoluene	14.968	119	2154	0.16	ug/L	77

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102496.D
Acq On : 17 Feb 2021 8:52 pm
Operator : brittank
Sample : ic4435-0.2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 11:39:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	14.999	146	1329	0.18	ug/L	100
112) 1,2,3-trimethylbenzene	15.104	105	2511	0.20	ug/L #	69
113) 1,4-dichlorobenzene	15.093	146	1464	0.19	ug/L #	43

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

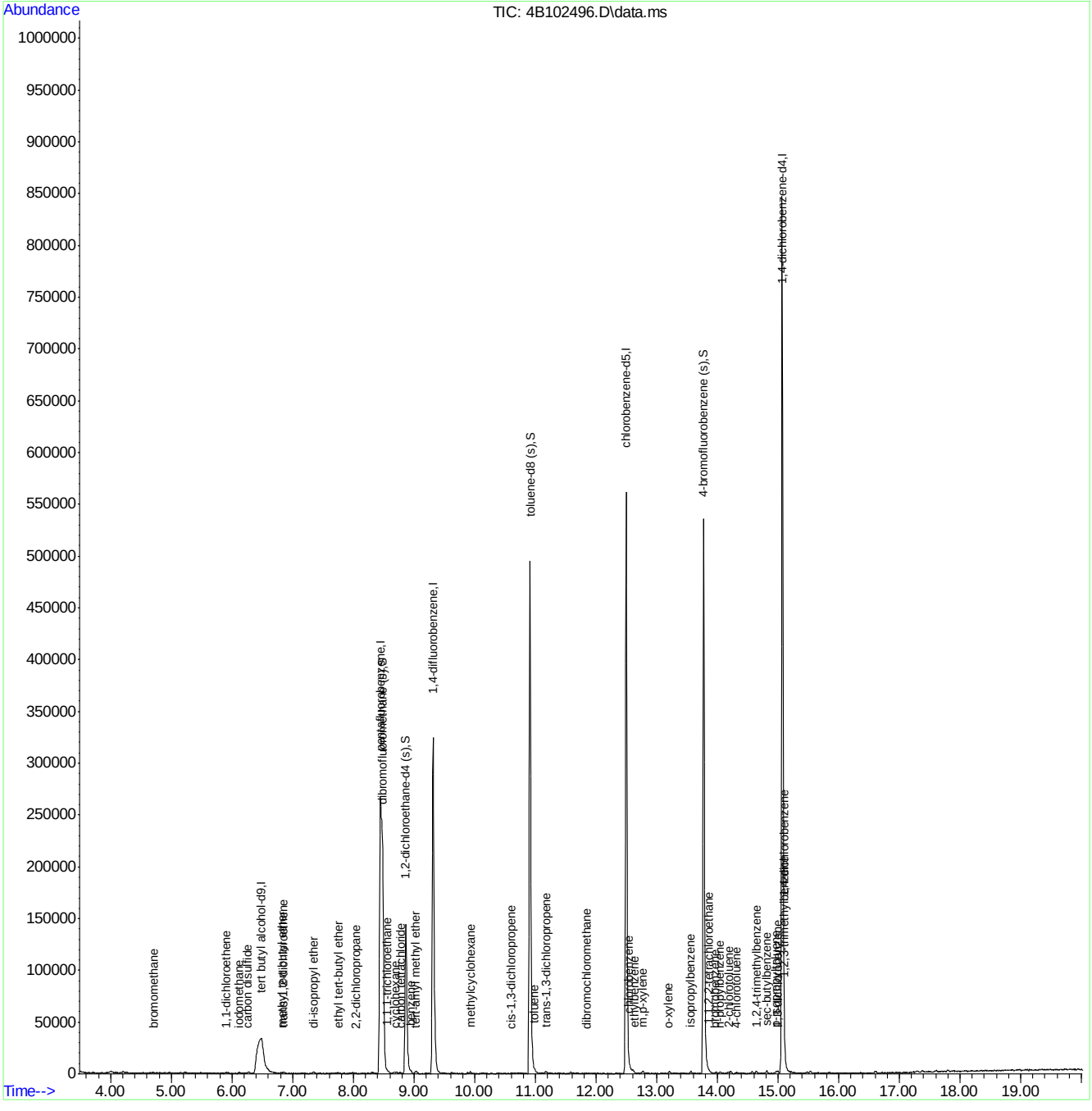
7.7.27

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102496.D
Acq On : 17 Feb 2021 8:52 pm
Operator : brittank
Sample : ic4435-0.2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 11:39:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102497.D
Acq On : 17 Feb 2021 9:20 pm
Operator : brittank
Sample : ic4435-0.5
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	134235	500.00	ug/L	0.01
5) pentafluorobenzene	8.451	168	276474	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.319	114	380998	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	392132	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	278090	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	134903	49.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.88%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	142745	50.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.92%			
75) toluene-d8 (s)	10.909	98	435003	47.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.02%			
98) 4-bromofluorobenzene (s)	13.770	95	212464	52.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.24%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.717	51	2260	0.45	ug/L	68
7) dichlorodifluoromethane	3.681	85	3031	0.41	ug/L #	48
9) vinyl chloride	4.199	62	2429	0.47	ug/L	89
10) 1,3-butadiene	4.199	54	1462	0.43	ug/L #	26
11) bromomethane	4.716	94	2096	0.58	ug/L	70
13) trichlorofluoromethane	5.255	101	3072	0.49	ug/L	88
18) 1,1-dichloroethene	5.904	61	2314	0.52	ug/L	90
21) iodomethane	6.123	142	3698	0.51	ug/L	83
22) carbon disulfide	6.265	76	5584	0.52	ug/L	78
25) methyl tert butyl ether	6.845	73	3974	0.49	ug/L	75
26) trans-1,2-dichloroethene	6.856	61	1919	0.51	ug/L	76
27) hexane	7.175	56	811	0.46	ug/L #	49
28) di-isopropyl ether	7.342	45	4913	0.48	ug/L	80
30) 1,1-dichloroethane	7.332	63	2544	0.55	ug/L	88
31) chloroprene	7.436	53	1864	0.50	ug/L	88
34) ethyl tert-butyl ether	7.739	59	4674	0.50	ug/L	90
36) 2,2-dichloropropane	8.006	77	2696	0.53	ug/L	91
37) cis-1,2-dichloroethene	7.964	96	1231	0.46	ug/L	85
38) propionitrile	7.975	54	1188	4.33	ug/L	58
41) bromochloromethane	8.242	128	824	0.57	ug/L #	53
43) chloroform	8.310	83	2917	0.61	ug/L	80
46) 1,1,1-trichloroethane	8.571	97	2771	0.48	ug/L	90
47) cyclohexane	8.691	84	2274	0.48	ug/L	85
49) 1,1-dichloropropene	8.738	75	1763	0.55	ug/L	80
50) carbon tetrachloride	8.765	117	2298	0.44	ug/L	82
57) benzene	8.948	78	5122	0.54	ug/L	92
58) tert-amyl methyl ether	9.031	73	4242	0.48	ug/L	95
59) heptane	9.183	57	800	0.43	ug/L #	48
62) trichloroethene	9.612	95	1217	0.48	ug/L #	50
63) 2-chloroethyl vinyl ether	10.381	63	2440	1.93	ug/L	84
65) methylcyclohexane	9.926	83	2602	0.46	ug/L #	75
66) 1,2-dichloropropane	9.889	63	1292	0.51	ug/L	87

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102497.D
Acq On : 17 Feb 2021 9:20 pm
Operator : brittank
Sample : ic4435-0.5
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

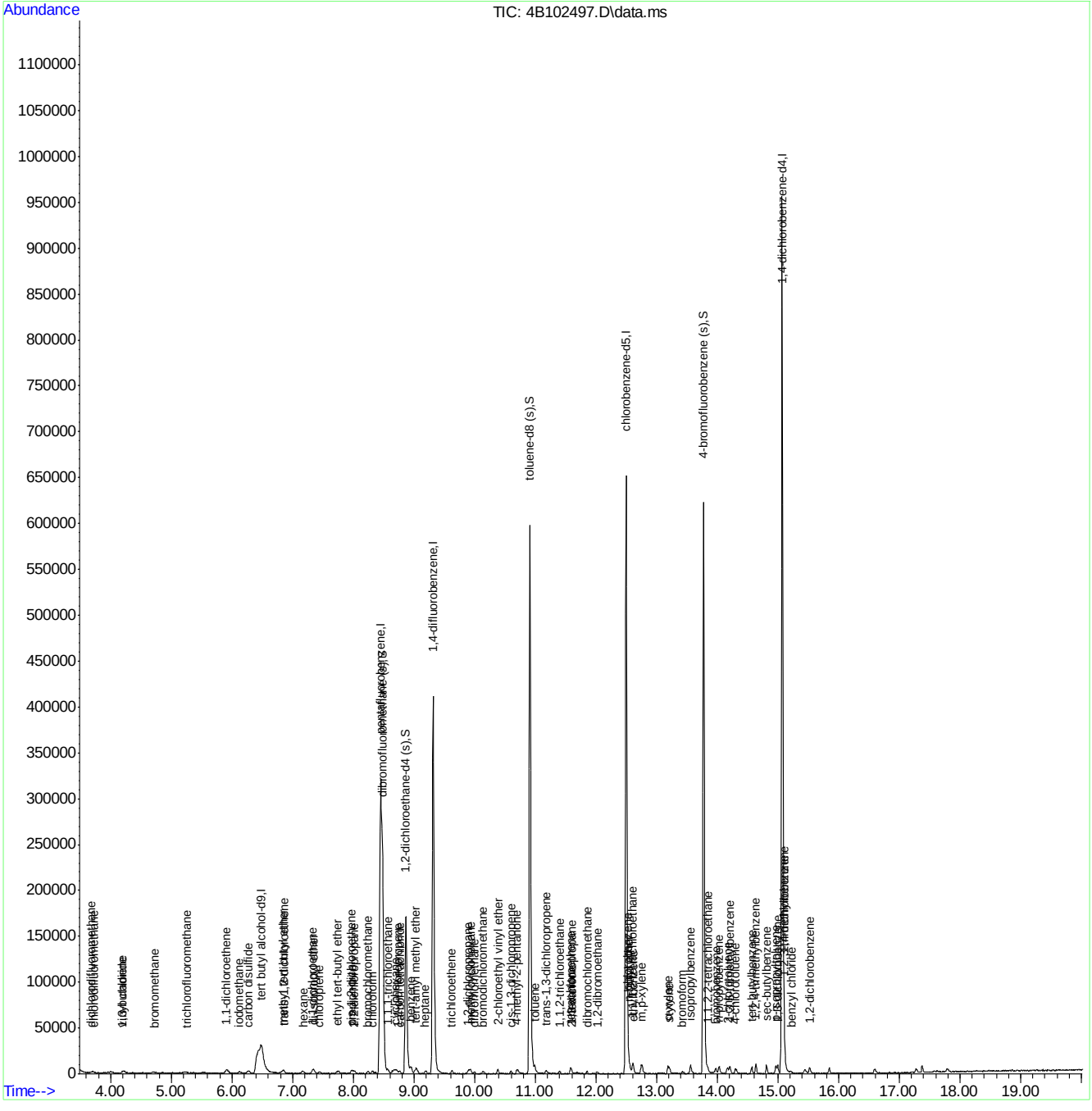
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
67)	dibromomethane	9.994	93	792	0.51	ug/L		90
68)	bromodichloromethane	10.135	83	1871	0.52	ug/L		94
71)	cis-1,3-dichloropropene	10.600	75	2013	0.51	ug/L		89
72)	4-methyl-2-pentanone	10.695	58	1514	1.84	ug/L	#	87
76)	toluene	10.993	92	2752	0.47	ug/L		93
78)	trans-1,3-dichloropropene	11.176	75	1734	0.49	ug/L		79
79)	1,1,2-trichloroethane	11.401	83	757	0.44	ug/L	#	79
80)	tetrachloroethene	11.584	164	1092	0.45	ug/L		91
81)	2-hexanone	11.605	58	1188	1.61	ug/L	#	72
82)	1,3-dichloropropane	11.594	76	1739	0.53	ug/L		76
84)	dibromochloromethane	11.856	129	1580	0.53	ug/L		81
85)	1,2-dibromoethane	12.018	107	1738	0.50	ug/L		90
86)	n-butyl ether	12.536	57	6247	0.52	ug/L		93
87)	chlorobenzene	12.530	112	4017	0.57	ug/L		94
88)	1,1,1,2-tetrachloroethane	12.604	131	1716	0.49	ug/L		85
89)	ethylbenzene	12.619	91	6399	0.51	ug/L		95
90)	m,p-xylene	12.750	106	4842	1.03	ug/L	#	80
91)	o-xylene	13.184	91	5258	0.48	ug/L		97
92)	styrene	13.205	104	3768	0.45	ug/L		85
94)	isopropylbenzene	13.561	105	7175	0.49	ug/L		88
95)	bromoform	13.425	173	1117	0.44	ug/L		92
99)	1,1,2,2-tetrachloroethane	13.848	83	1509	0.48	ug/L		91
102)	bromobenzene	13.974	156	1993	0.50	ug/L	#	64
103)	n-propylbenzene	14.026	91	8504	0.52	ug/L		92
104)	2-chlorotoluene	14.173	126	1651	0.48	ug/L	#	84
105)	4-chlorotoluene	14.303	91	5441	0.54	ug/L		95
106)	1,3,5-trimethylbenzene	14.204	105	6330	0.53	ug/L		96
107)	tert-butylbenzene	14.570	119	4833	0.47	ug/L		98
108)	1,2,4-trimethylbenzene	14.633	105	6568	0.52	ug/L		94
109)	sec-butylbenzene	14.811	105	8152	0.50	ug/L		98
110)	p-isopropyltoluene	14.968	119	7371	0.50	ug/L		97
111)	1,3-dichlorobenzene	14.999	146	4056	0.50	ug/L		88
112)	1,2,3-trimethylbenzene	15.104	105	7067	0.52	ug/L		92
113)	1,4-dichlorobenzene	15.098	146	4606	0.56	ug/L		96
114)	1,2-dichlorobenzene	15.522	146	4022	0.48	ug/L		96
115)	benzyl chloride	15.213	91	2857	0.42	ug/L		69

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102497.D
Acq On : 17 Feb 2021 9:20 pm
Operator : brittank
Sample : ic4435-0.5
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	133717	500.00	ug/L	0.01
5) pentafluorobenzene	8.451	168	263765	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	345287	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	367036	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	264728	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	131883	50.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.34%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	133947	52.25	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.50%			
75) toluene-d8 (s)	10.909	98	412864	48.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.36%			
98) 4-bromofluorobenzene (s)	13.770	95	201230	52.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.70%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.702	51	4457	0.93	ug/L	87
7) dichlorodifluoromethane	3.696	85	6042	0.86	ug/L	72
8) chloromethane	4.000	50	6666	1.28	ug/L	85
9) vinyl chloride	4.199	62	4766	0.96	ug/L	91
10) 1,3-butadiene	4.204	54	2804	0.86	ug/L	82
11) bromomethane	4.716	94	3882	1.12	ug/L #	72
12) chloroethane	4.852	64	1712	0.81	ug/L #	70
13) trichlorofluoromethane	5.245	101	5999	1.01	ug/L	89
14) vinyl bromide	5.140	106	1308	0.82	ug/L	91
17) freon 113	5.945	151	2815	0.88	ug/L #	69
18) 1,1-dichloroethene	5.904	61	4191	0.99	ug/L	90
21) iodomethane	6.123	142	6929	1.01	ug/L	92
22) carbon disulfide	6.270	76	10765	1.05	ug/L	93
23) methylene chloride	6.495	84	3743	1.29	ug/L	83
24) methyl acetate	6.291	43	1053	0.72	ug/L	61
25) methyl tert butyl ether	6.819	73	8088	1.04	ug/L	87
26) trans-1,2-dichloroethene	6.840	61	3839	1.08	ug/L	85
27) hexane	7.159	56	1578	0.93	ug/L #	75
28) di-isopropyl ether	7.342	45	10072	1.04	ug/L	98
30) 1,1-dichloroethane	7.331	63	4331	0.99	ug/L	91
31) chloroprene	7.441	53	3484	0.99	ug/L	87
34) ethyl tert-butyl ether	7.734	59	8571	0.96	ug/L	89
36) 2,2-dichloropropane	8.017	77	5419	1.12	ug/L	91
37) cis-1,2-dichloroethene	7.975	96	2786	1.10	ug/L #	77
38) propionitrile	7.970	54	2591	9.89	ug/L	60
40) methacrylonitrile	8.142	67	538	0.79	ug/L #	75
41) bromochloromethane	8.226	128	1325	0.96	ug/L	81
43) chloroform	8.310	83	5429	1.20	ug/L	97
44) tert-butyl formate	8.357	59	1517	0.73	ug/L	83
46) 1,1,1-trichloroethane	8.576	97	5196	0.94	ug/L	96
47) cyclohexane	8.686	84	4374	0.96	ug/L #	73
49) 1,1-dichloropropene	8.728	75	3046	1.00	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
50)	carbon tetrachloride	8.759	117	5099	1.03	ug/L		99
55)	n-butyl alcohol	9.392	41	1824	42.62	ug/L	#	64
56)	2,2,4-trimethylpentane	9.042	57	8817	0.83	ug/L		96
57)	benzene	8.942	78	8796	1.03	ug/L		89
58)	tert-amyl methyl ether	9.026	73	7706	0.96	ug/L		93
59)	heptane	9.193	57	1585	0.95	ug/L		85
60)	1,2-dichloroethane	8.948	62	3578	1.16	ug/L		92
62)	trichloroethene	9.622	95	2343	1.03	ug/L		90
63)	2-chloroethyl vinyl ether	10.375	63	5104	4.45	ug/L		92
65)	methylcyclohexane	9.931	83	4700	0.92	ug/L		97
66)	1,2-dichloropropane	9.884	63	2298	0.99	ug/L		97
67)	dibromomethane	9.994	93	1526	1.08	ug/L		94
68)	bromodichloromethane	10.140	83	3458	1.05	ug/L		95
70)	epichlorohydrin	10.454	57	649	3.69	ug/L		42
71)	cis-1,3-dichloropropene	10.590	75	3721	1.03	ug/L		87
72)	4-methyl-2-pentanone	10.695	58	2905	3.89	ug/L		88
73)	isoamyl alcohol	10.721	70	1021	17.39	ug/L	#	52
76)	toluene	10.987	92	5407	1.00	ug/L		93
77)	ethyl methacrylate	11.181	69	1975	0.75	ug/L		97
78)	trans-1,3-dichloropropene	11.165	75	3154	0.95	ug/L	#	72
79)	1,1,2-trichloroethane	11.401	83	1304	0.81	ug/L		92
80)	tetrachloroethene	11.573	164	2385	1.05	ug/L		90
81)	2-hexanone	11.589	58	2493	3.62	ug/L	#	76
82)	1,3-dichloropropane	11.584	76	2877	0.94	ug/L	#	67
84)	dibromochloromethane	11.850	129	2543	0.91	ug/L		95
85)	1,2-dibromoethane	12.013	107	3162	0.97	ug/L		76
86)	n-butyl ether	12.525	57	11383	1.01	ug/L		98
87)	chlorobenzene	12.530	112	6719	1.02	ug/L		96
88)	1,1,1,2-tetrachloroethane	12.598	131	2962	0.91	ug/L		98
89)	ethylbenzene	12.609	91	12069	1.03	ug/L		94
90)	m,p-xylene	12.745	106	8723	1.98	ug/L		95
91)	o-xylene	13.174	91	10294	1.01	ug/L		97
92)	styrene	13.205	104	6662	0.85	ug/L		100
93)	butyl acrylate	13.017	55	4151	0.81	ug/L		97
94)	isopropylbenzene	13.561	105	13476	0.98	ug/L		97
95)	bromoform	13.430	173	2251	0.96	ug/L		97
96)	cis-1,4-dichloro-2-butene	13.582	88	973	0.81	ug/L	#	73
99)	1,1,2,2-tetrachloroethane	13.854	83	3025	1.01	ug/L		92
101)	1,2,3-trichloropropane	13.948	110	650	0.79	ug/L	#	50
102)	bromobenzene	13.974	156	3639	0.96	ug/L		87
103)	n-propylbenzene	14.026	91	15379	0.99	ug/L		93
104)	2-chlorotoluene	14.162	126	3561	1.09	ug/L	#	86
105)	4-chlorotoluene	14.298	91	9803	1.03	ug/L		96
106)	1,3,5-trimethylbenzene	14.204	105	11386	0.99	ug/L		90
107)	tert-butylbenzene	14.565	119	8315	0.85	ug/L		91
108)	1,2,4-trimethylbenzene	14.633	105	11462	0.95	ug/L		94
109)	sec-butylbenzene	14.805	105	15284	0.98	ug/L		99
110)	p-isopropyltoluene	14.962	119	13916	0.99	ug/L		97
111)	1,3-dichlorobenzene	14.999	146	8031	1.05	ug/L		98
112)	1,2,3-trimethylbenzene	15.098	105	12876	0.99	ug/L		86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

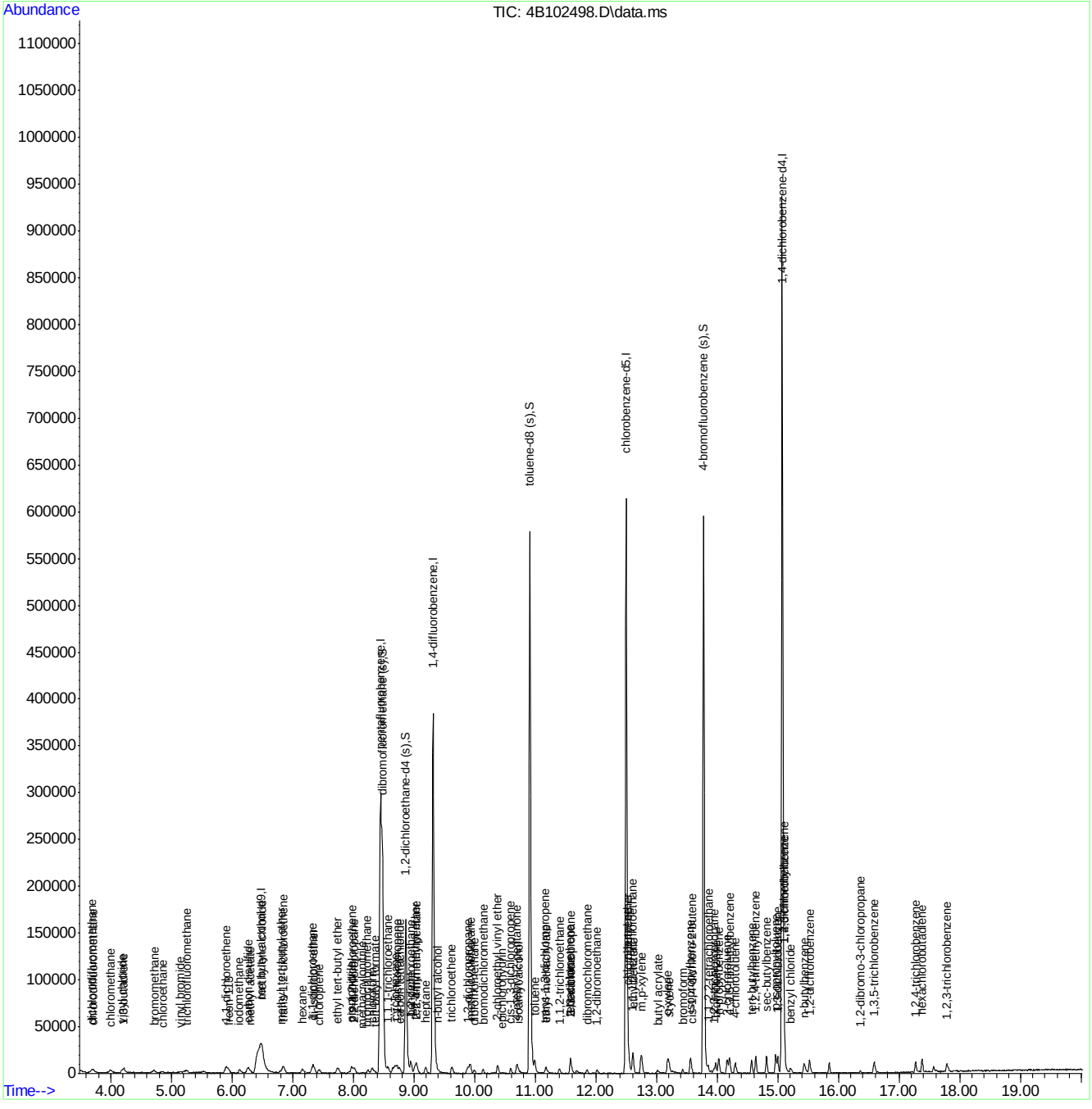
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
113) 1,4-dichlorobenzene	15.098	146	8634	1.10	ug/L	90
114) 1,2-dichlorobenzene	15.517	146	7719	0.96	ug/L	88
115) benzyl chloride	15.208	91	5811	0.90	ug/L	95
116) n-butylbenzene	15.428	92	6270	0.86	ug/L #	71
118) 1,2-dibromo-3-chloropr...	16.359	157	788	0.78	ug/L	80
119) 1,3,5-trichlorobenzene	16.584	180	6369	0.79	ug/L	89
120) 1,2,4-trichlorobenzene	17.269	180	5030	0.69	ug/L	86
122) hexachlorobutadiene	17.374	225	3290	0.87	ug/L	77
124) 1,2,3-trichlorobenzene	17.781	180	4567	0.74	ug/L	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	129644	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	256445	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	339893	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	357293	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	262637	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	127430	50.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.70%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	130315	51.64	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.28%			
75) toluene-d8 (s)	10.909	98	397745	47.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.36%			
98) 4-bromofluorobenzene (s)	13.770	95	195926	51.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.76%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.573	59	2439	8.28	ug/L	79
6) chlorodifluoromethane	3.707	51	8224	1.77	ug/L	95
7) dichlorodifluoromethane	3.696	85	11739	1.72	ug/L	89
8) chloromethane	4.000	50	10104	2.00	ug/L	96
9) vinyl chloride	4.209	62	8814	1.82	ug/L	88
10) 1,3-butadiene	4.214	54	5875	1.85	ug/L	97
11) bromomethane	4.716	94	7233	2.15	ug/L	92
12) chloroethane	4.831	64	4197	2.04	ug/L	87
13) trichlorofluoromethane	5.245	101	10621	1.83	ug/L	91
14) vinyl bromide	5.140	106	2523	1.63	ug/L	89
15) ethyl ether	5.553	74	1930	2.22	ug/L #	22
17) freon 113	5.924	151	6104	1.96	ug/L	87
18) 1,1-dichloroethene	5.904	61	8552	2.07	ug/L	95
19) acetone	5.893	58	1282	7.28	ug/L #	51
20) acetonitrile	6.259	41	5395	17.75	ug/L	82
21) iodomethane	6.123	142	13388	2.00	ug/L	93
22) carbon disulfide	6.259	76	19317	1.94	ug/L	96
23) methylene chloride	6.495	84	5995	2.13	ug/L	91
24) methyl acetate	6.280	43	2465	1.74	ug/L	64
25) methyl tert butyl ether	6.829	73	15374	2.04	ug/L	91
26) trans-1,2-dichloroethene	6.845	61	6959	2.01	ug/L	95
27) hexane	7.159	56	3130	1.90	ug/L #	79
28) di-isopropyl ether	7.337	45	18299	1.94	ug/L	89
29) 2-butanone	7.912	72	1000	5.65	ug/L	90
30) 1,1-dichloroethane	7.326	63	8231	1.93	ug/L	91
31) chloroprene	7.436	53	6574	1.92	ug/L	88
34) ethyl tert-butyl ether	7.745	59	16617	1.92	ug/L	98
36) 2,2-dichloropropane	8.017	77	9171	1.96	ug/L	96
37) cis-1,2-dichloroethene	7.964	96	4923	1.99	ug/L	88
38) propionitrile	7.954	54	4758	18.68	ug/L	93
40) methacrylonitrile	8.147	67	1071	1.61	ug/L	90
41) bromochloromethane	8.236	128	2549	1.91	ug/L #	81

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	8.309	83	9224	2.09	ug/L		95
44)	tert-butyl formate	8.351	59	3554	1.75	ug/L		86
46)	1,1,1-trichloroethane	8.576	97	10274	1.91	ug/L		91
47)	cyclohexane	8.686	84	7874	1.78	ug/L		99
49)	1,1-dichloropropene	8.723	75	6035	2.04	ug/L		87
50)	carbon tetrachloride	8.759	117	9289	1.93	ug/L		98
51)	tert-amyl alcohol	8.832	73	1072	9.71	ug/L	#	81
55)	n-butyl alcohol	9.371	41	4218	100.11	ug/L	#	78
56)	2,2,4-trimethylpentane	9.042	57	16890	1.62	ug/L		97
57)	benzene	8.942	78	16204	1.92	ug/L		97
58)	tert-amyl methyl ether	9.021	73	15312	1.94	ug/L		86
59)	heptane	9.188	57	3101	1.89	ug/L		96
60)	1,2-dichloroethane	8.948	62	6379	2.09	ug/L		89
61)	ethyl acrylate	9.627	55	3542	1.64	ug/L		83
62)	trichloroethene	9.622	95	4326	1.92	ug/L		89
63)	2-chloroethyl vinyl ether	10.370	63	9958	8.82	ug/L		97
65)	methylcyclohexane	9.926	83	8825	1.75	ug/L		100
66)	1,2-dichloropropane	9.889	63	4403	1.93	ug/L		82
67)	dibromomethane	9.988	93	2540	1.83	ug/L		89
68)	bromodichloromethane	10.135	83	6119	1.90	ug/L		87
69)	2-nitropropane	10.313	41	926	1.93	ug/L		66
70)	epichlorohydrin	10.443	57	1612	9.30	ug/L		52
71)	cis-1,3-dichloropropene	10.595	75	6590	1.86	ug/L		97
72)	4-methyl-2-pentanone	10.689	58	5805	7.90	ug/L	#	81
73)	isoamyl alcohol	10.700	70	1988	34.39	ug/L	#	85
76)	toluene	10.993	92	9911	1.87	ug/L		97
77)	ethyl methacrylate	11.181	69	4394	1.72	ug/L		87
78)	trans-1,3-dichloropropene	11.170	75	5747	1.79	ug/L		97
79)	1,1,2-trichloroethane	11.395	83	2860	1.81	ug/L	#	91
80)	tetrachloroethene	11.578	164	3960	1.79	ug/L		93
81)	2-hexanone	11.578	58	4740	7.07	ug/L		95
82)	1,3-dichloropropane	11.584	76	5840	1.95	ug/L		94
84)	dibromochloromethane	11.850	129	4965	1.83	ug/L		95
85)	1,2-dibromoethane	12.012	107	5792	1.82	ug/L		83
86)	n-butyl ether	12.515	57	21390	1.95	ug/L		86
87)	chlorobenzene	12.530	112	12558	1.96	ug/L		96
88)	1,1,1,2-tetrachloroethane	12.603	131	5774	1.82	ug/L		96
89)	ethylbenzene	12.609	91	22312	1.96	ug/L		91
90)	m,p-xylene	12.739	106	16183	3.77	ug/L		97
91)	o-xylene	13.179	91	18429	1.85	ug/L		98
92)	styrene	13.195	104	13270	1.74	ug/L		99
93)	butyl acrylate	13.011	55	8458	1.69	ug/L		84
94)	isopropylbenzene	13.555	105	24407	1.83	ug/L		95
95)	bromoform	13.425	173	4367	1.91	ug/L		96
96)	cis-1,4-dichloro-2-butene	13.576	88	1798	1.54	ug/L		89
99)	1,1,2,2-tetrachloroethane	13.848	83	6154	2.08	ug/L		77
101)	1,2,3-trichloropropane	13.942	110	1472	1.80	ug/L	#	52
102)	bromobenzene	13.974	156	7132	1.89	ug/L		93
103)	n-propylbenzene	14.021	91	30280	1.96	ug/L		93
104)	2-chlorotoluene	14.157	126	6156	1.89	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 4-chlorotoluene	14.288	91	18869	2.00	ug/L	96
106) 1,3,5-trimethylbenzene	14.199	105	20838	1.83	ug/L	99
107) tert-butylbenzene	14.565	119	16570	1.71	ug/L	99
108) 1,2,4-trimethylbenzene	14.628	105	22357	1.86	ug/L	97
109) sec-butylbenzene	14.811	105	28531	1.84	ug/L	97
110) p-isopropyltoluene	14.962	119	26418	1.90	ug/L	98
111) 1,3-dichlorobenzene	14.994	146	14925	1.96	ug/L	96
112) 1,2,3-trimethylbenzene	15.098	105	24773	1.93	ug/L	93
113) 1,4-dichlorobenzene	15.098	146	14839	1.91	ug/L	90
114) 1,2-dichlorobenzene	15.517	146	14518	1.83	ug/L	96
115) benzyl chloride	15.198	91	12085	1.89	ug/L	87
116) n-butylbenzene	15.423	92	12410	1.72	ug/L	96
117) hexachloroethane	15.851	201	3855	1.41	ug/L	86
118) 1,2-dibromo-3-chloropr...	16.354	157	1471	1.47	ug/L	90
119) 1,3,5-trichlorobenzene	16.578	180	13127	1.64	ug/L	91
120) 1,2,4-trichlorobenzene	17.258	180	10289	1.42	ug/L	89
122) hexachlorobutadiene	17.373	225	6714	1.78	ug/L	94
124) 1,2,3-trichlorobenzene	17.781	180	9729	1.59	ug/L	92

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

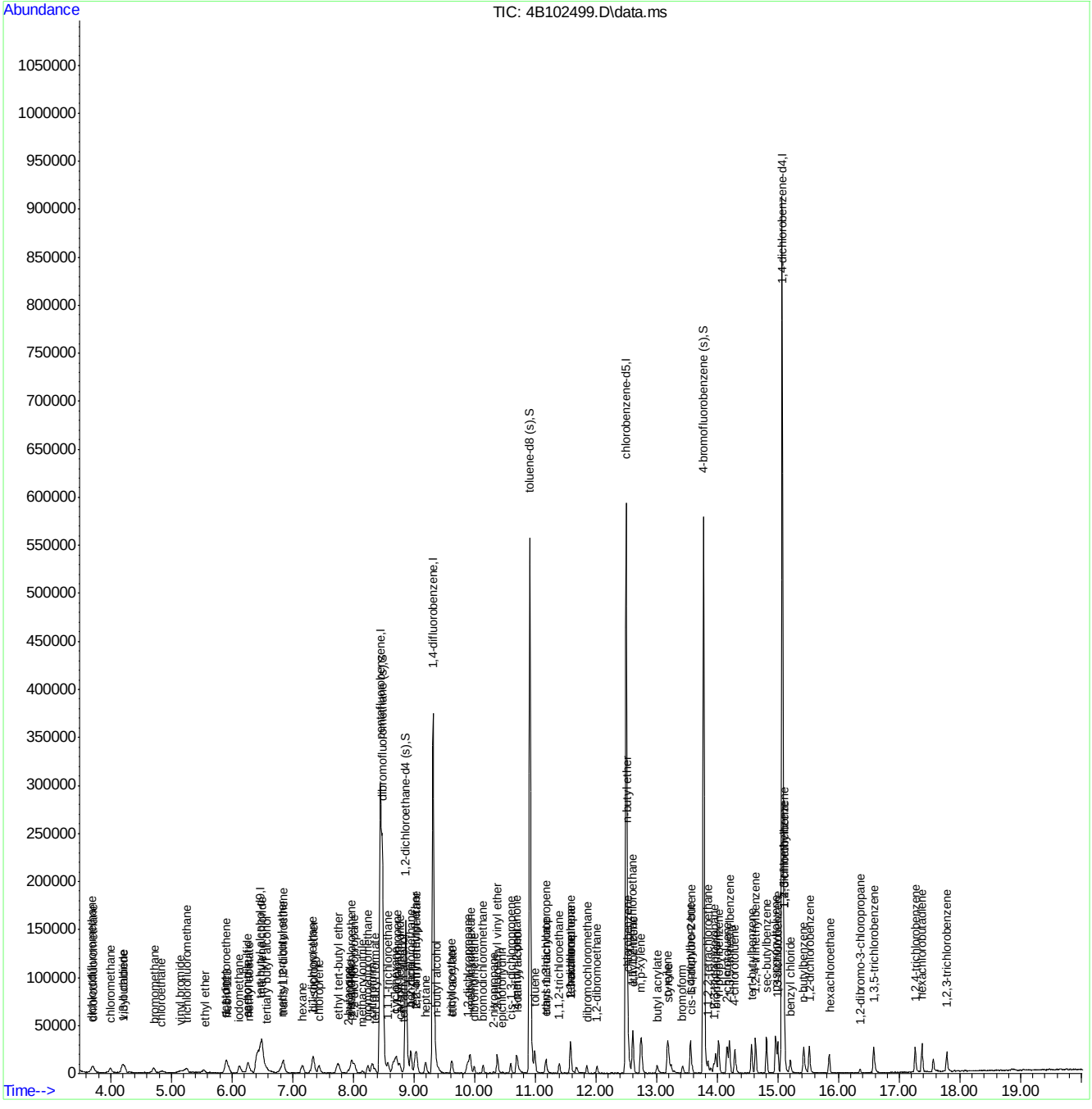
7.7.30

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	132056	500.00	ug/L	0.01
5) pentafluorobenzene	8.445	168	264025	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	348473	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	383342	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	277624	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	132205	50.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.48%			
54) 1,2-dichloroethane-d4 (s)	8.869	65	136727	52.84	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.68%			
75) toluene-d8 (s)	10.909	98	416647	46.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.10%			
98) 4-bromofluorobenzene (s)	13.770	95	211852	52.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.12%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.547	59	5848	19.49	ug/L	79
4) 1,4-dioxane	9.946	88	1921	82.23	ug/L	94
6) chlorodifluoromethane	3.707	51	17348	3.63	ug/L	95
7) dichlorodifluoromethane	3.681	85	24114	3.43	ug/L	89
8) chloromethane	3.994	50	20395	3.92	ug/L	86
9) vinyl chloride	4.198	62	18142	3.64	ug/L	95
10) 1,3-butadiene	4.225	54	11967	3.65	ug/L	97
11) bromomethane	4.716	94	13594	3.92	ug/L	94
12) chloroethane	4.847	64	8124	3.83	ug/L	92
13) trichlorofluoromethane	5.245	101	22591	3.78	ug/L	95
14) vinyl bromide	5.145	106	5933	3.73	ug/L	97
15) ethyl ether	5.527	74	3497	3.90	ug/L	87
16) acrolein	5.715	56	1060	3.08	ug/L #	58
17) freon 113	5.935	151	12584	3.93	ug/L	90
18) 1,1-dichloroethene	5.904	61	17901	4.21	ug/L	92
19) acetone	5.888	58	2549	14.05	ug/L	89
20) acetonitrile	6.228	41	11786	37.66	ug/L	79
21) iodomethane	6.123	142	27192	3.95	ug/L	98
22) carbon disulfide	6.270	76	40478	3.96	ug/L	96
23) methylene chloride	6.489	84	11930	4.12	ug/L	91
24) methyl acetate	6.285	43	5392	3.70	ug/L	83
25) methyl tert butyl ether	6.819	73	30000	3.86	ug/L	95
26) trans-1,2-dichloroethene	6.840	61	14615	4.09	ug/L	98
27) hexane	7.154	56	6649	3.91	ug/L #	77
28) di-isopropyl ether	7.337	45	36747	3.79	ug/L	92
29) 2-butanone	7.912	72	2297	12.61	ug/L	94
30) 1,1-dichloroethane	7.331	63	16793	3.82	ug/L	98
31) chloroprene	7.431	53	14004	3.97	ug/L	89
32) acrylonitrile	6.735	53	2255	3.08	ug/L	77
34) ethyl tert-butyl ether	7.739	59	33997	3.82	ug/L	99
35) ethyl acetate	7.938	45	770	2.76	ug/L #	1
36) 2,2-dichloropropane	8.017	77	18281	3.79	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	cis-1,2-dichloroethene	7.969	96	10635	4.18	ug/L		92
38)	propionitrile	7.949	54	10680	40.72	ug/L		92
39)	methyl acrylate	8.006	85	861	3.27	ug/L	#	25
40)	methacrylonitrile	8.147	67	2519	3.68	ug/L		91
41)	bromochloromethane	8.241	128	5257	3.82	ug/L		84
43)	chloroform	8.309	83	18586	4.10	ug/L		95
44)	tert-butyl formate	8.351	59	7783	3.73	ug/L		87
46)	1,1,1-trichloroethane	8.571	97	20755	3.75	ug/L		96
47)	cyclohexane	8.686	84	17430	3.82	ug/L		95
49)	1,1-dichloropropene	8.717	75	12624	4.15	ug/L		90
50)	carbon tetrachloride	8.764	117	18864	3.81	ug/L		91
51)	tert-amyl alcohol	8.817	73	2607	22.93	ug/L		97
52)	isopropyl acetate	8.853	87	1201	3.20	ug/L	#	61
55)	n-butyl alcohol	9.371	41	8672	200.76	ug/L		90
56)	2,2,4-trimethylpentane	9.036	57	35306	3.31	ug/L		98
57)	benzene	8.948	78	34822	4.03	ug/L		99
58)	tert-amyl methyl ether	9.026	73	29911	3.69	ug/L		96
59)	heptane	9.188	57	6420	3.81	ug/L		91
60)	1,2-dichloroethane	8.948	62	12752	4.08	ug/L		99
61)	ethyl acrylate	9.612	55	7840	3.54	ug/L		92
62)	trichloroethene	9.622	95	9240	4.01	ug/L		85
63)	2-chloroethyl vinyl ether	10.370	63	21797	18.83	ug/L		99
64)	methyl methacrylate	9.858	100	1469	3.19	ug/L	#	83
65)	methylcyclohexane	9.926	83	18411	3.57	ug/L		94
66)	1,2-dichloropropane	9.879	63	9164	3.92	ug/L		95
67)	dibromomethane	9.988	93	5626	3.94	ug/L		98
68)	bromodichloromethane	10.140	83	12630	3.82	ug/L		91
69)	2-nitropropane	10.313	41	1688	3.43	ug/L	#	37
70)	epichlorohydrin	10.454	57	3366	18.95	ug/L		93
71)	cis-1,3-dichloropropene	10.590	75	13615	3.74	ug/L		88
72)	4-methyl-2-pentanone	10.689	58	12371	16.42	ug/L		99
73)	isoamyl alcohol	10.694	70	4753	80.19	ug/L		93
76)	toluene	10.993	92	20966	3.70	ug/L		91
77)	ethyl methacrylate	11.170	69	10291	3.76	ug/L		89
78)	trans-1,3-dichloropropene	11.165	75	12863	3.72	ug/L		96
79)	1,1,2-trichloroethane	11.390	83	6514	3.85	ug/L	#	88
80)	tetrachloroethene	11.573	164	8522	3.59	ug/L		95
81)	2-hexanone	11.568	58	12332	17.14	ug/L		94
82)	1,3-dichloropropane	11.584	76	12780	3.98	ug/L		89
83)	butyl acetate	11.667	56	5077	3.73	ug/L	#	81
84)	dibromochloromethane	11.850	129	11050	3.80	ug/L		92
85)	1,2-dibromoethane	12.012	107	12803	3.76	ug/L		100
86)	n-butyl ether	12.509	57	45727	3.89	ug/L		94
87)	chlorobenzene	12.535	112	27416	3.99	ug/L		91
88)	1,1,1,2-tetrachloroethane	12.598	131	11735	3.45	ug/L		96
89)	ethylbenzene	12.603	91	47446	3.88	ug/L		98
90)	m,p-xylene	12.734	106	36235	7.86	ug/L		96
91)	o-xylene	13.174	91	39972	3.75	ug/L		90
92)	styrene	13.189	104	31141	3.81	ug/L		95
93)	butyl acrylate	13.001	55	19739	3.68	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

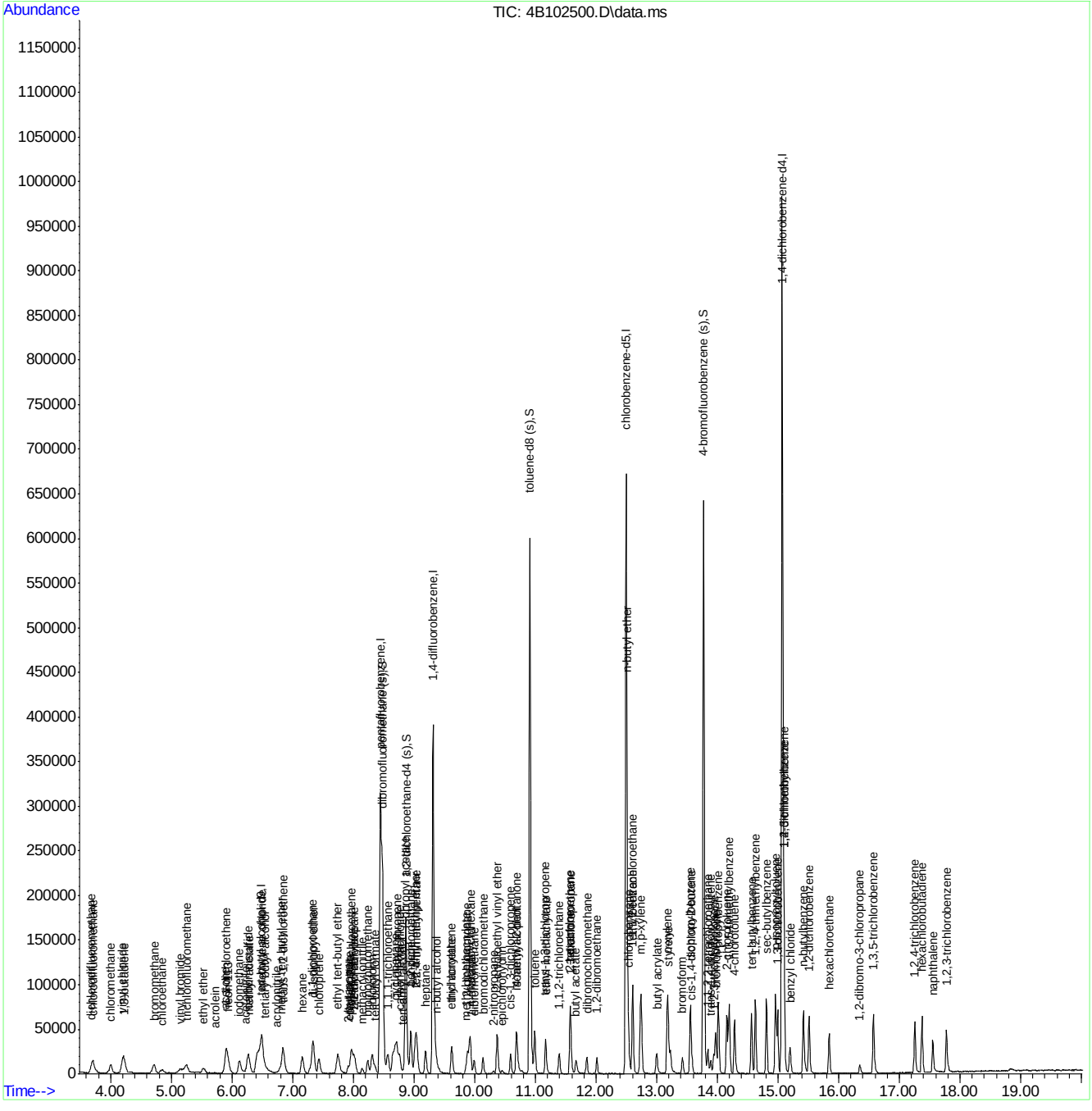
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94)	isopropylbenzene	13.555	105	52732	3.68	ug/L		99
95)	bromoform	13.425	173	9326	3.79	ug/L		94
96)	cis-1,4-dichloro-2-butene	13.576	88	4635	3.71	ug/L		93
99)	1,1,2,2-tetrachloroethane	13.848	83	12191	3.90	ug/L		96
100)	trans-1,4-dichloro-2-b...	13.885	53	3263	3.58	ug/L		83
101)	1,2,3-trichloropropane	13.942	110	3134	3.63	ug/L	#	80
102)	bromobenzene	13.974	156	15658	3.92	ug/L		90
103)	n-propylbenzene	14.016	91	65248	4.00	ug/L		97
104)	2-chlorotoluene	14.157	126	13811	4.02	ug/L		89
105)	4-chlorotoluene	14.282	91	40496	4.05	ug/L		98
106)	1,3,5-trimethylbenzene	14.193	105	46933	3.91	ug/L		96
107)	tert-butylbenzene	14.565	119	35809	3.49	ug/L		98
108)	1,2,4-trimethylbenzene	14.628	105	49150	3.86	ug/L		97
109)	sec-butylbenzene	14.811	105	61428	3.75	ug/L		99
110)	p-isopropyltoluene	14.957	119	54692	3.73	ug/L		96
111)	1,3-dichlorobenzene	14.994	146	31593	3.93	ug/L		94
112)	1,2,3-trimethylbenzene	15.098	105	53664	3.95	ug/L		98
113)	1,4-dichlorobenzene	15.098	146	33127	4.03	ug/L		99
114)	1,2-dichlorobenzene	15.511	146	32345	3.85	ug/L		96
115)	benzyl chloride	15.198	91	25047	3.70	ug/L		96
116)	n-butylbenzene	15.417	92	28012	3.67	ug/L		94
117)	hexachloroethane	15.841	201	8800	3.04	ug/L		88
118)	1,2-dibromo-3-chloropr...	16.348	157	3304	3.13	ug/L		91
119)	1,3,5-trichlorobenzene	16.573	180	27332	3.23	ug/L		98
120)	1,2,4-trichlorobenzene	17.253	180	22498	2.94	ug/L		99
122)	hexachlorobutadiene	17.373	225	14547	3.65	ug/L		93
123)	naphthalene	17.551	128	36073	2.83	ug/L		95
124)	1,2,3-trichlorobenzene	17.776	180	19282	2.97	ug/L		91

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	122162	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	251354	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	327738	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	334228	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	251318	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	124815	50.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.64%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	128748	52.91	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.82%			
75) toluene-d8 (s)	10.909	98	387387	49.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.28%			
98) 4-bromofluorobenzene (s)	13.770	95	184920	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.547	59	9820	35.38	ug/L	85
4) 1,4-dioxane	9.941	88	3785	175.15	ug/L	70
6) chlorodifluoromethane	3.702	51	33057	7.27	ug/L	95
7) dichlorodifluoromethane	3.686	85	45432	6.78	ug/L	92
8) chloromethane	3.995	50	38331	7.74	ug/L	99
9) vinyl chloride	4.193	62	33883	7.14	ug/L	99
10) 1,3-butadiene	4.209	54	23178	7.43	ug/L	98
11) bromomethane	4.701	94	25498	7.72	ug/L	91
12) chloroethane	4.852	64	14951	7.40	ug/L	94
13) trichlorofluoromethane	5.239	101	40976	7.21	ug/L	92
14) vinyl bromide	5.135	106	11045	7.30	ug/L	96
15) ethyl ether	5.527	74	6103	7.15	ug/L #	70
16) acrolein	5.705	56	2005	6.13	ug/L	74
17) freon 113	5.940	151	21795	7.15	ug/L	92
18) 1,1-dichloroethene	5.904	61	30171	7.45	ug/L	97
19) acetone	5.883	58	5489	31.79	ug/L #	83
20) acetonitrile	6.233	41	21350	71.66	ug/L	98
21) iodomethane	6.123	142	49675	7.58	ug/L	96
22) carbon disulfide	6.265	76	72524	7.45	ug/L	99
23) methylene chloride	6.489	84	21638	7.86	ug/L	92
24) methyl acetate	6.291	43	9986	7.20	ug/L	98
25) methyl tert butyl ether	6.819	73	55679	7.53	ug/L	99
26) trans-1,2-dichloroethene	6.845	61	25855	7.60	ug/L	96
27) hexane	7.154	56	12072	7.46	ug/L	98
28) di-isopropyl ether	7.337	45	70065	7.59	ug/L	97
29) 2-butanone	7.896	72	4729	27.27	ug/L #	75
30) 1,1-dichloroethane	7.337	63	32549	7.77	ug/L	97
31) chloroprene	7.426	53	25098	7.46	ug/L	94
32) acrylonitrile	6.730	53	5065	7.28	ug/L	81
33) vinyl acetate	7.284	86	1700	6.20	ug/L #	48
34) ethyl tert-butyl ether	7.750	59	63133	7.45	ug/L	96
35) ethyl acetate	7.922	45	1611	6.07	ug/L #	14

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	2,2-dichloropropane	8.011	77	35607	7.75	ug/L		96
37)	cis-1,2-dichloroethene	7.970	96	18256	7.54	ug/L		95
38)	propionitrile	7.949	54	18480	74.01	ug/L		91
39)	methyl acrylate	8.001	85	1431	5.72	ug/L	#	78
40)	methacrylonitrile	8.137	67	4583	7.03	ug/L		95
41)	bromochloromethane	8.226	128	9831	7.51	ug/L		97
42)	tetrahydrofuran	8.262	72	1544	7.14	ug/L		96
43)	chloroform	8.310	83	32940	7.63	ug/L		97
44)	tert-butyl formate	8.346	59	14550	7.33	ug/L		96
46)	1,1,1-trichloroethane	8.571	97	38467	7.31	ug/L		98
47)	cyclohexane	8.691	84	30685	7.07	ug/L		99
49)	1,1-dichloropropene	8.717	75	22484	7.76	ug/L		95
50)	carbon tetrachloride	8.759	117	34535	7.33	ug/L		94
51)	tert-amyl alcohol	8.817	73	4386	40.53	ug/L	#	80
52)	isopropyl acetate	8.838	87	2530	7.07	ug/L	#	91
55)	n-butyl alcohol	9.350	41	16128	397.00	ug/L		85
56)	2,2,4-trimethylpentane	9.042	57	66096	6.59	ug/L		98
57)	benzene	8.942	78	62178	7.66	ug/L		99
58)	tert-amyl methyl ether	9.016	73	55377	7.27	ug/L		94
59)	heptane	9.188	57	11398	7.19	ug/L		89
60)	1,2-dichloroethane	8.948	62	22231	7.56	ug/L		97
61)	ethyl acrylate	9.601	55	14322	6.87	ug/L		96
62)	trichloroethene	9.617	95	16038	7.40	ug/L		99
63)	2-chloroethyl vinyl ether	10.365	63	38409	35.28	ug/L		96
64)	methyl methacrylate	9.852	100	2342	5.40	ug/L	#	81
65)	methylcyclohexane	9.926	83	34775	7.16	ug/L		97
66)	1,2-dichloropropane	9.879	63	16093	7.32	ug/L		99
67)	dibromomethane	9.983	93	10514	7.84	ug/L		80
68)	bromodichloromethane	10.135	83	23543	7.56	ug/L		94
69)	2-nitropropane	10.307	41	3192	6.89	ug/L		88
70)	epichlorohydrin	10.449	57	6306	37.74	ug/L		85
71)	cis-1,3-dichloropropene	10.590	75	25041	7.32	ug/L		97
72)	4-methyl-2-pentanone	10.684	58	21097	29.77	ug/L		97
73)	isoamyl alcohol	10.700	70	8110	145.49	ug/L	#	73
76)	toluene	10.987	92	36716	7.42	ug/L		95
77)	ethyl methacrylate	11.165	69	16927	7.09	ug/L		94
78)	trans-1,3-dichloropropene	11.165	75	22311	7.41	ug/L		97
79)	1,1,2-trichloroethane	11.390	83	10475	7.10	ug/L		93
80)	tetrachloroethene	11.573	164	15404	7.44	ug/L		93
81)	2-hexanone	11.568	58	20033	31.93	ug/L		90
82)	1,3-dichloropropane	11.578	76	21118	7.54	ug/L		89
83)	butyl acetate	11.662	56	9353	7.87	ug/L		87
84)	dibromochloromethane	11.845	129	18082	7.13	ug/L		96
85)	1,2-dibromoethane	12.013	107	21708	7.31	ug/L		95
86)	n-butyl ether	12.509	57	78486	7.66	ug/L		96
87)	chlorobenzene	12.530	112	45069	7.52	ug/L		97
88)	1,1,1,2-tetrachloroethane	12.598	131	21661	7.30	ug/L		98
89)	ethylbenzene	12.604	91	82795	7.77	ug/L		98
90)	m,p-xylene	12.734	106	62055	15.44	ug/L		98
91)	o-xylene	13.168	91	70892	7.63	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

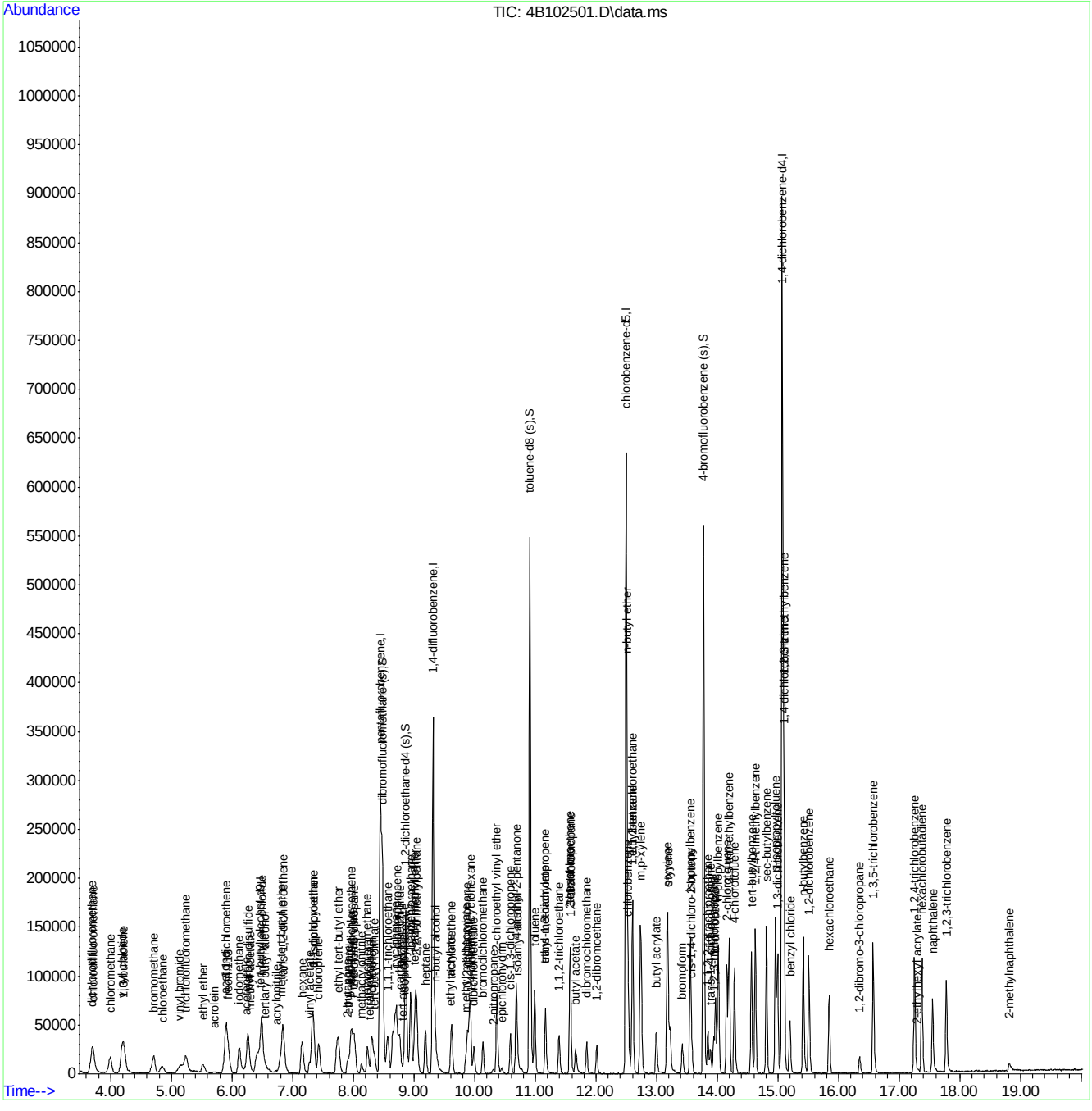
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	styrene	13.184	104	52207	7.34	ug/L		99
93)	butyl acrylate	12.991	55	33991	7.27	ug/L		94
94)	isopropylbenzene	13.555	105	95226	7.62	ug/L		99
95)	bromoform	13.425	173	15657	7.31	ug/L		89
96)	cis-1,4-dichloro-2-butene	13.576	88	7367	6.76	ug/L		96
99)	1,1,2,2-tetrachloroethane	13.843	83	21252	7.51	ug/L		99
100)	trans-1,4-dichloro-2-b...	13.885	53	5767	6.99	ug/L		77
101)	1,2,3-trichloropropane	13.943	110	5545	7.10	ug/L		87
102)	bromobenzene	13.969	156	26460	7.32	ug/L		95
103)	n-propylbenzene	14.016	91	112103	7.60	ug/L		98
104)	2-chlorotoluene	14.157	126	23595	7.58	ug/L		98
105)	4-chlorotoluene	14.282	91	68406	7.56	ug/L		99
106)	1,3,5-trimethylbenzene	14.194	105	81737	7.52	ug/L		96
107)	tert-butylbenzene	14.565	119	64814	6.99	ug/L		98
108)	1,2,4-trimethylbenzene	14.622	105	87606	7.61	ug/L		98
109)	sec-butylbenzene	14.811	105	109547	7.38	ug/L		99
110)	p-isopropyltoluene	14.957	119	99554	7.49	ug/L		99
111)	1,3-dichlorobenzene	14.994	146	55234	7.60	ug/L		100
112)	1,2,3-trimethylbenzene	15.093	105	94766	7.71	ug/L		97
113)	1,4-dichlorobenzene	15.098	146	57117	7.68	ug/L		98
114)	1,2-dichlorobenzene	15.512	146	57144	7.51	ug/L		96
115)	benzyl chloride	15.198	91	44673	7.30	ug/L		98
116)	n-butylbenzene	15.412	92	50915	7.36	ug/L		96
117)	hexachloroethane	15.846	201	16726	6.38	ug/L		94
118)	1,2-dibromo-3-chloropr...	16.348	157	6200	6.49	ug/L		89
119)	1,3,5-trichlorobenzene	16.568	180	52815	6.90	ug/L		98
120)	1,2,4-trichlorobenzene	17.248	180	44163	6.38	ug/L		95
121)	2-ethylhexyl acrylate	17.295	70	951	0.50	ug/L	#	72
122)	hexachlorobutadiene	17.374	225	26430	7.33	ug/L		96
123)	naphthalene	17.546	128	69863	6.06	ug/L		97
124)	1,2,3-trichlorobenzene	17.776	180	37571	6.40	ug/L		99
125)	2-methylnaphthalene	18.812	142	9904	2.15	ug/L		83

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.458	65	124110	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	246239	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	317731	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	329978	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	243264	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	122458	50.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	127049	53.85	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.70%			
75) toluene-d8 (s)	10.909	98	381423	49.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.02%			
98) 4-bromofluorobenzene (s)	13.770	95	177545	50.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.54%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.589	59	27896	98.94	ug/L	92
4) 1,4-dioxane	9.941	88	10842	493.83	ug/L #	66
6) chlorodifluoromethane	3.707	51	85003	19.09	ug/L	96
7) dichlorodifluoromethane	3.686	85	124146	18.91	ug/L	98
8) chloromethane	3.989	50	94614	19.51	ug/L	95
9) vinyl chloride	4.193	62	87729	18.87	ug/L	98
10) 1,3-butadiene	4.225	54	57345	18.76	ug/L	99
11) bromomethane	4.706	94	63906	19.76	ug/L	98
12) chloroethane	4.847	64	38724	19.57	ug/L	94
13) trichlorofluoromethane	5.245	101	107276	19.26	ug/L	98
14) vinyl bromide	5.135	106	28208	19.02	ug/L	94
15) ethyl ether	5.517	74	16339	19.55	ug/L	91
16) acrolein	5.726	56	5871	18.32	ug/L	90
17) freon 113	5.935	151	57296	19.18	ug/L	98
18) 1,1-dichloroethene	5.904	61	78081	19.68	ug/L	98
19) acetone	5.862	58	13447	79.50	ug/L	91
20) acetonitrile	6.217	41	59524	203.94	ug/L	86
21) iodomethane	6.123	142	126227	19.66	ug/L	98
22) carbon disulfide	6.265	76	188232	19.73	ug/L	98
23) methylene chloride	6.489	84	53194	19.71	ug/L	99
24) methyl acetate	6.265	43	26661	19.62	ug/L	97
25) methyl tert butyl ether	6.819	73	141822	19.58	ug/L	97
26) trans-1,2-dichloroethene	6.840	61	67769	20.35	ug/L	95
27) hexane	7.154	56	30883	19.48	ug/L	90
28) di-isopropyl ether	7.342	45	177904	19.67	ug/L	98
29) 2-butanone	7.886	72	12222	71.93	ug/L #	84
30) 1,1-dichloroethane	7.332	63	81381	19.84	ug/L	95
31) chloroprene	7.426	53	64388	19.55	ug/L	98
32) acrylonitrile	6.720	53	13250	19.43	ug/L	97
33) vinyl acetate	7.269	86	4503	16.76	ug/L #	88
34) ethyl tert-butyl ether	7.745	59	161669	19.48	ug/L	97
35) ethyl acetate	7.912	45	4766	18.34	ug/L #	82

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	2,2-dichloropropane	8.011	77	89731	19.95	ug/L		98
37)	cis-1,2-dichloroethene	7.964	96	47612	20.06	ug/L		97
38)	propionitrile	7.938	54	48925	200.01	ug/L		98
39)	methyl acrylate	7.996	85	4168	17.00	ug/L		96
40)	methacrylonitrile	8.132	67	11632	18.22	ug/L		98
41)	bromochloromethane	8.231	128	24768	19.30	ug/L		97
42)	tetrahydrofuran	8.273	72	3993	18.85	ug/L	#	72
43)	chloroform	8.310	83	85212	20.15	ug/L		97
44)	tert-butyl formate	8.351	59	38635	19.86	ug/L		92
46)	1,1,1-trichloroethane	8.571	97	98699	19.14	ug/L		96
47)	cyclohexane	8.686	84	81942	19.26	ug/L		99
49)	1,1-dichloropropene	8.718	75	55816	19.67	ug/L		95
50)	carbon tetrachloride	8.765	117	90765	19.66	ug/L		97
51)	tert-amyl alcohol	8.817	73	11642	109.82	ug/L		94
52)	isopropyl acetate	8.833	87	6806	19.42	ug/L	#	86
55)	n-butyl alcohol	9.340	41	43610	1107.29	ug/L		93
56)	2,2,4-trimethylpentane	9.042	57	174495	17.93	ug/L		99
57)	benzene	8.942	78	155878	19.81	ug/L		99
58)	tert-amyl methyl ether	9.021	73	145262	19.66	ug/L		99
59)	heptane	9.183	57	29556	19.23	ug/L		93
60)	1,2-dichloroethane	8.948	62	55850	19.60	ug/L		94
61)	ethyl acrylate	9.591	55	38512	19.06	ug/L		100
62)	trichloroethene	9.617	95	41567	19.77	ug/L		99
63)	2-chloroethyl vinyl ether	10.360	63	98520	93.34	ug/L		98
64)	methyl methacrylate	9.852	100	7703	18.32	ug/L	#	87
65)	methylcyclohexane	9.921	83	88391	18.78	ug/L		98
66)	1,2-dichloropropane	9.884	63	41654	19.53	ug/L		97
67)	dibromomethane	9.988	93	25488	19.59	ug/L		94
68)	bromodichloromethane	10.135	83	56691	18.79	ug/L		99
69)	2-nitropropane	10.308	41	8141	18.13	ug/L		99
70)	epichlorohydrin	10.444	57	15557	96.04	ug/L		85
71)	cis-1,3-dichloropropene	10.590	75	62970	18.99	ug/L		99
72)	4-methyl-2-pentanone	10.679	58	54739	79.67	ug/L		97
73)	isoamyl alcohol	10.684	70	23968	443.51	ug/L		95
76)	toluene	10.987	92	94499	19.35	ug/L		95
77)	ethyl methacrylate	11.165	69	45086	19.12	ug/L		97
78)	trans-1,3-dichloropropene	11.160	75	56518	19.01	ug/L		98
79)	1,1,2-trichloroethane	11.390	83	28606	19.64	ug/L		96
80)	tetrachloroethene	11.568	164	39104	19.12	ug/L		97
81)	2-hexanone	11.558	58	50191	81.03	ug/L		97
82)	1,3-dichloropropane	11.578	76	52910	19.13	ug/L		98
83)	butyl acetate	11.657	56	23238	19.81	ug/L		93
84)	dibromochloromethane	11.845	129	48292	19.30	ug/L		98
85)	1,2-dibromoethane	12.007	107	55394	18.90	ug/L		95
86)	n-butyl ether	12.504	57	202556	20.02	ug/L		99
87)	chlorobenzene	12.530	112	116582	19.70	ug/L		98
88)	1,1,1,2-tetrachloroethane	12.598	131	56340	19.23	ug/L		96
89)	ethylbenzene	12.604	91	206956	19.68	ug/L		99
90)	m,p-xylene	12.734	106	155459	39.17	ug/L		96
91)	o-xylene	13.168	91	181848	19.81	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	styrene	13.179	104	134639	19.16	ug/L		97
93)	butyl acrylate	12.985	55	91414	19.81	ug/L		98
94)	isopropylbenzene	13.556	105	239712	19.42	ug/L		98
95)	bromoform	13.420	173	40228	19.02	ug/L		96
96)	cis-1,4-dichloro-2-butene	13.576	88	20211	18.77	ug/L		94
99)	1,1,2,2-tetrachloroethane	13.843	83	53738	19.62	ug/L		98
100)	trans-1,4-dichloro-2-b...	13.880	53	14692	18.40	ug/L		98
101)	1,2,3-trichloropropane	13.937	110	14189	18.78	ug/L	#	81
102)	bromobenzene	13.969	156	66225	18.92	ug/L		93
103)	n-propylbenzene	14.011	91	282863	19.80	ug/L		99
104)	2-chlorotoluene	14.157	126	59422	19.72	ug/L		99
105)	4-chlorotoluene	14.277	91	172243	19.67	ug/L		96
106)	1,3,5-trimethylbenzene	14.194	105	208533	19.82	ug/L		98
107)	tert-butylbenzene	14.560	119	167782	18.68	ug/L		97
108)	1,2,4-trimethylbenzene	14.622	105	219167	19.67	ug/L		97
109)	sec-butylbenzene	14.806	105	279193	19.43	ug/L		98
110)	p-isopropyltoluene	14.957	119	252719	19.65	ug/L		98
111)	1,3-dichlorobenzene	14.989	146	139013	19.75	ug/L		99
112)	1,2,3-trimethylbenzene	15.093	105	234387	19.71	ug/L		100
113)	1,4-dichlorobenzene	15.098	146	141069	19.60	ug/L		99
114)	1,2-dichlorobenzene	15.506	146	144676	19.65	ug/L		99
115)	benzyl chloride	15.193	91	114108	19.25	ug/L		100
116)	n-butylbenzene	15.412	92	129065	19.28	ug/L		98
117)	hexachloroethane	15.846	201	46091	18.17	ug/L		98
118)	1,2-dibromo-3-chloropr...	16.343	157	16985	18.37	ug/L		94
119)	1,3,5-trichlorobenzene	16.568	180	138610	18.71	ug/L		97
120)	1,2,4-trichlorobenzene	17.248	180	121164	18.07	ug/L		95
121)	2-ethylhexyl acrylate	17.274	70	4306	2.35	ug/L		77
122)	hexachlorobutadiene	17.374	225	67148	19.25	ug/L		98
123)	naphthalene	17.541	128	201934	18.08	ug/L		99
124)	1,2,3-trichlorobenzene	17.771	180	103217	18.17	ug/L		99
125)	2-methylnaphthalene	18.801	142	32376	7.25	ug/L		98

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

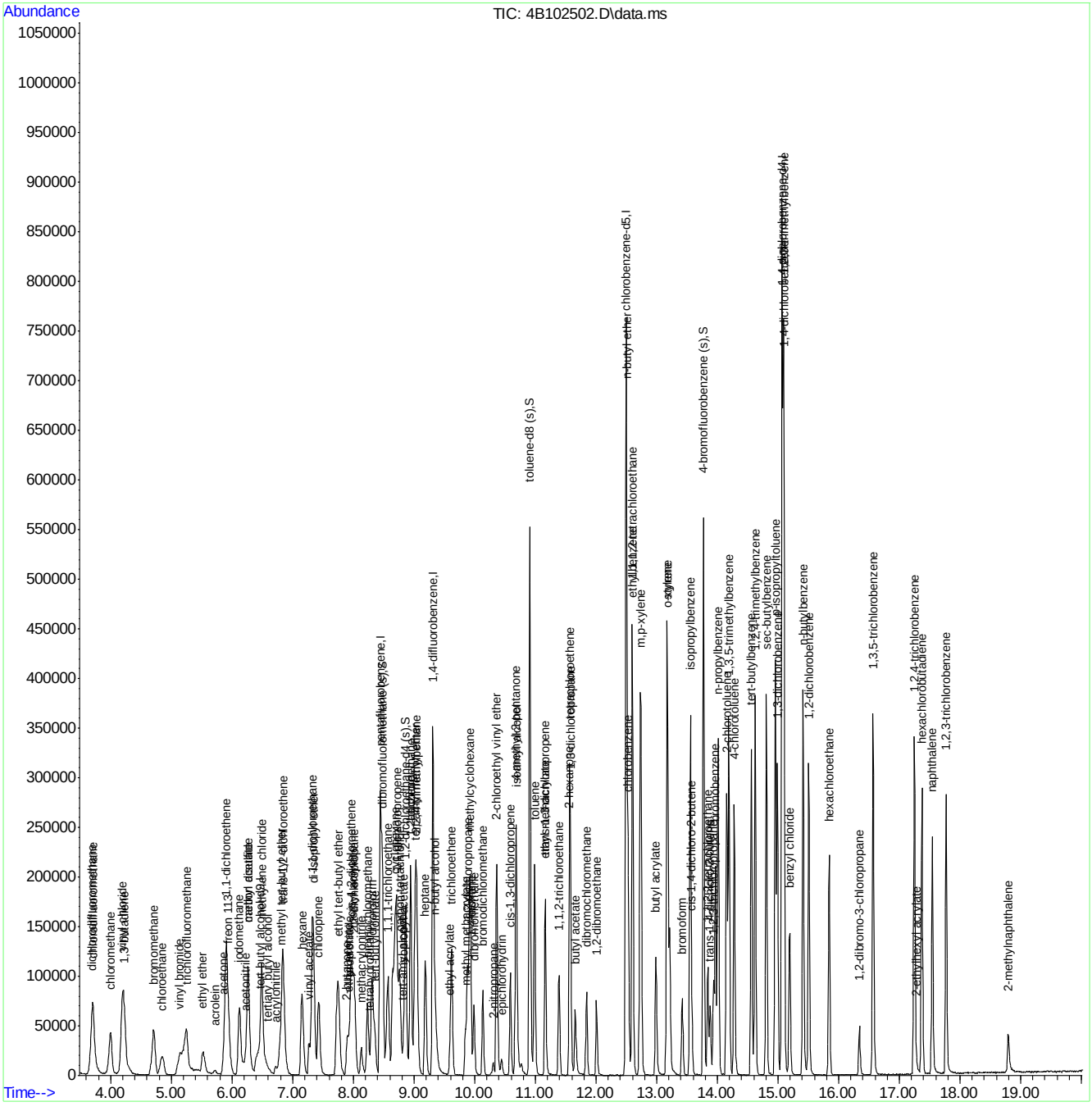
7.7.33

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.463	65	114497	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	243478	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	323280	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	330693	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	246913	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	120139	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
54) 1,2-dichloroethane-d4 (s)	8.864	65	120018	50.00	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 100.00%						
75) toluene-d8 (s)	10.909	98	386044	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
98) 4-bromofluorobenzene (s)	13.770	95	179254	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.578	59	66239	254.65	ug/L	100
4) 1,4-dioxane	9.931	88	25318	1250.00	ug/L	100
6) chlorodifluoromethane	3.702	51	220109	50.00	ug/L	100
7) dichlorodifluoromethane	3.686	85	324291	49.95	ug/L	100
8) chloromethane	3.994	50	239326	49.92	ug/L	100
9) vinyl chloride	4.193	62	229862	50.00	ug/L	100
10) 1,3-butadiene	4.214	54	151155	50.00	ug/L	100
11) bromomethane	4.711	94	159910	50.00	ug/L	100
12) chloroethane	4.847	64	97815	50.00	ug/L	100
13) trichlorofluoromethane	5.239	101	275365	50.00	ug/L	100
14) vinyl bromide	5.129	106	73321	50.00	ug/L	100
15) ethyl ether	5.516	74	41317	50.00	ug/L	100
16) acrolein	5.715	56	15848	50.00	ug/L	100
17) freon 113	5.935	151	147716	50.00	ug/L	100
18) 1,1-dichloroethene	5.898	61	196202	50.00	ug/L	100
19) acetone	5.867	58	33450	200.00	ug/L	100
20) acetonitrile	6.223	41	144299	500.00	ug/L	100
21) iodomethane	6.123	142	317467	50.00	ug/L	100
22) carbon disulfide	6.259	76	471698	50.00	ug/L	100
23) methylene chloride	6.489	84	133414	50.00	ug/L	100
24) methyl acetate	6.264	43	67189	50.00	ug/L	100
25) methyl tert butyl ether	6.819	73	358146	50.02	ug/L	100
26) trans-1,2-dichloroethene	6.840	61	164678	50.00	ug/L	100
27) hexane	7.154	56	78398	50.00	ug/L	100
28) di-isopropyl ether	7.331	45	447115	50.00	ug/L	100
29) 2-butanone	7.886	72	33601	200.00	ug/L	100
30) 1,1-dichloroethane	7.326	63	202760	50.00	ug/L	100
31) chloroprene	7.426	53	162847	50.00	ug/L	100
32) acrylonitrile	6.709	53	33708	50.00	ug/L	100
33) vinyl acetate	7.258	86	13284	50.00	ug/L #	93
34) ethyl tert-butyl ether	7.745	59	410407	50.00	ug/L	100
35) ethyl acetate	7.901	45	12850	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 2,2-dichloropropane	8.011	77	222410	50.00	ug/L	100
37) cis-1,2-dichloroethene	7.964	96	117329	50.00	ug/L	100
38) propionitrile	7.933	54	120938	500.00	ug/L	100
39) methyl acrylate	7.990	85	12124	50.00	ug/L	100
40) methacrylonitrile	8.126	67	31570	50.00	ug/L	100
41) bromochloromethane	8.231	128	63431	50.00	ug/L	100
42) tetrahydrofuran	8.257	72	10473	50.00	ug/L	100
43) chloroform	8.304	83	209120	50.00	ug/L	100
44) tert-butyl formate	8.351	59	96183	50.00	ug/L	100
46) 1,1,1-trichloroethane	8.571	97	254982	50.00	ug/L	100
47) cyclohexane	8.691	84	210290	50.00	ug/L	100
49) 1,1-dichloropropene	8.712	75	140275	50.00	ug/L	100
50) carbon tetrachloride	8.759	117	228231	50.00	ug/L	100
51) tert-amyl alcohol	8.812	73	26206	250.00	ug/L	100
52) isopropyl acetate	8.832	87	17324	50.00	ug/L	100
55) n-butyl alcohol	9.340	41	100181	2500.00	ug/L	100
56) 2,2,4-trimethylpentane	9.042	57	495032	50.00	ug/L	100
57) benzene	8.942	78	400403	50.00	ug/L	100
58) tert-amyl methyl ether	9.021	73	375806	50.00	ug/L	100
59) heptane	9.188	57	78174	50.00	ug/L	100
60) 1,2-dichloroethane	8.948	62	144982	50.00	ug/L	100
61) ethyl acrylate	9.586	55	102791	50.00	ug/L	100
62) trichloroethene	9.617	95	106950	50.00	ug/L	100
63) 2-chloroethyl vinyl ether	10.360	63	268492	250.00	ug/L	100
64) methyl methacrylate	9.847	100	21387	50.00	ug/L	100
65) methylcyclohexane	9.926	83	239419	50.00	ug/L	100
66) 1,2-dichloropropane	9.879	63	108496	50.00	ug/L	100
67) dibromomethane	9.988	93	66174	50.00	ug/L	100
68) bromodichloromethane	10.135	83	153511	50.00	ug/L	100
69) 2-nitropropane	10.302	41	22268	48.73	ug/L	100
70) epichlorohydrin	10.438	57	41205	250.00	ug/L	100
71) cis-1,3-dichloropropene	10.585	75	168675	50.00	ug/L	100
72) 4-methyl-2-pentanone	10.679	58	139820	200.00	ug/L	100
73) isoamyl alcohol	10.679	70	54985	1000.00	ug/L	100
76) toluene	10.987	92	244661	50.00	ug/L	100
77) ethyl methacrylate	11.160	69	118174	50.00	ug/L	100
78) trans-1,3-dichloropropene	11.160	75	148961	50.00	ug/L	100
79) 1,1,2-trichloroethane	11.390	83	72966	50.00	ug/L	100
80) tetrachloroethene	11.568	164	102482	50.00	ug/L	100
81) 2-hexanone	11.557	58	124146	200.00	ug/L	100
82) 1,3-dichloropropane	11.578	76	138562	50.00	ug/L	100
83) butyl acetate	11.652	56	58782	50.00	ug/L	100
84) dibromochloromethane	11.845	129	125375	50.00	ug/L	100
85) 1,2-dibromoethane	12.007	107	146886	50.00	ug/L	100
86) n-butyl ether	12.504	57	506948	50.00	ug/L	100
87) chlorobenzene	12.530	112	296589	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	12.598	131	146777	50.00	ug/L	100
89) ethylbenzene	12.603	91	526979	50.00	ug/L	100
90) m,p-xylene	12.734	106	397708	100.00	ug/L	100
91) o-xylene	13.168	91	459936	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

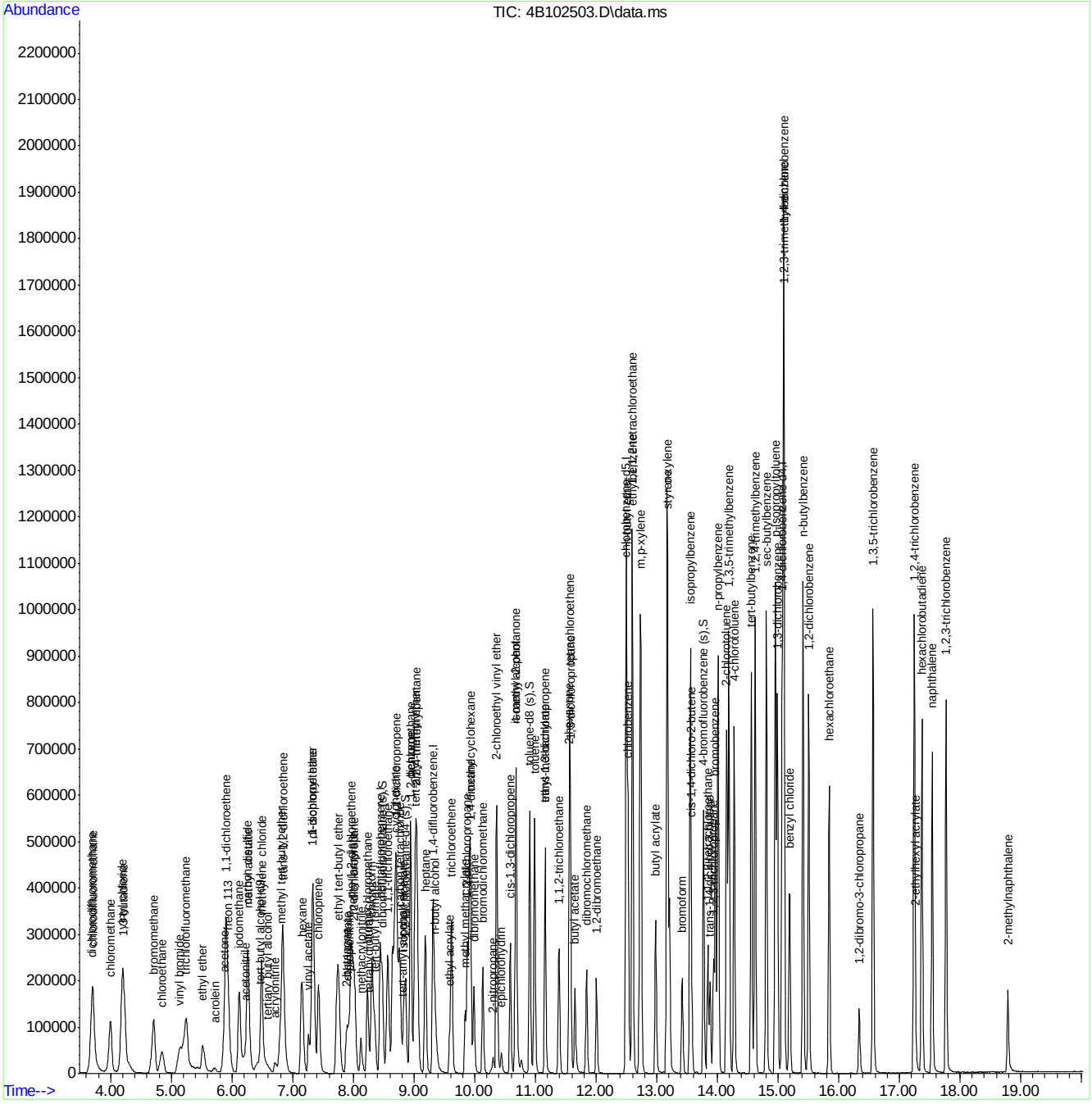
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	styrene	13.179	104	352104	50.00	ug/L	100
93)	butyl acrylate	12.985	55	231192	50.00	ug/L	100
94)	isopropylbenzene	13.555	105	618416	50.00	ug/L	100
95)	bromoform	13.419	173	106005	50.00	ug/L	100
96)	cis-1,4-dichloro-2-butene	13.571	88	53991	50.05	ug/L	100
99)	1,1,2,2-tetrachloroethane	13.843	83	139002	50.00	ug/L	100
100)	trans-1,4-dichloro-2-b...	13.880	53	40514	50.00	ug/L	100
101)	1,2,3-trichloropropane	13.937	110	38342	50.00	ug/L	100
102)	bromobenzene	13.969	156	177672	50.00	ug/L	100
103)	n-propylbenzene	14.010	91	724870	50.00	ug/L	100
104)	2-chlorotoluene	14.152	126	152897	50.00	ug/L	100
105)	4-chlorotoluene	14.277	91	444377	50.00	ug/L	100
106)	1,3,5-trimethylbenzene	14.188	105	533861	50.00	ug/L	100
107)	tert-butylbenzene	14.560	119	455797	50.00	ug/L	100
108)	1,2,4-trimethylbenzene	14.622	105	565503	50.00	ug/L	100
109)	sec-butylbenzene	14.805	105	729091	50.00	ug/L	100
110)	p-isopropyltoluene	14.957	119	652692	50.00	ug/L	100
111)	1,3-dichlorobenzene	14.988	146	357221	50.00	ug/L	100
112)	1,2,3-trimethylbenzene	15.093	105	603509	50.00	ug/L	100
113)	1,4-dichlorobenzene	15.098	146	365262	50.00	ug/L	100
114)	1,2-dichlorobenzene	15.506	146	373662	50.00	ug/L	100
115)	benzyl chloride	15.187	91	300761	50.00	ug/L	100
116)	n-butylbenzene	15.412	92	339695	50.00	ug/L	100
117)	hexachloroethane	15.841	201	128727	50.00	ug/L	100
118)	1,2-dibromo-3-chloropr...	16.338	157	46933	50.00	ug/L	100
119)	1,3,5-trichlorobenzene	16.568	180	375976	50.00	ug/L	100
120)	1,2,4-trichlorobenzene	17.248	180	340214	50.00	ug/L	100
121)	2-ethylhexyl acrylate	17.264	70	18591	10.00	ug/L	100
122)	hexachlorobutadiene	17.373	225	177008	50.00	ug/L	100
123)	naphthalene	17.541	128	566780	50.00	ug/L	100
124)	1,2,3-trichlorobenzene	17.771	180	288293	50.00	ug/L	100
125)	2-methylnaphthalene	18.791	142	113321	25.00	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	109247	500.00	ug/L	0.01
5) pentafluorobenzene	8.446	168	245455	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	335865	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	337769	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	218310	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	121440	50.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.26%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	123821	49.65	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.30%			
75) toluene-d8 (s)	10.909	98	406325	51.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.04%			
98) 4-bromofluorobenzene (s)	13.770	95	162407	51.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.584	59	130928	527.53	ug/L	98
4) 1,4-dioxane	9.926	88	51110	2644.67	ug/L	87
6) chlorodifluoromethane	3.702	51	440738	99.31	ug/L	98
7) dichlorodifluoromethane	3.681	85	657145	100.40	ug/L	98
8) chloromethane	3.995	50	490605	101.50	ug/L	98
9) vinyl chloride	4.193	62	466167	100.58	ug/L	99
10) 1,3-butadiene	4.214	54	302308	99.19	ug/L	99
11) bromomethane	4.706	94	322313	99.97	ug/L	98
12) chloroethane	4.847	64	193984	98.36	ug/L	97
13) trichlorofluoromethane	5.245	101	549758	99.02	ug/L	100
14) vinyl bromide	5.130	106	150859	102.05	ug/L	98
15) ethyl ether	5.517	74	83530	100.27	ug/L	92
16) acrolein	5.705	56	32654	102.19	ug/L	92
17) freon 113	5.935	151	290957	97.69	ug/L	98
18) 1,1-dichloroethene	5.898	61	382774	96.76	ug/L	98
19) acetone	5.872	58	68447	405.95	ug/L	100
20) acetonitrile	6.223	41	287639	988.65	ug/L	96
21) iodomethane	6.118	142	628283	98.16	ug/L	98
22) carbon disulfide	6.259	76	928533	97.63	ug/L	100
23) methylene chloride	6.484	84	262148	97.45	ug/L	97
24) methyl acetate	6.265	43	130810	96.56	ug/L	98
25) methyl tert butyl ether	6.824	73	703295	97.43	ug/L	97
26) trans-1,2-dichloroethene	6.835	61	329355	99.19	ug/L	97
27) hexane	7.154	56	160502	101.54	ug/L	94
28) di-isopropyl ether	7.331	45	897831	99.59	ug/L	99
29) 2-butanone	7.881	72	66723	393.95	ug/L	99
30) 1,1-dichloroethane	7.331	63	403484	98.70	ug/L	99
31) chloroprene	7.426	53	325793	99.22	ug/L	99
32) acrylonitrile	6.709	53	68439	100.70	ug/L	97
33) vinyl acetate	7.258	86	28720	107.23	ug/L #	91
34) ethyl tert-butyl ether	7.745	59	820759	99.19	ug/L	99
35) ethyl acetate	7.907	45	26147	100.92	ug/L #	72

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	8.017	77	437537	97.57	ug/L		99
37) cis-1,2-dichloroethene	7.964	96	233490	98.70	ug/L		96
38) propionitrile	7.933	54	245479	1006.72	ug/L		96
39) methyl acrylate	7.985	85	25107	102.71	ug/L	#	67
40) methacrylonitrile	8.121	67	64295	101.01	ug/L		97
41) bromochloromethane	8.231	128	127046	99.34	ug/L		96
42) tetrahydrofuran	8.262	72	22660	107.31	ug/L	#	78
43) chloroform	8.304	83	413770	98.13	ug/L		98
44) tert-butyl formate	8.346	59	197475	101.83	ug/L		99
46) 1,1,1-trichloroethane	8.571	97	518941	100.94	ug/L		96
47) cyclohexane	8.691	84	433254	102.18	ug/L		98
49) 1,1-dichloropropene	8.717	75	282330	99.82	ug/L		98
50) carbon tetrachloride	8.759	117	459228	99.80	ug/L		99
51) tert-amyl alcohol	8.812	73	48957	463.28	ug/L	#	86
52) isopropyl acetate	8.838	87	37071	106.13	ug/L	#	79
55) n-butyl alcohol	9.335	41	189309	4547.16	ug/L		95
56) 2,2,4-trimethylpentane	9.047	57	1034119	100.54	ug/L		99
57) benzene	8.942	78	812133	97.61	ug/L		99
58) tert-amyl methyl ether	9.021	73	748939	95.91	ug/L		99
59) heptane	9.183	57	159717	98.33	ug/L		97
60) 1,2-dichloroethane	8.948	62	288478	95.76	ug/L		98
61) ethyl acrylate	9.586	55	213083	99.76	ug/L		99
62) trichloroethene	9.617	95	222514	100.13	ug/L		100
63) 2-chloroethyl vinyl ether	10.360	63	541793	485.57	ug/L		99
64) methyl methacrylate	9.842	100	44263	99.60	ug/L		94
65) methylcyclohexane	9.926	83	488563	98.21	ug/L		96
66) 1,2-dichloropropane	9.884	63	221708	98.34	ug/L		98
67) dibromomethane	9.988	93	134618	97.90	ug/L		98
68) bromodichloromethane	10.135	83	319832	100.27	ug/L		100
69) 2-nitropropane	10.302	41	47297	99.62	ug/L		94
70) epichlorohydrin	10.438	57	87754	512.47	ug/L		97
71) cis-1,3-dichloropropene	10.590	75	348615	99.47	ug/L		98
72) 4-methyl-2-pentanone	10.679	58	282229	388.58	ug/L		99
73) isoamyl alcohol	10.679	70	99272	1737.79	ug/L	#	87
76) toluene	10.987	92	508899	101.82	ug/L		99
77) ethyl methacrylate	11.160	69	235669	97.62	ug/L		98
78) trans-1,3-dichloropropene	11.160	75	303593	99.77	ug/L		99
79) 1,1,2-trichloroethane	11.390	83	153646	103.08	ug/L		99
80) tetrachloroethene	11.568	164	212661	101.58	ug/L		99
81) 2-hexanone	11.552	58	240086	378.68	ug/L		96
82) 1,3-dichloropropane	11.578	76	277949	98.20	ug/L		95
83) butyl acetate	11.652	56	109435	91.14	ug/L		98
84) dibromochloromethane	11.845	129	261712	102.19	ug/L		97
85) 1,2-dibromoethane	12.007	107	296693	98.88	ug/L		98
86) n-butyl ether	12.499	57	987511	95.36	ug/L		99
87) chlorobenzene	12.530	112	598214	98.74	ug/L		99
88) 1,1,1,2-tetrachloroethane	12.598	131	305111	101.76	ug/L		97
89) ethylbenzene	12.598	91	1050116	97.55	ug/L		99
90) m,p-xylene	12.734	106	785814	193.45	ug/L		98
91) o-xylene	13.168	91	924255	98.37	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

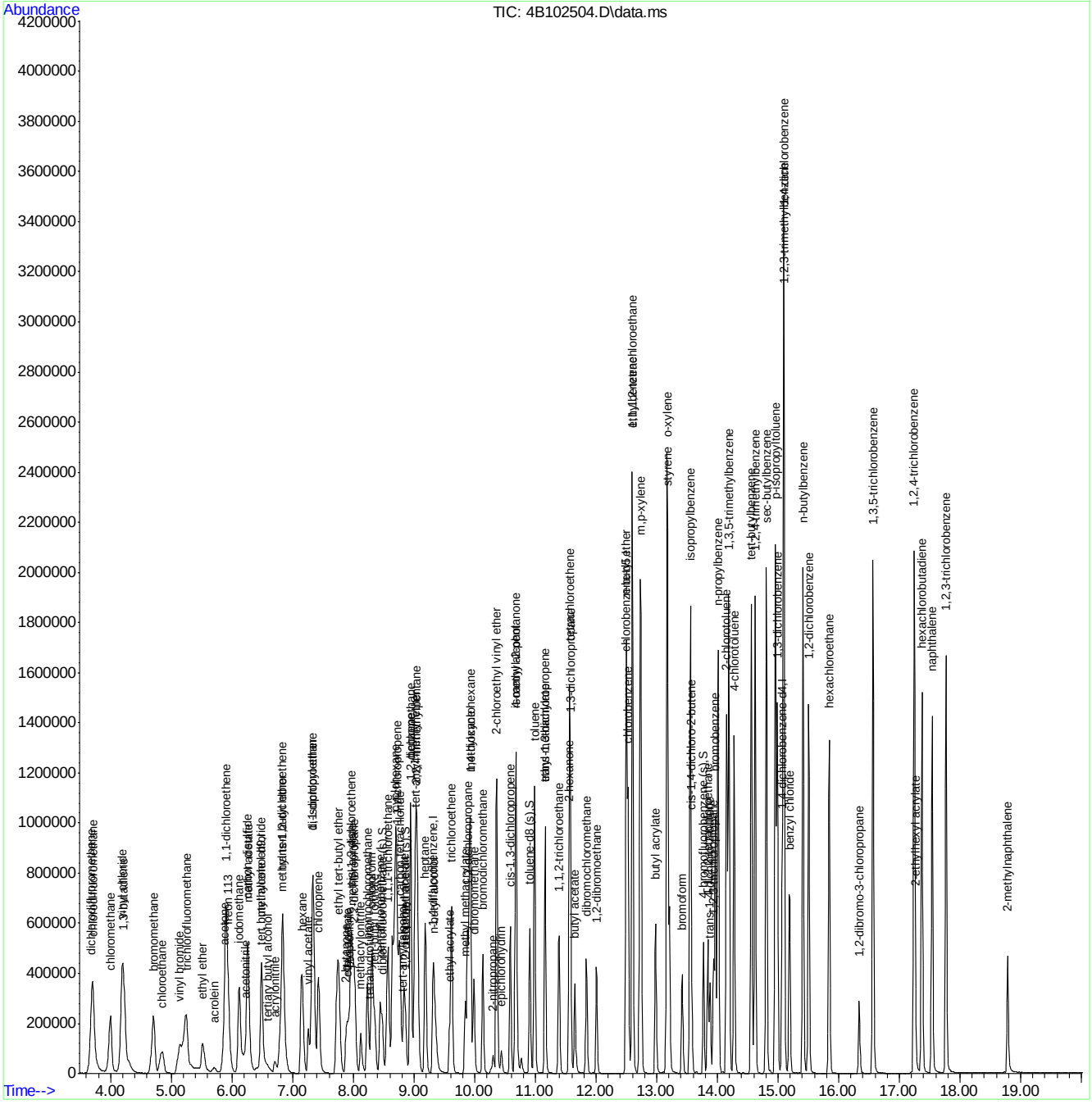
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	styrene	13.179	104	663690	92.27	ug/L	100
93)	butyl acrylate	12.980	55	412535	87.35	ug/L	97
94)	isopropylbenzene	13.555	105	1263670	100.03	ug/L	99
95)	bromoform	13.419	173	202268	93.41	ug/L	98
96)	cis-1,4-dichloro-2-butene	13.571	88	97040	88.06	ug/L	97
99)	1,1,2,2-tetrachloroethane	13.843	83	266339	108.36	ug/L	98
100)	trans-1,4-dichloro-2-b...	13.880	53	71787	100.20	ug/L	96
101)	1,2,3-trichloropropane	13.937	110	69916	103.12	ug/L	97
102)	bromobenzene	13.969	156	321420	102.30	ug/L	97
103)	n-propylbenzene	14.011	91	1367602	106.69	ug/L	99
104)	2-chlorotoluene	14.152	126	290632	107.49	ug/L	97
105)	4-chlorotoluene	14.277	91	795085	101.18	ug/L	99
106)	1,3,5-trimethylbenzene	14.188	105	1076706	114.05	ug/L	99
107)	tert-butylbenzene	14.560	119	973215	120.75	ug/L	100
108)	1,2,4-trimethylbenzene	14.622	105	1086499	108.65	ug/L	100
109)	sec-butylbenzene	14.806	105	1499620	116.32	ug/L	100
110)	p-isopropyltoluene	14.957	119	1290790	111.84	ug/L	99
111)	1,3-dichlorobenzene	14.989	146	636761	100.80	ug/L	99
112)	1,2,3-trimethylbenzene	15.093	105	1190296	111.54	ug/L	99
113)	1,4-dichlorobenzene	15.098	146	660771	102.30	ug/L	99
114)	1,2-dichlorobenzene	15.506	146	680264	102.95	ug/L	98
115)	benzyl chloride	15.187	91	541803	101.87	ug/L	100
116)	n-butylbenzene	15.412	92	637023	106.05	ug/L	99
117)	hexachloroethane	15.846	201	280486	123.22	ug/L	98
118)	1,2-dibromo-3-chloropr...	16.338	157	90634	109.21	ug/L	96
119)	1,3,5-trichlorobenzene	16.568	180	735041	110.56	ug/L	98
120)	1,2,4-trichlorobenzene	17.243	180	703796	116.99	ug/L	98
121)	2-ethylhexyl acrylate	17.264	70	51312	31.22	ug/L	97
122)	hexachlorobutadiene	17.374	225	352245	112.54	ug/L	99
123)	naphthalene	17.541	128	1181794	117.91	ug/L	99
124)	1,2,3-trichlorobenzene	17.771	180	600906	117.87	ug/L	98
125)	2-methylnaphthalene	18.786	142	271694	67.79	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



M4B4435.M Mon Feb 22 11:15:57 2021 MS4B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	113724	500.00	ug/L	0.02
5) pentafluorobenzene	8.446	168	265190	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	368992	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	371382	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	257112	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.482	113	128552	49.12	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.24%						
54) 1,2-dichloroethane-d4 (s)	8.864	65	130335	47.57	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 95.14%						
75) toluene-d8 (s)	10.909	98	450070	51.91	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 103.82%						
98) 4-bromofluorobenzene (s)	13.770	95	185818	49.77	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.54%						
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.584	59	270203	1045.82	ug/L	95
4) 1,4-dioxane	9.931	88	106041	5271.04	ug/L	93
6) chlorodifluoromethane	3.707	51	926029	193.13	ug/L	99
7) dichlorodifluoromethane	3.697	85	1291455	182.63	ug/L	99
8) chloromethane	4.000	50	958473	183.54	ug/L	98
9) vinyl chloride	4.193	62	920725	183.88	ug/L	99
10) 1,3-butadiene	4.214	54	603458	183.27	ug/L	99
11) bromomethane	4.711	94	615784	176.78	ug/L	98
12) chloroethane	4.852	64	375647	176.30	ug/L	98
13) trichlorofluoromethane	5.245	101	1100924	183.54	ug/L	99
14) vinyl bromide	5.135	106	299854	187.74	ug/L	97
15) ethyl ether	5.527	74	170627	189.58	ug/L	98
16) acrolein	5.715	56	70355	203.79	ug/L	86
17) freon 113	5.930	151	602460	187.23	ug/L	98
18) 1,1-dichloroethene	5.898	61	784716	183.60	ug/L	98
19) acetone	5.878	58	139813	767.51	ug/L	97
20) acetonitrile	6.223	41	583030	1854.81	ug/L	99
21) iodomethane	6.123	142	1312020	189.72	ug/L	100
22) carbon disulfide	6.259	76	1903264	185.23	ug/L	99
23) methylene chloride	6.489	84	541796	186.43	ug/L	97
24) methyl acetate	6.259	43	268338	183.34	ug/L	99
25) methyl tert butyl ether	6.824	73	1399181	179.40	ug/L	97
26) trans-1,2-dichloroethene	6.840	61	676216	188.50	ug/L	99
27) hexane	7.148	56	346971	203.17	ug/L	93
28) di-isopropyl ether	7.337	45	1824765	187.35	ug/L	99
29) 2-butanone	7.881	72	144899	791.86	ug/L	97
30) 1,1-dichloroethane	7.332	63	815786	184.70	ug/L	98
31) chloroprene	7.426	53	670551	189.03	ug/L	99
32) acrylonitrile	6.709	53	144036	196.16	ug/L	98
33) vinyl acetate	7.258	86	60954	210.64	ug/L	97
34) ethyl tert-butyl ether	7.750	59	1648667	184.41	ug/L	98
35) ethyl acetate	7.902	45	55580	198.56	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	2,2-dichloropropane	8.017	77	874035	180.40	ug/L		99
37)	cis-1,2-dichloroethene	7.964	96	482524	188.79	ug/L		99
38)	propionitrile	7.933	54	511358	1941.04	ug/L		96
39)	methyl acrylate	7.991	85	55162	208.87	ug/L	#	78
40)	methacrylonitrile	8.127	67	139225	202.45	ug/L		90
41)	bromochloromethane	8.231	128	261825	189.49	ug/L		95
42)	tetrahydrofuran	8.257	72	46858	205.39	ug/L	#	71
43)	chloroform	8.304	83	857116	188.16	ug/L		97
44)	tert-butyl formate	8.351	59	394197	188.14	ug/L		98
46)	1,1,1-trichloroethane	8.571	97	1077794	194.04	ug/L		97
47)	cyclohexane	8.691	84	893785	195.11	ug/L		97
49)	1,1-dichloropropene	8.718	75	581785	190.39	ug/L		98
50)	carbon tetrachloride	8.765	117	948342	190.75	ug/L		98
51)	tert-amyl alcohol	8.817	73	105786	926.55	ug/L	#	84
52)	isopropyl acetate	8.838	87	79272	210.06	ug/L	#	79
55)	n-butyl alcohol	9.335	41	387720	8476.85	ug/L		98
56)	2,2,4-trimethylpentane	9.052	57	2262377	200.20	ug/L		97
57)	benzene	8.942	78	1717495	187.90	ug/L		98
58)	tert-amyl methyl ether	9.021	73	1491176	173.82	ug/L		98
59)	heptane	9.188	57	343764	192.63	ug/L		97
60)	1,2-dichloroethane	8.948	62	595133	179.82	ug/L		98
61)	ethyl acrylate	9.586	55	457875	195.13	ug/L		98
62)	trichloroethene	9.617	95	474611	194.40	ug/L		98
63)	2-chloroethyl vinyl ether	10.360	63	1137126	927.64	ug/L		99
64)	methyl methacrylate	9.842	100	95798	196.22	ug/L		98
65)	methylcyclohexane	9.926	83	1022165	187.02	ug/L		98
66)	1,2-dichloropropane	9.884	63	458070	184.95	ug/L		99
67)	dibromomethane	9.988	93	287611	190.39	ug/L		97
68)	bromodichloromethane	10.135	83	689568	196.77	ug/L		100
69)	2-nitropropane	10.302	41	101659	194.90	ug/L		93
70)	epichlorohydrin	10.444	57	189304	1006.26	ug/L		97
71)	cis-1,3-dichloropropene	10.590	75	768692	199.63	ug/L		98
72)	4-methyl-2-pentanone	10.679	58	575305	720.98	ug/L		97
73)	isoamyl alcohol	10.679	70	200432	3193.63	ug/L	#	85
76)	toluene	10.987	92	1127591	205.19	ug/L		98
77)	ethyl methacrylate	11.155	69	492916	185.71	ug/L		98
78)	trans-1,3-dichloropropene	11.160	75	648228	193.74	ug/L		97
79)	1,1,2-trichloroethane	11.390	83	326837	199.43	ug/L		97
80)	tetrachloroethene	11.573	164	467629	203.16	ug/L		98
81)	2-hexanone	11.558	58	486883	698.44	ug/L		95
82)	1,3-dichloropropane	11.578	76	587489	188.77	ug/L		95
83)	butyl acetate	11.652	56	225178	170.55	ug/L		96
84)	dibromochloromethane	11.845	129	566483	201.16	ug/L		100
85)	1,2-dibromoethane	12.007	107	641308	194.38	ug/L		98
86)	n-butyl ether	12.504	57	2032682	178.52	ug/L		99
87)	chlorobenzene	12.530	112	1301613	195.39	ug/L		97
88)	1,1,1,2-tetrachloroethane	12.598	131	648844	196.81	ug/L		99
89)	ethylbenzene	12.598	91	2227954	188.23	ug/L		99
90)	m,p-xylene	12.734	106	1698753	380.34	ug/L		97
91)	o-xylene	13.168	91	1978031	191.47	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

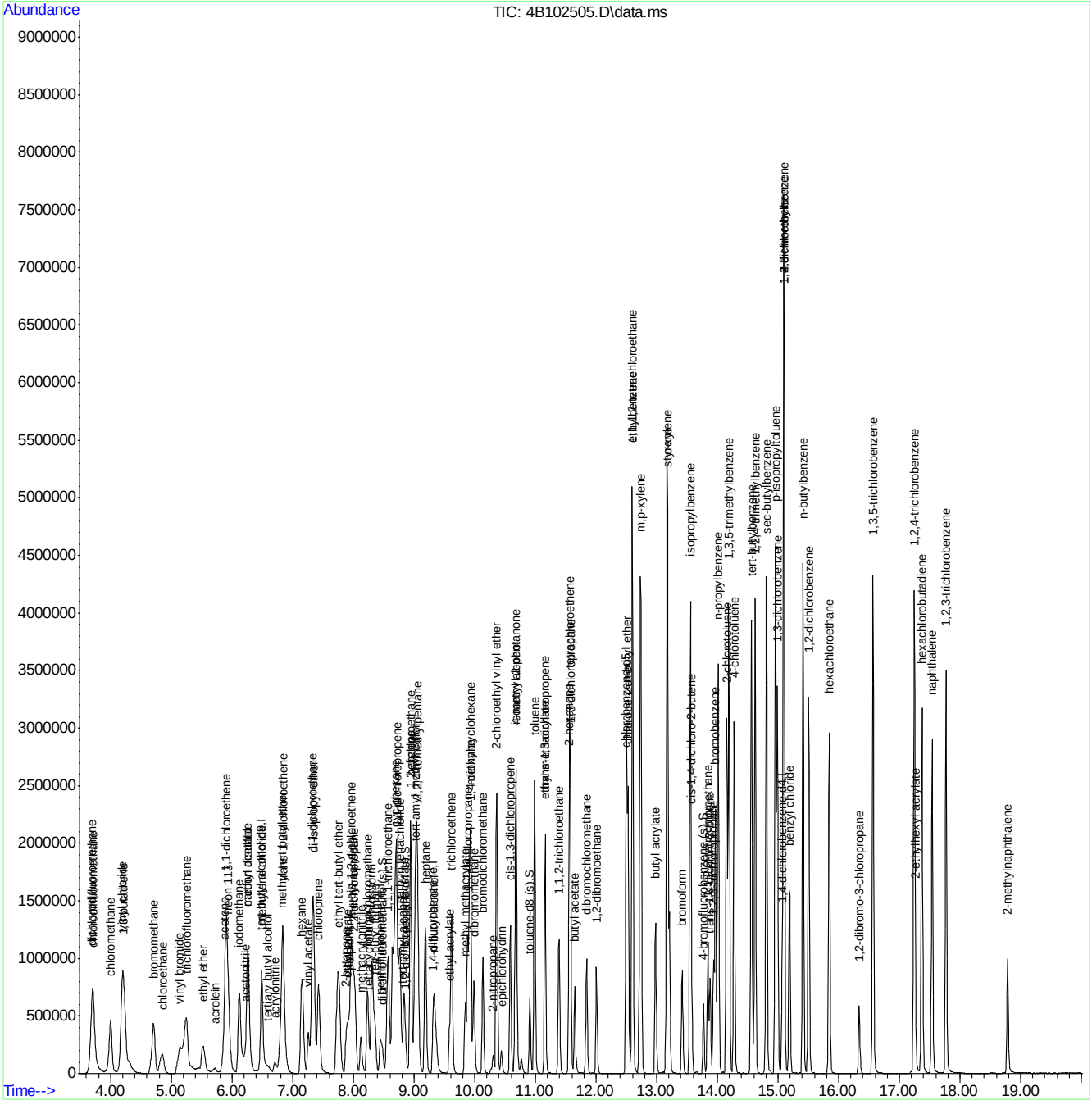
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	styrene	13.179	104	1461180	184.76	ug/L	100
93)	butyl acrylate	12.980	55	876287	168.75	ug/L	98
94)	isopropylbenzene	13.556	105	2735370	196.93	ug/L	99
95)	bromoform	13.420	173	454275	190.79	ug/L	98
96)	cis-1,4-dichloro-2-butene	13.571	88	215330	177.73	ug/L	96
99)	1,1,2,2-tetrachloroethane	13.843	83	574093	198.31	ug/L	97
100)	trans-1,4-dichloro-2-b...	13.880	53	162354	192.42	ug/L	98
101)	1,2,3-trichloropropane	13.937	110	152206	190.61	ug/L	95
102)	bromobenzene	13.969	156	731360	197.65	ug/L	100
103)	n-propylbenzene	14.011	91	2951138	195.49	ug/L	100
104)	2-chlorotoluene	14.157	126	638388	200.48	ug/L	98
105)	4-chlorotoluene	14.277	91	1787386	193.13	ug/L	98
106)	1,3,5-trimethylbenzene	14.188	105	2337877	210.27	ug/L	99
107)	tert-butylbenzene	14.565	119	2151623	226.67	ug/L	96
108)	1,2,4-trimethylbenzene	14.622	105	2369564	201.20	ug/L	99
109)	sec-butylbenzene	14.811	105	3256732	214.48	ug/L	99
110)	p-isopropyltoluene	14.957	119	2807162	206.51	ug/L	99
111)	1,3-dichlorobenzene	14.989	146	1471645	197.81	ug/L	99
112)	1,2,3-trimethylbenzene	15.093	105	2601133	206.95	ug/L	99
113)	1,4-dichlorobenzene	15.098	146	1521047	199.95	ug/L	100
114)	1,2-dichlorobenzene	15.506	146	1518516	195.13	ug/L	99
115)	benzyl chloride	15.187	91	1208408	192.92	ug/L	100
116)	n-butylbenzene	15.412	92	1399421	197.81	ug/L	99
117)	hexachloroethane	15.846	201	635533	237.06	ug/L	98
118)	1,2-dibromo-3-chloropr...	16.338	157	191558	195.98	ug/L	98
119)	1,3,5-trichlorobenzene	16.568	180	1594609	203.65	ug/L	98
120)	1,2,4-trichlorobenzene	17.248	180	1439995	203.24	ug/L	97
121)	2-ethylhexyl acrylate	17.264	70	126226	65.20	ug/L	98
122)	hexachlorobutadiene	17.374	225	750725	203.65	ug/L	100
123)	naphthalene	17.541	128	2383334	201.91	ug/L	99
124)	1,2,3-trichlorobenzene	17.771	180	1220443	203.27	ug/L	98
125)	2-methylnaphthalene	18.786	142	581655	123.23	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	115382	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	271418	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	356044	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	361492	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	260659	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	132877	49.31	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.62%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	131757	48.25	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 96.50%			
75) toluene-d8 (s)	10.909	98	413916	50.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.24%			
98) 4-bromofluorobenzene (s)	13.770	95	192597	49.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.70%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.552	59	68032	267.32	ug/L	95
4) 1,4-dioxane	9.926	88	27690	1403.94	ug/L	94
7) dichlorodifluoromethane	3.691	85	353029	54.17	ug/L	96
8) chloromethane	4.000	50	232544	42.76	ug/L	96
9) vinyl chloride	4.199	62	250215	51.89	ug/L	97
10) 1,3-butadiene	4.219	54	159767	51.30	ug/L	99
11) bromomethane	4.711	94	189448	51.67	ug/L	98
12) chloroethane	4.847	64	108069	52.49	ug/L	96
13) trichlorofluoromethane	5.245	101	296110	50.35	ug/L	99
14) vinyl bromide	5.135	106	86962	57.55	ug/L	93
15) ethyl ether	5.527	74	44301	48.74	ug/L	90
16) acrolein	5.715	56	18405	56.89	ug/L	96
17) freon 113	5.935	151	168322	53.75	ug/L	97
18) 1,1-dichloroethene	5.904	61	207361	47.39	ug/L	97
19) acetone	5.872	58	37343	207.72	ug/L	91
20) acetonitrile	6.233	41	125069	408.57	ug/L	99
21) iodomethane	6.118	142	304490	43.58	ug/L	99
22) carbon disulfide	6.264	76	571925	54.62	ug/L	99
23) methylene chloride	6.489	84	143752	46.77	ug/L	98
24) methyl acetate	6.264	43	65599	48.11	ug/L	97
25) methyl tert butyl ether	6.824	73	731460	93.39	ug/L	99
26) trans-1,2-dichloroethene	6.840	61	174137	48.21	ug/L	99
27) hexane	7.154	56	94684	56.02	ug/L	92
28) di-isopropyl ether	7.331	45	445526	45.83	ug/L	99
29) 2-butanone	7.886	72	37008	222.37	ug/L	95
30) 1,1-dichloroethane	7.331	63	221102	49.55	ug/L	99
31) chloroprene	7.431	53	177263	49.97	ug/L	98
32) acrylonitrile	6.719	53	39090	55.33	ug/L	96
33) vinyl acetate	7.263	86	14083	50.18	ug/L #	84
34) ethyl tert-butyl ether	7.739	59	409018	46.11	ug/L	98
35) ethyl acetate	7.912	45	12664	49.40	ug/L #	53
36) 2,2-dichloropropane	8.011	77	219413	44.44	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	7.964	96	127556	49.11	ug/L		98
38) propionitrile	7.938	54	130506	500.24	ug/L		94
39) methyl acrylate	7.990	85	12124	49.34	ug/L	#	75
40) methacrylonitrile	8.132	67	33972	52.72	ug/L		92
41) bromochloromethane	8.231	128	68725	49.35	ug/L		98
42) tetrahydrofuran	8.257	72	11752	50.99	ug/L		82
43) chloroform	8.304	83	235467	48.45	ug/L		97
44) tert-butyl formate	8.346	59	84059	42.35	ug/L		96
46) 1,1,1-trichloroethane	8.571	97	265466	49.07	ug/L		99
47) cyclohexane	8.691	84	274956	60.90	ug/L		89
49) 1,1-dichloropropene	8.717	75	152034	48.23	ug/L		99
50) carbon tetrachloride	8.759	117	237788	48.62	ug/L		98
51) tert-amyl alcohol	8.806	73	27802	235.16	ug/L		93
52) isopropyl acetate	8.838	87	17793	47.94	ug/L	#	84
55) n-butyl alcohol	9.340	41	101860	2393.50	ug/L		97
56) 2,2,4-trimethylpentane	9.042	57	537344	54.77	ug/L		98
57) benzene	8.942	78	439758	49.50	ug/L		99
58) tert-amyl methyl ether	9.021	73	370478	47.00	ug/L		98
59) heptane	9.188	57	82660	50.71	ug/L		99
60) 1,2-dichloroethane	8.948	62	150783	47.20	ug/L		91
61) ethyl acrylate	9.586	55	103497	49.31	ug/L		99
62) trichloroethene	9.617	95	117572	50.80	ug/L		98
63) 2-chloroethyl vinyl ether	10.360	63	291099	270.17	ug/L		99
64) methyl methacrylate	9.847	100	21419	50.85	ug/L	#	76
65) methylcyclohexane	9.920	83	265150	54.36	ug/L		97
66) 1,2-dichloropropane	9.884	63	113643	48.94	ug/L		99
67) dibromomethane	9.988	93	69309	48.17	ug/L		97
68) bromodichloromethane	10.135	83	161043	48.37	ug/L		98
69) 2-nitropropane	10.302	41	21052	44.82	ug/L		88
70) epichlorohydrin	10.438	57	45944	268.19	ug/L		97
71) cis-1,3-dichloropropene	10.585	75	172965	47.43	ug/L		97
72) 4-methyl-2-pentanone	10.679	58	144155	193.61	ug/L		98
73) isoamyl alcohol	10.684	70	57011	1015.47	ug/L		97
76) toluene	10.987	92	261563	50.85	ug/L		98
77) ethyl methacrylate	11.160	69	119401	50.66	ug/L		99
78) trans-1,3-dichloropropene	11.160	75	156959	51.33	ug/L		97
79) 1,1,2-trichloroethane	11.390	83	79123	52.84	ug/L		95
80) tetrachloroethene	11.568	164	151317	70.23	ug/L		99
81) 2-hexanone	11.557	58	133412	208.26	ug/L		98
82) 1,3-dichloropropane	11.578	76	145906	49.32	ug/L		94
83) butyl acetate	11.652	56	60969	50.20	ug/L		95
84) dibromochloromethane	11.845	129	137128	51.09	ug/L		96
85) 1,2-dibromoethane	12.007	107	159339	51.69	ug/L		97
86) n-butyl ether	12.504	57	538884	49.70	ug/L		99
87) chlorobenzene	12.530	112	321256	50.19	ug/L		98
88) 1,1,1,2-tetrachloroethane	12.598	131	159967	52.51	ug/L		98
89) ethylbenzene	12.598	91	562711	50.25	ug/L		99
90) m,p-xylene	12.734	106	431191	103.21	ug/L		100
91) o-xylene	13.168	91	493697	51.57	ug/L		99
92) styrene	13.179	104	371087	52.26	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

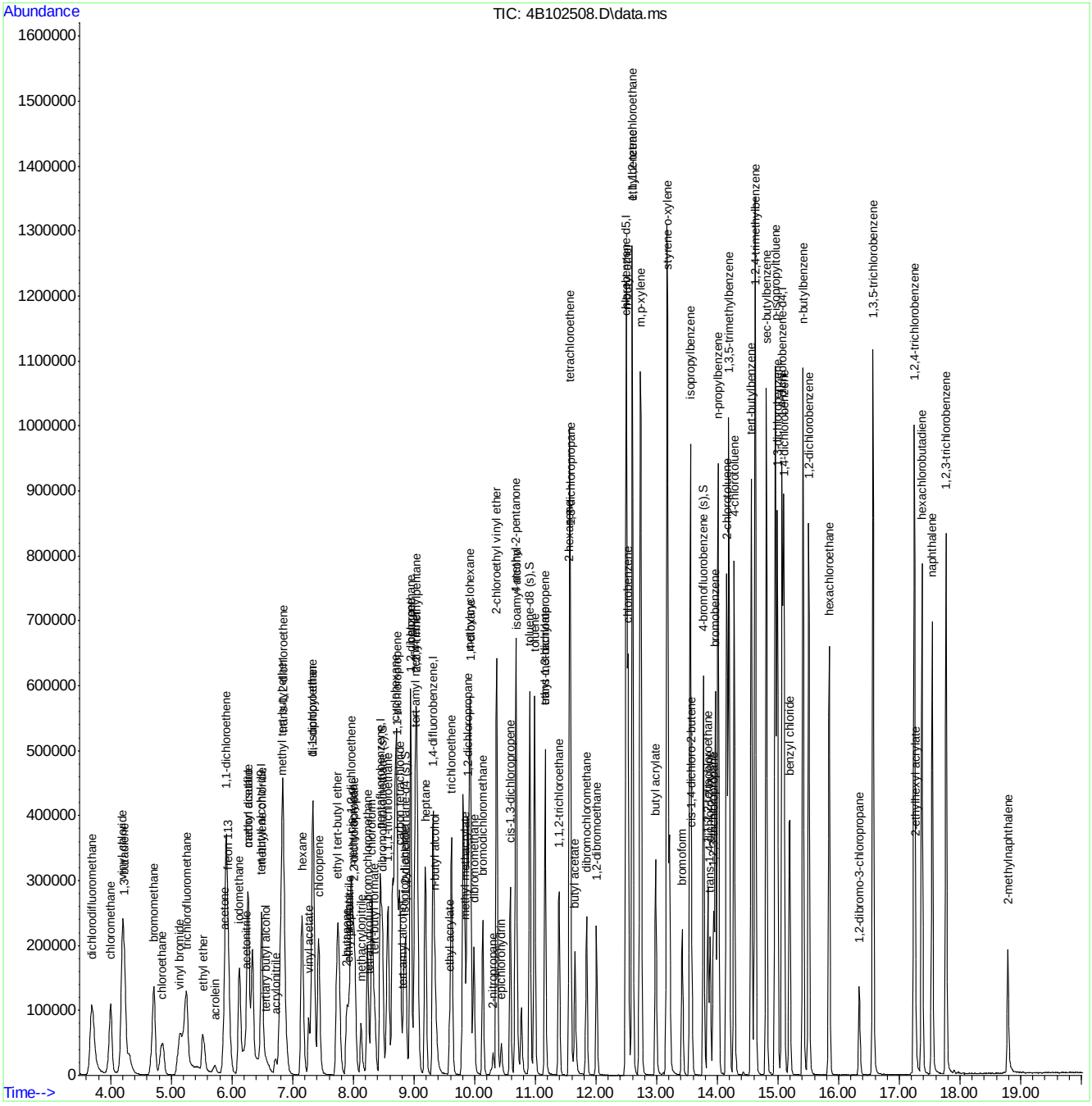
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	butyl acrylate	12.985	55	231782	51.00	ug/L	98
94)	isopropylbenzene	13.555	105	660147	50.56	ug/L	98
95)	bromoform	13.419	173	114384	52.26	ug/L	97
96)	cis-1,4-dichloro-2-butene	13.576	88	52868	50.77	ug/L	97
99)	1,1,2,2-tetrachloroethane	13.843	83	147141	50.65	ug/L	97
100)	trans-1,4-dichloro-2-b...	13.880	53	42722	53.00	ug/L	98
101)	1,2,3-trichloropropane	13.937	110	39194	52.25	ug/L	97
102)	bromobenzene	13.969	156	189725	53.20	ug/L	99
103)	n-propylbenzene	14.010	91	770574	51.38	ug/L	99
104)	2-chlorotoluene	14.157	126	163437	51.13	ug/L	99
105)	4-chlorotoluene	14.277	91	464135	49.69	ug/L	99
106)	1,3,5-trimethylbenzene	14.188	105	568054	50.03	ug/L	99
107)	tert-butylbenzene	14.560	119	484026	52.22	ug/L	98
108)	1,2,4-trimethylbenzene	14.622	105	601316	51.68	ug/L	100
109)	sec-butylbenzene	14.805	105	776261	51.29	ug/L	99
110)	p-isopropyltoluene	14.957	119	692122	51.53	ug/L	99
111)	1,3-dichlorobenzene	14.988	146	381515	51.33	ug/L	97
113)	1,4-dichlorobenzene	15.098	146	394136	50.52	ug/L	98
114)	1,2-dichlorobenzene	15.506	146	398352	52.11	ug/L	99
115)	benzyl chloride	15.192	91	308047	51.53	ug/L	98
116)	n-butylbenzene	15.412	92	355735	52.42	ug/L	98
117)	hexachloroethane	15.846	201	139464	44.94	ug/L	98
118)	1,2-dibromo-3-chloropr...	16.343	157	46992	53.41	ug/L	96
119)	1,3,5-trichlorobenzene	16.568	180	405984	55.74	ug/L	98
120)	1,2,4-trichlorobenzene	17.248	180	350067	55.52	ug/L	98
121)	2-ethylhexyl acrylate	17.264	70	22524	11.27	ug/L	94
122)	hexachlorobutadiene	17.373	225	183703	51.10	ug/L	99
123)	naphthalene	17.541	128	580434	52.37	ug/L	100
124)	1,2,3-trichlorobenzene	17.771	180	303111	55.49	ug/L	97
125)	2-methylnaphthalene	18.791	142	126317	27.22	ug/L	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102509.D
Acq On : 18 Feb 2021 2:58 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 21 11:44:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

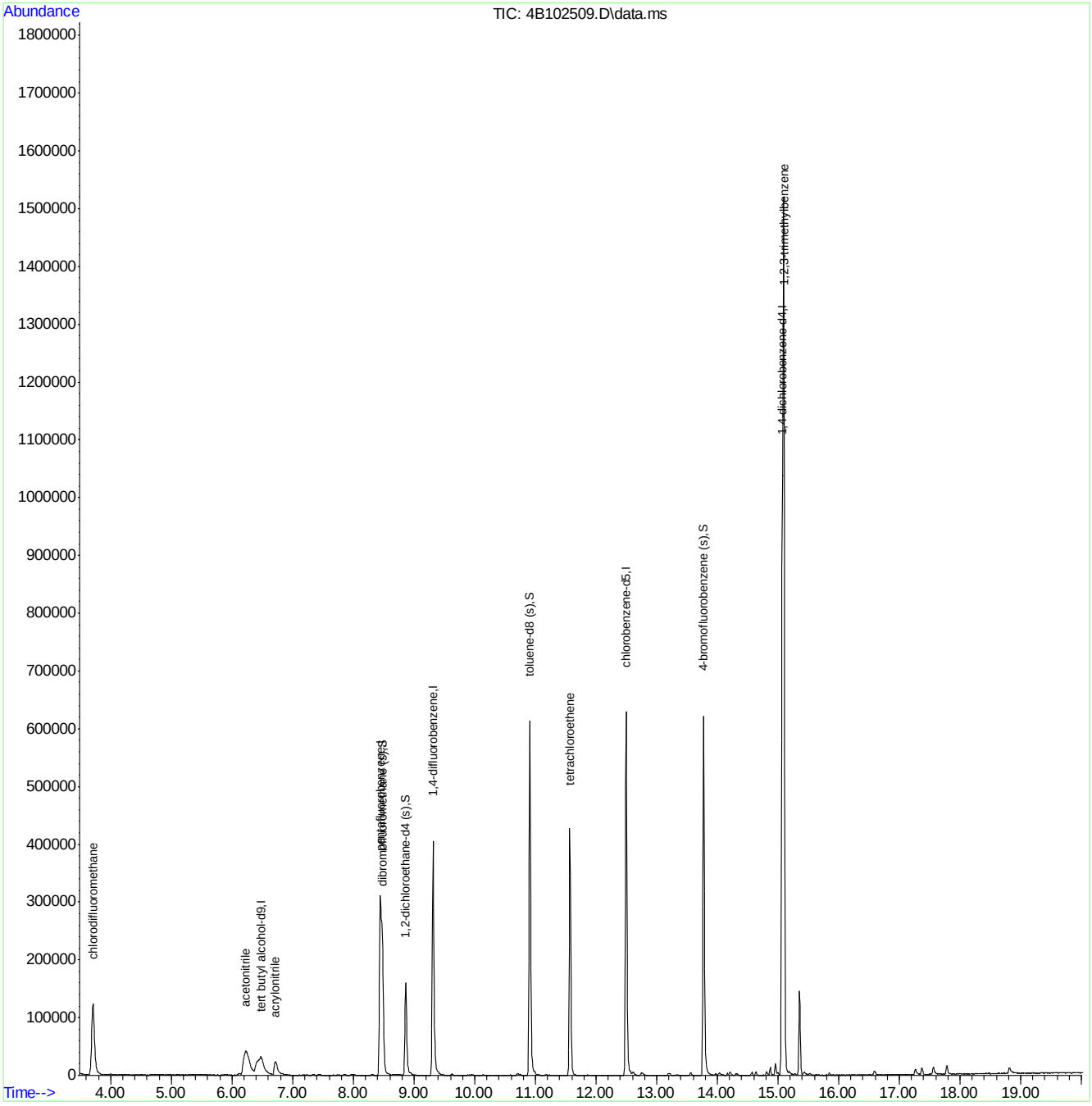
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	139499	500.00	ug/L	-0.01
5) pentafluorobenzene	8.445	168	277999	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	371550	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	394950	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	290221	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	133860	48.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.00%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	132457	46.48	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 92.96%			
75) toluene-d8 (s)	10.909	98	442690	49.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.14%			
98) 4-bromofluorobenzene (s)	13.770	95	209968	48.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.62%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.707	51	292719	61.98	ug/L	98
20) acetonitrile	6.228	41	161051	513.67	ug/L	97
32) acrylonitrile	6.709	53	34111	47.14	ug/L	94
80) tetrachloroethene	11.573	164	111477	47.36	ug/L	97
112) 1,2,3-trimethylbenzene	15.093	105	849128	59.31	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102509.D
Acq On : 18 Feb 2021 2:58 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 21 11:44:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



M4B4435.M Mon Feb 22 11:16:08 2021 MS4B Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102752.d
Acq On : 4 Mar 2021 10:02 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49212,V4B4445,W,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:19:24 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.469	65	143541	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	234741	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	300821	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	318428	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	247128	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	120596	51.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.48%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	119885	51.96	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.92%			
75) toluene-d8 (s)	10.909	98	358792	49.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.66%			
98) 4-bromofluorobenzene (s)	13.775	95	178992	48.87	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.74%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.568	59	31973	100.99	ug/L	96
4) 1,4-dioxane	9.931	88	12165	495.79	ug/L	89
6) chlorodifluoromethane	3.707	51	89427	22.42	ug/L	98
7) dichlorodifluoromethane	3.697	85	124413	22.07	ug/L	98
8) chloromethane	4.000	50	101302	21.54	ug/L	95
9) vinyl chloride	4.204	62	96423	23.12	ug/L	95
10) 1,3-butadiene	4.225	54	59872	22.23	ug/L	99
11) bromomethane	4.711	94	70700	22.29	ug/L	94
12) chloroethane	4.858	64	42961	24.13	ug/L	96
13) trichlorofluoromethane	5.239	101	114400	22.49	ug/L	97
14) vinyl bromide	5.135	106	53158	40.68	ug/L	97
15) ethyl ether	5.538	74	16633	21.16	ug/L	82
16) acrolein	5.731	56	6484	23.17	ug/L	89
17) freon 113	5.935	151	58109	21.45	ug/L	95
18) 1,1-dichloroethene	5.904	61	77141	20.38	ug/L	98
19) acetone	5.878	58	12880	82.84	ug/L #	82
20) acetonitrile	6.238	41	66554	251.39	ug/L	96
21) iodomethane	6.123	142	114243	18.90	ug/L	99
22) carbon disulfide	6.265	76	190480	21.03	ug/L	100
23) methylene chloride	6.495	84	53196	20.01	ug/L	98
24) methyl acetate	6.265	43	26578	22.54	ug/L	96
25) methyl tert butyl ether	6.824	73	139049	20.53	ug/L	94
26) trans-1,2-dichloroethene	6.845	61	65844	21.08	ug/L	98
27) hexane	7.154	56	31311	21.42	ug/L	94
28) di-isopropyl ether	7.332	45	168826	20.08	ug/L	96
29) 2-butanone	7.891	72	11939	82.95	ug/L	95
30) 1,1-dichloroethane	7.337	63	77698	20.13	ug/L	96
31) chloroprene	7.426	53	62386	20.34	ug/L	97
32) acrylonitrile	6.725	53	14366	23.51	ug/L	94
33) vinyl acetate	7.264	86	5104	21.03	ug/L #	58
34) ethyl tert-butyl ether	7.745	59	156047	20.34	ug/L	98
35) ethyl acetate	7.912	45	4206	18.97	ug/L #	84
36) 2,2-dichloropropane	8.012	77	94802	22.20	ug/L	95
37) cis-1,2-dichloroethene	7.964	96	45483	20.25	ug/L	93
38) propionitrile	7.944	54	51787	229.52	ug/L	98
39) methyl acrylate	8.001	85	3616	17.01	ug/L #	80
40) methacrylonitrile	8.127	67	11523	20.68	ug/L	99
41) bromochloromethane	8.231	128	24539	20.38	ug/L	95
42) tetrahydrofuran	8.268	72	4151	20.83	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102752.d
Acq On : 4 Mar 2021 10:02 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49212,V4B4445,W,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:19:24 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	8.310	83	77915	18.54	ug/L		95
44)	tert-butyl formate	8.346	59	38356	22.34	ug/L		95
46)	1,1,1-trichloroethane	8.571	97	99694	21.31	ug/L		98
47)	cyclohexane	8.691	84	86226	22.08	ug/L		99
49)	1,1-dichloropropene	8.712	75	50618	18.57	ug/L		99
50)	carbon tetrachloride	8.765	117	86841	20.53	ug/L		99
51)	tert-amyl alcohol	8.817	73	12665	123.86	ug/L		95
52)	isopropyl acetate	8.838	87	6477	20.18	ug/L	#	93
55)	n-butyl alcohol	9.340	41	46672	1298.02	ug/L		94
56)	2,2,4-trimethylpentane	9.042	57	173921	20.98	ug/L		98
57)	benzene	8.943	78	145640	19.40	ug/L		98
58)	tert-amyl methyl ether	9.021	73	144835	21.75	ug/L		99
59)	heptane	9.188	57	27801	20.19	ug/L		96
60)	1,2-dichloroethane	8.948	62	52447	19.43	ug/L		96
61)	ethyl acrylate	9.591	55	35969	20.28	ug/L		98
62)	trichloroethene	9.617	95	38202	19.54	ug/L		97
63)	2-chloroethyl vinyl ether	10.365	63	90171	99.05	ug/L		98
64)	methyl methacrylate	9.853	100	7526	21.15	ug/L	#	73
65)	methylcyclohexane	9.926	83	92813	22.52	ug/L		99
66)	1,2-dichloropropane	9.879	63	37216	18.97	ug/L		99
67)	dibromomethane	9.989	93	22879	18.82	ug/L		98
68)	bromodichloromethane	10.135	83	51673	18.37	ug/L		97
69)	2-nitropropane	10.302	41	7048	17.76	ug/L		96
70)	epichlorohydrin	10.444	57	16582	114.56	ug/L		95
71)	cis-1,3-dichloropropene	10.590	75	54952	17.84	ug/L		96
72)	4-methyl-2-pentanone	10.684	58	53605	85.21	ug/L		99
73)	isoamyl alcohol	10.684	70	23206	489.22	ug/L		87
76)	toluene	10.988	92	84923	18.74	ug/L		99
77)	ethyl methacrylate	11.165	69	43647	21.02	ug/L		95
78)	trans-1,3-dichloropropene	11.165	75	52136	19.35	ug/L		98
79)	1,1,2-trichloroethane	11.390	83	25850	19.60	ug/L		94
80)	tetrachloroethene	11.573	164	35852	18.89	ug/L		97
81)	2-hexanone	11.558	58	51034	90.44	ug/L		93
82)	1,3-dichloropropane	11.579	76	48933	18.78	ug/L		94
83)	butyl acetate	11.662	56	23047	21.54	ug/L		98
84)	dibromochloromethane	11.845	129	43332	18.33	ug/L		99
85)	1,2-dibromoethane	12.013	107	41470	15.27	ug/L		97
86)	n-butyl ether	12.504	57	185067	19.38	ug/L		98
87)	chlorobenzene	12.536	112	107752	19.11	ug/L		96
88)	1,1,1,2-tetrachloroethane	12.598	131	52597	19.60	ug/L		98
89)	ethylbenzene	12.604	91	193634	19.63	ug/L		99
90)	m,p-xylene	12.740	106	145454	39.52	ug/L		98
91)	o-xylene	13.169	91	170862	20.26	ug/L		99
92)	styrene	13.184	104	130111	20.80	ug/L		96
93)	butyl acrylate	12.991	55	88545	22.12	ug/L		97
94)	isopropylbenzene	13.556	105	227472	19.78	ug/L		99
95)	bromoform	13.425	173	37989	19.70	ug/L		98
96)	cis-1,4-dichloro-2-butene	13.576	88	19654	21.43	ug/L		91
99)	1,1,2,2-tetrachloroethane	13.843	83	54829	19.91	ug/L		100
100)	trans-1,4-dichloro-2-b...	13.885	53	15037	19.68	ug/L		85
101)	1,2,3-trichloropropane	13.943	110	14832	20.86	ug/L		93
102)	bromobenzene	13.974	156	65582	19.40	ug/L		96
103)	n-propylbenzene	14.016	91	274345	19.29	ug/L		97
104)	2-chlorotoluene	14.157	126	56043	18.49	ug/L		98
105)	4-chlorotoluene	14.283	91	168765	19.06	ug/L		98
106)	1,3,5-trimethylbenzene	14.194	105	198137	18.41	ug/L		99
107)	tert-butylbenzene	14.565	119	154521	17.58	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102752.d
Acq On : 4 Mar 2021 10:02 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49212,V4B4445,W,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:19:24 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

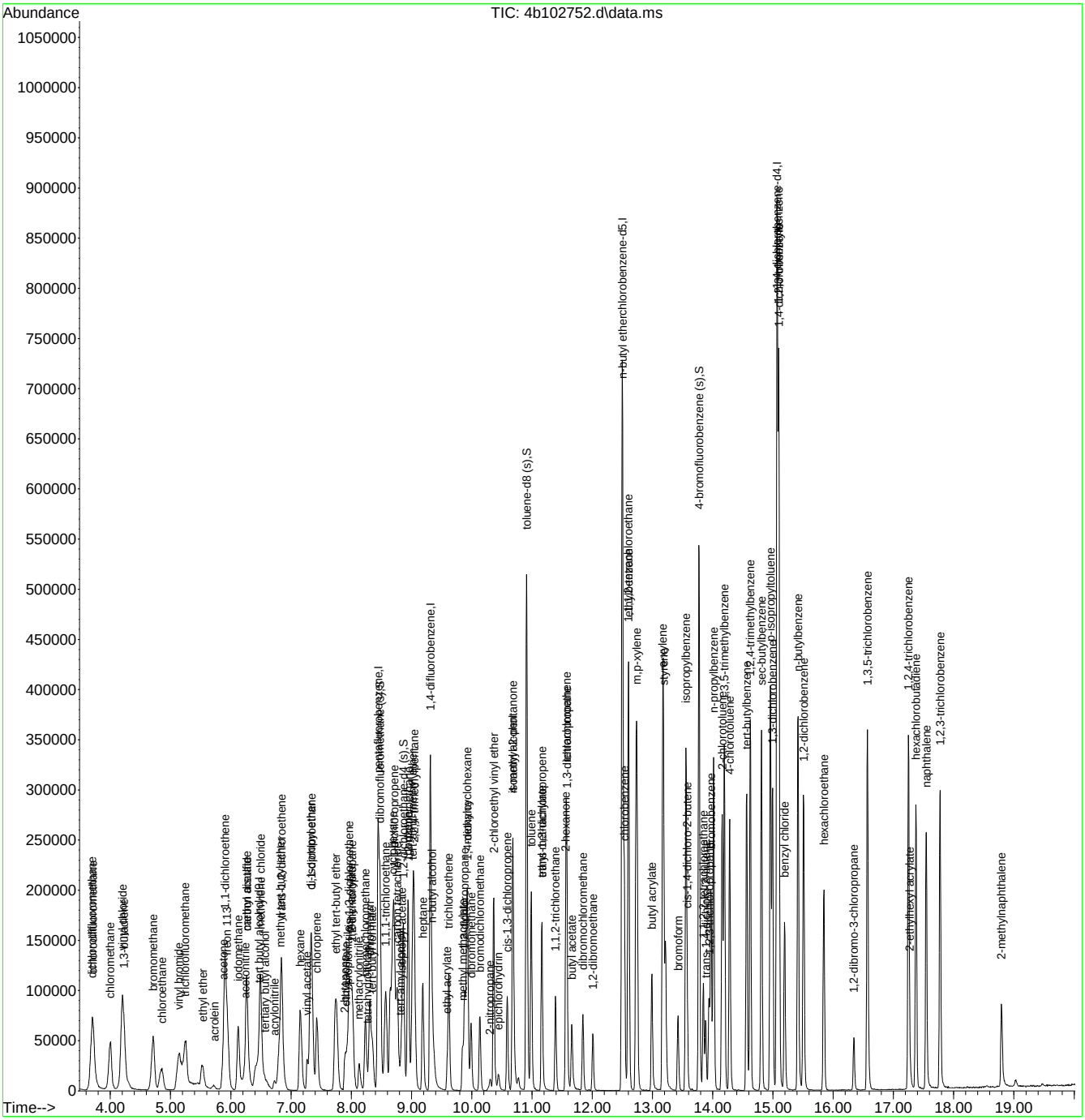
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	14.623	105	214528	19.45	ug/L	98
109) sec-butylbenzene	14.811	105	265368	18.49	ug/L	99
110) p-isopropyltoluene	14.957	119	244107	19.17	ug/L	99
111) 1,3-dichlorobenzene	14.994	146	133827	18.99	ug/L	100
112) 1,2,3-trimethylbenzene	15.093	105	226369	18.57	ug/L	99
113) 1,4-dichlorobenzene	15.099	146	136465	18.45	ug/L	97
114) 1,2-dichlorobenzene	15.512	146	138619	19.12	ug/L	99
115) benzyl chloride	15.193	91	130397	23.01	ug/L	99
116) n-butylbenzene	15.418	92	127486	19.81	ug/L	98
117) hexachloroethane	15.846	201	41342	14.62	ug/L	97
118) 1,2-dibromo-3-chloropr...	16.343	157	17515	21.00	ug/L	95
119) 1,3,5-trichlorobenzene	16.568	180	132951	19.25	ug/L	99
120) 1,2,4-trichlorobenzene	17.248	180	121891	20.39	ug/L	96
121) 2-ethylhexyl acrylate	17.269	70	8339	4.40	ug/L	91
122) hexachlorobutadiene	17.374	225	64230	18.85	ug/L	94
123) naphthalene	17.546	128	223950	21.31	ug/L	99
124) 1,2,3-trichlorobenzene	17.776	180	108800	21.01	ug/L	98
125) 2-methylnaphthalene	18.791	142	54848	12.46	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03052021\v4b4445\
Data File : 4b102752.d
Acq On : 4 Mar 2021 10:02 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49212,V4B4445,W,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 04 23:19:24 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi-624(60mx0.25mmx1.4um)
Standards	ABK: V020-2709-22.54	EC: V020-2709-38.9	Acrolein+Acrylonitrile: V020-2709-26.2	Ext. Chlorodifluoromethane:	Method	v8260d
Standard Concentrations	100-10,000ppm	100ppm	100ppm	100ppm	Init Calib Date	7/29/2020
Expiration Date	11/24/2020	11/13/2020	11/30/2020	12/3/2020		
Internal Surrogate	V020-2709-40					
Internal Surrogate Concentration	250/2,500ppm				Analysis Date	11/11/2020
Expiration Date	12/7/2020				Sequence loaded by	Edward Durner
Standards	Ext. ABK: V020-2709-31.1	Ext. EC: V020-2709-43.1	Ext. Acrolein: V020-2709-42.1	Ext. PA: V020-2709-24.1	Data processed by	Bridget Kelly
Standard Concentrations	100-10,000ppm	100ppm	100ppm	100-1000ppm	Batch ID	V2A8967
Expiration Date	11/30/2020	11/16/2020	12/9/2020	11/28/2020	Matrix	AQ
					Approved By:	KANYAV
pH paper Lot# (wide range):	221419	Exp. 8/1/2022	Initial Calibration Method	M2A8967	Approved Date:	11/16/2020 10:03:40 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
2A	206380	BFB		NA			5			1	ok	3:06 pm
2A	206381	IC8967-0.2		NA		V8260 initial calibration	5			2	ok	0.2ul abk,ec,acrolein+acrylonitrile/100ml
2A	206382	IC8967-0.5		NA		V8260 initial calibration	5			3	ok	0.5ul abk,ec,acrolein+acrylonitrile/100ml
2A	206383	IC8967-1		NA		V8260 initial calibration	5			4	ok	1ul abk,ec,acrolein+acrylonitrile/100ml
2A	206384	IC8967-2		NA		V8260 initial calibration	5			5	ok	2ul abk,ec,acrolein+acrylonitrile/100ml
2A	206385	IC8967-4		NA		V8260 initial calibration	5			6	ok	4ul abk,ec,acrolein+acrylonitrile/100ml
2A	206386	IC8967-8		NA		V8260 initial calibration	5			7	ok	8ul abk,ec,acrolein+acrylonitrile/100ml
2A	206387	IC8967-20		NA		V8260 initial calibration	5			8	ok	20ul abk,ec,acrolein+acrylonitrile/100ml
2A	206388	IC8967-50		NA		V8260 initial calibration	5			9	ok	50ul abk,ec,acrolein+acrylonitrile/100ml
2A	206389	IC8967-100		NA		V8260 initial calibration	5			10	ok	100ul abk,ec,acrolein+acrylonitrile/100ml

OR048-01
Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
2A	206390	IC8967-200		NA		V8260 initial calibration	5			11	ok	200ul abk,ec,acrolein+acrylonitrile/100ml
2A	206391	IB		NA			5			12	ok	
2A	206392	IB		NA			5			13	ok	
2A	206393	ICV8967-50		NA		V8260 initial calibration	5			14	ok	50ul ext abk,ec,acrolein/100ml
2A	206394	ICV8967-50		NA		V8260 initial calibration	5			15	ok	50ul ext pa chlorodifluoromethane /100ml

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standards	ABK: V021-2715-34.21	EC: V021-2715-42.7	AA: V021-2715-44.		Column	Rxi-624(60mx0.25mmx1.4um)
Standard Concentrations	100-10,000ppm	100ppm	100ppm		Method	V8260C
Expiration Date	3/26/2021	3/9/2021	4/5/2021		Init Calib Date	11/11/2020
Internal Surrogate	V021-2715-26					
Internal Surrogate Concentration	250/2,500ppm				Analysis Date	3/5/2021
Expiration Date	3/19/2021				Sequence loaded by	Krizhka Cuenta
					Data processed by	davem1
Rough Reviewed by	Krizhka				Batch ID	V2A9078
					Matrix	AQ
Initial Calibration Method	M2A8967				Approved By:	MEI
pH paper Lot# (wide range):	221419	Exp. 8/1/2022			Approved Date:	3/8/2021 8:59:10 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
2A	208823	BFB/CC8967-20		NA			5			1	OK/OK	20uL ABK, EC, AA/100mL (8:32 am) #24 low
2A	208824	CC8967-2		NA			5			2	OK	2uL ABK, EC, AA/100mL
2A	208825	BS		NA			5			3	OK	50uL ABK, EC, AA/100mL
2A	208826	IB		NA			5			4	OK	
2A	208827	MB		NA			5			5	OK	
2A	208828	JD20919-16	5	NA	MS49209	V8260SL, 8260C	5		1	6	OK	
2A	208829	JD20919-18	4	NA	MS49209	V8260SL, 8260C	5		1	7	OK	
2A	208830	JD20950-1	4	NA	MS49237	V8260SL, 8260C	5		1	8	OK	
2A	208831	JD20950-2	4	5X	MS49237	V8260SL, 8260C	10/50		1	9	OK	dilution due to NT
2A	208832	JD20950-3	4	5X	MS49237	V8260SL, 8260C	10/50		1	10	rr	l/d 2x to push
2A	208833	JD20950-3	5	2X	MS49237	V8260SL, 8260C	25/50		1	11	OK	dilution due to NT

OR048-01
Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
2A	208834	JD20919-18MS	2	NA	MS49209	V8260SL, 8260C	5		1	12	OK	20uL ABK, EC, AA/40mL sample
2A	208835	JD20874-9	10	10X	MS49207	V8260PALGTMB, 224TMP, 8260C,	5/50		1	13	OK	DOD-QSM5; I/d 1x
2A	208836	JD20919-16DUP	3	NA	MS49209	V8260SL, 8260C	5		1	14	OK	
2A	208837	JD20874-10	10	NA	MS49207	V8260PALGTMB, 224TMP, 8260C,	5		1	15	OK	MTBE, TBA; DOD-QSM5
2A	208838	JD20874-11	10	NA	MS49207	V8260PALGTMB, 224TMP, 8260C,	5		1	16	OK	MTBE, TBA; DOD-QSM5
2A	208839	JD20874-12	1	NA	MS49207	V8260PALGTMB, 224TMP, 8260C,	5		1	17	OK	MTBE, TBA; DOD-QSM5
2A	208840	JD21085-2	1	NA	MS49303	V8260BENZ, 8260C	5		1	18	OK	DOD-QSM5
2A	208841	JD21085-3	1	NA	MS49303	V8260BENZ, 8260C	5		1	19	OK	DOD-QSM5
2A	208842	JD21085-4	1	NA	MS49303	V8260BENZ, 8260C	5		1	20	OK	DOD-QSM5
2A	208843	JD20874-1	10	NA	MS49207	V8260PALGTMB, 224TMP, 8260C,	5		1	21	OK	MTBE, TBA; DOD-QSM5
2A	208844	JD20874-3	11	NA	MS49207	V8260PALGTMB, 224TMP, 8260C,	5		1	22	OK/DL	rr 10x F/D; MTBE, TBA; DOD-QSM5
2A	208845	JD21085-1	13	10X	MS49303	V8260BENZ, 8260C	5/50		4	23	OK	MTBE, TBA; DOD-QSM5
2A	208846	JD20874-9	10	NA	MS49207	V8260PALGTMB, 224TMP, 8260C,	5		1	24	OK/DL	MTBE, TBA; DOD-QSM5; +2A208835
2A	208847	ECC8967-50		NA			5			25	OK	50uL ABK, EC, AA/100mL (08:13 PM)

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standards	1,4 dioxane V018-2623-85.1	Ext 1,4-dioxane V018-262 3-106.1			Column	DB624(60mx0.25mmx1.4um)
Standard Concentration	100ppm	100 ppm			Method	V8260C SIM
Internal Surrogate	V018-2623-54				Init Calib Date	07/18/2018
Internal Surrogate Concentration	5/50ppm					
					Analysis Date	7/18/2018
					Sequence loaded by	Hueanh Tran
					Data processed by	Robert Szot
					Batch ID	V3A6923
					Matrix	AQ
Initial Calibration Method	M3A6923				Approved By:	BRIDGETK
pH Paper Lot#	232515				Approved Date:	7/20/2018 4:18:14 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
3A	160428	BFB		NA			5			1	ok	
3A	160429	IC6923-0.25		NA		SIM INITIAL CAL.	5			2	ok	1.25 ul 1,4 dioxane/ 500ml
3A	160430	IC6923-0.4		NA		SIM INITIAL CAL.	5			3	ok	2 ul 1,4 dioxane/ 500ml
3A	160431	IC6923-1		NA		SIM INITIAL CAL.	5			4	ok	1 ul 1,4 dioxane/ 100ml
3A	160432	IC6923-2		NA		SIM INITIAL CAL.	5			5	ok	2 ul 1,4 dioxane/ 100ml
3A	160433	IC6923-5		NA		SIM INITIAL CAL.	5			6	ok	5 ul 1,4 dioxane/ 100ml
3A	160434	ICC6923-20		NA		SIM INITIAL CAL.	5			7	ok	10 ul 1,4 dioxane/ 50ml
3A	160435	IC6923-50		NA		SIM INITIAL CAL.	5			8	ok	25ul 1,4 dioxane/ 50ml
3A	160436	IC6923-100		NA		SIM INITIAL CAL.	5			9	ok	50 ul 1,4 dioxane/50ml
3A	160437	IC6923-200		NA		SIM INITIAL CAL.	5			10	ok	100ul 1,4 dioxane/ 50ml
3A	160438	IB		NA			5			11	ok	

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
3A	160439	IB		NA			5			12	ok	
3A	160440	IB		NA			5			13	ok	
3A	160441	IB		NA			5			14	ok	
3A	160440	IB		NA			5			13	ok	
3A	160443	ICV6923-20		NA		SIM INITIAL CAL.	5			16	ok	10 ul Ext 1,4 dioxane/ 50ml
3A	160444	IB		NA			5			17	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standards	1,4-dioxane: V021-2715-9				Column	Rxi-624 (60mx0.25mmx1.4um)
Standard Concentrations	100 ppm				Method	V8260C SIM
Expiration Date	3/7/21				Init Calib Date	7/18/18
Internal Surrogate	V021-2715-10					
Internal Surrogate Concentration	5/50 ppm				Analysis Date	3/3/2021
Expiration Date	3/7/21				Sequence loaded by	Robert Szot
pH Paper Lot#	221419				Data processed by	Robert Szot
Expiration Date	8/1/22				Batch ID	V3A7169
					Matrix	AQ
					Approved By:	MEI
			Initial Calibration Method	M3A6923	Approved Date:	3/4/2021 4:28:44 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
3A	165034	BFB		NA			5			1	OK	1:10 PM
3A	165035	CC6923-5		NA			5			2	OK	5 uL 1,4-dioxane / 100 mL DI H2O
3A	165036	BS		NA			5			3	OK	10 uL 1,4-dioxane / 50 mL DI H2O
3A	165037	MB		NA			5			4	OK	
3A	165038	JD20919-17	1	NA	MS49208	V8260SIMDIOX	5		1	5	OK	
3A	165039	JD20919-17MS	7	NA	MS49208	V8260SIMDIOX	5		1	6	OK	8 uL 1,4-dioxane / 40 mL sample
3A	165040	JD20919-17MSD	8	NA	MS49208	V8260SIMDIOX	5		1	7	OK	8 uL 1,4-dioxane / 40 mL sample
3A	165041	JD20919-3	1	NA	MS49208	V8260SIMDIOX	5		1	8	OK	
3A	165042	JD20919-13	1	NA	MS49208	V8260SIMDIOX	5		1	9	OK	
3A	165043	JD20919-1	1	NA	MS49208	V8260SIMDIOX	5		1	10	OK	
3A	165044	JD20919-2	1	NA	MS49208	V8260SIMDIOX	5		1	11	OK	

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
3A	165045	JD20919-4	1	NA	MS49208	V8260SIMDIOX	5		1	12	OK	
3A	165046	JD20919-5	1	NA	MS49208	V8260SIMDIOX	5		1	13	OK	
3A	165047	JD20919-6	1	NA	MS49208	V8260SIMDIOX	5		1	14	OK	
3A	165048	JD20919-7	1	NA	MS49208	V8260SIMDIOX	5		1	15	OK	
3A	165049	JD20919-8	1	NA	MS49208	V8260SIMDIOX	5		1	16	OK	
3A	165050	JD20919-9	1	NA	MS49208	V8260SIMDIOX	5		1	17	OK	
3A	165051	JD20919-10	1	NA	MS49208	V8260SIMDIOX	5		1	18	OK	
3A	165052	JD20919-11	1	NA	MS49208	V8260SIMDIOX	5		1	19	OK	
3A	165053	JD20919-12	1	NA	MS49208	V8260SIMDIOX	5		1	20	OK	
3A	165054	JD20919-14	1	NA	MS49208	V8260SIMDIOX	5		1	21	OK	
3A	165055	JD20919-15	1	NA	MS49208	V8260SIMDIOX	5		1	22	OK	12:48 AM

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standards	1,4-dioxane: V021-2715-9				Column	Rxi-624 (60mx0.25mmx1.4um)
Standard Concentrations	100 ppm				Method	V8260C SIM
Expiration Date	3/7/21				Init Calib Date	7/18/18
Internal Surrogate	V021-2715-10					
Internal Surrogate Concentration	5/50 ppm				Analysis Date	3/4/2021
Expiration Date	3/7/21				Sequence loaded by	Robert Szot
pH Paper Lot#	221419				Data processed by	Robert Szot
Expiration Date	8/1/22				Batch ID	V3A7170
					Matrix	AQ
					Approved By:	MEI
			Initial Calibration Method	M3A6923	Approved Date:	3/8/2021 8:28:32 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
3A	165056	BFB		NA			5			1	OK	10:09 AM
3A	165057	CC6923-5		NA			5			2	OK	5 uL 1,4-dioxane / 100 mL DI H2O
3A	165058	BS		NA			5			3	OK	10 uL 1,4-dioxane / 50 mL DI H2O
3A	165059	MB		NA			5			4	OK	
3A	165060	JD20919-16	2	NA	MS49208	V8260SIMDIOX	5		1	5	OK	
3A	165061	JD20919-18	1	NA	MS49208	V8260SIMDIOX	5		1	6	OK	
3A	165062	JD20920-11	15	NA	MS49215	V8260SIMDIOX	5		1	7	OK	
3A	165063	JD20920-11MS	16	NA	MS49215	V8260SIMDIOX	5		1	8	OK	8 uL 1,4-dioxane / 40 mL sample
3A	165064	JD20920-11MSD	17	NA	MS49215	V8260SIMDIOX	5		1	9	OK	8 uL 1,4-dioxane / 40 mL sample
3A	165065	IB		NA			5			10	OK	
3A	165066	JD20920-6	1	NA	MS49215	V8260SIMDIOX	5		1	11	OK	

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
3A	165067	JD20920-10	1	NA	MS49215	V8260SIMDIOX	5		1	12	OK	
3A	165068	JD20920-1	1	NA	MS49215	V8260SIMDIOX	5		1	13	OK	
3A	165069	JD20920-2	1	NA	MS49215	V8260SIMDIOX	5		1	14	OK	
3A	165070	JD20920-3	1	NA	MS49215	V8260SIMDIOX	5		1	15	OK	
3A	165071	JD20920-4	1	NA	MS49215	V8260SIMDIOX	5		1	16	OK	
3A	165072	JD20920-5	1	NA	MS49215	V8260SIMDIOX	5		1	17	OK	
3A	165073	JD20920-7	1	NA	MS49215	V8260SIMDIOX	5		1	18	OK	
3A	165074	JD20920-8	1	NA	MS49215	V8260SIMDIOX	5		1	19	OK	
3A	165075	JD20920-9	1	NA	MS49215	V8260SIMDIOX	5		1	20	OK	8:01 PM

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi-624(60mx0.25mmx1.4um)
Standard	ABK: V020-2709-149.45	EC: V021-2715-21.9	AA: V021-2715-6.18	Ext. Chlorodifluoromethane:	Method	V8260D
Standard Concentration	100-10,000ppm	100ppm	100ppm	100ppm	Init Calib Date	2/17/2021
Expiration Date	2/25/2021	2/19/2021	3/4/2021	3/12/2021		
Standard	Ext. ABK: V020-2709-150.4	Ext. EC: V021-2715-22.3	Ext. Acrolein: V021-2715-24.3	Ext. PA: V021-2715-20.1		
Standard Concentration	100-10,000ppm	100ppm	100ppm	100-1,000ppm	Analysis Date	2/17/2021
Expiration Date	2/25/2021	2/19/2021	3/14/2021	3/12/2021	Sequence loaded by	Brittany Klimek
					Data processed by	Bridget Kelly
					Batch ID	V4B4435
Internal Surrogate	V021-2715-26				Matrix	AQ
Internal Surrogate Concentration	250/2,500ppm				Approved By:	MEI
Expiration Date	3/19/2021		Initial Calibration Method	M4B4435	Approved Date:	2/22/2021 9:13:55 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102495	BFB		NA			5			1	ok	2/17/2021; 8:17PM.
4B	102496	IC4435-0.2		NA		AQ Initial Calibraition	5			2	ok	1uL ABK, EC, AA/500mL DI H2O.
4B	102497	IC4435-0.5		NA		AQ Initial Calibraition	5			3	ok	1uL ABK, EC, AA/200mL DI H2O.
4B	102498	IC4435-1		NA		AQ Initial Calibraition	5			4	ok	1uL ABK, EC, AA/100mL DI H2O.
4B	102499	IC4435-2		NA		AQ Initial Calibraition	5			5	ok	2uL ABK, EC, AA/100mL DI H2O.
4B	102500	IC4435-4		NA		AQ Initial Calibraition	5			6	ok	4uL ABK, EC, AA/100mL DI H2O.
4B	102501	IC4435-8		NA		AQ Initial Calibraition	5			7	ok	8uL ABK, EC, AA/100mL DI H2O.
4B	102502	IC4435-20		NA		AQ Initial Calibraition	5			8	ok	20uL ABK, EC, AA/100mL DI H2O.
4B	102503	ICC4435-50		NA		AQ Initial Calibraition	5			9	ok	50uL ABK, EC, AA/100mL DI H2O.
4B	102504	IC4435-100		NA		AQ Initial Calibraition	5			10	ok	100uL ABK, EC, AA/100mL DI H2O.
4B	102505	IC4435-200		NA		AQ Initial Calibraition	5			11	ok	200uL ABK, EC, AA/100mL DI H2O.

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102506	IB		NA			5			12	ok	
4B	102507	IB		NA			5			13	ok	
4B	102508	ICV4435-50		NA		AQ Initial Calibraition	5			14	ok	50uL Ext. ABK, EC, Acrolein/100mL DI H2O.
4B	102509	ICV4435-50		NA		AQ Initial Calibraition	5			15	ok	50uL Ext. Chlorodifluoromethane, PA/100mL DI H2O.
4B	102510	IB		NA			5			16	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standard	ABK: V021-2715-34.11	EC: V021-2715-42.6	AA: V021-2715-6.26		Column	Rxi-624(60mx0.25mmx1.4um)
Standard Concentration	100-10,000ppm	100ppm	100ppm		Method	V8260C
Expiration Date	3/26/2021	3/9/2021	3/4/2021		Init Calib Date	2/17/2021
Internal Surrogate	V021-2715-26					
Internal Surrogate Concentration	250/2,500ppm				Analysis Date	3/4/2021
Expiration Date	3/19/2021				Sequence loaded by	Brittany Klimek
					Data processed by	kristelv
					Batch ID	V4B4445
Rough Reviewed by	brittank 3/5				Matrix	AQ
					Approved By:	MEI
pH paper (wide-range) lot#221419	Exp. 08/01/2022		Initial Calibration Method	M4B4435	Approved Date:	3/5/2021 3:00:47 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102752	BFB/CC4435-20		NA			5			1	OK/OK	20uL ABK, EC, AA/100mL DI H2O. 3/4/2021; 10:02AM.
4B	102753	BS		NA			5			2	OK	50uL ABK, EC, AA/100mL DI H2O.
4B	102754	IB		NA			5			3	OK	
4B	102755	MB		NA			5			4	OK	
4B	102756	JD20919-17	3	NA	MS49209	V8260SL, 8260C	5		1	5	OK	
4B	102757	JD20919-1	3	NA	MS49209	V8260SL, 8260C	5		1	6	OK	
4B	102758	JD20919-2	3	NA	MS49209	V8260SL, 8260C	5		1	7	OK	
4B	102759	JD20919-4	3	NA	MS49209	V8260SL, 8260C	5		1	8	OK	
4B	102760	JD20919-17MS	4	NA	MS49209	V8260SL, 8260C	5		1	9	OK	20uL ABK, EC, AA/40mL sample.
4B	102761	JD20919-17MSD	5	NA	MS49209	V8260SL, 8260C	5		1	10	OK	20uL ABK, EC, AA/40mL sample.
4B	102762	IB		NA			5			11	OK	

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102763	JD20919-3	3	NA	MS49209	V8260SL, 8260C	5		1	12	OK	
4B	102764	JD20919-13	5	NA	MS49209	V8260SL, 8260C	5		1	13	OK	
4B	102765	JD20919-19	1	NA	MS49209	V8260SL, 8260C	5		1	14	OK	Client ID checked; client vial.
4B	102766	JD20919-5	3	NA	MS49209	V8260SL, 8260C	5		1	15	OK	
4B	102767	JD20919-6	3	NA	MS49209	V8260SL, 8260C	5		1	16	OK	
4B	102768	JD20919-7	3	NA	MS49209	V8260SL, 8260C	5		1	17	OK	
4B	102769	JD20919-8	3	NA	MS49209	V8260SL, 8260C	5		1	18	OK	
4B	102770	JD20919-9	3	NA	MS49209	V8260SL, 8260C	5		1	19	OK	
4B	102771	JD20919-10	3	NA	MS49209	V8260SL, 8260C	5		1	20	OK	
4B	102772	JD20919-11	5	NA	MS49209	V8260SL, 8260C	5		1	21	OK	
4B	102773	JD20919-12	5	NA	MS49209	V8260SL, 8260C	5		1	22	OK	
4B	102774	JD20919-14	5	NA	MS49209	V8260SL, 8260C	5		1	23	OK	
4B	102775	JD20919-15	5	NA	MS49209	V8260SL, 8260C	5		1	24	OK	9:17pm
4B	102776	IB		NA			5			25	OK	

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Rev Date: 12/18/2017

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Raytheon Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

60651001

SGS Job Number: JD20920

Sampling Dates: 02/23/21 - 02/25/21

Report to:

AECOM, INC.
4320 Winfield Road
Warrenville, IL 60555
Peter.Hollatz@AECOM.com

ATTN: Peter Hollatz

Total number of pages in report: 265

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Beth Wasserman 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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SGS North America Inc.

Sample Summary

Raytheon Technologies Corporation

Job No: JD20920

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD20920-1	02/23/21	14:55	AH	02/27/21	AQ	Ground Water	HSSER-RAMW08-022321
JD20920-2	02/24/21	10:30	AH	02/27/21	AQ	Ground Water	HSSER-RAMW07-022421
JD20920-3	02/24/21	11:25	AH	02/27/21	AQ	Ground Water	HSSER-RAMW06-022421
JD20920-4	02/24/21	12:40	AH	02/27/21	AQ	Ground Water	HSSER-RAMW05-022421
JD20920-5	02/24/21	13:35	AH	02/27/21	AQ	Ground Water	HSSER-RAMW04-022421
JD20920-6	02/24/21	14:00	AH	02/27/21	AQ	Equipment Blank	HSSER-EBLK02-022421
JD20920-7	02/24/21	15:00	AH	02/27/21	AQ	Ground Water	HSSER-RAMW03-022421
JD20920-8	02/24/21	00:00	AH	02/27/21	AQ	Ground Water	HSSER-DUP02-022421
JD20920-9	02/25/21	11:35	AH	02/27/21	AQ	Ground Water	HSSER-RAMW01-022521
JD20920-10	02/25/21	11:55	AH	02/27/21	AQ	Field Blank Water	HSSER-FBLK02-022521
JD20920-11	02/25/21	12:10	AH	02/27/21	AQ	Ground Water	HSSER-RAMW02-022521
JD20920-11D	02/25/21	12:10	AH	02/27/21	AQ	Water Dup/MSD	HSSER-MSD02-022521

SGS North America Inc.

Sample Summary
(continued)

Raytheon Technologies Corporation

Job No: JD20920

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD20920-11S	02/25/21	12:10	AH	02/27/21	AQ	Water Matrix Spike	HSSER-MS02-022521
JD20920-12	02/25/21	12:10	AH	02/27/21	AQ	Trip Blank Water	HSSER-TBLK02-022521

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Raytheon Technologies Corporation	**Job No**	JD20920
Site:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL	**Report Date**	3/8/2021 4:06:57 PM

On 02/27/2021, 10 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD20920 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** V4B4443

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD20920-11MS, JD20920-11MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for MSD for Trichloroethene are outside control limits for sample JD20920-11MSD. Analytical precision exceeds in-house control limits.

MS Volatiles By Method SW846 8260C BY SIM

Matrix: AQ **Batch ID:** V3A7170

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD20920-11MS, JD20920-11MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD20920
Account: Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Collected: 02/23/21 thru 02/25/21

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD20920-1	**HSSER-RAMW08-022321**					
1,4-Dioxane		0.00037 J	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20920-2	**HSSER-RAMW07-022421**					
1,1-Dichloroethane		0.0011	0.0010	0.00057	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.0052	0.0010	0.00054	mg/l	SW846 8260C
JD20920-3	**HSSER-RAMW06-022421**					
1,1,1-Trichloroethane		0.0055	0.0010	0.00054	mg/l	SW846 8260C
1,4-Dioxane		0.00034 J	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20920-4	**HSSER-RAMW05-022421**					
1,1-Dichloroethane		0.0014	0.0010	0.00057	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.0082	0.0010	0.00054	mg/l	SW846 8260C
1,4-Dioxane		0.00042	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20920-5	**HSSER-RAMW04-022421**					
1,4-Dioxane		0.0014	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20920-6	**HSSER-EBLK02-022421**					
No hits reported in this sample.						
JD20920-7	**HSSER-RAMW03-022421**					
1,1,1-Trichloroethane		0.00059 J	0.0010	0.00054	mg/l	SW846 8260C
1,4-Dioxane		0.0017	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20920-8	**HSSER-DUP02-022421**					
1,1,1-Trichloroethane		0.00057 J	0.0010	0.00054	mg/l	SW846 8260C
1,4-Dioxane		0.0011	0.00040	0.000095	mg/l	SW846 8260C BY SIM
JD20920-9	**HSSER-RAMW01-022521**					
Tetrachloroethene		0.0015	0.0010	0.00090	mg/l	SW846 8260C
1,4-Dioxane		0.00049	0.00040	0.000095	mg/l	SW846 8260C BY SIM

Summary of Hits

Job Number: JD20920
Account: Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Collected: 02/23/21 thru 02/25/21

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD20920-10	**HSSER-FBLK02-022521**					
No hits reported in this sample.						
JD20920-11	**HSSER-RAMW02-022521**					
1,1-Dichloroethane		0.00077 J	0.0010	0.00057	mg/l	SW846 8260C
JD20920-12	**HSSER-TBLK02-022521**					
Toluene		0.0172	0.0010	0.00053	mg/l	SW846 8260C

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW08-022321		
Lab Sample ID:	JD20920-1	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102722.D	1	03/03/21 18:50	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	108%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW08-022321		
Lab Sample ID:	JD20920-1	**Date Sampled:**	02/23/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165068.D	1	03/04/21 16:40	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00037	0.00040	0.000095	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	113%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW07-022421		
Lab Sample ID:	JD20920-2	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102723.D	1	03/03/21 19:18	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0011	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0052	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW07-022421		
Lab Sample ID:	JD20920-2	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165069.D	1	03/04/21 17:09	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	127%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW06-022421		
Lab Sample ID:	JD20920-3	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102724.D	1	03/03/21 19:47	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0055	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW06-022421		
Lab Sample ID:	JD20920-3	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165070.D	1	03/04/21 17:37	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00034	0.00040	0.000095	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	121%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW05-022421		
Lab Sample ID:	JD20920-4	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102725.D	1	03/03/21 20:15	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0014	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0082	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW05-022421		
Lab Sample ID:	JD20920-4	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165071.D	1	03/04/21 18:06	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00042	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	124%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW04-022421		
Lab Sample ID:	JD20920-5	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102726.D	1	03/03/21 20:43	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW04-022421		
Lab Sample ID:	JD20920-5	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165072.D	1	03/04/21 18:34	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.0014	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	126%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-EBLK02-022421		
Lab Sample ID:	JD20920-6	**Date Sampled:**	02/24/21
Matrix:	AQ - Equipment Blank	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102719.D	1	03/03/21 17:26	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-EBLK02-022421		
Lab Sample ID:	JD20920-6	**Date Sampled:**	02/24/21
Matrix:	AQ - Equipment Blank	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165066.D	1	03/04/21 15:43	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	139%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW03-022421		
Lab Sample ID:	JD20920-7	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102727.D	1	03/03/21 21:11	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00059	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	107%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW03-022421		
Lab Sample ID:	JD20920-7	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165073.D	1	03/04/21 19:03	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.0017	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	132%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-DUP02-022421		
Lab Sample ID:	JD20920-8	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102728.D	1	03/03/21 21:39	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00057	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-DUP02-022421		
Lab Sample ID:	JD20920-8	**Date Sampled:**	02/24/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165074.D	1	03/04/21 19:32	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.0011	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	171%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW01-022521		
Lab Sample ID:	JD20920-9	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102729.D	1	03/03/21 22:07	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0015	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW01-022521		
Lab Sample ID:	JD20920-9	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165075.D	1	03/04/21 20:01	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.00049	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	130%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-FBLK02-022521		
Lab Sample ID:	JD20920-10	**Date Sampled:**	02/25/21
Matrix:	AQ - Field Blank Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102720.D	1	03/03/21 17:54	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-FBLK02-022521		
Lab Sample ID:	JD20920-10	**Date Sampled:**	02/25/21
Matrix:	AQ - Field Blank Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165067.D	1	03/04/21 16:11	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	103%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW02-022521		
Lab Sample ID:	JD20920-11	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102710.D	1	03/03/21 12:54	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00077	0.0010	0.00057	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-RAMW02-022521		
Lab Sample ID:	JD20920-11	**Date Sampled:**	02/25/21
Matrix:	AQ - Ground Water	**Date Received:**	02/27/21
Method:	SW846 8260C BY SIM	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A165062.D	1	03/04/21 13:47	RS	n/a	n/a	V3A7170
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.00040	0.000095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17647-74-4	1,4-Dioxane-d8	121%		39-174%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HSSER-TBLK02-022521		
Lab Sample ID:	JD20920-12	**Date Sampled:**	02/25/21
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/27/21
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B102721.D	1	03/03/21 18:22	BK	n/a	n/a	V4B4443
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	0.0172	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SGS ACCUTEST GW WTB

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 2

FED-EX Tracking # 7841 5387 7137
Bottle Order Control # None
SGS Accutest Quote #
SGS Accutest Job # JD20920

Client / Reporting Information

Company Name: AECOM
Street Address: 3333 Warrenville Rd Suite 200
City: Lisle State: IL Zip: 60532
Project Contact: Peter.Hellatz@aecom.com E-mail:
Phone #: 630 461-1194 Fax #:
Sampler(s) Name(s): H. Hellatz / A. Sikodowsky Phone #:

Project Information

Project Name: UTAS - SER - Plants 1/2 Facility
Street:
City: Rockford State: IL
Project #: 60651001
Client Purchase Order #:
Project Manager: Peter Hellatz

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	* VOC's 8260 STL 1,4 Dioxane		LAB USE ONLY
1	HSSER-RAMW08-022321		2-23-21	1455	AH	GW	6	X								X	X	
2	HSSER-RAMW07-022421		2-24-21	1030	AH	GW	6	X								X	X	
3	HSSER-RAMW06-022421		2-24-21	1125	AH	GW	6	X								X	X	
4	HSSER-RAMW05-022421		2-24-21	1240	AH	GW	6	X								X	X	~~V1204~~
5	HSSER-RAMW04-022421		2-24-21	1335	AH	GW	6	X								X	X	~~V1205~~
6	HSSER-FBLK02-022421		2-24-21	1400	AH	GW	6	X								X	X	
7	HSSER-RAMW03-022421		2-24-21	1500	AH	GW	6	X								X	X	V1204
8	HSSER-DUP02-022421		2-24-21	0000	AH	GW	6	X								X	X	V1207
9	HSSER-RAMW01-022521		2-25-21	1135	AS	GW	6	X								X	X	
10	HSSER-FBLK02-022521		2-25-21	1155	AS	GW	6	X								X	X	
11	HSSER-RAMW02-022521		2-25-21	1210	AH	GW	6	X								X	X	
	HSSER-MS02-022521		2-25-21	1210	AH	GW	6	X								X	X	

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:

Initial Assessment 2B-pp

Label Verification

Data Deliverable Information

- [ ] Commercial "a" (Level 1)
- [ ] Commercial "b" "Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] *NJ Data of Known Quality Protocol Reporting*
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* List of 13 VOC's

CHICAGO SC
Sample inventory is verified upon receipt in the laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2-26-21 1000	1	2 2-26-21-10:30		2 FedEx
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3 FedEx	2/27/2021 1140	3	4		4
Relinquished by Sampler:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp.
5		5	[ ] Intact [ ] Not intact	[ ]	IR4 X 2.3°C

Ip

SM088-01C Rev. Date: 9/13/16

JD20920: Chain of Custody
Page 1 of 3

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 7641 5387 7137
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job # JD20920

Client / Reporting Information

Company Name: AECOM
Street Address: 3333 Warrenville Rd Suite 200
City: Lisle State: IL Zip: 60532
Project Contact: Peter.Hellatz@aecom.com E-mail:
Phone #: 630-4601-1194 Fax #:
Sampler(s) Name(s): A. Hellatz / A. Sikdarsky Phone #:

Project Information

Project Name: UTAS-SER-Plants 1/2 Facility
Street:
City: Rockford State: IL
Project #: 60651001
Client Purchase Order #:
Project Manager: Peter Hellatz

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NJ Water	MEOH	ENCORE	* VOC's 8260 SIM 1,4 Dioxane	LAB USE ONLY
11	HSSER-MSD02-022521		2-25-21	1210	AH	GW	6	X								X X	
12	HSSER-FBLK02-022521		2-23-21	—	—	GW	3	X								X	

Turnaround Time (Business days)

Approved by (SGS Accutest PM): / Date:

- ☒ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

INITIAL ASESSMENT 2B.PP

LABEL VERIFICATION

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* List of 13 VOC's

Sample inventory is verified upon receipt in laboratory

CHICAGO SC

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2-26-21 1000	1	2		2 FedEx
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3 FedEx	2/27/2021 1140	3	4		4
Relinquished by Sampler:	Date Time:	Received By:	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐
5		5			

IR4 On Ice ☒ Cooler Temp. 2.3°C

IP

SM088-01C Rev. Date: 9/13/16

JD20920: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: JD20920 **Client:** _____ **Project:** _____

Date / Time Received: 2/27/2021 11:40:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.3);

Cooler Temps (Corrected) °C: Cooler 1: (1.0);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☑	☐	☐
2. Trip Blank listed on COC:	☑	☐	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Test Strip Lot #s: pH 1-12: 212820 pH 12+: 203117A Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

JD20920: Chain of Custody
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Internal Sample Tracking Chronicle

Raytheon Technologies Corporation

Job No: JD20920

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD20920-1	Collected: 23-FEB-21 14:55 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW08-022321						
JD20920-1	SW846 8260C	03-MAR-21 18:50	BK			V8260SL
JD20920-1	SW846 8260C BY SIM	04-MAR-21 16:40	RS			V8260SIMDIOX
JD20920-2	Collected: 24-FEB-21 10:30 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW07-022421						
JD20920-2	SW846 8260C	03-MAR-21 19:18	BK			V8260SL
JD20920-2	SW846 8260C BY SIM	04-MAR-21 17:09	RS			V8260SIMDIOX
JD20920-3	Collected: 24-FEB-21 11:25 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW06-022421						
JD20920-3	SW846 8260C	03-MAR-21 19:47	BK			V8260SL
JD20920-3	SW846 8260C BY SIM	04-MAR-21 17:37	RS			V8260SIMDIOX
JD20920-4	Collected: 24-FEB-21 12:40 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW05-022421						
JD20920-4	SW846 8260C	03-MAR-21 20:15	BK			V8260SL
JD20920-4	SW846 8260C BY SIM	04-MAR-21 18:06	RS			V8260SIMDIOX
JD20920-5	Collected: 24-FEB-21 13:35 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW04-022421						
JD20920-5	SW846 8260C	03-MAR-21 20:43	BK			V8260SL
JD20920-5	SW846 8260C BY SIM	04-MAR-21 18:34	RS			V8260SIMDIOX
JD20920-6	Collected: 24-FEB-21 14:00 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-EBLK02-022421						
JD20920-6	SW846 8260C	03-MAR-21 17:26	BK			V8260SL
JD20920-6	SW846 8260C BY SIM	04-MAR-21 15:43	RS			V8260SIMDIOX
JD20920-7	Collected: 24-FEB-21 15:00 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW03-022421						
JD20920-7	SW846 8260C	03-MAR-21 21:11	BK			V8260SL

Internal Sample Tracking Chronicle

Raytheon Technologies Corporation

Job No: JD20920

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60651001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD20920-7	SW846 8260C BY SIM	04-MAR-21 19:03	RS			V8260SIMDIOX
JD20920-8	Collected: 24-FEB-21 00:00 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-DUP02-022421						
JD20920-8	SW846 8260C	03-MAR-21 21:39	BK			V8260SL
JD20920-8	SW846 8260C BY SIM	04-MAR-21 19:32	RS			V8260SIMDIOX
JD20920-9	Collected: 25-FEB-21 11:35 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW01-022521						
JD20920-9	SW846 8260C	03-MAR-21 22:07	BK			V8260SL
JD20920-9	SW846 8260C BY SIM	04-MAR-21 20:01	RS			V8260SIMDIOX
JD20920-10	Collected: 25-FEB-21 11:55 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-FBLK02-022521						
JD20920-10	SW846 8260C	03-MAR-21 17:54	BK			V8260SL
JD20920-10	SW846 8260C BY SIM	04-MAR-21 16:11	RS			V8260SIMDIOX
JD20920-11	Collected: 25-FEB-21 12:10 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-RAMW02-022521						
JD20920-11	SW846 8260C	03-MAR-21 12:54	BK			V8260SL
JD20920-11	SW846 8260C BY SIM	04-MAR-21 13:47	RS			V8260SIMDIOX
JD20920-12	Collected: 25-FEB-21 12:10 By: AH		Received: 27-FEB-21 By: DDH			
HSSER-TBLK02-022521						
JD20920-12	SW846 8260C	03-MAR-21 18:22	BK			V8260SL

SGS Internal Chain of Custody

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20920-1.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-1.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-1.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-1.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-1.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-1.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-1.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-1.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-1.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-1.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-1.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-1.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-1.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-2.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-2.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-2.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-2.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-2.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-2.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-2.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-2.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-2.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-2.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-2.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-2.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-2.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-3.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-3.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-3.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-3.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-3.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-3.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20920-3.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-3.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-3.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-3.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-3.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-3.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-3.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-4.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-4.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-4.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-4.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-4.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-4.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-4.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-4.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-4.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-4.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-4.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-4.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-4.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-5.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-5.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-5.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-5.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-5.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-5.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-5.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-5.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-5.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-5.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-5.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-5.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20920-5.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-6.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-6.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-6.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-6.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-6.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-6.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-6.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-6.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-6.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-6.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-6.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-6.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-6.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-7.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-7.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-7.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-7.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-7.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-7.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-7.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-7.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-7.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-7.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-7.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-7.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-7.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-8.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-8.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-8.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-8.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-8.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20920-8.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-8.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-8.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-8.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-8.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-8.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-8.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-8.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-9.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-9.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-9.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-9.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-9.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-9.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-9.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-9.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-9.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-9.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-9.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-9.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-9.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-10.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-10.1	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-10.1	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-10.1	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-10.1	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-10.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-10.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-10.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-10.4	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-10.4	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-10.4	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20920-10.4	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-10.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.1	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.1	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-11.1	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-11.1	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-11.1	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-11.2	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.2	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-11.2	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-11.2	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-11.2	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-11.3	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.3	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-11.3	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-11.3	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-11.3	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage
JD20920-11.4	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.5	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.6	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.7	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.8	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.9	Shivani Gogwekar	Secured Storage	02/27/21 15:43	Return to Storage
JD20920-11.15	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-11.15	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-11.15	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-11.15	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-11.16	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-11.16	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-11.16	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-11.16	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage

SGS Internal Chain of Custody

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/27/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD20920-11.17	Secured Storage	Robert Szot	03/04/21 12:32	Retrieve from Storage
JD20920-11.17	Robert Szot	GCMS3A	03/04/21 12:32	Load on Instrument
JD20920-11.17	GCMS3A	Robert Szot	03/05/21 12:58	Unload from Instrument
JD20920-11.17	Robert Szot	Secured Storage	03/05/21 12:58	Return to Storage
JD20920-12.1	Secured Storage	Brittany Klimek	03/03/21 14:01	Retrieve from Storage
JD20920-12.1	Brittany Klimek	GCMS3B	03/03/21 14:01	Load on Instrument
JD20920-12.1	GCMS3B	Brittany Klimek	03/04/21 09:56	Unload from Instrument
JD20920-12.1	Brittany Klimek	Secured Storage	03/04/21 09:56	Return to Storage

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B4443-MB	4B102709.D	1	03/03/21	BK	n/a	n/a	V4B4443

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20920-1, JD20920-2, JD20920-3, JD20920-4, JD20920-5, JD20920-6, JD20920-7, JD20920-8, JD20920-9, JD20920-10, JD20920-11, JD20920-12

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	108%	81-124%
2037-26-5	Toluene-D8	95%	80-120%
460-00-4	4-Bromofluorobenzene	108%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A7170-MB	3A165059.D	1	03/04/21	RS	n/a	n/a	V3A7170

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20920-1, JD20920-2, JD20920-3, JD20920-4, JD20920-5, JD20920-6, JD20920-7, JD20920-8, JD20920-9, JD20920-10, JD20920-11

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.40	0.095	ug/l	

CAS No.	Surrogate Recoveries		Limits
17647-74-4	1,4-Dioxane-d8	93%	39-174%

Blank Spike Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B4443-BS	4B102707.D	1	03/03/21	BK	n/a	n/a	V4B4443

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20920-1, JD20920-2, JD20920-3, JD20920-4, JD20920-5, JD20920-6, JD20920-7, JD20920-8, JD20920-9, JD20920-10, JD20920-11, JD20920-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	48.5	97	79-120
107-06-2	1,2-Dichloroethane	50	47.7	95	78-126
75-35-4	1,1-Dichloroethene	50	46.1	92	69-126
156-59-2	cis-1,2-Dichloroethene	50	48.3	97	80-120
156-60-5	trans-1,2-Dichloroethene	50	48.5	97	76-120
100-41-4	Ethylbenzene	50	46.5	93	80-120
75-09-2	Methylene chloride	50	45.0	90	77-120
127-18-4	Tetrachloroethene	50	44.4	89	70-131
108-88-3	Toluene	50	45.5	91	80-120
71-55-6	1,1,1-Trichloroethane	50	51.1	102	81-128
79-00-5	1,1,2-Trichloroethane	50	49.8	100	83-118
79-01-6	Trichloroethene	50	47.0	94	80-120
75-01-4	Vinyl chloride	50	52.5	105	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	81-124%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	110%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A7170-BS	3A165058.D	1	03/04/21	RS	n/a	n/a	V3A7170

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20920-1, JD20920-2, JD20920-3, JD20920-4, JD20920-5, JD20920-6, JD20920-7, JD20920-8, JD20920-9, JD20920-10, JD20920-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	20	17.5	88	61-125

CAS No.	Surrogate Recoveries	BSP	Limits
17647-74-4	1,4-Dioxane-d8	91%	39-174%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20920-11MS	4B102716.D	1	03/03/21	BK	n/a	n/a	V4B4443
JD20920-11MSD	4B102717.D	1	03/03/21	BK	n/a	n/a	V4B4443
JD20920-11	4B102710.D	1	03/03/21	BK	n/a	n/a	V4B4443

The QC reported here applies to the following samples: **Method:** SW846 8260C

JD20920-1, JD20920-2, JD20920-3, JD20920-4, JD20920-5, JD20920-6, JD20920-7, JD20920-8, JD20920-9, JD20920-10, JD20920-11, JD20920-12

CAS No.	Compound	JD20920-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-34-3	1,1-Dichloroethane	0.77	J	50	52.5	103	50	53.9	106	3	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	47.8	96	50	51.7	103	8	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	52.1	104	50	51.8	104	1	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	51.0	102	50	52.7	105	3	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	54.0	108	50	53.0	106	2	70-126/11
100-41-4	Ethylbenzene	ND		50	48.4	97	50	54.2	108	11	51-140/20
75-09-2	Methylene chloride	ND		50	47.5	95	50	46.7	93	2	73-125/13
127-18-4	Tetrachloroethene	ND		50	47.5	95	50	51.6	103	8	61-139/11
108-88-3	Toluene	ND		50	46.4	93	50	50.2	100	8	60-135/10
71-55-6	1,1,1-Trichloroethane	ND		50	55.4	111	50	54.8	110	1	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	49.8	100	50	54.0	108	8	78-121/11
79-01-6	Trichloroethene	ND		50	47.0	94	50	53.9	108	14* [a]	62-141/10
75-01-4	Vinyl chloride	ND		50	61.8	124	50	58.5	117	5	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JD20920-11	Limits
1868-53-7	Dibromofluoromethane	107%	102%	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	103%	110%	81-124%
2037-26-5	Toluene-D8	99%	97%	101%	80-120%
460-00-4	4-Bromofluorobenzene	103%	106%	100%	80-120%

(a) Analytical precision exceeds in-house control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20920-11MS	3A165063.D	1	03/04/21	RS	n/a	n/a	V3A7170
JD20920-11MSD	3A165064.D	1	03/04/21	RS	n/a	n/a	V3A7170
JD20920-11	3A165062.D	1	03/04/21	RS	n/a	n/a	V3A7170

The QC reported here applies to the following samples: **Method:** SW846 8260C BY SIM

JD20920-1, JD20920-2, JD20920-3, JD20920-4, JD20920-5, JD20920-6, JD20920-7, JD20920-8, JD20920-9, JD20920-10, JD20920-11

CAS No.	Compound	JD20920-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	ND		20	20.7	104	20	21.7	109	5	36-157/42

CAS No.	Surrogate Recoveries	MS	MSD	JD20920-11	Limits
17647-74-4	1,4-Dioxane-d8	118%	143%	121%	39-174%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V3A6923-BFB
Lab File ID: 3A160428.D
Instrument ID: GCMS3A
Injection Date: 07/18/18
Injection Time: 16:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	25408	20.8		Pass
75	30.0 - 60.0% of mass 95	62880	51.6		Pass
95	Base peak, 100% relative abundance	121864	100.0		Pass
96	5.0 - 9.0% of mass 95	8101	6.65		Pass
173	Less than 2.0% of mass 174	826	0.68	(0.81) [a]	Pass
174	50.0 - 120.0% of mass 95	102317	84.0		Pass
175	5.0 - 9.0% of mass 174	8168	6.70	(7.98) [a]	Pass
176	95.0 - 101.0% of mass 174	100370	82.4	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	6691	5.49	(6.67) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A6923-IC6923	3A160429.D	07/18/18	17:26	00:31	Initial cal 0.25
V3A6923-IC6923	3A160430.D	07/18/18	17:52	00:57	Initial cal 0.4
V3A6923-IC6923	3A160431.D	07/18/18	18:18	01:23	Initial cal 1
V3A6923-IC6923	3A160432.D	07/18/18	18:43	01:48	Initial cal 2
V3A6923-IC6923	3A160433.D	07/18/18	19:09	02:14	Initial cal 5
V3A6923-ICC6923	3A160434.D	07/18/18	19:35	02:40	Initial cal 20
V3A6923-IC6923	3A160435.D	07/18/18	20:00	03:05	Initial cal 50
V3A6923-IC6923	3A160436.D	07/18/18	20:26	03:31	Initial cal 100
V3A6923-IC6923	3A160437.D	07/18/18	20:52	03:57	Initial cal 200
V3A6923-ICV6923	3A160443.D	07/18/18	23:25	06:30	Initial cal verification 20

Instrument Performance Check (BFB)

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V3A7170-BFB
Lab File ID: 3A165056.D
Instrument ID: GCMS3A
Injection Date: 03/04/21
Injection Time: 10:09

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12600	18.7		Pass
75	30.0 - 60.0% of mass 95	31168	46.2		Pass
95	Base peak, 100% relative abundance	67437	100.0		Pass
96	5.0 - 9.0% of mass 95	4218	6.25		Pass
173	Less than 2.0% of mass 174	669	0.99	(1.02) [a]	Pass
174	50.0 - 120.0% of mass 95	65834	97.6		Pass
175	5.0 - 9.0% of mass 174	4956	7.35	(7.53) [a]	Pass
176	95.0 - 101.0% of mass 174	64389	95.5	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4246	6.30	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A7170-CC6923	3A165057.D	03/04/21	10:45	00:36	Continuing cal 5
V3A7170-BS	3A165058.D	03/04/21	11:19	01:10	Blank Spike
V3A7170-MB	3A165059.D	03/04/21	11:48	01:39	Method Blank
ZZZZZZ	3A165060.D	03/04/21	12:49	02:40	(unrelated sample)
ZZZZZZ	3A165061.D	03/04/21	13:18	03:09	(unrelated sample)
JD20920-11	3A165062.D	03/04/21	13:47	03:38	HSSER-RAMW02-022521
JD20920-11MS	3A165063.D	03/04/21	14:16	04:07	Matrix Spike
JD20920-11MSD	3A165064.D	03/04/21	14:45	04:36	Matrix Spike Duplicate
JD20920-6	3A165066.D	03/04/21	15:43	05:34	HSSER-EBLK02-022421
JD20920-10	3A165067.D	03/04/21	16:11	06:02	HSSER-FBLK02-022521
JD20920-1	3A165068.D	03/04/21	16:40	06:31	HSSER-RAMW08-022321
JD20920-2	3A165069.D	03/04/21	17:09	07:00	HSSER-RAMW07-022421
JD20920-3	3A165070.D	03/04/21	17:37	07:28	HSSER-RAMW06-022421
JD20920-4	3A165071.D	03/04/21	18:06	07:57	HSSER-RAMW05-022421
JD20920-5	3A165072.D	03/04/21	18:34	08:25	HSSER-RAMW04-022421
JD20920-7	3A165073.D	03/04/21	19:03	08:54	HSSER-RAMW03-022421
JD20920-8	3A165074.D	03/04/21	19:32	09:23	HSSER-DUP02-022421
JD20920-9	3A165075.D	03/04/21	20:01	09:52	HSSER-RAMW01-022521

Instrument Performance Check (BFB)

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B4435-BFB
Lab File ID: 4B102495.D
Instrument ID: GCMS4B
Injection Date: 02/17/21
Injection Time: 20:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19973	18.9		Pass
75	30.0 - 60.0% of mass 95	51397	48.5		Pass
95	Base peak, 100% relative abundance	105933	100.0		Pass
96	5.0 - 9.0% of mass 95	6912	6.52		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	104266	98.4		Pass
175	5.0 - 9.0% of mass 174	8799	8.31	(8.44) [a]	Pass
176	95.0 - 101.0% of mass 174	101728	96.0	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	7225	6.82	(7.10) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B4435-IC4435	4B102496.D	02/17/21	20:52	00:35	Initial cal 0.2
V4B4435-IC4435	4B102497.D	02/17/21	21:20	01:03	Initial cal 0.5
V4B4435-IC4435	4B102498.D	02/17/21	21:48	01:31	Initial cal 1
V4B4435-IC4435	4B102499.D	02/17/21	22:17	02:00	Initial cal 2
V4B4435-IC4435	4B102500.D	02/17/21	22:45	02:28	Initial cal 4
V4B4435-IC4435	4B102501.D	02/17/21	23:13	02:56	Initial cal 8
V4B4435-IC4435	4B102502.D	02/17/21	23:41	03:24	Initial cal 20
V4B4435-ICC4435	4B102503.D	02/18/21	00:09	03:52	Initial cal 50
V4B4435-IC4435	4B102504.D	02/18/21	00:37	04:20	Initial cal 100
V4B4435-IC4435	4B102505.D	02/18/21	01:05	04:48	Initial cal 200
V4B4435-ICV4435	4B102508.D	02/18/21	02:30	06:13	Initial cal verification 50
V4B4435-ICV4435	4B102509.D	02/18/21	02:58	06:41	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B4443-BFB
Lab File ID: 4B102705.D
Instrument ID: GCMS4B
Injection Date: 03/03/21
Injection Time: 10:15

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18176	19.3		Pass
75	30.0 - 60.0% of mass 95	47011	49.9		Pass
95	Base peak, 100% relative abundance	94296	100.0		Pass
96	5.0 - 9.0% of mass 95	5973	6.33		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	92096	97.7		Pass
175	5.0 - 9.0% of mass 174	7699	8.16	(8.36) [a]	Pass
176	95.0 - 101.0% of mass 174	90197	95.7	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	5962	6.32	(6.61) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B4443-CC4435	4B102705.D	03/03/21	10:15	00:00	Continuing cal 20
V4B4443-BS	4B102707.D	03/03/21	11:24	01:09	Blank Spike
V4B4443-MB	4B102709.D	03/03/21	12:20	02:05	Method Blank
JD20920-11	4B102710.D	03/03/21	12:54	02:39	HSSER-RAMW02-022521
ZZZZZZ	4B102711.D	03/03/21	13:22	03:07	(unrelated sample)
ZZZZZZ	4B102712.D	03/03/21	14:07	03:52	(unrelated sample)
ZZZZZZ	4B102713.D	03/03/21	14:35	04:20	(unrelated sample)
ZZZZZZ	4B102714.D	03/03/21	15:03	04:48	(unrelated sample)
ZZZZZZ	4B102715.D	03/03/21	15:32	05:17	(unrelated sample)
JD20920-11MS	4B102716.D	03/03/21	16:01	05:46	Matrix Spike
JD20920-11MSD	4B102717.D	03/03/21	16:29	06:14	Matrix Spike Duplicate
JD20920-6	4B102719.D	03/03/21	17:26	07:11	HSSER-EBLK02-022421
JD20920-10	4B102720.D	03/03/21	17:54	07:39	HSSER-FBLK02-022521
JD20920-12	4B102721.D	03/03/21	18:22	08:07	HSSER-TBLK02-022521
JD20920-1	4B102722.D	03/03/21	18:50	08:35	HSSER-RAMW08-022321
JD20920-2	4B102723.D	03/03/21	19:18	09:03	HSSER-RAMW07-022421
JD20920-3	4B102724.D	03/03/21	19:47	09:32	HSSER-RAMW06-022421
JD20920-4	4B102725.D	03/03/21	20:15	10:00	HSSER-RAMW05-022421
JD20920-5	4B102726.D	03/03/21	20:43	10:28	HSSER-RAMW04-022421
JD20920-7	4B102727.D	03/03/21	21:11	10:56	HSSER-RAMW03-022421
JD20920-8	4B102728.D	03/03/21	21:39	11:24	HSSER-DUP02-022421
JD20920-9	4B102729.D	03/03/21	22:07	11:52	HSSER-RAMW01-022521

Internal Standard Area Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V3A7170-CC6923	**Injection Date:**	03/04/21
Lab File ID:	3A165057.D	**Injection Time:**	10:45
Instrument ID:	GCMS3A	**Method:**	SW846 8260C BY SIM

	IS 1 AREA	RT
Check Std	11964	15.77
Upper Limit [a]	23928	16.27
Lower Limit [b]	5982	15.27

Lab Sample ID	IS 1 AREA	RT
V3A7170-BS	11514	15.77
V3A7170-MB	10902	15.77
ZZZZZZ	10889	15.77
ZZZZZZ	10165	15.77
JD20920-11	8804	15.77
JD20920-11MS	9997	15.77
JD20920-11MSD	9697	15.77
JD20920-6	10380	15.77
JD20920-10	10217	15.77
JD20920-1	9874	15.77
JD20920-2	8849	15.77
JD20920-3	9696	15.77
JD20920-4	10135	15.77
JD20920-5	10728	15.77
JD20920-7	10057	15.77
JD20920-8	9238	15.77
JD20920-9	10500	15.77

IS 1 = 4-Bromofluorobenzene

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V4B4443-CC4435	**Injection Date:**	03/03/21
Lab File ID:	4B102705.D	**Injection Time:**	10:15
Instrument ID:	GCMS4B	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	116077	6.47	217909	8.45	284964	9.31	306108	12.50	220487	15.07
Upper Limit [a]	232154	6.97	435818	8.95	569928	9.81	612216	13.00	440974	15.57
Lower Limit [b]	58039	5.97	108955	7.95	142482	8.81	153054	12.00	110244	14.57

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4B4443-BS	120156	6.47	226836	8.45	304435	9.31	368437	12.49	233412	15.07
V4B4443-MB	128250	6.47	235067	8.45	306303	9.31	375928	12.50	251481	15.07
JD20920-11	140557	6.49	210103	8.45	270022	9.31	274298	12.50	200249	15.07
ZZZZZZ	220654	6.48	230652	8.45	303777	9.31	314475	12.50	219131	15.07
ZZZZZZ	221402	6.47	213553	8.45	267469	9.31	284393	12.50	197081	15.07
ZZZZZZ	139264	6.48	233217	8.45	312323	9.31	337674	12.50	234170	15.07
ZZZZZZ	137777	6.47	238218	8.45	324428	9.31	330788	12.50	231604	15.07
ZZZZZZ	113865	6.44	234052	8.45	318317	9.32	339568	12.50	243863	15.07
JD20920-11MS	133751	6.46	201008	8.45	267836	9.31	293877	12.50	204634	15.07
JD20920-11MSD	131614	6.47	238404	8.45	318906	9.31	358789	12.49	244418	15.07
JD20920-6	130711	6.47	241652	8.45	329574	9.31	343340	12.50	246247	15.07
JD20920-10	121380	6.48	242265	8.45	331922	9.31	339646	12.50	246198	15.07
JD20920-12	127658	6.48	236078	8.45	314407	9.31	350486	12.50	249516	15.07
JD20920-1	118450	6.46	235430	8.45	311970	9.31	365319	12.50	247195	15.07
JD20920-2	142254	6.48	231638	8.45	302302	9.31	333097	12.50	243110	15.07
JD20920-3	124750	6.48	230952	8.45	307590	9.31	333675	12.50	240056	15.07
JD20920-4	124727	6.47	224743	8.45	299789	9.31	311669	12.50	230753	15.07
JD20920-5	121927	6.48	227269	8.45	297582	9.31	317966	12.50	228750	15.07
JD20920-7	114062	6.47	226052	8.45	299923	9.31	331908	12.50	237413	15.07
JD20920-8	118795	6.48	223944	8.45	292841	9.31	324147	12.50	225723	15.07
JD20920-9	108978	6.49	217375	8.45	286441	9.31	321455	12.49	227995	15.07

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD20920-1	4B102722.D	102	104	95	108
JD20920-2	4B102723.D	104	106	96	104
JD20920-3	4B102724.D	104	106	97	106
JD20920-4	4B102725.D	103	107	100	103
JD20920-5	4B102726.D	104	110	99	102
JD20920-6	4B102719.D	103	103	100	101
JD20920-7	4B102727.D	106	107	96	107
JD20920-8	4B102728.D	104	108	96	105
JD20920-9	4B102729.D	103	108	96	106
JD20920-10	4B102720.D	104	104	101	103
JD20920-11	4B102710.D	108	110	101	100
JD20920-12	4B102721.D	105	104	96	105
JD20920-11MS	4B102716.D	107	106	99	103
JD20920-11MSD	4B102717.D	102	103	97	106
V4B4443-BS	4B102707.D	101	102	97	110
V4B4443-MB	4B102709.D	102	108	95	108

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

Surrogate Recovery Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD20920-1	3A165068.D	113
JD20920-2	3A165069.D	127
JD20920-3	3A165070.D	121
JD20920-4	3A165071.D	124
JD20920-5	3A165072.D	126
JD20920-6	3A165066.D	139
JD20920-7	3A165073.D	132
JD20920-8	3A165074.D	171
JD20920-9	3A165075.D	130
JD20920-10	3A165067.D	103
JD20920-11	3A165062.D	121
JD20920-11MS	3A165063.D	118
JD20920-11MSD	3A165064.D	143
V3A7170-BS	3A165058.D	91
V3A7170-MB	3A165059.D	93

Surrogate Compounds	Recovery Limits
S1 = 1,4-Dioxane-d8	39-174%

Initial Calibration Summary

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Sample: V3A6923-ICC6923
Lab FileID: 3A160434.D

```
                    Response Factor Report  MS3A

 Method       : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
 Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
 Last Update  : Thu Jul 19 08:25:27 2018
 Response via : Initial Calibration

 Calibration Files
 0.4 =3A160430.D  1   =3A160431.D  2   =3A160432.D  5   =3A160433.D
 0.25=3A160429.D  20  =3A160434.D  50  =3A160435.D  200 =3A160437.D
 100 =3A160436.D      =                =                =

 Compound
         0.4   1     2     5     0.25  20    50    200   100          Avg   %RSD
 ---------------------------------------------------------------------------

 1) I   4-bromofluorobenzene  ----------------ISTD---------------------
 2)  1,4-dioxane-d8
      0.048 0.049 0.051 0.052 0.050 0.051 0.052 0.057 0.051        0.051    4.92
 3)  1,4-dioxane
      0.053 0.051 0.049 0.049 0.069 0.044 0.046 0.052 0.044        0.051   14.72
---------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M3A6923.M         Thu Jul 19 08:29:15 2018   ACCUNJ
```

Initial Calibration Verification

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Sample: V3A6923-ICV6923
Lab FileID: 3A160443.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDChem\1\DATA\V3A6923\3A160443.D         Vial: 19
Acq On    : 18 Jul 2018  11:25 pm                    Operator: HueanhT
Sample    : icv6923-20                               Inst    : MS3A
Misc      : MS27832,V3A6923,5.0,,,,1                 Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Thu Jul 19 08:25:27 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	4-bromofluorobenzene	1.000	1.000	0.0	92	0.00	15.80
2 S	1,4-dioxane-d8	0.051	0.062	-21.6	111	0.00	12.09
3 M	1,4-dioxane	0.051	0.054	-5.9	113	0.01	12.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3A160434.D M3A6923.M Thu Jul 19 08:29:15 2018 ACCUNJ

Continuing Calibration Summary

Job Number: JD20920 **Sample:** V3A7170-CC6923
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 3A165057.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\V3A7170\3A165057.D        Vial: 2
Acq On    :  4 Mar 2021  10:45 am                   Operator: ROBERTS
Sample    : CC6923-5 C                              Inst    : MS3A
Misc      : MS49208,V3A7170,5,,,,1                  Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Wed Oct 21 09:38:56 2020
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	4-bromofluorobenzene	1.000	1.000	0.0	114	-0.03	15.77
2 S	1,4-dioxane-d8	0.051	0.046	9.8	101	-0.03	12.06
3 M	1,4-dioxane	0.051	0.046	9.8	106	0.00	12.15

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3A160433.D M3A6923.M Fri Mar 05 17:42:22 2021 ACCUNJ

Initial Calibration Summary

Job Number: JD20920 **Sample:** V4B4435-ICC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102503.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

```
                        Response Factor Report  MS4B

Method       : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title        : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update  : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Calibration Files
1   =4B102498.D  4   =4B102500.D  100 =4B102504.D  50  =4B102503.D
20  =4B102502.D  200 =4B102505.D  8   =4B102501.D  0.5 =4B102497.D
2   =4B102499.D  0.2 =4B102496.D      =                =

Compound
            1     4     100   50    20    200   8     0.5   2     0.2    Avg    %RSD
-----------------------------------------------------------------------------

1) I   tert butyl alcohol-d9 ----------------ISTD---------------------
2)  ethanol
                                                                        0.000   -1.00
3)  tertiary butyl alcohol
                1.107 1.198 1.157 1.124 1.188 1.005       0.941        1.103    8.74
4)  1,4-dioxane
                0.073 0.094 0.088 0.087 0.093 0.077                    0.085    9.99

5) I   pentafluorobenzene    ----------------ISTD---------------------
6)  chlorodifluoromethane
          0.845 0.821 0.898 0.904 0.863 0.873 0.822 0.817 0.802        0.849    4.35
7)  dichlorodifluoromethane
          1.145 1.142 1.339 1.332 1.260 1.217 1.130 1.096 1.144        1.201    7.55
8)  chloromethane
          1.264 0.966 0.999 0.983 0.961 0.904 0.953       0.985        1.002   10.95
9)  vinyl chloride
          0.903 0.859 0.950 0.944 0.891 0.868 0.843 0.879 0.859        0.888    4.25
10)  1,3-butadiene
          0.532 0.567 0.616 0.621 0.582 0.569 0.576 0.529 0.573        0.574    5.49
11)  bromomethane
          0.736 0.644 0.657 0.657 0.649 0.581 0.634 0.758 0.705 0.736  0.675    8.28
12)  chloroethane
          0.325 0.385 0.395 0.402 0.393 0.354 0.372       0.409        0.379    7.43
13)  trichlorofluoromethane
          1.137 1.070 1.120 1.131 1.089 1.038 1.019 1.111 1.035        1.083    4.13
14)  vinyl bromide
          0.248 0.281 0.307 0.301 0.286 0.283 0.275       0.246        0.278    7.96
15)  ethyl ether
                0.166 0.170 0.170 0.166 0.161 0.152       0.188        0.167    6.62
16)  acrolein
                0.050 0.067 0.065 0.060 0.066 0.050                    0.060   13.14
17)  freon 113
          0.534 0.596 0.593 0.607 0.582 0.568 0.542       0.595        0.577    4.64
18)  1,1-dichloroethene
          0.794 0.848 0.780 0.806 0.793 0.740 0.750 0.837 0.834 0.880  0.806    5.46
19)  acetone
                0.030 0.035 0.034 0.034 0.033 0.034       0.031        0.033    5.34
20)  acetonitrile
                0.056 0.059 0.059 0.060 0.055 0.053       0.053        0.056    5.47
21)  iodomethane
          1.313 1.287 1.280 1.304 1.282 1.237 1.235 1.338 1.305 1.291  1.287    2.48
22)  carbon disulfide
          2.041 1.916 1.891 1.937 1.911 1.794 1.803 2.020 1.883 2.093  1.929    5.06
23)  methylene chloride
```

```
          0.710 0.565 0.534 0.548 0.540 0.511 0.538       0.584        0.566   10.93
24)  methyl acetate
          0.200 0.255 0.266 0.276 0.271 0.253 0.248       0.240        0.251    9.56
25)  methyl tert butyl ether
          1.533 1.420 1.433 1.471 1.440 1.319 1.384 1.437 1.499 1.492  1.443    4.25
26)  trans-1,2-dichloroethene
          0.728 0.692 0.671 0.676 0.688 0.637 0.643 0.694 0.678 0.546  0.665    7.37
27)  hexane
          0.299 0.315 0.327 0.322 0.314 0.327 0.300 0.293 0.305        0.311    4.03
28)  di-isopropyl ether
          1.909 1.740 1.829 1.836 1.806 1.720 1.742 1.777 1.784 1.764  1.791    3.15
29)  2-butanone
                0.027 0.034 0.035 0.031 0.034 0.029       0.024        0.031   12.72
30)  1,1-dichloroethane
          0.821 0.795 0.822 0.833 0.826 0.769 0.809 0.920 0.802        0.822    5.06
31)  chloroprene
          0.660 0.663 0.664 0.669 0.654 0.632 0.624 0.674 0.641        0.653    2.64
32)  acrylonitrile
                0.107 0.139 0.138 0.135 0.136 0.126                    0.130    9.54
33)  vinyl acetate
                      0.059 0.055 0.046 0.057 0.042                    0.052   14.09
34)  ethyl tert-butyl ether
          1.625 1.610 1.672 1.686 1.641 1.554 1.570 1.691 1.620 1.671  1.634    2.89
35)  ethyl acetate
                0.036 0.053 0.053 0.048 0.052 0.040                    0.047   15.35
36)  2,2-dichloropropane
          1.027 0.865 0.891 0.913 0.911 0.824 0.885 0.975 0.894 0.909  0.910    6.20
37)  cis-1,2-dichloroethene
          0.528 0.504 0.476 0.482 0.483 0.455 0.454 0.445 0.480        0.479    5.43
38)  propionitrile
          0.049 0.051 0.050 0.050 0.050 0.048 0.046 0.043 0.046        0.048    5.18
39)  methyl acrylate
                0.041 0.051 0.050 0.042 0.052 0.036                    0.045   14.76
40)  methacrylonitrile
          0.102 0.119 0.131 0.130 0.118 0.131 0.114       0.104        0.119    9.74
41)  bromochloromethane
          0.251 0.249 0.259 0.261 0.251 0.247 0.244 0.298 0.248        0.257    6.41
42)  tetrahydrofuran
                      0.046 0.043 0.041 0.044 0.038                    0.042    7.18
43)  chloroform
          1.029 0.880 0.843 0.859 0.865 0.808 0.819 1.055 0.899        0.895    9.84
44)  tert-butyl formate
          0.288 0.368 0.402 0.395 0.392 0.372 0.362       0.346        0.366   10.04
45)  dibromofluoromethane (s)
          0.500 0.501 0.495 0.493 0.497 0.485 0.497 0.488 0.497 0.512  0.496    1.49
46)  1,1,1-trichloroethane
          0.985 0.983 1.057 1.047 1.002 1.016 0.956 1.002 1.002 0.916  0.997    4.11
47)  cyclohexane
          0.829 0.825 0.883 0.864 0.832 0.843 0.763 0.823 0.768 0.888  0.832    5.06
48)  isobutyl alcohol
                                                                       0.000   -1.00
49)  1,1-dichloropropene
          0.577 0.598 0.575 0.576 0.567 0.548 0.559 0.638 0.588        0.581    4.46
50)  carbon tetrachloride
          0.967 0.893 0.935 0.937 0.922 0.894 0.859 0.831 0.906 0.867  0.901    4.56
51)  tert-amyl alcohol
                0.025 0.020 0.022 0.024 0.020 0.022       0.021        0.022    8.27
52)  isopropyl acetate
                0.057 0.076 0.071 0.069 0.075 0.063                    0.068   10.59
```

```
53) I   1,4-difluorobenzene   ----------------ISTD---------------------
54)  1,2-dichloroethane-d4 (s)
           0.388 0.392 0.369 0.371 0.400 0.353 0.393 0.375 0.383 0.411  0.383    4.39
55)  n-butyl alcohol
           0.005 0.006 0.006 0.006 0.007 0.005 0.006       0.006        0.006    9.16
56)  2,2,4-trimethylpentane
           1.277 1.266 1.539 1.531 1.373 1.533 1.260       1.242        1.378    9.83
57)  benzene
           1.274 1.249 1.209 1.239 1.226 1.164 1.186 1.344 1.192 1.393  1.248    5.80
58)  tert-amyl methyl ether
           1.116 1.073 1.115 1.162 1.143 1.010 1.056 1.113 1.126 1.155  1.107    4.30
59)  heptane
           0.230 0.230 0.238 0.242 0.233 0.233 0.217 0.210 0.228        0.229    4.28
60)  1,2-dichloroethane
           0.518 0.457 0.429 0.448 0.439 0.403 0.424       0.469        0.449    7.75
61)  ethyl acrylate
                 0.281 0.317 0.318 0.303 0.310 0.273       0.261        0.295    7.80
62)  trichloroethene
           0.339 0.331 0.331 0.331 0.327 0.322 0.306 0.319 0.318        0.325    3.04
63)  2-chloroethyl vinyl ether
           0.148 0.156 0.161 0.166 0.155 0.154 0.146 0.128 0.146        0.151    7.26
64)  methyl methacrylate
                 0.053 0.066 0.066 0.061 0.065 0.045                    0.059   14.76
65)  methylcyclohexane
           0.681 0.660 0.727 0.741 0.695 0.693 0.663 0.683 0.649 0.657  0.685    4.41
66)  1,2-dichloropropane
           0.333 0.329 0.330 0.336 0.328 0.310 0.307 0.339 0.324        0.326    3.34
67)  dibromomethane
           0.221 0.202 0.200 0.205 0.201 0.195 0.201 0.208 0.187        0.202    4.60
68)  bromodichloromethane
           0.501 0.453 0.476 0.475 0.446 0.467 0.449 0.491 0.450        0.468    4.21
69)  2-nitropropane
                 0.061 0.070 0.069 0.064 0.069 0.061       0.068        0.066    6.20
70)  epichlorohydrin
           0.019 0.024 0.026 0.025 0.024 0.026 0.024       0.024        0.024    9.54
71)  cis-1,3-dichloropropene
           0.539 0.488 0.519 0.522 0.495 0.521 0.478 0.528 0.485 0.546  0.512    4.66
72)  4-methyl-2-pentanone
           0.105 0.111 0.105 0.108 0.108 0.097 0.101 0.099 0.107        0.105    4.31
73)  isoamyl alcohol
           0.007 0.009 0.007 0.009 0.009 0.007 0.008       0.007        0.008   10.95

74) I   chlorobenzene-d5      ----------------ISTD---------------------
75)  toluene-d8 (s)
           1.125 1.087 1.203 1.167 1.156 1.212 1.159 1.109 1.113 1.090  1.142    3.88
76)  toluene
           0.737 0.684 0.753 0.740 0.716 0.759 0.687 0.702 0.693 0.645  0.712    5.07
77)  ethyl methacrylate
           0.269 0.336 0.349 0.357 0.342 0.332 0.317       0.307        0.326    8.64
78)  trans-1,3-dichloropropene
           0.430 0.419 0.449 0.450 0.428 0.436 0.417 0.442 0.402 0.355  0.423    6.69
79)  1,1,2-trichloroethane
           0.178 0.212 0.227 0.221 0.217 0.220 0.196 0.193 0.200        0.207    7.87
80)  tetrachloroethene
           0.325 0.278 0.315 0.310 0.296 0.315 0.288 0.278 0.277        0.298    6.23
81)  2-hexanone
           0.085 0.101 0.089 0.094 0.095 0.082 0.094 0.076 0.083        0.089    8.86
82)  1,3-dichloropropane
           0.392 0.417 0.411 0.419 0.401 0.395 0.395 0.443 0.409        0.409    3.95
83)  butyl acetate
```

```
                 0.166 0.162 0.178 0.176 0.152 0.175                    0.168    6.07
 84)  dibromochloromethane
           0.346 0.360 0.387 0.379 0.366 0.381 0.338 0.403 0.347 0.403  0.371    6.28
 85)  1,2-dibromoethane
           0.431 0.417 0.439 0.444 0.420 0.432 0.406 0.443 0.405        0.426    3.52
 86)  n-butyl ether
           1.551 1.491 1.462 1.533 1.535 1.368 1.468 1.593 1.497        1.500    4.31
 87)  chlorobenzene
           0.915 0.894 0.886 0.897 0.883 0.876 0.843 1.024 0.879 0.756  0.885    7.45
 88)  1,1,1,2-tetrachloroethane
           0.404 0.383 0.452 0.444 0.427 0.437 0.405 0.438 0.404        0.421    5.53
 89)  ethylbenzene
           1.644 1.547 1.554 1.594 1.568 1.500 1.548 1.632 1.561 1.339  1.549    5.48
 90)  m,p-xylene
           0.594 0.591 0.582 0.601 0.589 0.572 0.580 0.617 0.566 0.486  0.578    6.11
 91)  o-xylene
           1.402 1.303 1.368 1.391 1.378 1.332 1.326 1.341 1.289 1.112  1.324    6.28
 92)  styrene
           0.908 1.015 0.982 1.065 1.020 0.984 0.976 0.961 0.929        0.982    4.87
 93)  butyl acrylate
           0.565 0.644 0.611 0.699 0.693 0.590 0.636       0.592        0.629    7.72
 94)  isopropylbenzene
           1.836 1.719 1.871 1.870 1.816 1.841 1.781 1.830 1.708 1.789  1.806    3.15
 95)  bromoform
           0.307 0.304 0.299 0.321 0.305 0.306 0.293 0.285 0.306        0.303    3.27
 96)  cis-1,4-dichloro-2-butene
           0.133 0.151 0.144 0.163 0.153 0.145 0.138       0.126        0.144    8.33

 97) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 98)  4-bromofluorobenzene (s)
           0.760 0.763 0.744 0.726 0.730 0.723 0.736 0.764 0.746 0.720  0.741    2.29
 99)  1,1,2,2-tetrachloroethane
           0.571 0.549 0.610 0.563 0.552 0.558 0.529 0.543 0.586 0.512  0.557    5.00
100)  trans-1,4-dichloro-2-butene
                 0.147 0.164 0.164 0.151 0.158 0.143                    0.155    5.74
101)  1,2,3-trichloropropane
           0.123 0.141 0.160 0.155 0.146 0.148 0.138       0.140        0.144    7.96
102)  bromobenzene
           0.687 0.705 0.736 0.720 0.681 0.711 0.658 0.717 0.679 0.547  0.684    7.80
103)  n-propylbenzene
           2.905 2.938 3.132 2.936 2.907 2.870 2.788 3.058 2.882 2.353  2.877    7.23
104)  2-chlorotoluene
           0.673 0.622 0.666 0.619 0.611 0.621 0.587 0.594 0.586 0.554  0.613    5.89
105)  4-chlorotoluene
           1.852 1.823 1.821 1.800 1.770 1.738 1.701 1.957 1.796 1.661  1.792    4.61
106)  1,3,5-trimethylbenzene
           2.151 2.113 2.466 2.162 2.143 2.273 2.033 2.276 1.984        2.178    6.63
107)  tert-butylbenzene
           1.570 1.612 2.229 1.846 1.724 2.092 1.612 1.738 1.577        1.778   13.33
108)  1,2,4-trimethylbenzene
           2.165 2.213 2.488 2.290 2.252 2.304 2.179 2.362 2.128 1.936  2.232    6.65
109)  sec-butylbenzene
           2.887 2.766 3.435 2.953 2.869 3.167 2.724 2.931 2.716 2.587  2.903    8.46
110)  p-isopropyltoluene
           2.628 2.463 2.956 2.643 2.597 2.730 2.476 2.651 2.515 2.106  2.576    8.48
111)  1,3-dichlorobenzene
           1.517 1.422 1.458 1.447 1.429 1.431 1.374 1.459 1.421 1.299  1.426    4.03
112)  1,2,3-trimethylbenzene
           2.432 2.416 2.726 2.444 2.409 2.529 2.357 2.541 2.358 2.455  2.467    4.45
113)  1,4-dichlorobenzene
```

Initial Calibration Summary

Job Number: JD20920 **Sample:** V4B4435-ICC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102503.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

```
            1.631 1.492 1.513 1.479 1.450 1.479 1.420 1.656 1.413 1.431  1.496    5.62
114)  1,2-dichlorobenzene
            1.458 1.456 1.558 1.513 1.487 1.477 1.421 1.446 1.382        1.466    3.48
115)  benzyl chloride
            1.098 1.128 1.241 1.218 1.173 1.175 1.111 1.027 1.150        1.147    5.66
116)  n-butylbenzene
            1.184 1.261 1.459 1.376 1.326 1.361 1.266       1.181        1.302    7.43
117)  hexachloroethane
            0.434 0.396 0.642 0.521 0.474 0.618 0.416       0.367        0.484   21.13
             ---- Linear regression ----  Coefficient =  0.9924
               Response Ratio = -0.01003 + 0.60640 *A

118)  1,2-dibromo-3-chloropropane
            0.149 0.149 0.208 0.190 0.175 0.186 0.154       0.140        0.169   14.40
119)  1,3,5-trichlorobenzene
            1.203 1.231 1.683 1.523 1.424 1.551 1.313       1.250        1.397   12.58
120)  1,2,4-trichlorobenzene
            0.950 1.013 1.612 1.378 1.245 1.400 1.098       0.979        1.209   19.74
121)  2-ethylhexyl acrylate       *This compound fails Initial Calibration criteria*
                        0.588 0.376 0.221 0.614 0.118                    0.383   57.04
122)  hexachlorobutadiene
            0.621 0.655 0.807 0.717 0.690 0.730 0.657       0.639        0.690    8.76
123)  naphthalene
                  1.624 2.707 2.295 2.075 2.317 1.737                    2.126   18.91
124)  1,2,3-trichlorobenzene
            0.863 0.868 1.376 1.168 1.061 1.187 0.934       0.926        1.048   17.52
125)  2-methylnaphthalene     *This compound fails Initial Calibration criteria*
                        1.245 0.918 0.665 1.131 0.493                    0.890   35.20
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M4B4435.M         Sun Feb 21 11:45:11 2021   MS4B
```

Initial Calibration Verification

Job Number: JD20920 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102508.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\V4B4435\4B102508.D Vial: 16
Acq On : 18 Feb 2021 2:30 am Operator: brittank
Sample : icv4435-50 Inst : MS4B
Misc : MS48773,V4B4435,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update : Fri Feb 19 16:10:14 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	6.48
2	ethanol		----------NA----------				
3	tertiary butyl alcohol	1.103	1.179	-6.9	103	-0.03	6.55
4	1,4-dioxane	0.085	0.096	-12.9	109	0.00	9.93
5 I	pentafluorobenzene	1.000	1.000	0.0	111	0.00	8.45
6	chlorodifluoromethane		----------NA----------				
7	dichlorodifluoromethane	1.201	1.301	-8.3	109	0.00	3.69
8	chloromethane	1.002	0.857	14.5	97	0.00	4.00
9	vinyl chloride	0.888	0.922	-3.8	109	0.00	4.20
10	1,3-butadiene	0.574	0.589	-2.6	106	0.00	4.22
11	bromomethane	0.675	0.698	-3.4	118	0.00	4.71
12	chloroethane	0.379	0.398	-5.0	110	0.00	4.85
13	trichlorofluoromethane	1.083	1.091	-0.7	108	0.00	5.24
14	vinyl bromide	0.278	0.320	-15.1	119	0.00	5.13
15	ethyl ether	0.167	0.163	2.4	107	0.00	5.53
16	acrolein	0.060	0.068	-13.3	116	0.00	5.72
17	freon 113	0.577	0.620	-7.5	114	0.00	5.93
18	1,1-dichloroethene	0.806	0.764	5.2	106	0.00	5.90
19	acetone	0.033	0.034	-3.0	112	0.00	5.87
20	acetonitrile	0.056	0.046	17.9	87	0.01	6.23
21	iodomethane	1.287	1.122	12.8	96	0.00	6.12
22	carbon disulfide	1.929	2.107	-9.2	121	0.00	6.26
23	methylene chloride	0.566	0.530	6.4	108	0.00	6.49
24	methyl acetate	0.251	0.242	3.6	98	0.00	6.26
25	methyl tert butyl ether	1.443	1.348	6.6	102	0.00	6.82
26	trans-1,2-dichloroethene	0.665	0.642	3.5	106	0.00	6.84
27	hexane	0.311	0.349	-12.2	121	0.00	7.15
28	di-isopropyl ether	1.791	1.641	8.4	100	0.00	7.33
29	2-butanone	0.031	0.034	-9.7	110	0.00	7.89
30	1,1-dichloroethane	0.822	0.815	0.9	109	0.00	7.33
31	chloroprene	0.653	0.653	0.0	109	0.00	7.43
32	acrylonitrile	0.130	0.144	-10.8	116	0.01	6.72
33	vinyl acetate	0.052	0.052	0.0	106	0.00	7.26
34	ethyl tert-butyl ether	1.634	1.507	7.8	100	-0.01	7.74
35	ethyl acetate	0.047	0.047	0.0	99	0.01	7.91
36	2,2-dichloropropane	0.910	0.808	11.2	99	0.00	8.01
37	cis-1,2-dichloroethene	0.479	0.470	1.9	109	0.00	7.96
38	propionitrile	0.048	0.048	0.0	108	0.00	7.94
39	methyl acrylate	0.045	0.045	0.0	100	0.00	7.99
40	methacrylonitrile	0.119	0.125	-5.0	108	0.00	8.13
41	bromochloromethane	0.257	0.253	1.6	108	0.00	8.23

Initial Calibration Verification

Job Number: JD20920 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102508.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tetrahydrofuran	0.042	0.043	-2.4	112	0.00	8.26
43		chloroform	0.895	0.868	3.0	113	0.00	8.30
44		tert-butyl formate	0.366	0.310	15.3	87	0.00	8.35
45	S	dibromofluoromethane (s)	0.496	0.490	1.2	111	0.00	8.48
46		1,1,1-trichloroethane	0.997	0.978	1.9	104	0.00	8.57
47		cyclohexane	0.832	1.013	-21.8	131	0.00	8.69
48		isobutyl alcohol		----------NA----------				
49		1,1-dichloropropene	0.581	0.560	3.6	108	0.00	8.72
50		carbon tetrachloride	0.901	0.876	2.8	104	0.00	8.76
51		tert-amyl alcohol	0.022	0.020	9.1	106	0.00	8.81
52		isopropyl acetate	0.068	0.066	2.9	103	0.00	8.84
53	I	1,4-difluorobenzene	1.000	1.000	0.0	110	0.00	9.31
54	S	1,2-dichloroethane-d4 (s)	0.383	0.370	3.4	110	0.00	8.86
55		n-butyl alcohol	0.006	0.006	0.0	102	0.00	9.34
56		2,2,4-trimethylpentane	1.378	1.509	-9.5	109	-0.01	9.04
57		benzene	1.248	1.235	1.0	110	0.00	8.94
58		tert-amyl methyl ether	1.107	1.041	6.0	99	0.00	9.02
59		heptane	0.229	0.232	-1.3	106	0.00	9.19
60		1,2-dichloroethane	0.449	0.423	5.8	104	0.00	8.95
61		ethyl acrylate	0.295	0.291	1.4	101	0.00	9.59
62		trichloroethene	0.325	0.330	-1.5	110	0.00	9.62
63		2-chloroethyl vinyl ether	0.151	0.164	-8.6	108	0.00	10.36
64		methyl methacrylate	0.059	0.060	-1.7	100	0.00	9.85
65		methylcyclohexane	0.685	0.745	-8.8	111	0.00	9.92
66		1,2-dichloropropane	0.326	0.319	2.1	105	0.00	9.88
67		dibromomethane	0.202	0.195	3.5	105	0.00	9.99
68		bromodichloromethane	0.468	0.452	3.4	105	0.00	10.13
69		2-nitropropane	0.066	0.059	10.6	95	0.00	10.30
70		epichlorohydrin	0.024	0.026	-8.3	112	0.00	10.44
71		cis-1,3-dichloropropene	0.512	0.486	5.1	103	0.00	10.58
72		4-methyl-2-pentanone	0.105	0.101	3.8	103	0.00	10.68
73		isoamyl alcohol	0.008	0.008	0.0	104	0.00	10.68
74	I	chlorobenzene-d5	1.000	1.000	0.0	109	0.00	12.49
75	S	toluene-d8 (s)	1.142	1.145	-0.3	107	0.00	10.91
76		toluene	0.712	0.724	-1.7	107	0.00	10.99
77		ethyl methacrylate	0.326	0.330	-1.2	101	0.00	11.16
78		trans-1,3-dichloropropene	0.423	0.434	-2.6	105	0.00	11.16
79		1,1,2-trichloroethane	0.207	0.219	-5.8	108	0.00	11.39
80		tetrachloroethene	0.298	0.419	-40.6#	148	0.00	11.57
81		2-hexanone	0.089	0.092	-3.4	107	0.00	11.56
82		1,3-dichloropropane	0.409	0.404	1.2	105	0.00	11.58
83		butyl acetate	0.168	0.169	-0.6	104	0.00	11.65
84		dibromochloromethane	0.371	0.379	-2.2	109	0.00	11.85
85		1,2-dibromoethane	0.426	0.441	-3.5	108	0.00	12.01
86		n-butyl ether	1.500	1.491	0.6	106	0.00	12.50
87		chlorobenzene	0.885	0.889	-0.5	108	0.00	12.53
88		1,1,1,2-tetrachloroethane	0.421	0.443	-5.2	109	0.00	12.60
89		ethylbenzene	1.549	1.557	-0.5	107	0.00	12.60
90		m,p-xylene	0.578	0.596	-3.1	108	0.00	12.73
91		o-xylene	1.324	1.366	-3.2	107	0.00	13.17
92		styrene	0.982	1.027	-4.6	105	0.00	13.18
93		butyl acrylate	0.629	0.641	-1.9	100	0.00	12.99
94		isopropylbenzene	1.806	1.826	-1.1	107	0.00	13.56
95		bromoform	0.303	0.316	-4.3	108	0.00	13.42
96		cis-1,4-dichloro-2-butene	0.144	0.146	-1.4	98	0.00	13.58
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.07
98	S	4-bromofluorobenzene (s)	0.741	0.739	0.3	107	0.00	13.77

Initial Calibration Verification

Job Number: JD20920 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102508.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane	0.557	0.564	-1.3	106	0.00	13.84
100	trans-1,4-dichloro-2-bute	0.155	0.164	-5.8	105	0.00	13.88
101	1,2,3-trichloropropane	0.144	0.150	-4.2	102	0.00	13.94
102	bromobenzene	0.684	0.728	-6.4	107	0.00	13.97
103	n-propylbenzene	2.877	2.956	-2.7	106	0.00	14.01
104	2-chlorotoluene	0.613	0.627	-2.3	107	0.00	14.16
105	4-chlorotoluene	1.792	1.781	0.6	104	0.00	14.28
106	1,3,5-trimethylbenzene	2.178	2.179	-0.0	106	0.00	14.19
107	tert-butylbenzene	1.778	1.857	-4.4	106	0.00	14.56
108	1,2,4-trimethylbenzene	2.232	2.307	-3.4	106	0.00	14.62
109	sec-butylbenzene	2.903	2.978	-2.6	106	0.00	14.81
110	p-isopropyltoluene	2.576	2.655	-3.1	106	0.00	14.96
111	1,3-dichlorobenzene	1.426	1.464	-2.7	107	0.00	14.99
112	1,2,3-trimethylbenzene		----------NA----------				
113	1,4-dichlorobenzene	1.496	1.512	-1.1	108	0.00	15.10
114	1,2-dichlorobenzene	1.466	1.528	-4.2	107	0.00	15.51
115	benzyl chloride	1.147	1.182	-3.1	102	0.00	15.19
116	n-butylbenzene	1.302	1.365	-4.8	105	0.00	15.41
	----------	True	Calc.	% Drift	----------		
117	hexachloroethane	50.000	44.943	10.1	108	0.00	15.85
	----------	AvgRF	CCRF	% Dev	----------		
118	1,2-dibromo-3-chloropropa	0.169	0.180	-6.5	100	0.00	16.34
119	1,3,5-trichlorobenzene	1.397	1.558	-11.5	108	0.00	16.57
120	1,2,4-trichlorobenzene	1.209	1.343	-11.1	103	0.00	17.25
121	2-ethylhexyl acrylate	0.383	0.432	-12.8	121	0.00	17.26
122	hexachlorobutadiene	0.690	0.705	-2.2	104	0.00	17.37
123	naphthalene	2.126	2.227	-4.8	102	0.00	17.54
124	1,2,3-trichlorobenzene	1.048	1.163	-11.0	105	0.00	17.77
125	2-methylnaphthalene	0.890	0.969	-8.9	111	0.00	18.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B102503.D M4B4435.M Sun Feb 21 11:44:43 2021 MS4B

Initial Calibration Verification

Job Number: JD20920 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102509.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\V4B4435\4B102509.D Vial: 17
Acq On : 18 Feb 2021 2:58 am Operator: brittank
Sample : icv4435-50 Inst : MS4B
Misc : MS48773,V4B4435,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update : Fri Feb 19 16:10:14 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	122	-0.01	6.47
2	ethanol		----------NA----------				
3	tertiary butyl alcohol		----------NA----------				
4	1,4-dioxane		----------NA----------				
5 I	pentafluorobenzene	1.000	1.000	0.0	114	0.00	8.45
6	chlorodifluoromethane	0.849	1.053	-24.0	133	0.00	3.71
7	dichlorodifluoromethane		----------NA----------				
8	chloromethane		----------NA----------				
9	vinyl chloride		----------NA----------				
10	1,3-butadiene		----------NA----------				
11	bromomethane		----------NA----------				
12	chloroethane		----------NA----------				
13	trichlorofluoromethane		----------NA----------				
14	vinyl bromide		----------NA----------				
15	ethyl ether		----------NA----------				
16	acrolein		----------NA----------				
17	freon 113		----------NA----------				
18	1,1-dichloroethene		----------NA----------				
19	acetone		----------NA----------				
20	acetonitrile	0.056	0.058	-3.6	112	0.00	6.23
21	iodomethane		----------NA----------				
22	carbon disulfide		----------NA----------				
23	methylene chloride		----------NA----------				
24	methyl acetate		----------NA----------				
25	methyl tert butyl ether		----------NA----------				
26	trans-1,2-dichloroethene		----------NA----------				
27	hexane		----------NA----------				
28	di-isopropyl ether		----------NA----------				
29	2-butanone		----------NA----------				
30	1,1-dichloroethane		----------NA----------				
31	chloroprene		----------NA----------				
32	acrylonitrile	0.130	0.123	5.4	101	0.00	6.71
33	vinyl acetate		----------NA----------				
34	ethyl tert-butyl ether		----------NA----------				
35	ethyl acetate		----------NA----------				
36	2,2-dichloropropane		----------NA----------				
37	cis-1,2-dichloroethene		----------NA----------				
38	propionitrile		----------NA----------				
39	methyl acrylate		----------NA----------				
40	methacrylonitrile		----------NA----------				
41	bromochloromethane		----------NA----------				

Initial Calibration Verification

Job Number: JD20920 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102509.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tetrahydrofuran		----------NA----------				
43		chloroform		----------NA----------				
44		tert-butyl formate		----------NA----------				
45	S	dibromofluoromethane (s)	0.496	0.482	2.8	111	0.00	8.48
46		1,1,1-trichloroethane		----------NA----------				
47		cyclohexane		----------NA----------				
48		isobutyl alcohol		----------NA----------				
49		1,1-dichloropropene		----------NA----------				
50		carbon tetrachloride		----------NA----------				
51		tert-amyl alcohol		----------NA----------				
52		isopropyl acetate		----------NA----------				
53	I	1,4-difluorobenzene	1.000	1.000	0.0	115	0.00	9.31
54	S	1,2-dichloroethane-d4 (s)	0.383	0.356	7.0	110	0.00	8.86
55		n-butyl alcohol		----------NA----------				
56		2,2,4-trimethylpentane		----------NA----------				
57		benzene		----------NA----------				
58		tert-amyl methyl ether		----------NA----------				
59		heptane		----------NA----------				
60		1,2-dichloroethane		----------NA----------				
61		ethyl acrylate		----------NA----------				
62		trichloroethene		----------NA----------				
63		2-chloroethyl vinyl ether		----------NA----------				
64		methyl methacrylate		----------NA----------				
65		methylcyclohexane		----------NA----------				
66		1,2-dichloropropane		----------NA----------				
67		dibromomethane		----------NA----------				
68		bromodichloromethane		----------NA----------				
69		2-nitropropane		----------NA----------				
70		epichlorohydrin		----------NA----------				
71		cis-1,3-dichloropropene		----------NA----------				
72		4-methyl-2-pentanone		----------NA----------				
73		isoamyl alcohol		----------NA----------				
74	I	chlorobenzene-d5	1.000	1.000	0.0	119	0.00	12.50
75	S	toluene-d8 (s)	1.142	1.121	1.8	115	0.00	10.91
76		toluene		----------NA----------				
77		ethyl methacrylate		----------NA----------				
78		trans-1,3-dichloropropene		----------NA----------				
79		1,1,2-trichloroethane		----------NA----------				
80		tetrachloroethene	0.298	0.282	5.4	109	0.00	11.57
81		2-hexanone		----------NA----------				
82		1,3-dichloropropane		----------NA----------				
83		butyl acetate		----------NA----------				
84		dibromochloromethane		----------NA----------				
85		1,2-dibromoethane		----------NA----------				
86		n-butyl ether		----------NA----------				
87		chlorobenzene		----------NA----------				
88		1,1,1,2-tetrachloroethane		----------NA----------				
89		ethylbenzene		----------NA----------				
90		m,p-xylene		----------NA----------				
91		o-xylene		----------NA----------				
92		styrene		----------NA----------				
93		butyl acrylate		----------NA----------				
94		isopropylbenzene		----------NA----------				
95		bromoform		----------NA----------				
96		cis-1,4-dichloro-2-butene		----------NA----------				
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	118	0.00	15.07
98	S	4-bromofluorobenzene (s)	0.741	0.723	2.4	117	0.00	13.77

Initial Calibration Verification

Job Number: JD20920 **Sample:** V4B4435-ICV4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102509.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane		----------NA----------				
100	trans-1,4-dichloro-2-bute		----------NA----------				
101	1,2,3-trichloropropane		----------NA----------				
102	bromobenzene		----------NA----------				
103	n-propylbenzene		----------NA----------				
104	2-chlorotoluene		----------NA----------				
105	4-chlorotoluene		----------NA----------				
106	1,3,5-trimethylbenzene		----------NA----------				
107	tert-butylbenzene		----------NA----------				
108	1,2,4-trimethylbenzene		----------NA----------				
109	sec-butylbenzene		----------NA----------				
110	p-isopropyltoluene		----------NA----------				
111	1,3-dichlorobenzene		----------NA----------				
112	1,2,3-trimethylbenzene	2.467	2.926	-18.6	141	0.00	15.09
113	1,4-dichlorobenzene		----------NA----------				
114	1,2-dichlorobenzene		----------NA----------				
115	benzyl chloride		----------NA----------				
116	n-butylbenzene		----------NA----------				
	----------	True	Calc.	% Drift	----------		
117	hexachloroethane		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
118	1,2-dibromo-3-chloropropa		----------NA----------				
119	1,3,5-trichlorobenzene		----------NA----------				
120	1,2,4-trichlorobenzene		----------NA----------				
121	2-ethylhexyl acrylate		----------NA----------				
122	hexachlorobutadiene		----------NA----------				
123	naphthalene		----------NA----------				
124	1,2,3-trichlorobenzene		----------NA----------				
125	2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B102503.D M4B4435.M Sun Feb 21 11:44:45 2021 MS4B

Continuing Calibration Summary

Job Number: JD20920 **Sample:** V4B4443-CC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102705.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kr...21\v4b4443\4b102705.d Vial: 3
Acq On : 3 Mar 2021 10:15 am Operator: brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49206,V4B4443,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
Last Update : Fri Feb 19 16:10:14 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	94	-0.02	6.47
2	ethanol		----------NA----------				
3	tertiary butyl alcohol	1.103	1.148	-4.1	96	0.00	6.58
4	1,4-dioxane	0.085	0.085	0.0	91	0.00	9.93
5 I	pentafluorobenzene	1.000	1.000	0.0	88	0.00	8.45
6	chlorodifluoromethane	0.849	0.840	1.1	86	0.00	3.71
7	dichlorodifluoromethane	1.201	1.434	-19.4	101	-0.01	3.69
8	chloromethane	1.002	1.067	-6.5	98	0.00	4.00
9	vinyl chloride	0.888	1.015	-14.3	101	0.00	4.19
10	1,3-butadiene	0.574	0.576	-0.3	87	0.01	4.22
11	bromomethane	0.675	0.718	-6.4	98	0.00	4.71
12	chloroethane	0.379	0.433	-14.2	97	-0.02	4.83
13	trichlorofluoromethane	1.083	1.231	-13.7	100	0.00	5.24
14	vinyl bromide	0.278	0.541	-94.6#	167	0.00	5.13
15	ethyl ether	0.167	0.171	-2.4	91	-0.01	5.52
16	acrolein	0.060	0.062	-3.3	92	0.00	5.72
17	freon 113	0.577	0.602	-4.3	92	0.00	5.92
18	1,1-dichloroethene	0.806	0.834	-3.5	93	0.00	5.90
19	acetone	0.033	0.032	3.0	84	0.00	5.87
20	acetonitrile	0.056	0.066	-17.9	96	0.00	6.23
21	iodomethane	1.287	1.171	9.0	81	0.00	6.12
22	carbon disulfide	1.929	1.953	-1.2	90	0.00	6.26
23	methylene chloride	0.566	0.557	1.6	91	0.00	6.49
24	methyl acetate	0.251	0.284	-13.1	93	0.02	6.28
25	methyl tert butyl ether	1.443	1.433	0.7	88	-0.01	6.81
26	trans-1,2-dichloroethene	0.665	0.727	-9.3	94	0.00	6.84
27	hexane	0.311	0.348	-11.9	98	0.00	7.15
28	di-isopropyl ether	1.791	1.858	-3.7	91	0.00	7.33
29	2-butanone	0.031	0.030	3.2	87	0.00	7.89
30	1,1-dichloroethane	0.822	0.856	-4.1	92	0.00	7.33
31	chloroprene	0.653	0.689	-5.5	93	0.00	7.43
32	acrylonitrile	0.130	0.121	6.9	79	0.02	6.72
33	vinyl acetate	0.052	0.050	3.8	96	0.01	7.27
34	ethyl tert-butyl ether	1.634	1.705	-4.3	92	0.00	7.74
35	ethyl acetate	0.047	0.046	2.1	84	0.01	7.91
36	2,2-dichloropropane	0.910	1.061	-16.6	103	0.00	8.01
37	cis-1,2-dichloroethene	0.479	0.488	-1.9	89	0.00	7.96
38	propionitrile	0.048	0.051	-6.2	91	0.00	7.93
39	methyl acrylate	0.045	0.041	8.9	86	0.00	8.00
40	methacrylonitrile	0.119	0.122	-2.5	92	0.00	8.13
41	bromochloromethane	0.257	0.265	-3.1	93	0.00	8.24

Continuing Calibration Summary

Job Number: JD20920 **Sample:** V4B4443-CC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102705.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42		tetrahydrofuran	0.042	0.040	4.8	87	0.00	8.26
43		chloroform	0.895	0.878	1.9	90	0.00	8.30
44		tert-butyl formate	0.366	0.411	-12.3	93	0.00	8.35
45	S	dibromofluoromethane (s)	0.496	0.510	-2.8	91	0.00	8.48
46		1,1,1-trichloroethane	0.997	1.078	-8.1	95	0.00	8.57
47		cyclohexane	0.832	0.895	-7.6	95	0.00	8.69
48		isobutyl alcohol		----------NA----------				
49		1,1-dichloropropene	0.581	0.562	3.3	88	0.00	8.71
50		carbon tetrachloride	0.901	0.979	-8.7	94	0.00	8.76
51		tert-amyl alcohol	0.022	0.026	-18.2	96	0.00	8.82
52		isopropyl acetate	0.068	0.070	-2.9	89	0.00	8.84
53	I	1,4-difluorobenzene	1.000	1.000	0.0	90	0.00	9.31
54	S	1,2-dichloroethane-d4 (s)	0.383	0.397	-3.7	89	0.00	8.86
55		n-butyl alcohol	0.006	0.007	-16.7	95	0.01	9.35
56		2,2,4-trimethylpentane	1.378	1.470	-6.7	96	-0.01	9.04
57		benzene	1.248	1.206	3.4	88	0.00	8.94
58		tert-amyl methyl ether	1.107	1.169	-5.6	92	0.00	9.02
59		heptane	0.229	0.243	-6.1	94	0.00	9.19
60		1,2-dichloroethane	0.449	0.460	-2.4	94	0.00	8.95
61		ethyl acrylate	0.295	0.309	-4.7	91	0.00	9.59
62		trichloroethene	0.325	0.322	0.9	88	0.00	9.62
63		2-chloroethyl vinyl ether	0.151	0.156	-3.3	90	0.00	10.36
64		methyl methacrylate	0.059	0.060	-1.7	88	0.00	9.85
65		methylcyclohexane	0.685	0.753	-9.9	97	0.00	9.92
66		1,2-dichloropropane	0.326	0.319	2.1	87	0.00	9.88
67		dibromomethane	0.202	0.195	3.5	87	0.00	9.99
68		bromodichloromethane	0.468	0.466	0.4	94	0.00	10.13
69		2-nitropropane	0.066	0.069	-4.5	96	0.00	10.31
70		epichlorohydrin	0.024	0.026	-8.3	96	0.00	10.44
71		cis-1,3-dichloropropene	0.512	0.503	1.8	91	0.00	10.59
72		4-methyl-2-pentanone	0.105	0.113	-7.6	94	0.00	10.68
73		isoamyl alcohol	0.008	0.009	-12.5	89	0.01	10.69
74	I	chlorobenzene-d5	1.000	1.000	0.0	93	0.00	12.50
75	S	toluene-d8 (s)	1.142	1.153	-1.0	93	0.00	10.91
76		toluene	0.712	0.700	1.7	91	0.00	10.99
77		ethyl methacrylate	0.326	0.343	-5.2	93	0.00	11.16
78		trans-1,3-dichloropropene	0.423	0.432	-2.1	94	0.00	11.16
79		1,1,2-trichloroethane	0.207	0.212	-2.4	91	0.00	11.38
80		tetrachloroethene	0.298	0.290	2.7	91	0.00	11.57
81		2-hexanone	0.089	0.098	-10.1	96	0.00	11.56
82		1,3-dichloropropane	0.409	0.396	3.2	92	0.00	11.58
83		butyl acetate	0.168	0.175	-4.2	92	0.00	11.66
84		dibromochloromethane	0.371	0.361	2.7	91	0.00	11.85
85		1,2-dibromoethane	0.426	0.325	23.7#	72	0.00	12.01
86		n-butyl ether	1.500	1.518	-1.2	92	0.00	12.50
87		chlorobenzene	0.885	0.882	0.3	93	0.00	12.53
88		1,1,1,2-tetrachloroethane	0.421	0.424	-0.7	92	0.00	12.60
89		ethylbenzene	1.549	1.602	-3.4	95	0.00	12.60
90		m,p-xylene	0.578	0.601	-4.0	95	0.00	12.74
91		o-xylene	1.324	1.382	-4.4	93	0.00	13.17
92		styrene	0.982	1.036	-5.5	94	0.00	13.18
93		butyl acrylate	0.629	0.691	-9.9	93	0.01	12.99
94		isopropylbenzene	1.806	1.799	0.4	92	0.00	13.56
95		bromoform	0.303	0.302	0.3	92	0.00	13.42
96		cis-1,4-dichloro-2-butene	0.144	0.152	-5.6	92	0.00	13.58
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	91	0.00	15.07
98	S	4-bromofluorobenzene (s)	0.741	0.762	-2.8	95	0.00	13.77

Continuing Calibration Summary

Job Number: JD20920 **Sample:** V4B4443-CC4435
Account: UTC Raytheon Technologies Corporation **Lab FileID:** 4B102705.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane	0.557	0.585	-5.0	96	0.00	13.84
100	trans-1,4-dichloro-2-bute	0.155	0.156	-0.6	93	0.00	13.88
101	1,2,3-trichloropropane	0.144	0.156	-8.3	97	0.00	13.94
102	bromobenzene	0.684	0.703	-2.8	94	0.00	13.97
103	n-propylbenzene	2.877	3.016	-4.8	94	0.00	14.02
104	2-chlorotoluene	0.613	0.629	-2.6	93	0.00	14.16
105	4-chlorotoluene	1.792	1.877	-4.7	96	0.00	14.28
106	1,3,5-trimethylbenzene	2.178	2.195	-0.8	93	0.00	14.19
107	tert-butylbenzene	1.778	1.748	1.7	92	0.00	14.56
108	1,2,4-trimethylbenzene	2.232	2.337	-4.7	94	0.00	14.62
109	sec-butylbenzene	2.903	2.953	-1.7	93	0.00	14.81
110	p-isopropyltoluene	2.576	2.680	-4.0	94	0.00	14.96
111	1,3-dichlorobenzene	1.426	1.442	-1.1	92	0.00	14.99
112	1,2,3-trimethylbenzene	2.467	2.483	-0.6	93	0.00	15.09
113	1,4-dichlorobenzene	1.496	1.459	2.5	91	0.00	15.10
114	1,2-dichlorobenzene	1.466	1.472	-0.4	90	0.00	15.51
115	benzyl chloride	1.147	1.313	-14.5	101	0.00	15.19
116	n-butylbenzene	1.302	1.361	-4.5	93	0.00	15.41
	----------	True	Calc.	% Drift	----------		
117	hexachloroethane	20.000	15.617	21.9#	86	0.00	15.85
	----------	AvgRF	CCRF	% Dev	----------		
118	1,2-dibromo-3-chloropropa	0.169	0.169	0.0	88	0.01	16.35
119	1,3,5-trichlorobenzene	1.397	1.381	1.1	88	0.00	16.57
120	1,2,4-trichlorobenzene	1.209	1.208	0.1	88	0.00	17.25
121	2-ethylhexyl acrylate	0.383	0.206	46.2#	85	0.02	17.28
122	hexachlorobutadiene	0.690	0.680	1.4	89	0.00	17.37
123	naphthalene	2.126	1.933	9.1	84	0.00	17.55
124	1,2,3-trichlorobenzene	1.048	1.027	2.0	88	0.00	17.77
125	2-methylnaphthalene	0.890	0.593	33.4#	81	0.02	18.80

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B102502.D M4B4435.M Wed Mar 03 22:21:57 2021

Run Sequence Report

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V3A6923 **Method:** SW846 8260C BY SIM **Instrument ID:** GCMS3A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V3A6923-BFB	3A160428.D	07/18/18 16:55	n/a	BFB Tune
V3A6923-IC6923	3A160429.D	07/18/18 17:26	n/a	Initial cal 0.25
V3A6923-IC6923	3A160430.D	07/18/18 17:52	n/a	Initial cal 0.4
V3A6923-IC6923	3A160431.D	07/18/18 18:18	n/a	Initial cal 1
V3A6923-IC6923	3A160432.D	07/18/18 18:43	n/a	Initial cal 2
V3A6923-IC6923	3A160433.D	07/18/18 19:09	n/a	Initial cal 5
V3A6923-ICC6923	3A160434.D	07/18/18 19:35	n/a	Initial cal 20
V3A6923-IC6923	3A160435.D	07/18/18 20:00	n/a	Initial cal 50
V3A6923-IC6923	3A160436.D	07/18/18 20:26	n/a	Initial cal 100
V3A6923-IC6923	3A160437.D	07/18/18 20:52	n/a	Initial cal 200
V3A6923-ICV6923	3A160443.D	07/18/18 23:25	n/a	Initial cal verification 20

Run Sequence Report

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V3A7170 **Method:** SW846 8260C BY SIM **Instrument ID:** GCMS3A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V3A7170-BFB	3A165056.D	03/04/21 10:09	n/a	BFB Tune
V3A7170-CC6923	3A165057.D	03/04/21 10:45	n/a	Continuing cal 5
V3A7170-BS	3A165058.D	03/04/21 11:19	n/a	Blank Spike
V3A7170-MB	3A165059.D	03/04/21 11:48	n/a	Method Blank
ZZZZZZ	3A165060.D	03/04/21 12:49	n/a	(unrelated sample)
ZZZZZZ	3A165061.D	03/04/21 13:18	n/a	(unrelated sample)
JD20920-11	3A165062.D	03/04/21 13:47	n/a	HSSER-RAMW02-022521
JD20920-11MS	3A165063.D	03/04/21 14:16	n/a	Matrix Spike
JD20920-11MSD	3A165064.D	03/04/21 14:45	n/a	Matrix Spike Duplicate
JD20920-6	3A165066.D	03/04/21 15:43	n/a	HSSER-EBLK02-022421
JD20920-10	3A165067.D	03/04/21 16:11	n/a	HSSER-FBLK02-022521
JD20920-1	3A165068.D	03/04/21 16:40	n/a	HSSER-RAMW08-022321
JD20920-2	3A165069.D	03/04/21 17:09	n/a	HSSER-RAMW07-022421
JD20920-3	3A165070.D	03/04/21 17:37	n/a	HSSER-RAMW06-022421
JD20920-4	3A165071.D	03/04/21 18:06	n/a	HSSER-RAMW05-022421
JD20920-5	3A165072.D	03/04/21 18:34	n/a	HSSER-RAMW04-022421
JD20920-7	3A165073.D	03/04/21 19:03	n/a	HSSER-RAMW03-022421
JD20920-8	3A165074.D	03/04/21 19:32	n/a	HSSER-DUP02-022421
JD20920-9	3A165075.D	03/04/21 20:01	n/a	HSSER-RAMW01-022521

Run Sequence Report

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V4B4435 **Method:** SW846 8260D **Instrument ID:** GCMS4B

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V4B4435-BFB	4B102495.D	02/17/21 20:17	n/a	BFB Tune
V4B4435-IC4435	4B102496.D	02/17/21 20:52	n/a	Initial cal 0.2
V4B4435-IC4435	4B102497.D	02/17/21 21:20	n/a	Initial cal 0.5
V4B4435-IC4435	4B102498.D	02/17/21 21:48	n/a	Initial cal 1
V4B4435-IC4435	4B102499.D	02/17/21 22:17	n/a	Initial cal 2
V4B4435-IC4435	4B102500.D	02/17/21 22:45	n/a	Initial cal 4
V4B4435-IC4435	4B102501.D	02/17/21 23:13	n/a	Initial cal 8
V4B4435-IC4435	4B102502.D	02/17/21 23:41	n/a	Initial cal 20
V4B4435-ICC4435	4B102503.D	02/18/21 00:09	n/a	Initial cal 50
V4B4435-IC4435	4B102504.D	02/18/21 00:37	n/a	Initial cal 100
V4B4435-IC4435	4B102505.D	02/18/21 01:05	n/a	Initial cal 200
V4B4435-ICV4435	4B102508.D	02/18/21 02:30	n/a	Initial cal verification 50
V4B4435-ICV4435	4B102509.D	02/18/21 02:58	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD20920
Account: UTC Raytheon Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V4B4443 **Method:** SW846 8260C **Instrument ID:** GCMS4B

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V4B4443-BFB	4B102705.D	03/03/21 10:15	n/a	BFB Tune
V4B4443-CC4435	4B102705.D	03/03/21 10:15	n/a	Continuing cal 20
V4B4443-BS	4B102707.D	03/03/21 11:24	n/a	Blank Spike
V4B4443-MB	4B102709.D	03/03/21 12:20	n/a	Method Blank
JD20920-11	4B102710.D	03/03/21 12:54	n/a	HSSER-RAMW02-022521
ZZZZZZ	4B102711.D	03/03/21 13:22	n/a	(unrelated sample)
ZZZZZZ	4B102712.D	03/03/21 14:07	n/a	(unrelated sample)
ZZZZZZ	4B102713.D	03/03/21 14:35	n/a	(unrelated sample)
ZZZZZZ	4B102714.D	03/03/21 15:03	n/a	(unrelated sample)
ZZZZZZ	4B102715.D	03/03/21 15:32	n/a	(unrelated sample)
JD20920-11MS	4B102716.D	03/03/21 16:01	n/a	Matrix Spike
JD20920-11MSD	4B102717.D	03/03/21 16:29	n/a	Matrix Spike Duplicate
JD20920-6	4B102719.D	03/03/21 17:26	n/a	HSSER-EBLK02-022421
JD20920-10	4B102720.D	03/03/21 17:54	n/a	HSSER-FBLK02-022521
JD20920-12	4B102721.D	03/03/21 18:22	n/a	HSSER-TBLK02-022521
JD20920-1	4B102722.D	03/03/21 18:50	n/a	HSSER-RAMW08-022321
JD20920-2	4B102723.D	03/03/21 19:18	n/a	HSSER-RAMW07-022421
JD20920-3	4B102724.D	03/03/21 19:47	n/a	HSSER-RAMW06-022421
JD20920-4	4B102725.D	03/03/21 20:15	n/a	HSSER-RAMW05-022421
JD20920-5	4B102726.D	03/03/21 20:43	n/a	HSSER-RAMW04-022421
JD20920-7	4B102727.D	03/03/21 21:11	n/a	HSSER-RAMW03-022421
JD20920-8	4B102728.D	03/03/21 21:39	n/a	HSSER-DUP02-022421
JD20920-9	4B102729.D	03/03/21 22:07	n/a	HSSER-RAMW01-022521

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102722.d
Acq On : 3 Mar 2021 6:50 pm
Operator : brittank
Sample : JD20920-1 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:15:35 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.458	65	118450	500.00	ug/L	-0.03
5) pentafluorobenzene	8.446	168	235430	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	311970	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	365319	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	247195	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	119793	51.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.50%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	124024	51.84	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.68%			
75) toluene-d8 (s)	10.909	98	397046	47.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.16%			
98) 4-bromofluorobenzene (s)	13.770	95	197554	53.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.84%			

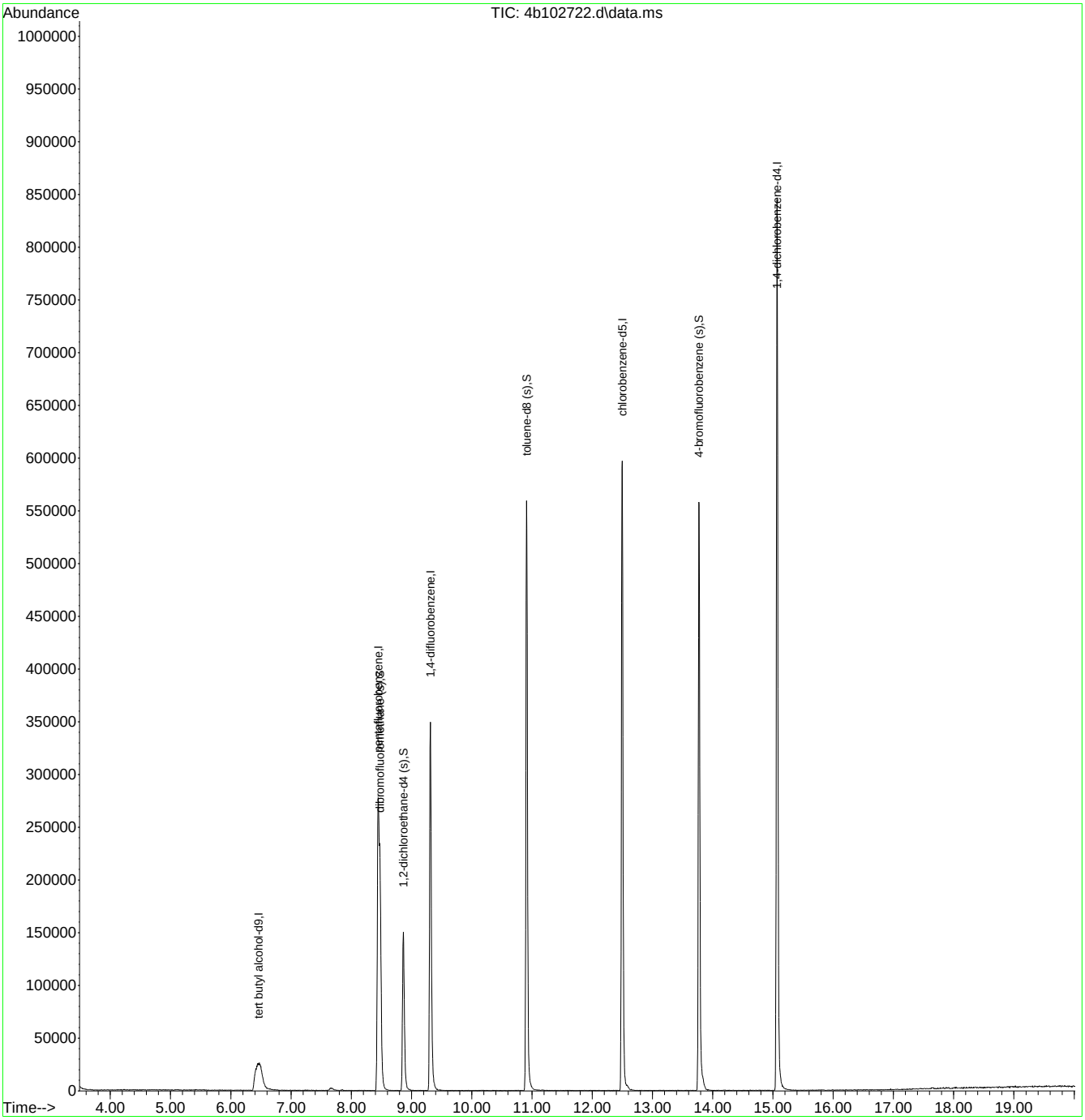
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102722.d
Acq On : 3 Mar 2021 6:50 pm
Operator : brittank
Sample : JD20920-1 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:15:35 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



M4B4435.M Wed Mar 03 22:24:03 2021 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102723.d
Acq On : 3 Mar 2021 7:18 pm
Operator : brittank
Sample : JD20920-2 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:16:32 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

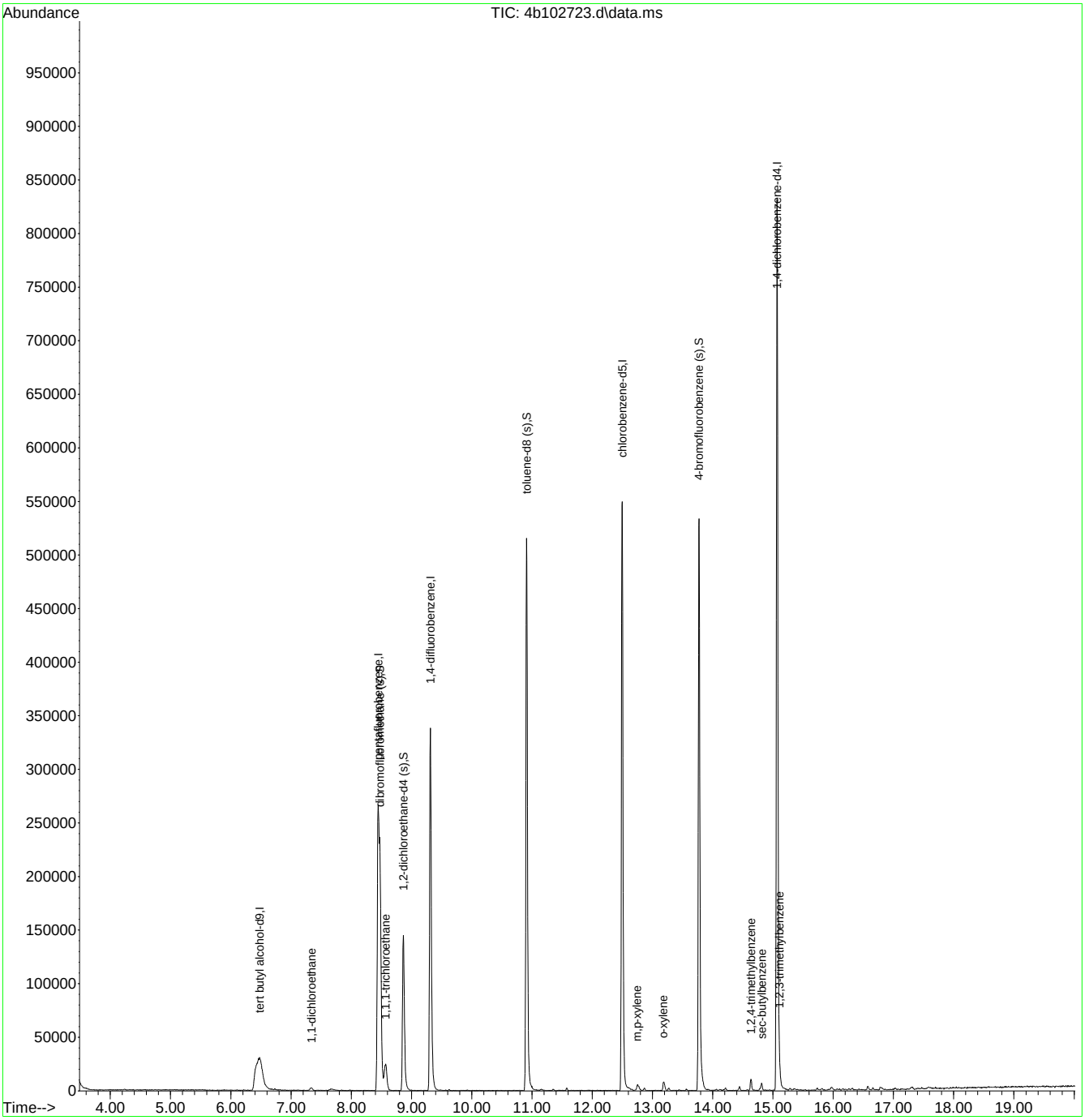
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.479	65	142254	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	231638	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	302302	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	333097	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	243110	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	119698	52.05	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.10%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	122786	52.96	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.92%			
75) toluene-d8 (s)	10.909	98	366794	48.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.40%			
98) 4-bromofluorobenzene (s)	13.770	95	186794	51.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.68%			
Target Compounds						Qvalue
30) 1,1-dichloroethane	7.342	63	4364	1.15	ug/L	87
46) 1,1,1-trichloroethane	8.571	97	24238	5.25	ug/L	90
90) m,p-xylene	12.745	106	3000	0.78	ug/L	89
91) o-xylene	13.179	91	7267	0.82	ug/L	100
108) 1,2,4-trimethylbenzene	14.633	105	7441	0.69	ug/L	89
109) sec-butylbenzene	14.816	105	5396	0.38	ug/L	92
112) 1,2,3-trimethylbenzene	15.109	105	5188	0.43	ug/L	93

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

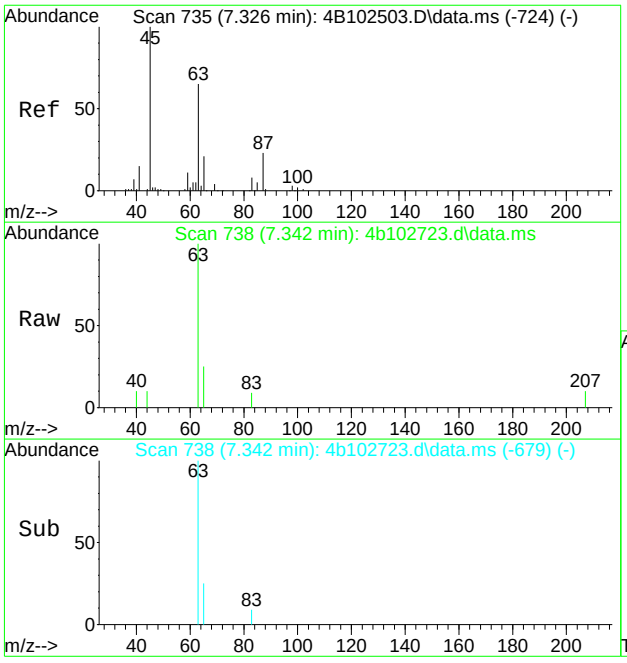
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102723.d
Acq On : 3 Mar 2021 7:18 pm
Operator : brittank
Sample : JD20920-2 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:16:32 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



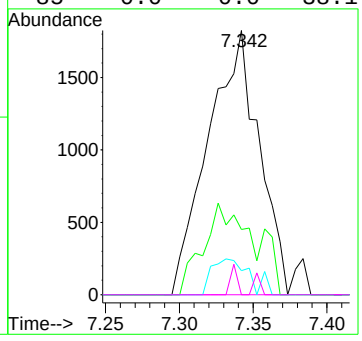
M4B4435.M Wed Mar 03 22:24:07 2021 Page: 2

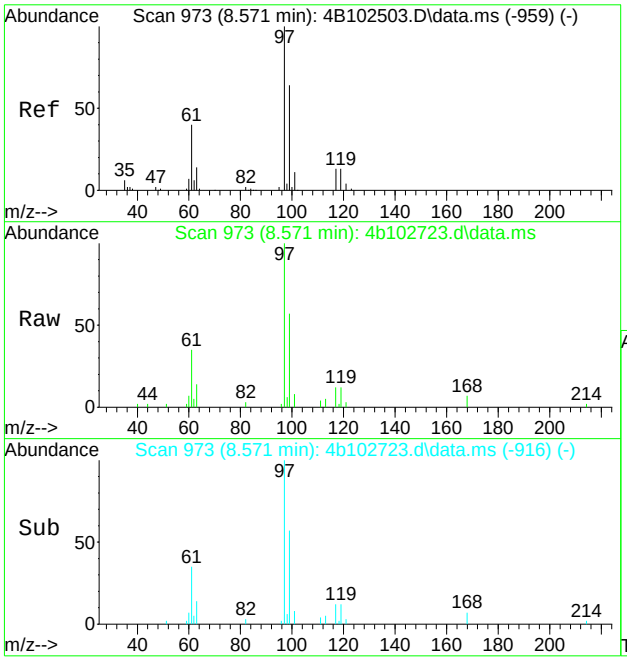


#30
1,1-dichloroethane
Concen: 1.15 ug/L
RT: 7.342 min Scan# 738
Delta R.T. 0.011 min
Lab File: 4b102723.d
Acq: 3 Mar 2021 7:18 pm

Tgt Ion: 63 Resp: 4364

Ion	Ratio	Lower	Upper
63	100		
65	24.7	1.6	61.6
83	9.1	0.0	43.0
85	0.0	0.0	38.1

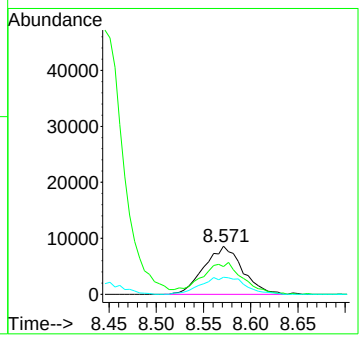


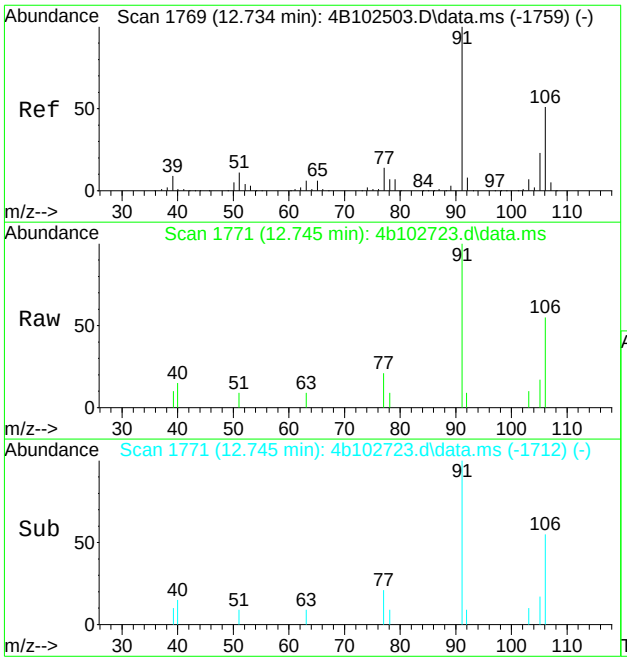


#46
1,1,1-trichloroethane
Concen: 5.25 ug/L
RT: 8.571 min Scan# 973
Delta R.T. 0.000 min
Lab File: 4b102723.d
Acq: 3 Mar 2021 7:18 pm

Tgt Ion: 97 Resp: 24238

Ion	Ratio	Lower	Upper
97	100		
99	57.5	36.9	96.9
61	35.4	9.7	69.7

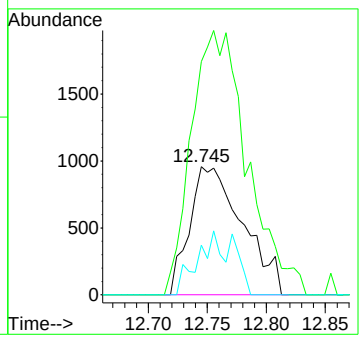


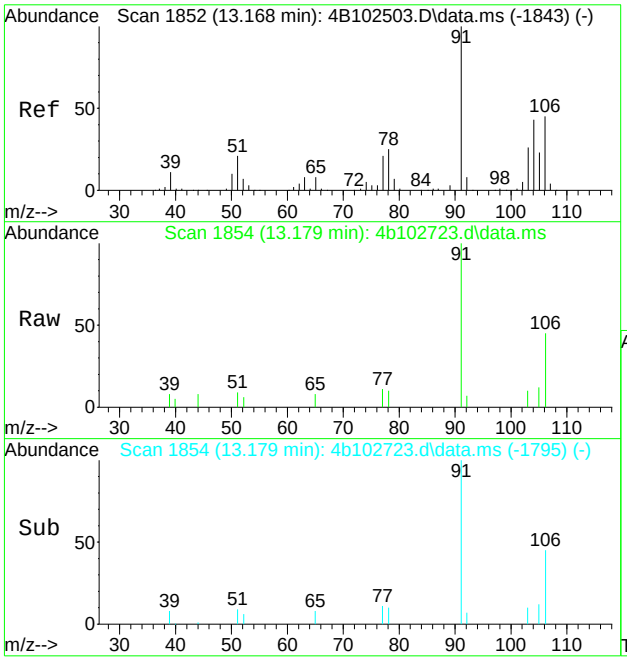


#90
m,p-xylene
Concen: 0.78 ug/L
RT: 12.745 min Scan# 1771
Delta R.T. 0.011 min
Lab File: 4b102723.d
Acq: 3 Mar 2021 7:18 pm

Tgt Ion:106 Resp: 3000

Ion	Ratio	Lower	Upper
106	100		
91	181.9	166.6	226.6
77	38.7	0.0	56.6

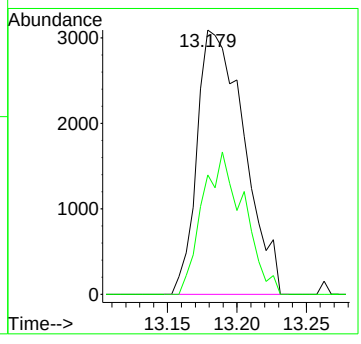


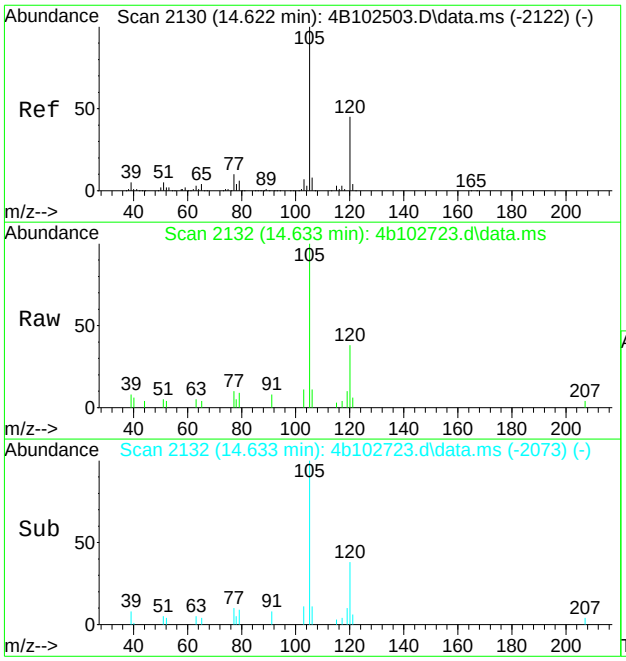


#91
o-xylene
Concen: 0.82 ug/L
RT: 13.179 min Scan# 1854
Delta R.T. 0.011 min
Lab File: 4b102723.d
Acq: 3 Mar 2021 7:18 pm

Tgt Ion: 91 Resp: 7267

Ion	Ratio	Lower	Upper
91	100		
106	45.2	15.4	75.4

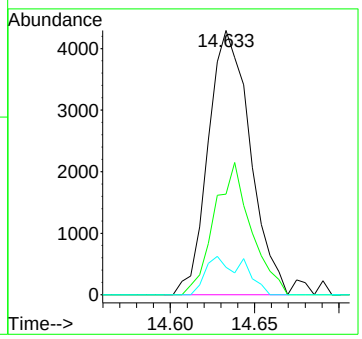


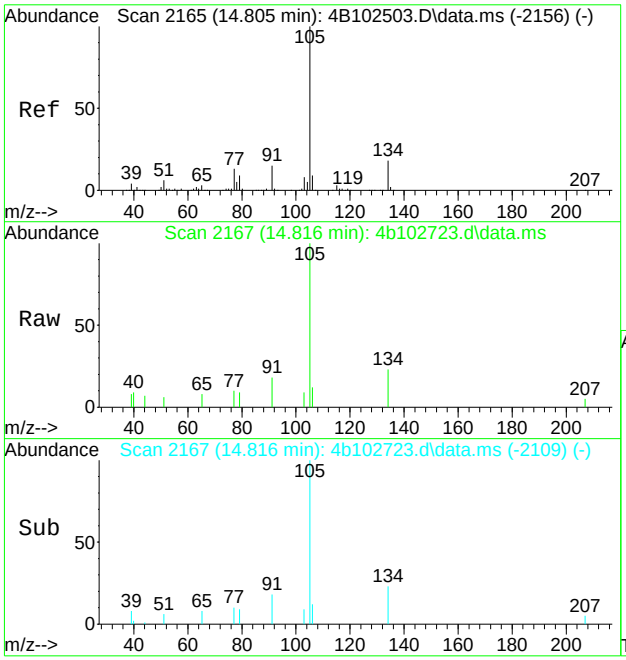


#108
1,2,4-trimethylbenzene
Concen: 0.69 ug/L
RT: 14.633 min Scan# 2132
Delta R.T. 0.011 min
Lab File: 4b102723.d
Acq: 3 Mar 2021 7:18 pm

Tgt Ion:105 Resp: 7441

Ion	Ratio	Lower	Upper
105	100		
120	38.0	16.3	76.3
77	10.4	0.0	42.2

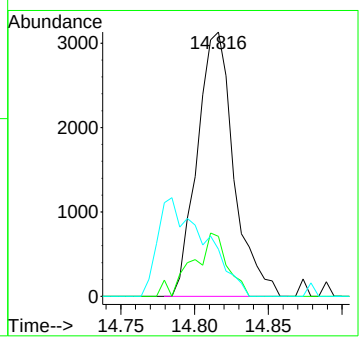


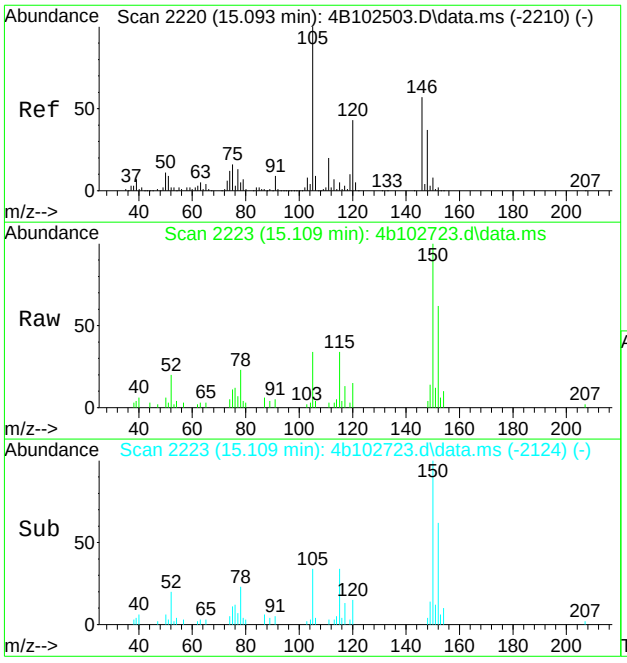


#109
sec-butylbenzene
Concen: 0.38 ug/L
RT: 14.816 min Scan# 2167
Delta R.T. 0.005 min
Lab File: 4b102723.d
Acq: 3 Mar 2021 7:18 pm

Tgt Ion:105 Resp: 5396

Ion	Ratio	Lower	Upper
105	100		
134	22.7	0.0	48.3
91	17.8	0.0	45.3

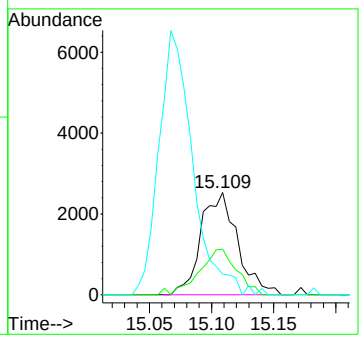




#112
1,2,3-trimethylbenzene
Concen: 0.43 ug/L
RT: 15.109 min Scan# 2223
Delta R.T. 0.016 min
Lab File: 4b102723.d
Acq: 3 Mar 2021 7:18 pm

Tgt Ion:105 Resp: 5188

Ion	Ratio	Lower	Upper
105	100		
120	44.6	12.7	72.7
77	20.4	0.0	42.7



7.1.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102724.d
Acq On : 3 Mar 2021 7:47 pm
Operator : brittank
Sample : JD20920-3 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:17:59 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	124750	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	230952	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	307590	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	333675	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	240056	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	119540	52.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.26%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	125325	53.12	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.24%			
75) toluene-d8 (s)	10.909	98	370667	48.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.26%			
98) 4-bromofluorobenzene (s)	13.775	95	187830	52.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.58%			
Target Compounds						Qvalue
30) 1,1-dichloroethane	7.347	63	1025	0.27	ug/L	81
37) cis-1,2-dichloroethene	7.964	96	701	0.32	ug/L #	53
46) 1,1,1-trichloroethane	8.566	97	25272	5.49	ug/L	93

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

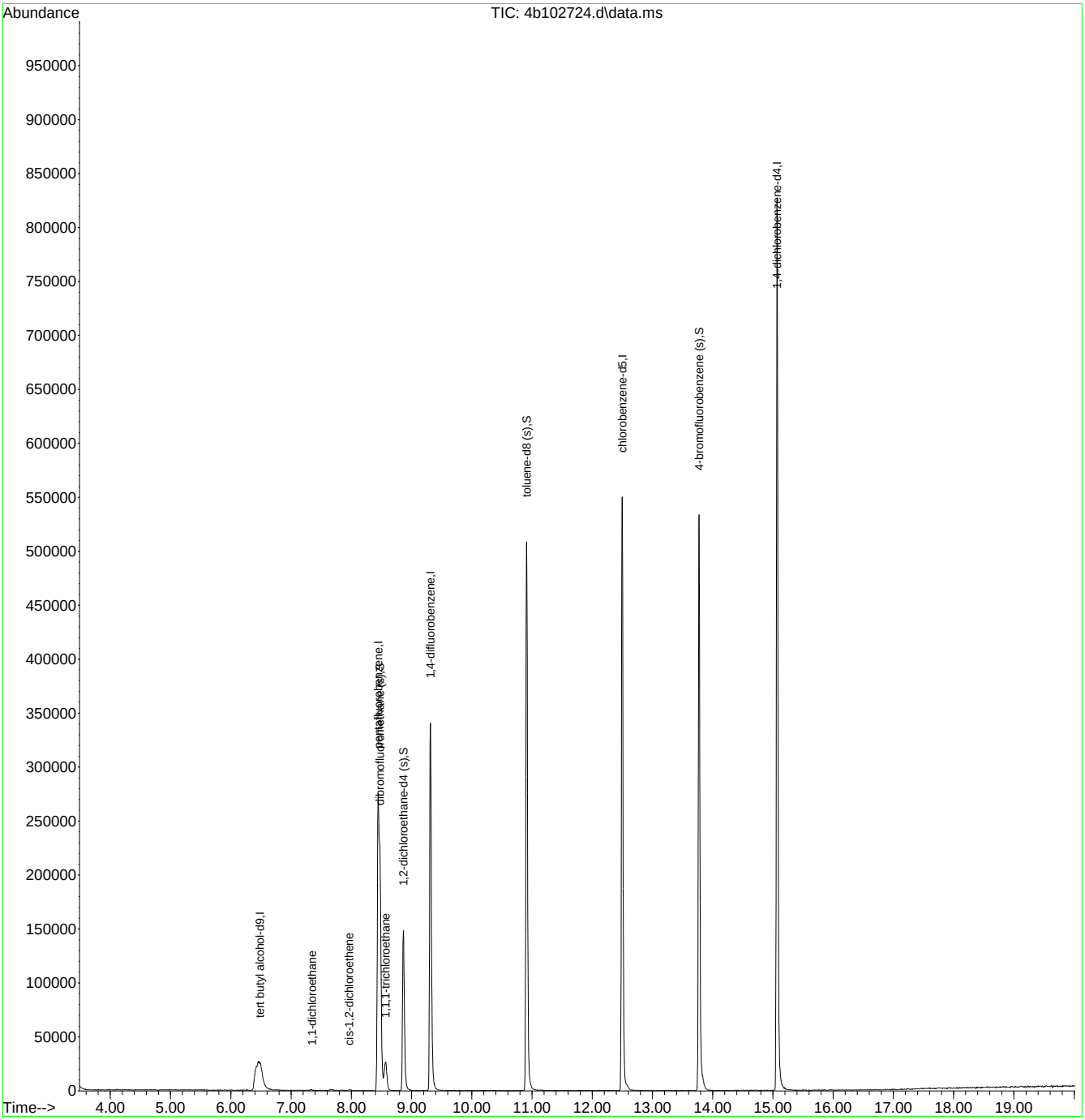
7.1.3

7

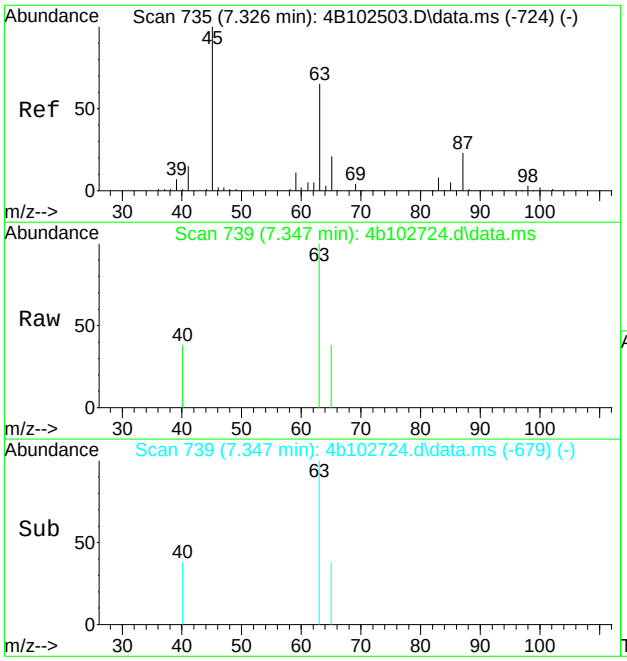
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102724.d
Acq On : 3 Mar 2021 7:47 pm
Operator : brittank
Sample : JD20920-3 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:17:59 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



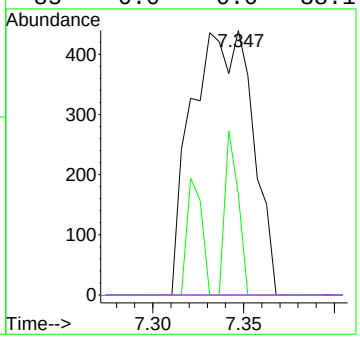
M4B4435.M Wed Mar 03 22:24:13 2021 Page: 2

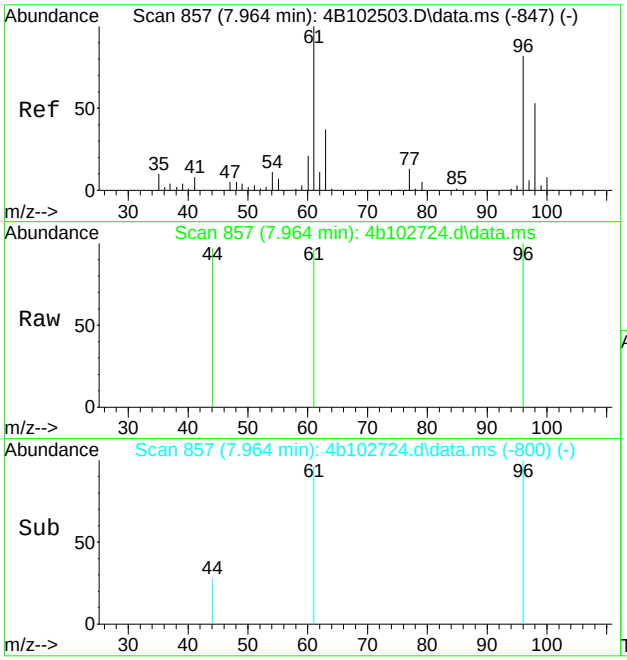


#30
1,1-dichloroethane
Concen: 0.27 ug/L
RT: 7.347 min Scan# 739
Delta R.T. 0.015 min
Lab File: 4b102724.d
Acq: 3 Mar 2021 7:47 pm

Tgt Ion: 63 Resp: 1025

Ion	Ratio	Lower	Upper
63	100		
65	38.2	1.6	61.6
83	0.0	0.0	43.0
85	0.0	0.0	38.1

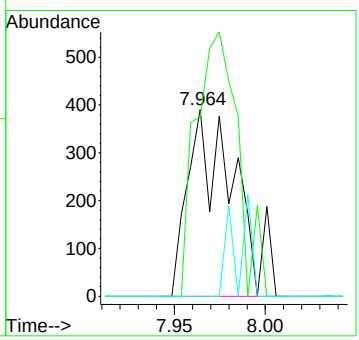


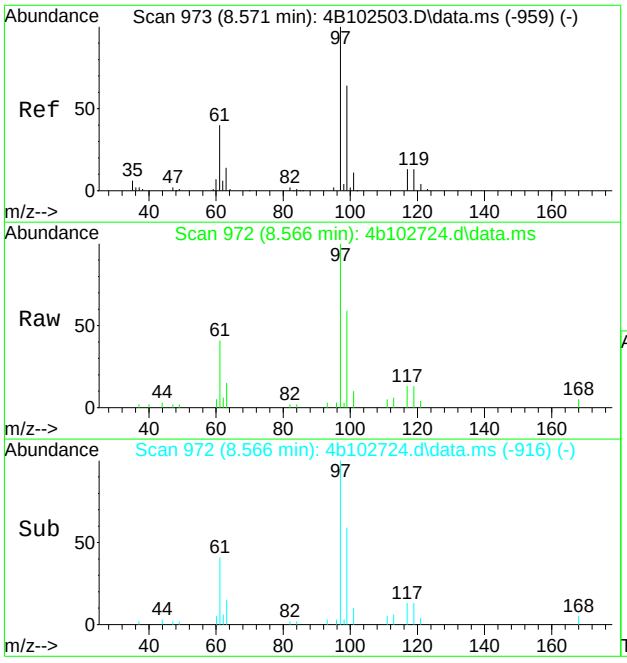


#37
cis-1,2-dichloroethene
Concen: 0.32 ug/L
RT: 7.964 min Scan# 857
Delta R.T. -0.000 min
Lab File: 4b102724.d
Acq: 3 Mar 2021 7:47 pm

Tgt Ion: 96 Resp: 701

Ion	Ratio	Lower	Upper
96	100		
61	95.9	100.5	160.5#
98	0.0	34.4	94.4#

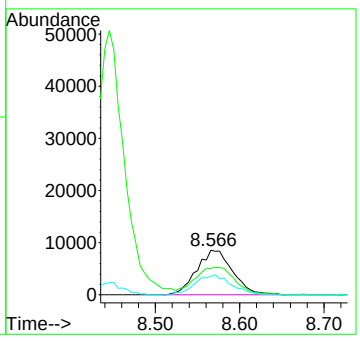




#46
1,1,1-trichloroethane
Concen: 5.49 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102724.d
Acq: 3 Mar 2021 7:47 pm

Tgt Ion: 97 Resp: 25272

Ion	Ratio	Lower	Upper
97	100		
99	59.2	36.9	96.9
61	41.4	9.7	69.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102725.d
Acq On : 3 Mar 2021 8:15 pm
Operator : brittank
Sample : JD20920-4 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:18:57 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

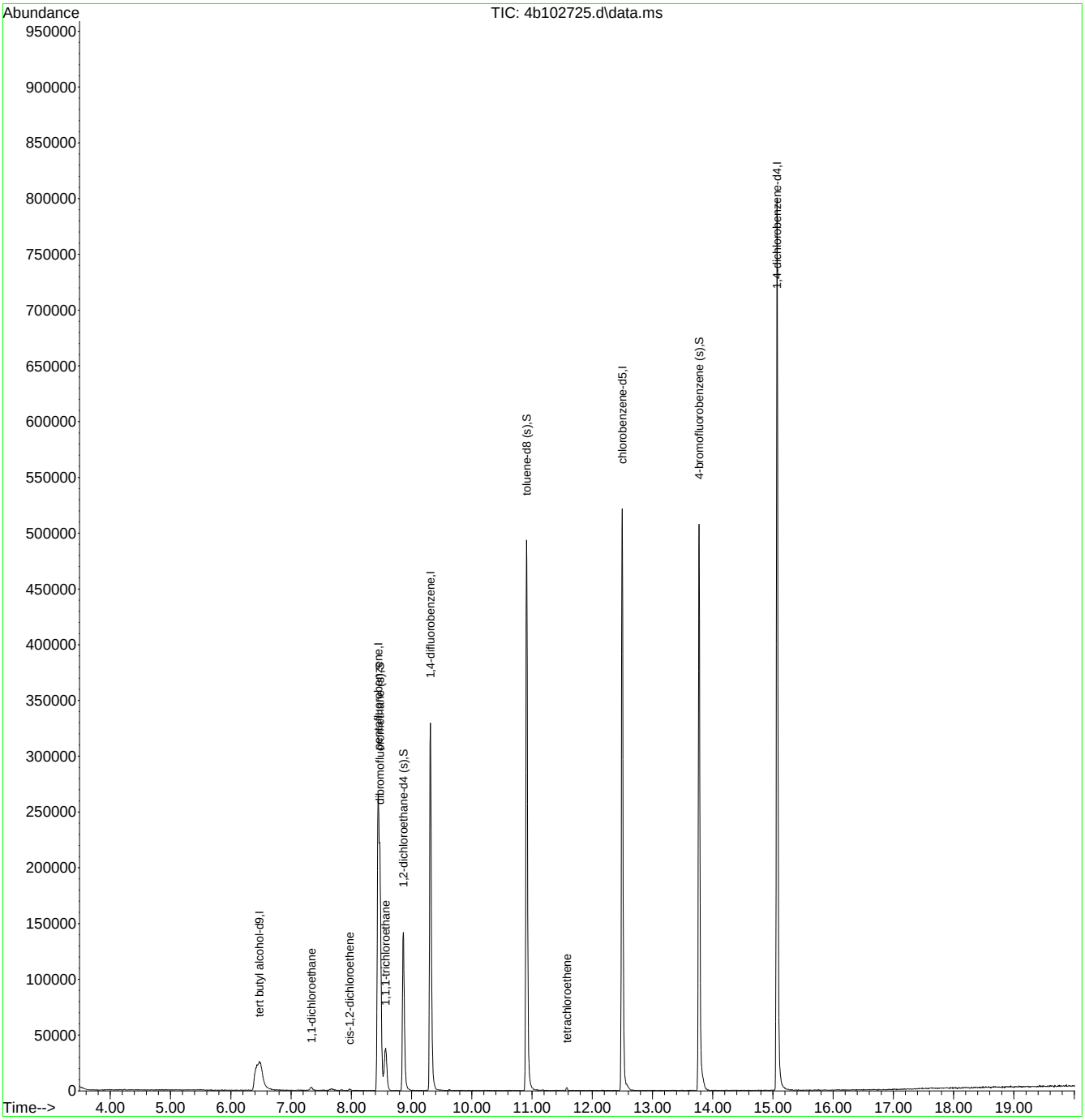
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	124727	500.00	ug/L	-0.01
5) pentafluorobenzene	8.445	168	224743	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	299789	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	311669	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	230753	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	115308	51.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.36%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	122536	53.29	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.58%			
75) toluene-d8 (s)	10.909	98	355747	49.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.94%			
98) 4-bromofluorobenzene (s)	13.775	95	176519	51.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.22%			
Target Compounds						Qvalue
30) 1,1-dichloroethane	7.337	63	5037	1.36	ug/L	95
37) cis-1,2-dichloroethene	7.969	96	702	0.33	ug/L	82
46) 1,1,1-trichloroethane	8.566	97	36852	8.23	ug/L	95
80) tetrachloroethene	11.578	164	730	0.39	ug/L #	69

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

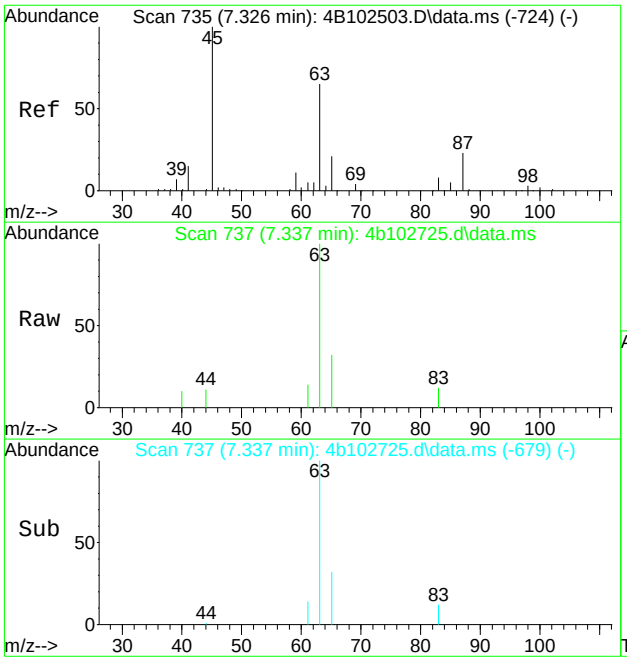
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102725.d
Acq On : 3 Mar 2021 8:15 pm
Operator : brittank
Sample : JD20920-4 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:18:57 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



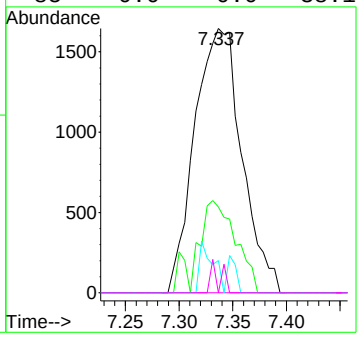
M4B4435.M Wed Mar 03 22:24:17 2021 Page: 2

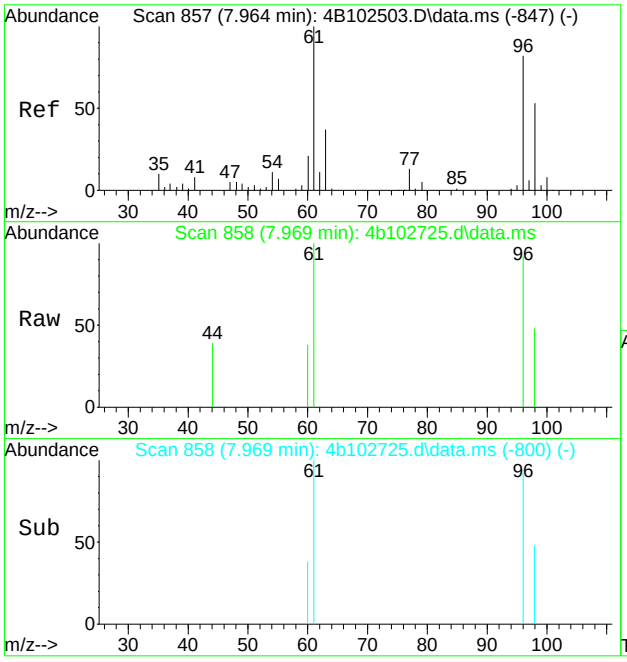


#30
1,1-dichloroethane
Concen: 1.36 ug/L
RT: 7.337 min Scan# 737
Delta R.T. 0.005 min
Lab File: 4b102725.d
Acq: 3 Mar 2021 8:15 pm

Tgt Ion: 63 Resp: 5037

Ion	Ratio	Lower	Upper
63	100		
65	32.4	1.6	61.6
83	12.2	0.0	43.0
85	0.0	0.0	38.1

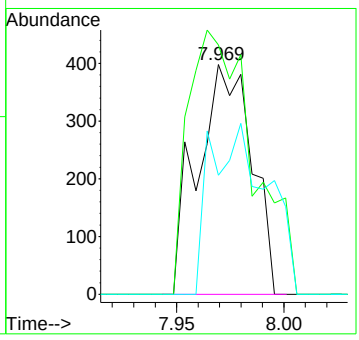


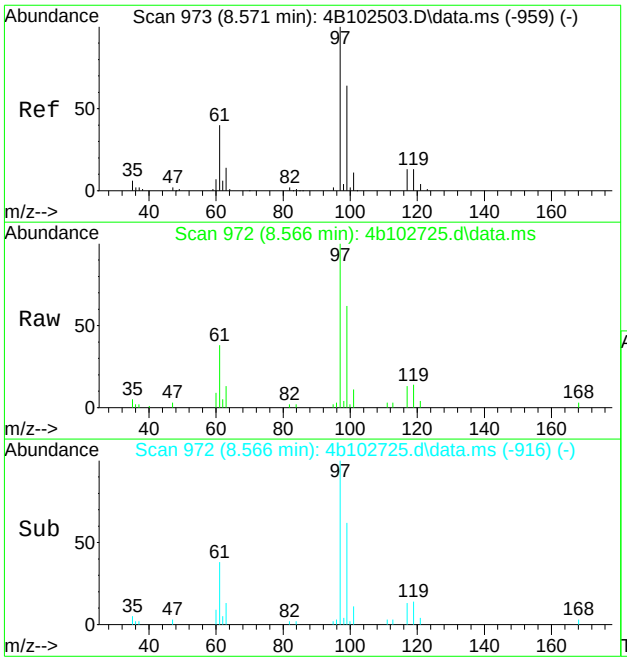


#37
cis-1,2-dichloroethene
Concen: 0.33 ug/L
RT: 7.969 min Scan# 858
Delta R.T. 0.005 min
Lab File: 4b102725.d
Acq: 3 Mar 2021 8:15 pm

Tgt Ion: 96 Resp: 702

Ion	Ratio	Lower	Upper
96	100		
61	108.5	100.5	160.5
98	51.8	34.4	94.4

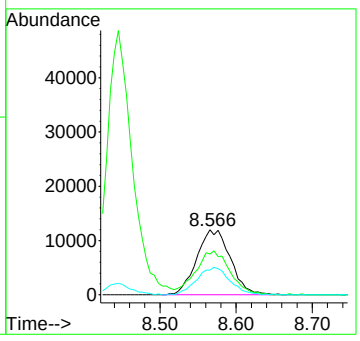


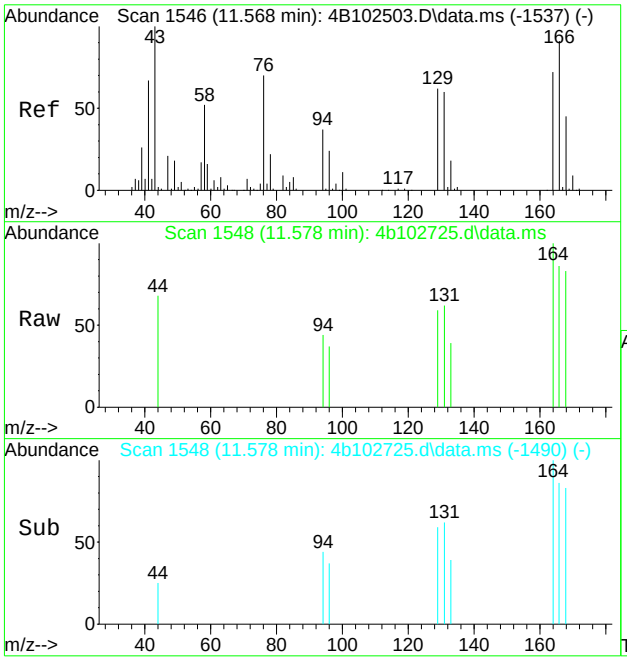


#46
1,1,1-trichloroethane
Concen: 8.23 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102725.d
Acq: 3 Mar 2021 8:15 pm

Tgt Ion: 97 Resp: 36852

Ion	Ratio	Lower	Upper
97	100		
99	62.4	36.9	96.9
61	37.9	9.7	69.7

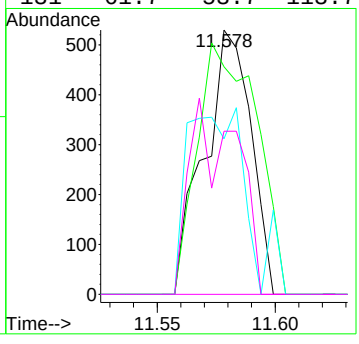




#80
tetrachloroethene
Concen: 0.39 ug/L
RT: 11.578 min Scan# 1548
Delta R.T. 0.005 min
Lab File: 4b102725.d
Acq: 3 Mar 2021 8:15 pm

Tgt Ion:164 Resp: 730

Ion	Ratio	Lower	Upper
164	100		
166	86.0	96.6	156.6#
129	58.9	56.4	116.4
131	61.7	53.7	113.7



7.1.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102726.d
Acq On : 3 Mar 2021 8:43 pm
Operator : brittank
Sample : JD20920-5 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:19:58 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

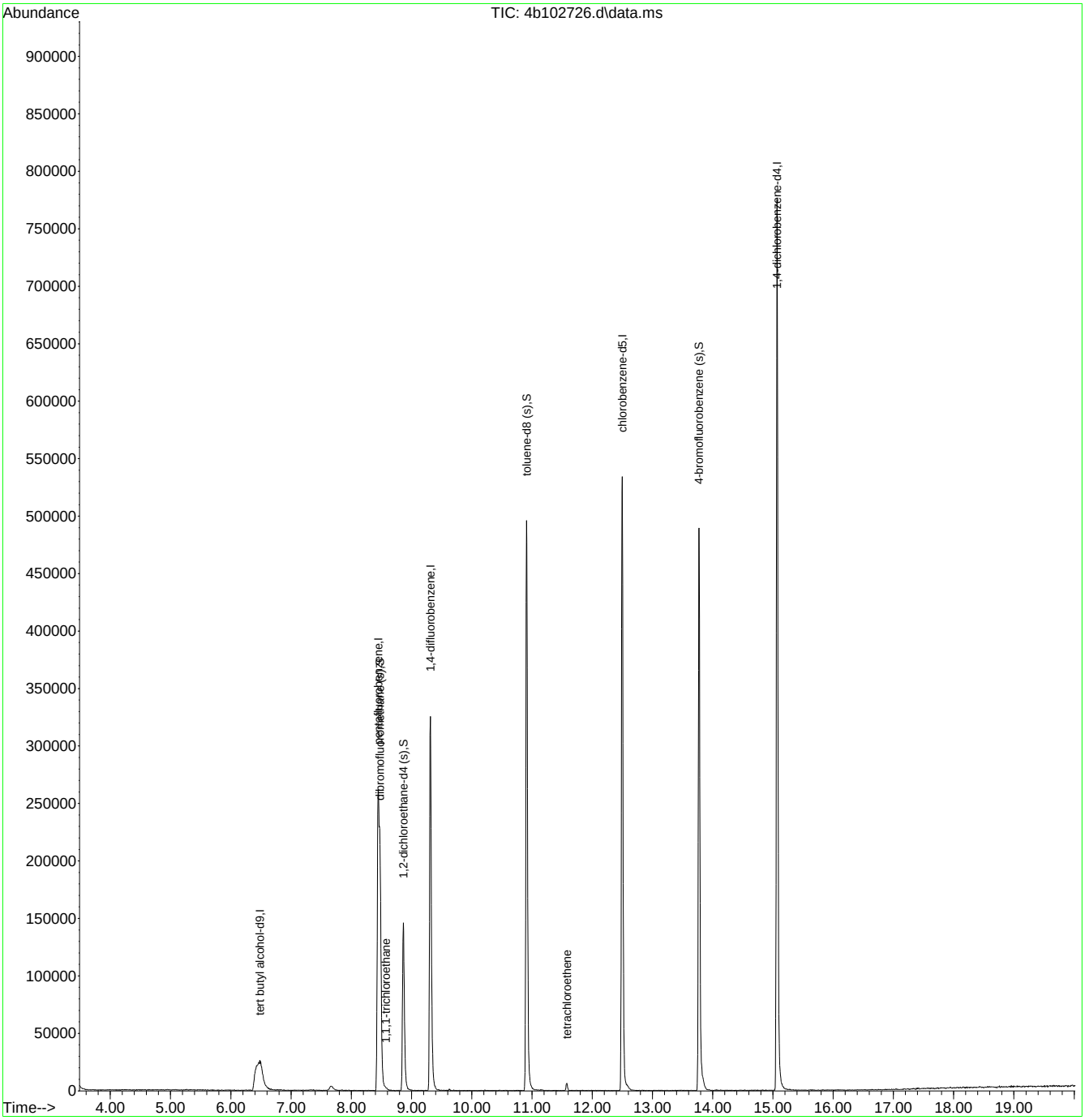
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	121927	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	227269	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	297582	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	317966	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	228750	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	117190	51.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.88%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	124986	54.76	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 109.52%			
75) toluene-d8 (s)	10.909	98	360265	49.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.20%			
98) 4-bromofluorobenzene (s)	13.770	95	173139	51.06	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.12%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.576	97	1920	0.42	ug/L #	65
80) tetrachloroethene	11.578	164	1635	0.86	ug/L	90

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

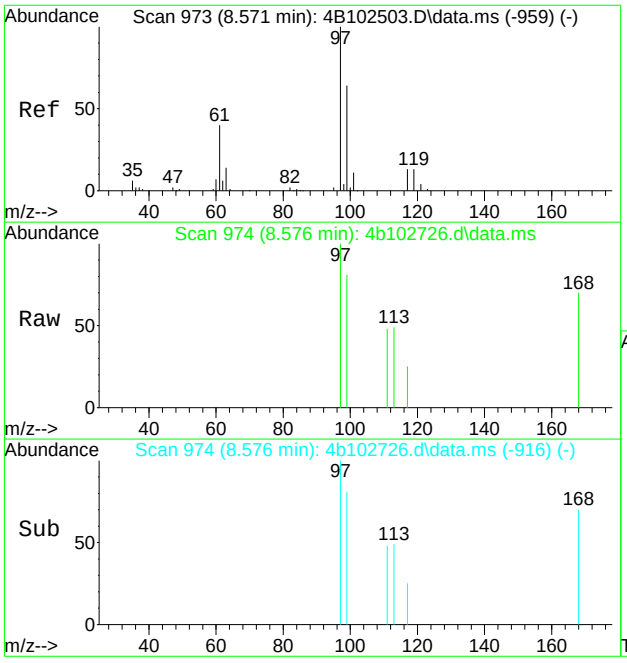
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102726.d
Acq On : 3 Mar 2021 8:43 pm
Operator : brittank
Sample : JD20920-5 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:19:58 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



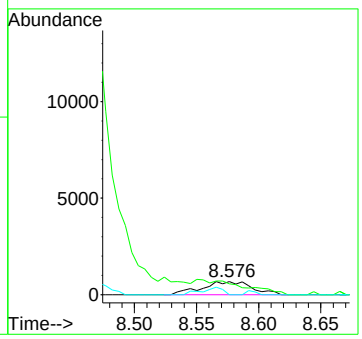
M4B4435.M Wed Mar 03 22:24:21 2021 Page: 2

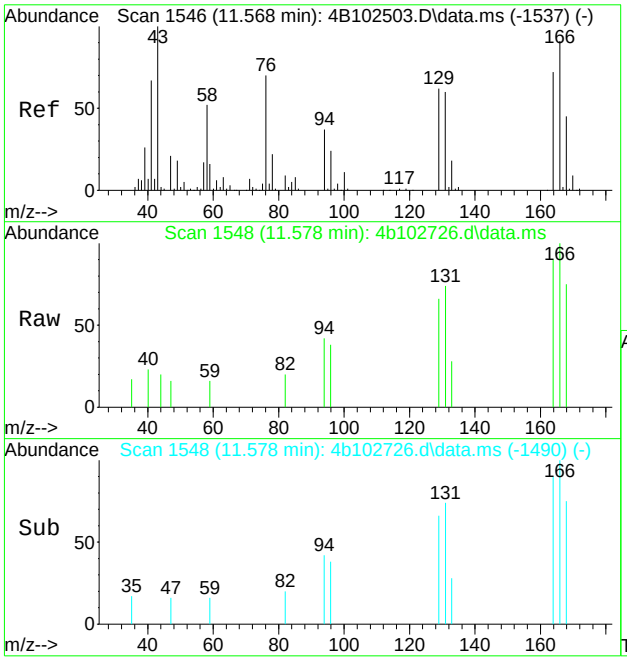


#46
1,1,1-trichloroethane
Concen: 0.42 ug/L
RT: 8.576 min Scan# 974
Delta R.T. 0.005 min
Lab File: 4b102726.d
Acq: 3 Mar 2021 8:43 pm

Tgt Ion: 97 Resp: 1920

Ion	Ratio	Lower	Upper
97	100		
99	81.4	36.9	96.9
61	0.0	9.7	69.7#

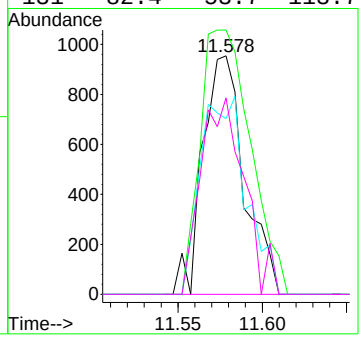




#80
tetrachloroethene
Concen: 0.86 ug/L
RT: 11.578 min Scan# 1548
Delta R.T. 0.005 min
Lab File: 4b102726.d
Acq: 3 Mar 2021 8:43 pm

Tgt Ion:164 Resp: 1635

Ion	Ratio	Lower	Upper
164	100		
166	110.9	96.6	156.6
129	73.7	56.4	116.4
131	82.4	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102719.d
Acq On : 3 Mar 2021 5:26 pm
Operator : brittank
Sample : JD20920-6 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:13:52 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

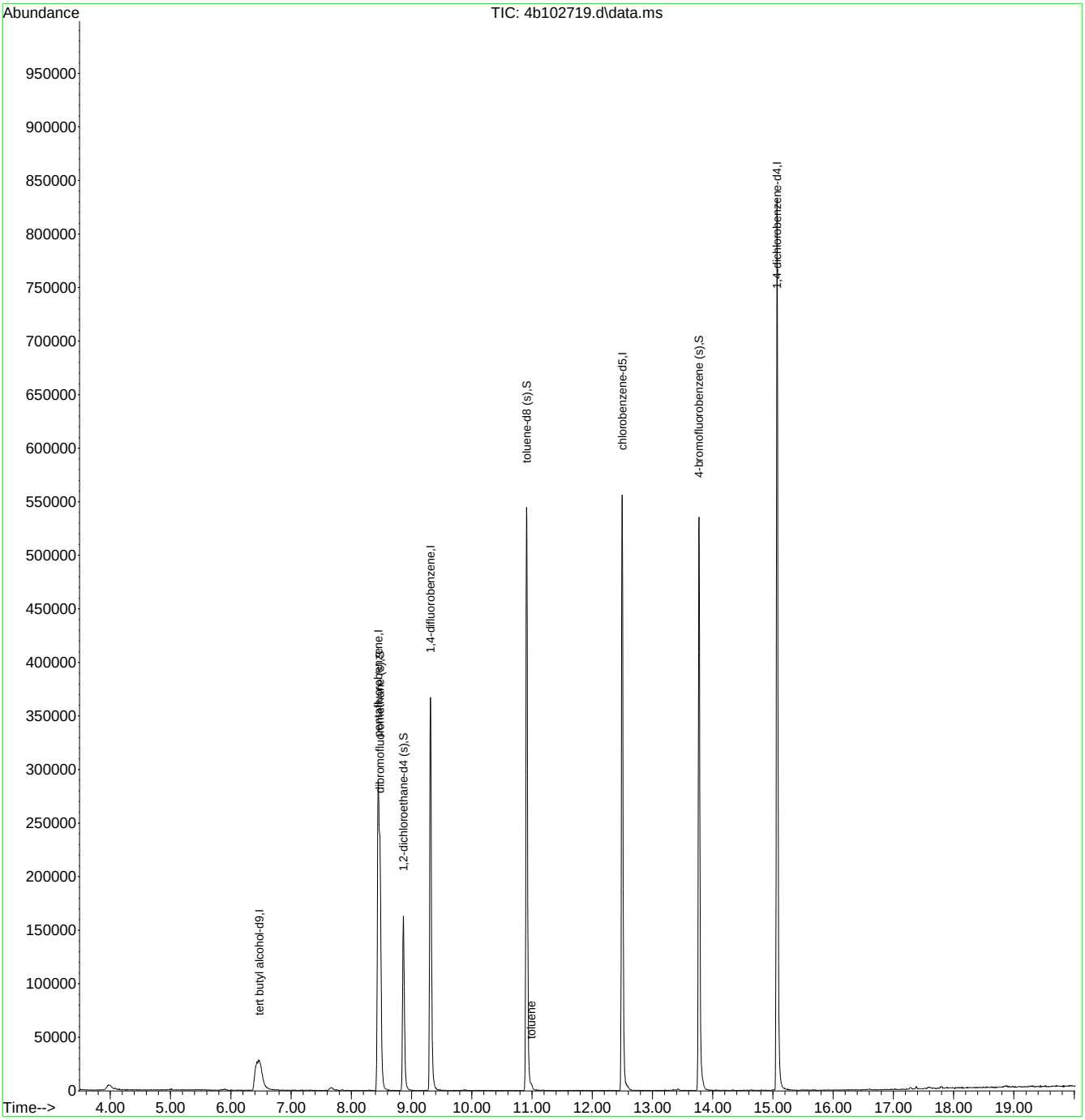
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	130711	500.00	ug/L	-0.01
5) pentafluorobenzene	8.445	168	241652	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	329574	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	343340	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	246247	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	123010	51.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.54%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	130670	51.70	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.40%			
75) toluene-d8 (s)	10.909	98	393658	50.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.38%			
98) 4-bromofluorobenzene (s)	13.770	95	185105	50.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.42%			
Target Compounds						Qvalue
76) toluene	10.987	92	1489	0.30	ug/L #	88

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

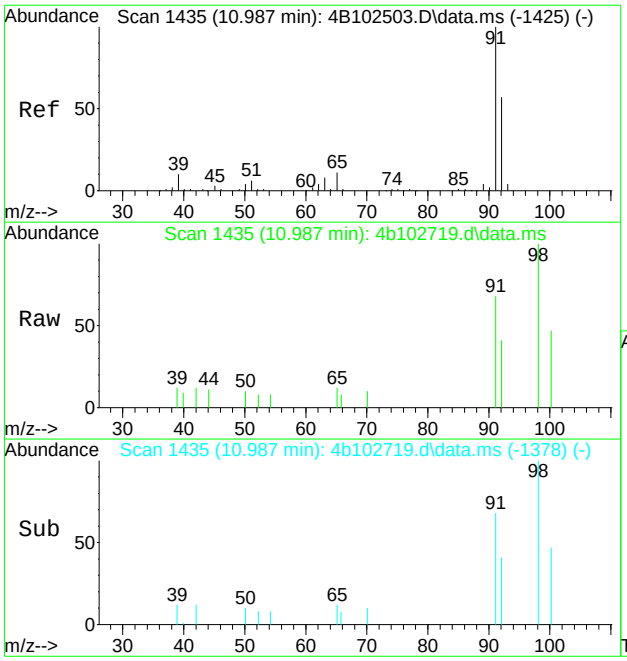
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102719.d
Acq On : 3 Mar 2021 5:26 pm
Operator : brittank
Sample : JD20920-6 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:13:52 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



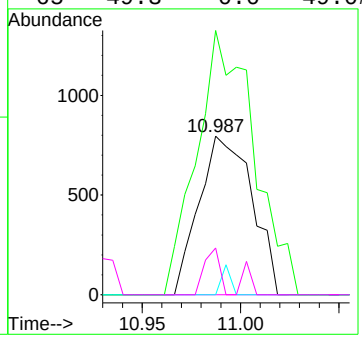
M4B4435.M Wed Mar 03 22:23:51 2021 Page: 2



#76
toluene
Concen: 0.30 ug/L
RT: 10.987 min Scan# 1435
Delta R.T. -0.000 min
Lab File: 4b102719.d
Acq: 3 Mar 2021 5:26 pm

Tgt Ion: 92 Resp: 1489

Ion	Ratio	Lower	Upper
92	100		
91	166.8	154.4	194.4
51	0.0	0.0	40.9
65	49.3	0.0	49.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102727.d
Acq On : 3 Mar 2021 9:11 pm
Operator : brittank
Sample : JD20920-7 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:20:50 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

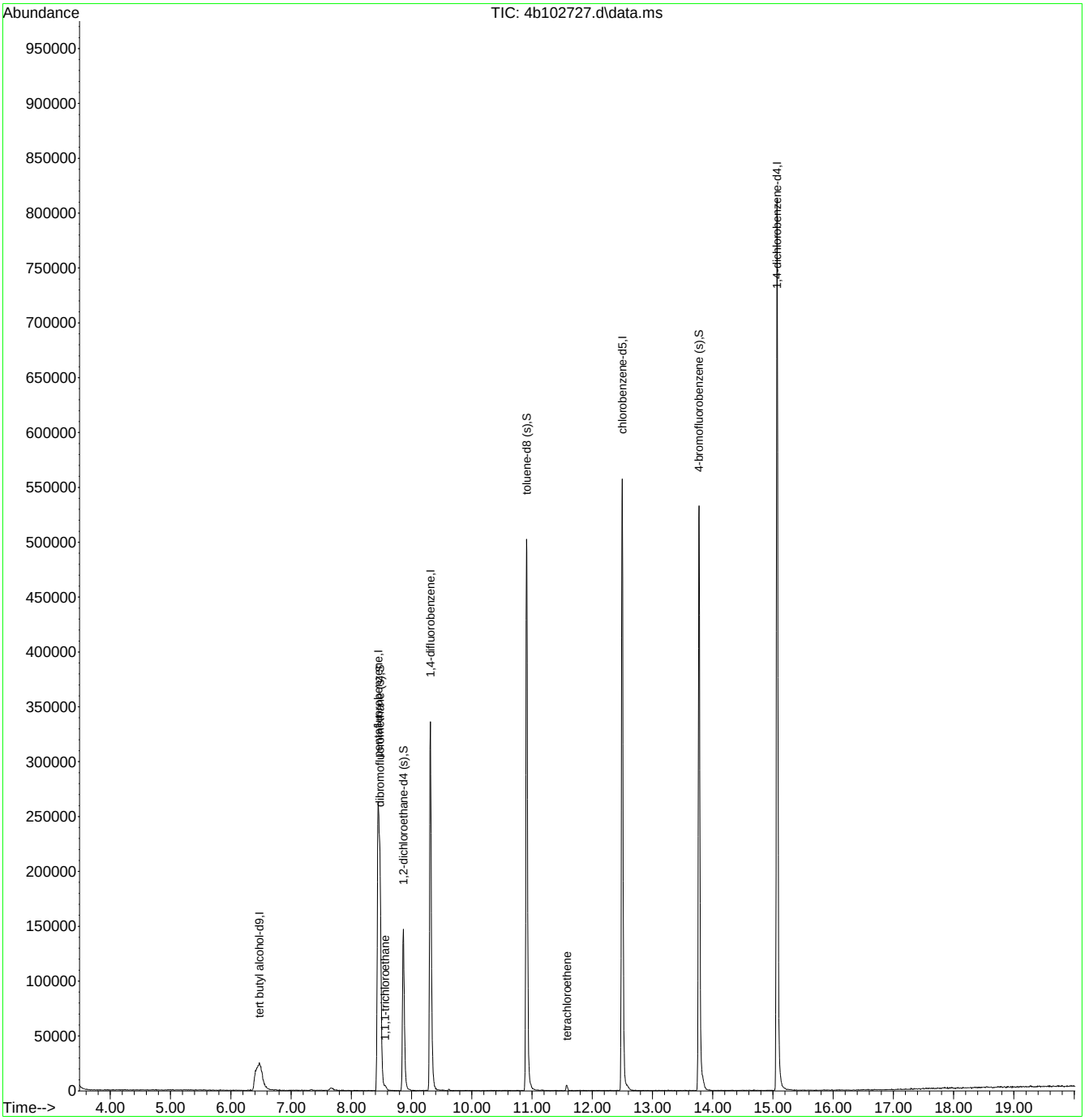
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	114062	500.00	ug/L	-0.01
5) pentafluorobenzene	8.445	168	226052	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	299923	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	331908	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	237413	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	118455	52.78	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.56%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	123431	53.66	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.32%			
75) toluene-d8 (s)	10.909	98	364766	48.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.22%			
98) 4-bromofluorobenzene (s)	13.770	95	188435	53.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.10%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.561	97	2644	0.59	ug/L	97
80) tetrachloroethene	11.578	164	1462	0.74	ug/L	88

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

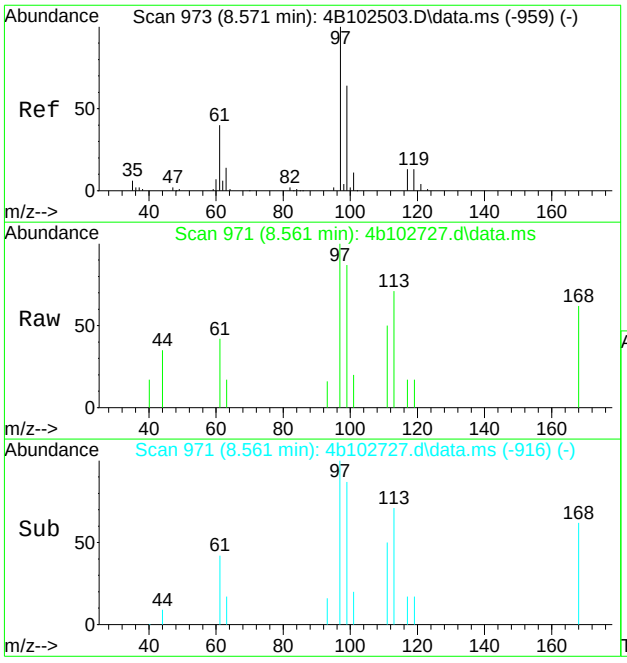
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102727.d
Acq On : 3 Mar 2021 9:11 pm
Operator : brittank
Sample : JD20920-7 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:20:50 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



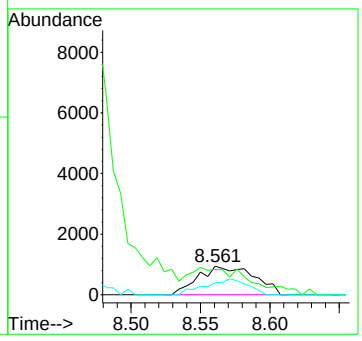
M4B4435.M Wed Mar 03 22:24:25 2021 Page: 2

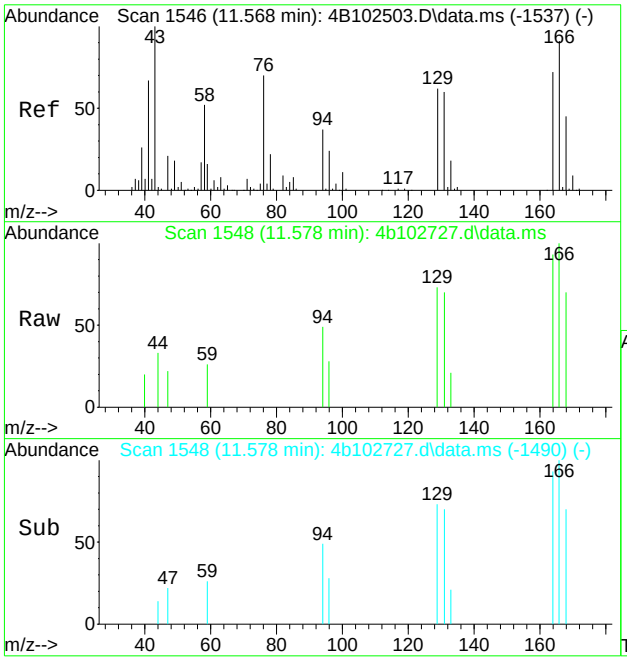


#46
1,1,1-trichloroethane
Concen: 0.59 ug/L
RT: 8.561 min Scan# 971
Delta R.T. -0.011 min
Lab File: 4b102727.d
Acq: 3 Mar 2021 9:11 pm

Tgt Ion: 97 Resp: 2644

Ion	Ratio	Lower	Upper
97	100		
99	68.1	36.9	96.9
61	42.4	9.7	69.7

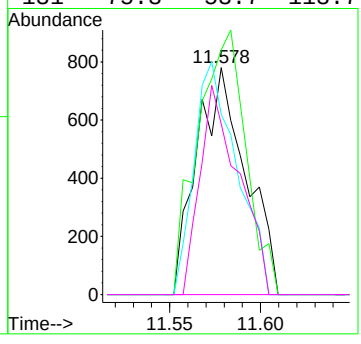




#80
tetrachloroethene
Concen: 0.74 ug/L
RT: 11.578 min Scan# 1548
Delta R.T. 0.005 min
Lab File: 4b102727.d
Acq: 3 Mar 2021 9:11 pm

Tgt Ion:164 Resp: 1462

Ion	Ratio	Lower	Upper
164	100		
166	107.8	96.6	156.6
129	79.2	56.4	116.4
131	75.3	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102728.d
Acq On : 3 Mar 2021 9:39 pm
Operator : brittank
Sample : JD20920-8 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:38:55 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

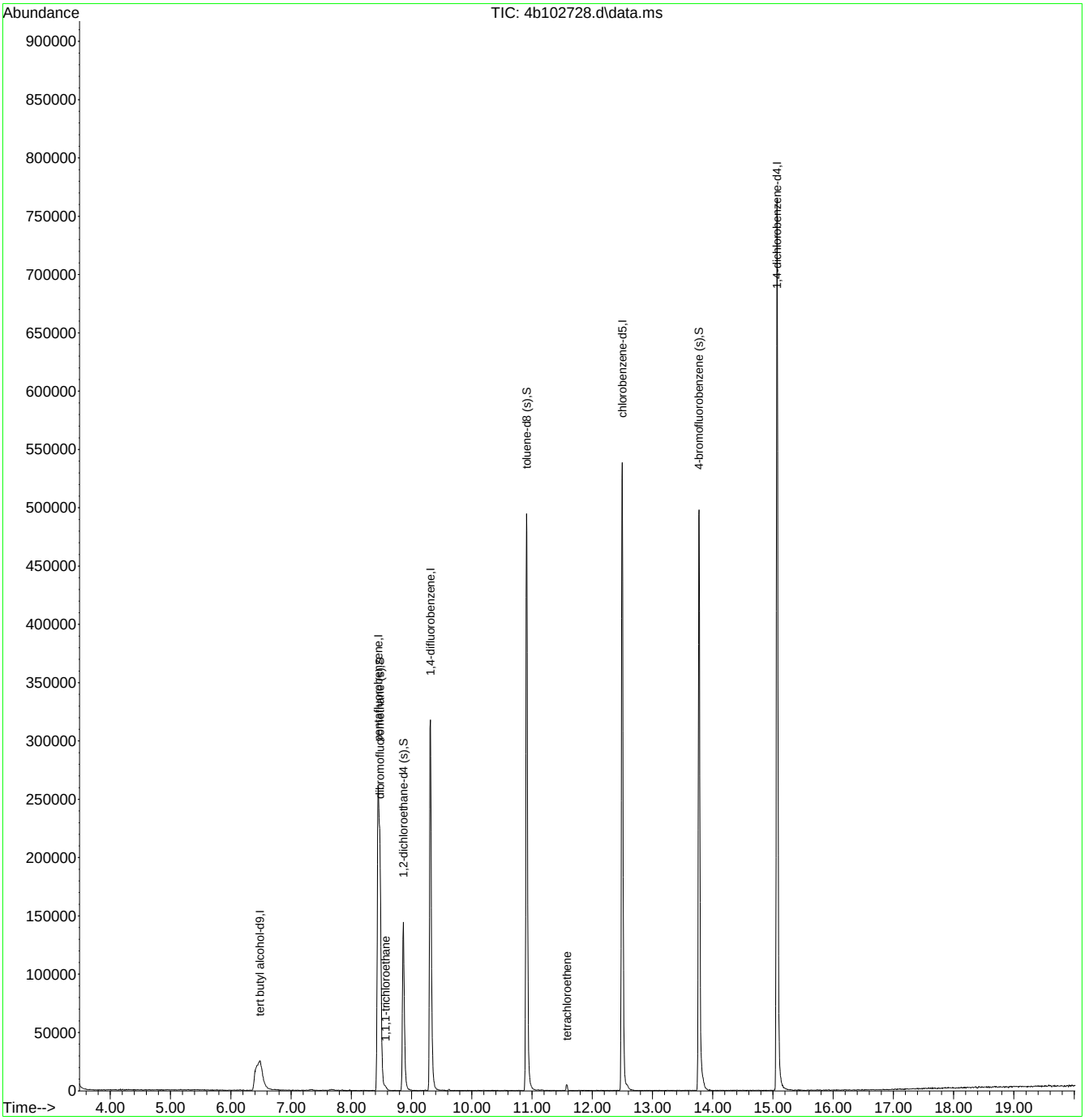
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	118795	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	223944	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	292841	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	324147	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	225723	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	115983	52.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.32%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	120952	53.85	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.70%			
75) toluene-d8 (s)	10.909	98	356333	48.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.24%			
98) 4-bromofluorobenzene (s)	13.770	95	175765	52.53	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.06%			
Target Compounds						Qvalue
46) 1,1,1-trichloroethane	8.566	97	2546	0.57	ug/L	76
80) tetrachloroethene	11.578	164	1357	0.70	ug/L	94

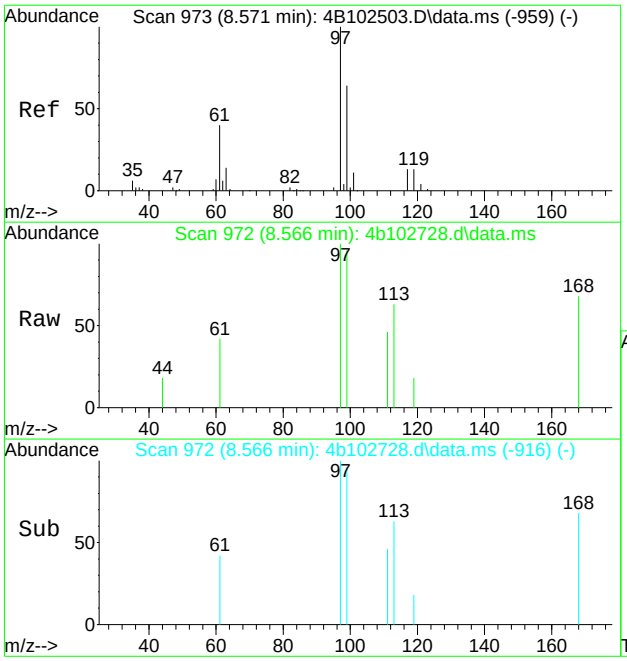
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102728.d
Acq On : 3 Mar 2021 9:39 pm
Operator : brittank
Sample : JD20920-8 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:38:55 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

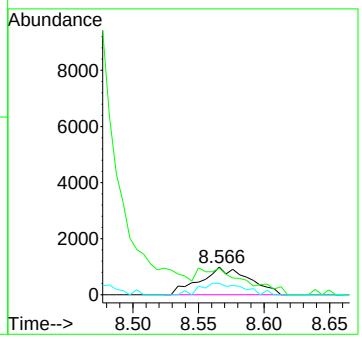


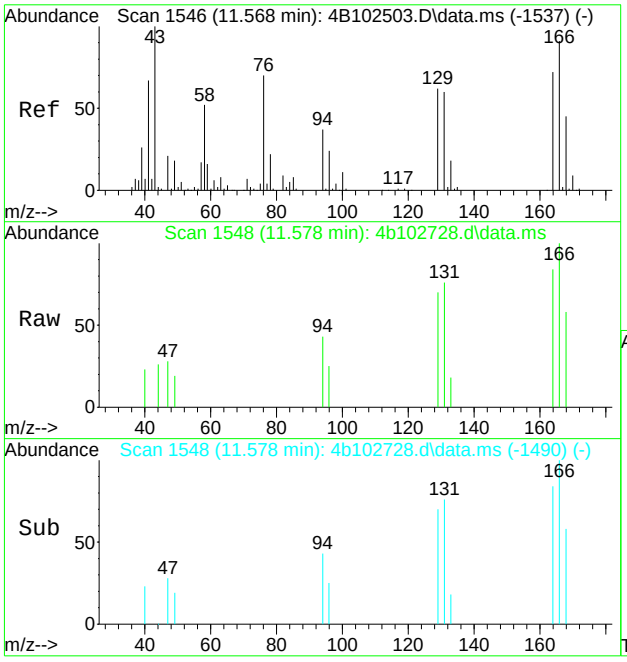


#46
1,1,1-trichloroethane
Concen: 0.57 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102728.d
Acq: 3 Mar 2021 9:39 pm

Tgt Ion: 97 Resp: 2546

Ion	Ratio	Lower	Upper
97	100		
99	95.6	36.9	96.9
61	41.6	9.7	69.7

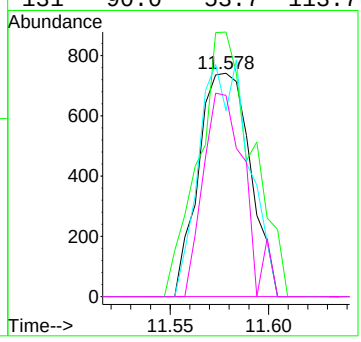




#80
tetrachloroethene
Concen: 0.70 ug/L
RT: 11.578 min Scan# 1548
Delta R.T. 0.005 min
Lab File: 4b102728.d
Acq: 3 Mar 2021 9:39 pm

Tgt Ion:164 Resp: 1357

Ion	Ratio	Lower	Upper
164	100		
166	118.5	96.6	156.6
129	83.2	56.4	116.4
131	90.0	53.7	113.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102729.d
Acq On : 3 Mar 2021 10:07 pm
Operator : brittank
Sample : JD20920-9 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:39:43 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

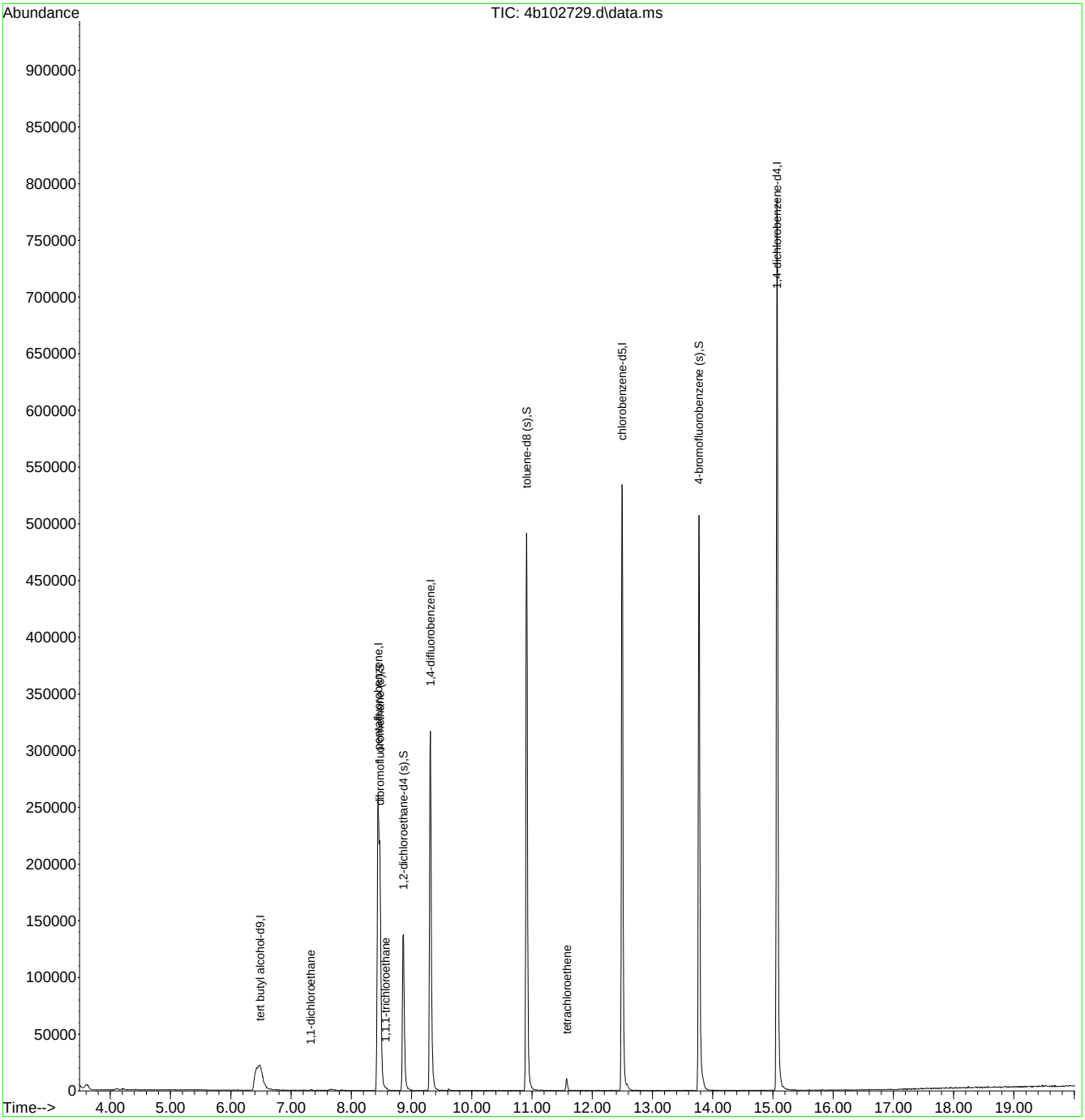
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.489	65	108978	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	217375	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	286441	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	321455	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	227995	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	111322	51.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.16%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	118558	53.97	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.94%			
75) toluene-d8 (s)	10.909	98	352506	48.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.00%			
98) 4-bromofluorobenzene (s)	13.770	95	178355	52.78	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.56%			
Target Compounds						Qvalue
30) 1,1-dichloroethane	7.326	63	1041	0.29	ug/L	86
46) 1,1,1-trichloroethane	8.566	97	2030	0.47	ug/L	81
80) tetrachloroethene	11.578	164	2941	1.53	ug/L #	78

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

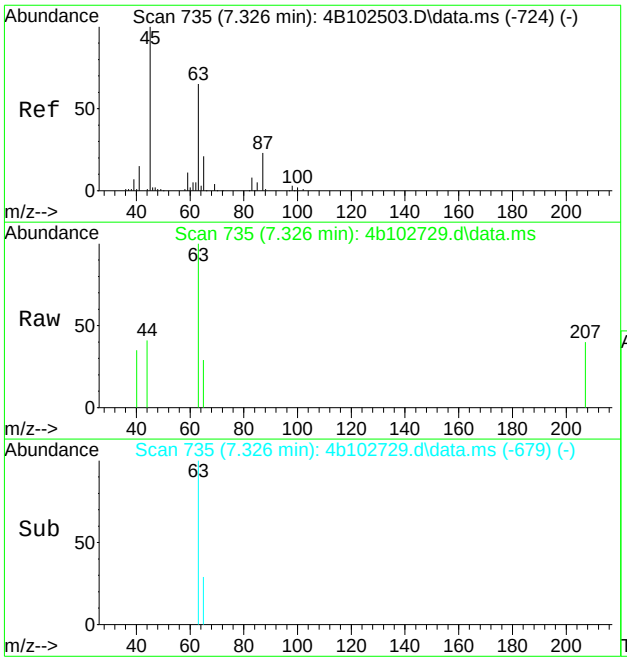
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102729.d
Acq On : 3 Mar 2021 10:07 pm
Operator : brittank
Sample : JD20920-9 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:39:43 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



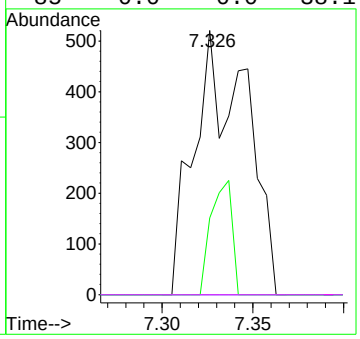
M4B4435.M Wed Mar 03 22:40:07 2021 Page: 2

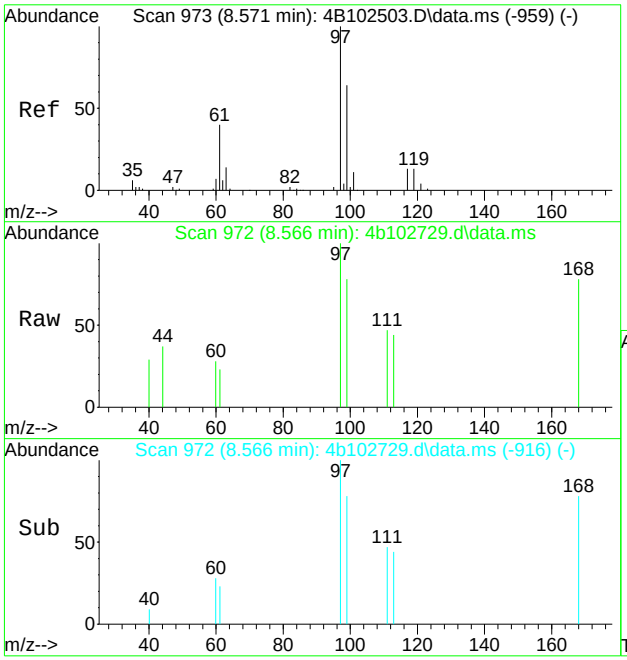


#30
1,1-dichloroethane
Concen: 0.29 ug/L
RT: 7.326 min Scan# 735
Delta R.T. -0.005 min
Lab File: 4b102729.d
Acq: 3 Mar 2021 10:07 pm

Tgt Ion: 63 Resp: 1041

Ion	Ratio	Lower	Upper
63	100		
65	29.0	1.6	61.6
83	0.0	0.0	43.0
85	0.0	0.0	38.1

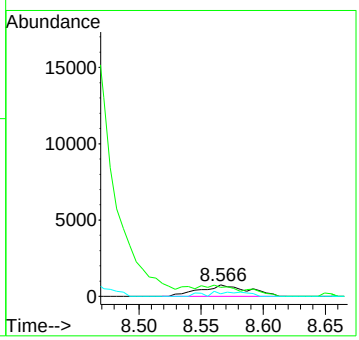


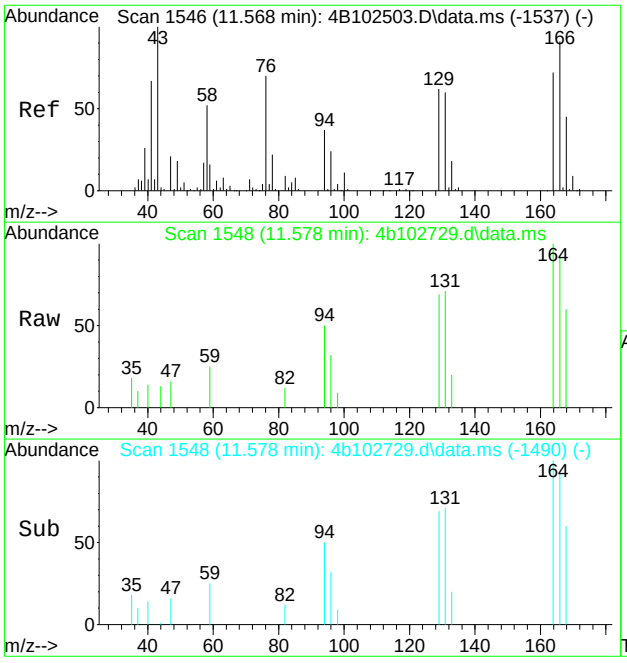


#46
1,1,1-trichloroethane
Concen: 0.47 ug/L
RT: 8.566 min Scan# 972
Delta R.T. -0.005 min
Lab File: 4b102729.d
Acq: 3 Mar 2021 10:07 pm

Tgt Ion: 97 Resp: 2030

Ion	Ratio	Lower	Upper
97	100		
99	78.1	36.9	96.9
61	23.1	9.7	69.7

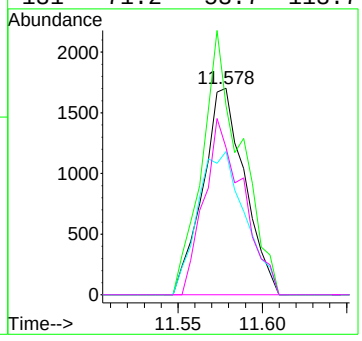




#80
tetrachloroethene
Concen: 1.53 ug/L
RT: 11.578 min Scan# 1548
Delta R.T. 0.005 min
Lab File: 4b102729.d
Acq: 3 Mar 2021 10:07 pm

Tgt Ion:164 Resp: 2941

Ion	Ratio	Lower	Upper
164	100		
166	91.6	96.6	156.6#
129	69.4	56.4	116.4
131	71.2	53.7	113.7



7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102720.d
Acq On : 3 Mar 2021 5:54 pm
Operator : brittank
Sample : JD20920-10 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:14:35 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

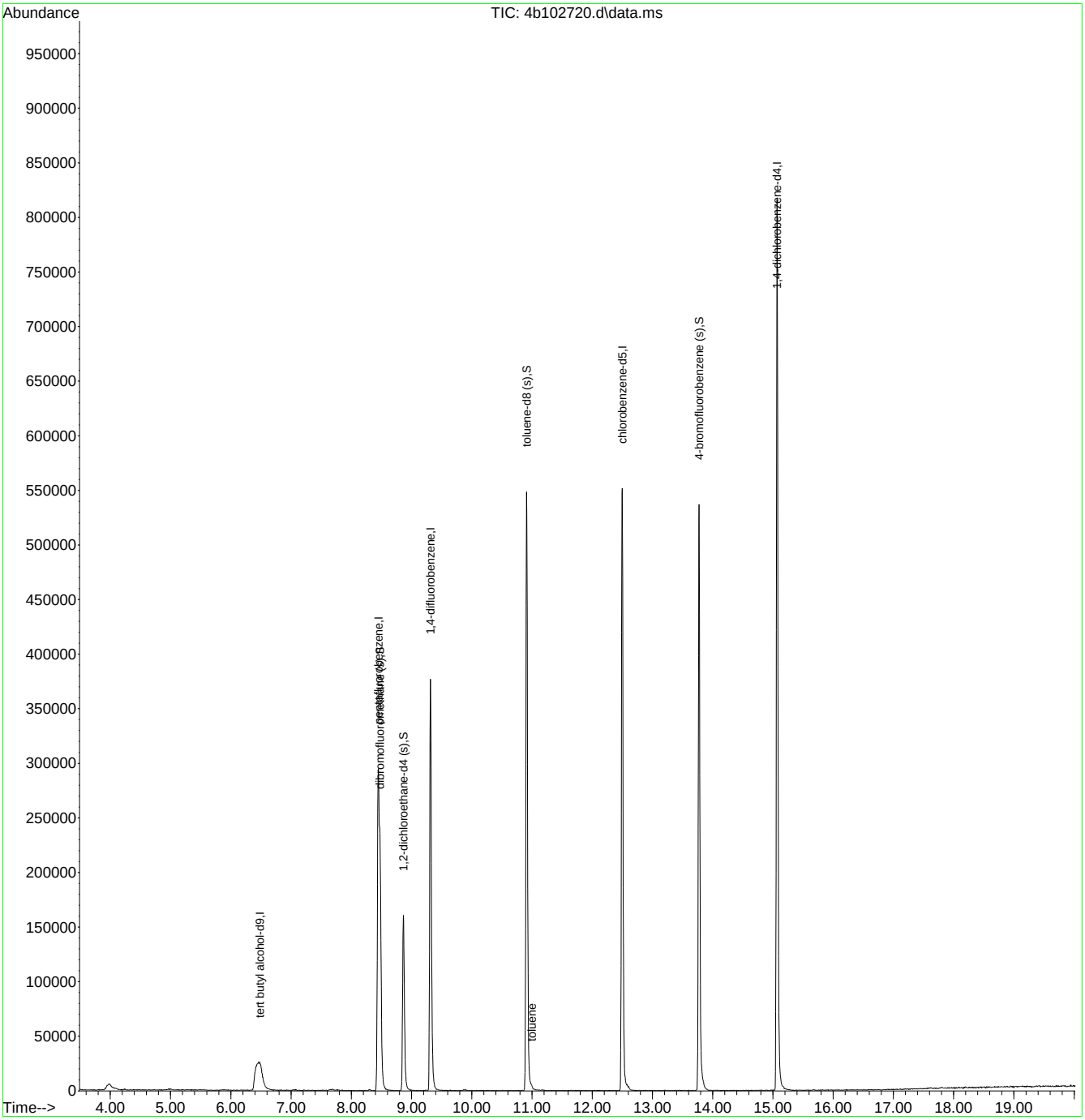
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	121380	500.00	ug/L	0.00
5) pentafluorobenzene	8.451	168	242265	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	331922	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	339646	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	246198	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	124629	51.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.62%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	132056	51.87	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.74%			
75) toluene-d8 (s)	10.909	98	392215	50.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.10%			
98) 4-bromofluorobenzene (s)	13.775	95	187170	51.29	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.58%			
Target Compounds						Qvalue
76) toluene	10.998	92	1331	0.28	ug/L #	65

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

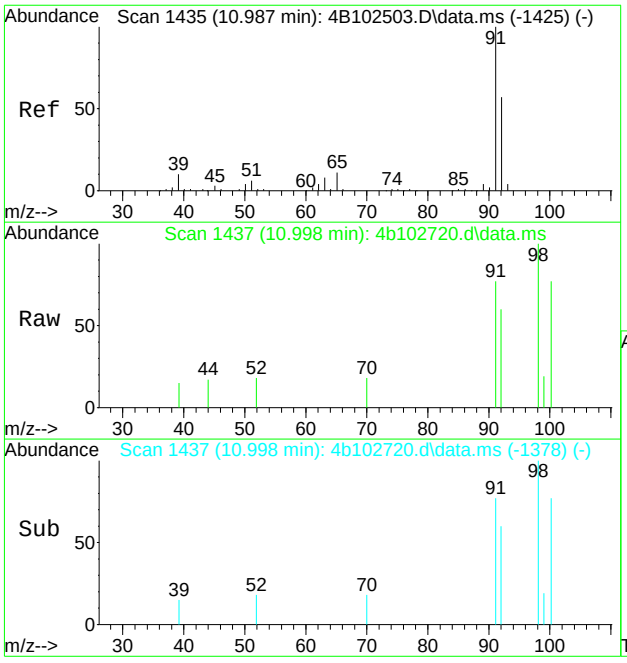
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102720.d
Acq On : 3 Mar 2021 5:54 pm
Operator : brittank
Sample : JD20920-10 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:14:35 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



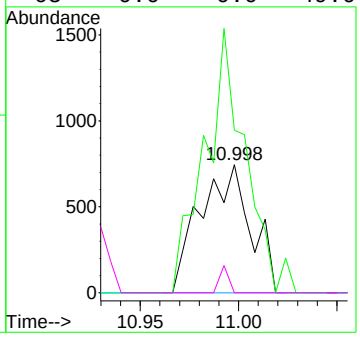
M4B4435.M Wed Mar 03 22:23:55 2021 Page: 2



#76
toluene
Concen: 0.28 ug/L
RT: 10.998 min Scan# 1437
Delta R.T. 0.010 min
Lab File: 4b102720.d
Acq: 3 Mar 2021 5:54 pm

Tgt Ion: 92 Resp: 1331

Ion	Ratio	Lower	Upper
92	100		
91	126.8	154.4	194.4#
51	0.0	0.0	40.9
65	0.0	0.0	49.0



Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
03/04/21 14:43

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102710.d
Acq On : 3 Mar 2021 12:54 pm
Operator : brittank
Sample : JD20920-11 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:42:54 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

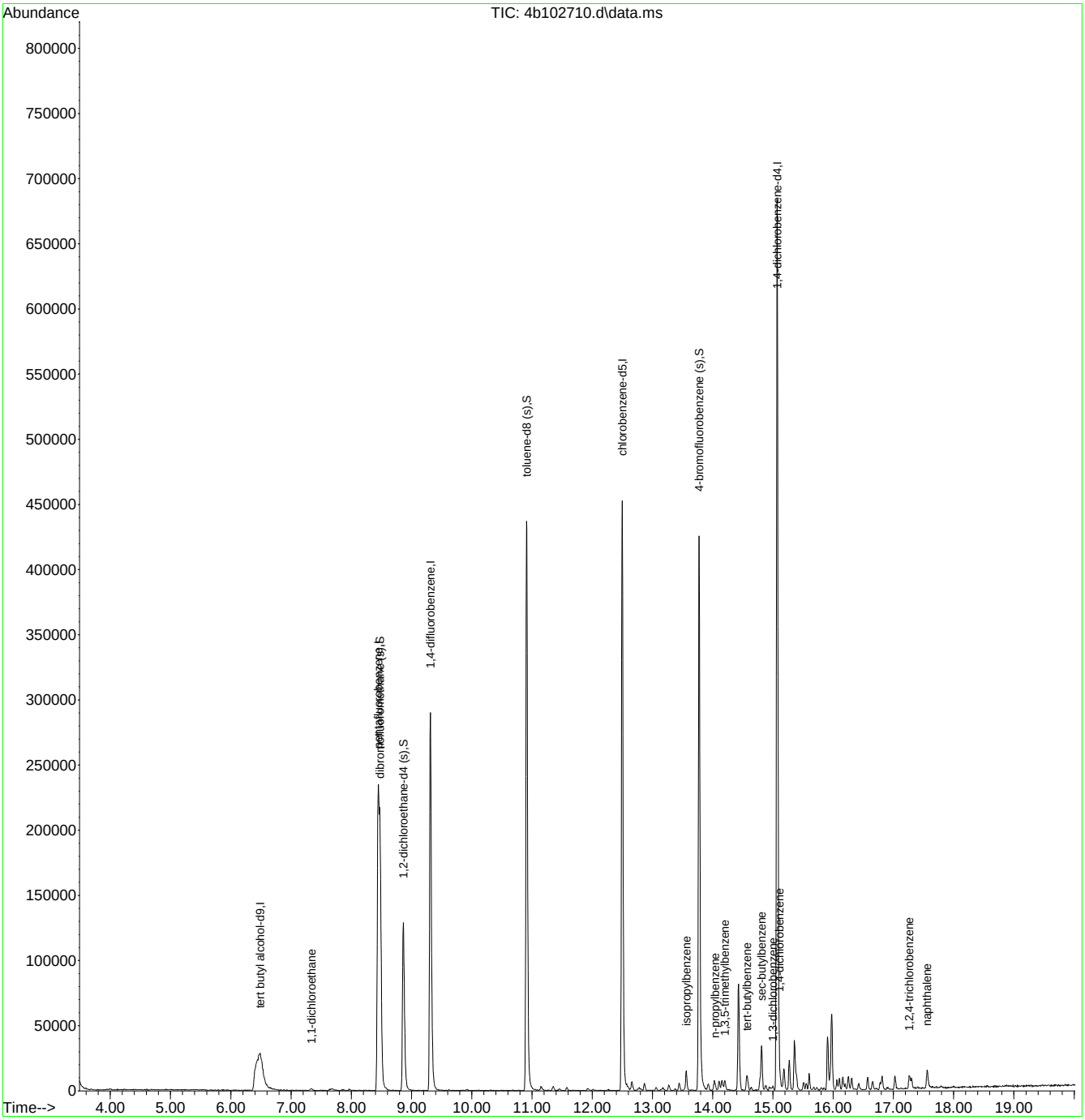
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.489	65	140557	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	210103	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	270022	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	274298	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.072	152	200249	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	112342	53.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.70%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	113458	54.79	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 109.58%			
75) toluene-d8 (s)	10.909	98	317617	50.69	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.38%			
98) 4-bromofluorobenzene (s)	13.775	95	148997	50.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.40%			
Target Compounds						Qvalue
30) 1,1-dichloroethane	7.337	63	2673	0.77	ug/L	82
94) isopropylbenzene	13.561	105	10606	1.07	ug/L	95
103) n-propylbenzene	14.037	91	5763	0.50	ug/L	98
106) 1,3,5-trimethylbenzene	14.199	105	5387m	0.62	ug/L	
107) tert-butylbenzene	14.570	119	6133	0.86	ug/L	98
109) sec-butylbenzene	14.811	105	25553	2.20	ug/L	95
111) 1,3-dichlorobenzene	14.999	146	1905	0.33	ug/L	94
113) 1,4-dichlorobenzene	15.104	146	2338	0.39	ug/L	91
120) 1,2,4-trichlorobenzene	17.259	180	4112	0.85	ug/L	86
123) naphthalene	17.557	128	17419	2.05	ug/L	98

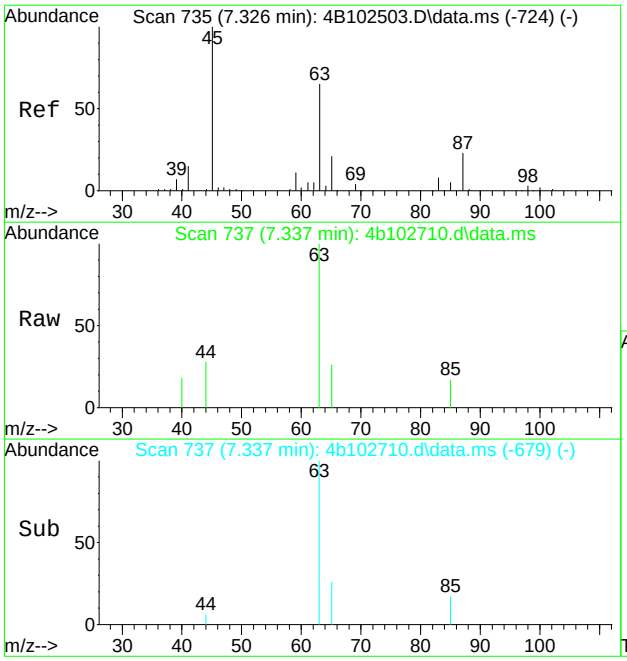
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102710.d
Acq On : 3 Mar 2021 12:54 pm
Operator : brittank
Sample : JD20920-11 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:42:54 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

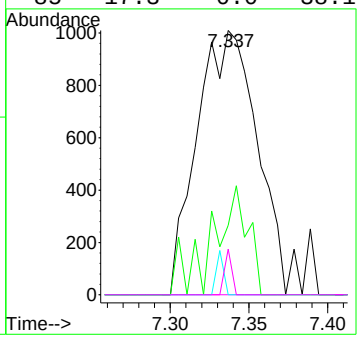


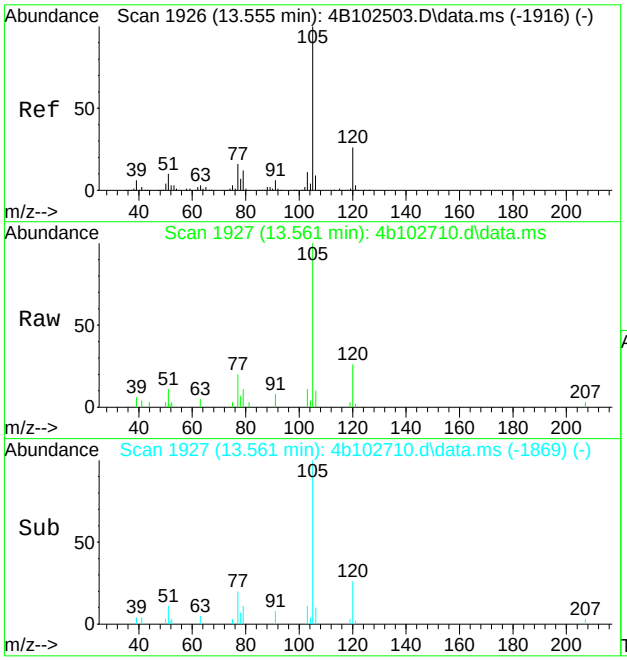


#30
1,1-dichloroethane
Concen: 0.77 ug/L
RT: 7.337 min Scan# 737
Delta R.T. 0.005 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion: 63 Resp: 2673

Ion	Ratio	Lower	Upper
63	100		
65	26.3	1.6	61.6
83	0.0	0.0	43.0
85	17.3	0.0	38.1

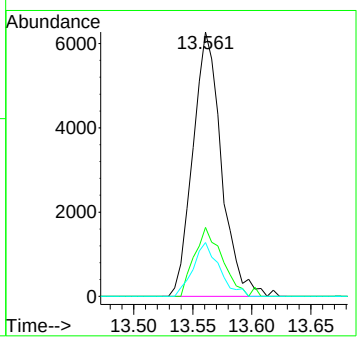


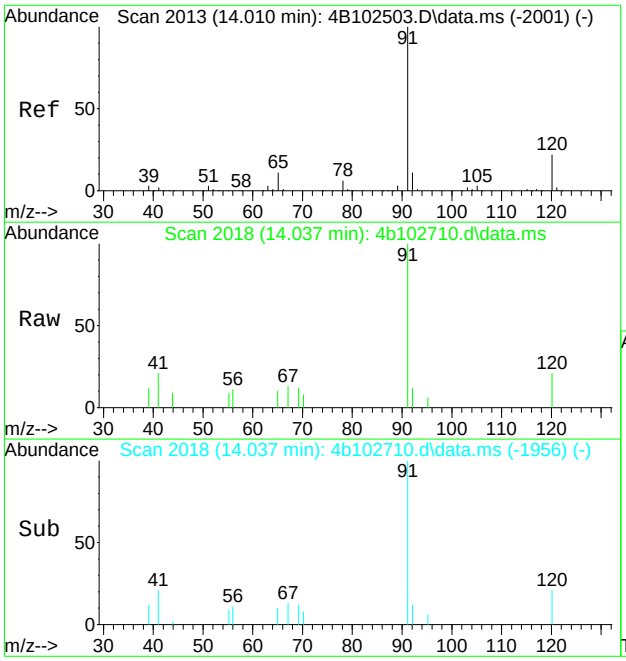


#94
isopropylbenzene
Concen: 1.07 ug/L
RT: 13.561 min Scan# 1927
Delta R.T. 0.005 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion:105 Resp: 10606

Ion	Ratio	Lower	Upper
105	100		
120	26.1	5.5	45.5
77	20.3	0.0	35.9

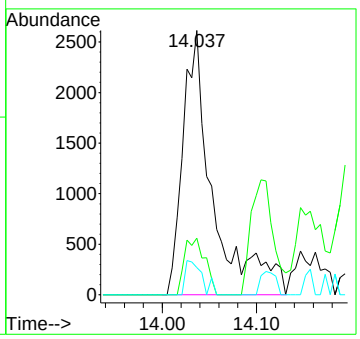


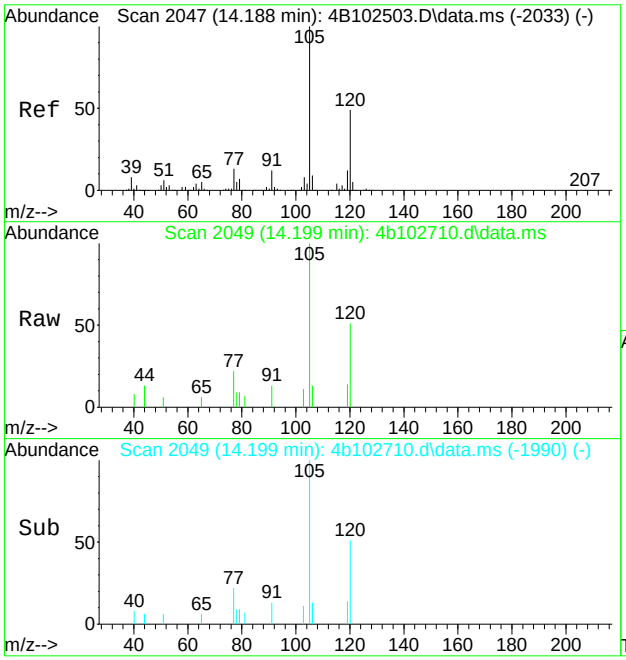


#103
n-propylbenzene
Concen: 0.50 ug/L
RT: 14.037 min Scan# 2018
Delta R.T. 0.026 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion: 91 Resp: 5763

Ion	Ratio	Lower	Upper
91	100		
120	21.4	0.0	52.4
65	10.3	0.0	40.8

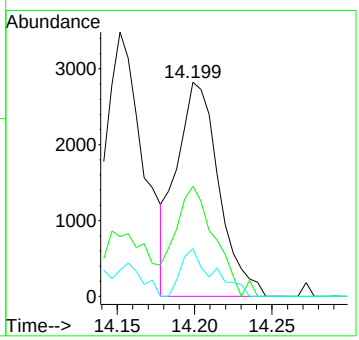




#106
1,3,5-trimethylbenzene
Concen: 0.62 ug/L m
RT: 14.199 min Scan# 2049
Delta R.T. 0.011 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

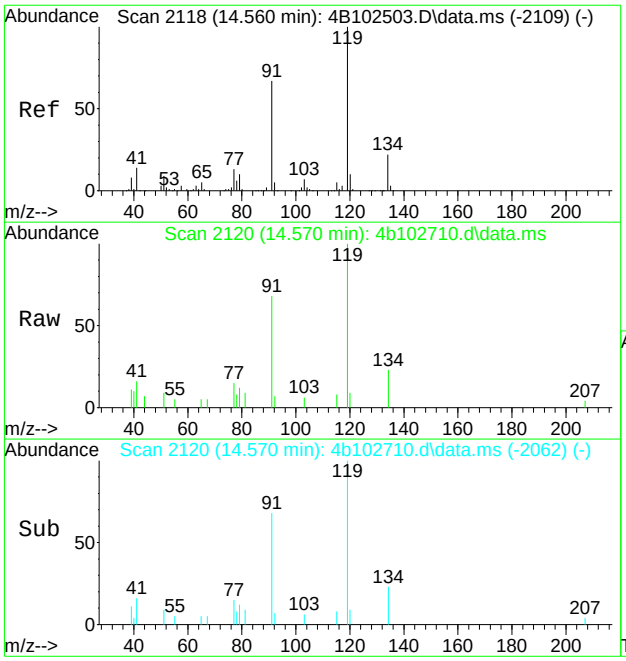
Tgt Ion:105 Resp: 5387

Ion	Ratio	Lower	Upper
105	100		
120	51.5	19.2	79.2
77	22.2	0.0	43.2



7.1.11

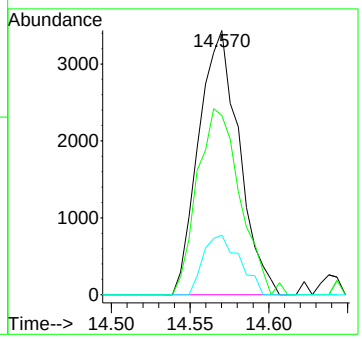
7

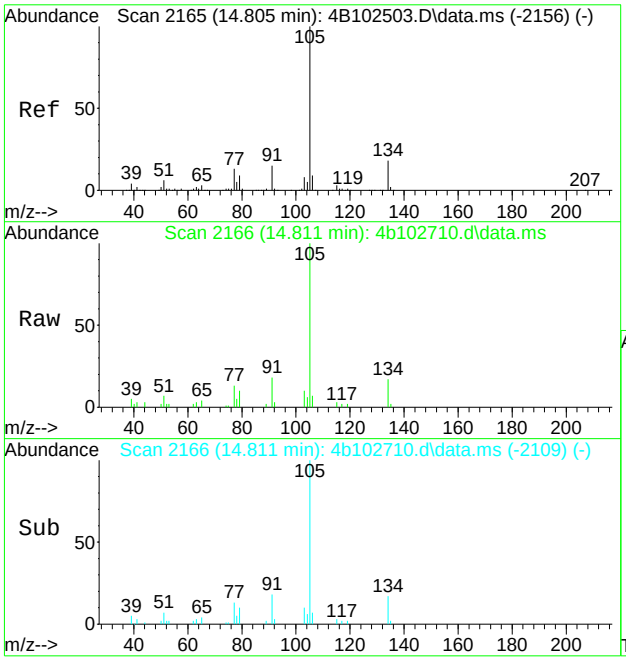


#107
tert-butylbenzene
Concen: 0.86 ug/L
RT: 14.570 min Scan# 2120
Delta R.T. 0.005 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion:119 Resp: 6133

Ion	Ratio	Lower	Upper
119	100		
91	67.9	36.6	96.6
134	22.6	0.0	51.8

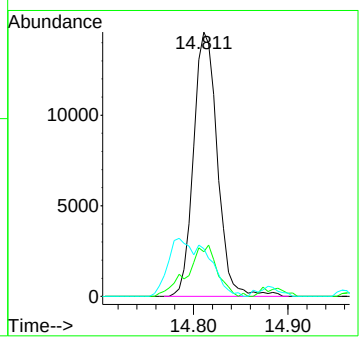


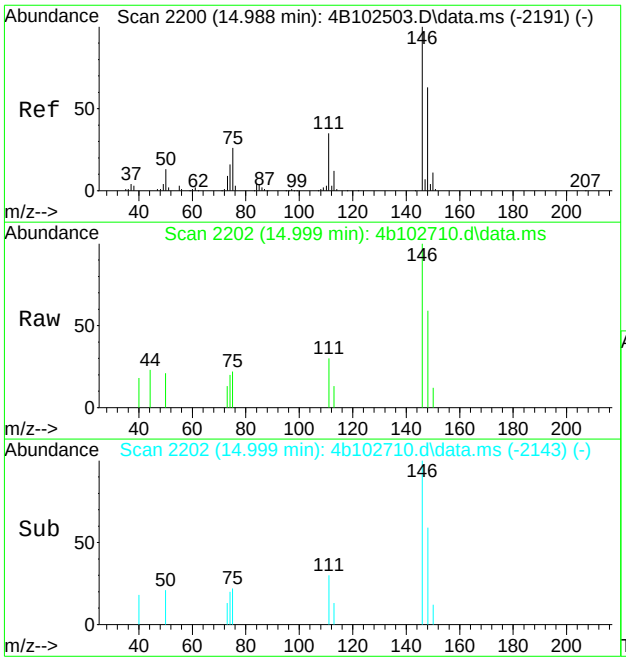


#109
sec-butylbenzene
Concen: 2.20 ug/L
RT: 14.811 min Scan# 2166
Delta R.T. 0.000 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion:105 Resp: 25553

Ion	Ratio	Lower	Upper
105	100		
134	15.7	0.0	48.3
91	16.8	0.0	45.3

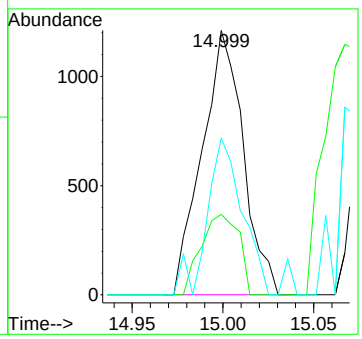


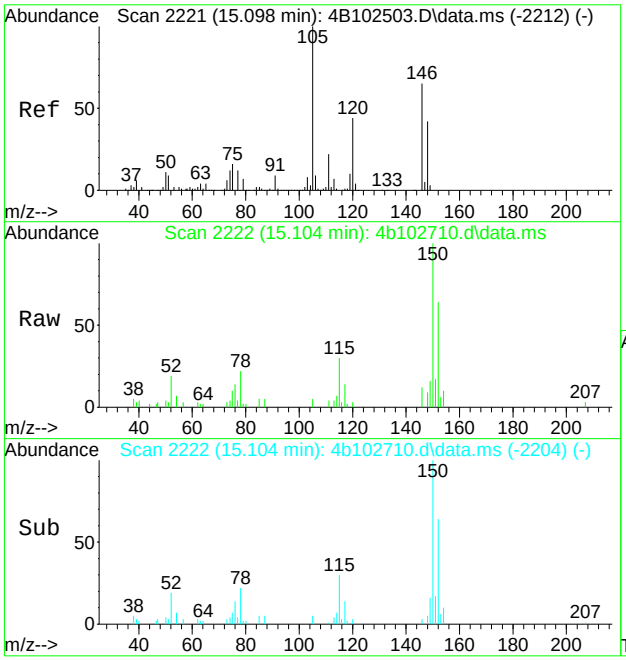


#111
1,3-dichlorobenzene
Concen: 0.33 ug/L
RT: 14.999 min Scan# 2202
Delta R.T. 0.010 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion:146 Resp: 1905

Ion	Ratio	Lower	Upper
146	100		
111	30.5	5.0	65.0
148	59.3	33.3	93.3

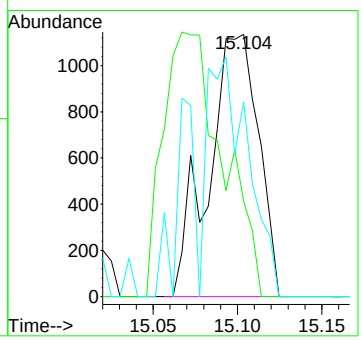


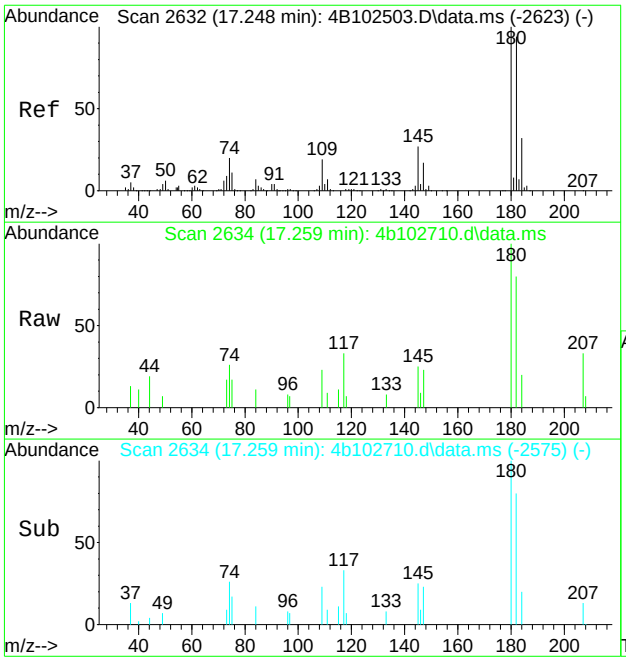


#113
1,4-dichlorobenzene
Concen: 0.39 ug/L
RT: 15.104 min Scan# 2222
Delta R.T. 0.005 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion:146 Resp: 2338

Ion	Ratio	Lower	Upper
146	100		
111	36.3	3.5	63.5
148	74.2	35.0	95.0

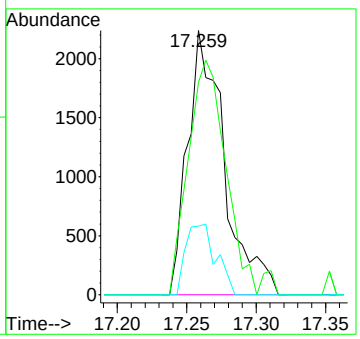


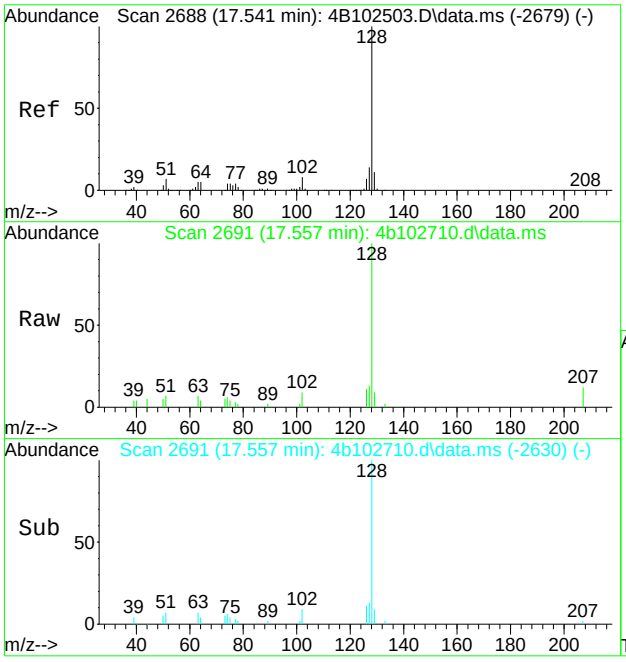


#120
1,2,4-trichlorobenzene
Concen: 0.85 ug/L
RT: 17.259 min Scan# 2634
Delta R.T. 0.010 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion:180 Resp: 4112

Ion	Ratio	Lower	Upper
180	100		
182	80.3	64.1	124.1
74	26.0	0.0	49.8

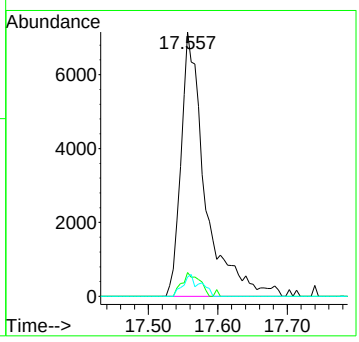




#123
naphthalene
Concen: 2.05 ug/L
RT: 17.557 min Scan# 2691
Delta R.T. 0.017 min
Lab File: 4b102710.d
Acq: 3 Mar 2021 12:54 pm

Tgt Ion:128 Resp: 17419

Ion	Ratio	Lower	Upper
128	100		
102	9.0	0.0	38.1
51	7.3	0.0	36.7



Manual Integration Approval Summary

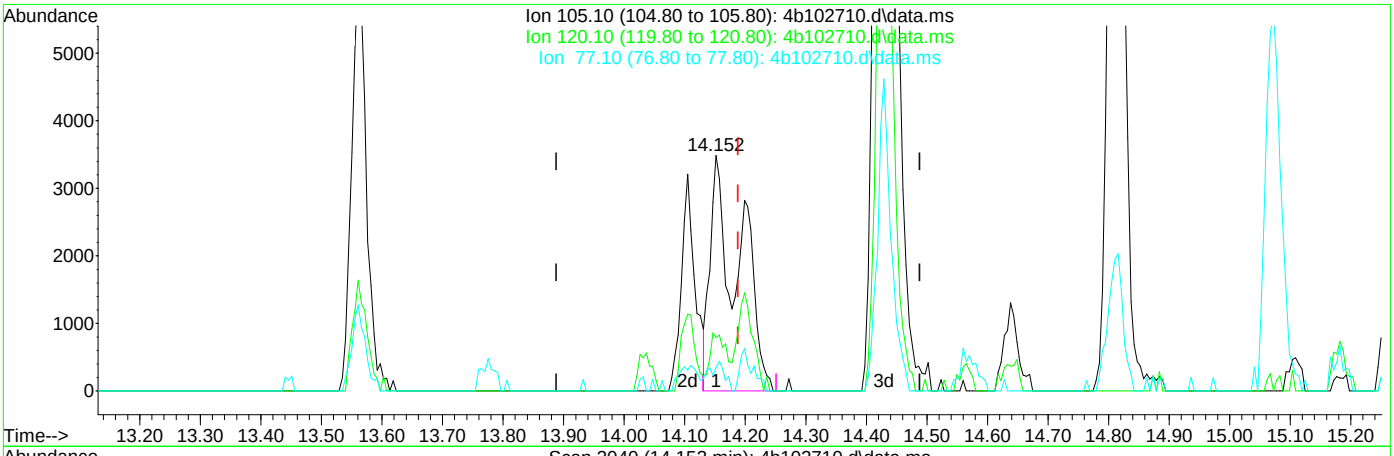
Sample Number:	JD20920-11	**Method:**	SW846 8260C
Lab FileID:	4B102710.D	**Analyst approved:**	03/03/21 22:43 Kristel Valladolid
Injection Time:	03/03/21 12:54	**Supervisor approved:**	03/04/21 14:43 Mei Chen

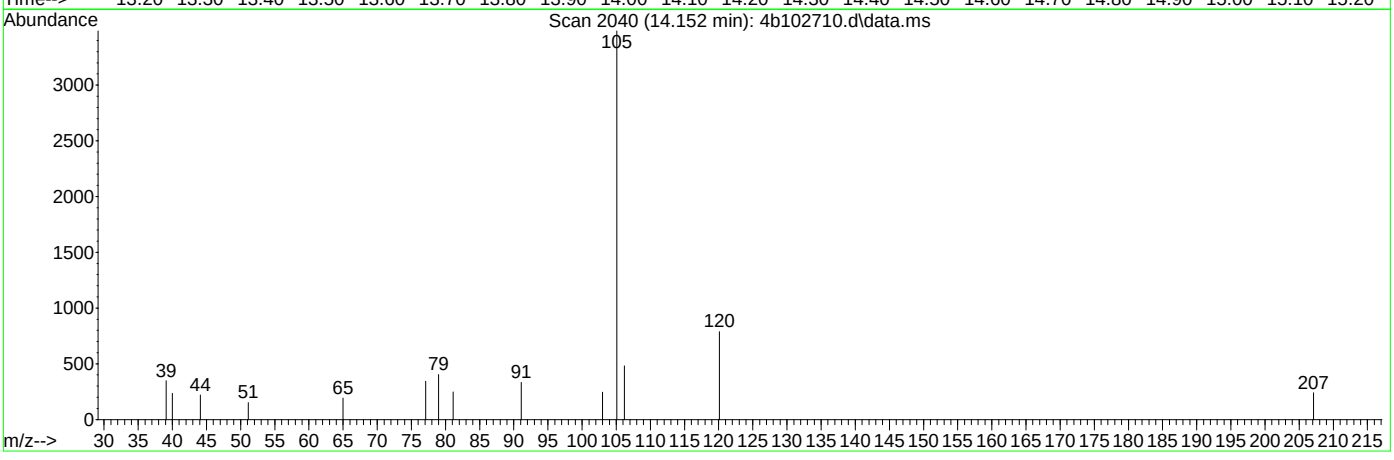
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trimethylbenzene	108-67-8		14.20	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102710.d
Acq On : 3 Mar 2021 12:54 pm
Operator : brittank
Sample : JD20920-11 Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 16:06:17 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration





TIC: 4b102710.d\data.ms

(106) 1,3,5-trimethylbenzene

14.152min (-0.036) 1.31ug/L

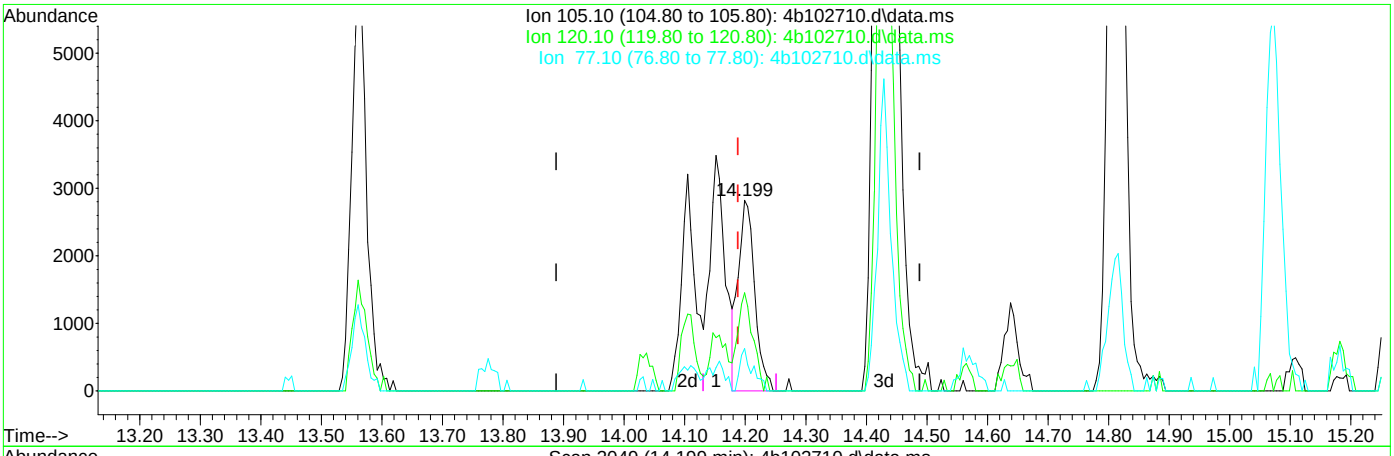
response 11418

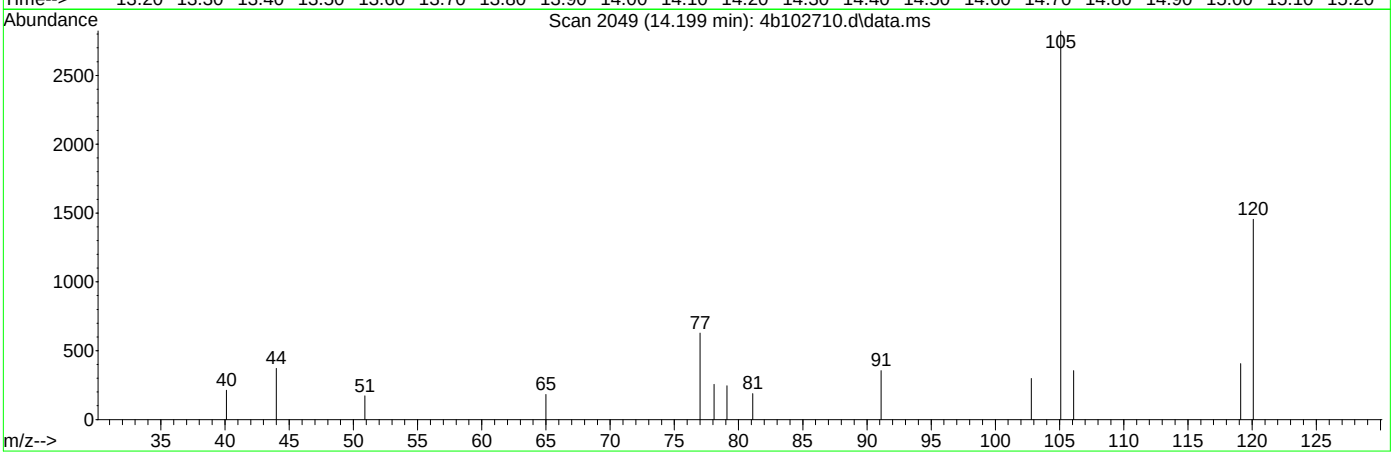
Ion	Exp%	Act%
105.10	100	100
120.10	49.20	22.63
77.10	13.20	9.87
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102710.d
Acq On : 3 Mar 2021 12:54 pm
Operator : brittank
Sample : JD20920-11 Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 16:06:17 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration





TIC: 4b102710.d\data.ms

(106) 1,3,5-trimethylbenzene

14.199min (+0.011) 0.62ug/L m

response 5387

Ion	Exp%	Act%
105.10	100	100
120.10	49.20	51.49
77.10	13.20	22.24
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102721.d
Acq On : 3 Mar 2021 6:22 pm
Operator : brittank
Sample : JD20920-12 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:15:08 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

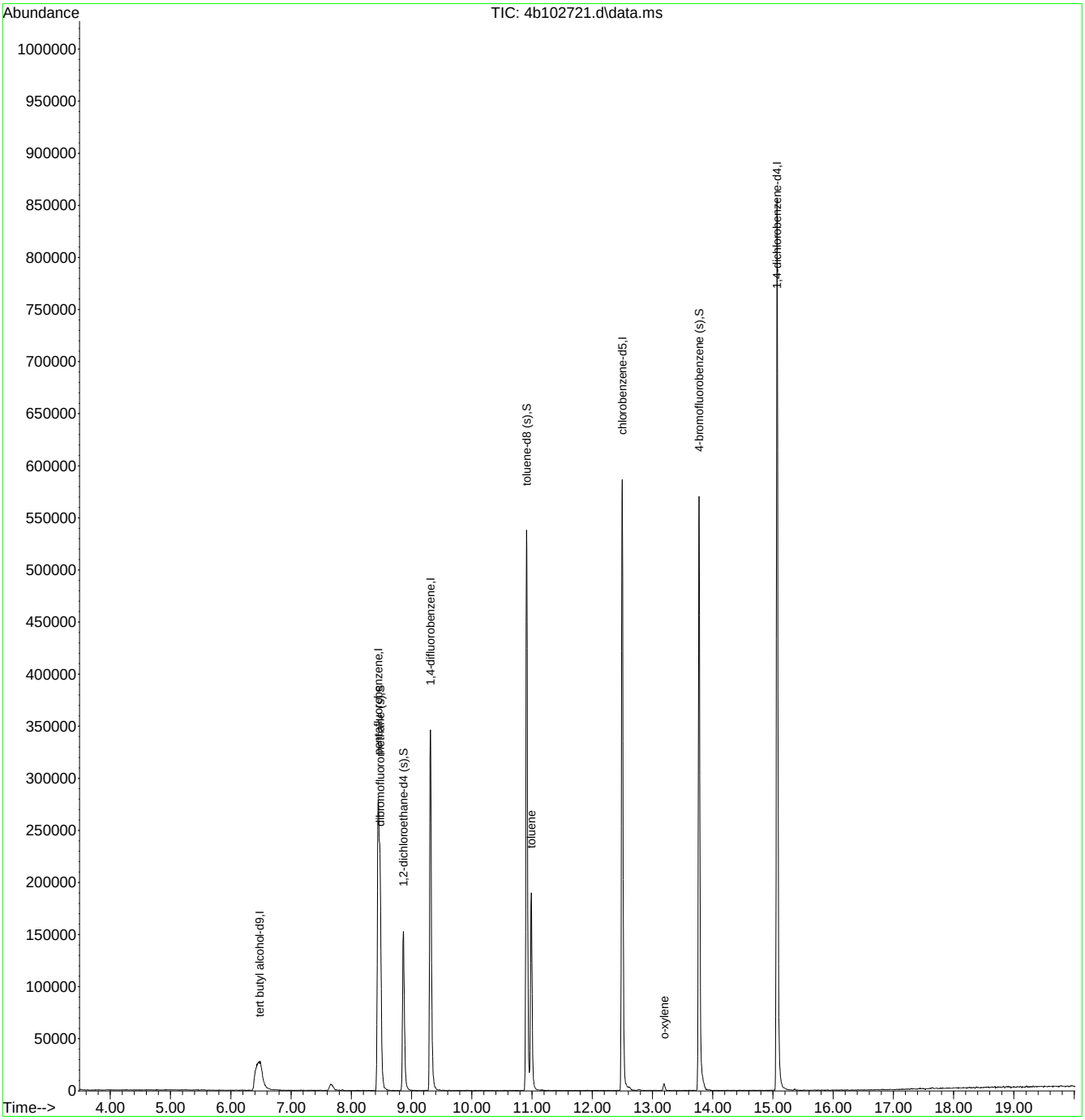
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.479	65	127658	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	236078	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	314407	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	350486	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	249516	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.482	113	122964	52.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.92%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	125083	51.87	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.74%			
75) toluene-d8 (s)	10.909	98	384304	48.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.00%			
98) 4-bromofluorobenzene (s)	13.775	95	194099	52.48	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.96%			
Target Compounds						Qvalue
76) toluene	10.987	92	85616	17.17	ug/L	99
91) o-xylene	13.195	91	5358	0.58	ug/L	99

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

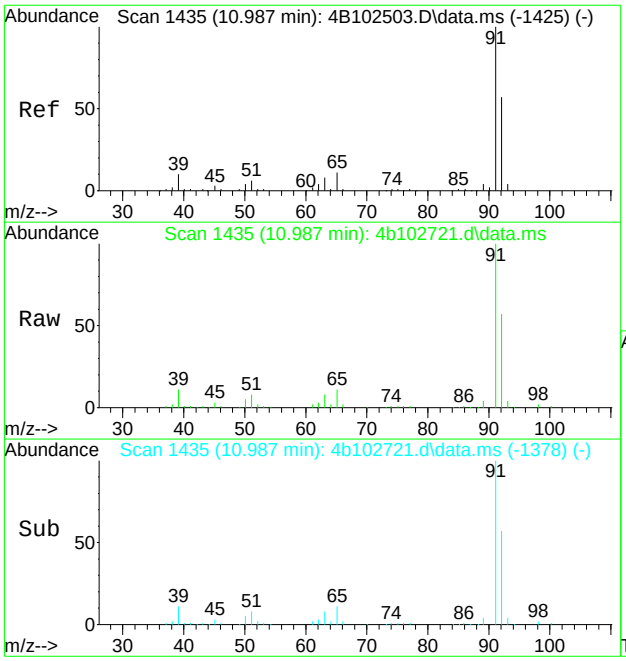
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102721.d
Acq On : 3 Mar 2021 6:22 pm
Operator : brittank
Sample : JD20920-12 c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:15:08 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



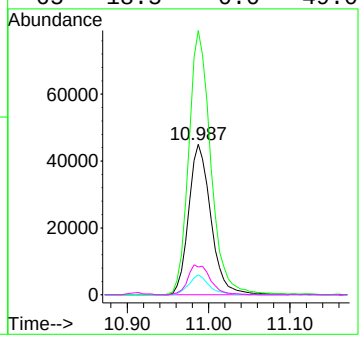
M4B4435.M Wed Mar 03 22:23:59 2021 Page: 2

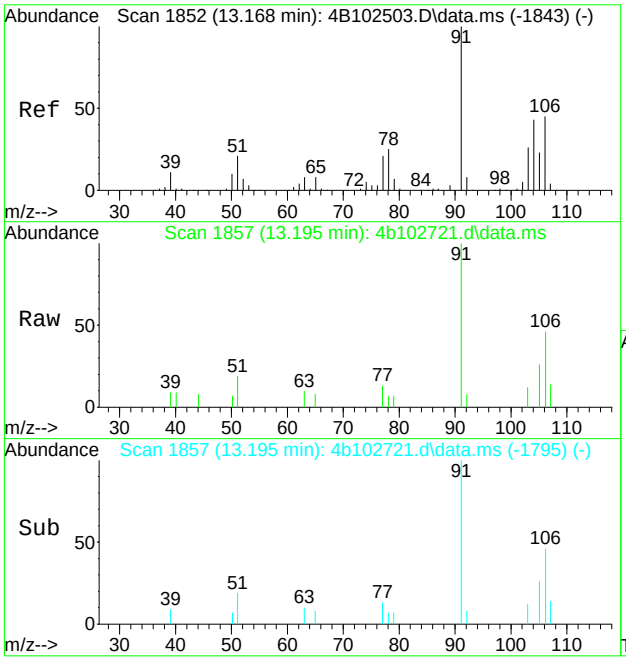


#76
toluene
Concen: 17.17 ug/L
RT: 10.987 min Scan# 1435
Delta R.T. -0.000 min
Lab File: 4b102721.d
Acq: 3 Mar 2021 6:22 pm

Tgt Ion: 92 Resp: 85616

Ion	Ratio	Lower	Upper
92	100		
91	175.7	154.4	194.4
51	13.2	0.0	40.9
65	18.5	0.0	49.0

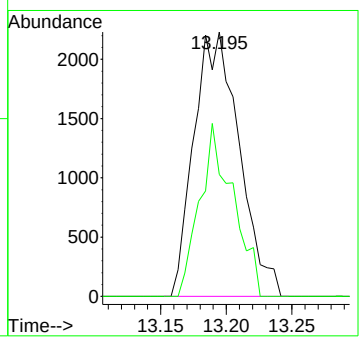




#91
o-xylene
Concen: 0.58 ug/L
RT: 13.195 min Scan# 1857
Delta R.T. 0.026 min
Lab File: 4b102721.d
Acq: 3 Mar 2021 6:22 pm

Tgt Ion: 91 Resp: 5358

Ion	Ratio	Lower	Upper
91	100		
106	46.1	15.4	75.4



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165068.D
Acq On : 4 Mar 2021 4:40 pm
Operator : ROBERTS
Sample : JD20920-1 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 04 17:41:42 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9874	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5721	11.31 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 113.10%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.13	88	184	0.37 ug/L	91

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

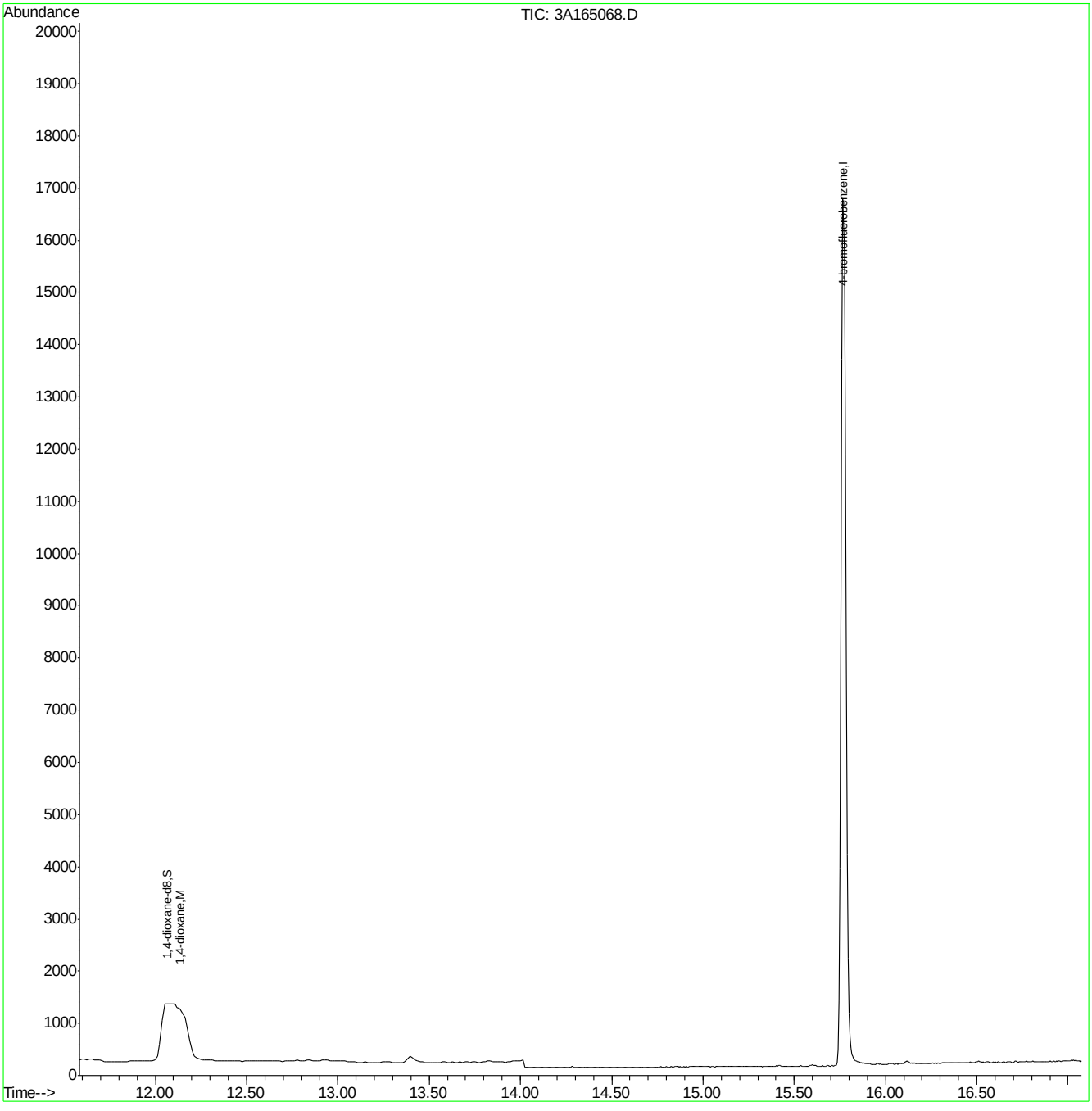
7.1.13

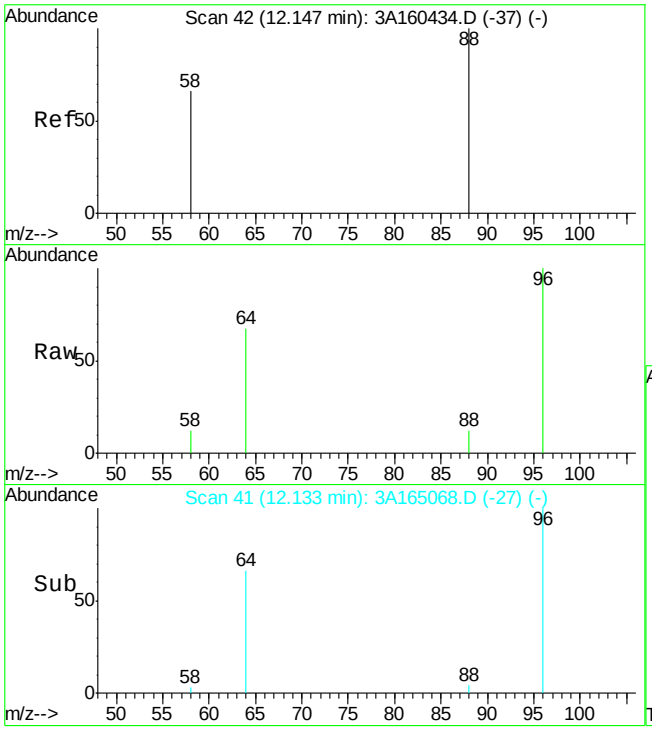
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165068.D
Acq On : 4 Mar 2021 4:40 pm
Operator : ROBERTS
Sample : JD20920-1 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 04 17:41:42 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

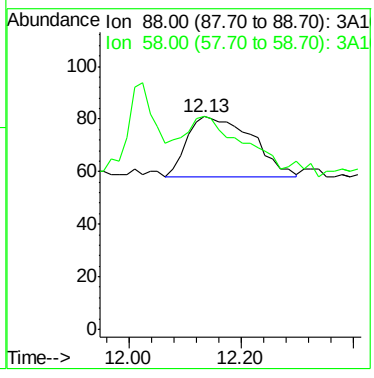




#3
1,4-dioxane
Concen: 0.37 ug/L
RT: 12.13 min Scan# 41
Delta R.T. -0.01 min
Lab File: 3A165068.D
Acq: 4 Mar 2021 4:40 pm

Tgt Ion: 88 Resp: 184

Ion	Ratio	Lower	Upper
88	100		
58	73.9	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165069.D
Acq On : 4 Mar 2021 5:09 pm
Operator : ROBERTS
Sample : JD20920-2 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 17:41:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	8849	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	5739	12.66	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 126.60%

Target Compounds Qvalue

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

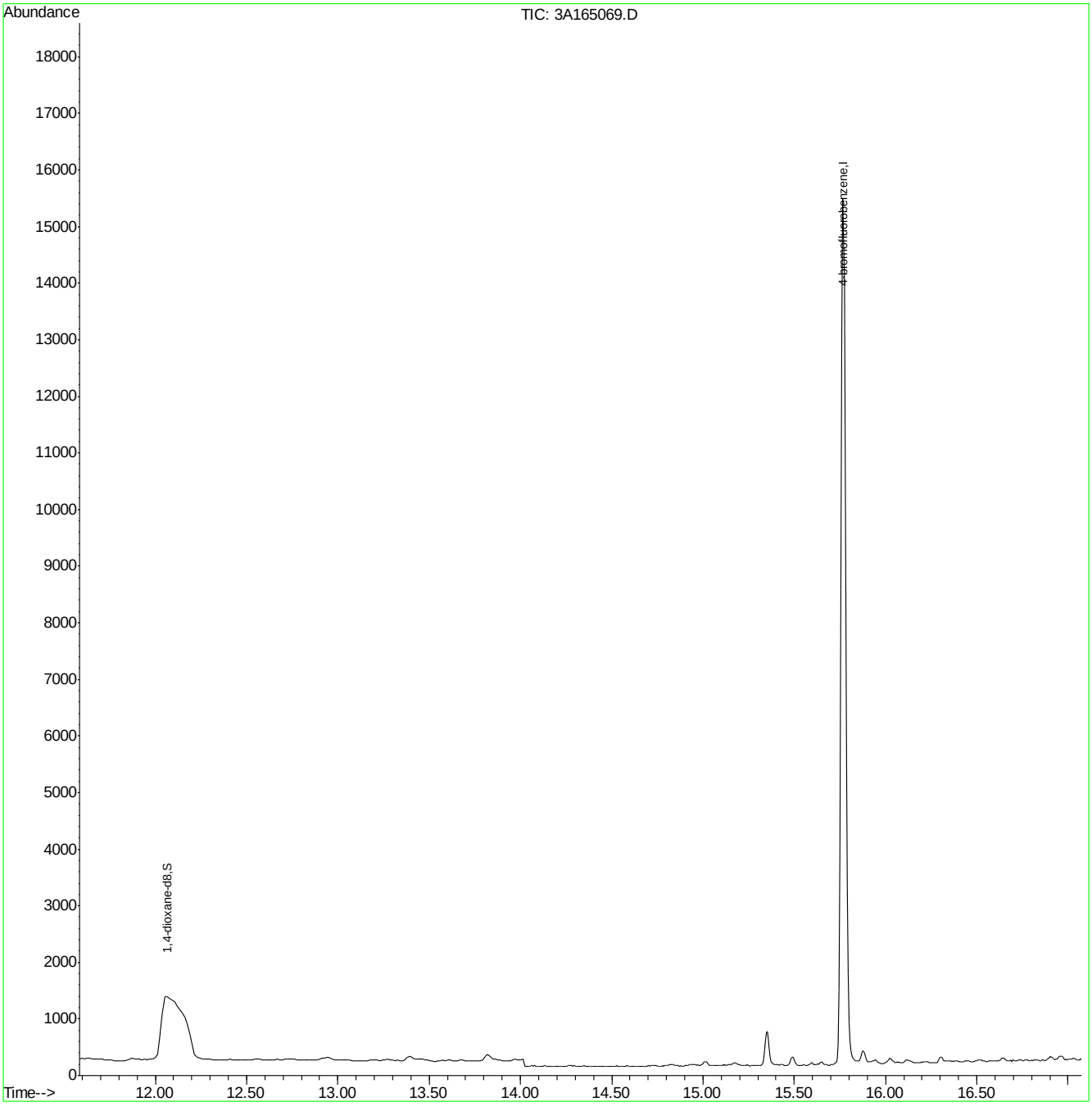
7.1.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165069.D
Acq On : 4 Mar 2021 5:09 pm
Operator : ROBERTS
Sample : JD20920-2 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 04 17:41:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Fri Mar 05 17:39:24 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165070.D
Acq On : 4 Mar 2021 5:37 pm
Operator : ROBERTS
Sample : JD20920-3 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 05 08:37:04 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9696	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	6011	12.11 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 121.10%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	166	0.34 ug/L	73

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

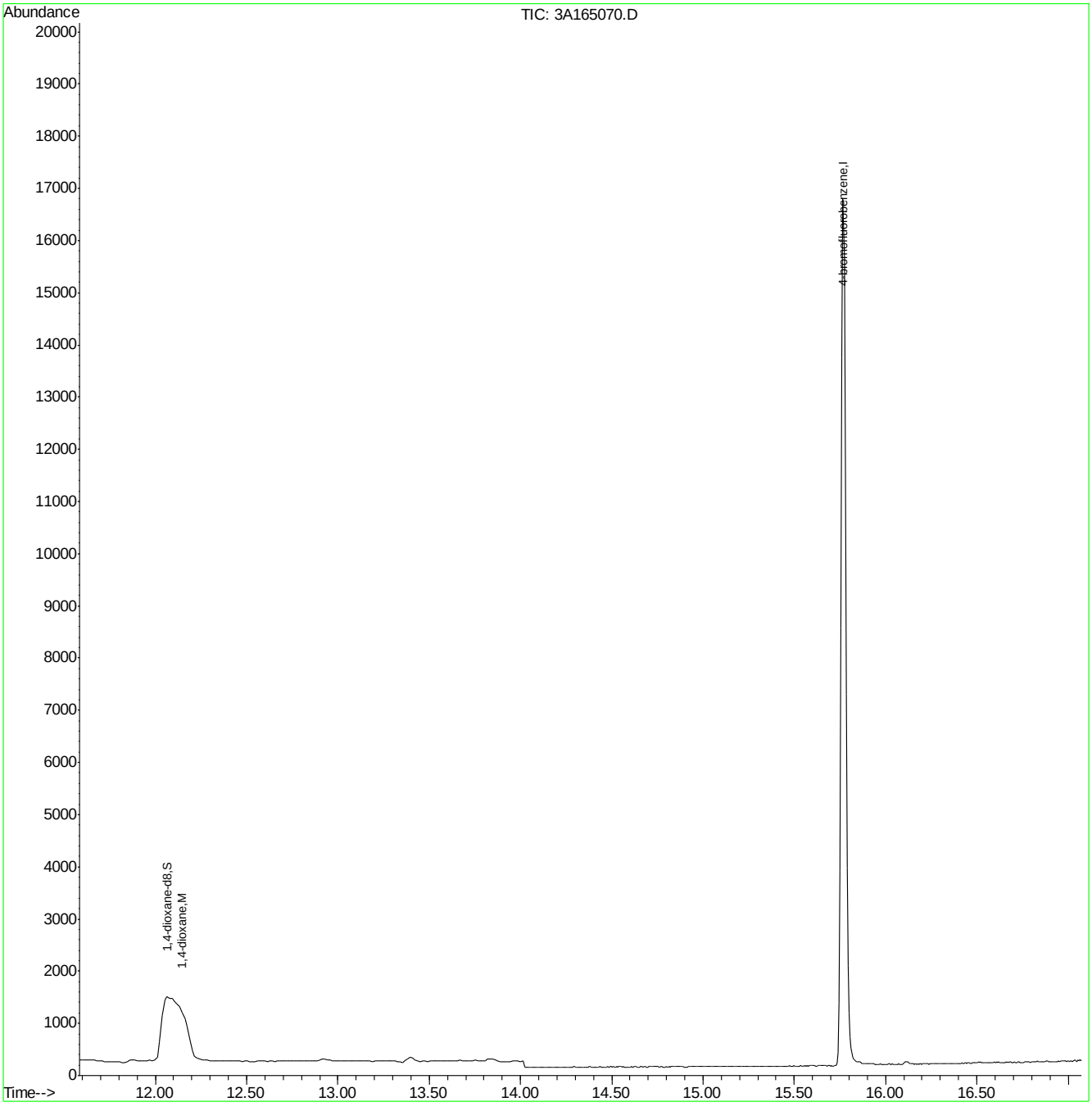
7.1.15

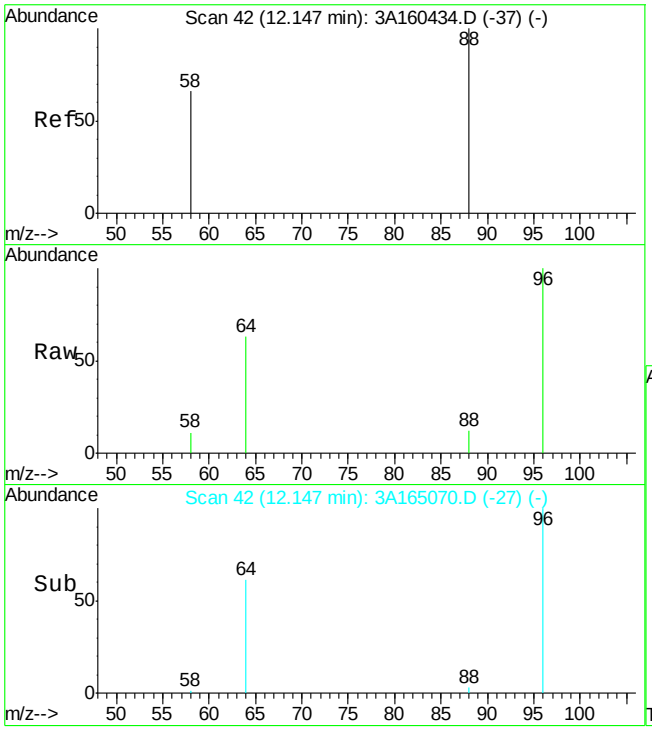
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165070.D
Acq On : 4 Mar 2021 5:37 pm
Operator : ROBERTS
Sample : JD20920-3 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 05 08:37:04 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

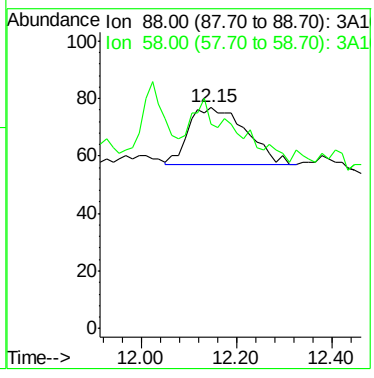




#3
1,4-dioxane
Concen: 0.34 ug/L
RT: 12.15 min Scan# 42
Delta R.T. -0.00 min
Lab File: 3A165070.D
Acq: 4 Mar 2021 5:37 pm

Tgt Ion: 88 Resp: 166

Ion	Ratio	Lower	Upper
88	100		
58	45.0	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165071.D
Acq On : 4 Mar 2021 6:06 pm
Operator : ROBERTS
Sample : JD20920-4 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 05 08:37:08 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10135	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	6430	12.39	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 123.90%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	217	0.42	ug/L	95

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

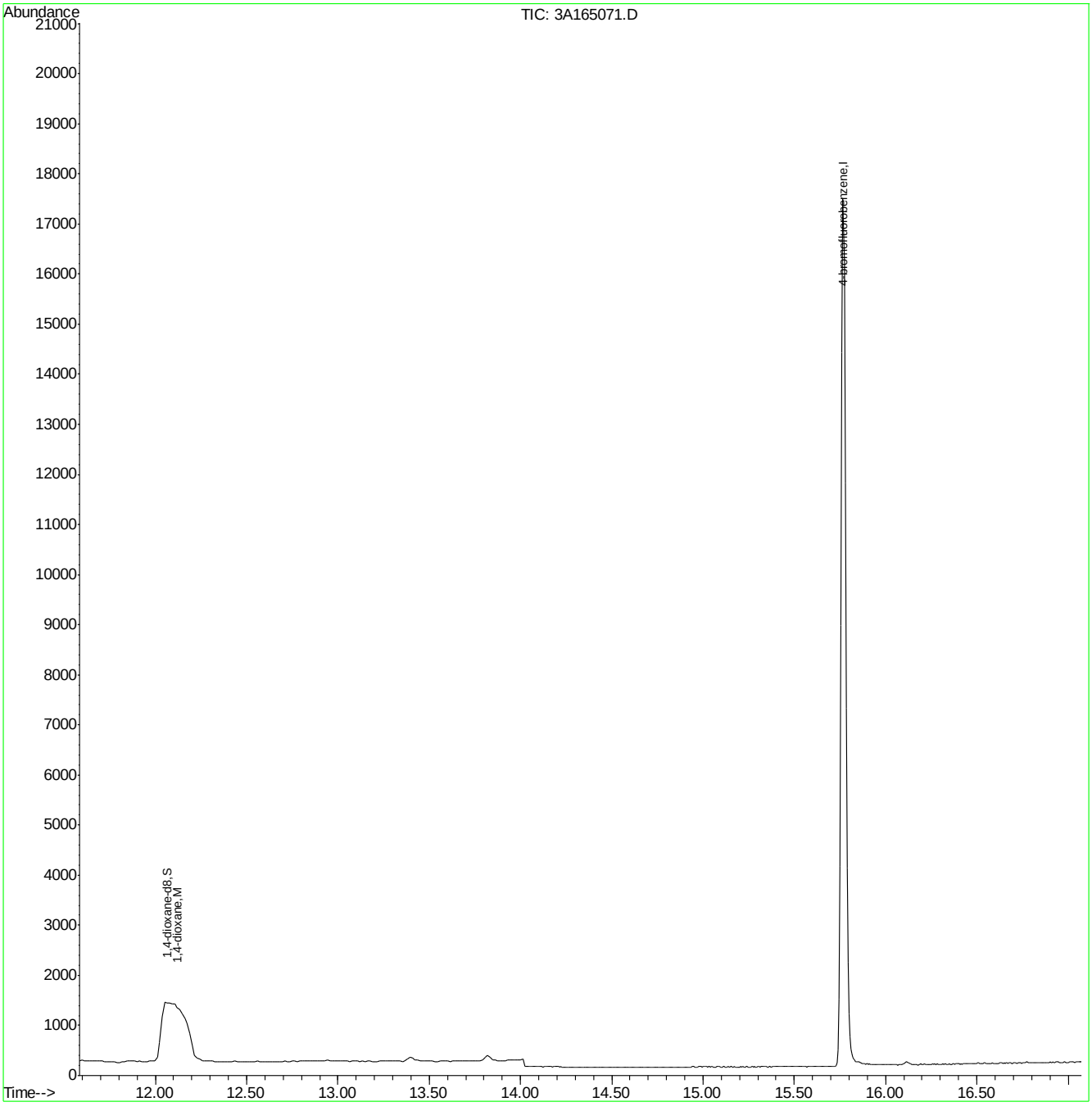
7.1.16

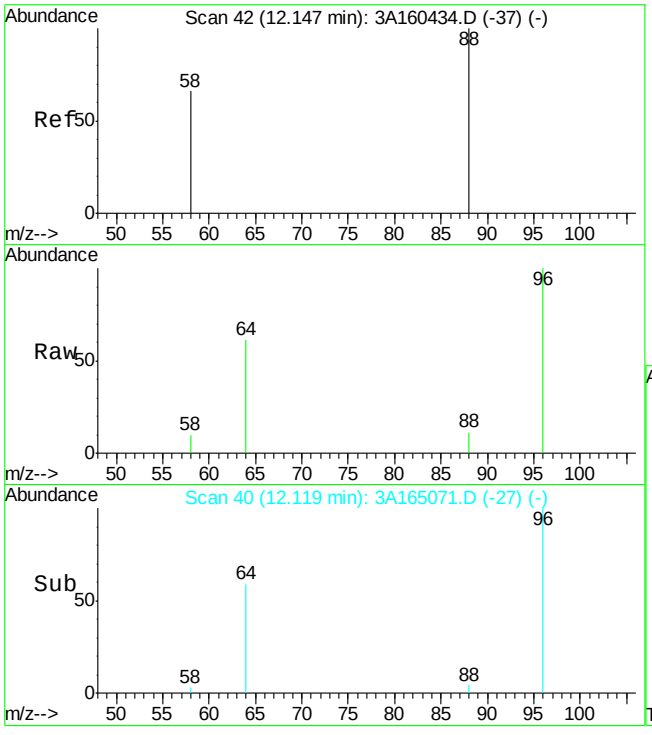
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165071.D
Acq On : 4 Mar 2021 6:06 pm
Operator : ROBERTS
Sample : JD20920-4 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 05 08:37:08 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

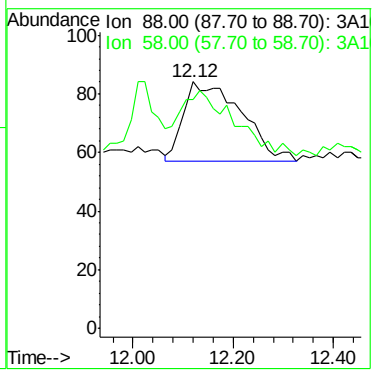




#3
1,4-dioxane
Concen: 0.42 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165071.D
Acq: 4 Mar 2021 6:06 pm

Tgt Ion: 88 Resp: 217

Ion	Ratio	Lower	Upper
88	100		
58	70.4	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165072.D
Acq On : 4 Mar 2021 6:34 pm
Operator : ROBERTS
Sample : JD20920-5 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 05 08:37:11 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

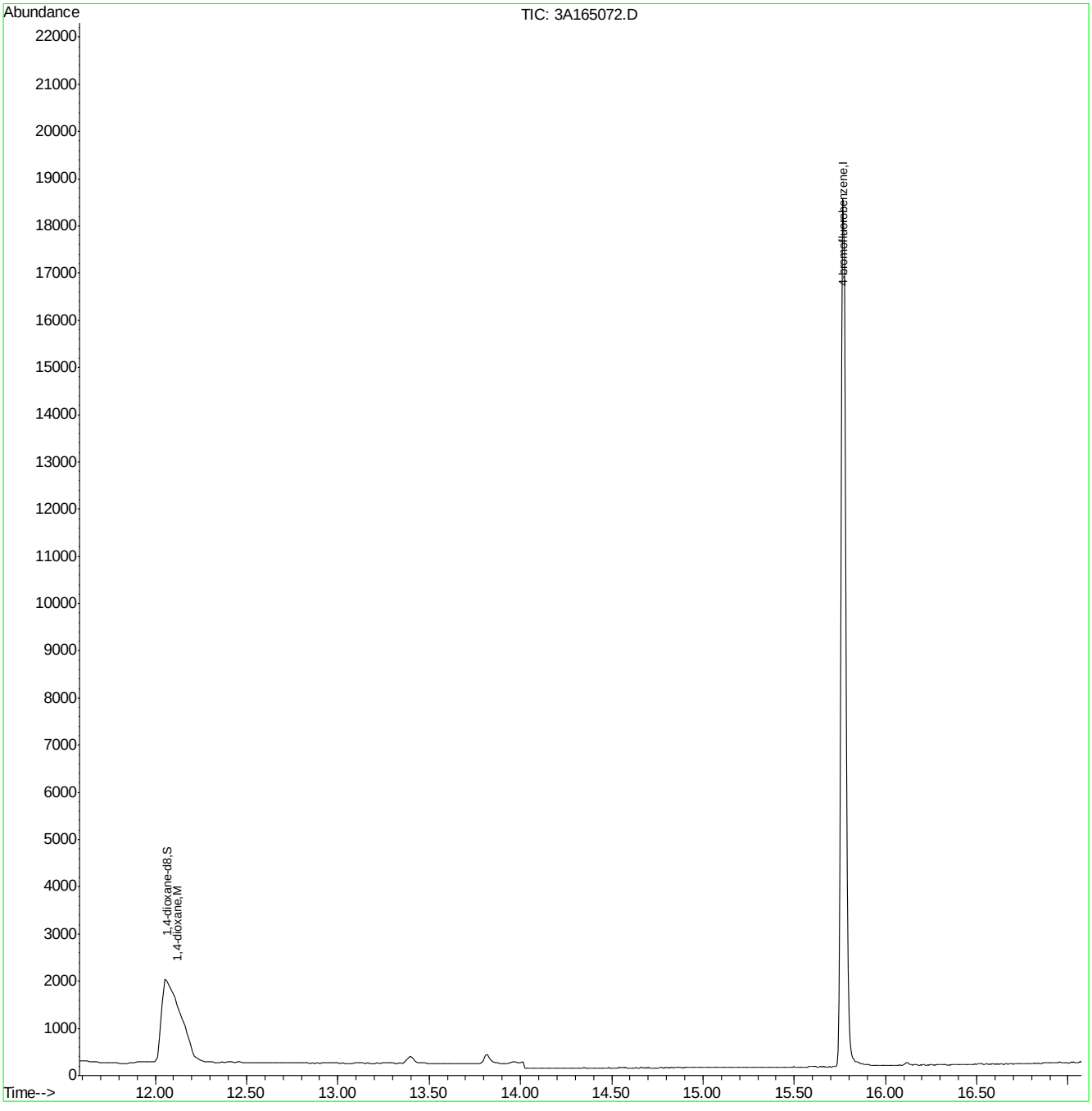
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10728	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	6936	12.62	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 126.20%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	738	1.36	ug/L	98

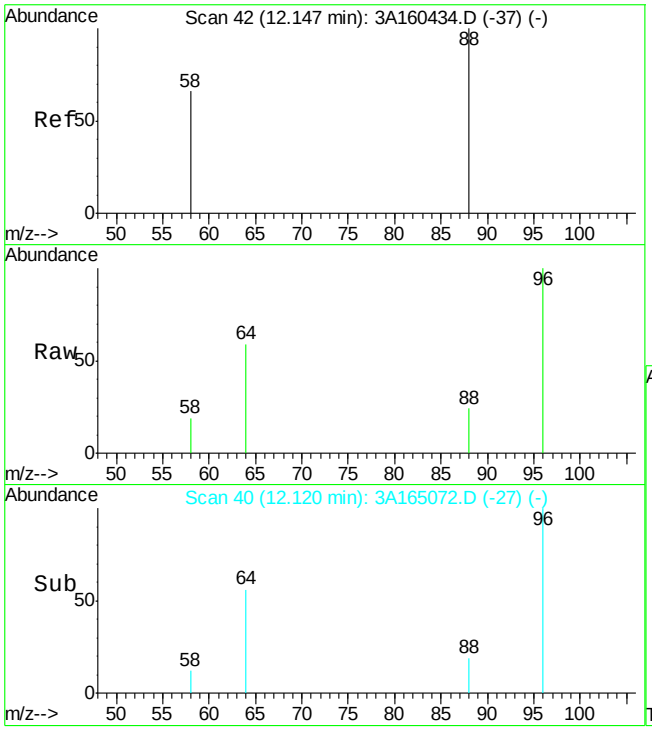
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165072.D
Acq On : 4 Mar 2021 6:34 pm
Operator : ROBERTS
Sample : JD20920-5 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 05 08:37:11 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

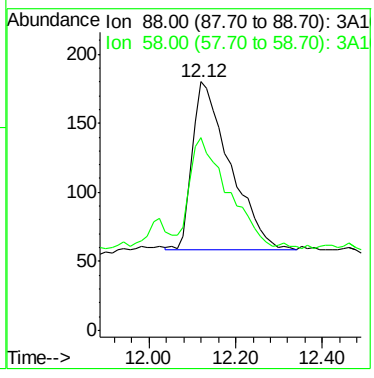




#3
1,4-dioxane
Concen: 1.36 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165072.D
Acq: 4 Mar 2021 6:34 pm

Tgt Ion: 88 Resp: 738

Ion	Ratio	Lower	Upper
88	100		
58	64.8	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165066.D
Acq On : 4 Mar 2021 3:43 pm
Operator : ROBERTS
Sample : JD20920-6 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 04 16:43:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10380	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	7384	13.89	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 138.90%

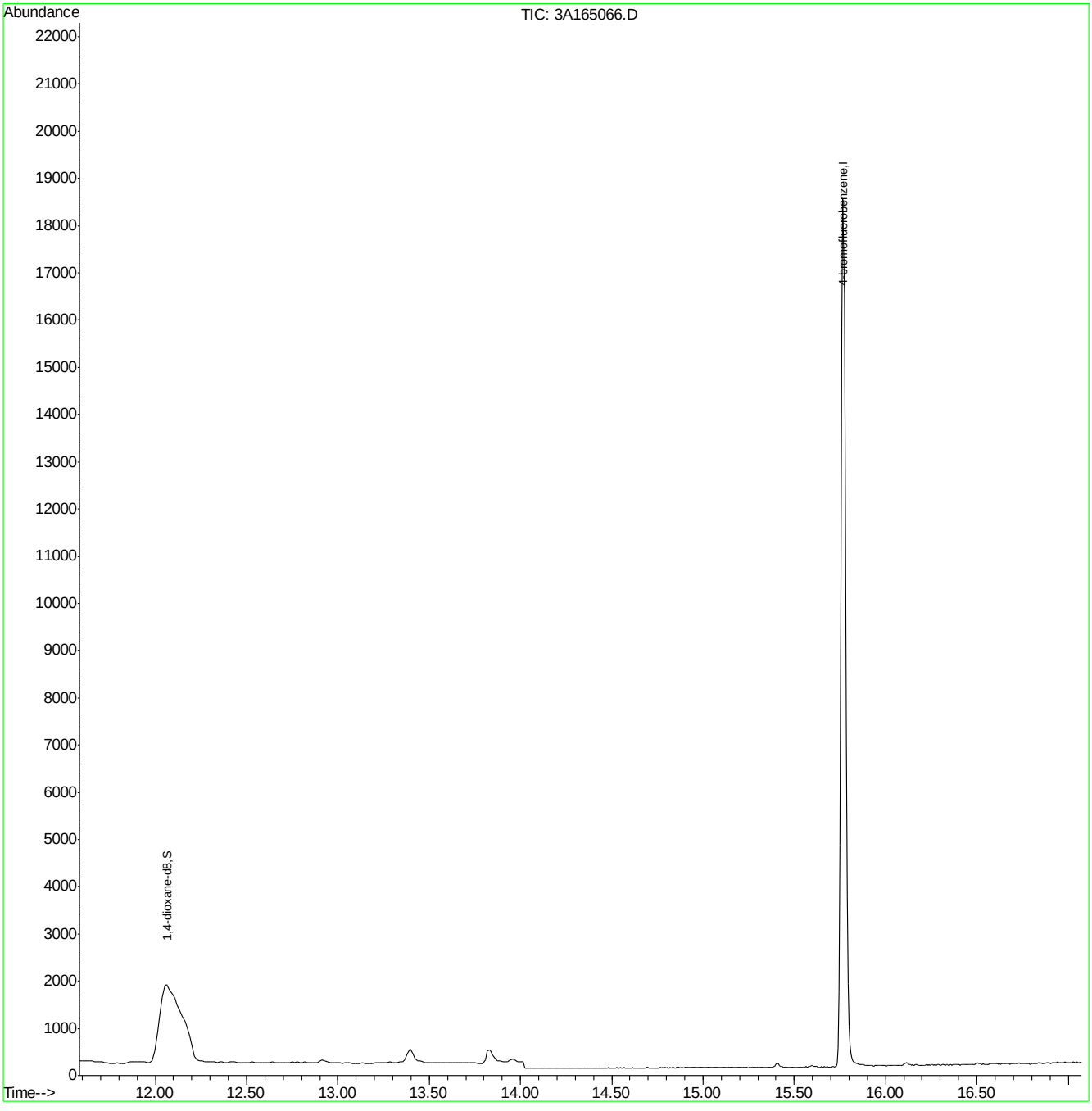
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165066.D
Acq On : 4 Mar 2021 3:43 pm
Operator : ROBERTS
Sample : JD20920-6 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 04 16:43:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165073.D
Acq On : 4 Mar 2021 7:03 pm
Operator : ROBERTS
Sample : JD20920-7 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 05 08:37:15 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

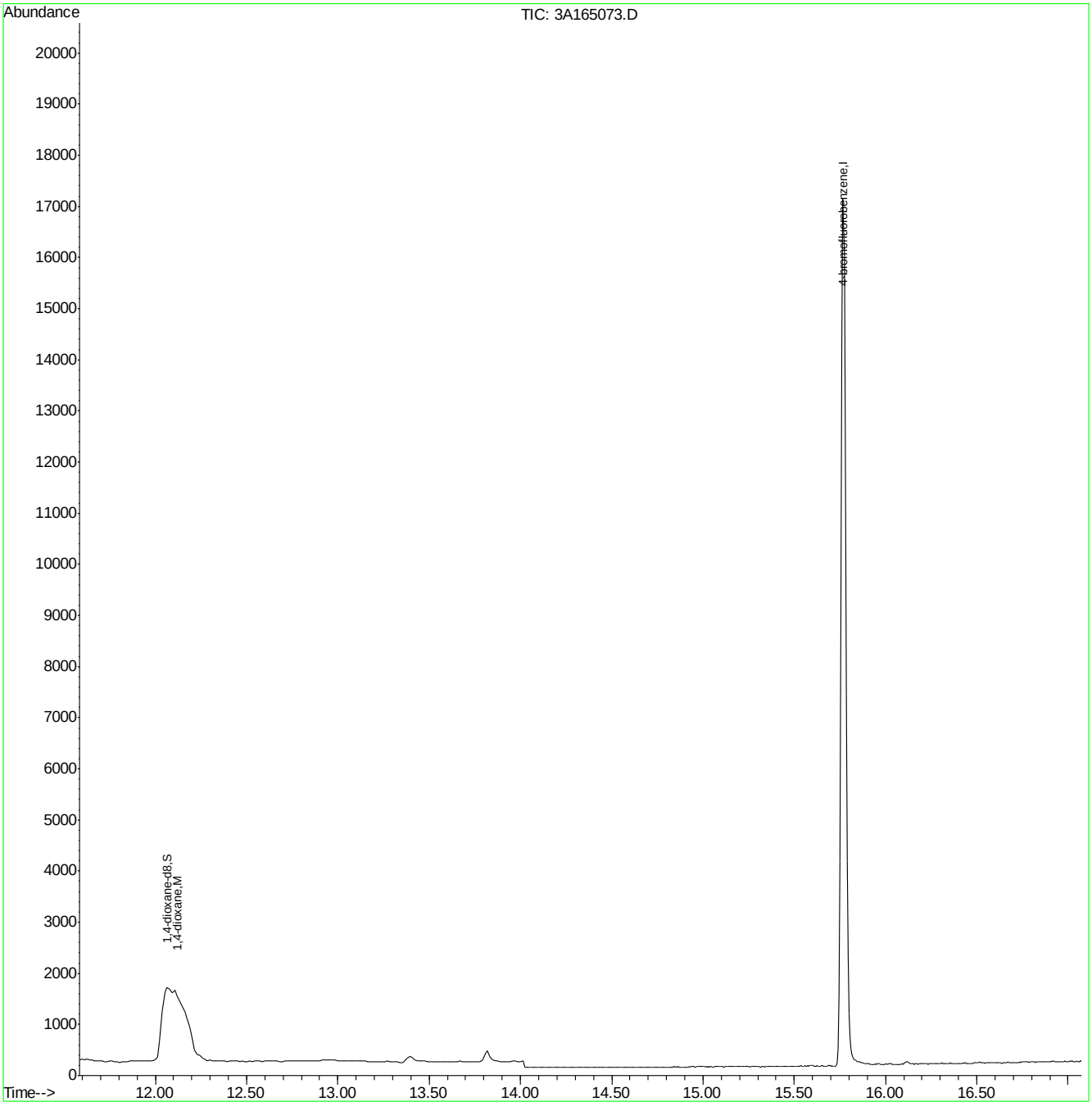
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10057	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	6790	13.18	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 131.80%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	885	1.74	ug/L	98

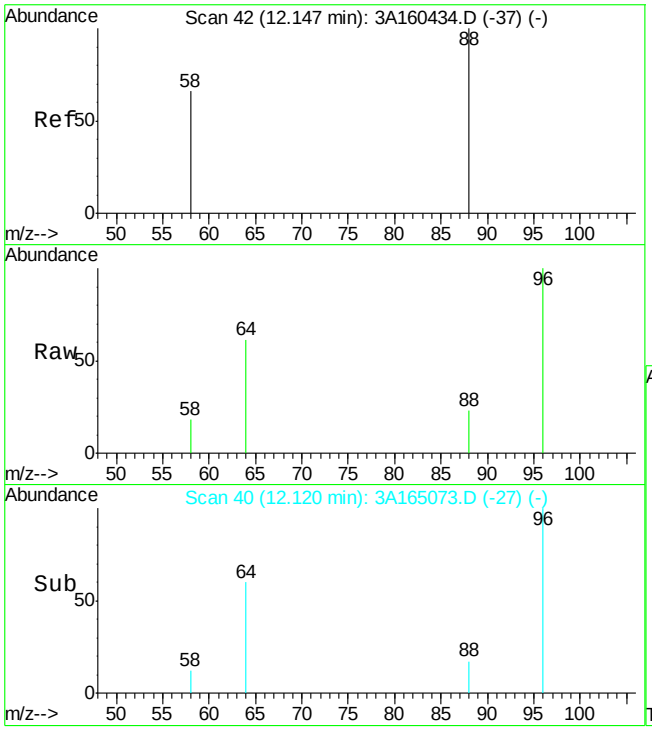
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165073.D
Acq On : 4 Mar 2021 7:03 pm
Operator : ROBERTS
Sample : JD20920-7 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Mar 05 08:37:15 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

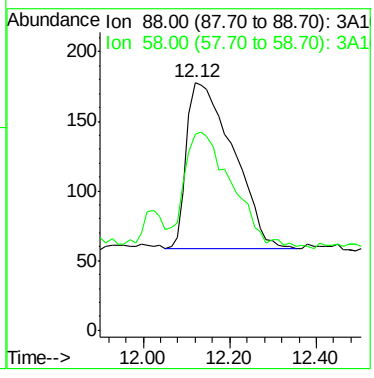




#3
1,4-dioxane
Concen: 1.74 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165073.D
Acq: 4 Mar 2021 7:03 pm

Tgt Ion: 88 Resp: 885

Ion	Ratio	Lower	Upper
88	100		
58	68.1	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165074.D
Acq On : 4 Mar 2021 7:32 pm
Operator : ROBERTS
Sample : JD20920-8 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Mar 05 08:37:54 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9238	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	8101	17.12	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 171.20%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	519	1.11	ug/L	92

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

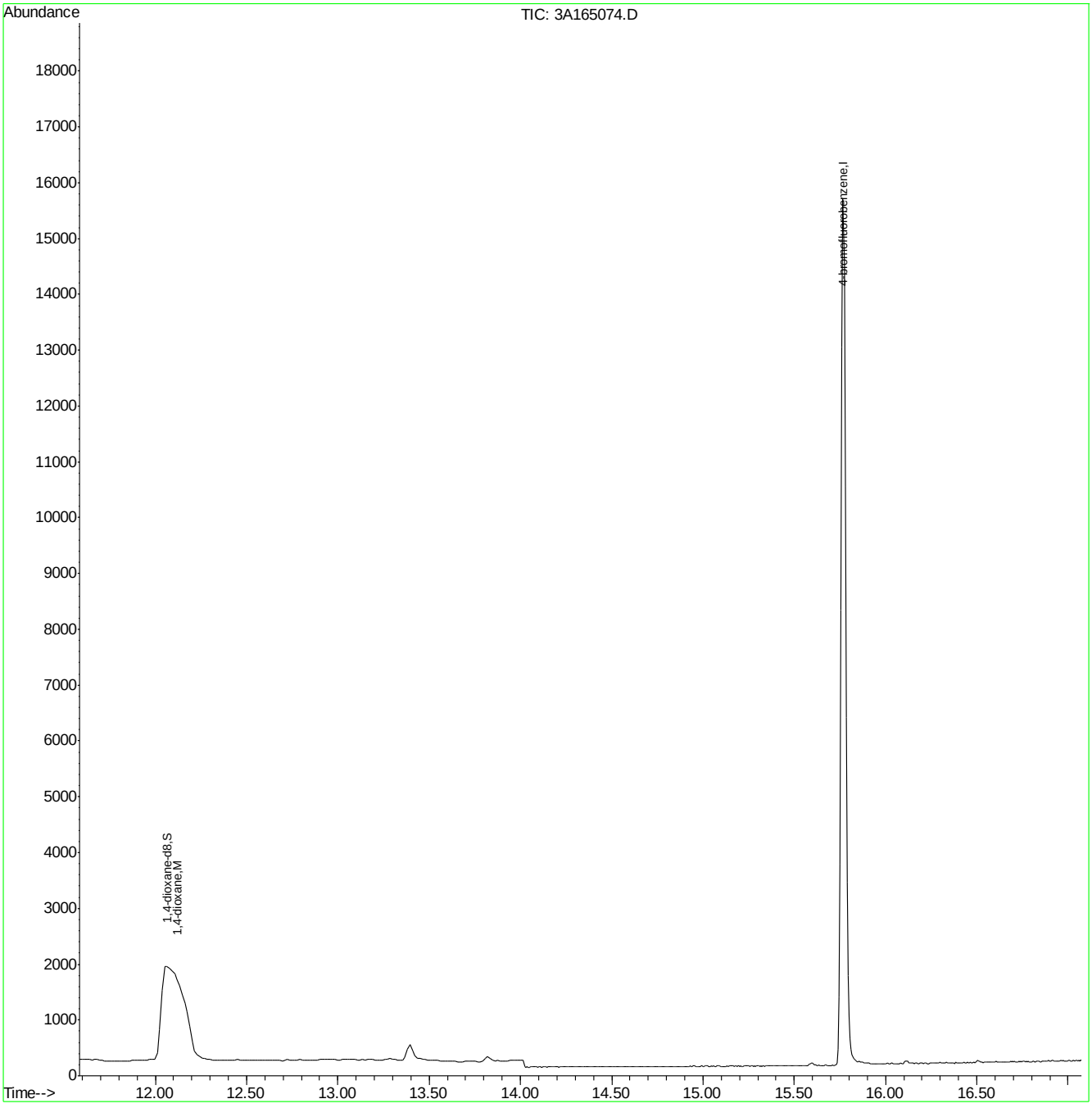
7.1.20

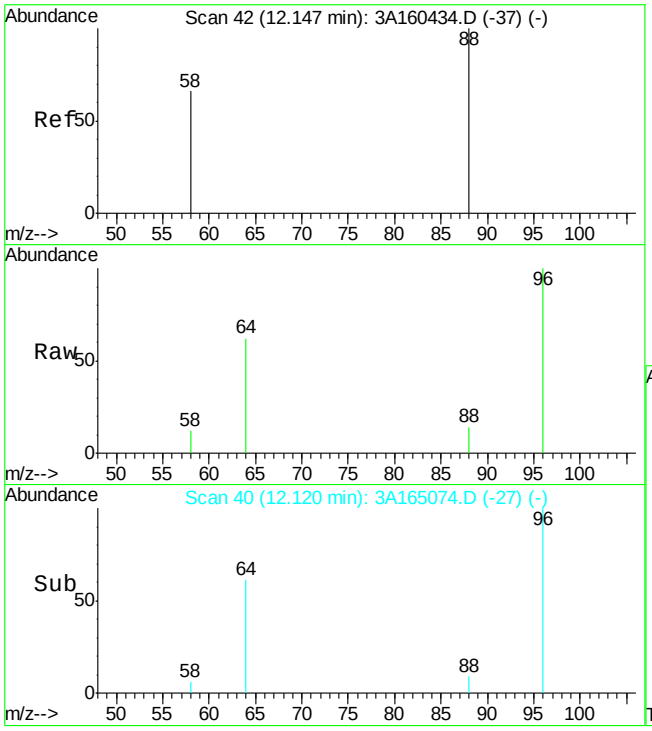
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165074.D
Acq On : 4 Mar 2021 7:32 pm
Operator : ROBERTS
Sample : JD20920-8 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Mar 05 08:37:54 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

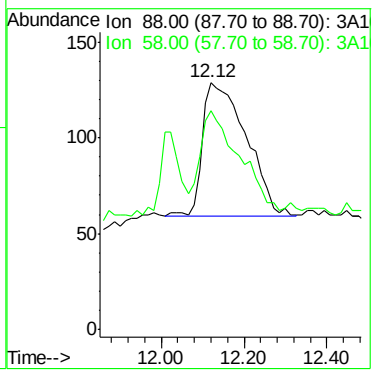




#3
1,4-dioxane
Concen: 1.11 ug/L
RT: 12.12 min Scan# 40
Delta R.T. -0.03 min
Lab File: 3A165074.D
Acq: 4 Mar 2021 7:32 pm

Tgt Ion: 88 Resp: 519

Ion	Ratio	Lower	Upper
88	100		
58	72.9	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165075.D
Acq On : 4 Mar 2021 8:01 pm
Operator : ROBERTS
Sample : JD20920-9 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Mar 05 08:37:41 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

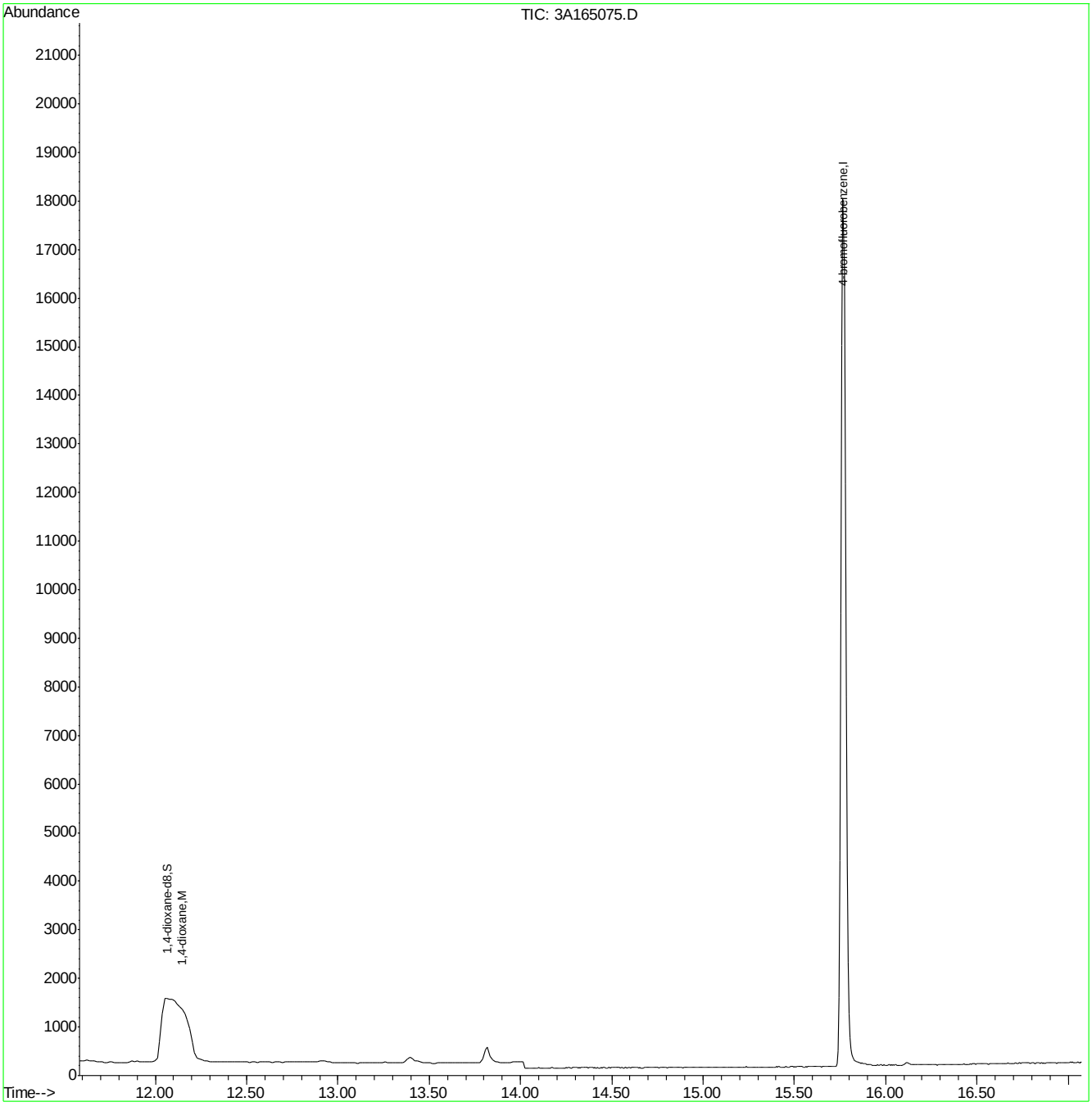
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10500	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	6996	13.01	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 130.10%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.15	88	262	0.49	ug/L	98

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

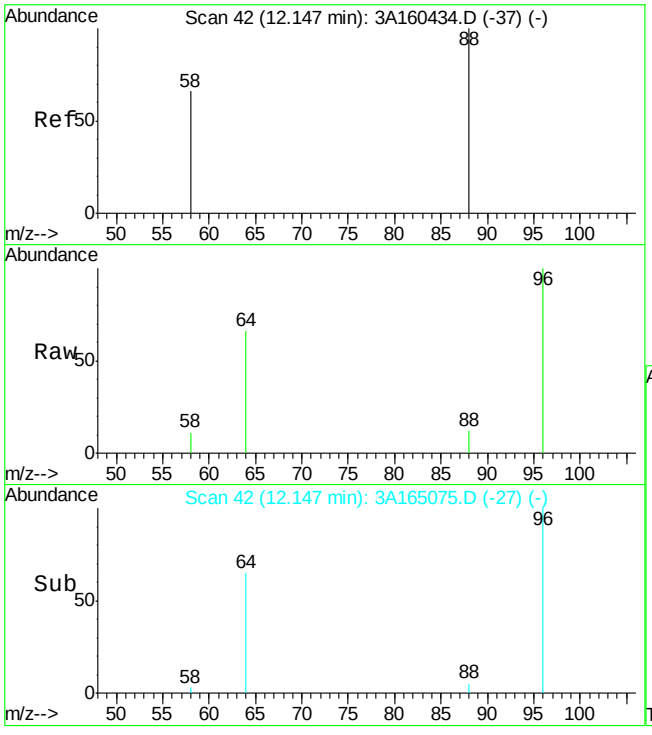
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165075.D
Acq On : 4 Mar 2021 8:01 pm
Operator : ROBERTS
Sample : JD20920-9 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Mar 05 08:37:41 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



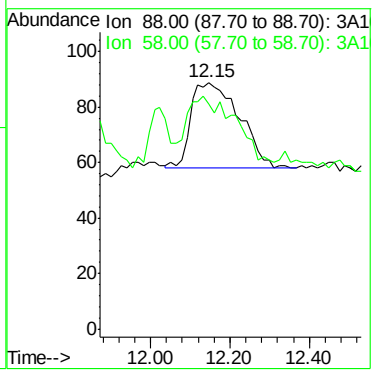
M3A6923.M Fri Mar 05 17:39:26 2021 ACCUNJ Page: 2



#3
1,4-dioxane
Concen: 0.49 ug/L
RT: 12.15 min Scan# 42
Delta R.T. -0.00 min
Lab File: 3A165075.D
Acq: 4 Mar 2021 8:01 pm

Tgt Ion: 88 Resp: 262

Ion	Ratio	Lower	Upper
88	100		
58	64.5	36.5	96.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165067.D
Acq On : 4 Mar 2021 4:11 pm
Operator : ROBERTS
Sample : JD20920-10 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 04 16:43:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10217	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	5365	10.25	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 102.50%

Target Compounds	Qvalue

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

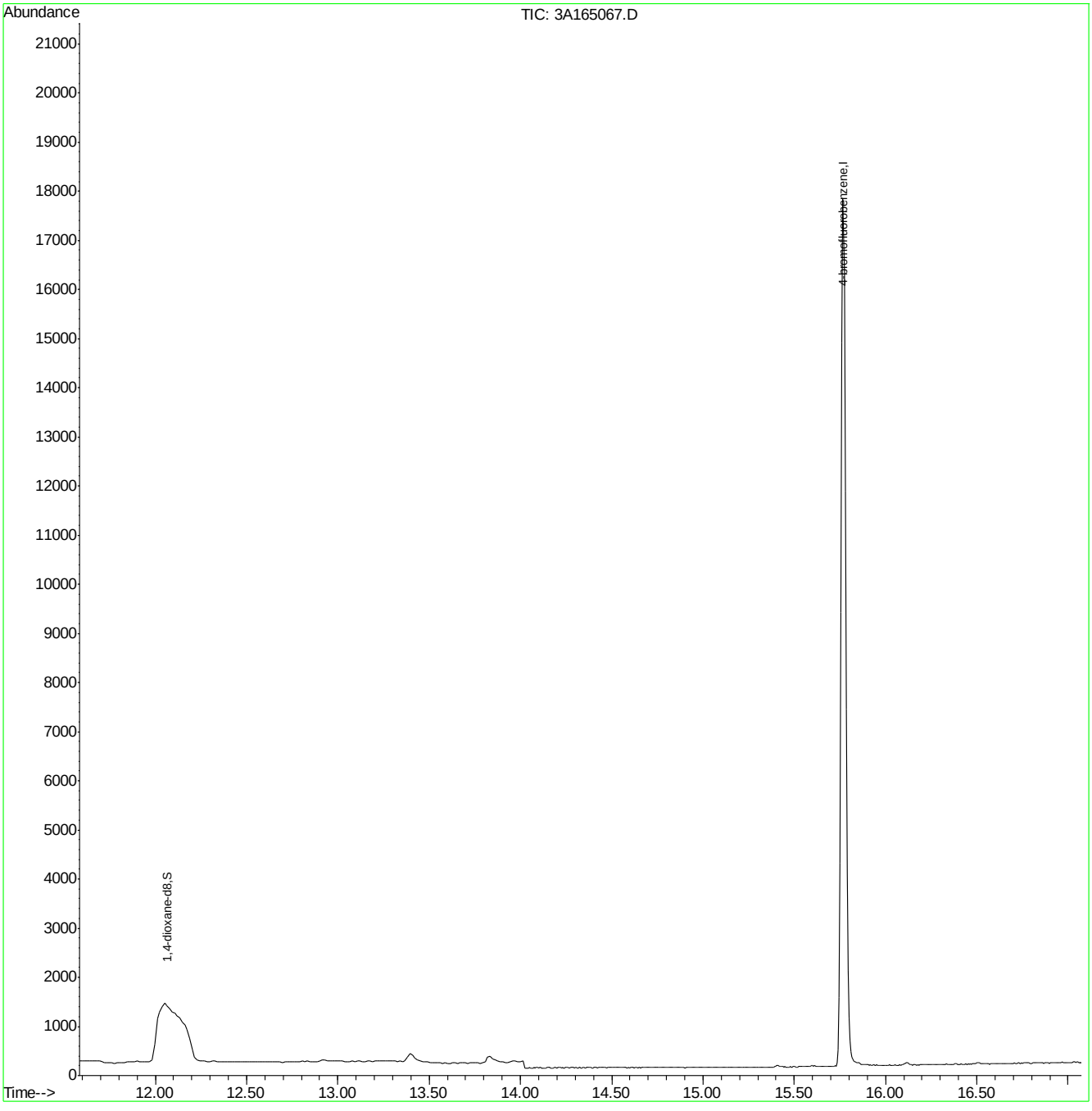
7.1.22

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165067.D
Acq On : 4 Mar 2021 4:11 pm
Operator : ROBERTS
Sample : JD20920-10 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 04 16:43:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165062.D
Acq On : 4 Mar 2021 1:47 pm
Operator : ROBERTS
Sample : JD20920-11 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 04 14:30:49 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	8804	1.00	ug/L	-0.03

System Monitoring Compounds

2) 1,4-dioxane-d8	12.06	96	5451	12.09	ug/L	-0.03

Spiked Amount 10.000 Range 39 - 174 Recovery = 120.90%

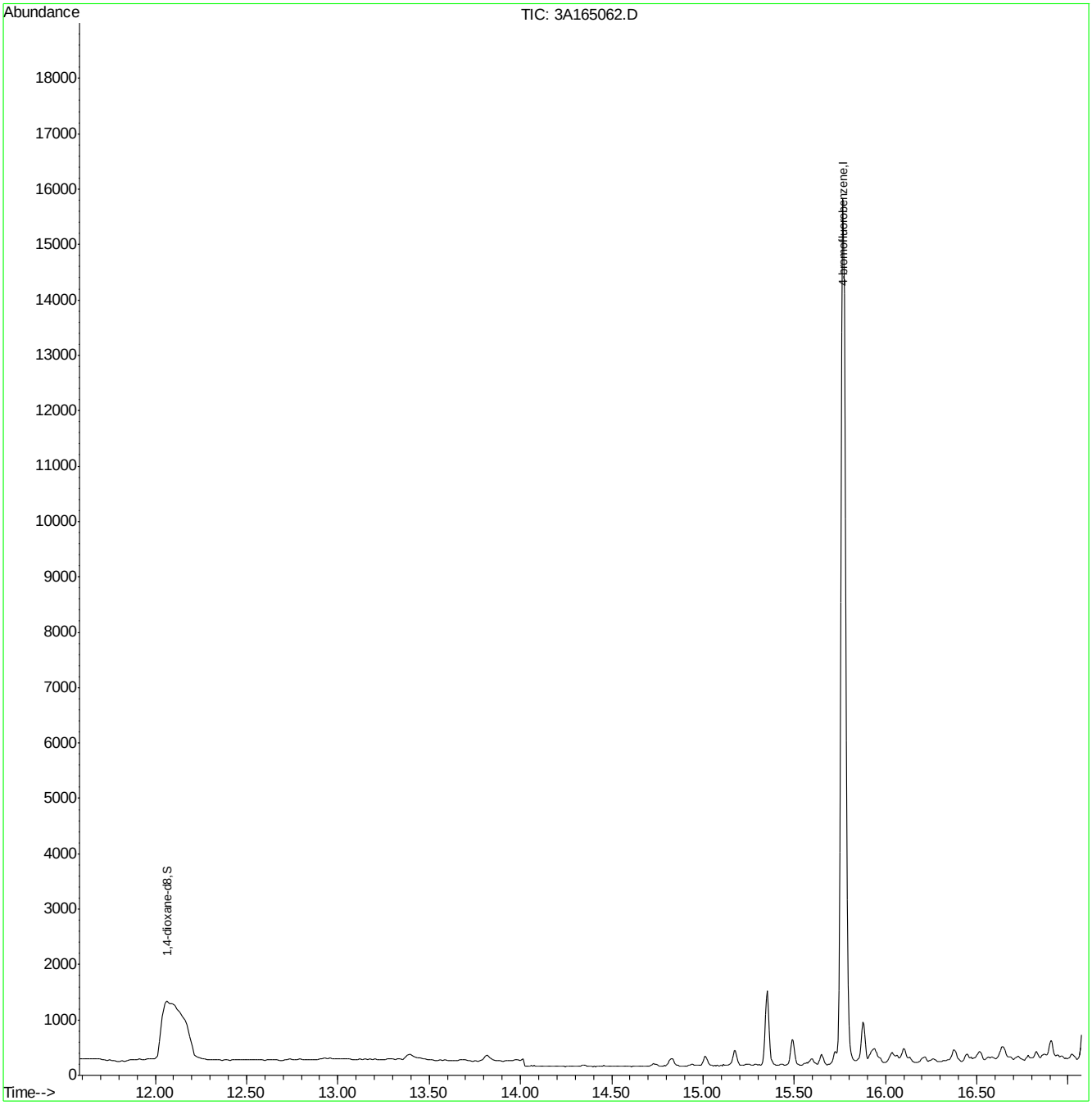
Target Compounds	Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165062.D
Acq On : 4 Mar 2021 1:47 pm
Operator : ROBERTS
Sample : JD20920-11 C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 04 14:30:49 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102709.d
Acq On : 3 Mar 2021 12:20 pm
Operator : brittank
Sample : mb c Inst : MS4B
Misc : MS46075,V4B4443,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:28:43 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	128250	500.00	ug/L	-0.02
5) pentafluorobenzene	8.445	168	235067	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	306303	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	375928	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	251481	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.482	113	118988	50.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.96%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	126434	53.82	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.64%			
75) toluene-d8 (s)	10.909	98	406655	47.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.70%			
98) 4-bromofluorobenzene (s)	13.775	95	201085	53.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.90%			

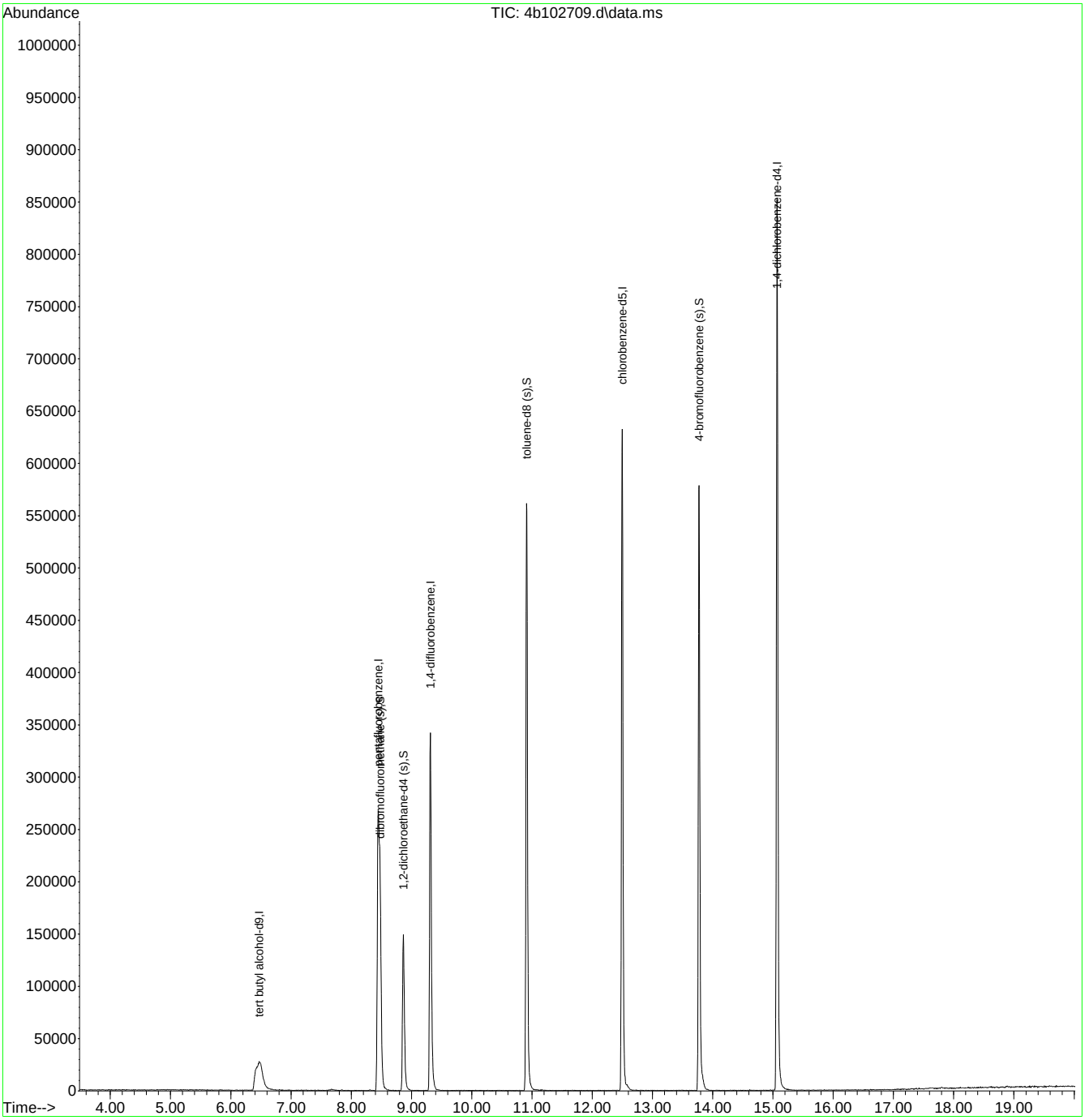
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102709.d
Acq On : 3 Mar 2021 12:20 pm
Operator : brittank
Sample : mb c Inst : MS4B
Misc : MS46075,V4B4443,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:28:43 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



M4B4435.M Wed Mar 03 22:23:18 2021 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165059.D
Acq On : 4 Mar 2021 11:48 am
Operator : ROBERTS
Sample : MB C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 04 12:08:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	10902	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5183	9.28 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 92.80%		

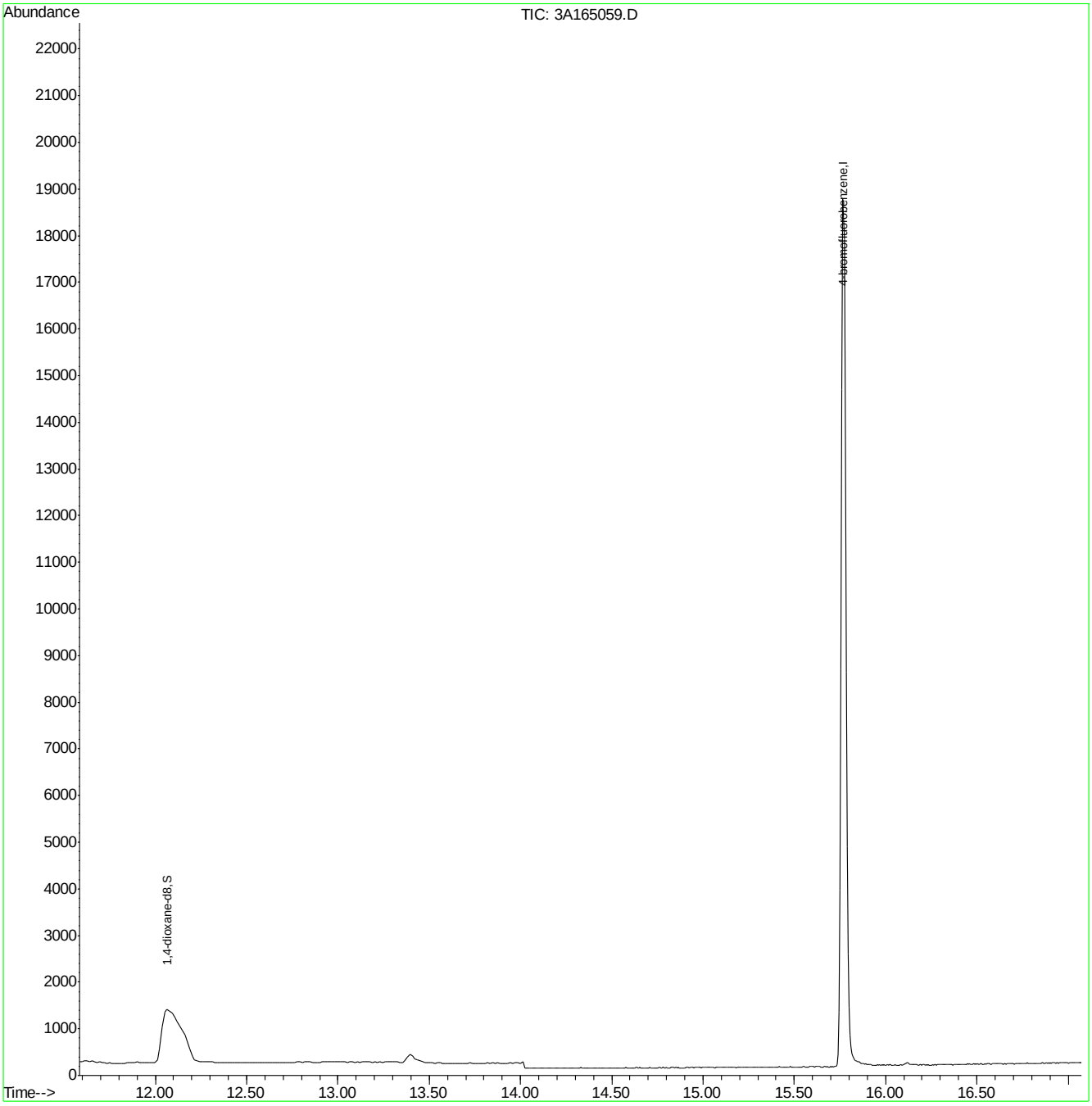
Target Compounds	Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165059.D
Acq On : 4 Mar 2021 11:48 am
Operator : ROBERTS
Sample : MB C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 04 12:08:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102707.d
Acq On : 3 Mar 2021 11:24 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4443,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	120156	500.00	ug/L	-0.01
5) pentafluorobenzene	8.446	168	226836	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	304435	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	368437	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	233412	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	113364	50.34	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.68%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	118581	50.79	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.58%			
75) toluene-d8 (s)	10.909	98	407822	48.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.92%			
98) 4-bromofluorobenzene (s)	13.770	95	189555	54.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.58%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.584	59	69205	261.13	ug/L	93
4) 1,4-dioxane	9.941	88	28299	1377.81	ug/L #	74
6) chlorodifluoromethane	3.702	51	172714	44.82	ug/L	99
7) dichlorodifluoromethane	3.696	85	304991	55.99	ug/L	97
8) chloromethane	3.995	50	224460	49.39	ug/L	97
9) vinyl chloride	4.193	62	211528	52.49	ug/L	99
10) 1,3-butadiene	4.220	54	114359	43.93	ug/L	99
11) bromomethane	4.711	94	152406	49.73	ug/L	96
12) chloroethane	4.842	64	91617	53.24	ug/L	97
13) trichlorofluoromethane	5.239	101	261439	53.19	ug/L	97
14) vinyl bromide	5.135	106	111350	88.17	ug/L	97
15) ethyl ether	5.522	74	36597	48.18	ug/L	97
16) acrolein	5.710	56	14312	52.93	ug/L	90
17) freon 113	5.930	151	119243	45.56	ug/L	97
18) 1,1-dichloroethene	5.904	61	168672	46.12	ug/L	98
19) acetone	5.878	58	28800	191.69	ug/L	99
20) acetonitrile	6.238	41	141802	554.28	ug/L	95
21) iodomethane	6.123	142	242099	41.46	ug/L	99
22) carbon disulfide	6.265	76	394479	45.08	ug/L	99
23) methylene chloride	6.489	84	115557	44.99	ug/L	99
24) methyl acetate	6.259	43	62037	54.44	ug/L	97
25) methyl tert butyl ether	6.819	73	311193	47.54	ug/L	98
26) trans-1,2-dichloroethene	6.840	61	146505	48.53	ug/L	99
27) hexane	7.159	56	72145	51.08	ug/L	88
28) di-isopropyl ether	7.332	45	404327	49.77	ug/L	96
29) 2-butanone	7.881	72	29813	214.35	ug/L	99
30) 1,1-dichloroethane	7.332	63	180964	48.53	ug/L	99
31) chloroprene	7.426	53	147427	49.73	ug/L	98
32) acrylonitrile	6.709	53	30989	52.49	ug/L	95
33) vinyl acetate	7.258	86	12319	52.52	ug/L #	94
34) ethyl tert-butyl ether	7.745	59	363770	49.07	ug/L	97
35) ethyl acetate	7.907	45	12387	57.82	ug/L #	94
36) 2,2-dichloropropane	8.011	77	212515	51.50	ug/L	96
37) cis-1,2-dichloroethene	7.964	96	104839	48.29	ug/L	97
38) propionitrile	7.938	54	116094	532.46	ug/L	96
39) methyl acrylate	7.991	85	11292	54.99	ug/L #	73
40) methacrylonitrile	8.127	67	29057	53.96	ug/L	96
41) bromochloromethane	8.231	128	56066	48.18	ug/L	95
42) tetrahydrofuran	8.252	72	9954	51.68	ug/L #	67

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102707.d
Acq On : 3 Mar 2021 11:24 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4443,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	8.304	83	185953	45.78	ug/L		98
44)	tert-butyl formate	8.346	59	90747	54.70	ug/L		95
46)	1,1,1-trichloroethane	8.566	97	231205	51.13	ug/L		96
47)	cyclohexane	8.691	84	191591	50.78	ug/L		98
49)	1,1-dichloropropene	8.712	75	120283	45.66	ug/L		98
50)	carbon tetrachloride	8.759	117	204269	49.97	ug/L		95
51)	tert-amyl alcohol	8.822	73	25816	261.28	ug/L	#	74
52)	isopropyl acetate	8.838	87	16529	53.28	ug/L	#	69
55)	n-butyl alcohol	9.335	41	112648	3095.72	ug/L		98
56)	2,2,4-trimethylpentane	9.047	57	427728	50.99	ug/L		98
57)	benzene	8.937	78	344690	45.38	ug/L		99
58)	tert-amyl methyl ether	9.021	73	337674	50.10	ug/L		98
59)	heptane	9.183	57	69101	49.58	ug/L		96
60)	1,2-dichloroethane	8.948	62	130358	47.72	ug/L		100
61)	ethyl acrylate	9.591	55	109806	61.18	ug/L		99
62)	trichloroethene	9.617	95	93046	47.02	ug/L		96
63)	2-chloroethyl vinyl ether	10.365	63	282599	306.74	ug/L		98
64)	methyl methacrylate	9.847	100	21592	59.95	ug/L		92
65)	methylcyclohexane	9.926	83	215037	51.56	ug/L		96
66)	1,2-dichloropropane	9.884	63	97366	49.03	ug/L		98
67)	dibromomethane	9.988	93	59268	48.18	ug/L		97
68)	bromodichloromethane	10.135	83	141505	49.70	ug/L		97
69)	2-nitropropane	10.302	41	23417	58.30	ug/L		98
70)	epichlorohydrin	10.444	57	46071	314.52	ug/L		94
71)	cis-1,3-dichloropropene	10.590	75	167522	53.73	ug/L		99
72)	4-methyl-2-pentanone	10.679	58	142306	223.52	ug/L		93
73)	isoamyl alcohol	10.679	70	58587	1220.44	ug/L	#	78
76)	toluene	10.987	92	238380	45.47	ug/L		99
77)	ethyl methacrylate	11.160	69	126252	52.55	ug/L		98
78)	trans-1,3-dichloropropene	11.160	75	161761	51.90	ug/L		94
79)	1,1,2-trichloroethane	11.390	83	76069	49.85	ug/L		97
80)	tetrachloroethene	11.573	164	97486	44.39	ug/L		97
81)	2-hexanone	11.558	58	137587	210.73	ug/L		99
82)	1,3-dichloropropane	11.578	76	145184	48.15	ug/L		97
83)	butyl acetate	11.657	56	62749	50.70	ug/L		94
84)	dibromochloromethane	11.845	129	130990	47.88	ug/L		99
85)	1,2-dibromoethane	12.007	107	122766	39.07	ug/L		99
86)	n-butyl ether	12.504	57	497012	44.98	ug/L		100
87)	chlorobenzene	12.530	112	308711	47.32	ug/L		98
88)	1,1,1,2-tetrachloroethane	12.598	131	136273	43.89	ug/L		98
89)	ethylbenzene	12.604	91	530523	46.49	ug/L		99
90)	m,p-xylene	12.734	106	394054	92.54	ug/L		92
91)	o-xylene	13.168	91	451017	46.22	ug/L		99
92)	styrene	13.179	104	344224	47.56	ug/L		95
93)	butyl acrylate	12.985	55	228112	49.25	ug/L		97
94)	isopropylbenzene	13.556	105	587919	44.18	ug/L		99
95)	bromoform	13.425	173	104888	47.02	ug/L		98
96)	cis-1,4-dichloro-2-butene	13.576	88	51955	48.95	ug/L		95
99)	1,1,2,2-tetrachloroethane	13.843	83	137938	53.02	ug/L		99
100)	trans-1,4-dichloro-2-b...	13.880	53	38087	52.77	ug/L		89
101)	1,2,3-trichloropropane	13.937	110	36648	54.56	ug/L		97
102)	bromobenzene	13.969	156	166256	52.06	ug/L		95
103)	n-propylbenzene	14.011	91	696241	51.84	ug/L		99
104)	2-chlorotoluene	14.157	126	143856	50.26	ug/L		96
105)	4-chlorotoluene	14.277	91	424937	50.80	ug/L		99
106)	1,3,5-trimethylbenzene	14.188	105	516994	50.85	ug/L		98
107)	tert-butylbenzene	14.565	119	413996	49.88	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102707.d
Acq On : 3 Mar 2021 11:24 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4443,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

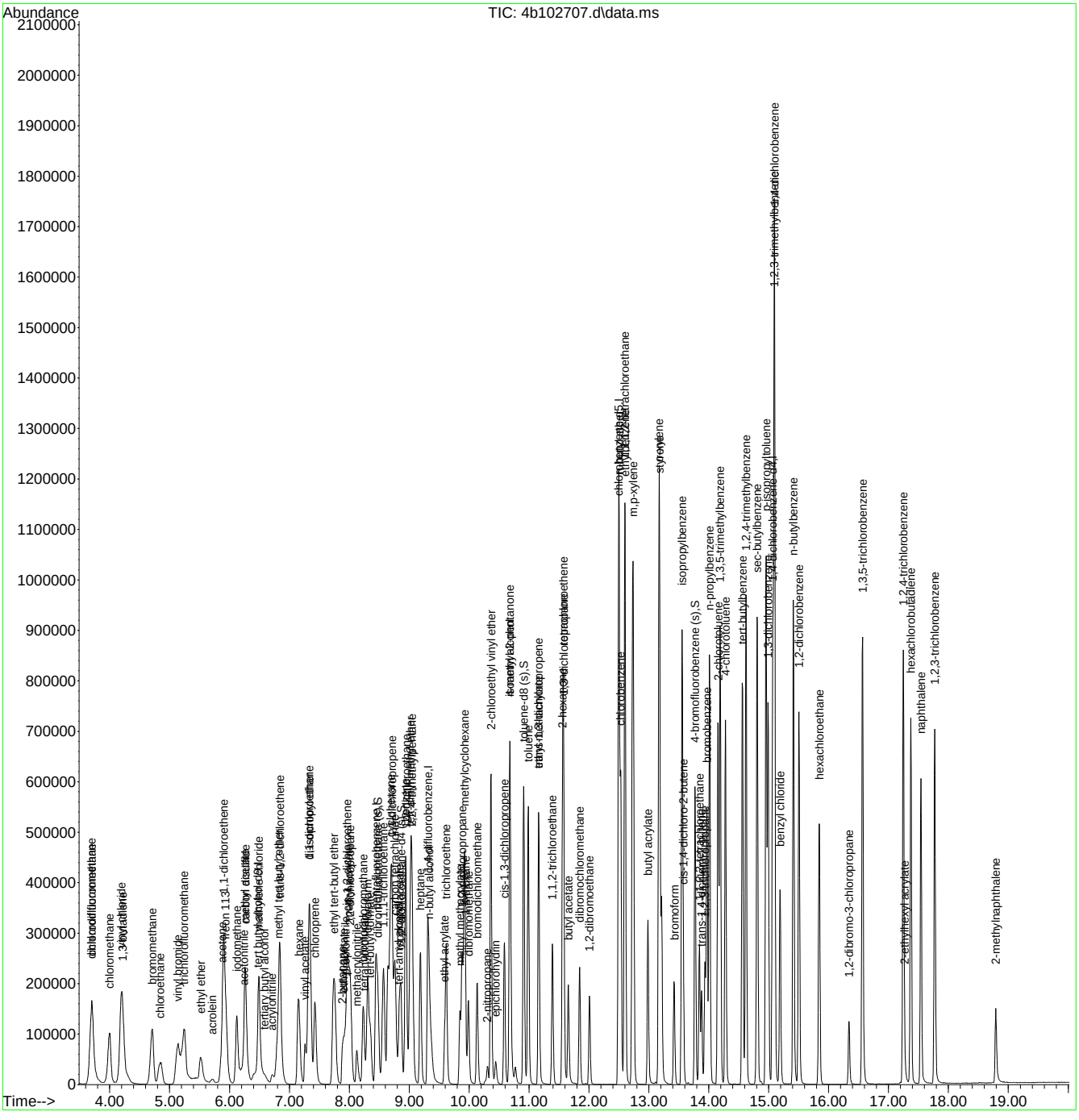
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
108) 1,2,4-trimethylbenzene	14.622	105	538222	51.66 ug/L	98
109) sec-butylbenzene	14.806	105	688711	50.81 ug/L	99
110) p-isopropyltoluene	14.957	119	617210	51.32 ug/L	99
111) 1,3-dichlorobenzene	14.989	146	321342	48.29 ug/L	97
112) 1,2,3-trimethylbenzene	15.093	105	572660	49.73 ug/L	100
113) 1,4-dichlorobenzene	15.098	146	328682	47.05 ug/L	97
114) 1,2-dichlorobenzene	15.506	146	330229	48.24 ug/L	99
115) benzyl chloride	15.193	91	298329	55.73 ug/L	99
116) n-butylbenzene	15.412	92	307574	50.61 ug/L	95
117) hexachloroethane	15.846	201	107346	38.75 ug/L	97
118) 1,2-dibromo-3-chloropr...	16.338	157	40396	51.27 ug/L	95
119) 1,3,5-trichlorobenzene	16.568	180	315278	48.34 ug/L	96
120) 1,2,4-trichlorobenzene	17.248	180	284725	50.43 ug/L	96
121) 2-ethylhexyl acrylate	17.269	70	15280	8.54 ug/L	97
122) hexachlorobutadiene	17.374	225	162010	50.33 ug/L	98
123) naphthalene	17.541	128	488360	49.21 ug/L	99
124) 1,2,3-trichlorobenzene	17.771	180	240264	49.12 ug/L	98
125) 2-methylnaphthalene	18.791	142	95136	22.89 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102707.d
Acq On : 3 Mar 2021 11:24 am
Operator : brittank
Sample : bs c Inst : MS4B
Misc : MS46075,V4B4443,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:34 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



M4B4435.M Wed Mar 03 22:22:40 2021 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165058.D
Acq On : 4 Mar 2021 11:19 am
Operator : ROBERTS
Sample : BS C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 04 15:46:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11514	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5363	9.10 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 91.00%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.12	88	10207	17.48 ug/L	97

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

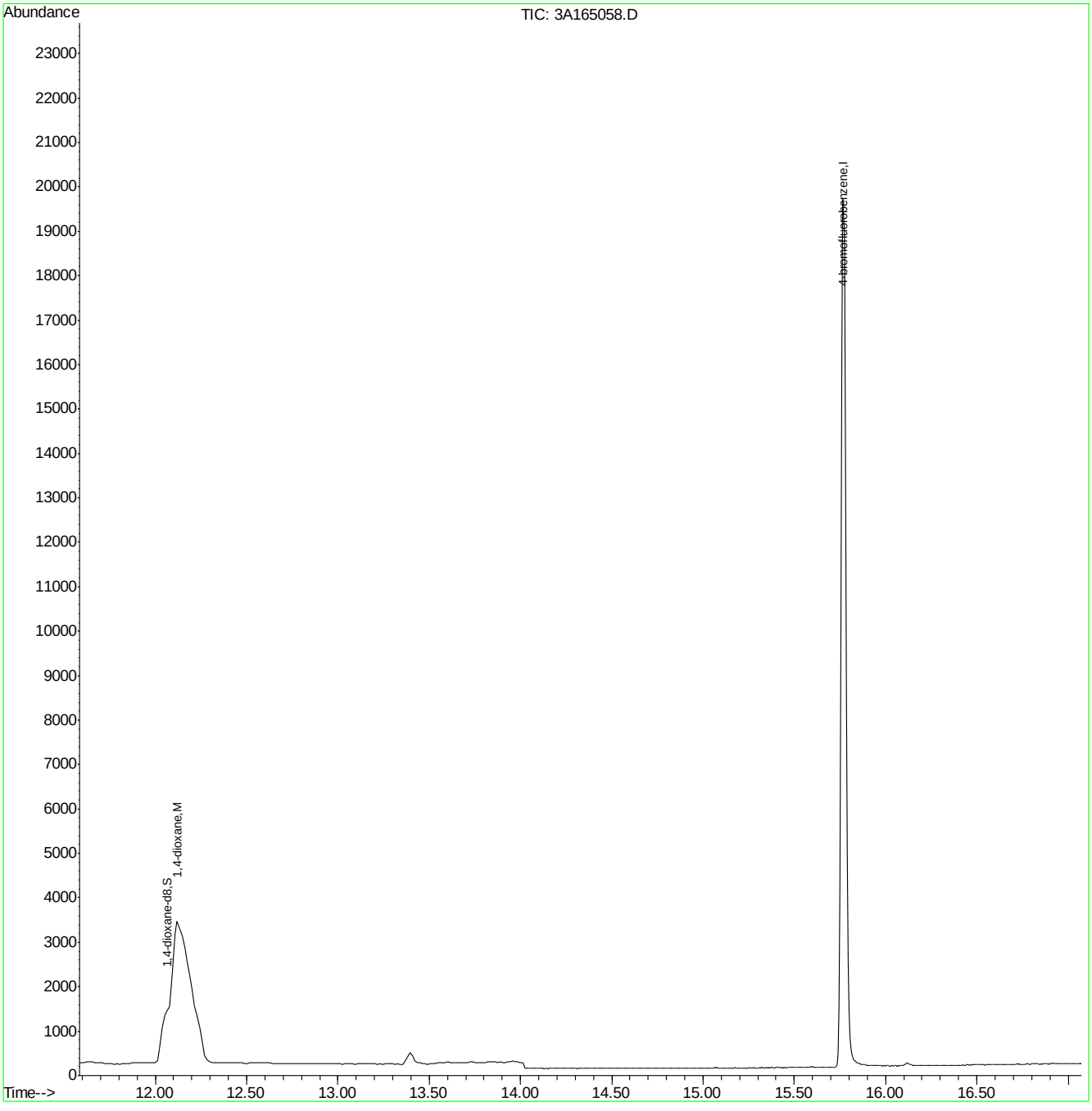
7.3.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165058.D
Acq On : 4 Mar 2021 11:19 am
Operator : ROBERTS
Sample : BS C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 04 15:46:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102716.d
Acq On : 3 Mar 2021 4:01 pm
Operator : brittank
Sample : JD20920-11ms c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:00:18 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.463	65	133751	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	201008	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	267836	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	293877	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	204634	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	107063	53.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.30%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	108971	53.05	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.10%			
75) toluene-d8 (s)	10.909	98	333254	49.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.28%			
98) 4-bromofluorobenzene (s)	13.770	95	156927	51.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.578	59	76668	259.88	ug/L	93
4) 1,4-dioxane	9.936	88	30171	1319.64	ug/L	80
6) chlorodifluoromethane	3.707	51	192880	56.48	ug/L	99
7) dichlorodifluoromethane	3.697	85	329189	68.20	ug/L	98
8) chloromethane	4.000	50	221244	54.94	ug/L	97
9) vinyl chloride	4.199	62	220847	61.84	ug/L	96
10) 1,3-butadiene	4.214	54	125784	54.53	ug/L	99
11) bromomethane	4.711	94	150809	55.53	ug/L	96
12) chloroethane	4.842	64	93078	61.04	ug/L	98
13) trichlorofluoromethane	5.250	101	281262	64.58	ug/L	99
14) vinyl bromide	5.130	106	117621	105.10	ug/L	99
15) ethyl ether	5.527	74	34015	50.53	ug/L	93
16) acrolein	5.726	56	13769	57.47	ug/L	95
17) freon 113	5.930	151	126435	54.51	ug/L	98
18) 1,1-dichloroethene	5.904	61	168989	52.15	ug/L	98
19) acetone	5.878	58	27205	204.34	ug/L #	81
20) acetonitrile	6.228	41	141980	626.29	ug/L	95
21) iodomethane	6.123	142	232407	44.91	ug/L	97
22) carbon disulfide	6.265	76	395143	50.95	ug/L	99
23) methylene chloride	6.489	84	108021	47.46	ug/L	98
24) methyl acetate	6.275	43	58214	57.65	ug/L	97
25) methyl tert butyl ether	6.835	73	291203	50.20	ug/L	95
26) trans-1,2-dichloroethene	6.840	61	144563	54.04	ug/L	96
27) hexane	7.149	56	73055	58.37	ug/L	90
28) di-isopropyl ether	7.337	45	361083	50.15	ug/L	96
29) 2-butanone	7.886	72	27262	221.19	ug/L	93
30) 1,1-dichloroethane	7.332	63	173637	52.54	ug/L	99
31) chloroprene	7.431	53	139192	52.99	ug/L	97
32) acrylonitrile	6.720	53	30441	58.18	ug/L	91
33) vinyl acetate	7.269	86	11209	53.93	ug/L	97
34) ethyl tert-butyl ether	7.745	59	331240	50.43	ug/L	99
35) ethyl acetate	7.907	45	10652	56.11	ug/L #	79
36) 2,2-dichloropropane	8.017	77	209267	57.23	ug/L	99
37) cis-1,2-dichloroethene	7.964	96	98084	50.99	ug/L	96
38) propionitrile	7.938	54	110789	573.42	ug/L	98
39) methyl acrylate	7.991	85	9309	51.15	ug/L #	55
40) methacrylonitrile	8.132	67	25335	53.09	ug/L	94
41) bromochloromethane	8.236	128	50613	49.08	ug/L	92
42) tetrahydrofuran	8.268	72	9323	54.62	ug/L #	57

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102716.d
Acq On : 3 Mar 2021 4:01 pm
Operator : brittank
Sample : JD20920-11ms c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:00:18 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	8.310	83	175924	48.88	ug/L		98
44)	tert-butyl formate	8.351	59	76425	51.99	ug/L		99
46)	1,1,1-trichloroethane	8.571	97	221989	55.40	ug/L		95
47)	cyclohexane	8.691	84	204472	61.16	ug/L		97
49)	1,1-dichloropropene	8.718	75	113688	48.70	ug/L		98
50)	carbon tetrachloride	8.759	117	198591	54.83	ug/L		96
51)	tert-amyl alcohol	8.806	73	29511	337.05	ug/L		95
52)	isopropyl acetate	8.838	87	14221	51.73	ug/L	#	86
55)	n-butyl alcohol	9.340	41	116254	3631.38	ug/L		99
56)	2,2,4-trimethylpentane	9.047	57	441864	59.87	ug/L		97
57)	benzene	8.942	78	312701	46.79	ug/L		99
58)	tert-amyl methyl ether	9.021	73	310491	52.36	ug/L		99
59)	heptane	9.188	57	64024	52.21	ug/L		97
60)	1,2-dichloroethane	8.948	62	114905	47.81	ug/L		99
61)	ethyl acrylate	9.591	55	83578	52.93	ug/L		98
62)	trichloroethene	9.617	95	81803	46.99	ug/L		98
64)	methyl methacrylate	9.842	100	16354	51.61	ug/L	#	77
65)	methylcyclohexane	9.926	83	215642	58.77	ug/L		97
66)	1,2-dichloropropane	9.884	63	82486	47.22	ug/L		100
67)	dibromomethane	9.989	93	50620	46.77	ug/L		96
68)	bromodichloromethane	10.135	83	120229	48.00	ug/L		98
69)	2-nitropropane	10.302	41	18747	53.05	ug/L		95
70)	epichlorohydrin	10.438	57	36817	285.69	ug/L		98
71)	cis-1,3-dichloropropene	10.590	75	131443	47.92	ug/L		99
72)	4-methyl-2-pentanone	10.679	58	125281	223.67	ug/L		93
73)	isoamyl alcohol	10.684	70	62457	1478.85	ug/L	#	83
76)	toluene	10.987	92	193844	46.35	ug/L		99
77)	ethyl methacrylate	11.160	69	99824	52.09	ug/L		94
78)	trans-1,3-dichloropropene	11.160	75	122716	49.36	ug/L		94
79)	1,1,2-trichloroethane	11.390	83	60664	49.84	ug/L		97
80)	tetrachloroethene	11.568	164	83191	47.49	ug/L		96
81)	2-hexanone	11.558	58	114843	220.52	ug/L		97
82)	1,3-dichloropropane	11.579	76	114044	47.42	ug/L		95
83)	butyl acetate	11.657	56	52605	53.28	ug/L		93
84)	dibromochloromethane	11.845	129	102044	46.77	ug/L		99
85)	1,2-dibromoethane	12.007	107	94516	37.72	ug/L		96
86)	n-butyl ether	12.504	57	415240	47.11	ug/L		99
87)	chlorobenzene	12.530	112	244197	46.93	ug/L		99
88)	1,1,1,2-tetrachloroethane	12.598	131	120388	48.61	ug/L		98
89)	ethylbenzene	12.604	91	440714	48.41	ug/L		100
90)	m,p-xylene	12.734	106	328255	96.65	ug/L		94
91)	o-xylene	13.169	91	383307	49.25	ug/L		99
92)	styrene	13.179	104	275936	47.80	ug/L		96
93)	butyl acrylate	12.985	55	200624	54.30	ug/L		100
94)	isopropylbenzene	13.556	105	526976	49.64	ug/L		99
95)	bromoform	13.425	173	84164	47.30	ug/L		98
96)	cis-1,4-dichloro-2-butene	13.576	88	45150	53.33	ug/L		98
99)	1,1,2,2-tetrachloroethane	13.843	83	117511	51.52	ug/L		99
100)	trans-1,4-dichloro-2-b...	13.880	53	33606	53.11	ug/L		89
101)	1,2,3-trichloropropane	13.937	110	31322	53.19	ug/L		100
102)	bromobenzene	13.969	156	136422	48.73	ug/L		93
103)	n-propylbenzene	14.016	91	611467	51.93	ug/L		99
104)	2-chlorotoluene	14.157	126	123079	49.05	ug/L		97
105)	4-chlorotoluene	14.277	91	354288	48.31	ug/L		97
106)	1,3,5-trimethylbenzene	14.194	105	452388	50.75	ug/L		98
107)	tert-butylbenzene	14.560	119	374140	51.42	ug/L		98
108)	1,2,4-trimethylbenzene	14.623	105	467802	51.22	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102716.d
Acq On : 3 Mar 2021 4:01 pm
Operator : brittank
Sample : JD20920-11ms c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:00:18 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

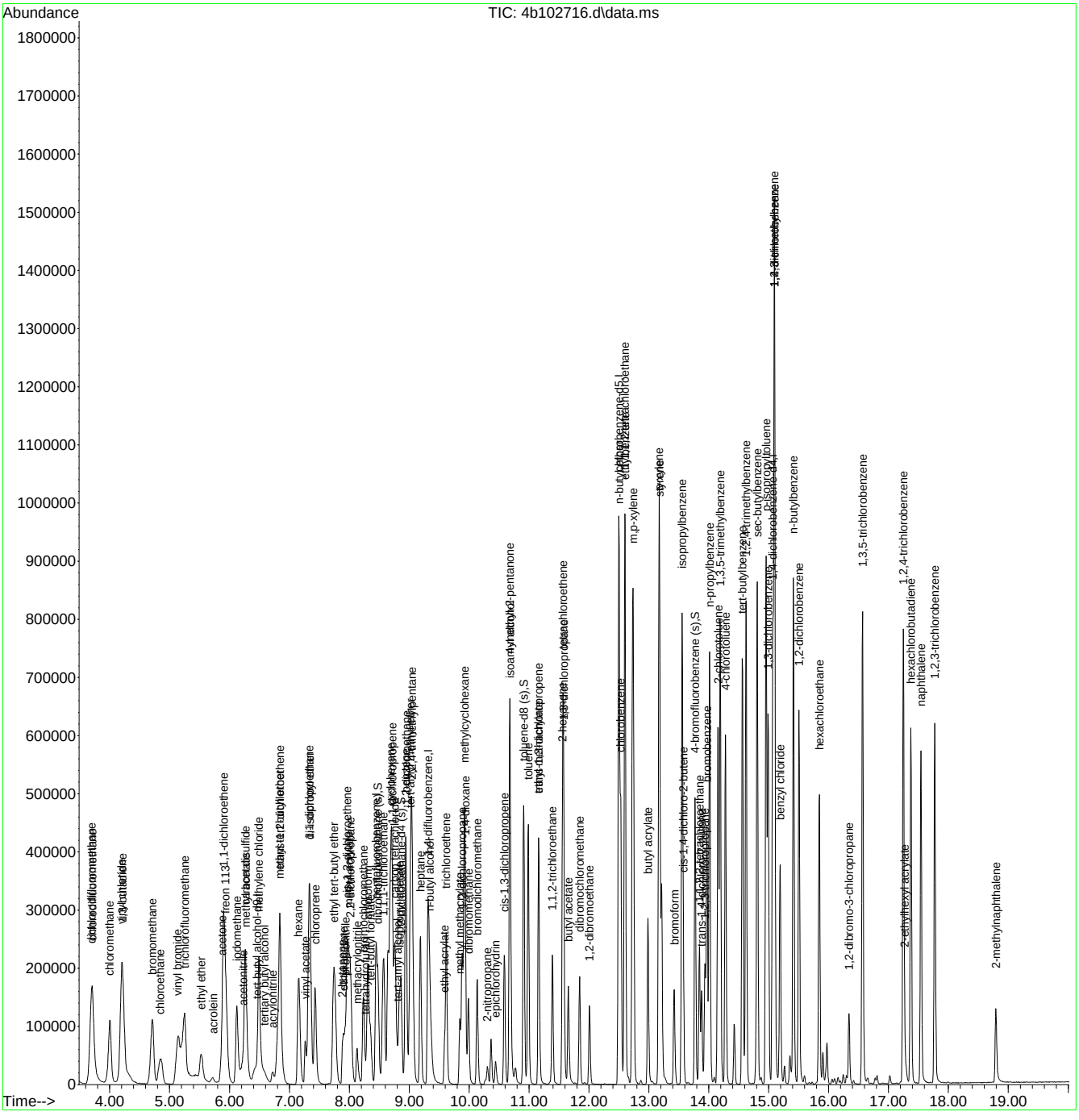
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	14.811	105	639229	53.79	ug/L	99
110) p-isopropyltoluene	14.957	119	543885	51.58	ug/L	99
111) 1,3-dichlorobenzene	14.989	146	275047	47.14	ug/L	97
112) 1,2,3-trimethylbenzene	15.093	105	489626	48.50	ug/L	99
113) 1,4-dichlorobenzene	15.098	146	283185	46.24	ug/L	99
114) 1,2-dichlorobenzene	15.506	146	286788	47.78	ug/L	99
115) benzyl chloride	15.193	91	280976	59.87	ug/L	100
116) n-butylbenzene	15.412	92	273101	51.26	ug/L	99
117) hexachloroethane	15.846	201	100792	41.44	ug/L	97
118) 1,2-dibromo-3-chloropr...	16.343	157	37704	54.58	ug/L	89
119) 1,3,5-trichlorobenzene	16.568	180	277331	48.50	ug/L	98
120) 1,2,4-trichlorobenzene	17.248	180	256101	51.74	ug/L	96
121) 2-ethylhexyl acrylate	17.269	70	18260	11.64	ug/L	93
122) hexachlorobutadiene	17.374	225	139066	49.28	ug/L	98
123) naphthalene	17.541	128	465504	53.50	ug/L	99
124) 1,2,3-trichlorobenzene	17.771	180	216275	50.43	ug/L	97
125) 2-methylnaphthalene	18.796	142	83787	22.99	ug/L	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102716.d
Acq On : 3 Mar 2021 4:01 pm
Operator : brittank
Sample : JD20920-11ms c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 22:00:18 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102717.d
Acq On : 3 Mar 2021 4:29 pm
Operator : brittank
Sample : JD20920-11msd c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:59:57 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	131614	500.00	ug/L	-0.01
5) pentafluorobenzene	8.445	168	238404	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	318906	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	358789	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	244418	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	120283	50.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.64%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	125861	51.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.92%			
75) toluene-d8 (s)	10.909	98	395771	48.29	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.58%			
98) 4-bromofluorobenzene (s)	13.770	95	192889	53.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.578	59	84551	291.26	ug/L	98
4) 1,4-dioxane	9.931	88	33663	1496.28	ug/L	86
6) chlorodifluoromethane	3.707	51	213231	52.65	ug/L	98
7) dichlorodifluoromethane	3.696	85	341285	59.62	ug/L	97
8) chloromethane	4.005	50	256042	53.61	ug/L	96
9) vinyl chloride	4.199	62	247709	58.48	ug/L	98
10) 1,3-butadiene	4.219	54	150809	55.13	ug/L	99
11) bromomethane	4.716	94	171237	53.17	ug/L	95
12) chloroethane	4.842	64	106318	58.79	ug/L	98
13) trichlorofluoromethane	5.245	101	307154	59.46	ug/L	100
14) vinyl bromide	5.135	106	132714	99.99	ug/L	96
15) ethyl ether	5.527	74	41408	51.87	ug/L	95
16) acrolein	5.710	56	12703	44.70	ug/L	94
17) freon 113	5.930	151	144803	52.64	ug/L	97
18) 1,1-dichloroethene	5.904	61	199070	51.79	ug/L	98
19) acetone	5.877	58	31162	197.35	ug/L	93
20) acetonitrile	6.212	41	151541	563.61	ug/L	96
21) iodomethane	6.123	142	274777	44.77	ug/L	96
22) carbon disulfide	6.264	76	460636	50.08	ug/L	99
23) methylene chloride	6.489	84	125984	46.67	ug/L	94
24) methyl acetate	6.270	43	67306	56.19	ug/L	99
25) methyl tert butyl ether	6.829	73	334178	48.58	ug/L	98
26) trans-1,2-dichloroethene	6.840	61	168306	53.05	ug/L	98
27) hexane	7.154	56	88723	59.76	ug/L	95
28) di-isopropyl ether	7.337	45	434527	50.89	ug/L	98
29) 2-butanone	7.891	72	33649	230.19	ug/L #	84
30) 1,1-dichloroethane	7.331	63	211100	53.86	ug/L	100
31) chloroprene	7.431	53	173656	55.74	ug/L	97
32) acrylonitrile	6.714	53	31350	50.52	ug/L	96
33) vinyl acetate	7.263	86	13874	56.28	ug/L #	92
34) ethyl tert-butyl ether	7.745	59	390695	50.15	ug/L	99
35) ethyl acetate	7.907	45	13209	58.66	ug/L	98
36) 2,2-dichloropropane	8.006	77	246901	56.93	ug/L	98
37) cis-1,2-dichloroethene	7.964	96	120348	52.75	ug/L	94
38) propionitrile	7.938	54	132911	580.01	ug/L	97
39) methyl acrylate	7.990	85	12200	56.52	ug/L #	80
40) methacrylonitrile	8.132	67	32151	56.81	ug/L	96
41) bromochloromethane	8.236	128	62070	50.75	ug/L	98
42) tetrahydrofuran	8.257	72	11388	56.26	ug/L #	60

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102717.d
Acq On : 3 Mar 2021 4:29 pm
Operator : brittank
Sample : JD20920-11msd c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:59:57 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) chloroform	8.304	83	215803	50.56 ug/L	98
44) tert-butyl formate	8.346	59	78736	45.16 ug/L	97
46) 1,1,1-trichloroethane	8.571	97	260358	54.79 ug/L	97
47) cyclohexane	8.691	84	224803	56.69 ug/L	98
49) 1,1-dichloropropene	8.717	75	147204	53.16 ug/L	98
50) carbon tetrachloride	8.759	117	234854	54.67 ug/L	98
51) tert-amyl alcohol	8.812	73	34443	331.68 ug/L	97
52) isopropyl acetate	8.843	87	18652	57.21 ug/L #	86
55) n-butyl alcohol	9.340	41	135925	3565.91 ug/L	94
56) 2,2,4-trimethylpentane	9.047	57	521936	59.39 ug/L	98
57) benzene	8.942	78	402149	50.54 ug/L	100
58) tert-amyl methyl ether	9.021	73	366003	51.83 ug/L	99
59) heptane	9.188	57	80992	55.47 ug/L	93
60) 1,2-dichloroethane	8.948	62	148026	51.73 ug/L	99
61) ethyl acrylate	9.591	55	115210	61.28 ug/L	98
62) trichloroethene	9.617	95	111756	53.92 ug/L	98
64) methyl methacrylate	9.847	100	22305	59.12 ug/L	92
65) methylcyclohexane	9.920	83	252216	57.73 ug/L	97
66) 1,2-dichloropropane	9.879	63	107841	51.85 ug/L	100
67) dibromomethane	9.988	93	66689	51.75 ug/L	99
68) bromodichloromethane	10.135	83	158353	53.10 ug/L	99
69) 2-nitropropane	10.302	41	24856	59.08 ug/L	95
70) epichlorohydrin	10.443	57	48248	314.44 ug/L	97
71) cis-1,3-dichloropropene	10.590	75	178021	54.51 ug/L	98
72) 4-methyl-2-pentanone	10.679	58	161389	242.00 ug/L	89
73) isoamyl alcohol	10.684	70	78932	1569.64 ug/L #	88
76) toluene	10.987	92	256519	50.24 ug/L	96
77) ethyl methacrylate	11.160	69	139621	59.68 ug/L	95
78) trans-1,3-dichloropropene	11.160	75	169581	55.87 ug/L	92
79) 1,1,2-trichloroethane	11.390	83	80206	53.97 ug/L	95
80) tetrachloroethene	11.573	164	110417	51.63 ug/L	98
81) 2-hexanone	11.557	58	164656	258.97 ug/L	99
82) 1,3-dichloropropane	11.578	76	154679	52.68 ug/L	98
83) butyl acetate	11.657	56	74458	61.77 ug/L	94
84) dibromochloromethane	11.845	129	136601	51.28 ug/L	99
85) 1,2-dibromoethane	12.007	107	131415	42.95 ug/L	98
86) n-butyl ether	12.504	57	572184	53.17 ug/L	99
87) chlorobenzene	12.530	112	341509	53.76 ug/L	99
88) 1,1,1,2-tetrachloroethane	12.598	131	153343	50.72 ug/L	99
89) ethylbenzene	12.604	91	602237	54.19 ug/L	100
90) m,p-xylene	12.734	106	449891	108.50 ug/L	95
91) o-xylene	13.168	91	502584	52.89 ug/L	100
92) styrene	13.179	104	378436	53.70 ug/L	97
93) butyl acrylate	12.985	55	278596	61.76 ug/L	99
94) isopropylbenzene	13.555	105	688260	53.11 ug/L	100
95) bromoform	13.419	173	108914	50.14 ug/L	96
96) cis-1,4-dichloro-2-butene	13.576	88	61652	59.65 ug/L	98
99) 1,1,2,2-tetrachloroethane	13.843	83	156028	57.27 ug/L	99
100) trans-1,4-dichloro-2-b...	13.880	53	46264	61.21 ug/L	89
101) 1,2,3-trichloropropane	13.937	110	42874	60.95 ug/L	97
102) bromobenzene	13.969	156	193849	57.97 ug/L	95
103) n-propylbenzene	14.016	91	822189	58.47 ug/L	99
104) 2-chlorotoluene	14.157	126	165428	55.19 ug/L	94
105) 4-chlorotoluene	14.277	91	494974	56.51 ug/L	98
106) 1,3,5-trimethylbenzene	14.188	105	575005	54.01 ug/L	99
107) tert-butylbenzene	14.560	119	481649	55.42 ug/L	98
108) 1,2,4-trimethylbenzene	14.622	105	604064	55.37 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102717.d
Acq On : 3 Mar 2021 4:29 pm
Operator : brittank
Sample : JD20920-11msd c Inst : MS4B
Misc : MS49216,V4B4443,W,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:59:57 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

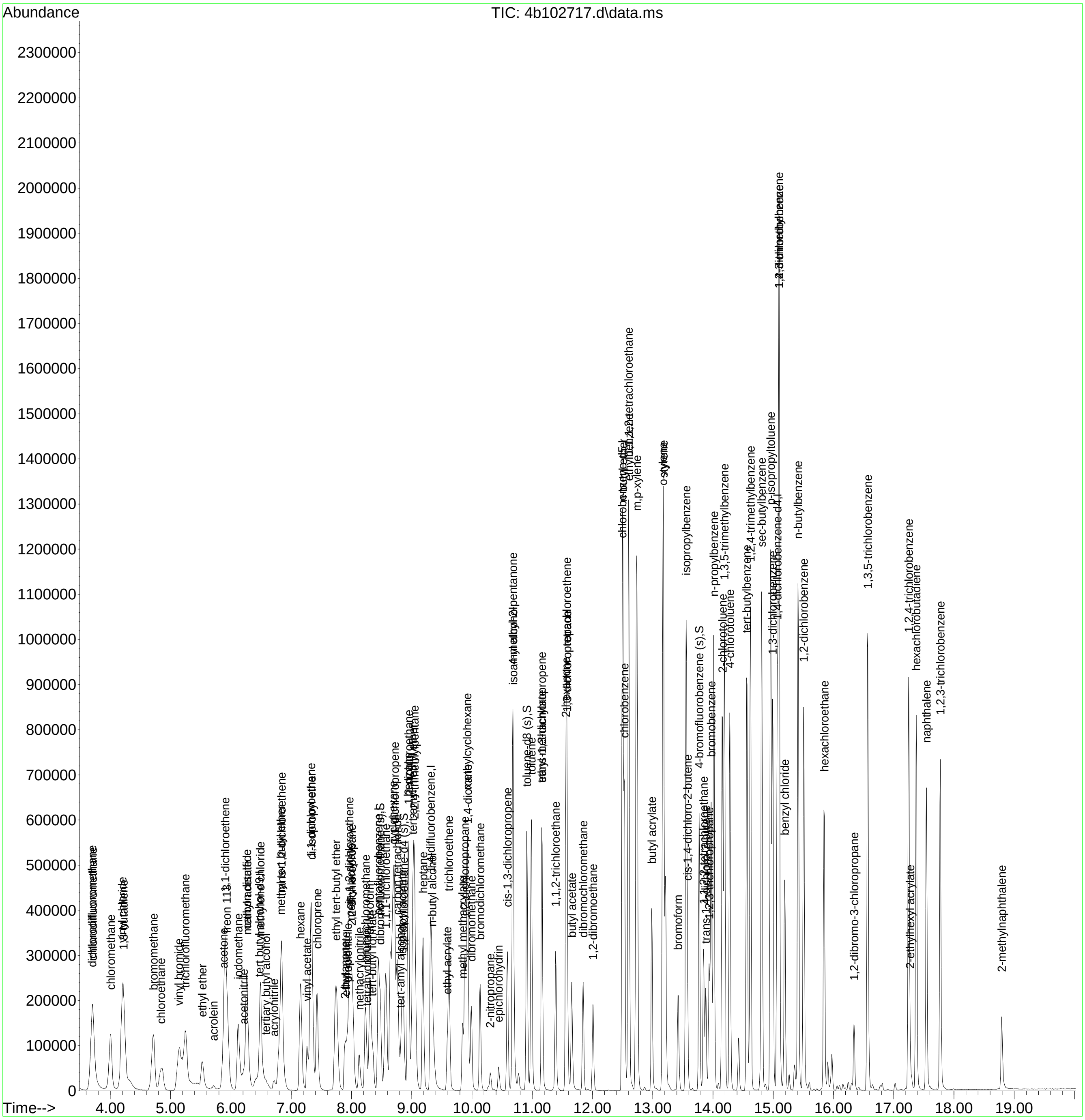
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	14.805	105	820465	57.81	ug/L	99
110) p-isopropyltoluene	14.957	119	710262	56.40	ug/L	99
111) 1,3-dichlorobenzene	14.989	146	376786	54.07	ug/L	99
112) 1,2,3-trimethylbenzene	15.093	105	625235	51.85	ug/L	99
113) 1,4-dichlorobenzene	15.098	146	385420	52.69	ug/L	98
114) 1,2-dichlorobenzene	15.506	146	376155	52.47	ug/L	98
115) benzyl chloride	15.192	91	360299	64.27	ug/L	98
116) n-butylbenzene	15.412	92	361720	56.84	ug/L	99
117) hexachloroethane	15.846	201	126078	43.36	ug/L	98
118) 1,2-dibromo-3-chloropr...	16.343	157	46328	56.15	ug/L	99
119) 1,3,5-trichlorobenzene	16.568	180	351167	51.41	ug/L	97
120) 1,2,4-trichlorobenzene	17.248	180	308641	52.20	ug/L	98
121) 2-ethylhexyl acrylate	17.269	70	17800	9.50	ug/L	97
122) hexachlorobutadiene	17.373	225	184856	54.84	ug/L	98
123) naphthalene	17.541	128	537883	51.75	ug/L	99
124) 1,2,3-trichlorobenzene	17.771	180	252929	49.38	ug/L	97
125) 2-methylnaphthalene	18.791	142	101567	23.34	ug/L	98

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

Quantitation Report (QT Reviewed)

```
Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102717.d
Acq On    :  3 Mar 2021   4:29 pm
Operator  : brittank
Sample    : JD20920-11msd c                         Inst    : MS4B
Misc      : MS49216,V4B4443,W,,,,1
ALS Vial  : 15   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:59:57 2021
Quant Title  : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration
```



M4B4435.M Wed Mar 03 22:22:48 2021 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165063.D
Acq On : 4 Mar 2021 2:16 pm
Operator : ROBERTS
Sample : JD20920-11MS C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 04 14:46:08 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9997	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.06	96	6035	11.79	ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 117.90%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	10513	20.74	ug/L	97

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

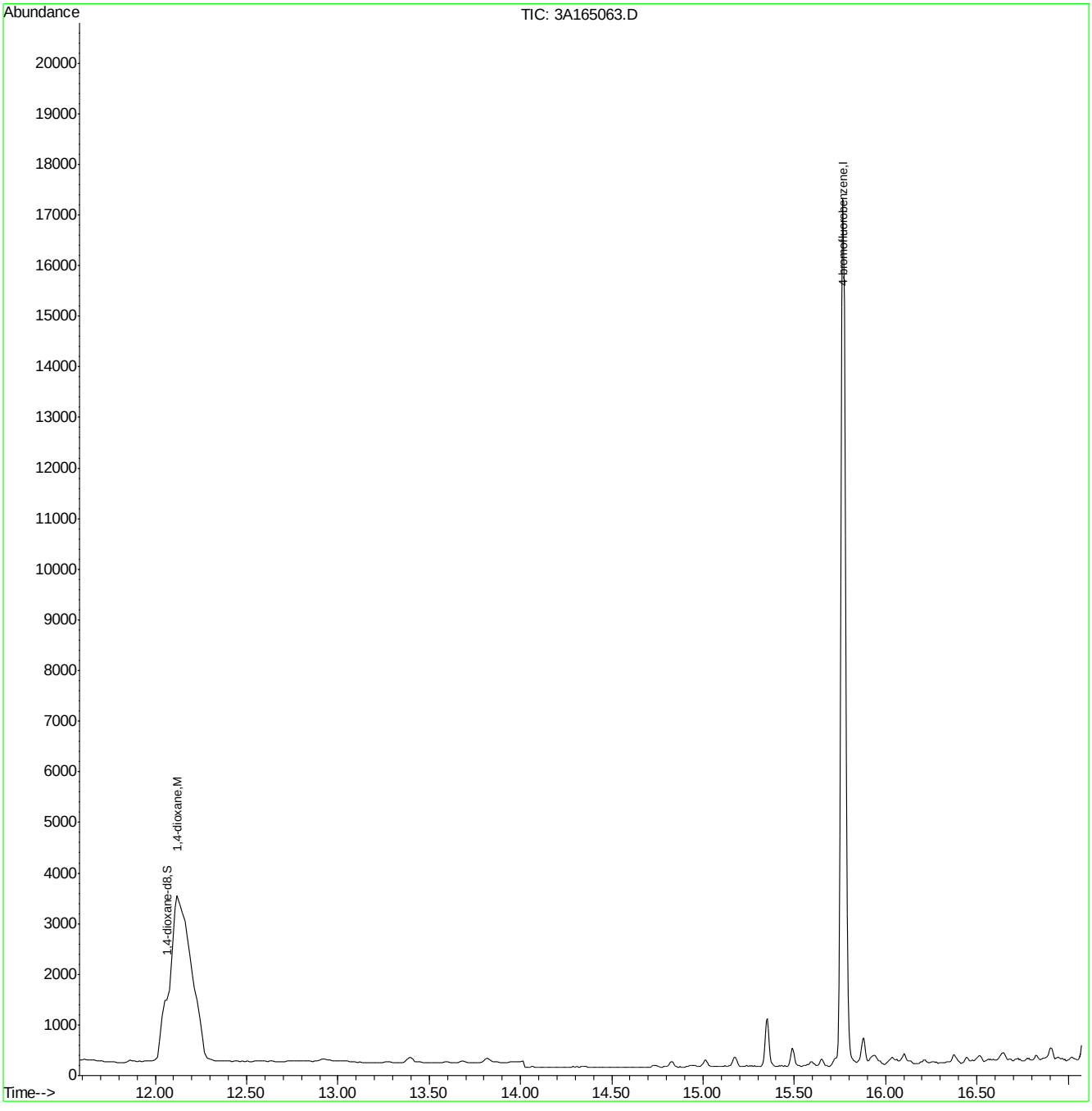
7.4.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165063.D
Acq On : 4 Mar 2021 2:16 pm
Operator : ROBERTS
Sample : JD20920-11MS C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 04 14:46:08 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Fri Mar 05 17:40:17 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165064.D
Acq On : 4 Mar 2021 2:45 pm
Operator : ROBERTS
Sample : JD20920-11MSD C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 04 15:29:50 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	9697	1.00	ug/L	-0.03
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.05	96	7110	14.32	ug/L	-0.04
Spiked Amount 10.000	Range 39 - 174		Recovery = 143.20%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.12	88	10665	21.69	ug/L	99

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

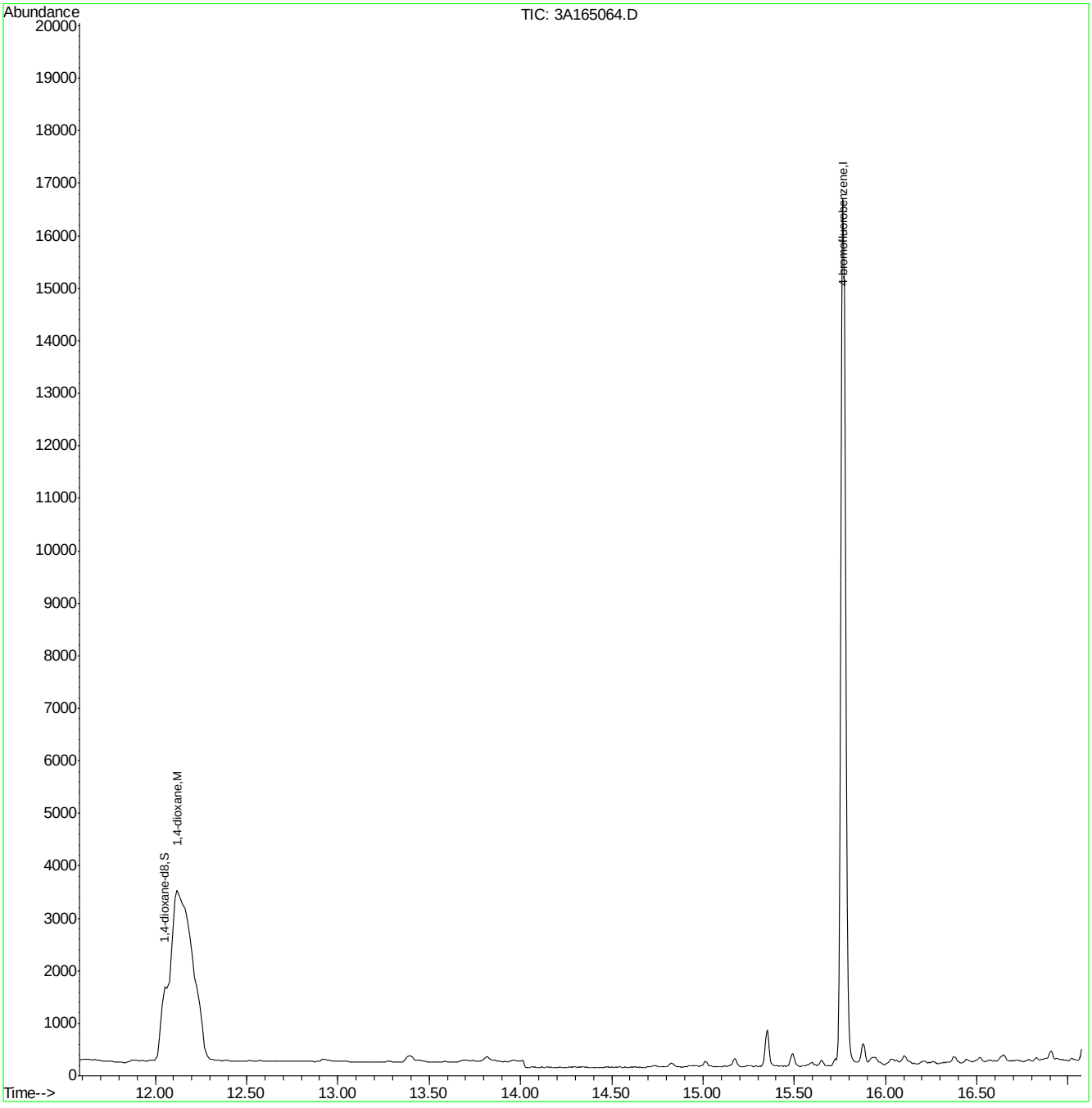
7.4.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165064.D
Acq On : 4 Mar 2021 2:45 pm
Operator : ROBERTS
Sample : JD20920-11MSD C
Misc : MS49215,V3A7170,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 04 15:29:50 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

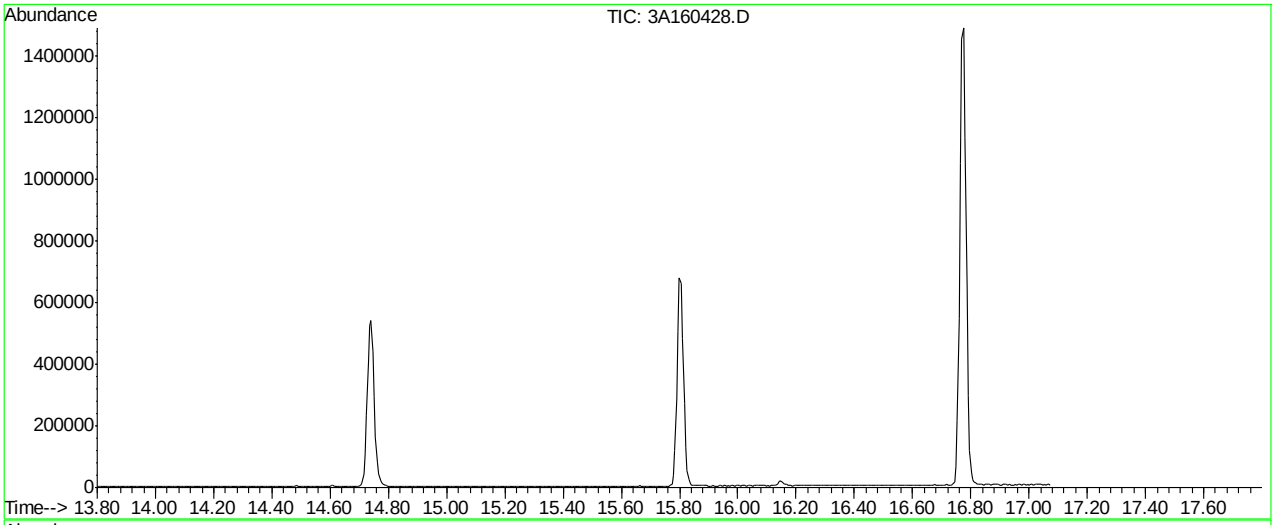


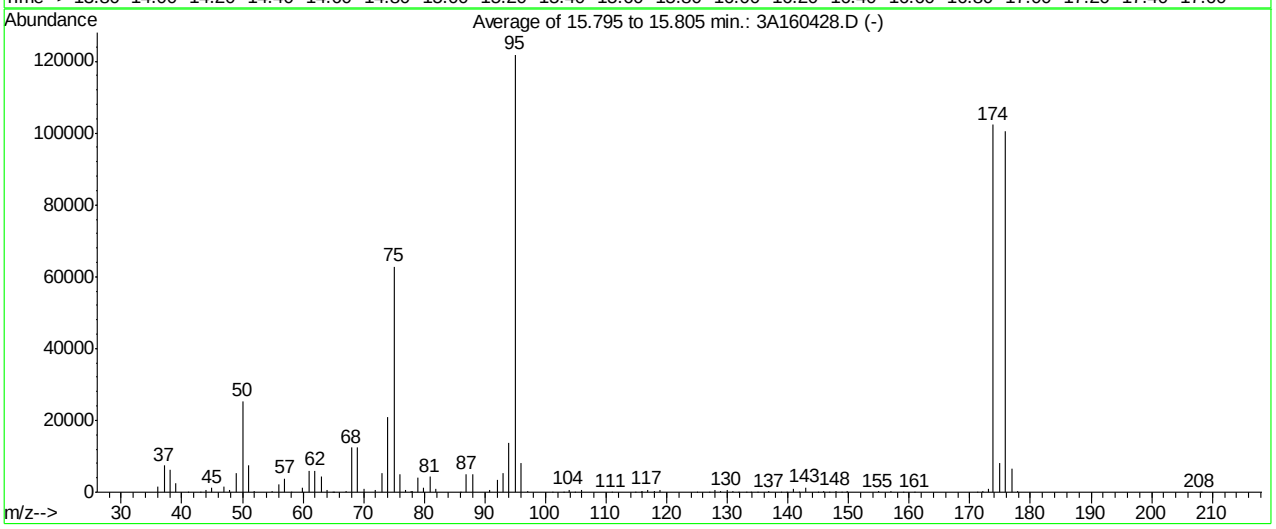
M3A6923.M Fri Mar 05 17:40:17 2021 ACCUNJ Page: 2

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\V3A6923\3A160428.D Vial: 4
Acq On : 18 Jul 2018 4:55 pm Operator: HueanhT
Sample : bfb Inst : MS3A
Misc : MS27832,V3A6923,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 804, 805, 806; Background Corrected with Scan 796

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.8	25408	PASS
75	95	30	60	51.6	62880	PASS
95	95	100	100	100.0	121864	PASS
96	95	5	9	6.6	8101	PASS
173	174	0.00	2	0.8	826	PASS
174	95	50	120	84.0	102317	PASS
175	174	5	9	8.0	8168	PASS
176	174	95	101	98.1	100370	PASS
177	176	5	9	6.7	6691	PASS

3A160428.D M3A6923.M Thu Jul 19 08:26:25 2018 ACCUNJ

Average of 15.795 to 15.805 min.: 3A160428.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1432	50.00	25408	64.00	520	76.00	4978
37.05	7421	51.05	7612	64.80	63	76.95	723
38.00	6169	52.00	338	65.10	112	77.80	180
39.05	2412	54.95	437	67.05	263	78.00	432
41.00	106	56.00	2197	68.00	12455	78.90	4012
43.10	71	57.00	3821	69.00	12406	79.90	1292
44.00	637	58.00	158	70.05	989	80.90	4344
45.00	1170	59.95	1370	72.00	664	81.90	1023
46.95	1477	61.00	5857	73.00	5289	86.00	119
47.95	663	62.00	5999	74.00	20858	86.95	5016
49.00	5192	63.00	4472	75.00	62880	87.95	4994

Average of 15.795 to 15.805 min.: 3A160428.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.85	638	105.85	495	128.85	226	141.80	56
92.00	3515	110.90	162	129.90	531	142.90	1285
93.00	5228	114.80	53	130.90	236	145.00	54
94.00	13688	115.70	114	131.90	51	145.95	175
95.00	121864	115.85	344	133.10	62	146.85	149
96.00	8101	116.85	707	133.90	50	147.85	335
97.00	299	117.90	430	134.95	166	148.80	50
101.20	52	118.95	660	136.85	246	149.85	192
102.90	62	125.00	115	138.80	64	154.95	303
103.90	629	127.10	53	139.80	51	156.95	212
104.90	143	127.95	498	140.95	998	158.95	139

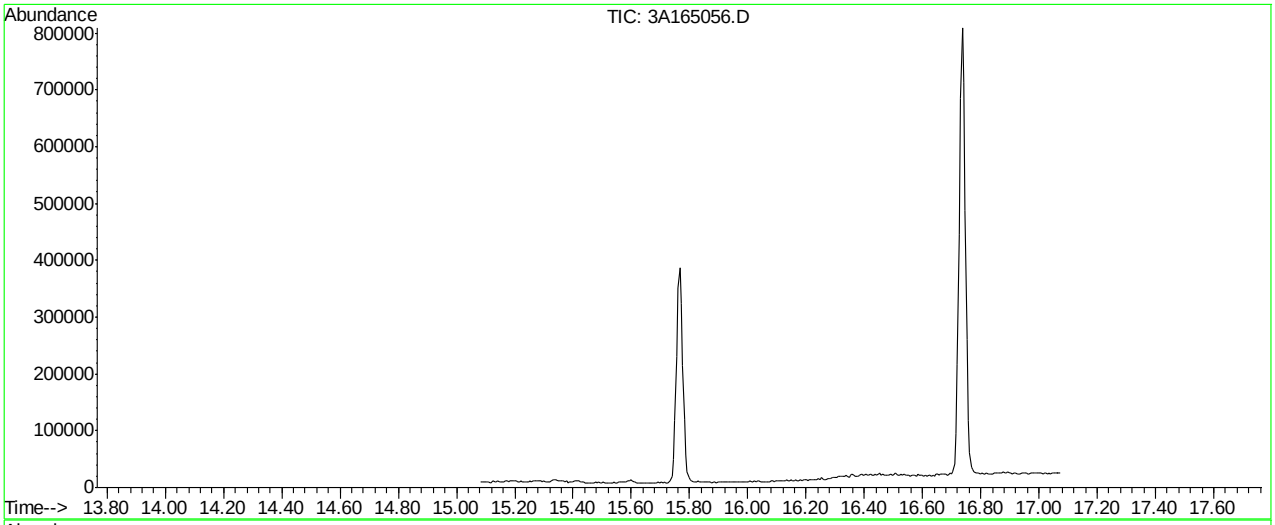
Average of 15.795 to 15.805 min.: 3A160428.D
bfb
Modified:subtracted

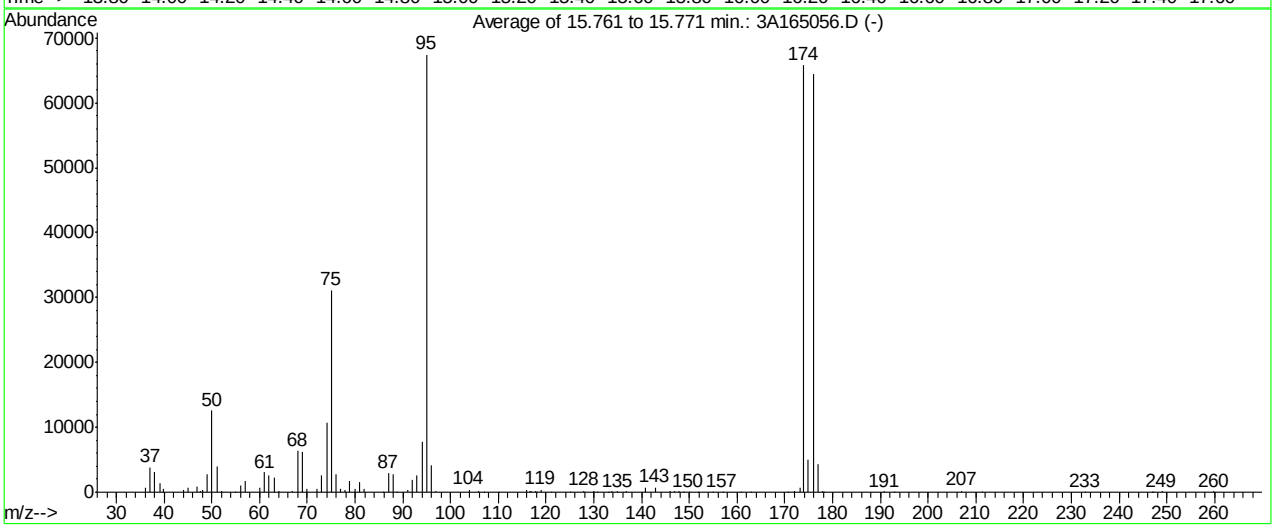
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
160.95	122						
171.20	56						
172.10	335						
173.05	826						
173.90	102317						
174.95	8168						
175.90	100370						
176.90	6691						
177.80	200						
207.95	105						
208.20	52						

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\V3A7170\3A165056.D Vial: 1
Acq On : 4 Mar 2021 10:09 am Operator: ROBERTS
Sample : BFB Inst : MS3A
Misc : MS49208,V3A7170,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3A6923.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 130, 131, 132; Background Corrected with Scan 122

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	12600	PASS
75	95	30	60	46.2	31168	PASS
95	95	100	100	100.0	67437	PASS
96	95	5	9	6.3	4218	PASS
173	174	0.00	2	1.0	669	PASS
174	95	50	120	97.6	65834	PASS
175	174	5	9	7.5	4956	PASS
176	174	95	101	97.8	64389	PASS
177	176	5	9	6.6	4246	PASS

3A165056.D M3A6923.M Fri Mar 05 17:42:53 2021 ACCUNJ

Average of 15.761 to 15.771 min.: 3A165056.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	700	50.00	12600	66.95	247	78.90	1730
37.05	3848	51.00	3936	68.00	6386	79.95	557
38.00	3105	52.05	142	69.00	6310	80.90	1628
39.10	1371	54.90	74	70.00	510	81.95	537
39.95	442	56.00	965	71.95	482	85.90	76
44.00	363	57.00	1709	73.00	2641	86.95	3021
45.00	661	59.95	697	74.00	10660	87.95	2740
47.00	868	61.00	3076	75.00	31168	88.70	65
47.60	167	62.00	2610	76.00	2819	90.90	325
48.00	358	63.05	2278	77.00	505	92.00	1841
49.05	2715	64.00	233	77.95	438	93.00	2656

Average of 15.761 to 15.771 min.: 3A165056.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.00	7758	117.70	146	136.90	123	160.80	51
95.00	67437	117.90	72	140.85	710	162.90	56
96.00	4218	118.85	379	142.90	724	170.60	50
96.95	132	121.00	61	145.90	144	172.00	138
103.90	352	125.00	77	147.00	190	173.10	669
105.85	235	127.95	218	147.90	129	173.90	65834
106.90	54	129.90	215	148.80	51	174.90	4956
110.00	72	130.80	59	149.90	57	175.90	64389
115.90	282	133.00	79	151.90	52	176.95	4246
116.70	202	133.70	101	154.80	67	177.95	156
116.95	246	134.95	120	156.90	76	178.20	57

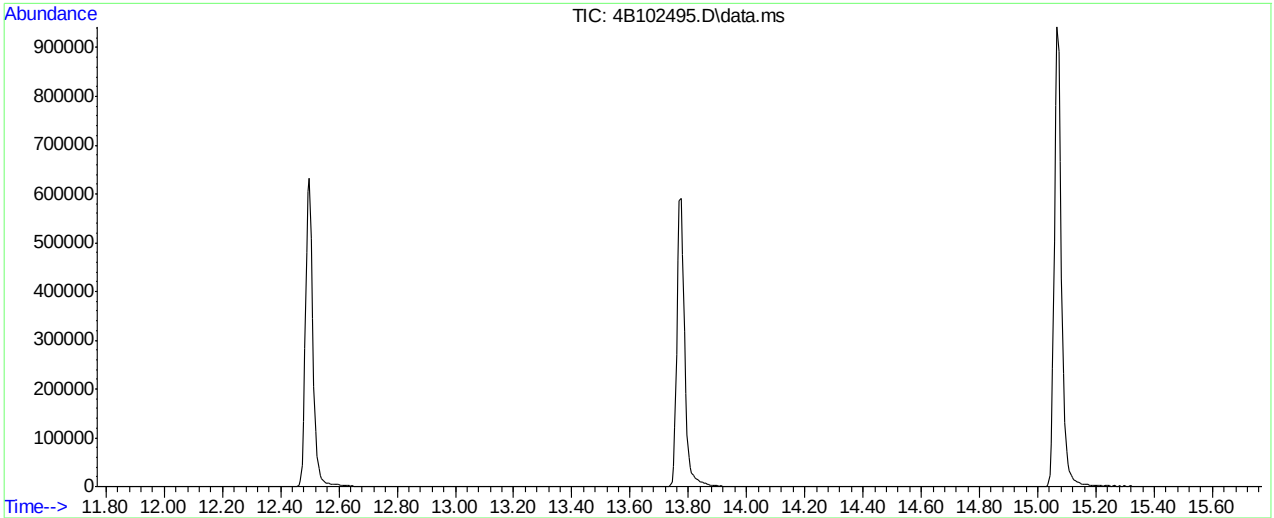
Average of 15.761 to 15.771 min.: 3A165056.D
BFB
Modified:subtracted

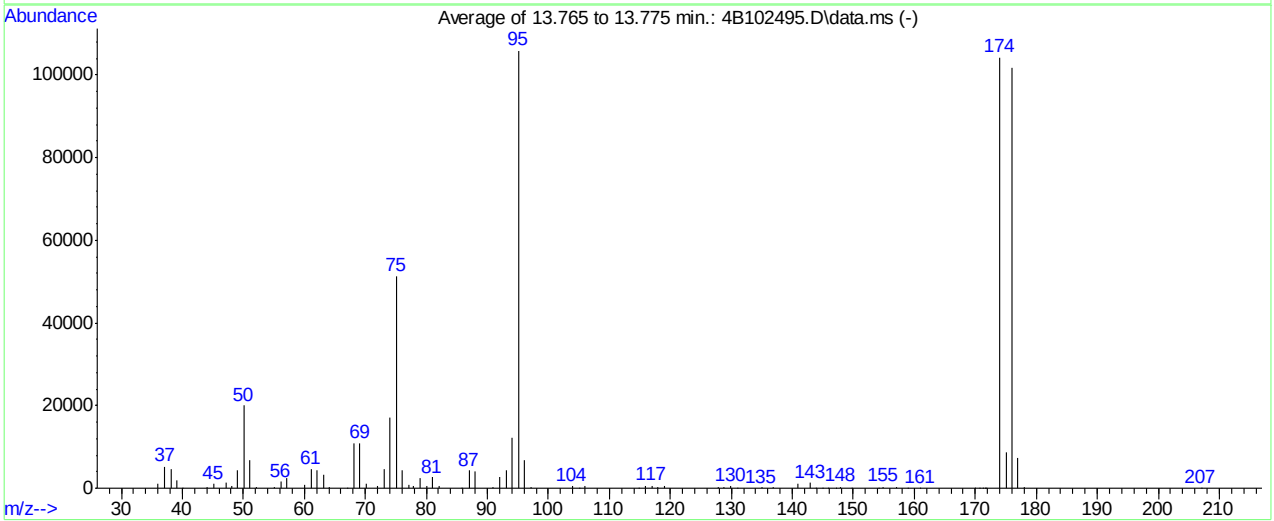
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
190.80	136						
192.90	6						
207.00	211						
211.10	54						
232.90	53						
246.80	58						
247.20	67						
248.95	113						
259.90	121						

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\V4B4435\4B102495.D Vial: 3
Acq On : 17 Feb 2021 8:17 pm Operator: brittank
Sample : bfb Inst : MS4B
Misc : MS48773,V4B4435,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021





AutoFind: Scans 1966, 1967, 1968; Background Corrected with Scan 1958

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.9	19973	PASS
75	95	30	60	48.5	51397	PASS
95	95	100	100	100.0	105933	PASS
96	95	5	9	6.5	6912	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	98.4	104266	PASS
175	174	5	9	8.4	8799	PASS
176	174	95	101	97.6	101728	PASS
177	176	5	9	7.1	7225	PASS

4B102495.D M4B4435.M Sun Feb 21 11:38:44 2021 MS4B

Average of 13.765 to 13.775 min.: 4B102495.D\data.ms
bfb
Modified:subtracted

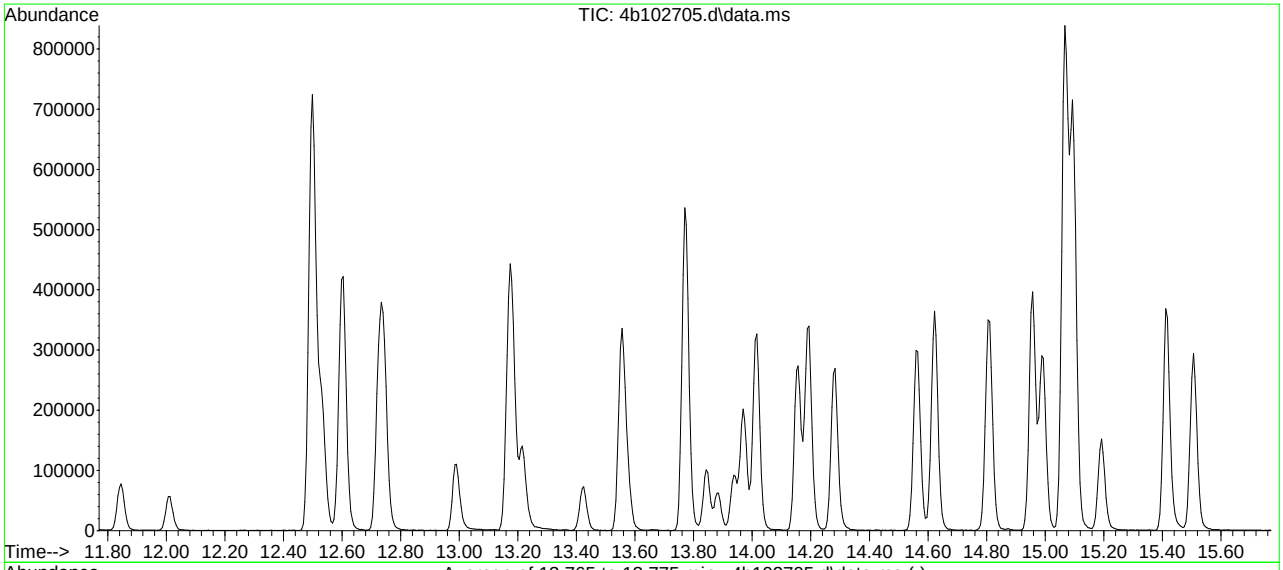
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1001	51.10	6662	68.05	10783	80.00	648
37.10	5296	52.05	267	69.10	10981	81.00	2665
38.10	4573	55.05	237	70.10	967	82.05	572
39.10	1913	56.10	1520	72.05	486	85.85	139
40.05	100	57.10	2530	73.10	4584	87.00	4287
44.10	356	60.05	778	74.10	17208	88.00	4083
45.10	1021	61.10	4707	75.10	51397	90.95	390
47.10	1478	62.10	4475	76.05	4414	92.05	2842
48.05	613	63.10	3334	77.05	693	93.05	4219
49.10	4372	64.10	259	77.95	527	94.10	12167
50.10	19973	67.10	137	79.00	2512	95.10	105933

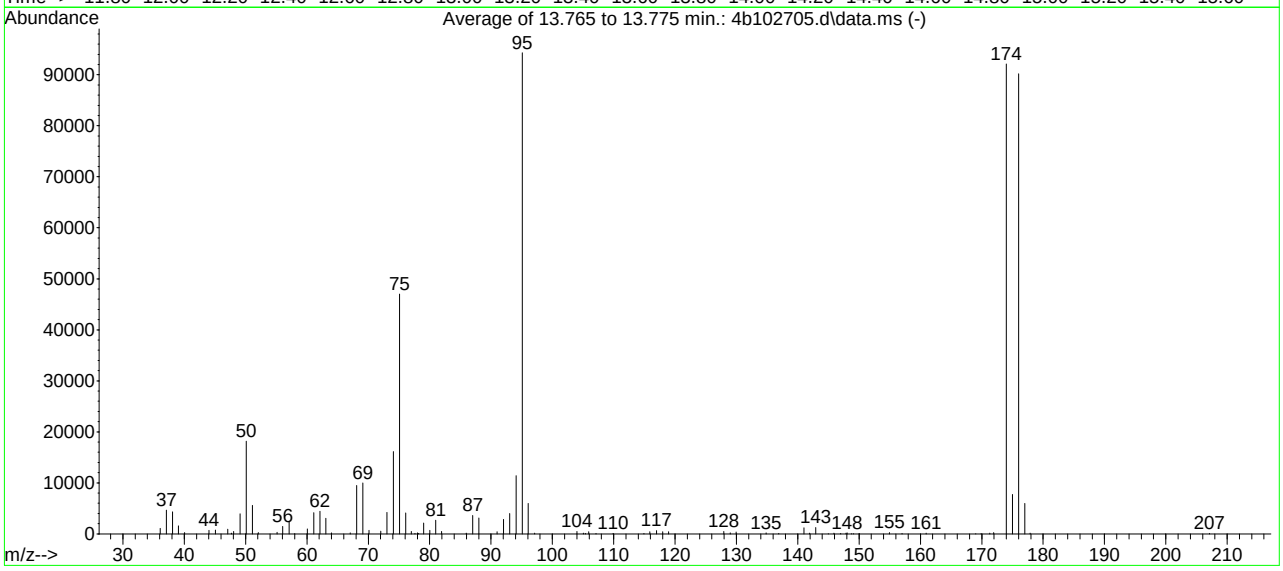
Average of 13.765 to 13.775 min.: 4B102495.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.10	6912	128.85	161	147.95	306	171.80	79
97.10	186	129.95	432	149.80	67	174.00	104266
103.95	527	130.90	120	154.10	62	175.00	8799
105.00	81	135.00	207	154.95	326	176.00	101728
105.95	431	136.85	170	157.05	211	177.00	7225
114.80	54	140.90	1190	159.00	56	177.95	200
116.00	444	142.95	1291	161.00	63	207.00	112
116.95	653	143.90	52	169.90	50		
117.95	400	145.00	50	170.70	60		
118.95	521	145.85	119	171.30	80		
127.85	394	147.10	64	171.60	80		

SW-846 Method 8260
Data File : C:\msdchem\1\data\kr...21\v4b4443\4b102705.d Vial: 3
Acq On : 3 Mar 2021 10:15 am Operator: brittank
Sample : bfb Inst : MS4B
Misc : MS49206,V4B4443,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B4435.M (RTE Integrator)
Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021





AutoFind: Scans 1966, 1967, 1968; Background Corrected with Scan 1958

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.3	18176	PASS
75	95	30	60	49.9	47011	PASS
95	95	100	100	100.0	94296	PASS
96	95	5	9	6.3	5973	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	97.7	92096	PASS
175	174	5	9	8.4	7699	PASS
176	174	95	101	97.9	90197	PASS
177	176	5	9	6.6	5962	PASS

4b102705.d M4B4435.M Wed Mar 03 21:24:31 2021

Average of 13.765 to 13.775 min.: 4b102705.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	1064	50.10	18176	64.00	178	77.60	79
37.10	4667	51.10	5578	67.05	195	78.00	181
38.10	4342	52.05	243	68.10	9473	78.20	109
39.05	1545	55.15	306	69.10	9964	79.00	2110
40.05	239	56.05	1476	70.10	683	80.05	668
44.05	696	57.10	2406	72.05	531	81.00	2656
45.10	771	58.00	53	73.05	4235	81.95	477
47.10	894	60.05	983	74.10	16128	85.95	145
47.70	147	61.10	4167	75.10	47011	87.00	3580
48.05	493	62.10	4404	76.10	4073	88.00	3112
49.10	3939	63.10	3035	77.00	498	91.00	435

Average of 13.765 to 13.775 min.: 4b102705.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.05	2819	109.90	69	141.00	1185	154.95	276
93.05	4010	114.95	106	141.95	140	157.00	61
94.10	11421	115.90	436	142.95	1259	160.95	145
95.10	94296	117.00	628	145.00	55	169.00	54
96.05	5973	118.00	402	145.90	140	169.90	50
97.10	144	118.95	442	147.00	71	171.30	155
104.00	476	127.95	459	147.85	148	171.95	259
105.05	118	129.00	220	148.05	187	174.00	92096
105.40	82	129.95	364	148.80	58	175.00	7699
105.95	409	134.85	207	149.10	50	176.00	90197
107.10	61	136.90	74	150.00	61	177.00	5962

Average of 13.765 to 13.775 min.: 4b102705.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.90	157						
207.10	76						

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160429.D
Acq On : 18 Jul 2018 5:26 pm
Operator : HueanhT
Sample : ic6923-0.25
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 19 08:25:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:24:21 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.81	95	11428	1.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.11	96	5765	9.85	ug/L	0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 98.50%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.16	88	196	0.34	ug/L	97

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

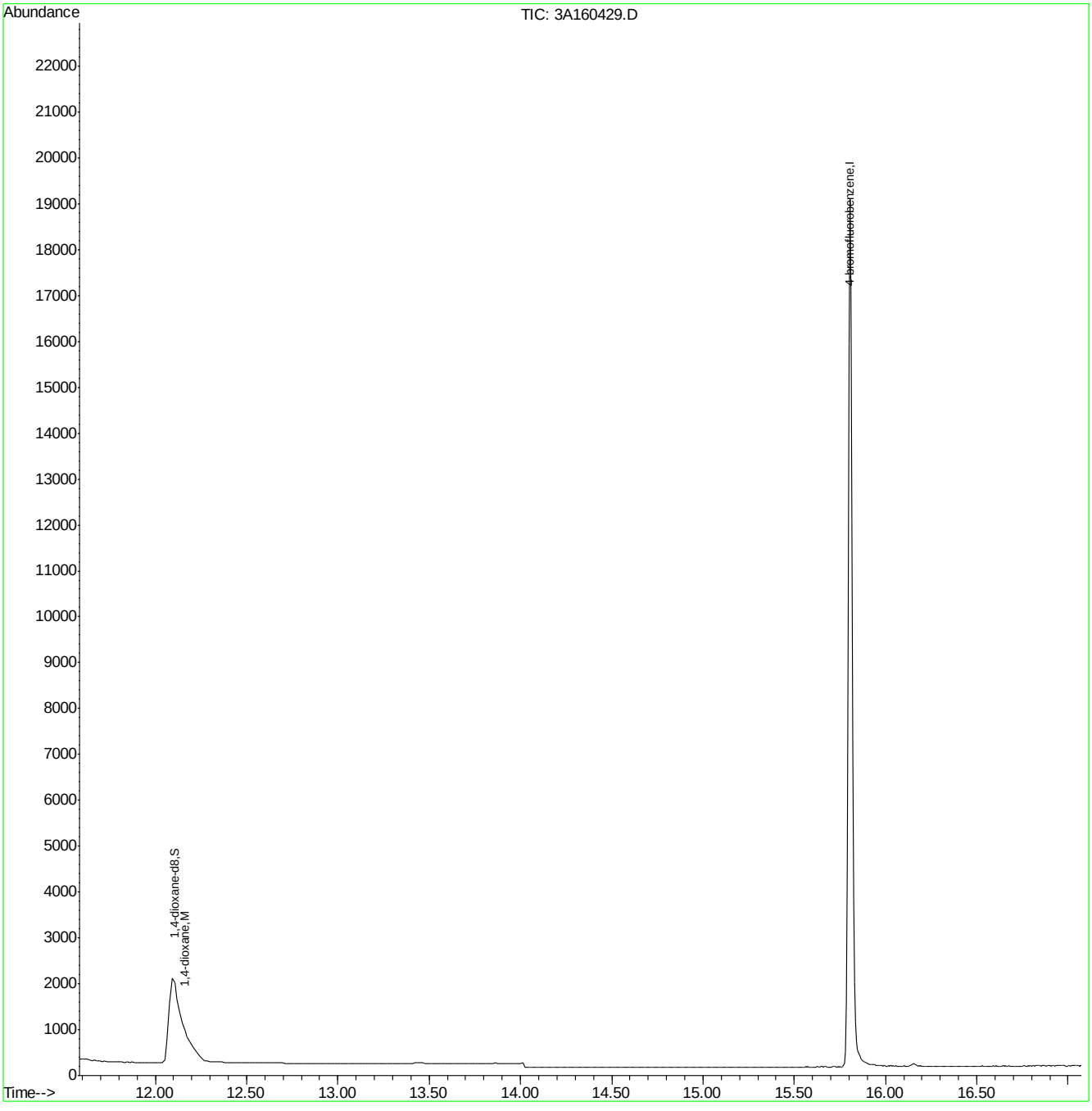
7.6.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160429.D
Acq On : 18 Jul 2018 5:26 pm
Operator : HueanhT
Sample : ic6923-0.25
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 19 08:25:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:24:21 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:31 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160430.D
Acq On : 18 Jul 2018 5:52 pm
Operator : HueanhT
Sample : ic6923-0.4
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 19 08:22:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	10021	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4844	7.41 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 74.10%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.16	88	212	0.35 ug/L	98

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

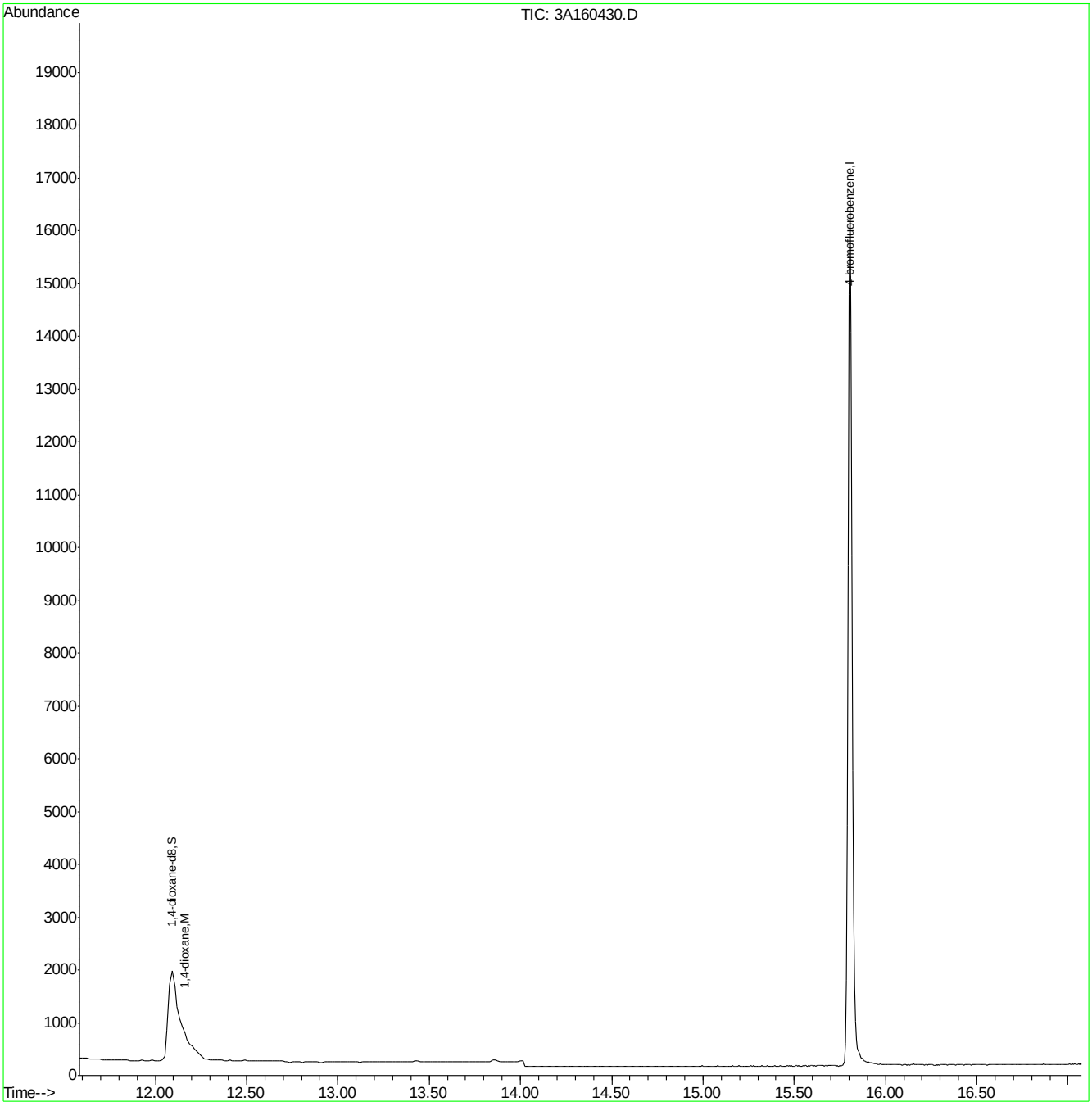
7.6.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160430.D
Acq On : 18 Jul 2018 5:52 pm
Operator : HueanhT
Sample : ic6923-0.4
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 19 08:22:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:32 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160431.D
Acq On : 18 Jul 2018 6:18 pm
Operator : HueanhT
Sample : ic6923-1
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 19 08:16:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.81	95	9887	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4804	7.45 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 74.50%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.16	88	507	0.84 ug/L	94

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

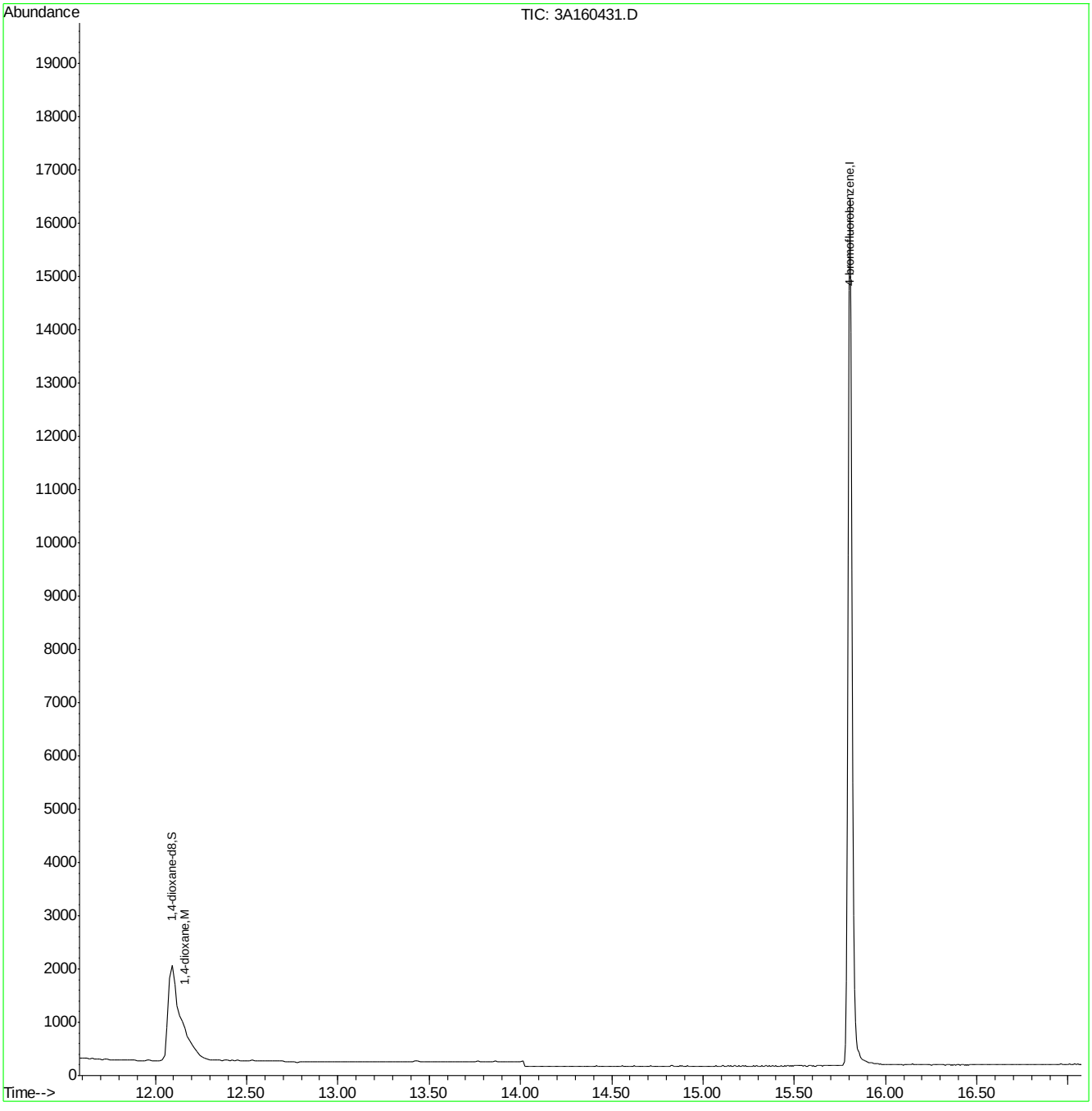
7.6.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160431.D
Acq On : 18 Jul 2018 6:18 pm
Operator : HueanhT
Sample : ic6923-1
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 19 08:16:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:33 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160432.D
Acq On : 18 Jul 2018 6:43 pm
Operator : HueanhT
Sample : ic6923-2
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:16:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	10152	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	5154	7.78 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 77.80%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.16	88	986	1.59 ug/L	94

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

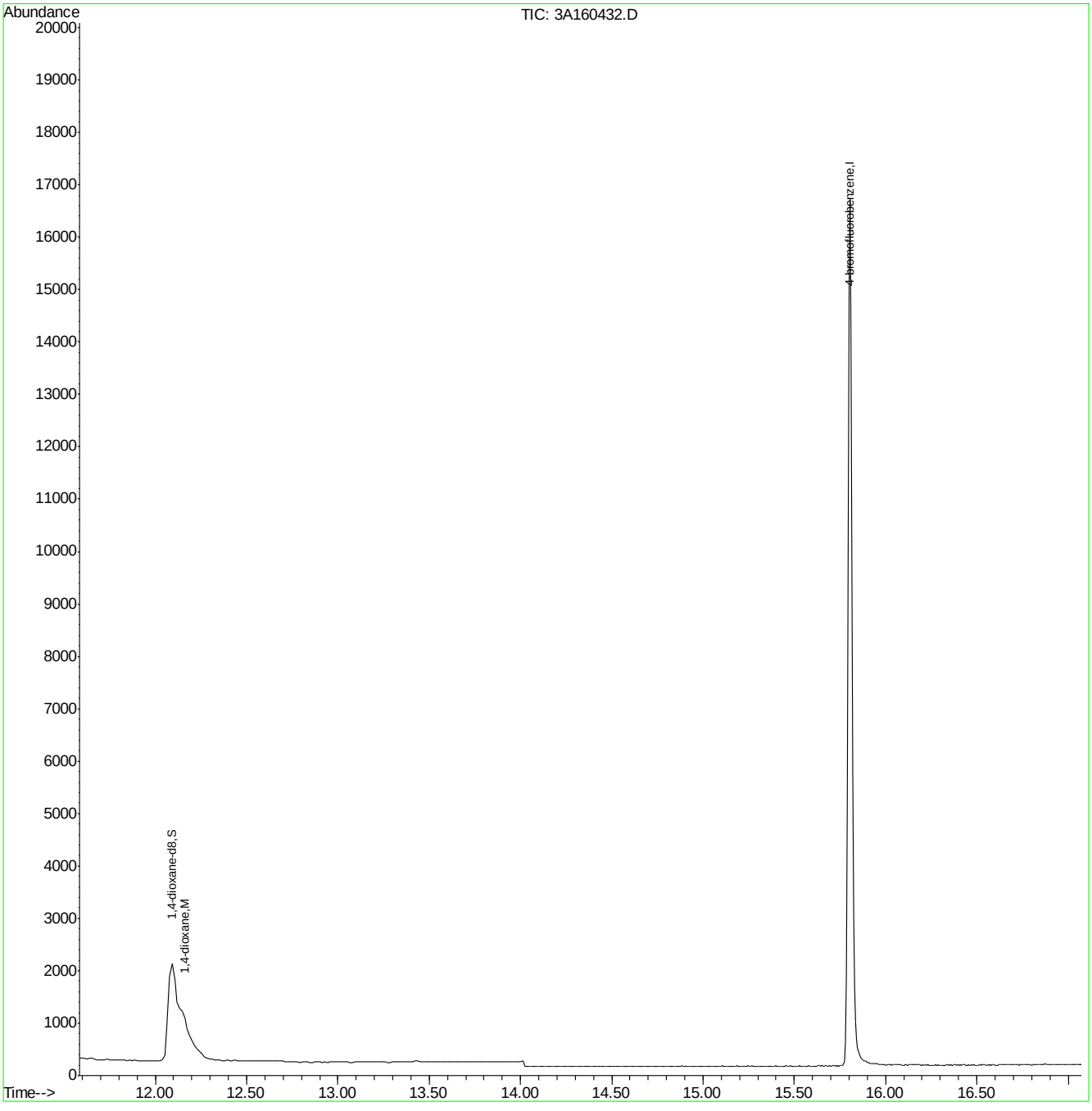
7.6.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160432.D
Acq On : 18 Jul 2018 6:43 pm
Operator : HueanhT
Sample : ic6923-2
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:16:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:34 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160433.D
Acq On : 18 Jul 2018 7:09 pm
Operator : HueanhT
Sample : ic6923-5
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 19 08:16:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	10530	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	5454	7.94 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 79.40%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	2558	3.99 ug/L	99

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

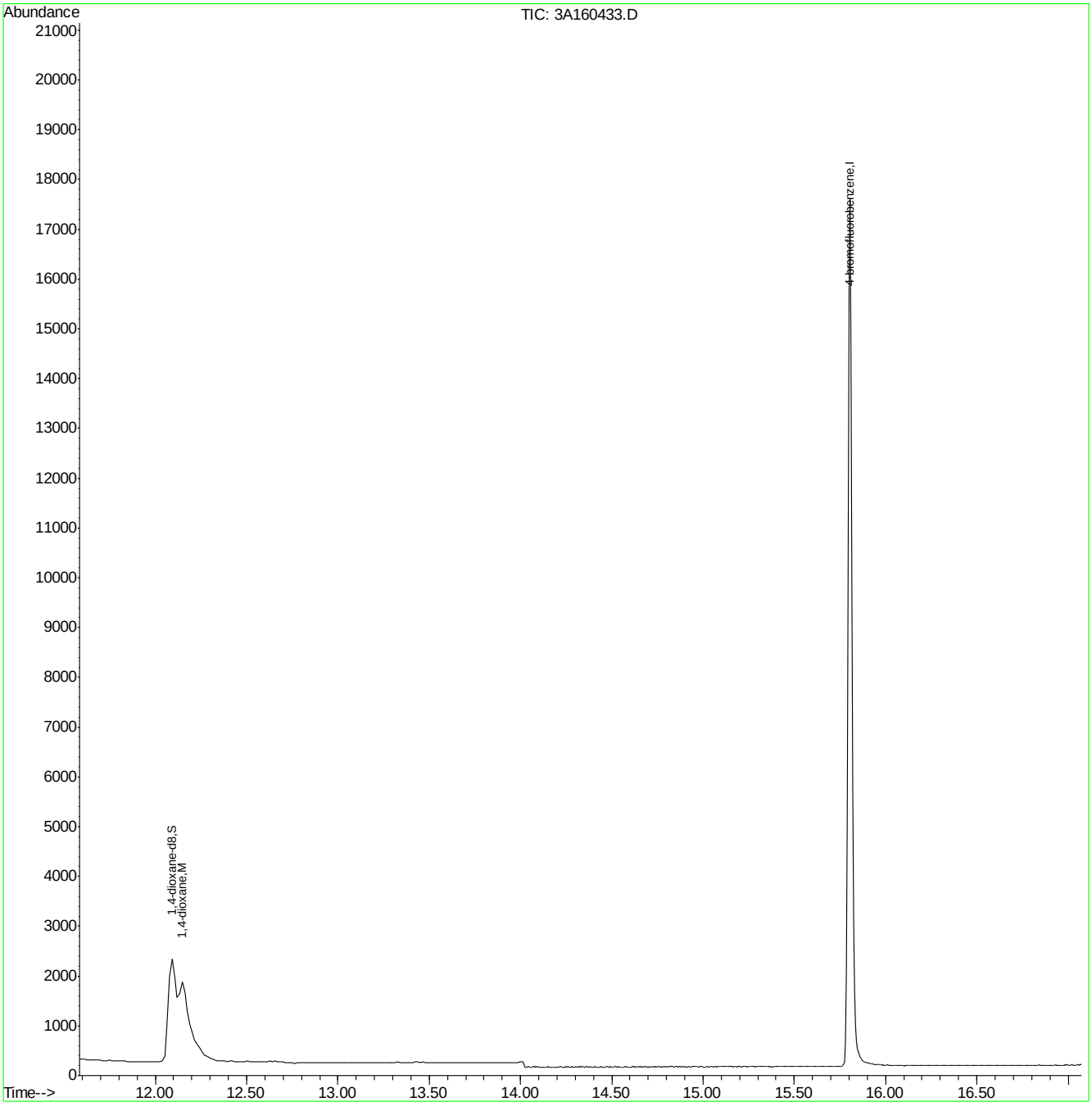
7.6.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160433.D
Acq On : 18 Jul 2018 7:09 pm
Operator : HueanhT
Sample : ic6923-5
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 19 08:16:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160434.D
Acq On : 18 Jul 2018 7:35 pm
Operator : HueanhT
Sample : icc6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 19 08:16:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9699	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4983	7.88 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 78.80%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	8526	14.43 ug/L	98

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

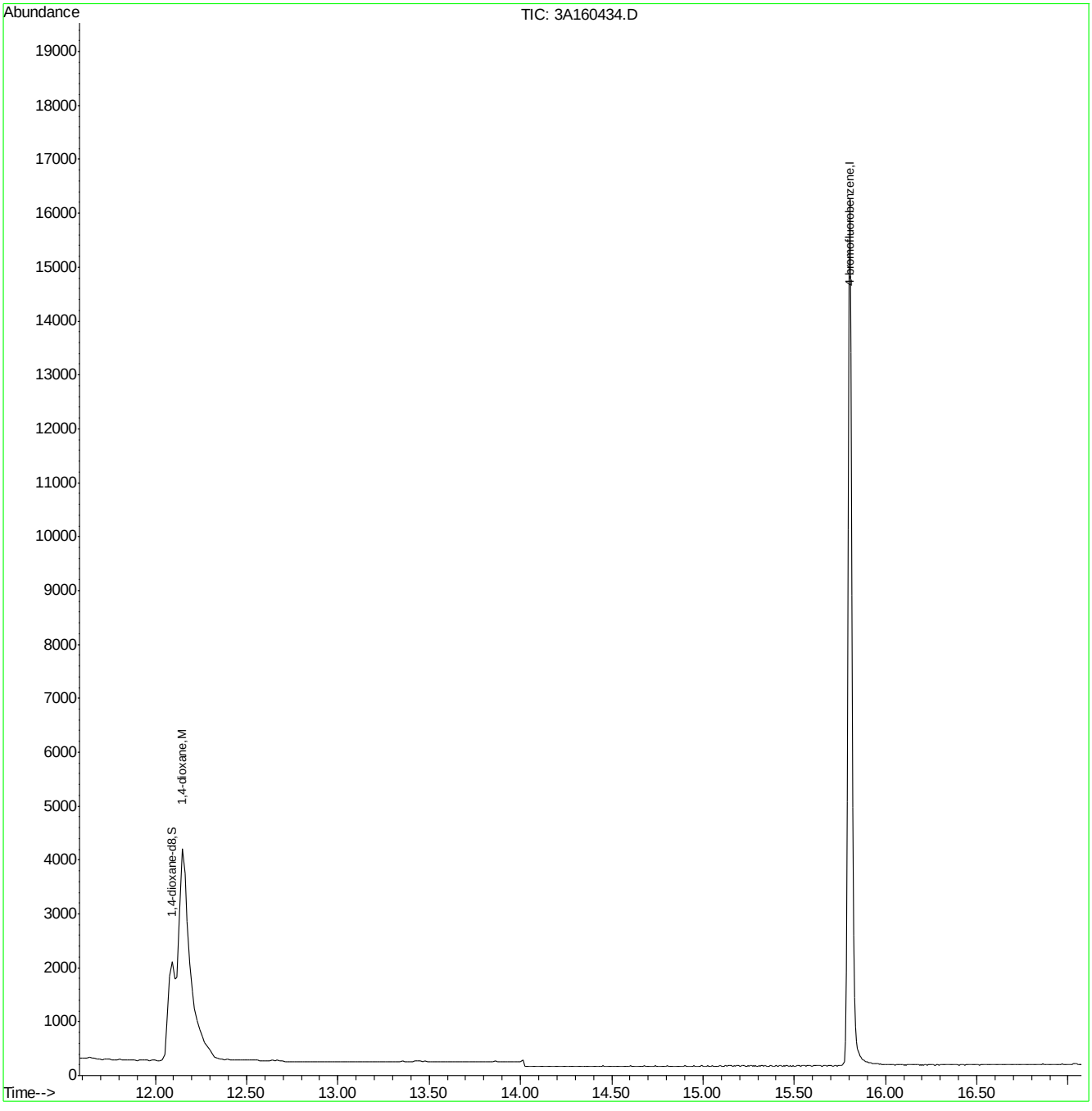
7.6.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160434.D
Acq On : 18 Jul 2018 7:35 pm
Operator : HueanhT
Sample : icc6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 19 08:16:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:36 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160435.D
Acq On : 18 Jul 2018 8:00 pm
Operator : HueanhT
Sample : ic6923-50
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 19 08:16:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9594	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	4993	7.98 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 79.80%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	22016	37.68 ug/L	99

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

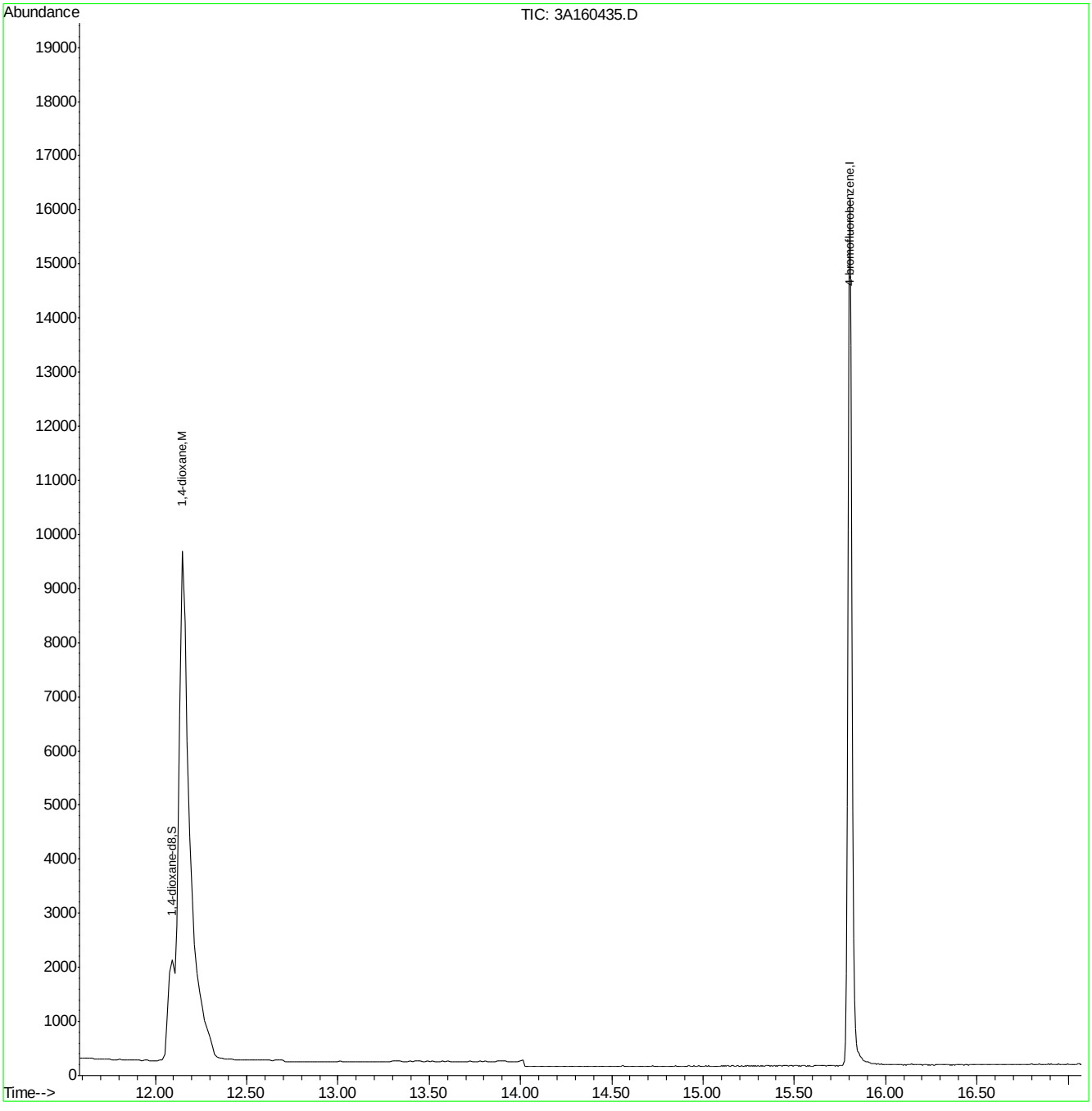
7.6.7

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160435.D
Acq On : 18 Jul 2018 8:00 pm
Operator : HueanhT
Sample : ic6923-50
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 19 08:16:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:37 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160436.D
Acq On : 18 Jul 2018 8:26 pm
Operator : HueanhT
Sample : ic6923-100
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 19 08:16:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9290	1.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.09	96	4696	7.75	ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 77.50%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.15	88	41236	72.88	ug/L	99

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

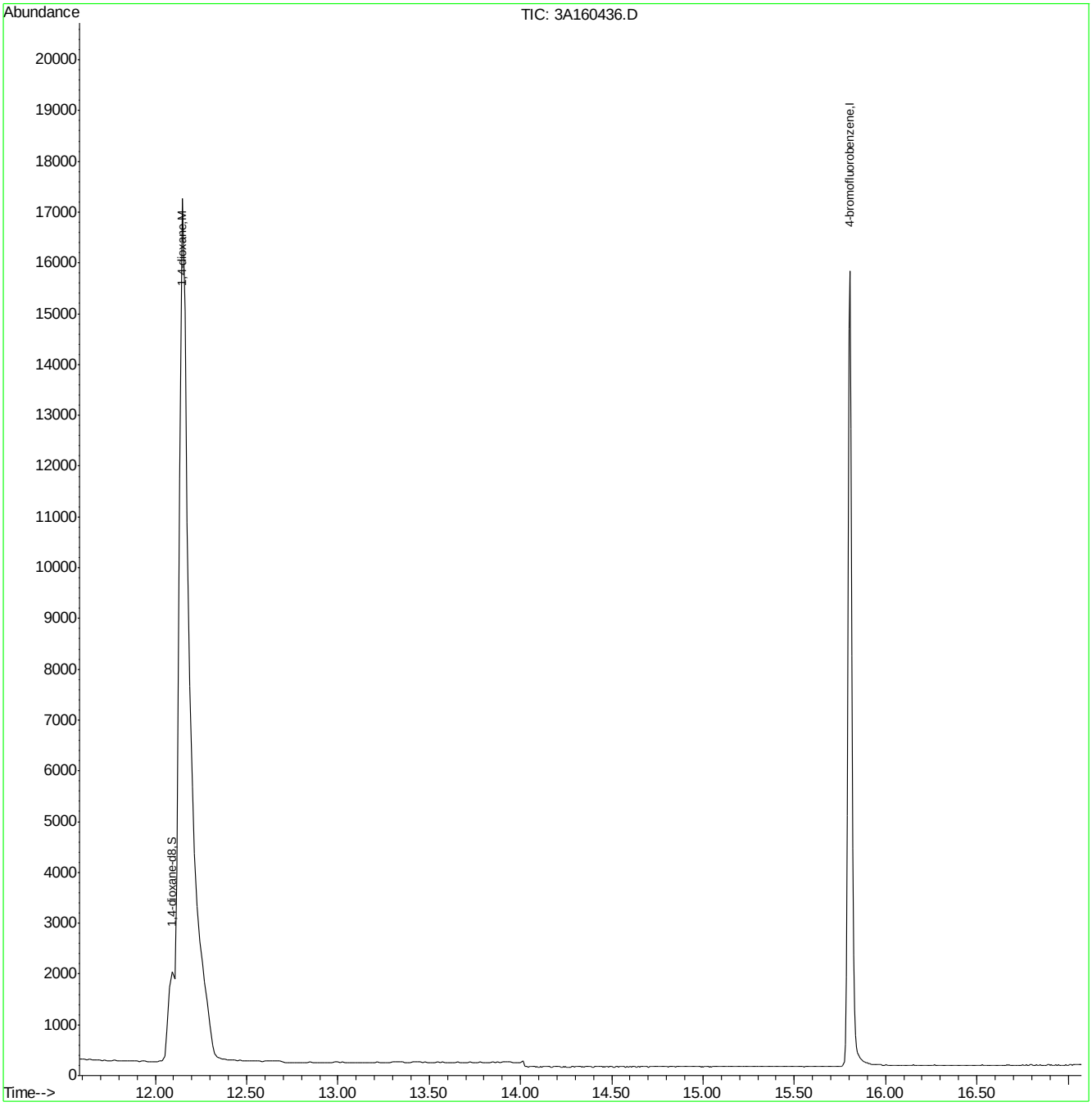
7.6.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160436.D
Acq On : 18 Jul 2018 8:26 pm
Operator : HueanhT
Sample : ic6923-100
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 19 08:16:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:38 2018 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160437.D
Acq On : 18 Jul 2018 8:52 pm
Operator : HueanhT
Sample : ic6923-200
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 19 08:16:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	9766	1.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.09	96	5566	8.74 ug/L	-0.01
Spiked Amount 10.000	Range 51 - 175		Recovery = 87.40%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	102005	171.50 ug/L	99

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

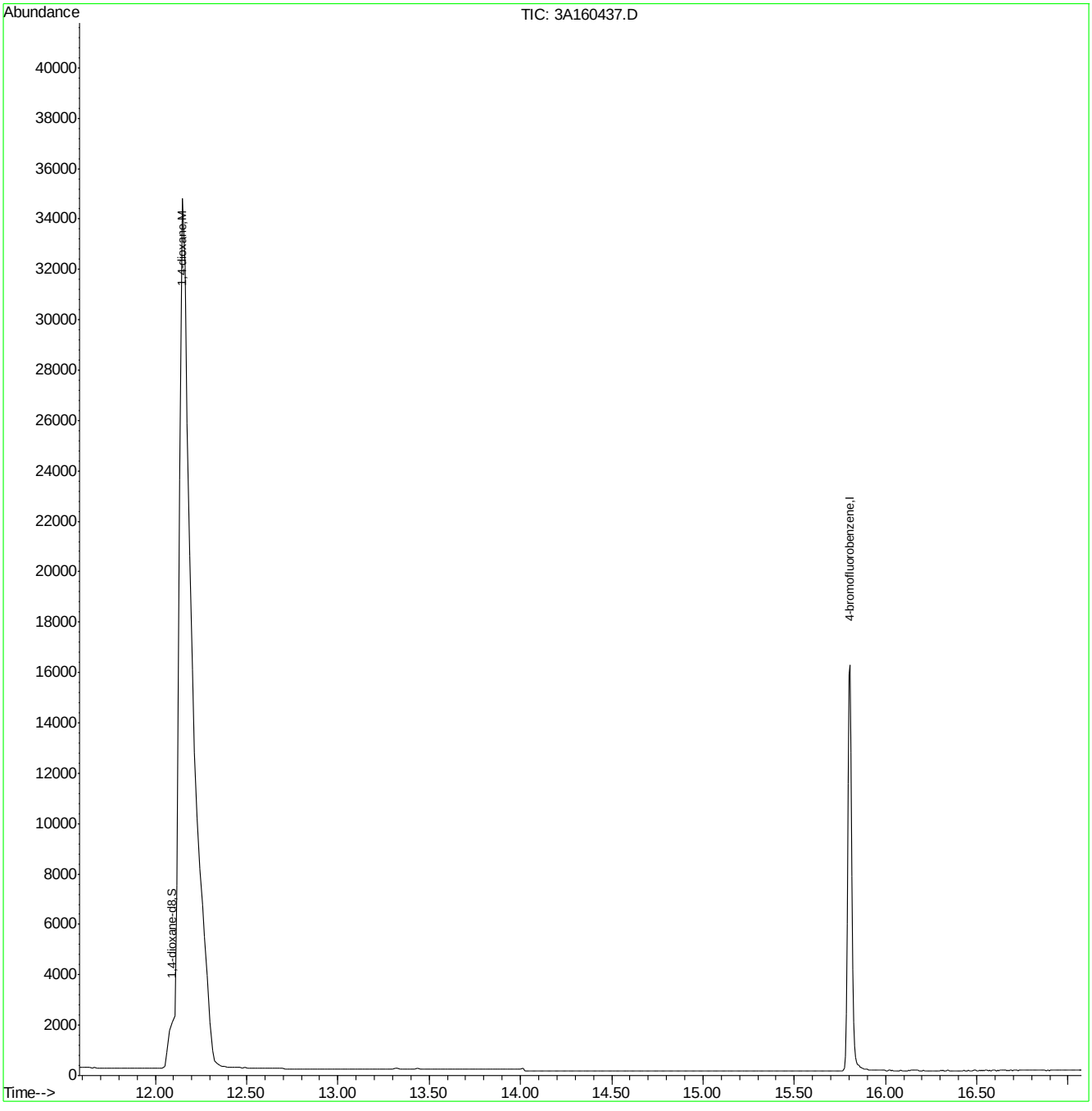
7.6.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160437.D
Acq On : 18 Jul 2018 8:52 pm
Operator : HueanhT
Sample : ic6923-200
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 19 08:16:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Jun 04 09:52:26 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:39 2018 ACCUNJ

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160443.D
Acq On : 18 Jul 2018 11:25 pm
Operator : HueanhT
Sample : icv6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 19 08:26:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:25:27 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 4-bromofluorobenzene	15.80	95	8921	1.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-dioxane-d8	12.09	96	5512	12.07	ug/L	0.00
Spiked Amount 10.000	Range 51 - 175		Recovery = 120.70%			
Target Compounds						Qvalue
3) 1,4-dioxane	12.16	88	9667	21.37	ug/L	91

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

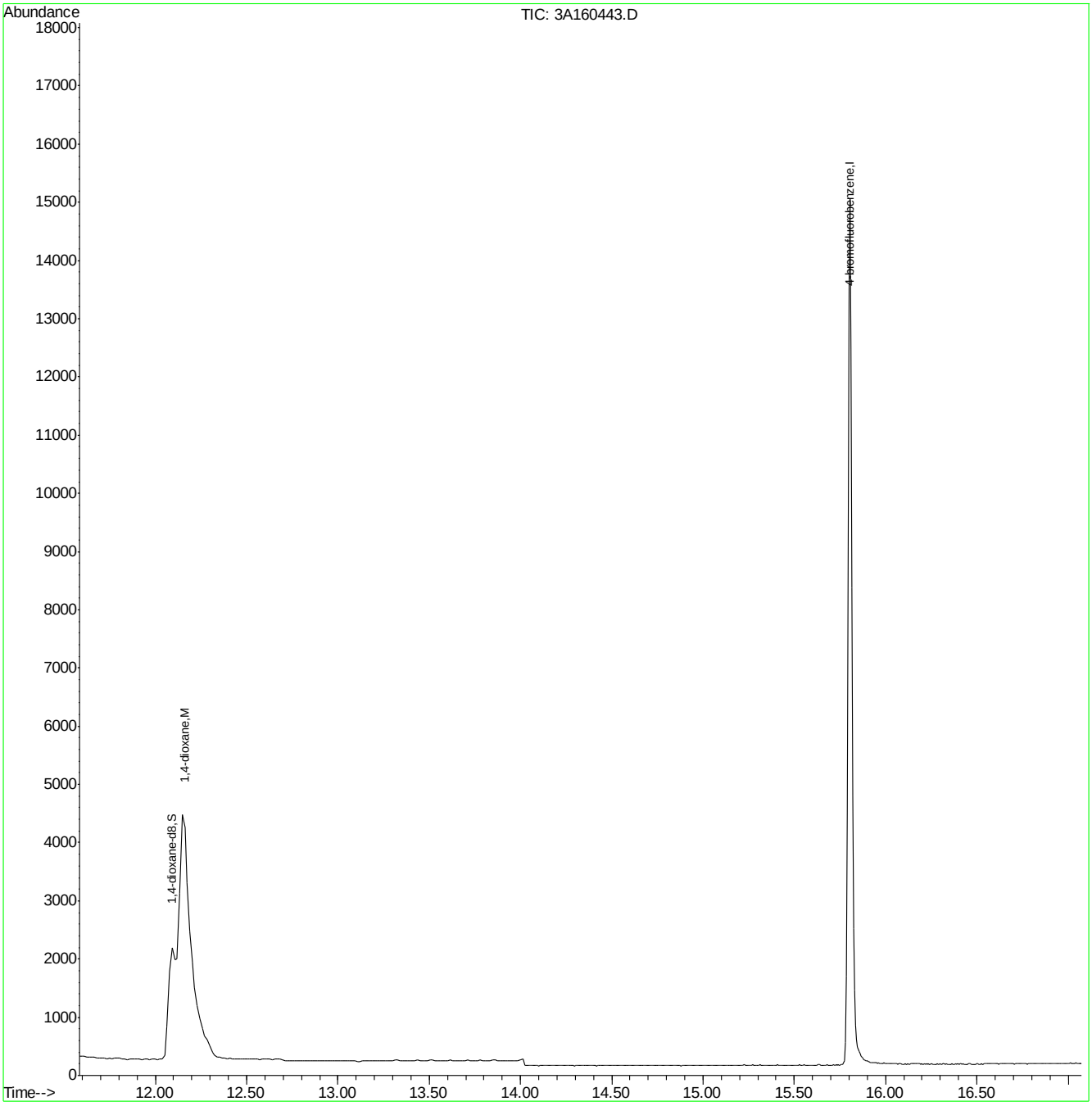
7.6.10

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A6923\
Data File : 3A160443.D
Acq On : 18 Jul 2018 11:25 pm
Operator : HueanhT
Sample : icv6923-20
Misc : MS27832,V3A6923,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 19 08:26:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Jul 19 08:25:27 2018
Response via : Initial Calibration



M3A6923.M Wed Jul 25 13:48:40 2018 ACCUNJ

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165057.D
Acq On : 4 Mar 2021 10:45 am
Operator : ROBERTS
Sample : CC6923-5 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 04 11:03:35 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 4-bromofluorobenzene	15.77	95	11964	1.00 ug/L	-0.03
System Monitoring Compounds					
2) 1,4-dioxane-d8	12.06	96	5486	8.95 ug/L	-0.03
Spiked Amount 10.000	Range 39 - 174		Recovery = 89.50%		
Target Compounds					Qvalue
3) 1,4-dioxane	12.15	88	2723	4.49 ug/L	92

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

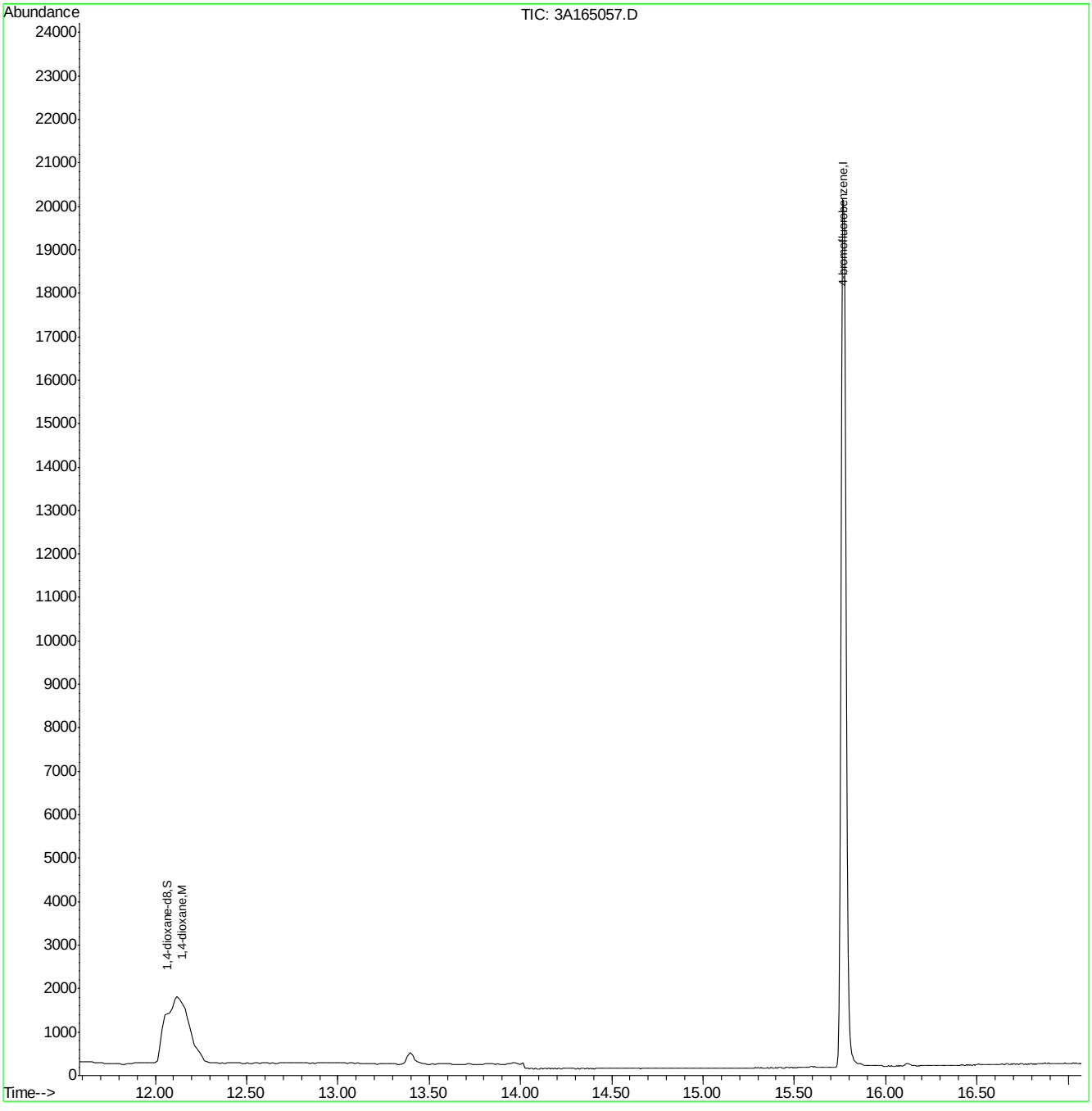
7.6.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3A7170\
Data File : 3A165057.D
Acq On : 4 Mar 2021 10:45 am
Operator : ROBERTS
Sample : CC6923-5 C
Misc : MS49208,V3A7170,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 04 11:03:35 2021
Quant Method : C:\MSDCHEM\1\METHODS\M3A6923.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Oct 21 09:38:56 2020
Response via : Initial Calibration



M3A6923.M Fri Mar 05 17:40:16 2021 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102496.D
Acq On : 17 Feb 2021 8:52 pm
Operator : brittank
Sample : ic4435-0.2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 11:39:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	152226	500.00	ug/L	0.01
5) pentafluorobenzene	8.445	168	241999	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	302283	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	333356	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	255733	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.482	113	123873	51.87	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.74%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	124108	55.30	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 110.60%			
75) toluene-d8 (s)	10.914	98	363441	46.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.40%			
98) 4-bromofluorobenzene (s)	13.770	95	184024	49.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.12%			
Target Compounds						Qvalue
11) bromomethane	4.706	94	712	0.22	ug/L #	18
18) 1,1-dichloroethene	5.909	61	852	0.22	ug/L #	41
21) iodomethane	6.113	142	1250	0.20	ug/L #	46
22) carbon disulfide	6.259	76	2026	0.22	ug/L	78
25) methyl tert butyl ether	6.829	73	1444	0.20	ug/L	57
26) trans-1,2-dichloroethene	6.850	61	529	0.16	ug/L #	70
28) di-isopropyl ether	7.342	45	1708	0.19	ug/L	79
34) ethyl tert-butyl ether	7.745	59	1618	0.20	ug/L #	60
36) 2,2-dichloropropane	8.037	77	880	0.20	ug/L	85
46) 1,1,1-trichloroethane	8.560	97	887	0.17	ug/L #	72
47) cyclohexane	8.686	84	860	0.21	ug/L	87
50) carbon tetrachloride	8.775	117	839	0.18	ug/L #	69
57) benzene	8.942	78	1684	0.22	ug/L #	61
58) tert-amyl methyl ether	9.021	73	1397	0.20	ug/L	61
65) methylcyclohexane	9.931	83	795	0.18	ug/L	91
71) cis-1,3-dichloropropene	10.595	75	660	0.21	ug/L #	75
76) toluene	10.982	92	860	0.17	ug/L #	57
78) trans-1,3-dichloropropene	11.176	75	473	0.16	ug/L #	22
84) dibromochloromethane	11.845	129	538	0.21	ug/L #	20
87) chlorobenzene	12.541	112	1008	0.17	ug/L #	63
89) ethylbenzene	12.624	91	1786	0.17	ug/L	81
90) m,p-xylene	12.766	106	1297	0.32	ug/L #	56
91) o-xylene	13.194	91	1483	0.16	ug/L	87
94) isopropylbenzene	13.561	105	2385	0.19	ug/L	94
99) 1,1,2,2-tetrachloroethane	13.859	83	524	0.18	ug/L #	33
102) bromobenzene	13.969	156	560	0.15	ug/L #	79
103) n-propylbenzene	14.042	91	2407	0.16	ug/L	84
104) 2-chlorotoluene	14.188	126	567	0.18	ug/L #	34
105) 4-chlorotoluene	14.319	91	1699	0.18	ug/L #	47
108) 1,2,4-trimethylbenzene	14.638	105	1980	0.17	ug/L	87
109) sec-butylbenzene	14.816	105	2646	0.18	ug/L	90
110) p-isopropyltoluene	14.968	119	2154	0.16	ug/L	77

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102496.D
Acq On : 17 Feb 2021 8:52 pm
Operator : brittank
Sample : ic4435-0.2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 11:39:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	14.999	146	1329	0.18	ug/L	100
112) 1,2,3-trimethylbenzene	15.104	105	2511	0.20	ug/L #	69
113) 1,4-dichlorobenzene	15.093	146	1464	0.19	ug/L #	43

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

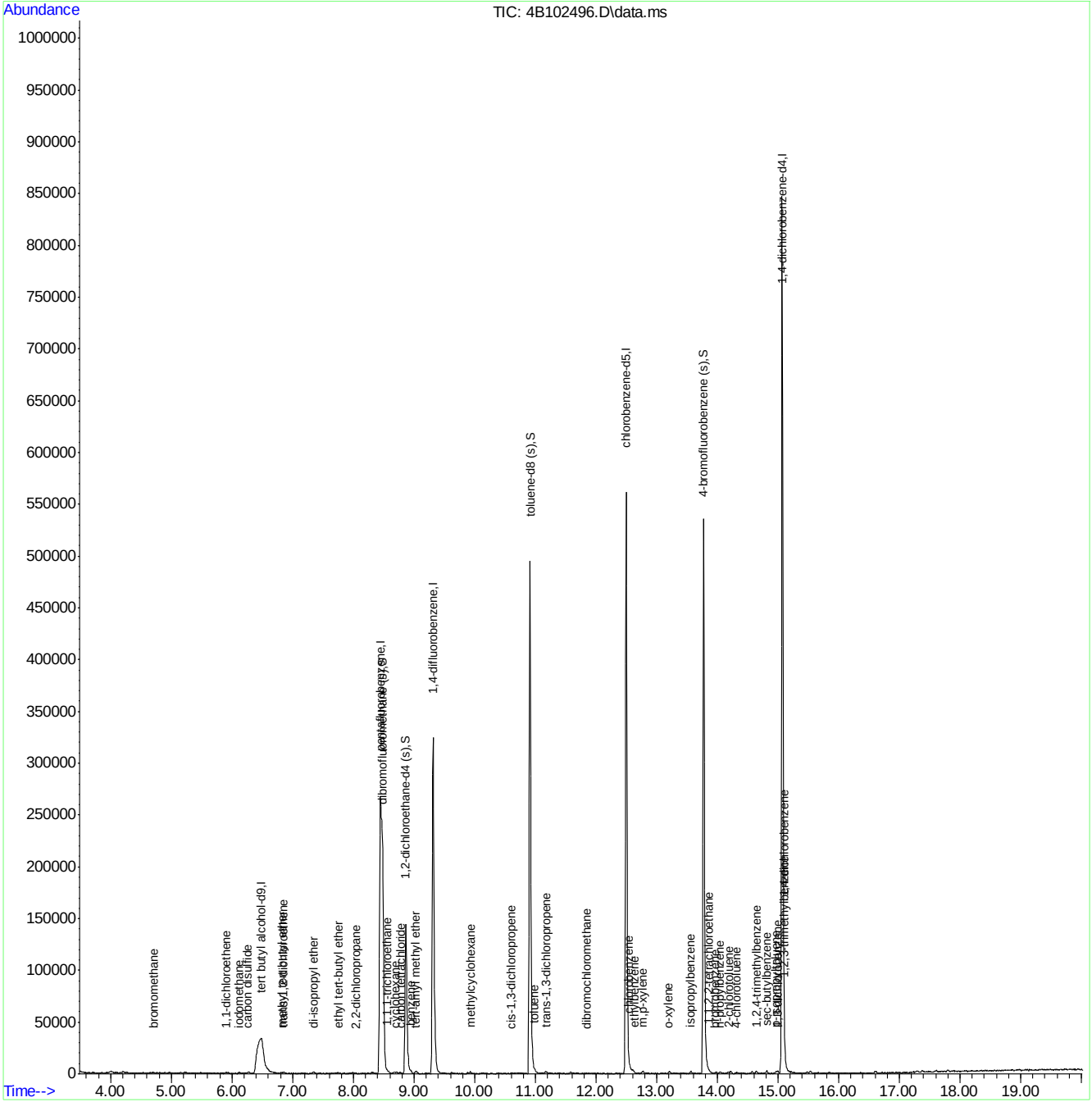
7.6.12

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102496.D
Acq On : 17 Feb 2021 8:52 pm
Operator : brittank
Sample : ic4435-0.2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 11:39:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102497.D
Acq On : 17 Feb 2021 9:20 pm
Operator : brittank
Sample : ic4435-0.5
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	134235	500.00	ug/L	0.01
5) pentafluorobenzene	8.451	168	276474	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.319	114	380998	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	392132	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	278090	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	134903	49.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.88%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	142745	50.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.92%			
75) toluene-d8 (s)	10.909	98	435003	47.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.02%			
98) 4-bromofluorobenzene (s)	13.770	95	212464	52.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.24%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.717	51	2260	0.45	ug/L	68
7) dichlorodifluoromethane	3.681	85	3031	0.41	ug/L #	48
9) vinyl chloride	4.199	62	2429	0.47	ug/L	89
10) 1,3-butadiene	4.199	54	1462	0.43	ug/L #	26
11) bromomethane	4.716	94	2096	0.58	ug/L	70
13) trichlorofluoromethane	5.255	101	3072	0.49	ug/L	88
18) 1,1-dichloroethene	5.904	61	2314	0.52	ug/L	90
21) iodomethane	6.123	142	3698	0.51	ug/L	83
22) carbon disulfide	6.265	76	5584	0.52	ug/L	78
25) methyl tert butyl ether	6.845	73	3974	0.49	ug/L	75
26) trans-1,2-dichloroethene	6.856	61	1919	0.51	ug/L	76
27) hexane	7.175	56	811	0.46	ug/L #	49
28) di-isopropyl ether	7.342	45	4913	0.48	ug/L	80
30) 1,1-dichloroethane	7.332	63	2544	0.55	ug/L	88
31) chloroprene	7.436	53	1864	0.50	ug/L	88
34) ethyl tert-butyl ether	7.739	59	4674	0.50	ug/L	90
36) 2,2-dichloropropane	8.006	77	2696	0.53	ug/L	91
37) cis-1,2-dichloroethene	7.964	96	1231	0.46	ug/L	85
38) propionitrile	7.975	54	1188	4.33	ug/L	58
41) bromochloromethane	8.242	128	824	0.57	ug/L #	53
43) chloroform	8.310	83	2917	0.61	ug/L	80
46) 1,1,1-trichloroethane	8.571	97	2771	0.48	ug/L	90
47) cyclohexane	8.691	84	2274	0.48	ug/L	85
49) 1,1-dichloropropene	8.738	75	1763	0.55	ug/L	80
50) carbon tetrachloride	8.765	117	2298	0.44	ug/L	82
57) benzene	8.948	78	5122	0.54	ug/L	92
58) tert-amyl methyl ether	9.031	73	4242	0.48	ug/L	95
59) heptane	9.183	57	800	0.43	ug/L #	48
62) trichloroethene	9.612	95	1217	0.48	ug/L #	50
63) 2-chloroethyl vinyl ether	10.381	63	2440	1.93	ug/L	84
65) methylcyclohexane	9.926	83	2602	0.46	ug/L #	75
66) 1,2-dichloropropane	9.889	63	1292	0.51	ug/L	87

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102497.D
Acq On : 17 Feb 2021 9:20 pm
Operator : brittank
Sample : ic4435-0.5
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

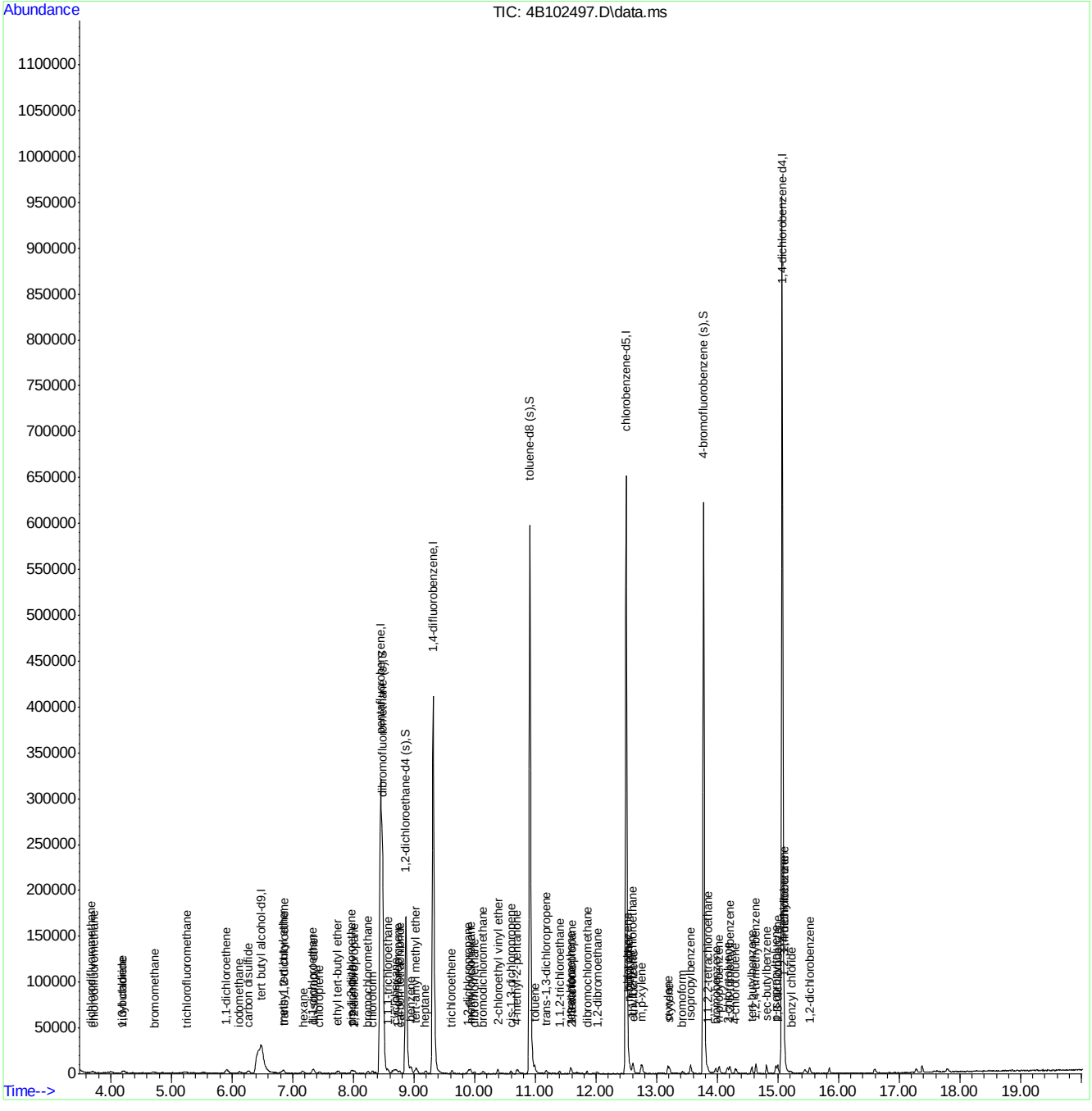
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
67)	dibromomethane	9.994	93	792	0.51	ug/L		90
68)	bromodichloromethane	10.135	83	1871	0.52	ug/L		94
71)	cis-1,3-dichloropropene	10.600	75	2013	0.51	ug/L		89
72)	4-methyl-2-pentanone	10.695	58	1514	1.84	ug/L	#	87
76)	toluene	10.993	92	2752	0.47	ug/L		93
78)	trans-1,3-dichloropropene	11.176	75	1734	0.49	ug/L		79
79)	1,1,2-trichloroethane	11.401	83	757	0.44	ug/L	#	79
80)	tetrachloroethene	11.584	164	1092	0.45	ug/L		91
81)	2-hexanone	11.605	58	1188	1.61	ug/L	#	72
82)	1,3-dichloropropane	11.594	76	1739	0.53	ug/L		76
84)	dibromochloromethane	11.856	129	1580	0.53	ug/L		81
85)	1,2-dibromoethane	12.018	107	1738	0.50	ug/L		90
86)	n-butyl ether	12.536	57	6247	0.52	ug/L		93
87)	chlorobenzene	12.530	112	4017	0.57	ug/L		94
88)	1,1,1,2-tetrachloroethane	12.604	131	1716	0.49	ug/L		85
89)	ethylbenzene	12.619	91	6399	0.51	ug/L		95
90)	m,p-xylene	12.750	106	4842	1.03	ug/L	#	80
91)	o-xylene	13.184	91	5258	0.48	ug/L		97
92)	styrene	13.205	104	3768	0.45	ug/L		85
94)	isopropylbenzene	13.561	105	7175	0.49	ug/L		88
95)	bromoform	13.425	173	1117	0.44	ug/L		92
99)	1,1,2,2-tetrachloroethane	13.848	83	1509	0.48	ug/L		91
102)	bromobenzene	13.974	156	1993	0.50	ug/L	#	64
103)	n-propylbenzene	14.026	91	8504	0.52	ug/L		92
104)	2-chlorotoluene	14.173	126	1651	0.48	ug/L	#	84
105)	4-chlorotoluene	14.303	91	5441	0.54	ug/L		95
106)	1,3,5-trimethylbenzene	14.204	105	6330	0.53	ug/L		96
107)	tert-butylbenzene	14.570	119	4833	0.47	ug/L		98
108)	1,2,4-trimethylbenzene	14.633	105	6568	0.52	ug/L		94
109)	sec-butylbenzene	14.811	105	8152	0.50	ug/L		98
110)	p-isopropyltoluene	14.968	119	7371	0.50	ug/L		97
111)	1,3-dichlorobenzene	14.999	146	4056	0.50	ug/L		88
112)	1,2,3-trimethylbenzene	15.104	105	7067	0.52	ug/L		92
113)	1,4-dichlorobenzene	15.098	146	4606	0.56	ug/L		96
114)	1,2-dichlorobenzene	15.522	146	4022	0.48	ug/L		96
115)	benzyl chloride	15.213	91	2857	0.42	ug/L		69

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102497.D
Acq On : 17 Feb 2021 9:20 pm
Operator : brittank
Sample : ic4435-0.5
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



M4B4435.M Mon Feb 22 11:15:39 2021 MS4B Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	133717	500.00	ug/L	0.01
5) pentafluorobenzene	8.451	168	263765	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	345287	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	367036	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	264728	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	131883	50.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.34%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	133947	52.25	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.50%			
75) toluene-d8 (s)	10.909	98	412864	48.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.36%			
98) 4-bromofluorobenzene (s)	13.770	95	201230	52.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.70%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.702	51	4457	0.93	ug/L	87
7) dichlorodifluoromethane	3.696	85	6042	0.86	ug/L	72
8) chloromethane	4.000	50	6666	1.28	ug/L	85
9) vinyl chloride	4.199	62	4766	0.96	ug/L	91
10) 1,3-butadiene	4.204	54	2804	0.86	ug/L	82
11) bromomethane	4.716	94	3882	1.12	ug/L #	72
12) chloroethane	4.852	64	1712	0.81	ug/L #	70
13) trichlorofluoromethane	5.245	101	5999	1.01	ug/L	89
14) vinyl bromide	5.140	106	1308	0.82	ug/L	91
17) freon 113	5.945	151	2815	0.88	ug/L #	69
18) 1,1-dichloroethene	5.904	61	4191	0.99	ug/L	90
21) iodomethane	6.123	142	6929	1.01	ug/L	92
22) carbon disulfide	6.270	76	10765	1.05	ug/L	93
23) methylene chloride	6.495	84	3743	1.29	ug/L	83
24) methyl acetate	6.291	43	1053	0.72	ug/L	61
25) methyl tert butyl ether	6.819	73	8088	1.04	ug/L	87
26) trans-1,2-dichloroethene	6.840	61	3839	1.08	ug/L	85
27) hexane	7.159	56	1578	0.93	ug/L #	75
28) di-isopropyl ether	7.342	45	10072	1.04	ug/L	98
30) 1,1-dichloroethane	7.331	63	4331	0.99	ug/L	91
31) chloroprene	7.441	53	3484	0.99	ug/L	87
34) ethyl tert-butyl ether	7.734	59	8571	0.96	ug/L	89
36) 2,2-dichloropropane	8.017	77	5419	1.12	ug/L	91
37) cis-1,2-dichloroethene	7.975	96	2786	1.10	ug/L #	77
38) propionitrile	7.970	54	2591	9.89	ug/L	60
40) methacrylonitrile	8.142	67	538	0.79	ug/L #	75
41) bromochloromethane	8.226	128	1325	0.96	ug/L	81
43) chloroform	8.310	83	5429	1.20	ug/L	97
44) tert-butyl formate	8.357	59	1517	0.73	ug/L	83
46) 1,1,1-trichloroethane	8.576	97	5196	0.94	ug/L	96
47) cyclohexane	8.686	84	4374	0.96	ug/L #	73
49) 1,1-dichloropropene	8.728	75	3046	1.00	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
50)	carbon tetrachloride	8.759	117	5099	1.03	ug/L		99
55)	n-butyl alcohol	9.392	41	1824	42.62	ug/L	#	64
56)	2,2,4-trimethylpentane	9.042	57	8817	0.83	ug/L		96
57)	benzene	8.942	78	8796	1.03	ug/L		89
58)	tert-amyl methyl ether	9.026	73	7706	0.96	ug/L		93
59)	heptane	9.193	57	1585	0.95	ug/L		85
60)	1,2-dichloroethane	8.948	62	3578	1.16	ug/L		92
62)	trichloroethene	9.622	95	2343	1.03	ug/L		90
63)	2-chloroethyl vinyl ether	10.375	63	5104	4.45	ug/L		92
65)	methylcyclohexane	9.931	83	4700	0.92	ug/L		97
66)	1,2-dichloropropane	9.884	63	2298	0.99	ug/L		97
67)	dibromomethane	9.994	93	1526	1.08	ug/L		94
68)	bromodichloromethane	10.140	83	3458	1.05	ug/L		95
70)	epichlorohydrin	10.454	57	649	3.69	ug/L		42
71)	cis-1,3-dichloropropene	10.590	75	3721	1.03	ug/L		87
72)	4-methyl-2-pentanone	10.695	58	2905	3.89	ug/L		88
73)	isoamyl alcohol	10.721	70	1021	17.39	ug/L	#	52
76)	toluene	10.987	92	5407	1.00	ug/L		93
77)	ethyl methacrylate	11.181	69	1975	0.75	ug/L		97
78)	trans-1,3-dichloropropene	11.165	75	3154	0.95	ug/L	#	72
79)	1,1,2-trichloroethane	11.401	83	1304	0.81	ug/L		92
80)	tetrachloroethene	11.573	164	2385	1.05	ug/L		90
81)	2-hexanone	11.589	58	2493	3.62	ug/L	#	76
82)	1,3-dichloropropane	11.584	76	2877	0.94	ug/L	#	67
84)	dibromochloromethane	11.850	129	2543	0.91	ug/L		95
85)	1,2-dibromoethane	12.013	107	3162	0.97	ug/L		76
86)	n-butyl ether	12.525	57	11383	1.01	ug/L		98
87)	chlorobenzene	12.530	112	6719	1.02	ug/L		96
88)	1,1,1,2-tetrachloroethane	12.598	131	2962	0.91	ug/L		98
89)	ethylbenzene	12.609	91	12069	1.03	ug/L		94
90)	m,p-xylene	12.745	106	8723	1.98	ug/L		95
91)	o-xylene	13.174	91	10294	1.01	ug/L		97
92)	styrene	13.205	104	6662	0.85	ug/L		100
93)	butyl acrylate	13.017	55	4151	0.81	ug/L		97
94)	isopropylbenzene	13.561	105	13476	0.98	ug/L		97
95)	bromoform	13.430	173	2251	0.96	ug/L		97
96)	cis-1,4-dichloro-2-butene	13.582	88	973	0.81	ug/L	#	73
99)	1,1,2,2-tetrachloroethane	13.854	83	3025	1.01	ug/L		92
101)	1,2,3-trichloropropane	13.948	110	650	0.79	ug/L	#	50
102)	bromobenzene	13.974	156	3639	0.96	ug/L		87
103)	n-propylbenzene	14.026	91	15379	0.99	ug/L		93
104)	2-chlorotoluene	14.162	126	3561	1.09	ug/L	#	86
105)	4-chlorotoluene	14.298	91	9803	1.03	ug/L		96
106)	1,3,5-trimethylbenzene	14.204	105	11386	0.99	ug/L		90
107)	tert-butylbenzene	14.565	119	8315	0.85	ug/L		91
108)	1,2,4-trimethylbenzene	14.633	105	11462	0.95	ug/L		94
109)	sec-butylbenzene	14.805	105	15284	0.98	ug/L		99
110)	p-isopropyltoluene	14.962	119	13916	0.99	ug/L		97
111)	1,3-dichlorobenzene	14.999	146	8031	1.05	ug/L		98
112)	1,2,3-trimethylbenzene	15.098	105	12876	0.99	ug/L		86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

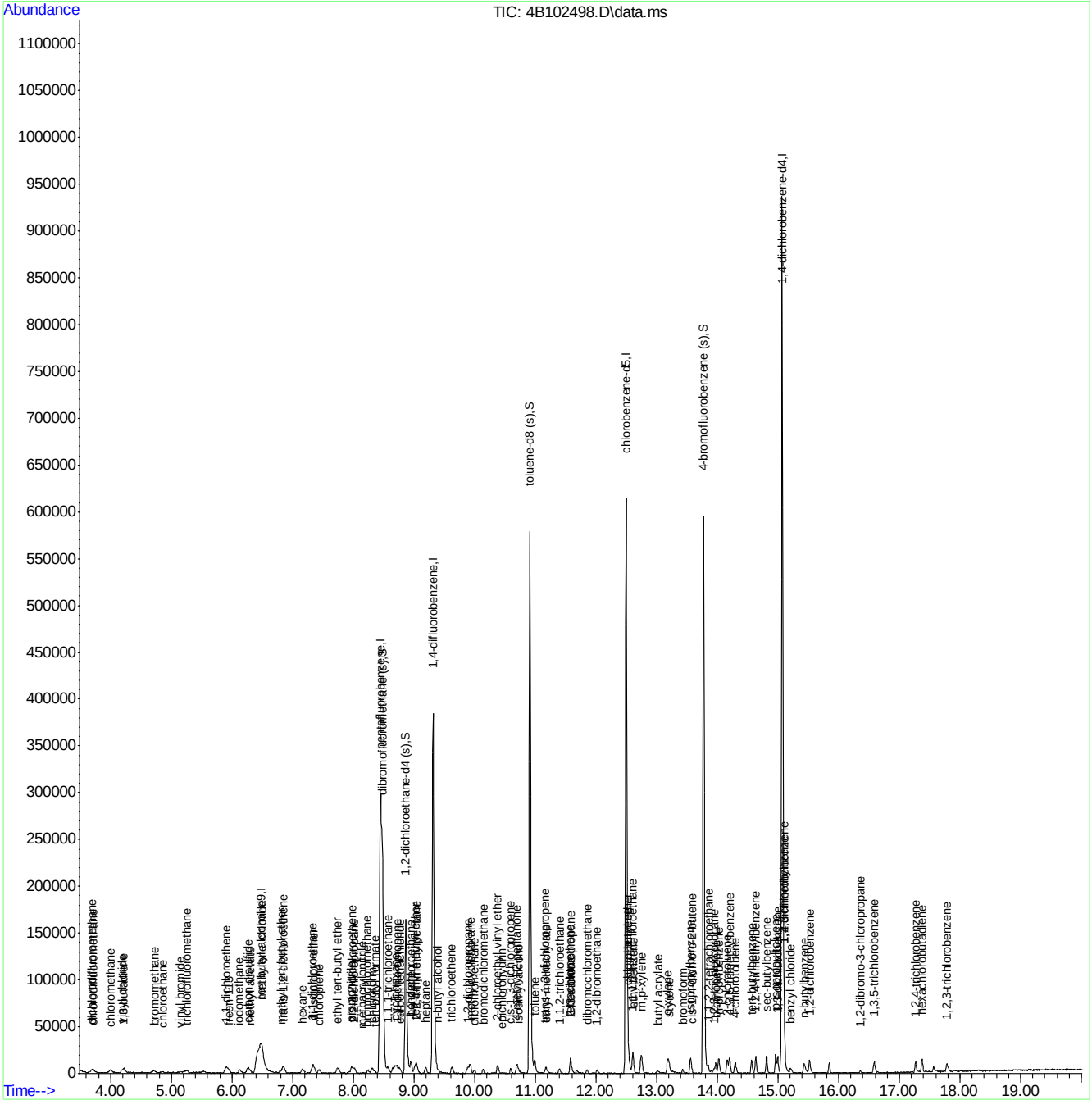
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
113) 1,4-dichlorobenzene	15.098	146	8634	1.10	ug/L	90
114) 1,2-dichlorobenzene	15.517	146	7719	0.96	ug/L	88
115) benzyl chloride	15.208	91	5811	0.90	ug/L	95
116) n-butylbenzene	15.428	92	6270	0.86	ug/L #	71
118) 1,2-dibromo-3-chloropr...	16.359	157	788	0.78	ug/L	80
119) 1,3,5-trichlorobenzene	16.584	180	6369	0.79	ug/L	89
120) 1,2,4-trichlorobenzene	17.269	180	5030	0.69	ug/L	86
122) hexachlorobutadiene	17.374	225	3290	0.87	ug/L	77
124) 1,2,3-trichlorobenzene	17.781	180	4567	0.74	ug/L	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102498.D
Acq On : 17 Feb 2021 9:48 pm
Operator : brittank
Sample : ic4435-1
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	129644	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	256445	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	339893	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	357293	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	262637	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	127430	50.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.70%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	130315	51.64	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.28%			
75) toluene-d8 (s)	10.909	98	397745	47.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.36%			
98) 4-bromofluorobenzene (s)	13.770	95	195926	51.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.76%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.573	59	2439	8.28	ug/L	79
6) chlorodifluoromethane	3.707	51	8224	1.77	ug/L	95
7) dichlorodifluoromethane	3.696	85	11739	1.72	ug/L	89
8) chloromethane	4.000	50	10104	2.00	ug/L	96
9) vinyl chloride	4.209	62	8814	1.82	ug/L	88
10) 1,3-butadiene	4.214	54	5875	1.85	ug/L	97
11) bromomethane	4.716	94	7233	2.15	ug/L	92
12) chloroethane	4.831	64	4197	2.04	ug/L	87
13) trichlorofluoromethane	5.245	101	10621	1.83	ug/L	91
14) vinyl bromide	5.140	106	2523	1.63	ug/L	89
15) ethyl ether	5.553	74	1930	2.22	ug/L #	22
17) freon 113	5.924	151	6104	1.96	ug/L	87
18) 1,1-dichloroethene	5.904	61	8552	2.07	ug/L	95
19) acetone	5.893	58	1282	7.28	ug/L #	51
20) acetonitrile	6.259	41	5395	17.75	ug/L	82
21) iodomethane	6.123	142	13388	2.00	ug/L	93
22) carbon disulfide	6.259	76	19317	1.94	ug/L	96
23) methylene chloride	6.495	84	5995	2.13	ug/L	91
24) methyl acetate	6.280	43	2465	1.74	ug/L	64
25) methyl tert butyl ether	6.829	73	15374	2.04	ug/L	91
26) trans-1,2-dichloroethene	6.845	61	6959	2.01	ug/L	95
27) hexane	7.159	56	3130	1.90	ug/L #	79
28) di-isopropyl ether	7.337	45	18299	1.94	ug/L	89
29) 2-butanone	7.912	72	1000	5.65	ug/L	90
30) 1,1-dichloroethane	7.326	63	8231	1.93	ug/L	91
31) chloroprene	7.436	53	6574	1.92	ug/L	88
34) ethyl tert-butyl ether	7.745	59	16617	1.92	ug/L	98
36) 2,2-dichloropropane	8.017	77	9171	1.96	ug/L	96
37) cis-1,2-dichloroethene	7.964	96	4923	1.99	ug/L	88
38) propionitrile	7.954	54	4758	18.68	ug/L	93
40) methacrylonitrile	8.147	67	1071	1.61	ug/L	90
41) bromochloromethane	8.236	128	2549	1.91	ug/L #	81

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	8.309	83	9224	2.09	ug/L		95
44)	tert-butyl formate	8.351	59	3554	1.75	ug/L		86
46)	1,1,1-trichloroethane	8.576	97	10274	1.91	ug/L		91
47)	cyclohexane	8.686	84	7874	1.78	ug/L		99
49)	1,1-dichloropropene	8.723	75	6035	2.04	ug/L		87
50)	carbon tetrachloride	8.759	117	9289	1.93	ug/L		98
51)	tert-amyl alcohol	8.832	73	1072	9.71	ug/L	#	81
55)	n-butyl alcohol	9.371	41	4218	100.11	ug/L	#	78
56)	2,2,4-trimethylpentane	9.042	57	16890	1.62	ug/L		97
57)	benzene	8.942	78	16204	1.92	ug/L		97
58)	tert-amyl methyl ether	9.021	73	15312	1.94	ug/L		86
59)	heptane	9.188	57	3101	1.89	ug/L		96
60)	1,2-dichloroethane	8.948	62	6379	2.09	ug/L		89
61)	ethyl acrylate	9.627	55	3542	1.64	ug/L		83
62)	trichloroethene	9.622	95	4326	1.92	ug/L		89
63)	2-chloroethyl vinyl ether	10.370	63	9958	8.82	ug/L		97
65)	methylcyclohexane	9.926	83	8825	1.75	ug/L		100
66)	1,2-dichloropropane	9.889	63	4403	1.93	ug/L		82
67)	dibromomethane	9.988	93	2540	1.83	ug/L		89
68)	bromodichloromethane	10.135	83	6119	1.90	ug/L		87
69)	2-nitropropane	10.313	41	926	1.93	ug/L		66
70)	epichlorohydrin	10.443	57	1612	9.30	ug/L		52
71)	cis-1,3-dichloropropene	10.595	75	6590	1.86	ug/L		97
72)	4-methyl-2-pentanone	10.689	58	5805	7.90	ug/L	#	81
73)	isoamyl alcohol	10.700	70	1988	34.39	ug/L	#	85
76)	toluene	10.993	92	9911	1.87	ug/L		97
77)	ethyl methacrylate	11.181	69	4394	1.72	ug/L		87
78)	trans-1,3-dichloropropene	11.170	75	5747	1.79	ug/L		97
79)	1,1,2-trichloroethane	11.395	83	2860	1.81	ug/L	#	91
80)	tetrachloroethene	11.578	164	3960	1.79	ug/L		93
81)	2-hexanone	11.578	58	4740	7.07	ug/L		95
82)	1,3-dichloropropane	11.584	76	5840	1.95	ug/L		94
84)	dibromochloromethane	11.850	129	4965	1.83	ug/L		95
85)	1,2-dibromoethane	12.012	107	5792	1.82	ug/L		83
86)	n-butyl ether	12.515	57	21390	1.95	ug/L		86
87)	chlorobenzene	12.530	112	12558	1.96	ug/L		96
88)	1,1,1,2-tetrachloroethane	12.603	131	5774	1.82	ug/L		96
89)	ethylbenzene	12.609	91	22312	1.96	ug/L		91
90)	m,p-xylene	12.739	106	16183	3.77	ug/L		97
91)	o-xylene	13.179	91	18429	1.85	ug/L		98
92)	styrene	13.195	104	13270	1.74	ug/L		99
93)	butyl acrylate	13.011	55	8458	1.69	ug/L		84
94)	isopropylbenzene	13.555	105	24407	1.83	ug/L		95
95)	bromoform	13.425	173	4367	1.91	ug/L		96
96)	cis-1,4-dichloro-2-butene	13.576	88	1798	1.54	ug/L		89
99)	1,1,2,2-tetrachloroethane	13.848	83	6154	2.08	ug/L		77
101)	1,2,3-trichloropropane	13.942	110	1472	1.80	ug/L	#	52
102)	bromobenzene	13.974	156	7132	1.89	ug/L		93
103)	n-propylbenzene	14.021	91	30280	1.96	ug/L		93
104)	2-chlorotoluene	14.157	126	6156	1.89	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

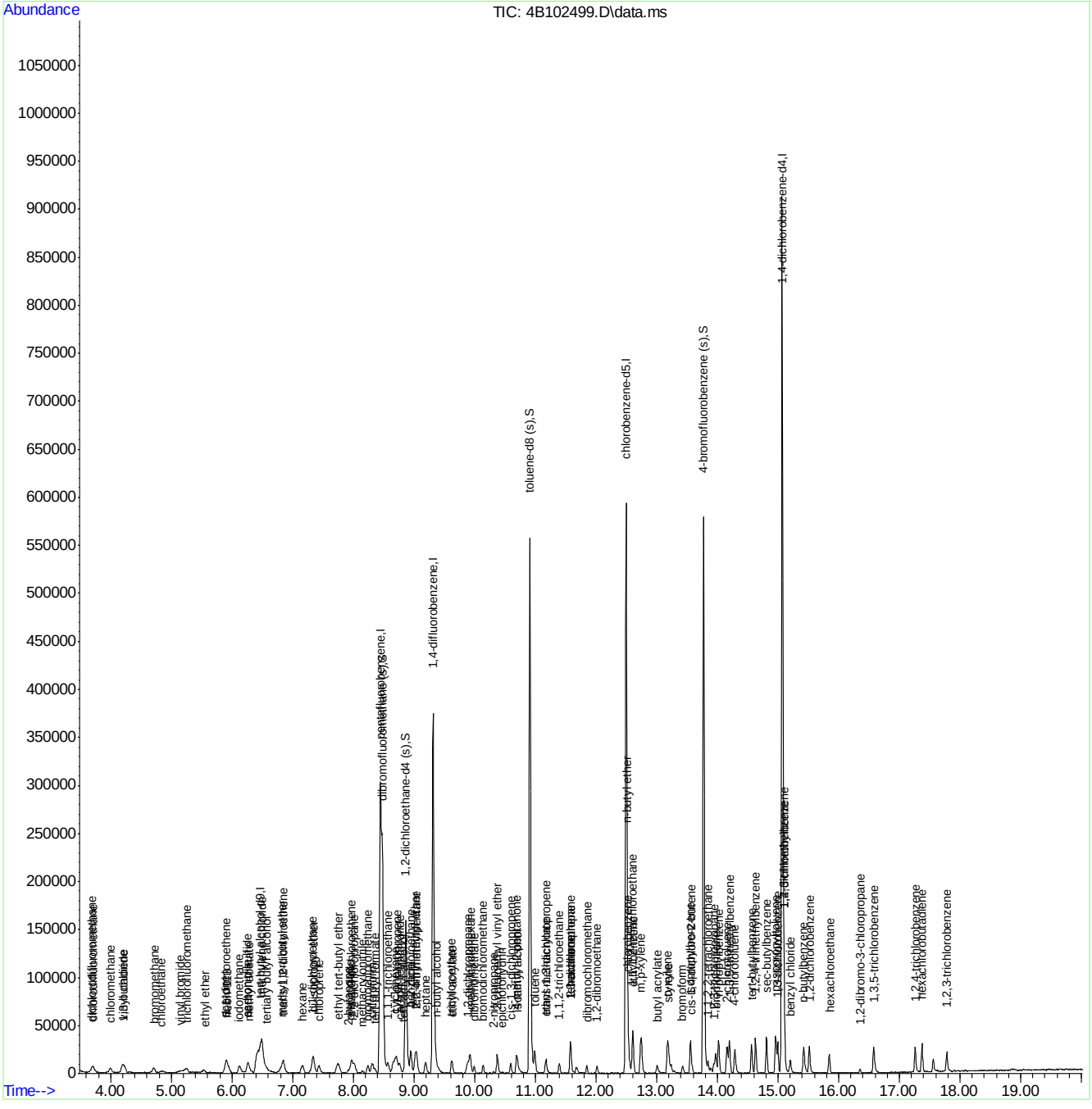
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 4-chlorotoluene	14.288	91	18869	2.00	ug/L	96
106) 1,3,5-trimethylbenzene	14.199	105	20838	1.83	ug/L	99
107) tert-butylbenzene	14.565	119	16570	1.71	ug/L	99
108) 1,2,4-trimethylbenzene	14.628	105	22357	1.86	ug/L	97
109) sec-butylbenzene	14.811	105	28531	1.84	ug/L	97
110) p-isopropyltoluene	14.962	119	26418	1.90	ug/L	98
111) 1,3-dichlorobenzene	14.994	146	14925	1.96	ug/L	96
112) 1,2,3-trimethylbenzene	15.098	105	24773	1.93	ug/L	93
113) 1,4-dichlorobenzene	15.098	146	14839	1.91	ug/L	90
114) 1,2-dichlorobenzene	15.517	146	14518	1.83	ug/L	96
115) benzyl chloride	15.198	91	12085	1.89	ug/L	87
116) n-butylbenzene	15.423	92	12410	1.72	ug/L	96
117) hexachloroethane	15.851	201	3855	1.41	ug/L	86
118) 1,2-dibromo-3-chloropr...	16.354	157	1471	1.47	ug/L	90
119) 1,3,5-trichlorobenzene	16.578	180	13127	1.64	ug/L	91
120) 1,2,4-trichlorobenzene	17.258	180	10289	1.42	ug/L	89
122) hexachlorobutadiene	17.373	225	6714	1.78	ug/L	94
124) 1,2,3-trichlorobenzene	17.781	180	9729	1.59	ug/L	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102499.D
Acq On : 17 Feb 2021 10:17 pm
Operator : brittank
Sample : ic4435-2
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 11:42:01 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	132056	500.00	ug/L	0.01
5) pentafluorobenzene	8.445	168	264025	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	348473	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	383342	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	277624	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	132205	50.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.48%			
54) 1,2-dichloroethane-d4 (s)	8.869	65	136727	52.84	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.68%			
75) toluene-d8 (s)	10.909	98	416647	46.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.10%			
98) 4-bromofluorobenzene (s)	13.770	95	211852	52.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.12%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.547	59	5848	19.49	ug/L	79
4) 1,4-dioxane	9.946	88	1921	82.23	ug/L	94
6) chlorodifluoromethane	3.707	51	17348	3.63	ug/L	95
7) dichlorodifluoromethane	3.681	85	24114	3.43	ug/L	89
8) chloromethane	3.994	50	20395	3.92	ug/L	86
9) vinyl chloride	4.198	62	18142	3.64	ug/L	95
10) 1,3-butadiene	4.225	54	11967	3.65	ug/L	97
11) bromomethane	4.716	94	13594	3.92	ug/L	94
12) chloroethane	4.847	64	8124	3.83	ug/L	92
13) trichlorofluoromethane	5.245	101	22591	3.78	ug/L	95
14) vinyl bromide	5.145	106	5933	3.73	ug/L	97
15) ethyl ether	5.527	74	3497	3.90	ug/L	87
16) acrolein	5.715	56	1060	3.08	ug/L #	58
17) freon 113	5.935	151	12584	3.93	ug/L	90
18) 1,1-dichloroethene	5.904	61	17901	4.21	ug/L	92
19) acetone	5.888	58	2549	14.05	ug/L	89
20) acetonitrile	6.228	41	11786	37.66	ug/L	79
21) iodomethane	6.123	142	27192	3.95	ug/L	98
22) carbon disulfide	6.270	76	40478	3.96	ug/L	96
23) methylene chloride	6.489	84	11930	4.12	ug/L	91
24) methyl acetate	6.285	43	5392	3.70	ug/L	83
25) methyl tert butyl ether	6.819	73	30000	3.86	ug/L	95
26) trans-1,2-dichloroethene	6.840	61	14615	4.09	ug/L	98
27) hexane	7.154	56	6649	3.91	ug/L #	77
28) di-isopropyl ether	7.337	45	36747	3.79	ug/L	92
29) 2-butanone	7.912	72	2297	12.61	ug/L	94
30) 1,1-dichloroethane	7.331	63	16793	3.82	ug/L	98
31) chloroprene	7.431	53	14004	3.97	ug/L	89
32) acrylonitrile	6.735	53	2255	3.08	ug/L	77
34) ethyl tert-butyl ether	7.739	59	33997	3.82	ug/L	99
35) ethyl acetate	7.938	45	770	2.76	ug/L #	1
36) 2,2-dichloropropane	8.017	77	18281	3.79	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	cis-1,2-dichloroethene	7.969	96	10635	4.18	ug/L		92
38)	propionitrile	7.949	54	10680	40.72	ug/L		92
39)	methyl acrylate	8.006	85	861	3.27	ug/L	#	25
40)	methacrylonitrile	8.147	67	2519	3.68	ug/L		91
41)	bromochloromethane	8.241	128	5257	3.82	ug/L		84
43)	chloroform	8.309	83	18586	4.10	ug/L		95
44)	tert-butyl formate	8.351	59	7783	3.73	ug/L		87
46)	1,1,1-trichloroethane	8.571	97	20755	3.75	ug/L		96
47)	cyclohexane	8.686	84	17430	3.82	ug/L		95
49)	1,1-dichloropropene	8.717	75	12624	4.15	ug/L		90
50)	carbon tetrachloride	8.764	117	18864	3.81	ug/L		91
51)	tert-amyl alcohol	8.817	73	2607	22.93	ug/L		97
52)	isopropyl acetate	8.853	87	1201	3.20	ug/L	#	61
55)	n-butyl alcohol	9.371	41	8672	200.76	ug/L		90
56)	2,2,4-trimethylpentane	9.036	57	35306	3.31	ug/L		98
57)	benzene	8.948	78	34822	4.03	ug/L		99
58)	tert-amyl methyl ether	9.026	73	29911	3.69	ug/L		96
59)	heptane	9.188	57	6420	3.81	ug/L		91
60)	1,2-dichloroethane	8.948	62	12752	4.08	ug/L		99
61)	ethyl acrylate	9.612	55	7840	3.54	ug/L		92
62)	trichloroethene	9.622	95	9240	4.01	ug/L		85
63)	2-chloroethyl vinyl ether	10.370	63	21797	18.83	ug/L		99
64)	methyl methacrylate	9.858	100	1469	3.19	ug/L	#	83
65)	methylcyclohexane	9.926	83	18411	3.57	ug/L		94
66)	1,2-dichloropropane	9.879	63	9164	3.92	ug/L		95
67)	dibromomethane	9.988	93	5626	3.94	ug/L		98
68)	bromodichloromethane	10.140	83	12630	3.82	ug/L		91
69)	2-nitropropane	10.313	41	1688	3.43	ug/L	#	37
70)	epichlorohydrin	10.454	57	3366	18.95	ug/L		93
71)	cis-1,3-dichloropropene	10.590	75	13615	3.74	ug/L		88
72)	4-methyl-2-pentanone	10.689	58	12371	16.42	ug/L		99
73)	isoamyl alcohol	10.694	70	4753	80.19	ug/L		93
76)	toluene	10.993	92	20966	3.70	ug/L		91
77)	ethyl methacrylate	11.170	69	10291	3.76	ug/L		89
78)	trans-1,3-dichloropropene	11.165	75	12863	3.72	ug/L		96
79)	1,1,2-trichloroethane	11.390	83	6514	3.85	ug/L	#	88
80)	tetrachloroethene	11.573	164	8522	3.59	ug/L		95
81)	2-hexanone	11.568	58	12332	17.14	ug/L		94
82)	1,3-dichloropropane	11.584	76	12780	3.98	ug/L		89
83)	butyl acetate	11.667	56	5077	3.73	ug/L	#	81
84)	dibromochloromethane	11.850	129	11050	3.80	ug/L		92
85)	1,2-dibromoethane	12.012	107	12803	3.76	ug/L		100
86)	n-butyl ether	12.509	57	45727	3.89	ug/L		94
87)	chlorobenzene	12.535	112	27416	3.99	ug/L		91
88)	1,1,1,2-tetrachloroethane	12.598	131	11735	3.45	ug/L		96
89)	ethylbenzene	12.603	91	47446	3.88	ug/L		98
90)	m,p-xylene	12.734	106	36235	7.86	ug/L		96
91)	o-xylene	13.174	91	39972	3.75	ug/L		90
92)	styrene	13.189	104	31141	3.81	ug/L		95
93)	butyl acrylate	13.001	55	19739	3.68	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

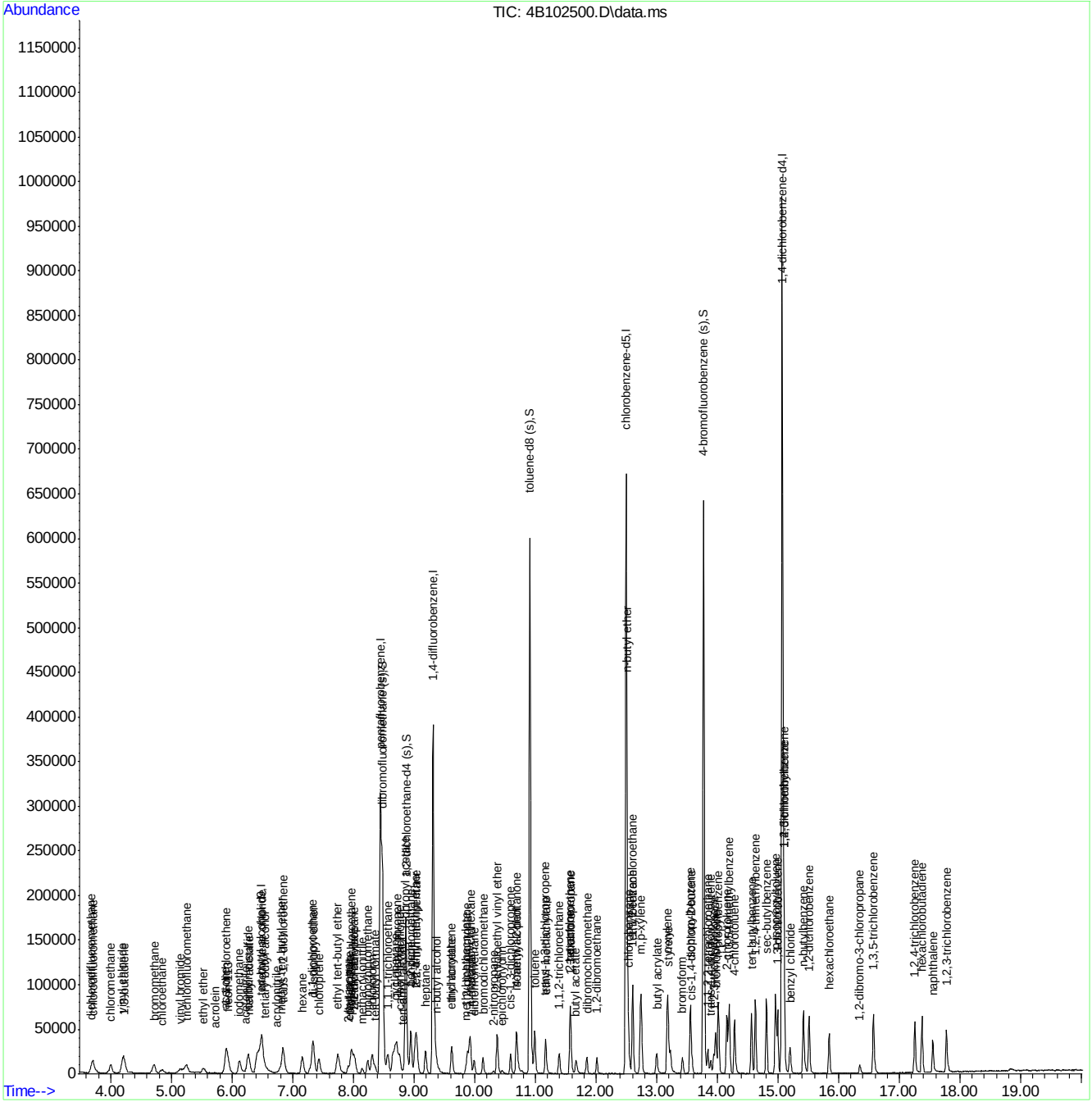
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94)	isopropylbenzene	13.555	105	52732	3.68	ug/L		99
95)	bromoform	13.425	173	9326	3.79	ug/L		94
96)	cis-1,4-dichloro-2-butene	13.576	88	4635	3.71	ug/L		93
99)	1,1,2,2-tetrachloroethane	13.848	83	12191	3.90	ug/L		96
100)	trans-1,4-dichloro-2-b...	13.885	53	3263	3.58	ug/L		83
101)	1,2,3-trichloropropane	13.942	110	3134	3.63	ug/L	#	80
102)	bromobenzene	13.974	156	15658	3.92	ug/L		90
103)	n-propylbenzene	14.016	91	65248	4.00	ug/L		97
104)	2-chlorotoluene	14.157	126	13811	4.02	ug/L		89
105)	4-chlorotoluene	14.282	91	40496	4.05	ug/L		98
106)	1,3,5-trimethylbenzene	14.193	105	46933	3.91	ug/L		96
107)	tert-butylbenzene	14.565	119	35809	3.49	ug/L		98
108)	1,2,4-trimethylbenzene	14.628	105	49150	3.86	ug/L		97
109)	sec-butylbenzene	14.811	105	61428	3.75	ug/L		99
110)	p-isopropyltoluene	14.957	119	54692	3.73	ug/L		96
111)	1,3-dichlorobenzene	14.994	146	31593	3.93	ug/L		94
112)	1,2,3-trimethylbenzene	15.098	105	53664	3.95	ug/L		98
113)	1,4-dichlorobenzene	15.098	146	33127	4.03	ug/L		99
114)	1,2-dichlorobenzene	15.511	146	32345	3.85	ug/L		96
115)	benzyl chloride	15.198	91	25047	3.70	ug/L		96
116)	n-butylbenzene	15.417	92	28012	3.67	ug/L		94
117)	hexachloroethane	15.841	201	8800	3.04	ug/L		88
118)	1,2-dibromo-3-chloropr...	16.348	157	3304	3.13	ug/L		91
119)	1,3,5-trichlorobenzene	16.573	180	27332	3.23	ug/L		98
120)	1,2,4-trichlorobenzene	17.253	180	22498	2.94	ug/L		99
122)	hexachlorobutadiene	17.373	225	14547	3.65	ug/L		93
123)	naphthalene	17.551	128	36073	2.83	ug/L		95
124)	1,2,3-trichlorobenzene	17.776	180	19282	2.97	ug/L		91

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102500.D
Acq On : 17 Feb 2021 10:45 pm
Operator : brittank
Sample : ic4435-4
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 11:42:51 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	122162	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	251354	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	327738	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	334228	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	251318	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	124815	50.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.64%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	128748	52.91	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.82%			
75) toluene-d8 (s)	10.909	98	387387	49.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.28%			
98) 4-bromofluorobenzene (s)	13.770	95	184920	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.547	59	9820	35.38	ug/L	85
4) 1,4-dioxane	9.941	88	3785	175.15	ug/L	70
6) chlorodifluoromethane	3.702	51	33057	7.27	ug/L	95
7) dichlorodifluoromethane	3.686	85	45432	6.78	ug/L	92
8) chloromethane	3.995	50	38331	7.74	ug/L	99
9) vinyl chloride	4.193	62	33883	7.14	ug/L	99
10) 1,3-butadiene	4.209	54	23178	7.43	ug/L	98
11) bromomethane	4.701	94	25498	7.72	ug/L	91
12) chloroethane	4.852	64	14951	7.40	ug/L	94
13) trichlorofluoromethane	5.239	101	40976	7.21	ug/L	92
14) vinyl bromide	5.135	106	11045	7.30	ug/L	96
15) ethyl ether	5.527	74	6103	7.15	ug/L #	70
16) acrolein	5.705	56	2005	6.13	ug/L	74
17) freon 113	5.940	151	21795	7.15	ug/L	92
18) 1,1-dichloroethene	5.904	61	30171	7.45	ug/L	97
19) acetone	5.883	58	5489	31.79	ug/L #	83
20) acetonitrile	6.233	41	21350	71.66	ug/L	98
21) iodomethane	6.123	142	49675	7.58	ug/L	96
22) carbon disulfide	6.265	76	72524	7.45	ug/L	99
23) methylene chloride	6.489	84	21638	7.86	ug/L	92
24) methyl acetate	6.291	43	9986	7.20	ug/L	98
25) methyl tert butyl ether	6.819	73	55679	7.53	ug/L	99
26) trans-1,2-dichloroethene	6.845	61	25855	7.60	ug/L	96
27) hexane	7.154	56	12072	7.46	ug/L	98
28) di-isopropyl ether	7.337	45	70065	7.59	ug/L	97
29) 2-butanone	7.896	72	4729	27.27	ug/L #	75
30) 1,1-dichloroethane	7.337	63	32549	7.77	ug/L	97
31) chloroprene	7.426	53	25098	7.46	ug/L	94
32) acrylonitrile	6.730	53	5065	7.28	ug/L	81
33) vinyl acetate	7.284	86	1700	6.20	ug/L #	48
34) ethyl tert-butyl ether	7.750	59	63133	7.45	ug/L	96
35) ethyl acetate	7.922	45	1611	6.07	ug/L #	14

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	2,2-dichloropropane	8.011	77	35607	7.75	ug/L		96
37)	cis-1,2-dichloroethene	7.970	96	18256	7.54	ug/L		95
38)	propionitrile	7.949	54	18480	74.01	ug/L		91
39)	methyl acrylate	8.001	85	1431	5.72	ug/L	#	78
40)	methacrylonitrile	8.137	67	4583	7.03	ug/L		95
41)	bromochloromethane	8.226	128	9831	7.51	ug/L		97
42)	tetrahydrofuran	8.262	72	1544	7.14	ug/L		96
43)	chloroform	8.310	83	32940	7.63	ug/L		97
44)	tert-butyl formate	8.346	59	14550	7.33	ug/L		96
46)	1,1,1-trichloroethane	8.571	97	38467	7.31	ug/L		98
47)	cyclohexane	8.691	84	30685	7.07	ug/L		99
49)	1,1-dichloropropene	8.717	75	22484	7.76	ug/L		95
50)	carbon tetrachloride	8.759	117	34535	7.33	ug/L		94
51)	tert-amyl alcohol	8.817	73	4386	40.53	ug/L	#	80
52)	isopropyl acetate	8.838	87	2530	7.07	ug/L	#	91
55)	n-butyl alcohol	9.350	41	16128	397.00	ug/L		85
56)	2,2,4-trimethylpentane	9.042	57	66096	6.59	ug/L		98
57)	benzene	8.942	78	62178	7.66	ug/L		99
58)	tert-amyl methyl ether	9.016	73	55377	7.27	ug/L		94
59)	heptane	9.188	57	11398	7.19	ug/L		89
60)	1,2-dichloroethane	8.948	62	22231	7.56	ug/L		97
61)	ethyl acrylate	9.601	55	14322	6.87	ug/L		96
62)	trichloroethene	9.617	95	16038	7.40	ug/L		99
63)	2-chloroethyl vinyl ether	10.365	63	38409	35.28	ug/L		96
64)	methyl methacrylate	9.852	100	2342	5.40	ug/L	#	81
65)	methylcyclohexane	9.926	83	34775	7.16	ug/L		97
66)	1,2-dichloropropane	9.879	63	16093	7.32	ug/L		99
67)	dibromomethane	9.983	93	10514	7.84	ug/L		80
68)	bromodichloromethane	10.135	83	23543	7.56	ug/L		94
69)	2-nitropropane	10.307	41	3192	6.89	ug/L		88
70)	epichlorohydrin	10.449	57	6306	37.74	ug/L		85
71)	cis-1,3-dichloropropene	10.590	75	25041	7.32	ug/L		97
72)	4-methyl-2-pentanone	10.684	58	21097	29.77	ug/L		97
73)	isoamyl alcohol	10.700	70	8110	145.49	ug/L	#	73
76)	toluene	10.987	92	36716	7.42	ug/L		95
77)	ethyl methacrylate	11.165	69	16927	7.09	ug/L		94
78)	trans-1,3-dichloropropene	11.165	75	22311	7.41	ug/L		97
79)	1,1,2-trichloroethane	11.390	83	10475	7.10	ug/L		93
80)	tetrachloroethene	11.573	164	15404	7.44	ug/L		93
81)	2-hexanone	11.568	58	20033	31.93	ug/L		90
82)	1,3-dichloropropane	11.578	76	21118	7.54	ug/L		89
83)	butyl acetate	11.662	56	9353	7.87	ug/L		87
84)	dibromochloromethane	11.845	129	18082	7.13	ug/L		96
85)	1,2-dibromoethane	12.013	107	21708	7.31	ug/L		95
86)	n-butyl ether	12.509	57	78486	7.66	ug/L		96
87)	chlorobenzene	12.530	112	45069	7.52	ug/L		97
88)	1,1,1,2-tetrachloroethane	12.598	131	21661	7.30	ug/L		98
89)	ethylbenzene	12.604	91	82795	7.77	ug/L		98
90)	m,p-xylene	12.734	106	62055	15.44	ug/L		98
91)	o-xylene	13.168	91	70892	7.63	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

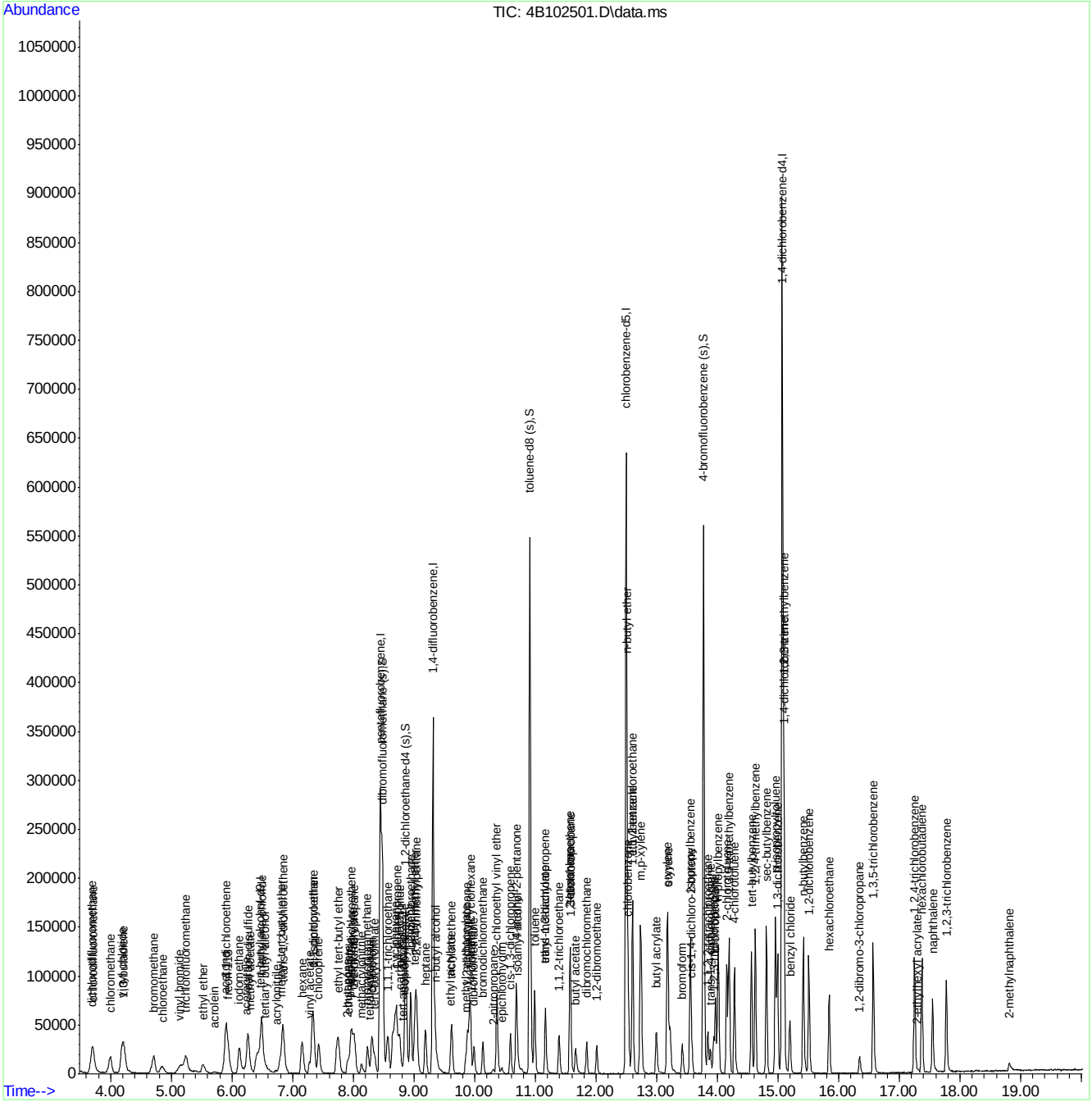
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	styrene	13.184	104	52207	7.34	ug/L		99
93)	butyl acrylate	12.991	55	33991	7.27	ug/L		94
94)	isopropylbenzene	13.555	105	95226	7.62	ug/L		99
95)	bromoform	13.425	173	15657	7.31	ug/L		89
96)	cis-1,4-dichloro-2-butene	13.576	88	7367	6.76	ug/L		96
99)	1,1,2,2-tetrachloroethane	13.843	83	21252	7.51	ug/L		99
100)	trans-1,4-dichloro-2-b...	13.885	53	5767	6.99	ug/L		77
101)	1,2,3-trichloropropane	13.943	110	5545	7.10	ug/L		87
102)	bromobenzene	13.969	156	26460	7.32	ug/L		95
103)	n-propylbenzene	14.016	91	112103	7.60	ug/L		98
104)	2-chlorotoluene	14.157	126	23595	7.58	ug/L		98
105)	4-chlorotoluene	14.282	91	68406	7.56	ug/L		99
106)	1,3,5-trimethylbenzene	14.194	105	81737	7.52	ug/L		96
107)	tert-butylbenzene	14.565	119	64814	6.99	ug/L		98
108)	1,2,4-trimethylbenzene	14.622	105	87606	7.61	ug/L		98
109)	sec-butylbenzene	14.811	105	109547	7.38	ug/L		99
110)	p-isopropyltoluene	14.957	119	99554	7.49	ug/L		99
111)	1,3-dichlorobenzene	14.994	146	55234	7.60	ug/L		100
112)	1,2,3-trimethylbenzene	15.093	105	94766	7.71	ug/L		97
113)	1,4-dichlorobenzene	15.098	146	57117	7.68	ug/L		98
114)	1,2-dichlorobenzene	15.512	146	57144	7.51	ug/L		96
115)	benzyl chloride	15.198	91	44673	7.30	ug/L		98
116)	n-butylbenzene	15.412	92	50915	7.36	ug/L		96
117)	hexachloroethane	15.846	201	16726	6.38	ug/L		94
118)	1,2-dibromo-3-chloropr...	16.348	157	6200	6.49	ug/L		89
119)	1,3,5-trichlorobenzene	16.568	180	52815	6.90	ug/L		98
120)	1,2,4-trichlorobenzene	17.248	180	44163	6.38	ug/L		95
121)	2-ethylhexyl acrylate	17.295	70	951	0.50	ug/L	#	72
122)	hexachlorobutadiene	17.374	225	26430	7.33	ug/L		96
123)	naphthalene	17.546	128	69863	6.06	ug/L		97
124)	1,2,3-trichlorobenzene	17.776	180	37571	6.40	ug/L		99
125)	2-methylnaphthalene	18.812	142	9904	2.15	ug/L		83

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102501.D
Acq On : 17 Feb 2021 11:13 pm
Operator : brittank
Sample : ic4435-8
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 15:56:27 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.458	65	124110	500.00	ug/L	0.00
5) pentafluorobenzene	8.446	168	246239	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	317731	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	329978	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	243264	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	122458	50.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	127049	53.85	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.70%			
75) toluene-d8 (s)	10.909	98	381423	49.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.02%			
98) 4-bromofluorobenzene (s)	13.770	95	177545	50.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.54%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.589	59	27896	98.94	ug/L	92
4) 1,4-dioxane	9.941	88	10842	493.83	ug/L #	66
6) chlorodifluoromethane	3.707	51	85003	19.09	ug/L	96
7) dichlorodifluoromethane	3.686	85	124146	18.91	ug/L	98
8) chloromethane	3.989	50	94614	19.51	ug/L	95
9) vinyl chloride	4.193	62	87729	18.87	ug/L	98
10) 1,3-butadiene	4.225	54	57345	18.76	ug/L	99
11) bromomethane	4.706	94	63906	19.76	ug/L	98
12) chloroethane	4.847	64	38724	19.57	ug/L	94
13) trichlorofluoromethane	5.245	101	107276	19.26	ug/L	98
14) vinyl bromide	5.135	106	28208	19.02	ug/L	94
15) ethyl ether	5.517	74	16339	19.55	ug/L	91
16) acrolein	5.726	56	5871	18.32	ug/L	90
17) freon 113	5.935	151	57296	19.18	ug/L	98
18) 1,1-dichloroethene	5.904	61	78081	19.68	ug/L	98
19) acetone	5.862	58	13447	79.50	ug/L	91
20) acetonitrile	6.217	41	59524	203.94	ug/L	86
21) iodomethane	6.123	142	126227	19.66	ug/L	98
22) carbon disulfide	6.265	76	188232	19.73	ug/L	98
23) methylene chloride	6.489	84	53194	19.71	ug/L	99
24) methyl acetate	6.265	43	26661	19.62	ug/L	97
25) methyl tert butyl ether	6.819	73	141822	19.58	ug/L	97
26) trans-1,2-dichloroethene	6.840	61	67769	20.35	ug/L	95
27) hexane	7.154	56	30883	19.48	ug/L	90
28) di-isopropyl ether	7.342	45	177904	19.67	ug/L	98
29) 2-butanone	7.886	72	12222	71.93	ug/L #	84
30) 1,1-dichloroethane	7.332	63	81381	19.84	ug/L	95
31) chloroprene	7.426	53	64388	19.55	ug/L	98
32) acrylonitrile	6.720	53	13250	19.43	ug/L	97
33) vinyl acetate	7.269	86	4503	16.76	ug/L #	88
34) ethyl tert-butyl ether	7.745	59	161669	19.48	ug/L	97
35) ethyl acetate	7.912	45	4766	18.34	ug/L #	82

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	2,2-dichloropropane	8.011	77	89731	19.95	ug/L		98
37)	cis-1,2-dichloroethene	7.964	96	47612	20.06	ug/L		97
38)	propionitrile	7.938	54	48925	200.01	ug/L		98
39)	methyl acrylate	7.996	85	4168	17.00	ug/L		96
40)	methacrylonitrile	8.132	67	11632	18.22	ug/L		98
41)	bromochloromethane	8.231	128	24768	19.30	ug/L		97
42)	tetrahydrofuran	8.273	72	3993	18.85	ug/L	#	72
43)	chloroform	8.310	83	85212	20.15	ug/L		97
44)	tert-butyl formate	8.351	59	38635	19.86	ug/L		92
46)	1,1,1-trichloroethane	8.571	97	98699	19.14	ug/L		96
47)	cyclohexane	8.686	84	81942	19.26	ug/L		99
49)	1,1-dichloropropene	8.718	75	55816	19.67	ug/L		95
50)	carbon tetrachloride	8.765	117	90765	19.66	ug/L		97
51)	tert-amyl alcohol	8.817	73	11642	109.82	ug/L		94
52)	isopropyl acetate	8.833	87	6806	19.42	ug/L	#	86
55)	n-butyl alcohol	9.340	41	43610	1107.29	ug/L		93
56)	2,2,4-trimethylpentane	9.042	57	174495	17.93	ug/L		99
57)	benzene	8.942	78	155878	19.81	ug/L		99
58)	tert-amyl methyl ether	9.021	73	145262	19.66	ug/L		99
59)	heptane	9.183	57	29556	19.23	ug/L		93
60)	1,2-dichloroethane	8.948	62	55850	19.60	ug/L		94
61)	ethyl acrylate	9.591	55	38512	19.06	ug/L		100
62)	trichloroethene	9.617	95	41567	19.77	ug/L		99
63)	2-chloroethyl vinyl ether	10.360	63	98520	93.34	ug/L		98
64)	methyl methacrylate	9.852	100	7703	18.32	ug/L	#	87
65)	methylcyclohexane	9.921	83	88391	18.78	ug/L		98
66)	1,2-dichloropropane	9.884	63	41654	19.53	ug/L		97
67)	dibromomethane	9.988	93	25488	19.59	ug/L		94
68)	bromodichloromethane	10.135	83	56691	18.79	ug/L		99
69)	2-nitropropane	10.308	41	8141	18.13	ug/L		99
70)	epichlorohydrin	10.444	57	15557	96.04	ug/L		85
71)	cis-1,3-dichloropropene	10.590	75	62970	18.99	ug/L		99
72)	4-methyl-2-pentanone	10.679	58	54739	79.67	ug/L		97
73)	isoamyl alcohol	10.684	70	23968	443.51	ug/L		95
76)	toluene	10.987	92	94499	19.35	ug/L		95
77)	ethyl methacrylate	11.165	69	45086	19.12	ug/L		97
78)	trans-1,3-dichloropropene	11.160	75	56518	19.01	ug/L		98
79)	1,1,2-trichloroethane	11.390	83	28606	19.64	ug/L		96
80)	tetrachloroethene	11.568	164	39104	19.12	ug/L		97
81)	2-hexanone	11.558	58	50191	81.03	ug/L		97
82)	1,3-dichloropropane	11.578	76	52910	19.13	ug/L		98
83)	butyl acetate	11.657	56	23238	19.81	ug/L		93
84)	dibromochloromethane	11.845	129	48292	19.30	ug/L		98
85)	1,2-dibromoethane	12.007	107	55394	18.90	ug/L		95
86)	n-butyl ether	12.504	57	202556	20.02	ug/L		99
87)	chlorobenzene	12.530	112	116582	19.70	ug/L		98
88)	1,1,1,2-tetrachloroethane	12.598	131	56340	19.23	ug/L		96
89)	ethylbenzene	12.604	91	206956	19.68	ug/L		99
90)	m,p-xylene	12.734	106	155459	39.17	ug/L		96
91)	o-xylene	13.168	91	181848	19.81	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

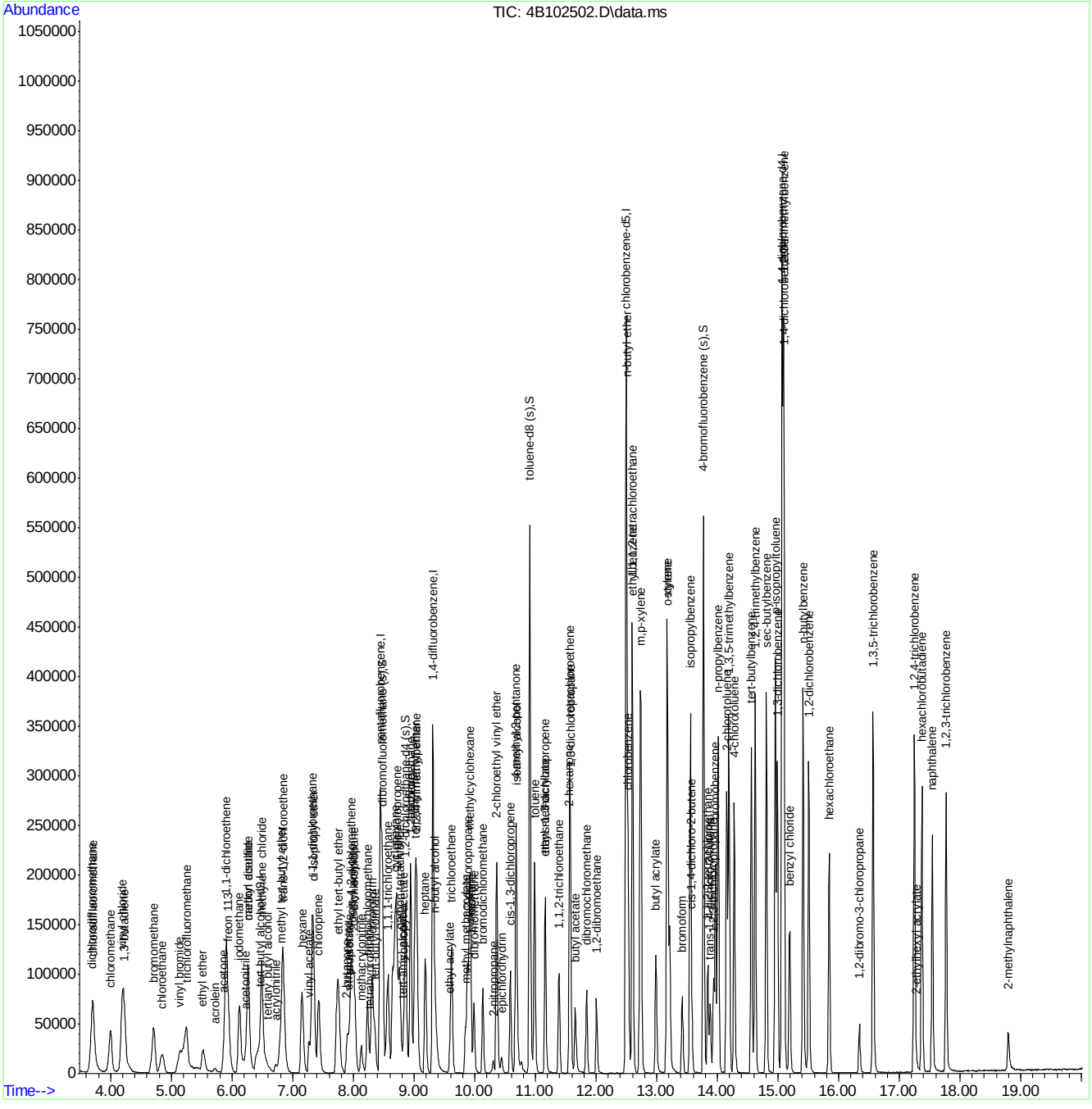
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	styrene	13.179	104	134639	19.16	ug/L		97
93)	butyl acrylate	12.985	55	91414	19.81	ug/L		98
94)	isopropylbenzene	13.556	105	239712	19.42	ug/L		98
95)	bromoform	13.420	173	40228	19.02	ug/L		96
96)	cis-1,4-dichloro-2-butene	13.576	88	20211	18.77	ug/L		94
99)	1,1,2,2-tetrachloroethane	13.843	83	53738	19.62	ug/L		98
100)	trans-1,4-dichloro-2-b...	13.880	53	14692	18.40	ug/L		98
101)	1,2,3-trichloropropane	13.937	110	14189	18.78	ug/L	#	81
102)	bromobenzene	13.969	156	66225	18.92	ug/L		93
103)	n-propylbenzene	14.011	91	282863	19.80	ug/L		99
104)	2-chlorotoluene	14.157	126	59422	19.72	ug/L		99
105)	4-chlorotoluene	14.277	91	172243	19.67	ug/L		96
106)	1,3,5-trimethylbenzene	14.194	105	208533	19.82	ug/L		98
107)	tert-butylbenzene	14.560	119	167782	18.68	ug/L		97
108)	1,2,4-trimethylbenzene	14.622	105	219167	19.67	ug/L		97
109)	sec-butylbenzene	14.806	105	279193	19.43	ug/L		98
110)	p-isopropyltoluene	14.957	119	252719	19.65	ug/L		98
111)	1,3-dichlorobenzene	14.989	146	139013	19.75	ug/L		99
112)	1,2,3-trimethylbenzene	15.093	105	234387	19.71	ug/L		100
113)	1,4-dichlorobenzene	15.098	146	141069	19.60	ug/L		99
114)	1,2-dichlorobenzene	15.506	146	144676	19.65	ug/L		99
115)	benzyl chloride	15.193	91	114108	19.25	ug/L		100
116)	n-butylbenzene	15.412	92	129065	19.28	ug/L		98
117)	hexachloroethane	15.846	201	46091	18.17	ug/L		98
118)	1,2-dibromo-3-chloropr...	16.343	157	16985	18.37	ug/L		94
119)	1,3,5-trichlorobenzene	16.568	180	138610	18.71	ug/L		97
120)	1,2,4-trichlorobenzene	17.248	180	121164	18.07	ug/L		95
121)	2-ethylhexyl acrylate	17.274	70	4306	2.35	ug/L		77
122)	hexachlorobutadiene	17.374	225	67148	19.25	ug/L		98
123)	naphthalene	17.541	128	201934	18.08	ug/L		99
124)	1,2,3-trichlorobenzene	17.771	180	103217	18.17	ug/L		99
125)	2-methylnaphthalene	18.801	142	32376	7.25	ug/L		98

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102502.D
Acq On : 17 Feb 2021 11:41 pm
Operator : brittank
Sample : ic4435-20
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 15:56:34 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.463	65	114497	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	243478	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	323280	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	330693	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	246913	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	120139	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
54) 1,2-dichloroethane-d4 (s)	8.864	65	120018	50.00	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 100.00%						
75) toluene-d8 (s)	10.909	98	386044	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
98) 4-bromofluorobenzene (s)	13.770	95	179254	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.578	59	66239	254.65	ug/L	100
4) 1,4-dioxane	9.931	88	25318	1250.00	ug/L	100
6) chlorodifluoromethane	3.702	51	220109	50.00	ug/L	100
7) dichlorodifluoromethane	3.686	85	324291	49.95	ug/L	100
8) chloromethane	3.994	50	239326	49.92	ug/L	100
9) vinyl chloride	4.193	62	229862	50.00	ug/L	100
10) 1,3-butadiene	4.214	54	151155	50.00	ug/L	100
11) bromomethane	4.711	94	159910	50.00	ug/L	100
12) chloroethane	4.847	64	97815	50.00	ug/L	100
13) trichlorofluoromethane	5.239	101	275365	50.00	ug/L	100
14) vinyl bromide	5.129	106	73321	50.00	ug/L	100
15) ethyl ether	5.516	74	41317	50.00	ug/L	100
16) acrolein	5.715	56	15848	50.00	ug/L	100
17) freon 113	5.935	151	147716	50.00	ug/L	100
18) 1,1-dichloroethene	5.898	61	196202	50.00	ug/L	100
19) acetone	5.867	58	33450	200.00	ug/L	100
20) acetonitrile	6.223	41	144299	500.00	ug/L	100
21) iodomethane	6.123	142	317467	50.00	ug/L	100
22) carbon disulfide	6.259	76	471698	50.00	ug/L	100
23) methylene chloride	6.489	84	133414	50.00	ug/L	100
24) methyl acetate	6.264	43	67189	50.00	ug/L	100
25) methyl tert butyl ether	6.819	73	358146	50.02	ug/L	100
26) trans-1,2-dichloroethene	6.840	61	164678	50.00	ug/L	100
27) hexane	7.154	56	78398	50.00	ug/L	100
28) di-isopropyl ether	7.331	45	447115	50.00	ug/L	100
29) 2-butanone	7.886	72	33601	200.00	ug/L	100
30) 1,1-dichloroethane	7.326	63	202760	50.00	ug/L	100
31) chloroprene	7.426	53	162847	50.00	ug/L	100
32) acrylonitrile	6.709	53	33708	50.00	ug/L	100
33) vinyl acetate	7.258	86	13284	50.00	ug/L #	93
34) ethyl tert-butyl ether	7.745	59	410407	50.00	ug/L	100
35) ethyl acetate	7.901	45	12850	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 2,2-dichloropropane	8.011	77	222410	50.00	ug/L	100
37) cis-1,2-dichloroethene	7.964	96	117329	50.00	ug/L	100
38) propionitrile	7.933	54	120938	500.00	ug/L	100
39) methyl acrylate	7.990	85	12124	50.00	ug/L	100
40) methacrylonitrile	8.126	67	31570	50.00	ug/L	100
41) bromochloromethane	8.231	128	63431	50.00	ug/L	100
42) tetrahydrofuran	8.257	72	10473	50.00	ug/L	100
43) chloroform	8.304	83	209120	50.00	ug/L	100
44) tert-butyl formate	8.351	59	96183	50.00	ug/L	100
46) 1,1,1-trichloroethane	8.571	97	254982	50.00	ug/L	100
47) cyclohexane	8.691	84	210290	50.00	ug/L	100
49) 1,1-dichloropropene	8.712	75	140275	50.00	ug/L	100
50) carbon tetrachloride	8.759	117	228231	50.00	ug/L	100
51) tert-amyl alcohol	8.812	73	26206	250.00	ug/L	100
52) isopropyl acetate	8.832	87	17324	50.00	ug/L	100
55) n-butyl alcohol	9.340	41	100181	2500.00	ug/L	100
56) 2,2,4-trimethylpentane	9.042	57	495032	50.00	ug/L	100
57) benzene	8.942	78	400403	50.00	ug/L	100
58) tert-amyl methyl ether	9.021	73	375806	50.00	ug/L	100
59) heptane	9.188	57	78174	50.00	ug/L	100
60) 1,2-dichloroethane	8.948	62	144982	50.00	ug/L	100
61) ethyl acrylate	9.586	55	102791	50.00	ug/L	100
62) trichloroethene	9.617	95	106950	50.00	ug/L	100
63) 2-chloroethyl vinyl ether	10.360	63	268492	250.00	ug/L	100
64) methyl methacrylate	9.847	100	21387	50.00	ug/L	100
65) methylcyclohexane	9.926	83	239419	50.00	ug/L	100
66) 1,2-dichloropropane	9.879	63	108496	50.00	ug/L	100
67) dibromomethane	9.988	93	66174	50.00	ug/L	100
68) bromodichloromethane	10.135	83	153511	50.00	ug/L	100
69) 2-nitropropane	10.302	41	22268	48.73	ug/L	100
70) epichlorohydrin	10.438	57	41205	250.00	ug/L	100
71) cis-1,3-dichloropropene	10.585	75	168675	50.00	ug/L	100
72) 4-methyl-2-pentanone	10.679	58	139820	200.00	ug/L	100
73) isoamyl alcohol	10.679	70	54985	1000.00	ug/L	100
76) toluene	10.987	92	244661	50.00	ug/L	100
77) ethyl methacrylate	11.160	69	118174	50.00	ug/L	100
78) trans-1,3-dichloropropene	11.160	75	148961	50.00	ug/L	100
79) 1,1,2-trichloroethane	11.390	83	72966	50.00	ug/L	100
80) tetrachloroethene	11.568	164	102482	50.00	ug/L	100
81) 2-hexanone	11.557	58	124146	200.00	ug/L	100
82) 1,3-dichloropropane	11.578	76	138562	50.00	ug/L	100
83) butyl acetate	11.652	56	58782	50.00	ug/L	100
84) dibromochloromethane	11.845	129	125375	50.00	ug/L	100
85) 1,2-dibromoethane	12.007	107	146886	50.00	ug/L	100
86) n-butyl ether	12.504	57	506948	50.00	ug/L	100
87) chlorobenzene	12.530	112	296589	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	12.598	131	146777	50.00	ug/L	100
89) ethylbenzene	12.603	91	526979	50.00	ug/L	100
90) m,p-xylene	12.734	106	397708	100.00	ug/L	100
91) o-xylene	13.168	91	459936	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

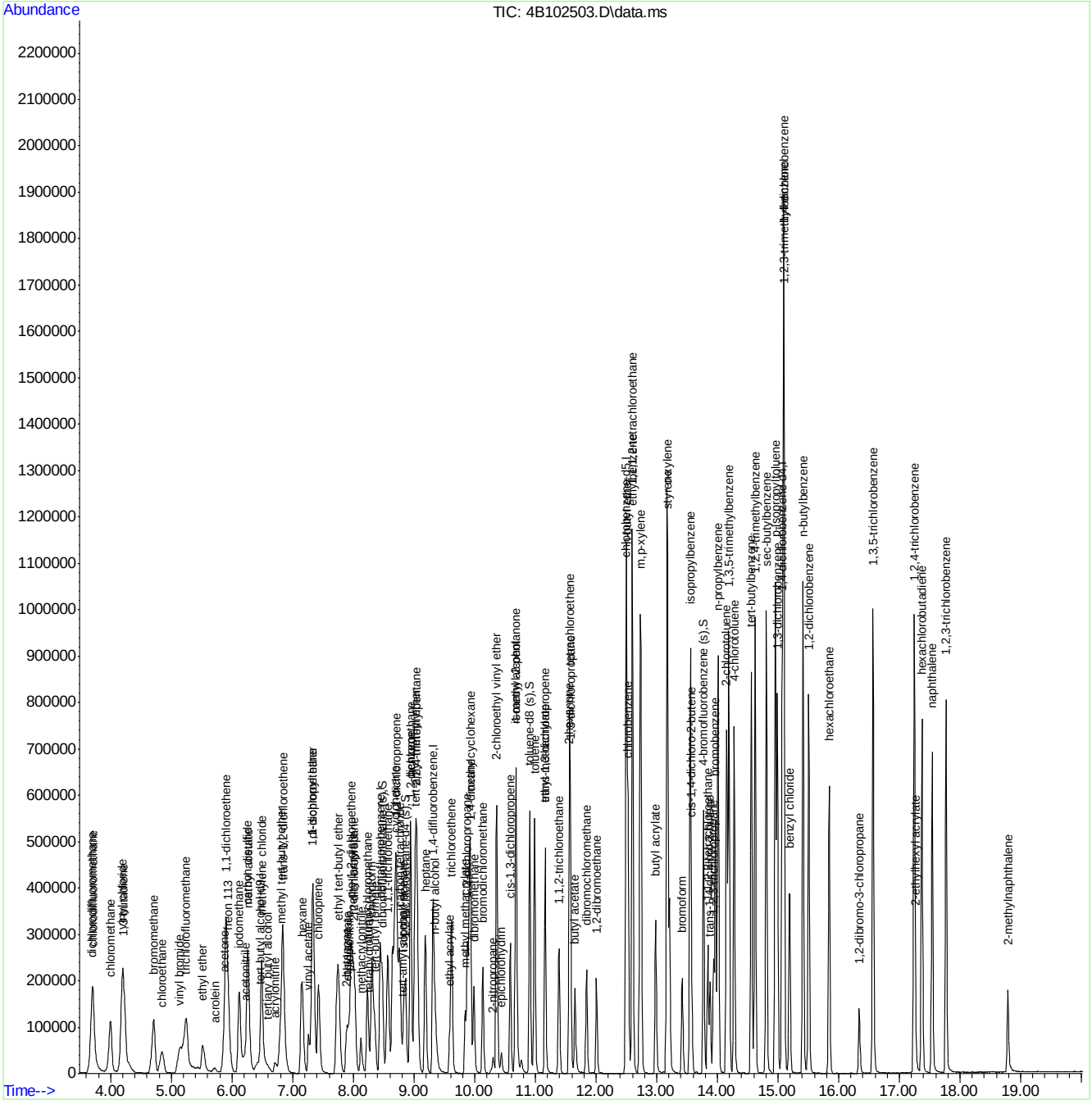
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	styrene	13.179	104	352104	50.00	ug/L	100
93)	butyl acrylate	12.985	55	231192	50.00	ug/L	100
94)	isopropylbenzene	13.555	105	618416	50.00	ug/L	100
95)	bromoform	13.419	173	106005	50.00	ug/L	100
96)	cis-1,4-dichloro-2-butene	13.571	88	53991	50.05	ug/L	100
99)	1,1,2,2-tetrachloroethane	13.843	83	139002	50.00	ug/L	100
100)	trans-1,4-dichloro-2-b...	13.880	53	40514	50.00	ug/L	100
101)	1,2,3-trichloropropane	13.937	110	38342	50.00	ug/L	100
102)	bromobenzene	13.969	156	177672	50.00	ug/L	100
103)	n-propylbenzene	14.010	91	724870	50.00	ug/L	100
104)	2-chlorotoluene	14.152	126	152897	50.00	ug/L	100
105)	4-chlorotoluene	14.277	91	444377	50.00	ug/L	100
106)	1,3,5-trimethylbenzene	14.188	105	533861	50.00	ug/L	100
107)	tert-butylbenzene	14.560	119	455797	50.00	ug/L	100
108)	1,2,4-trimethylbenzene	14.622	105	565503	50.00	ug/L	100
109)	sec-butylbenzene	14.805	105	729091	50.00	ug/L	100
110)	p-isopropyltoluene	14.957	119	652692	50.00	ug/L	100
111)	1,3-dichlorobenzene	14.988	146	357221	50.00	ug/L	100
112)	1,2,3-trimethylbenzene	15.093	105	603509	50.00	ug/L	100
113)	1,4-dichlorobenzene	15.098	146	365262	50.00	ug/L	100
114)	1,2-dichlorobenzene	15.506	146	373662	50.00	ug/L	100
115)	benzyl chloride	15.187	91	300761	50.00	ug/L	100
116)	n-butylbenzene	15.412	92	339695	50.00	ug/L	100
117)	hexachloroethane	15.841	201	128727	50.00	ug/L	100
118)	1,2-dibromo-3-chloropr...	16.338	157	46933	50.00	ug/L	100
119)	1,3,5-trichlorobenzene	16.568	180	375976	50.00	ug/L	100
120)	1,2,4-trichlorobenzene	17.248	180	340214	50.00	ug/L	100
121)	2-ethylhexyl acrylate	17.264	70	18591	10.00	ug/L	100
122)	hexachlorobutadiene	17.373	225	177008	50.00	ug/L	100
123)	naphthalene	17.541	128	566780	50.00	ug/L	100
124)	1,2,3-trichlorobenzene	17.771	180	288293	50.00	ug/L	100
125)	2-methylnaphthalene	18.791	142	113321	25.00	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102503.D
Acq On : 18 Feb 2021 12:09 am
Operator : brittank
Sample : icc4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 15:56:40 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



M4B4435.M Mon Feb 22 11:15:53 2021 MS4B Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	109247	500.00	ug/L	0.01
5) pentafluorobenzene	8.446	168	245455	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	335865	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	337769	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	218310	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	121440	50.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.26%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	123821	49.65	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.30%			
75) toluene-d8 (s)	10.909	98	406325	51.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.04%			
98) 4-bromofluorobenzene (s)	13.770	95	162407	51.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.584	59	130928	527.53	ug/L	98
4) 1,4-dioxane	9.926	88	51110	2644.67	ug/L	87
6) chlorodifluoromethane	3.702	51	440738	99.31	ug/L	98
7) dichlorodifluoromethane	3.681	85	657145	100.40	ug/L	98
8) chloromethane	3.995	50	490605	101.50	ug/L	98
9) vinyl chloride	4.193	62	466167	100.58	ug/L	99
10) 1,3-butadiene	4.214	54	302308	99.19	ug/L	99
11) bromomethane	4.706	94	322313	99.97	ug/L	98
12) chloroethane	4.847	64	193984	98.36	ug/L	97
13) trichlorofluoromethane	5.245	101	549758	99.02	ug/L	100
14) vinyl bromide	5.130	106	150859	102.05	ug/L	98
15) ethyl ether	5.517	74	83530	100.27	ug/L	92
16) acrolein	5.705	56	32654	102.19	ug/L	92
17) freon 113	5.935	151	290957	97.69	ug/L	98
18) 1,1-dichloroethene	5.898	61	382774	96.76	ug/L	98
19) acetone	5.872	58	68447	405.95	ug/L	100
20) acetonitrile	6.223	41	287639	988.65	ug/L	96
21) iodomethane	6.118	142	628283	98.16	ug/L	98
22) carbon disulfide	6.259	76	928533	97.63	ug/L	100
23) methylene chloride	6.484	84	262148	97.45	ug/L	97
24) methyl acetate	6.265	43	130810	96.56	ug/L	98
25) methyl tert butyl ether	6.824	73	703295	97.43	ug/L	97
26) trans-1,2-dichloroethene	6.835	61	329355	99.19	ug/L	97
27) hexane	7.154	56	160502	101.54	ug/L	94
28) di-isopropyl ether	7.331	45	897831	99.59	ug/L	99
29) 2-butanone	7.881	72	66723	393.95	ug/L	99
30) 1,1-dichloroethane	7.331	63	403484	98.70	ug/L	99
31) chloroprene	7.426	53	325793	99.22	ug/L	99
32) acrylonitrile	6.709	53	68439	100.70	ug/L	97
33) vinyl acetate	7.258	86	28720	107.23	ug/L #	91
34) ethyl tert-butyl ether	7.745	59	820759	99.19	ug/L	99
35) ethyl acetate	7.907	45	26147	100.92	ug/L #	72

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	8.017	77	437537	97.57	ug/L		99
37) cis-1,2-dichloroethene	7.964	96	233490	98.70	ug/L		96
38) propionitrile	7.933	54	245479	1006.72	ug/L		96
39) methyl acrylate	7.985	85	25107	102.71	ug/L	#	67
40) methacrylonitrile	8.121	67	64295	101.01	ug/L		97
41) bromochloromethane	8.231	128	127046	99.34	ug/L		96
42) tetrahydrofuran	8.262	72	22660	107.31	ug/L	#	78
43) chloroform	8.304	83	413770	98.13	ug/L		98
44) tert-butyl formate	8.346	59	197475	101.83	ug/L		99
46) 1,1,1-trichloroethane	8.571	97	518941	100.94	ug/L		96
47) cyclohexane	8.691	84	433254	102.18	ug/L		98
49) 1,1-dichloropropene	8.717	75	282330	99.82	ug/L		98
50) carbon tetrachloride	8.759	117	459228	99.80	ug/L		99
51) tert-amyl alcohol	8.812	73	48957	463.28	ug/L	#	86
52) isopropyl acetate	8.838	87	37071	106.13	ug/L	#	79
55) n-butyl alcohol	9.335	41	189309	4547.16	ug/L		95
56) 2,2,4-trimethylpentane	9.047	57	1034119	100.54	ug/L		99
57) benzene	8.942	78	812133	97.61	ug/L		99
58) tert-amyl methyl ether	9.021	73	748939	95.91	ug/L		99
59) heptane	9.183	57	159717	98.33	ug/L		97
60) 1,2-dichloroethane	8.948	62	288478	95.76	ug/L		98
61) ethyl acrylate	9.586	55	213083	99.76	ug/L		99
62) trichloroethene	9.617	95	222514	100.13	ug/L		100
63) 2-chloroethyl vinyl ether	10.360	63	541793	485.57	ug/L		99
64) methyl methacrylate	9.842	100	44263	99.60	ug/L		94
65) methylcyclohexane	9.926	83	488563	98.21	ug/L		96
66) 1,2-dichloropropane	9.884	63	221708	98.34	ug/L		98
67) dibromomethane	9.988	93	134618	97.90	ug/L		98
68) bromodichloromethane	10.135	83	319832	100.27	ug/L		100
69) 2-nitropropane	10.302	41	47297	99.62	ug/L		94
70) epichlorohydrin	10.438	57	87754	512.47	ug/L		97
71) cis-1,3-dichloropropene	10.590	75	348615	99.47	ug/L		98
72) 4-methyl-2-pentanone	10.679	58	282229	388.58	ug/L		99
73) isoamyl alcohol	10.679	70	99272	1737.79	ug/L	#	87
76) toluene	10.987	92	508899	101.82	ug/L		99
77) ethyl methacrylate	11.160	69	235669	97.62	ug/L		98
78) trans-1,3-dichloropropene	11.160	75	303593	99.77	ug/L		99
79) 1,1,2-trichloroethane	11.390	83	153646	103.08	ug/L		99
80) tetrachloroethene	11.568	164	212661	101.58	ug/L		99
81) 2-hexanone	11.552	58	240086	378.68	ug/L		96
82) 1,3-dichloropropane	11.578	76	277949	98.20	ug/L		95
83) butyl acetate	11.652	56	109435	91.14	ug/L		98
84) dibromochloromethane	11.845	129	261712	102.19	ug/L		97
85) 1,2-dibromoethane	12.007	107	296693	98.88	ug/L		98
86) n-butyl ether	12.499	57	987511	95.36	ug/L		99
87) chlorobenzene	12.530	112	598214	98.74	ug/L		99
88) 1,1,1,2-tetrachloroethane	12.598	131	305111	101.76	ug/L		97
89) ethylbenzene	12.598	91	1050116	97.55	ug/L		99
90) m,p-xylene	12.734	106	785814	193.45	ug/L		98
91) o-xylene	13.168	91	924255	98.37	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

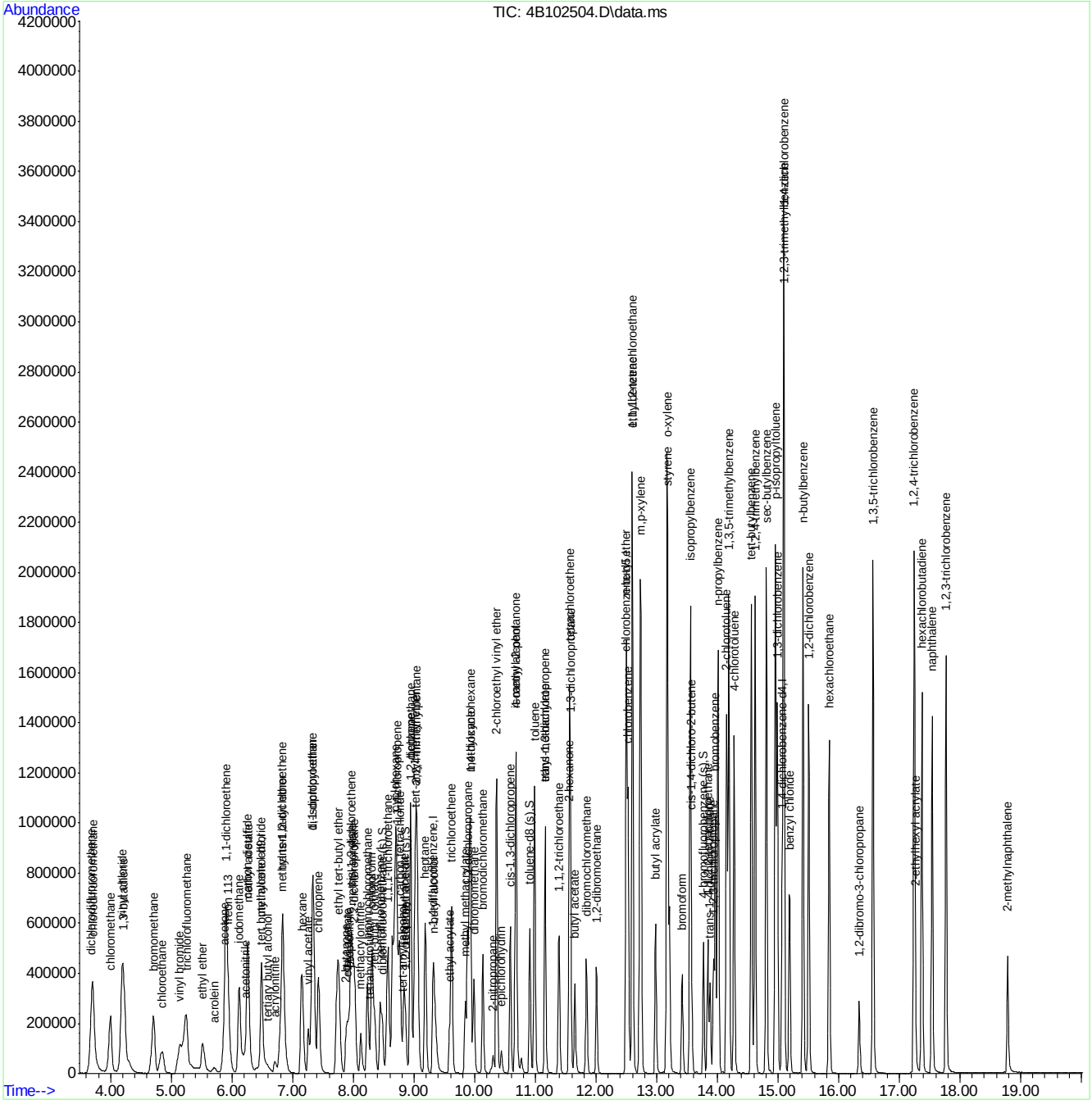
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	styrene	13.179	104	663690	92.27	ug/L	100
93)	butyl acrylate	12.980	55	412535	87.35	ug/L	97
94)	isopropylbenzene	13.555	105	1263670	100.03	ug/L	99
95)	bromoform	13.419	173	202268	93.41	ug/L	98
96)	cis-1,4-dichloro-2-butene	13.571	88	97040	88.06	ug/L	97
99)	1,1,2,2-tetrachloroethane	13.843	83	266339	108.36	ug/L	98
100)	trans-1,4-dichloro-2-b...	13.880	53	71787	100.20	ug/L	96
101)	1,2,3-trichloropropane	13.937	110	69916	103.12	ug/L	97
102)	bromobenzene	13.969	156	321420	102.30	ug/L	97
103)	n-propylbenzene	14.011	91	1367602	106.69	ug/L	99
104)	2-chlorotoluene	14.152	126	290632	107.49	ug/L	97
105)	4-chlorotoluene	14.277	91	795085	101.18	ug/L	99
106)	1,3,5-trimethylbenzene	14.188	105	1076706	114.05	ug/L	99
107)	tert-butylbenzene	14.560	119	973215	120.75	ug/L	100
108)	1,2,4-trimethylbenzene	14.622	105	1086499	108.65	ug/L	100
109)	sec-butylbenzene	14.806	105	1499620	116.32	ug/L	100
110)	p-isopropyltoluene	14.957	119	1290790	111.84	ug/L	99
111)	1,3-dichlorobenzene	14.989	146	636761	100.80	ug/L	99
112)	1,2,3-trimethylbenzene	15.093	105	1190296	111.54	ug/L	99
113)	1,4-dichlorobenzene	15.098	146	660771	102.30	ug/L	99
114)	1,2-dichlorobenzene	15.506	146	680264	102.95	ug/L	98
115)	benzyl chloride	15.187	91	541803	101.87	ug/L	100
116)	n-butylbenzene	15.412	92	637023	106.05	ug/L	99
117)	hexachloroethane	15.846	201	280486	123.22	ug/L	98
118)	1,2-dibromo-3-chloropr...	16.338	157	90634	109.21	ug/L	96
119)	1,3,5-trichlorobenzene	16.568	180	735041	110.56	ug/L	98
120)	1,2,4-trichlorobenzene	17.243	180	703796	116.99	ug/L	98
121)	2-ethylhexyl acrylate	17.264	70	51312	31.22	ug/L	97
122)	hexachlorobutadiene	17.374	225	352245	112.54	ug/L	99
123)	naphthalene	17.541	128	1181794	117.91	ug/L	99
124)	1,2,3-trichlorobenzene	17.771	180	600906	117.87	ug/L	98
125)	2-methylnaphthalene	18.786	142	271694	67.79	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102504.D
Acq On : 18 Feb 2021 12:37 am
Operator : brittank
Sample : ic4435-100
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 15:56:46 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	113724	500.00	ug/L	0.02
5) pentafluorobenzene	8.446	168	265190	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	368992	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	371382	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	257112	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.482	113	128552	49.12	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.24%						
54) 1,2-dichloroethane-d4 (s)	8.864	65	130335	47.57	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 95.14%						
75) toluene-d8 (s)	10.909	98	450070	51.91	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 103.82%						
98) 4-bromofluorobenzene (s)	13.770	95	185818	49.77	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.54%						
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.584	59	270203	1045.82	ug/L	95
4) 1,4-dioxane	9.931	88	106041	5271.04	ug/L	93
6) chlorodifluoromethane	3.707	51	926029	193.13	ug/L	99
7) dichlorodifluoromethane	3.697	85	1291455	182.63	ug/L	99
8) chloromethane	4.000	50	958473	183.54	ug/L	98
9) vinyl chloride	4.193	62	920725	183.88	ug/L	99
10) 1,3-butadiene	4.214	54	603458	183.27	ug/L	99
11) bromomethane	4.711	94	615784	176.78	ug/L	98
12) chloroethane	4.852	64	375647	176.30	ug/L	98
13) trichlorofluoromethane	5.245	101	1100924	183.54	ug/L	99
14) vinyl bromide	5.135	106	299854	187.74	ug/L	97
15) ethyl ether	5.527	74	170627	189.58	ug/L	98
16) acrolein	5.715	56	70355	203.79	ug/L	86
17) freon 113	5.930	151	602460	187.23	ug/L	98
18) 1,1-dichloroethene	5.898	61	784716	183.60	ug/L	98
19) acetone	5.878	58	139813	767.51	ug/L	97
20) acetonitrile	6.223	41	583030	1854.81	ug/L	99
21) iodomethane	6.123	142	1312020	189.72	ug/L	100
22) carbon disulfide	6.259	76	1903264	185.23	ug/L	99
23) methylene chloride	6.489	84	541796	186.43	ug/L	97
24) methyl acetate	6.259	43	268338	183.34	ug/L	99
25) methyl tert butyl ether	6.824	73	1399181	179.40	ug/L	97
26) trans-1,2-dichloroethene	6.840	61	676216	188.50	ug/L	99
27) hexane	7.148	56	346971	203.17	ug/L	93
28) di-isopropyl ether	7.337	45	1824765	187.35	ug/L	99
29) 2-butanone	7.881	72	144899	791.86	ug/L	97
30) 1,1-dichloroethane	7.332	63	815786	184.70	ug/L	98
31) chloroprene	7.426	53	670551	189.03	ug/L	99
32) acrylonitrile	6.709	53	144036	196.16	ug/L	98
33) vinyl acetate	7.258	86	60954	210.64	ug/L	97
34) ethyl tert-butyl ether	7.750	59	1648667	184.41	ug/L	98
35) ethyl acetate	7.902	45	55580	198.56	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	8.017	77	874035	180.40	ug/L		99
37) cis-1,2-dichloroethene	7.964	96	482524	188.79	ug/L		99
38) propionitrile	7.933	54	511358	1941.04	ug/L		96
39) methyl acrylate	7.991	85	55162	208.87	ug/L	#	78
40) methacrylonitrile	8.127	67	139225	202.45	ug/L		90
41) bromochloromethane	8.231	128	261825	189.49	ug/L		95
42) tetrahydrofuran	8.257	72	46858	205.39	ug/L	#	71
43) chloroform	8.304	83	857116	188.16	ug/L		97
44) tert-butyl formate	8.351	59	394197	188.14	ug/L		98
46) 1,1,1-trichloroethane	8.571	97	1077794	194.04	ug/L		97
47) cyclohexane	8.691	84	893785	195.11	ug/L		97
49) 1,1-dichloropropene	8.718	75	581785	190.39	ug/L		98
50) carbon tetrachloride	8.765	117	948342	190.75	ug/L		98
51) tert-amyl alcohol	8.817	73	105786	926.55	ug/L	#	84
52) isopropyl acetate	8.838	87	79272	210.06	ug/L	#	79
55) n-butyl alcohol	9.335	41	387720	8476.85	ug/L		98
56) 2,2,4-trimethylpentane	9.052	57	2262377	200.20	ug/L		97
57) benzene	8.942	78	1717495	187.90	ug/L		98
58) tert-amyl methyl ether	9.021	73	1491176	173.82	ug/L		98
59) heptane	9.188	57	343764	192.63	ug/L		97
60) 1,2-dichloroethane	8.948	62	595133	179.82	ug/L		98
61) ethyl acrylate	9.586	55	457875	195.13	ug/L		98
62) trichloroethene	9.617	95	474611	194.40	ug/L		98
63) 2-chloroethyl vinyl ether	10.360	63	1137126	927.64	ug/L		99
64) methyl methacrylate	9.842	100	95798	196.22	ug/L		98
65) methylcyclohexane	9.926	83	1022165	187.02	ug/L		98
66) 1,2-dichloropropane	9.884	63	458070	184.95	ug/L		99
67) dibromomethane	9.988	93	287611	190.39	ug/L		97
68) bromodichloromethane	10.135	83	689568	196.77	ug/L		100
69) 2-nitropropane	10.302	41	101659	194.90	ug/L		93
70) epichlorohydrin	10.444	57	189304	1006.26	ug/L		97
71) cis-1,3-dichloropropene	10.590	75	768692	199.63	ug/L		98
72) 4-methyl-2-pentanone	10.679	58	575305	720.98	ug/L		97
73) isoamyl alcohol	10.679	70	200432	3193.63	ug/L	#	85
76) toluene	10.987	92	1127591	205.19	ug/L		98
77) ethyl methacrylate	11.155	69	492916	185.71	ug/L		98
78) trans-1,3-dichloropropene	11.160	75	648228	193.74	ug/L		97
79) 1,1,2-trichloroethane	11.390	83	326837	199.43	ug/L		97
80) tetrachloroethene	11.573	164	467629	203.16	ug/L		98
81) 2-hexanone	11.558	58	486883	698.44	ug/L		95
82) 1,3-dichloropropane	11.578	76	587489	188.77	ug/L		95
83) butyl acetate	11.652	56	225178	170.55	ug/L		96
84) dibromochloromethane	11.845	129	566483	201.16	ug/L		100
85) 1,2-dibromoethane	12.007	107	641308	194.38	ug/L		98
86) n-butyl ether	12.504	57	2032682	178.52	ug/L		99
87) chlorobenzene	12.530	112	1301613	195.39	ug/L		97
88) 1,1,1,2-tetrachloroethane	12.598	131	648844	196.81	ug/L		99
89) ethylbenzene	12.598	91	2227954	188.23	ug/L		99
90) m,p-xylene	12.734	106	1698753	380.34	ug/L		97
91) o-xylene	13.168	91	1978031	191.47	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration

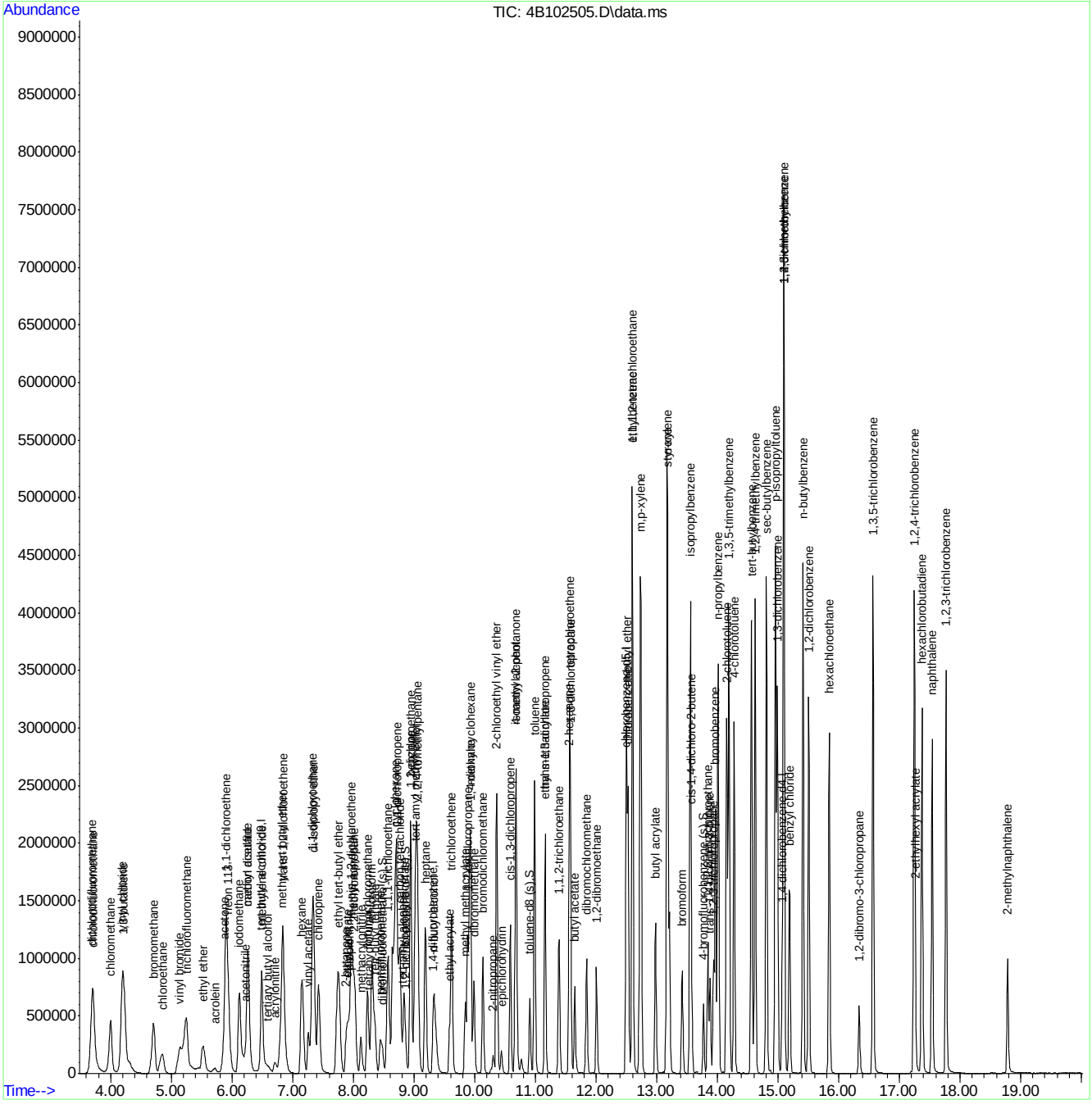
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	styrene	13.179	104	1461180	184.76	ug/L	100
93)	butyl acrylate	12.980	55	876287	168.75	ug/L	98
94)	isopropylbenzene	13.556	105	2735370	196.93	ug/L	99
95)	bromoform	13.420	173	454275	190.79	ug/L	98
96)	cis-1,4-dichloro-2-butene	13.571	88	215330	177.73	ug/L	96
99)	1,1,2,2-tetrachloroethane	13.843	83	574093	198.31	ug/L	97
100)	trans-1,4-dichloro-2-b...	13.880	53	162354	192.42	ug/L	98
101)	1,2,3-trichloropropane	13.937	110	152206	190.61	ug/L	95
102)	bromobenzene	13.969	156	731360	197.65	ug/L	100
103)	n-propylbenzene	14.011	91	2951138	195.49	ug/L	100
104)	2-chlorotoluene	14.157	126	638388	200.48	ug/L	98
105)	4-chlorotoluene	14.277	91	1787386	193.13	ug/L	98
106)	1,3,5-trimethylbenzene	14.188	105	2337877	210.27	ug/L	99
107)	tert-butylbenzene	14.565	119	2151623	226.67	ug/L	96
108)	1,2,4-trimethylbenzene	14.622	105	2369564	201.20	ug/L	99
109)	sec-butylbenzene	14.811	105	3256732	214.48	ug/L	99
110)	p-isopropyltoluene	14.957	119	2807162	206.51	ug/L	99
111)	1,3-dichlorobenzene	14.989	146	1471645	197.81	ug/L	99
112)	1,2,3-trimethylbenzene	15.093	105	2601133	206.95	ug/L	99
113)	1,4-dichlorobenzene	15.098	146	1521047	199.95	ug/L	100
114)	1,2-dichlorobenzene	15.506	146	1518516	195.13	ug/L	99
115)	benzyl chloride	15.187	91	1208408	192.92	ug/L	100
116)	n-butylbenzene	15.412	92	1399421	197.81	ug/L	99
117)	hexachloroethane	15.846	201	635533	237.06	ug/L	98
118)	1,2-dibromo-3-chloropr...	16.338	157	191558	195.98	ug/L	98
119)	1,3,5-trichlorobenzene	16.568	180	1594609	203.65	ug/L	98
120)	1,2,4-trichlorobenzene	17.248	180	1439995	203.24	ug/L	97
121)	2-ethylhexyl acrylate	17.264	70	126226	65.20	ug/L	98
122)	hexachlorobutadiene	17.374	225	750725	203.65	ug/L	100
123)	naphthalene	17.541	128	2383334	201.91	ug/L	99
124)	1,2,3-trichlorobenzene	17.771	180	1220443	203.27	ug/L	98
125)	2-methylnaphthalene	18.786	142	581655	123.23	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102505.D
Acq On : 18 Feb 2021 1:05 am
Operator : brittank
Sample : ic4435-200
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 15:56:53 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 15:47:44 2021
QLast Update : Fri Feb 19 15:47:44 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.484	65	115382	500.00	ug/L	0.00
5) pentafluorobenzene	8.445	168	271418	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	356044	50.00	ug/L	0.00
74) chlorobenzene-d5	12.494	117	361492	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	260659	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	132877	49.31	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.62%						
54) 1,2-dichloroethane-d4 (s)	8.864	65	131757	48.25	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 96.50%						
75) toluene-d8 (s)	10.909	98	413916	50.12	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.24%						
98) 4-bromofluorobenzene (s)	13.770	95	192597	49.85	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.70%						
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.552	59	68032	267.32	ug/L	95
4) 1,4-dioxane	9.926	88	27690	1403.94	ug/L	94
7) dichlorodifluoromethane	3.691	85	353029	54.17	ug/L	96
8) chloromethane	4.000	50	232544	42.76	ug/L	96
9) vinyl chloride	4.199	62	250215	51.89	ug/L	97
10) 1,3-butadiene	4.219	54	159767	51.30	ug/L	99
11) bromomethane	4.711	94	189448	51.67	ug/L	98
12) chloroethane	4.847	64	108069	52.49	ug/L	96
13) trichlorofluoromethane	5.245	101	296110	50.35	ug/L	99
14) vinyl bromide	5.135	106	86962	57.55	ug/L	93
15) ethyl ether	5.527	74	44301	48.74	ug/L	90
16) acrolein	5.715	56	18405	56.89	ug/L	96
17) freon 113	5.935	151	168322	53.75	ug/L	97
18) 1,1-dichloroethene	5.904	61	207361	47.39	ug/L	97
19) acetone	5.872	58	37343	207.72	ug/L	91
20) acetonitrile	6.233	41	125069	408.57	ug/L	99
21) iodomethane	6.118	142	304490	43.58	ug/L	99
22) carbon disulfide	6.264	76	571925	54.62	ug/L	99
23) methylene chloride	6.489	84	143752	46.77	ug/L	98
24) methyl acetate	6.264	43	65599	48.11	ug/L	97
25) methyl tert butyl ether	6.824	73	731460	93.39	ug/L	99
26) trans-1,2-dichloroethene	6.840	61	174137	48.21	ug/L	99
27) hexane	7.154	56	94684	56.02	ug/L	92
28) di-isopropyl ether	7.331	45	445526	45.83	ug/L	99
29) 2-butanone	7.886	72	37008	222.37	ug/L	95
30) 1,1-dichloroethane	7.331	63	221102	49.55	ug/L	99
31) chloroprene	7.431	53	177263	49.97	ug/L	98
32) acrylonitrile	6.719	53	39090	55.33	ug/L	96
33) vinyl acetate	7.263	86	14083	50.18	ug/L #	84
34) ethyl tert-butyl ether	7.739	59	409018	46.11	ug/L	98
35) ethyl acetate	7.912	45	12664	49.40	ug/L #	53
36) 2,2-dichloropropane	8.011	77	219413	44.44	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	7.964	96	127556	49.11	ug/L		98
38) propionitrile	7.938	54	130506	500.24	ug/L		94
39) methyl acrylate	7.990	85	12124	49.34	ug/L	#	75
40) methacrylonitrile	8.132	67	33972	52.72	ug/L		92
41) bromochloromethane	8.231	128	68725	49.35	ug/L		98
42) tetrahydrofuran	8.257	72	11752	50.99	ug/L		82
43) chloroform	8.304	83	235467	48.45	ug/L		97
44) tert-butyl formate	8.346	59	84059	42.35	ug/L		96
46) 1,1,1-trichloroethane	8.571	97	265466	49.07	ug/L		99
47) cyclohexane	8.691	84	274956	60.90	ug/L		89
49) 1,1-dichloropropene	8.717	75	152034	48.23	ug/L		99
50) carbon tetrachloride	8.759	117	237788	48.62	ug/L		98
51) tert-amyl alcohol	8.806	73	27802	235.16	ug/L		93
52) isopropyl acetate	8.838	87	17793	47.94	ug/L	#	84
55) n-butyl alcohol	9.340	41	101860	2393.50	ug/L		97
56) 2,2,4-trimethylpentane	9.042	57	537344	54.77	ug/L		98
57) benzene	8.942	78	439758	49.50	ug/L		99
58) tert-amyl methyl ether	9.021	73	370478	47.00	ug/L		98
59) heptane	9.188	57	82660	50.71	ug/L		99
60) 1,2-dichloroethane	8.948	62	150783	47.20	ug/L		91
61) ethyl acrylate	9.586	55	103497	49.31	ug/L		99
62) trichloroethene	9.617	95	117572	50.80	ug/L		98
63) 2-chloroethyl vinyl ether	10.360	63	291099	270.17	ug/L		99
64) methyl methacrylate	9.847	100	21419	50.85	ug/L	#	76
65) methylcyclohexane	9.920	83	265150	54.36	ug/L		97
66) 1,2-dichloropropane	9.884	63	113643	48.94	ug/L		99
67) dibromomethane	9.988	93	69309	48.17	ug/L		97
68) bromodichloromethane	10.135	83	161043	48.37	ug/L		98
69) 2-nitropropane	10.302	41	21052	44.82	ug/L		88
70) epichlorohydrin	10.438	57	45944	268.19	ug/L		97
71) cis-1,3-dichloropropene	10.585	75	172965	47.43	ug/L		97
72) 4-methyl-2-pentanone	10.679	58	144155	193.61	ug/L		98
73) isoamyl alcohol	10.684	70	57011	1015.47	ug/L		97
76) toluene	10.987	92	261563	50.85	ug/L		98
77) ethyl methacrylate	11.160	69	119401	50.66	ug/L		99
78) trans-1,3-dichloropropene	11.160	75	156959	51.33	ug/L		97
79) 1,1,2-trichloroethane	11.390	83	79123	52.84	ug/L		95
80) tetrachloroethene	11.568	164	151317	70.23	ug/L		99
81) 2-hexanone	11.557	58	133412	208.26	ug/L		98
82) 1,3-dichloropropane	11.578	76	145906	49.32	ug/L		94
83) butyl acetate	11.652	56	60969	50.20	ug/L		95
84) dibromochloromethane	11.845	129	137128	51.09	ug/L		96
85) 1,2-dibromoethane	12.007	107	159339	51.69	ug/L		97
86) n-butyl ether	12.504	57	538884	49.70	ug/L		99
87) chlorobenzene	12.530	112	321256	50.19	ug/L		98
88) 1,1,1,2-tetrachloroethane	12.598	131	159967	52.51	ug/L		98
89) ethylbenzene	12.598	91	562711	50.25	ug/L		99
90) m,p-xylene	12.734	106	431191	103.21	ug/L		100
91) o-xylene	13.168	91	493697	51.57	ug/L		99
92) styrene	13.179	104	371087	52.26	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

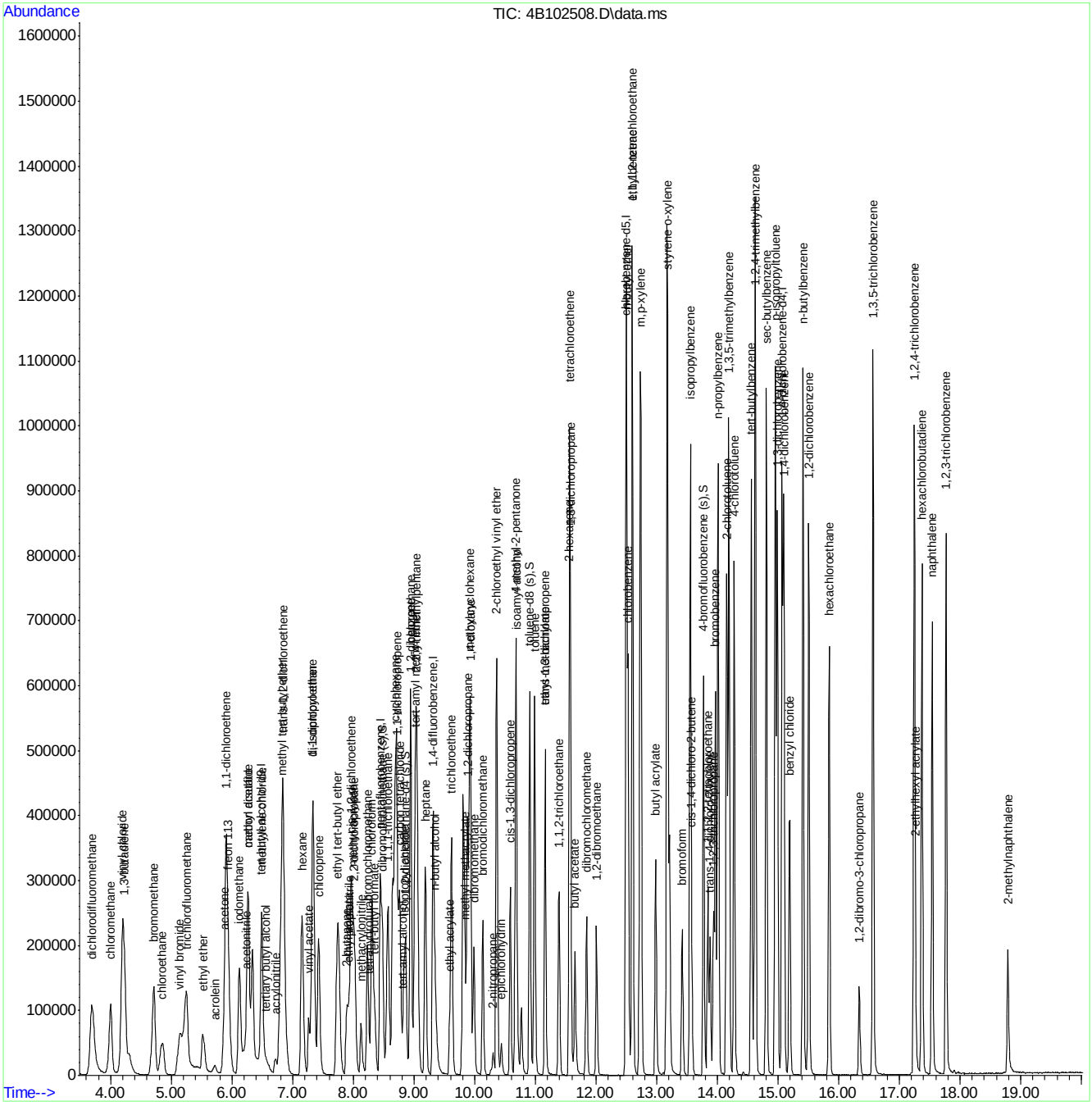
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	butyl acrylate	12.985	55	231782	51.00	ug/L	98
94)	isopropylbenzene	13.555	105	660147	50.56	ug/L	98
95)	bromoform	13.419	173	114384	52.26	ug/L	97
96)	cis-1,4-dichloro-2-butene	13.576	88	52868	50.77	ug/L	97
99)	1,1,2,2-tetrachloroethane	13.843	83	147141	50.65	ug/L	97
100)	trans-1,4-dichloro-2-b...	13.880	53	42722	53.00	ug/L	98
101)	1,2,3-trichloropropane	13.937	110	39194	52.25	ug/L	97
102)	bromobenzene	13.969	156	189725	53.20	ug/L	99
103)	n-propylbenzene	14.010	91	770574	51.38	ug/L	99
104)	2-chlorotoluene	14.157	126	163437	51.13	ug/L	99
105)	4-chlorotoluene	14.277	91	464135	49.69	ug/L	99
106)	1,3,5-trimethylbenzene	14.188	105	568054	50.03	ug/L	99
107)	tert-butylbenzene	14.560	119	484026	52.22	ug/L	98
108)	1,2,4-trimethylbenzene	14.622	105	601316	51.68	ug/L	100
109)	sec-butylbenzene	14.805	105	776261	51.29	ug/L	99
110)	p-isopropyltoluene	14.957	119	692122	51.53	ug/L	99
111)	1,3-dichlorobenzene	14.988	146	381515	51.33	ug/L	97
113)	1,4-dichlorobenzene	15.098	146	394136	50.52	ug/L	98
114)	1,2-dichlorobenzene	15.506	146	398352	52.11	ug/L	99
115)	benzyl chloride	15.192	91	308047	51.53	ug/L	98
116)	n-butylbenzene	15.412	92	355735	52.42	ug/L	98
117)	hexachloroethane	15.846	201	139464	44.94	ug/L	98
118)	1,2-dibromo-3-chloropr...	16.343	157	46992	53.41	ug/L	96
119)	1,3,5-trichlorobenzene	16.568	180	405984	55.74	ug/L	98
120)	1,2,4-trichlorobenzene	17.248	180	350067	55.52	ug/L	98
121)	2-ethylhexyl acrylate	17.264	70	22524	11.27	ug/L	94
122)	hexachlorobutadiene	17.373	225	183703	51.10	ug/L	99
123)	naphthalene	17.541	128	580434	52.37	ug/L	100
124)	1,2,3-trichlorobenzene	17.771	180	303111	55.49	ug/L	97
125)	2-methylnaphthalene	18.791	142	126317	27.22	ug/L	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102508.D
Acq On : 18 Feb 2021 2:30 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 21 11:43:45 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102509.D
Acq On : 18 Feb 2021 2:58 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 21 11:44:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

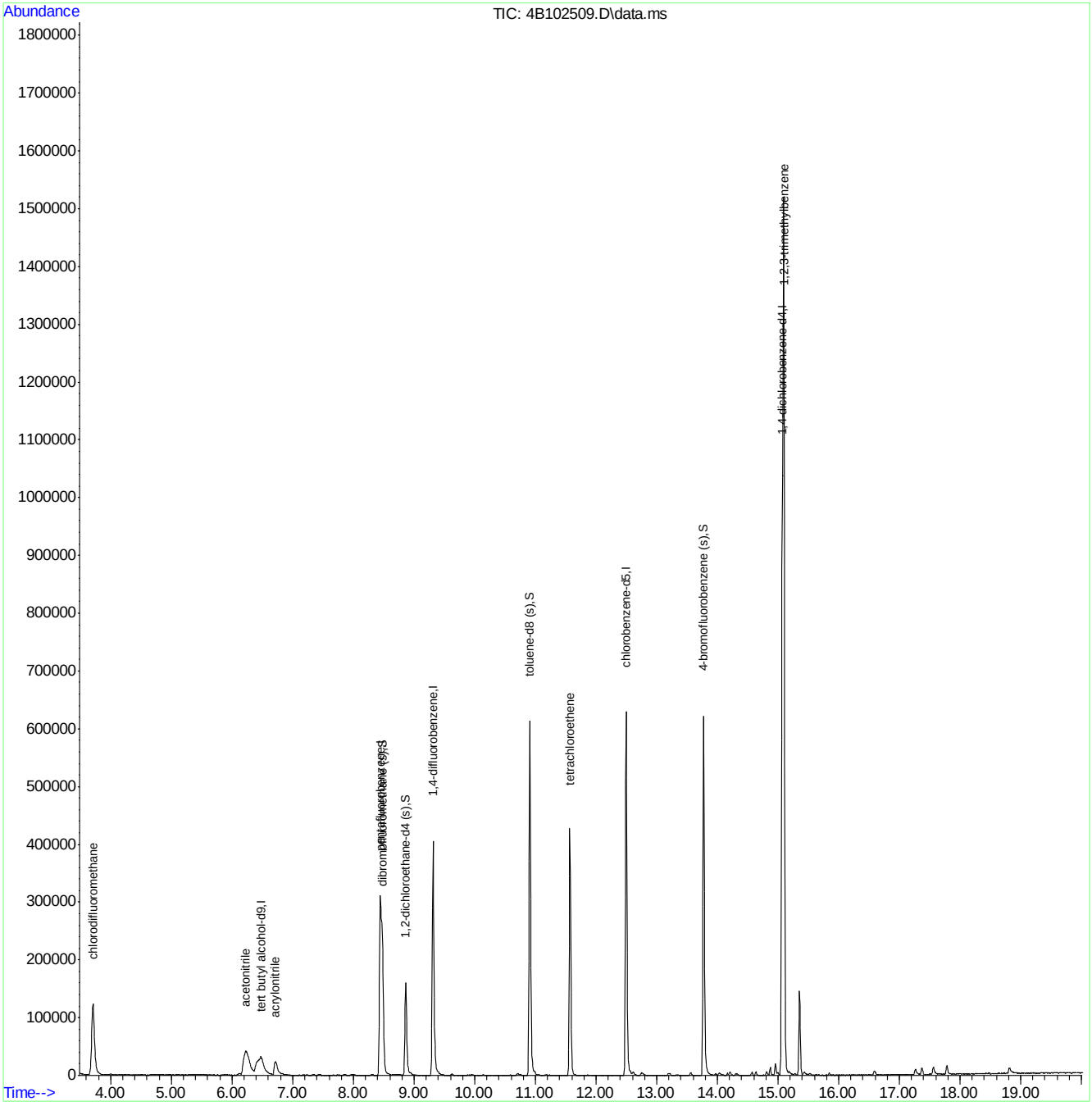
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.474	65	139499	500.00	ug/L	-0.01
5) pentafluorobenzene	8.445	168	277999	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	371550	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	394950	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	290221	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	133860	48.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.00%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	132457	46.48	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 92.96%			
75) toluene-d8 (s)	10.909	98	442690	49.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.14%			
98) 4-bromofluorobenzene (s)	13.770	95	209968	48.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.62%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.707	51	292719	61.98	ug/L	98
20) acetonitrile	6.228	41	161051	513.67	ug/L	97
32) acrylonitrile	6.709	53	34111	47.14	ug/L	94
80) tetrachloroethene	11.573	164	111477	47.36	ug/L	97
112) 1,2,3-trimethylbenzene	15.093	105	849128	59.31	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\V4B4435\
Data File : 4B102509.D
Acq On : 18 Feb 2021 2:58 am
Operator : brittank
Sample : icv4435-50
Misc : MS48773,V4B4435,W,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 21 11:44:29 2021
Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102705.d
Acq On : 3 Mar 2021 10:15 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49206,V4B4443,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:06 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.468	65	116077	500.00	ug/L	-0.02
5) pentafluorobenzene	8.446	168	217909	50.00	ug/L	0.00
53) 1,4-difluorobenzene	9.314	114	284964	50.00	ug/L	0.00
74) chlorobenzene-d5	12.499	117	306108	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.067	152	220487	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	8.477	113	111120	51.36	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.72%			
54) 1,2-dichloroethane-d4 (s)	8.864	65	113110	51.75	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.50%			
75) toluene-d8 (s)	10.909	98	352856	50.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.92%			
98) 4-bromofluorobenzene (s)	13.770	95	168045	51.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.84%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.584	59	26658	104.12	ug/L	92
4) 1,4-dioxane	9.931	88	9834	495.62	ug/L	95
6) chlorodifluoromethane	3.707	51	73239	19.78	ug/L	99
7) dichlorodifluoromethane	3.686	85	125019	23.89	ug/L	99
8) chloromethane	4.000	50	92974	21.30	ug/L	97
9) vinyl chloride	4.188	62	88491	22.86	ug/L	96
10) 1,3-butadiene	4.225	54	50169	20.06	ug/L	98
11) bromomethane	4.711	94	62613	21.27	ug/L	95
12) chloroethane	4.831	64	37734	22.83	ug/L	91
13) trichlorofluoromethane	5.245	101	107318	22.73	ug/L	96
14) vinyl bromide	5.135	106	47114	38.84	ug/L	96
15) ethyl ether	5.517	74	14911	20.43	ug/L	88
16) acrolein	5.715	56	5411	20.83	ug/L	93
17) freon 113	5.925	151	52495	20.88	ug/L	95
18) 1,1-dichloroethene	5.904	61	72652	20.68	ug/L	97
19) acetone	5.872	58	11324	78.46	ug/L	99
20) acetonitrile	6.228	41	57197	232.73	ug/L	95
21) iodomethane	6.123	142	102110	18.20	ug/L	99
22) carbon disulfide	6.259	76	170213	20.25	ug/L	98
23) methylene chloride	6.495	84	48566	19.68	ug/L	91
24) methyl acetate	6.280	43	24741	22.60	ug/L	89
25) methyl tert butyl ether	6.814	73	124921	19.87	ug/L	96
26) trans-1,2-dichloroethene	6.840	61	63370	21.85	ug/L	98
27) hexane	7.154	56	30323	22.35	ug/L	91
28) di-isopropyl ether	7.331	45	161932	20.75	ug/L	94
29) 2-butanone	7.886	72	10610	79.41	ug/L	94
30) 1,1-dichloroethane	7.331	63	74638	20.83	ug/L	99
31) chloroprene	7.431	53	60095	21.10	ug/L	98
32) acrylonitrile	6.725	53	10510	18.53	ug/L	92
33) vinyl acetate	7.269	86	4330	19.22	ug/L #	82
34) ethyl tert-butyl ether	7.745	59	148632	20.87	ug/L	95
35) ethyl acetate	7.912	45	3988	19.38	ug/L #	59
36) 2,2-dichloropropane	8.011	77	92475	23.33	ug/L	93
37) cis-1,2-dichloroethene	7.959	96	42579	20.42	ug/L	93
38) propionitrile	7.933	54	44320	211.60	ug/L	100
39) methyl acrylate	7.996	85	3573	18.11	ug/L #	69
40) methacrylonitrile	8.126	67	10650	20.59	ug/L	95
41) bromochloromethane	8.236	128	23105	20.67	ug/L	89
42) tetrahydrofuran	8.262	72	3484	18.83	ug/L #	52

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102705.d
Acq On : 3 Mar 2021 10:15 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49206,V4B4443,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:06 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	8.304	83	76490	19.60	ug/L	98
44) tert-butyl formate	8.346	59	35825	22.48	ug/L	92
46) 1,1,1-trichloroethane	8.571	97	93963	21.63	ug/L	97
47) cyclohexane	8.691	84	77982	21.51	ug/L	95
49) 1,1-dichloropropene	8.712	75	49008	19.36	ug/L	99
50) carbon tetrachloride	8.759	117	85327	21.73	ug/L	98
51) tert-amyl alcohol	8.822	73	11179	117.78	ug/L #	83
52) isopropyl acetate	8.838	87	6059	20.33	ug/L #	84
55) n-butyl alcohol	9.345	41	41446	1216.82	ug/L	97
56) 2,2,4-trimethylpentane	9.042	57	167557	21.34	ug/L	98
57) benzene	8.942	78	137453	19.33	ug/L	98
58) tert-amyl methyl ether	9.021	73	133227	21.12	ug/L	98
59) heptane	9.188	57	27649	21.19	ug/L	97
60) 1,2-dichloroethane	8.948	62	52458	20.52	ug/L	98
61) ethyl acrylate	9.591	55	35188	20.95	ug/L	98
62) trichloroethene	9.617	95	36698	19.81	ug/L	98
63) 2-chloroethyl vinyl ether	10.360	63	88959	103.16	ug/L	96
64) methyl methacrylate	9.847	100	6795	20.16	ug/L	91
65) methylcyclohexane	9.920	83	85793	21.98	ug/L	95
66) 1,2-dichloropropane	9.879	63	36359	19.56	ug/L	98
67) dibromomethane	9.988	93	22174	19.26	ug/L	99
68) bromodichloromethane	10.130	83	53129	19.94	ug/L	97
69) 2-nitropropane	10.307	41	7828	20.82	ug/L	97
70) epichlorohydrin	10.443	57	14872	108.47	ug/L	94
71) cis-1,3-dichloropropene	10.590	75	57318	19.64	ug/L	94
72) 4-methyl-2-pentanone	10.679	58	51681	86.72	ug/L	99
73) isoamyl alcohol	10.689	70	21374	475.67	ug/L #	80
76) toluene	10.987	92	85657	19.66	ug/L	96
77) ethyl methacrylate	11.160	69	41972	21.03	ug/L	93
78) trans-1,3-dichloropropene	11.160	75	52855	20.41	ug/L	93
79) 1,1,2-trichloroethane	11.385	83	26002	20.51	ug/L	92
80) tetrachloroethene	11.573	164	35480	19.45	ug/L	93
81) 2-hexanone	11.563	58	48173	88.81	ug/L	96
82) 1,3-dichloropropane	11.578	76	48469	19.35	ug/L	92
83) butyl acetate	11.657	56	21428	20.84	ug/L	96
84) dibromochloromethane	11.845	129	44158	19.43	ug/L	95
85) 1,2-dibromoethane	12.013	107	39825	15.26	ug/L	97
86) n-butyl ether	12.504	57	185846	20.24	ug/L	99
87) chlorobenzene	12.530	112	107956	19.92	ug/L	97
88) 1,1,1,2-tetrachloroethane	12.598	131	51938	20.14	ug/L	98
89) ethylbenzene	12.604	91	196149	20.69	ug/L	99
90) m,p-xylene	12.740	106	147214	41.61	ug/L	100
91) o-xylene	13.168	91	169238	20.88	ug/L	98
92) styrene	13.184	104	126815	21.09	ug/L	99
93) butyl acrylate	12.991	55	84657	22.00	ug/L	97
94) isopropylbenzene	13.555	105	220215	19.92	ug/L	99
95) bromoform	13.425	173	36934	19.93	ug/L	97
96) cis-1,4-dichloro-2-butene	13.576	88	18656	21.16	ug/L	96
99) 1,1,2,2-tetrachloroethane	13.843	83	51575	20.99	ug/L	97
100) trans-1,4-dichloro-2-b...	13.880	53	13720	20.12	ug/L	84
101) 1,2,3-trichloropropane	13.937	110	13752	21.67	ug/L	97
102) bromobenzene	13.969	156	61971	20.54	ug/L	92
103) n-propylbenzene	14.016	91	266028	20.97	ug/L	99
104) 2-chlorotoluene	14.157	126	55434	20.50	ug/L	98
105) 4-chlorotoluene	14.282	91	165584	20.96	ug/L	99
106) 1,3,5-trimethylbenzene	14.194	105	193610	20.16	ug/L	98
107) tert-butylbenzene	14.565	119	154130	19.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102705.d
Acq On : 3 Mar 2021 10:15 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49206,V4B4443,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:06 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration

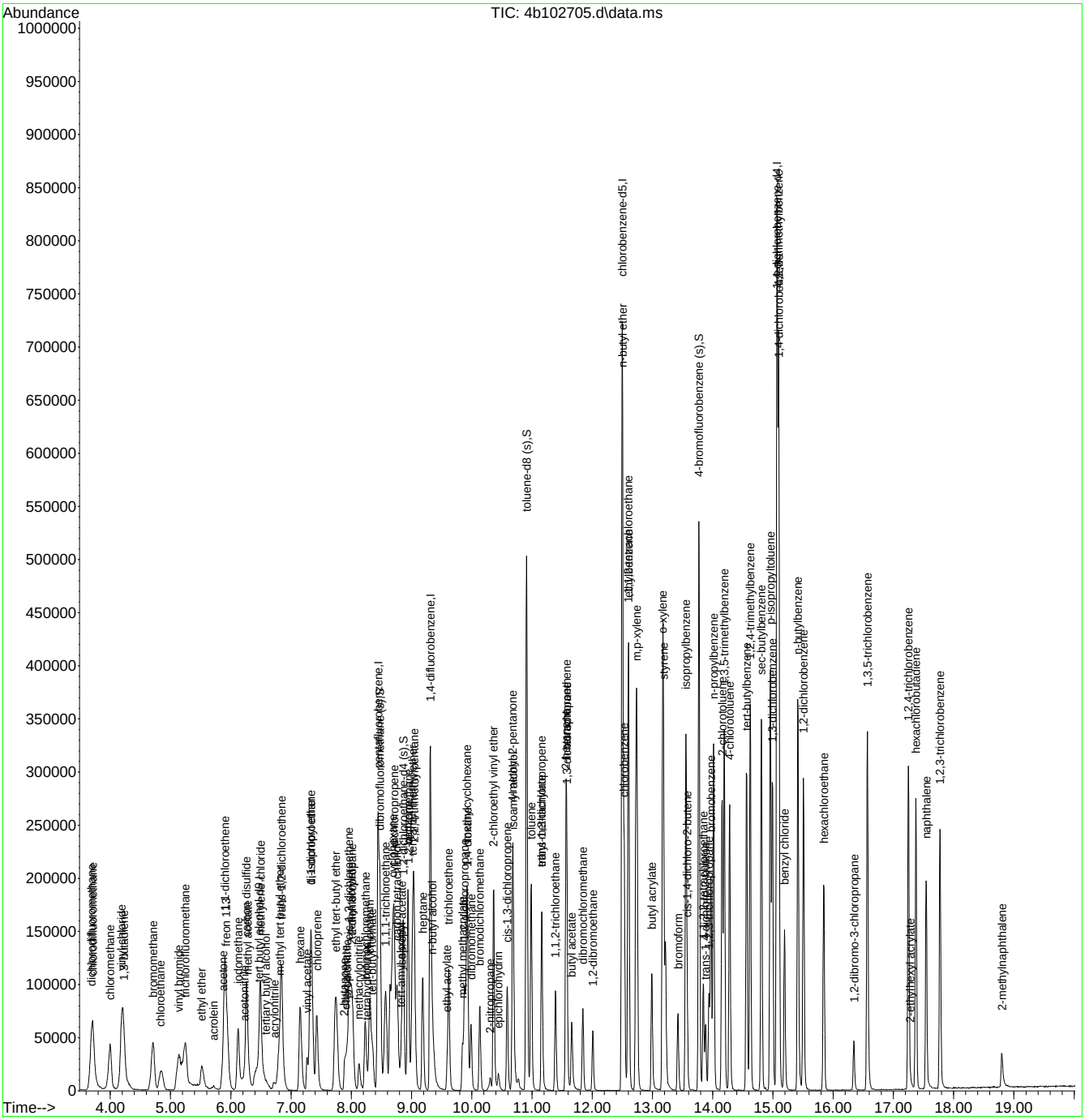
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	14.622	105	206136	20.95	ug/L	98
109) sec-butylbenzene	14.806	105	260452	20.34	ug/L	100
110) p-isopropyltoluene	14.957	119	236405	20.81	ug/L	99
111) 1,3-dichlorobenzene	14.994	146	127215	20.24	ug/L	99
112) 1,2,3-trimethylbenzene	15.093	105	219028	20.14	ug/L	99
113) 1,4-dichlorobenzene	15.098	146	128710	19.51	ug/L	99
114) 1,2-dichlorobenzene	15.506	146	129840	20.08	ug/L	97
115) benzyl chloride	15.193	91	115774	22.89	ug/L	100
116) n-butylbenzene	15.412	92	120045	20.91	ug/L	97
117) hexachloroethane	15.846	201	39551	15.62	ug/L	97
118) 1,2-dibromo-3-chloropr...	16.348	157	14924	20.05	ug/L	97
119) 1,3,5-trichlorobenzene	16.568	180	121823	19.77	ug/L	97
120) 1,2,4-trichlorobenzene	17.248	180	106555	19.98	ug/L	98
121) 2-ethylhexyl acrylate	17.279	70	3639	2.15	ug/L	79
122) hexachlorobutadiene	17.374	225	59973	19.72	ug/L	96
123) naphthalene	17.546	128	170482	18.18	ug/L	99
124) 1,2,3-trichlorobenzene	17.771	180	90617	19.61	ug/L	99
125) 2-methylnaphthalene	18.801	142	26129	6.66	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\2021\march 2021\03042021\v4b4443\
Data File : 4b102705.d
Acq On : 3 Mar 2021 10:15 am
Operator : brittank
Sample : cc4435-20 Inst : MS4B
Misc : MS49206,V4B4443,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B4435.M
Quant Results File: M4B4435.RES
Quant Time: Mar 03 21:25:06 2021
Quant Title : SW846 8260C/D, Rxi624.1 Sil MS 60m x 0.25mm x 1.4uFri Feb 19 16:10:14 2021
QLast Update : Fri Feb 19 16:10:14 2021
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standards	1,4 dioxane V018-2623-85.1	Ext 1,4-dioxane V018-262 3-106.1			Column	DB624(60mx0.25mmx1.4um)
Standard Concentration	100ppm	100 ppm			Method	V8260C SIM
Internal Surrogate	V018-2623-54				Init Calib Date	07/18/2018
Internal Surrogate Concentration	5/50ppm					
					Analysis Date	7/18/2018
					Sequence loaded by	Hueanh Tran
					Data processed by	Robert Szot
					Batch ID	V3A6923
					Matrix	AQ
Initial Calibration Method	M3A6923				Approved By:	BRIDGETK
pH Paper Lot#	232515				Approved Date:	7/20/2018 4:18:14 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
3A	160428	BFB		NA			5			1	ok	
3A	160429	IC6923-0.25		NA		SIM INITIAL CAL.	5			2	ok	1.25 ul 1,4 dioxane/ 500ml
3A	160430	IC6923-0.4		NA		SIM INITIAL CAL.	5			3	ok	2 ul 1,4 dioxane/ 500ml
3A	160431	IC6923-1		NA		SIM INITIAL CAL.	5			4	ok	1 ul 1,4 dioxane/ 100ml
3A	160432	IC6923-2		NA		SIM INITIAL CAL.	5			5	ok	2 ul 1,4 dioxane/ 100ml
3A	160433	IC6923-5		NA		SIM INITIAL CAL.	5			6	ok	5 ul 1,4 dioxane/ 100ml
3A	160434	ICC6923-20		NA		SIM INITIAL CAL.	5			7	ok	10 ul 1,4 dioxane/ 50ml
3A	160435	IC6923-50		NA		SIM INITIAL CAL.	5			8	ok	25ul 1,4 dioxane/ 50ml
3A	160436	IC6923-100		NA		SIM INITIAL CAL.	5			9	ok	50 ul 1,4 dioxane/50ml
3A	160437	IC6923-200		NA		SIM INITIAL CAL.	5			10	ok	100ul 1,4 dioxane/ 50ml
3A	160438	IB		NA			5			11	ok	

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
3A	160439	IB		NA			5			12	ok	
3A	160440	IB		NA			5			13	ok	
3A	160441	IB		NA			5			14	ok	
3A	160440	IB		NA			5			13	ok	
3A	160443	ICV6923-20		NA		SIM INITIAL CAL.	5			16	ok	10 ul Ext 1,4 dioxane/ 50ml
3A	160444	IB		NA			5			17	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standards	1,4-dioxane: V021-2715-9				Column	Rxi-624 (60mx0.25mmx1.4um)
Standard Concentrations	100 ppm				Method	V8260C SIM
Expiration Date	3/7/21				Init Calib Date	7/18/18
Internal Surrogate	V021-2715-10					
Internal Surrogate Concentration	5/50 ppm				Analysis Date	3/4/2021
Expiration Date	3/7/21				Sequence loaded by	Robert Szot
pH Paper Lot#	221419				Data processed by	Robert Szot
Expiration Date	8/1/22				Batch ID	V3A7170
					Matrix	AQ
					Approved By:	MEI
			Initial Calibration Method	M3A6923	Approved Date:	3/8/2021 8:28:32 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
3A	165056	BFB		NA			5			1	OK	10:09 AM
3A	165057	CC6923-5		NA			5			2	OK	5 uL 1,4-dioxane / 100 mL DI H2O
3A	165058	BS		NA			5			3	OK	10 uL 1,4-dioxane / 50 mL DI H2O
3A	165059	MB		NA			5			4	OK	
3A	165060	JD20919-16	2	NA	MS49208	V8260SIMDIOX	5		1	5	OK	
3A	165061	JD20919-18	1	NA	MS49208	V8260SIMDIOX	5		1	6	OK	
3A	165062	JD20920-11	15	NA	MS49215	V8260SIMDIOX	5		1	7	OK	
3A	165063	JD20920-11MS	16	NA	MS49215	V8260SIMDIOX	5		1	8	OK	8 uL 1,4-dioxane / 40 mL sample
3A	165064	JD20920-11MSD	17	NA	MS49215	V8260SIMDIOX	5		1	9	OK	8 uL 1,4-dioxane / 40 mL sample
3A	165065	IB		NA			5			10	OK	
3A	165066	JD20920-6	1	NA	MS49215	V8260SIMDIOX	5		1	11	OK	

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
3A	165067	JD20920-10	1	NA	MS49215	V8260SIMDIOX	5		1	12	OK	
3A	165068	JD20920-1	1	NA	MS49215	V8260SIMDIOX	5		1	13	OK	
3A	165069	JD20920-2	1	NA	MS49215	V8260SIMDIOX	5		1	14	OK	
3A	165070	JD20920-3	1	NA	MS49215	V8260SIMDIOX	5		1	15	OK	
3A	165071	JD20920-4	1	NA	MS49215	V8260SIMDIOX	5		1	16	OK	
3A	165072	JD20920-5	1	NA	MS49215	V8260SIMDIOX	5		1	17	OK	
3A	165073	JD20920-7	1	NA	MS49215	V8260SIMDIOX	5		1	18	OK	
3A	165074	JD20920-8	1	NA	MS49215	V8260SIMDIOX	5		1	19	OK	
3A	165075	JD20920-9	1	NA	MS49215	V8260SIMDIOX	5		1	20	OK	8:01 PM

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standard	ABK: V020-2709-149.45	EC: V021-2715-21.9	AA: V021-2715-6.18	Ext. Chlorodifluoromethane:	Column	Rxi-624(60mx0.25mmx1.4um)
Standard Concentration	100-10,000ppm	100ppm	100ppm	100ppm	Method	V8260D
Expiration Date	2/25/2021	2/19/2021	3/4/2021	3/12/2021	Init Calib Date	2/17/2021
Standard	Ext. ABK: V020-2709-150.4	Ext. EC: V021-2715-22.3	Ext. Acrolein: V021-2715-24.3	Ext. PA: V021-2715-20.1		
Standard Concentration	100-10,000ppm	100ppm	100ppm	100-1,000ppm	Analysis Date	2/17/2021
Expiration Date	2/25/2021	2/19/2021	3/14/2021	3/12/2021	Sequence loaded by	Brittany Klimek
					Data processed by	Bridget Kelly
					Batch ID	V4B4435
Internal Surrogate	V021-2715-26				Matrix	AQ
Internal Surrogate Concentration	250/2,500ppm				Approved By:	MEI
Expiration Date	3/19/2021		Initial Calibration Method	M4B4435	Approved Date:	2/22/2021 9:13:55 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102495	BFB		NA			5			1	ok	2/17/2021; 8:17PM.
4B	102496	IC4435-0.2		NA		AQ Initial Calibraition	5			2	ok	1uL ABK, EC, AA/500mL DI H2O.
4B	102497	IC4435-0.5		NA		AQ Initial Calibraition	5			3	ok	1uL ABK, EC, AA/200mL DI H2O.
4B	102498	IC4435-1		NA		AQ Initial Calibraition	5			4	ok	1uL ABK, EC, AA/100mL DI H2O.
4B	102499	IC4435-2		NA		AQ Initial Calibraition	5			5	ok	2uL ABK, EC, AA/100mL DI H2O.
4B	102500	IC4435-4		NA		AQ Initial Calibraition	5			6	ok	4uL ABK, EC, AA/100mL DI H2O.
4B	102501	IC4435-8		NA		AQ Initial Calibraition	5			7	ok	8uL ABK, EC, AA/100mL DI H2O.
4B	102502	IC4435-20		NA		AQ Initial Calibraition	5			8	ok	20uL ABK, EC, AA/100mL DI H2O.
4B	102503	ICC4435-50		NA		AQ Initial Calibraition	5			9	ok	50uL ABK, EC, AA/100mL DI H2O.
4B	102504	IC4435-100		NA		AQ Initial Calibraition	5			10	ok	100uL ABK, EC, AA/100mL DI H2O.
4B	102505	IC4435-200		NA		AQ Initial Calibraition	5			11	ok	200uL ABK, EC, AA/100mL DI H2O.

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102506	IB		NA			5			12	ok	
4B	102507	IB		NA			5			13	ok	
4B	102508	ICV4435-50		NA		AQ Initial Calibraition	5			14	ok	50uL Ext. ABK, EC, Acrolein/100mL DI H2O.
4B	102509	ICV4435-50		NA		AQ Initial Calibraition	5			15	ok	50uL Ext. Chlorodifluoromethane, PA/100mL DI H2O.
4B	102510	IB		NA			5			16	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #					
Standard	ABK: V021-2715-34.11	EC: V021-2715-32.3	AA: V021-2715-6.26		Column	Rxi-624(60mx0.25mmx1.4um)
Standard Concentration	100-10,000ppm	100ppm	100ppm		Method	V8260C
Expiration Date	3/26/2021	3/3/2021	3/4/2021		Init Calib Date	2/17/2021
Internal Surrogate	V021-2715-26					
Internal Surrogate Concentration	250/2,500ppm				Analysis Date	3/3/2021
Expiration Date	3/19/2021				Sequence loaded by	Brittany Klimek
					Data processed by	kristelv
					Batch ID	V4B4443
Rough Reviewed by	brittank 3/4				Matrix	AQ
					Approved By:	MEI
pH paper (wide-range) lot#221419	Exp. 08/01/2022		Initial Calibration Method	M4B4435	Approved Date:	3/4/2021 2:28:08 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102703	IB		NA			5			1	OK	
4B	102704	IB		NA			5			2	OK	
4B	102705	BFB/CC4435-20		NA			5			3	OK/OK	20uL ABK, EC, AA/100mL DI H2O. 3/3/2021; 10:15AM. High: #14.
4B	102706	CC4435-1		NA			5			4	not used	1uL ABK, EC, AA/100mL DI H2O.
4B	102707	BS		NA			5			5	OK	50uL ABK, EC, AA/100mL DI H2O.
4B	102708	IB		NA			5			6	OK	
4B	102709	MB		NA			5			7	OK	
4B	102710	JD20920-11	1	NA	MS49216	V8260SL, 8260C	5		1	8	OK	
4B	102711	JD19595-1	3	2.5x	MS49177	V8260SL, 13BUTADN,	20/50		3	9	OK	+2CHL13BUTADN, 8260C, UNPR, VINYLBR. Dilution due to turbidity.
4B	102712	JD19596-1	8	10x	MS49177	V8260SL, 13BUTADN,	5/50		3	10	OK	+2CHL13BUTADN, 8260C, UNPR, VINYLBR. Dilution due to turbidity & foaming.
4B	102713	JD19594-1	4	200x	MS49177	V8260SL, 13BUTADN,	0.25/50		9	11	OK	+2CHL13BUTADN, 8260C, UNPR, VINYLBR. Dilution due to turbidity.

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	IS/Surr	pH	ALS #	Status	Comments
4B	102714	JD20843-1	5	200x	MS49186	V8260SL, 13BUTADN,	0.25/50		9	12	OK	+2CHL13BUTADN, 8260C, UNPR, VINYLBR. Dilution due to turbidity.
4B	102715	JD19597-1	5	2.5x	MS49177	V8260SL, 13BUTADN,	20/50		9	13	OK	+2CHL13BUTADN, 8260C, UNPR, VINYLBR. Dilution due to high non target.
4B	102716	JD20920-11MS	2	NA	MS49216	V8260SL, 8260C	5		1	14	OK	20uL ABK, EC, AA/40mL sample.
4B	102717	JD20920-11MSD	3	NA	MS49216	V8260SL, 8260C	5		1	15	OK	20uL ABK, EC, AA/40mL sample.
4B	102718	IB		NA			5			16	OK	
4B	102719	JD20920-6	4	NA	MS49216	V8260SL, 8260C	5		1	17	OK	
4B	102720	JD20920-10	4	NA	MS49216	V8260SL, 8260C	5		1	18	OK	
4B	102721	JD20920-12	1	NA	MS49216	V8260SL, 8260C	5		1	19	OK	
4B	102722	JD20920-1	4	NA	MS49216	V8260SL, 8260C	5		1	20	OK	
4B	102723	JD20920-2	4	NA	MS49216	V8260SL, 8260C	5		1	21	OK	
4B	102724	JD20920-3	4	NA	MS49216	V8260SL, 8260C	5		1	22	OK	
4B	102725	JD20920-4	4	NA	MS49216	V8260SL, 8260C	5		1	23	OK	
4B	102726	JD20920-5	4	NA	MS49216	V8260SL, 8260C	5		1	24	OK	
4B	102727	JD20920-7	4	NA	MS49216	V8260SL, 8260C	5		1	25	OK	
4B	102728	JD20920-8	4	NA	MS49216	V8260SL, 8260C	5		1	26	OK	
4B	102729	JD20920-9	4	NA	MS49216	V8260SL, 8260C	5		1	27	OK	10:07pm
4B	102730	IB		NA			5			28	OK	

Appendix B

First Quarter 2021 Effluent Air Laboratory Analytical Reports

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2/4/2021
Mr. Peter Hollatz
AECOM Environment
4320 Winfield Road

Warrenville IL 60555

Project Name: HSSER Plant 1/2
Project #: 60627752
Workorder #: 2101538

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 1/25/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Jade White

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2101538

Work Order Summary

CLIENT:	Mr. Peter Hollatz AECOM Environment 4320 Winfield Road Warrenville, IL 60555	**BILL TO:**	Accounts Payable Austin AECOM PO Box 203970 Austin, TX 78720
PHONE:	630 829-2736	**P.O. #**	109672
FAX:	630-657-6305	**PROJECT #**	60627752 HSSER Plant 1/2
DATE RECEIVED:	01/25/2021	**CONTACT:**	Jade White
DATE COMPLETED:	02/04/2021		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	P1SVE-EFFC1-012121	Modified TO-14A	8.4 "Hg	14.8 psi
01AA	P1SVE-EFFC1-012121 Lab Duplicate	Modified TO-14A	8.4 "Hg	14.8 psi
02A	P2SVE-EFFC4-012121	Modified TO-14A	10.2 "Hg	14.9 psi
03A	P2SVE-EFFC5-012121	Modified TO-14A	9.6 "Hg	14.8 psi
04A	P1SVE-EFFC2-012121	Modified TO-14A	7.3 "Hg	15.1 psi
05A	P1SVE-EFFC3-012121	Modified TO-14A	7.3 "Hg	14.8 psi
06A	Lab Blank	Modified TO-14A	NA	NA
07A	CCV	Modified TO-14A	NA	NA
08A	LCS	Modified TO-14A	NA	NA
08AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 02/04/21

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified TO-14A
AECOM Environment
Workorder# 2101538

Five 1 Liter Summa Canister (100% Certified UTC) samples were received on January 25, 2021. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications. Please note that TO-14A was validated for specially treated canisters, and the use of Tedlar bags for sample collection is outside the scope of the method.

Requirement	***TO-14A***	***ATL Modifications***
Initial Calibration criteria	RSD</=30%	Follow TO-15 requirements of RSD</=30% with two compounds allowed out to </=40%RSD.
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action when recovery is less than 60%.
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Sample Drying System	Nafion Dryer	Multibed hydrophobic sorbent
BFB ion abundance criteria	Ion abundance listed in Table 4 of TO-14A	Follow ion abundance criteria listed in Method TO-15

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The data contained in this report have been generated in accordance with the requirements in the Raytheon Technologies Corporation Environmental Laboratory Program CHEM_03: Analytical Minimum Standards for Laboratories, May 2020 Revision 10.0 and associated documents if applicable.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated calculation due to estimated sampling rate.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC1-012121

Lab ID#: 2101538-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.4	5.3	5.6	22
1,1,1-Trichloroethane	1.4	70	7.6	380
Trichloroethene	1.4	4.1	7.5	22
Tetrachloroethene	1.4	27	9.5	180

Client Sample ID: P1SVE-EFFC1-012121 Lab Duplicate

Lab ID#: 2101538-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.4	5.7	5.6	23
1,1,1-Trichloroethane	1.4	73	7.6	400
Trichloroethene	1.4	4.0	7.5	21
Tetrachloroethene	1.4	27	9.5	180

Client Sample ID: P2SVE-EFFC4-012121

Lab ID#: 2101538-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.5	15	8.3	83
Tetrachloroethene	1.5	10	10	68

Client Sample ID: P2SVE-EFFC5-012121

Lab ID#: 2101538-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.5	2.7	6.0	11
1,1,1-Trichloroethane	1.5	62	8.0	340
Tetrachloroethene	1.5	4.2	10	29

Client Sample ID: P1SVE-EFFC2-012121

Lab ID#: 2101538-04A

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC2-012121

Lab ID#: 2101538-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.3	2.0	5.3	7.8
1,1-Dichloroethane	1.3	49	5.4	200
cis-1,2-Dichloroethene	1.3	1.9	5.3	7.5
1,1,1-Trichloroethane	1.3	140	7.3	760
Trichloroethene	1.3	4.0	7.2	22
Tetrachloroethene	1.3	6.2	9.1	42

Client Sample ID: P1SVE-EFFC3-012121

Lab ID#: 2101538-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.3	1.4	5.2	5.8
1,1-Dichloroethane	1.3	4.7	5.4	19
1,1,1-Trichloroethane	1.3	140	7.2	740
Trichloroethene	1.3	3.9	7.1	21
Tetrachloroethene	1.3	4.2	9.0	28

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Client Sample ID: P1SVE-EFFC1-012121

Lab ID#: 2101538-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020109**	**Date of Collection:**	**1/21/21 9:45:00 AM**
Dil. Factor:	**2.79**	**Date of Analysis:**	**2/1/21 03:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.6	Not Detected
Chloroethane	5.6	Not Detected	15	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.5	Not Detected
Acetone	14	Not Detected	33	Not Detected
Methylene Chloride	14	Not Detected	48	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.5	Not Detected
1,1-Dichloroethane	1.4	5.3	5.6	22
2-Butanone (Methyl Ethyl Ketone)	5.6	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.5	Not Detected
Chloroform	1.4	Not Detected	6.8	Not Detected
1,1,1-Trichloroethane	1.4	70	7.6	380
Carbon Tetrachloride	1.4	Not Detected	8.8	Not Detected
Benzene	1.4	Not Detected	4.4	Not Detected
1,2-Dichloroethane	1.4	Not Detected	5.6	Not Detected
Trichloroethene	1.4	4.1	7.5	22
Toluene	1.4	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected	7.6	Not Detected
Tetrachloroethene	1.4	27	9.5	180
Ethyl Benzene	1.4	Not Detected	6.0	Not Detected
m,p-Xylene	1.4	Not Detected	6.0	Not Detected
o-Xylene	1.4	Not Detected	6.0	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: P1SVE-EFFC1-012121 Lab Duplicate

Lab ID#: 2101538-01AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020110**	**Date of Collection:**	**1/21/21 9:45:00 AM**
Dil. Factor:	**2.79**	**Date of Analysis:**	**2/1/21 03:27 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.6	Not Detected
Chloroethane	5.6	Not Detected	15	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.5	Not Detected
Acetone	14	Not Detected	33	Not Detected
Methylene Chloride	14	Not Detected	48	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.5	Not Detected
1,1-Dichloroethane	1.4	5.7	5.6	23
2-Butanone (Methyl Ethyl Ketone)	5.6	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.5	Not Detected
Chloroform	1.4	Not Detected	6.8	Not Detected
1,1,1-Trichloroethane	1.4	73	7.6	400
Carbon Tetrachloride	1.4	Not Detected	8.8	Not Detected
Benzene	1.4	Not Detected	4.4	Not Detected
1,2-Dichloroethane	1.4	Not Detected	5.6	Not Detected
Trichloroethene	1.4	4.0	7.5	21
Toluene	1.4	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected	7.6	Not Detected
Tetrachloroethene	1.4	27	9.5	180
Ethyl Benzene	1.4	Not Detected	6.0	Not Detected
m,p-Xylene	1.4	Not Detected	6.0	Not Detected
o-Xylene	1.4	Not Detected	6.0	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	120	70-130

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Client Sample ID: P2SVE-EFFC4-012121

Lab ID#: 2101538-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020111**	**Date of Collection:**	**1/21/21 10:00:00 AM**
Dil. Factor:	**3.05**	**Date of Analysis:**	**2/1/21 03:54 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.5	Not Detected	3.9	Not Detected
Chloroethane	6.1	Not Detected	16	Not Detected
1,1-Dichloroethene	1.5	Not Detected	6.0	Not Detected
Acetone	15	Not Detected	36	Not Detected
Methylene Chloride	15	Not Detected	53	Not Detected
trans-1,2-Dichloroethene	1.5	Not Detected	6.0	Not Detected
1,1-Dichloroethane	1.5	Not Detected	6.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	6.1	Not Detected	18	Not Detected
cis-1,2-Dichloroethene	1.5	Not Detected	6.0	Not Detected
Chloroform	1.5	Not Detected	7.4	Not Detected
1,1,1-Trichloroethane	1.5	15	8.3	83
Carbon Tetrachloride	1.5	Not Detected	9.6	Not Detected
Benzene	1.5	Not Detected	4.9	Not Detected
1,2-Dichloroethane	1.5	Not Detected	6.2	Not Detected
Trichloroethene	1.5	Not Detected	8.2	Not Detected
Toluene	1.5	Not Detected	5.7	Not Detected
1,1,2-Trichloroethane	1.5	Not Detected	8.3	Not Detected
Tetrachloroethene	1.5	10	10	68
Ethyl Benzene	1.5	Not Detected	6.6	Not Detected
m,p-Xylene	1.5	Not Detected	6.6	Not Detected
o-Xylene	1.5	Not Detected	6.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: P2SVE-EFFC5-012121

Lab ID#: 2101538-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020112**	**Date of Collection:**	**1/21/21 10:05:00 AM**
Dil. Factor:	**2.95**	**Date of Analysis:**	**2/1/21 04:20 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.5	Not Detected	3.8	Not Detected
Chloroethane	5.9	Not Detected	16	Not Detected
1,1-Dichloroethene	1.5	Not Detected	5.8	Not Detected
Acetone	15	Not Detected	35	Not Detected
Methylene Chloride	15	Not Detected	51	Not Detected
trans-1,2-Dichloroethene	1.5	Not Detected	5.8	Not Detected
1,1-Dichloroethane	1.5	2.7	6.0	11
2-Butanone (Methyl Ethyl Ketone)	5.9	Not Detected	17	Not Detected
cis-1,2-Dichloroethene	1.5	Not Detected	5.8	Not Detected
Chloroform	1.5	Not Detected	7.2	Not Detected
1,1,1-Trichloroethane	1.5	62	8.0	340
Carbon Tetrachloride	1.5	Not Detected	9.3	Not Detected
Benzene	1.5	Not Detected	4.7	Not Detected
1,2-Dichloroethane	1.5	Not Detected	6.0	Not Detected
Trichloroethene	1.5	Not Detected	7.9	Not Detected
Toluene	1.5	Not Detected	5.6	Not Detected
1,1,2-Trichloroethane	1.5	Not Detected	8.0	Not Detected
Tetrachloroethene	1.5	4.2	10	29
Ethyl Benzene	1.5	Not Detected	6.4	Not Detected
m,p-Xylene	1.5	Not Detected	6.4	Not Detected
o-Xylene	1.5	Not Detected	6.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: P1SVE-EFFC2-012121

Lab ID#: 2101538-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020113**	**Date of Collection:**	**1/21/21 10:20:00 AM**
Dil. Factor:	**2.68**	**Date of Analysis:**	**2/1/21 04:47 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	2.0	5.3	7.8
Acetone	13	Not Detected	32	Not Detected
Methylene Chloride	13	Not Detected	46	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
1,1-Dichloroethane	1.3	49	5.4	200
2-Butanone (Methyl Ethyl Ketone)	5.4	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.3	1.9	5.3	7.5
Chloroform	1.3	Not Detected	6.5	Not Detected
1,1,1-Trichloroethane	1.3	140	7.3	760
Carbon Tetrachloride	1.3	Not Detected	8.4	Not Detected
Benzene	1.3	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	4.0	7.2	22
Toluene	1.3	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Tetrachloroethene	1.3	6.2	9.1	42
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	85	70-130

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Client Sample ID: P1SVE-EFFC3-012121

Lab ID#: 2101538-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020114**	**Date of Collection:**	**1/21/21 11:00:00 AM**
Dil. Factor:	**2.65**	**Date of Analysis:**	**2/1/21 05:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.3	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	1.4	5.2	5.8
Acetone	13	Not Detected	31	Not Detected
Methylene Chloride	13	Not Detected	46	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
1,1-Dichloroethane	1.3	4.7	5.4	19
2-Butanone (Methyl Ethyl Ketone)	5.3	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Chloroform	1.3	Not Detected	6.5	Not Detected
1,1,1-Trichloroethane	1.3	140	7.2	740
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	3.9	7.1	21
Toluene	1.3	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	4.2	9.0	28
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2101538-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020106a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/1/21 11:29 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	78	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: CCV

Lab ID#: 2101538-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020105**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 2/1/21 10:38 AM**

Compound	%Recovery
Vinyl Chloride	84
Chloroethane	82
1,1-Dichloroethene	81
Acetone	75
Methylene Chloride	83
trans-1,2-Dichloroethene	83
1,1-Dichloroethane	80
2-Butanone (Methyl Ethyl Ketone)	73
cis-1,2-Dichloroethene	82
Chloroform	77
1,1,1-Trichloroethane	80
Carbon Tetrachloride	83
Benzene	86
1,2-Dichloroethane	93
Trichloroethene	79
Toluene	88
1,1,2-Trichloroethane	81
Tetrachloroethene	88
Ethyl Benzene	87
m,p-Xylene	85
o-Xylene	85

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 2101538-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/1/21 09:32 AM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	93	70-130
Chloroethane	92	70-130
1,1-Dichloroethene	92	70-130
Acetone	84	70-130
Methylene Chloride	92	70-130
trans-1,2-Dichloroethene	92	70-130
1,1-Dichloroethane	89	70-130
2-Butanone (Methyl Ethyl Ketone)	80	70-130
cis-1,2-Dichloroethene	90	70-130
Chloroform	85	70-130
1,1,1-Trichloroethane	86	70-130
Carbon Tetrachloride	89	70-130
Benzene	89	70-130
1,2-Dichloroethane	94	70-130
Trichloroethene	93	70-130
Toluene	70	70-130
1,1,2-Trichloroethane	88	70-130
Tetrachloroethene	94	70-130
Ethyl Benzene	93	70-130
m,p-Xylene	90	70-130
o-Xylene	89	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	79	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCSD

Lab ID#: 2101538-08AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**a020104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/1/21 09:56 AM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	91	70-130
Chloroethane	87	70-130
1,1-Dichloroethene	91	70-130
Acetone	82	70-130
Methylene Chloride	90	70-130
trans-1,2-Dichloroethene	90	70-130
1,1-Dichloroethane	87	70-130
2-Butanone (Methyl Ethyl Ketone)	80	70-130
cis-1,2-Dichloroethene	89	70-130
Chloroform	84	70-130
1,1,1-Trichloroethane	86	70-130
Carbon Tetrachloride	88	70-130
Benzene	87	70-130
1,2-Dichloroethane	92	70-130
Trichloroethene	93	70-130
Toluene	85	70-130
1,1,2-Trichloroethane	88	70-130
Tetrachloroethene	95	70-130
Ethyl Benzene	93	70-130
m,p-Xylene	91	70-130
o-Xylene	91	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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4/9/2021
Mr. Peter Hollatz
AECOM Environment
4320 Winfield Road

Warrenville IL 60555

Project Name: HSSER Plant 1/2
Project #: 60651001
Workorder #: 2103797

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 3/30/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Jade White

Project Manager

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WORK ORDER #: 2103797

Work Order Summary

CLIENT:	Mr. Peter Hollatz AECOM Environment 4320 Winfield Road Warrenville, IL 60555	**BILL TO:**	Accounts Payable Austin AECOM PO Box 203970 Austin, TX 78720
PHONE:	630 829-2736	**P.O. #**	109672
FAX:	630-657-6305	**PROJECT #**	60651001 HSSER Plant 1/2
DATE RECEIVED:	03/30/2021	**CONTACT:**	Jade White
DATE COMPLETED:	04/09/2021		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	P1SVE-EFFC2-032621	Modified TO-14A	5.3 "Hg	10 psi
02A	P2SVE-EFFC4-032621	Modified TO-14A	8.4 "Hg	9.9 psi
03A	P2SVE-EFFC5-032621	Modified TO-14A	11.2 "Hg	9.9 psi
04A	P1SVE-EFFC3-032621	Modified TO-14A	6.5 "Hg	9.9 psi
05A	P1SVE-EFFC3-032621-DUP	Modified TO-14A	10.2 "Hg	9.5 psi
05AA	P1SVE-EFFC3-032621-DUP Lab Duplicate	Modified TO-14A	10.2 "Hg	9.5 psi
06A	P1SVE-EFFC1-032621	Modified TO-14A	9 "Hg	9.7 psi
07A	Field Blank-032621	Modified TO-14A	8.2 "Hg	9.2 psi
08A	Lab Blank	Modified TO-14A	NA	NA
09A	CCV	Modified TO-14A	NA	NA
10A	LCS	Modified TO-14A	NA	NA
10AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 04/09/21

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-14A
AECOM Environment
Workorder# 2103797

Seven 1 Liter Summa Canister (100% Certified UTC) samples were received on March 30, 2021. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications. Please note that TO-14A was validated for specially treated canisters, and the use of Tedlar bags for sample collection is outside the scope of the method.

Requirement	***TO-14A***	***ATL Modifications***
Initial Calibration criteria	RSD</=30%	Follow TO-15 requirements of RSD</=30% with two compounds allowed out to </=40%RSD.
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action when recovery is less than 60%.
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Sample Drying System	Nafion Dryer	Multibed hydrophobic sorbent
BFB ion abundance criteria	Ion abundance listed in Table 4 of TO-14A	Follow ion abundance criteria listed in Method TO-15

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The data contained in this report have been generated in accordance with the requirements in the Raytheon Technologies Corporation Environmental Laboratory Program CHEM_03: Analytical Minimum Standards for Laboratories, May 2020 Revision 10.0 and associated documents if applicable.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated calculation due to estimated sampling rate.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC2-032621

Lab ID#: 2103797-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	10	11	24	25
1,1-Dichloroethane	1.0	7.0	4.1	28
2-Butanone (Methyl Ethyl Ketone)	4.1	4.4	12	13
cis-1,2-Dichloroethene	1.0	1.1	4.0	4.4
1,1,1-Trichloroethane	1.0	27	5.6	140
Trichloroethene	1.0	5.0	5.5	27
Tetrachloroethene	1.0	5.3	6.9	36

Client Sample ID: P2SVE-EFFC4-032621

Lab ID#: 2103797-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.2	1.3	4.7	5.2
1,1,1-Trichloroethane	1.2	5.2	6.3	28
Trichloroethene	1.2	1.4	6.2	7.5
Tetrachloroethene	1.2	7.8	7.9	53

Client Sample ID: P2SVE-EFFC5-032621

Lab ID#: 2103797-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.3	4.1	5.4	17
1,1,1-Trichloroethane	1.3	68	7.3	370
Trichloroethene	1.3	1.7	7.2	9.3
Tetrachloroethene	1.3	7.8	9.0	53

Client Sample ID: P1SVE-EFFC3-032621

Lab ID#: 2103797-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.1	3.0	4.3	12
cis-1,2-Dichloroethene	1.1	1.1	4.2	4.2

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC3-032621

Lab ID#: 2103797-04A

1,1,1-Trichloroethane	1.1	33	5.8	180
Trichloroethene	1.1	6.4	5.8	34
Tetrachloroethene	1.1	3.7	7.2	25

Client Sample ID: P1SVE-EFFC3-032621-DUP

Lab ID#: 2103797-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.2	3.2	5.0	13
1,1,1-Trichloroethane	1.2	33	6.8	180
Trichloroethene	1.2	6.4	6.7	34
Tetrachloroethene	1.2	3.1	8.4	21

Client Sample ID: P1SVE-EFFC3-032621-DUP Lab Duplicate

Lab ID#: 2103797-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.2	3.1	5.0	12
1,1,1-Trichloroethane	1.2	34	6.8	180
Trichloroethene	1.2	6.4	6.7	35
Tetrachloroethene	1.2	3.2	8.4	22

Client Sample ID: P1SVE-EFFC1-032621

Lab ID#: 2103797-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.2	2.7	4.7	11
Acetone	12	17	28	40
1,1-Dichloroethane	1.2	7.0	4.8	28
cis-1,2-Dichloroethene	1.2	1.5	4.7	5.8
1,1,1-Trichloroethane	1.2	30	6.5	170
Trichloroethene	1.2	5.8	6.4	31
Tetrachloroethene	1.2	17	8.0	120

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: Field Blank-032621

Lab ID#: 2103797-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	1.4	4.2	5.2
m,p-Xylene	1.1	1.4	4.9	6.3

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Client Sample ID: P1SVE-EFFC2-032621

Lab ID#: 2103797-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040607**	**Date of Collection:**	**3/26/21 9:50:00 AM**
Dil. Factor:	**2.04**	**Date of Analysis:**	**4/6/21 02:38 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
Chloroethane	4.1	Not Detected	11	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Acetone	10	11	24	25
Methylene Chloride	10	Not Detected	35	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.0	7.0	4.1	28
2-Butanone (Methyl Ethyl Ketone)	4.1	4.4	12	13
cis-1,2-Dichloroethene	1.0	1.1	4.0	4.4
Chloroform	1.0	Not Detected	5.0	Not Detected
1,1,1-Trichloroethane	1.0	27	5.6	140
Carbon Tetrachloride	1.0	Not Detected	6.4	Not Detected
Benzene	1.0	Not Detected	3.2	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	5.0	5.5	27
Toluene	1.0	Not Detected	3.8	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Tetrachloroethene	1.0	5.3	6.9	36
Ethyl Benzene	1.0	Not Detected	4.4	Not Detected
m,p-Xylene	1.0	Not Detected	4.4	Not Detected
o-Xylene	1.0	Not Detected	4.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: P2SVE-EFFC4-032621

Lab ID#: 2103797-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040608**	**Date of Collection:**	**3/26/21 10:15:00 AM**
Dil. Factor:	**2.32**	**Date of Analysis:**	**4/6/21 03:07 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	12	Not Detected	28	Not Detected
Methylene Chloride	12	Not Detected	40	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
1,1-Dichloroethane	1.2	1.3	4.7	5.2
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Chloroform	1.2	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.2	5.2	6.3	28
Carbon Tetrachloride	1.2	Not Detected	7.3	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Trichloroethene	1.2	1.4	6.2	7.5
Toluene	1.2	Not Detected	4.4	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.3	Not Detected
Tetrachloroethene	1.2	7.8	7.9	53
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
m,p-Xylene	1.2	Not Detected	5.0	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: P2SVE-EFFC5-032621

Lab ID#: 2103797-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040609**	**Date of Collection:**	**3/26/21 10:40:00 AM**
Dil. Factor:	**2.67**	**Date of Analysis:**	**4/6/21 03:36 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.3	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Acetone	13	Not Detected	32	Not Detected
Methylene Chloride	13	Not Detected	46	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
1,1-Dichloroethane	1.3	4.1	5.4	17
2-Butanone (Methyl Ethyl Ketone)	5.3	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Chloroform	1.3	Not Detected	6.5	Not Detected
1,1,1-Trichloroethane	1.3	68	7.3	370
Carbon Tetrachloride	1.3	Not Detected	8.4	Not Detected
Benzene	1.3	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	1.7	7.2	9.3
Toluene	1.3	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Tetrachloroethene	1.3	7.8	9.0	53
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: P1SVE-EFFC3-032621

Lab ID#: 2103797-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040610**	**Date of Collection:**	**3/26/21 10:55:00 AM**
Dil. Factor:	**2.14**	**Date of Analysis:**	**4/6/21 04:06 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Acetone	11	Not Detected	25	Not Detected
Methylene Chloride	11	Not Detected	37	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.1	3.0	4.3	12
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	1.1	4.2	4.2
Chloroform	1.1	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.1	33	5.8	180
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
Benzene	1.1	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Trichloroethene	1.1	6.4	5.8	34
Toluene	1.1	Not Detected	4.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Tetrachloroethene	1.1	3.7	7.2	25
Ethyl Benzene	1.1	Not Detected	4.6	Not Detected
m,p-Xylene	1.1	Not Detected	4.6	Not Detected
o-Xylene	1.1	Not Detected	4.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: P1SVE-EFFC3-032621-DUP

Lab ID#: 2103797-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040611**	**Date of Collection:**	**3/26/21 10:55:00 AM**
Dil. Factor:	**2.49**	**Date of Analysis:**	**4/6/21 04:35 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	12	Not Detected	30	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
1,1-Dichloroethane	1.2	3.2	5.0	13
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	33	6.8	180
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	6.4	6.7	34
Toluene	1.2	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	3.1	8.4	21
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: P1SVE-EFFC3-032621-DUP Lab Duplicate

Lab ID#: 2103797-05AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040612**	**Date of Collection:**	**3/26/21 10:55:00 AM**
Dil. Factor:	**2.49**	**Date of Analysis:**	**4/6/21 05:04 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	12	Not Detected	30	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
1,1-Dichloroethane	1.2	3.1	5.0	12
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	34	6.8	180
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	6.4	6.7	35
Toluene	1.2	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	3.2	8.4	22
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: P1SVE-EFFC1-032621

Lab ID#: 2103797-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040613**	**Date of Collection:**	**3/26/21 11:25:00 AM**
Dil. Factor:	**2.37**	**Date of Analysis:**	**4/6/21 05:33 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Chloroethane	4.7	Not Detected	12	Not Detected
1,1-Dichloroethene	1.2	2.7	4.7	11
Acetone	12	17	28	40
Methylene Chloride	12	Not Detected	41	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
1,1-Dichloroethane	1.2	7.0	4.8	28
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	1.5	4.7	5.8
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	30	6.5	170
Carbon Tetrachloride	1.2	Not Detected	7.4	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	5.8	6.4	31
Toluene	1.2	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	17	8.0	120
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
m,p-Xylene	1.2	Not Detected	5.1	Not Detected
o-Xylene	1.2	Not Detected	5.1	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Field Blank-032621

Lab ID#: 2103797-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040614**	**Date of Collection:**	**3/26/21 10:30:00 AM**
Dil. Factor:	**2.24**	**Date of Analysis:**	**4/6/21 06:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	Not Detected	27	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
Toluene	1.1	1.4	4.2	5.2
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	1.4	4.9	6.3
o-Xylene	1.1	Not Detected	4.9	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified UTC)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2103797-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040605a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/6/21 12:54 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: CCV

Lab ID#: 2103797-09A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040602**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 4/6/21 11:20 AM**

Compound	%Recovery
Vinyl Chloride	100
Chloroethane	100
1,1-Dichloroethene	108
Acetone	98
Methylene Chloride	91
trans-1,2-Dichloroethene	106
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	101
cis-1,2-Dichloroethene	104
Chloroform	103
1,1,1-Trichloroethane	97
Carbon Tetrachloride	100
Benzene	97
1,2-Dichloroethane	100
Trichloroethene	100
Toluene	96
1,1,2-Trichloroethane	101
Tetrachloroethene	103
Ethyl Benzene	98
m,p-Xylene	100
o-Xylene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCS

Lab ID#: 2103797-10A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/6/21 11:48 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	107	70-130
Chloroethane	106	70-130
1,1-Dichloroethene	118	70-130
Acetone	102	70-130
Methylene Chloride	93	70-130
trans-1,2-Dichloroethene	111	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
cis-1,2-Dichloroethene	112	70-130
Chloroform	106	70-130
1,1,1-Trichloroethane	104	70-130
Carbon Tetrachloride	107	70-130
Benzene	101	70-130
1,2-Dichloroethane	101	70-130
Trichloroethene	105	70-130
Toluene	98	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	107	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	106	70-130
o-Xylene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCSD

Lab ID#: 2103797-10AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3040604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/6/21 12:15 PM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	106	70-130
Chloroethane	104	70-130
1,1-Dichloroethene	116	70-130
Acetone	103	70-130
Methylene Chloride	94	70-130
trans-1,2-Dichloroethene	110	70-130
1,1-Dichloroethane	105	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
cis-1,2-Dichloroethene	108	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	101	70-130
Carbon Tetrachloride	106	70-130
Benzene	102	70-130
1,2-Dichloroethane	103	70-130
Trichloroethene	105	70-130
Toluene	99	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	108	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	105	70-130
o-Xylene	102	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

Appendix C

First Quarter 2021 Phase1/Phase 2 AS/SVE System Operations Data Sheets

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	3.25.21	3.26.21								
TIME	10:43 AM	9:04 AM								
OBSERVER'S INITIALS	MG	MG								
ALARMS										
Shut Down Alarm Code	NA	NA								
Non-critical Alarm Code	NA	NA								
HOURS METERS										
B-701 SVE (hrs)	62581	62604								
C-2201 SPRG (hrs)	56202	56224								
F-2501 H-XCH (hrs)	56202	56224								
ANALOGS										
MV-701 SVE POS (%)	29	29								
PT-701 SVE (-wc)	-81.6	-40.8								
PT-2501 SPRG (psi)	12.7	12.9								
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0								
PTHA-2501 SPRG (psi)	17.0	17.0								
SET POINTS 2										
SVON-101 SVE (min)	60	60								
SVON-102 SVE (min)	60	60								
SVON-103 SVE (min)	180	180								
SET POINTS 3										
SVON-2801 SPRG (min)	60	60								
SVON-2802 SPRG (min)	60	60								
SVON-2803 SPRG (min)	180	180								
SPRG DELAY (min)	0	0								
SET POINTS 4										
MV-701 SVE POS (%)	30	30								

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	3.15.21	3-16-21	3-17-21	3.18.21	3.19.21	3-20-21	3.21-21	3.22.21	3.23.21	3.24.21
TIME	2:46pm	9:30AM	10:41am	3:01pm	12:56pm	2:45am	5:53AM	10:58 AM	11:01 AM	6:30AM
OBSERVER'S INITIALS	MG	DE	MG	MG	MG	KN	KA	MG	MG	KA
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	62346	62365	62390	62418	62440	62454	62481	62510	62534	62553
C-2201 SPRG (hrs)	55964	55983	56008	56037	56059	56073	56100	56129	56154	56173
F-2501 H-XCH (hrs)	55964	55983	56008	56037	56059	56073	56100	56129	56154	56173
ANALOGS										
MV-701 SVE POS (%)	29	29	29	29	29	29	29	29	29	29
PT-701 SVE (-wc)	-54.4	-81.6	-81.6	-81.6	-54.4	-81.6	40.8	-40.8	-54.4	54.4
PT-2501 SPRG (psi)	12.1	12.6	12.7	12.6	12.1	12.7	12.6	12.7	12.1	12.3
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	0	0	0	0	0	0	0	0	0	0
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	3-5-21	3-6-21	3-7-21	3-8-21	3-9-21	3-10-21	3-11-21	3-12-21	3-13-21	3-14-21
TIME	8:28 AM	8:51 AM	1:20 pm	11:05 AM	12:30 pm	10:48 AM	2:29 pm	2:01 pm	5:37 AM	9:25 AM
OBSERVER'S INITIALS	MG	KN	MG	MG	MG	MG	MG	MG	KA	DE
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	62101	62119	62154	62176	62201	62223	62251	62274	62290	62317
C-2201 SPRG (hrs)	55716	55735	55770	55792	55817	55840	55868	55891	55907	55934
F-2501 H-XCH (hrs)	55716	55735	55770	55792	55817	55840	55868	55892	55907	55934
ANALOGS										
MV-701 SVE POS (%)	29	29	29	29	29	29	29	29	29	29
PT-701 SVE (-wc)	-81.6	-40.0	-54.4	-81.6	-81.6	-40.8	-81.6	-81.6	81.6	-40.8
PT-2501 SPRG (psi)	12.7	12.6	12.6	12.7	12.7	12.6	12.7	12.7	12.7	12.9
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	0	0	0	0	0	0	0	0	0	0
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	2·16·21	2·17·21	2·18·21	2-26-21	2-27-21	2-28-21	3·1·21	3·2·21	3·3·21	3·4·21
TIME	1:00 PM	1:35 pm	1:30 pm	0930	5:00AM	10:04AM	2:36 pm	3:38 pm	7:15 AM	3:10 PM
OBSERVER'S INITIALS	MG	MG	MG	AS	KA	DE	MG	MG	MG	MG
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	61845	61870	61894	61934	61954	61983	62011	62036	62052	62084
C-2201 SPRG (hrs)	55458	55483	55507	55548	55568	55597	55626	55651	55667	55699
F-2501 H-XCH (hrs)	55458	55483	55507	55548	55568	55597	55626	55651	55667	55699
ANALOGS										
MV-701 SVE POS (%)	29	29	29	29	29	29	29	29	29	29
PT-701 SVE (-wc)	-81.6	-81.6	-81.6	-54.4	-81.6	-81.6	-81.6	-81.6	-81.6	-54.4
PT-2501 SPRG (psi)	12.7	12.7	13.5	13.2	12.7	12.7	12.9	12.8	12.8	12.1
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	0	0	0	0	0	0	0	0	0	0
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	2-6-21	2-7-21	2-8-21	2-9-21	2-10-21	2-11-21	2-12-21	2-13-21	2-14-21	2-15-21
TIME	2:48 Am	11:59 Am	12:43PM	12:39PM	10:46AM	11:19AM	9:55AM	5:45AM	9:04AM	2:17PM
OBSERVER'S INITIALS	KN	MG	MG	MG	MG	MG	KN	KN	DE	MG
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	61596	61629	61653	61677	61699	61724	61746	61766	61793	61823
C-2201 SPRG (hrs)	55206	55239	55264	55288	55311	55336	55358	55378	55406	55435
F-2501 H-XCH (hrs)	55206	55239	55264	55288	55311	55336	55358	55378	55406	55435
ANALOGS										
MV-701 SVE POS (%)	29	29	29	29	29	29	29	29	29	29
PT-701 SVE (-wc)	-54.4	-81.6	-81.6	-81.6	-54.4	-54.4	-81.6	81.6	-54.4	-54.4
PT-2501 SPRG (psi)	12.3	12.8	12.7	12.7	12.2	12.2	12.8	12.8	12.1	12.3
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	0	0	0	0	0	0	0	0	0	0
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	1-27-21	1-28-21	1-29-21	1-30-21	1-31-21	2-1-21	2-2-21	2-3-21	2-4-21	2-5-21
TIME	12:38 pm	3:08 pm	9:00AM	5:45AM	10:25 AM	1:18 pm	11:13AM	2:07pm	1:45pm	2:39 PM
OBSERVER'S INITIALS	MG	MG			DE	MG	MG	MG	MG	MG
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	61366	61392	61410	61431	61459	61486	61508	61535	61559	61583
C-2201 SPRG (hrs)	54974	55001	55018	55039	55068	55096	55118	55145	55169	55194
F-2501 H-XCH (hrs)	54974	55001	55018	55039	55068	55096	55118	55145	55169	55194
ANALOGS										
MV-701 SVE POS (%)	29	29	29	29	29	29	29	29	29	29
PT-701 SVE (-wc)	-81.6	-54.4	-81.6	-81.6	-81.6	-54.4	-81.6	-81.6	-81.6	-81.6
PT-2501 SPRG (psi)	12.9	12.4	12.8	12.7	12.8	12.3	12.9	12.7	12.7	12.8
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	0	0	0	0	0	0	0	0	0	0
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	11-22-20	11-23-20	11-24-20	11-25-20	1-21-21	1.22.21	1.23.21	1.24.21	1.25.21	1.26.21
TIME	8:17 AM	10:10AM	12:07PM	0850	0925	2:45 PM	11:09 AM	2:43 PM	2:43 PM	1:17PM
OBSERVER'S INITIALS	DE	KA	KN	AA	A.H	MG	MG	KN	MG	MG
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	61145	61171	61196	61217	61219	61248	61269	61284	61320	61343
C-2201 SPRG (hrs)	54751	54777	54803	54824	54825	54855	54876	54891	54928	54950
F-2501 H-XCH (hrs)	54751	54777	54803	54824	54825	54855	54876	54891	54928	54950
ANALOGS										
MV-701 SVE POS (%)	29	29	29	29	29	29	29	29	29	29
PT-701 SVE (-wc)	-81.6	-81.6	-54.4	-54.4	-54.4	-81.6	-54.4	-54.4	-81.6	-54.4
PT-2501 SPRG (psi)	13.1	13.0	13.1	12.5	12.7	12.9	12.4	13.0	13.0	12.5
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	0	0	0	0	0	0	0	0	0	0
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

WEEKLY DOCUMENTATION SHEET

SYSTEM COMPONENTS

DATE	2-26-21	2.28.21	3.8.21	3.15.21	3.22.21				
TIME	0940	2:38pm	11:07 AM	2:48pm	11:00AM				
OBSERVER'S INITIALS	AS	MG	MG	MG	MG				

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.

Comments and Notes	NA	NA	NA	NA	NA				

SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	61934	62011	62176	62346	62510				
Inlet Vacuum (-wc)	-56	-95	-98	-58	-54				
Pre-Filter Vacuum (-wc)	~~-42.8~~ ~~-47~~ AS	-80.4	-80.1	-43.5	-40.1				
Post-Filter Vacuum (-wc)	-47	-84	-84	-48	-55				
Outlet Pressure (wc)	11.5	6.5	6.5	11.0	11.5				
Outlet Temperature (°F)	110	139	143	109	114				
Outlet Magnehelic* (in H_2O)	1.1	0.9	0.9	1.1	1.15				
Water Level Sight Glass (in)	Ø	Ø	Ø	Ø	Ø				

AIR SPARGE (SPRG)

Hours Operation (hrs)	55548	55626	55792	55964	56129				
Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK				

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	55548	55626	55792	55964	56129				
Inlet Temperature (°F)	~~0~~ 215	~~101.5~~ 219	224	214	226				
Inlet Pressure (psi)	17.0	17.0	16.5	17.0	16.5				
Outlet Temperature (°F)	100 ~~97.5~~ AS	101	105	100	110				
Outlet Pressure (psi)	14.5	14.5	14.0	14.0	13.5				
Outlet Magnehelic* (in H_2O)	3.5	3.4	3.4	3.4	3.2				

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	306802	307182	308005	308841	309647				

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

2020

WEEKLY DOCUMENTATION SHEET

SYSTEM COMPONENTS

DATE	11-02-20	11-12-20	11-17-20	11-23-20	1-21-21	1-25-21	2-1-21	2-8-21	2-15-21
TIME	1:27 PM	12:30 PM	0900	10:14 AM	0925	2:46 PM	1:20 PM	12:45	2:19 PM
OBSERVER'S INITIALS	MG	KN	AH	KA	AH	MG	MG	MG	MG

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.

Comments and Notes	NA	NA	NA	NA	NA	NA	NA	NA	NA

SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	60671	60909	61026	61171	61219	61320	61486	61653	61823
Inlet Vacuum (-wc)	-99	-99	-99	-99	-58	-100	-58	-96	-58
Pre-Filter Vacuum (-wc)	-80.5	-40.3	-80.8	-79.7	-44.2	-79.9	-43.6	-80.2	-43.5
Post-Filter Vacuum (-wc)	-84	-82	-84	84	48	-84	~~58~~ -48	-85	-59
Outlet Pressure (wc)	6	6	6	6	12	6	11	5	11
Outlet Temperature (°F)	148	154	146	150	102	136	106	138	101
Outlet Magnehelic* (in H_2O)	0.9	0.9	0.9	0.9	1.2	0.9	1.15	0.9	1.15
Water Level Sight Glass (in)	1/2"	0	Ø	Ø	Ø	6"	FULL ①	FULL ①	FULL

AIR SPARGE (SPRG)

Hours Operation (hrs)	54272	54513	54630	54777	54825	54928	55096	55264	55435
Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	OK	OK	OK	OK

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	54272	54513	54630	54777	54825	54928	55096	55264	55435
Inlet Temperature (°F)	224	228	220	225	200	215	215	215	205
Inlet Pressure (psi)	17.5	17.0	17.5	18	18.5	18	17	17.5	17.5
Outlet Temperature (°F)	104	105	102	118	95	99	99	98	92
Outlet Pressure (psi)	14.5	14.0	15.0	14.0	14.5	15	14	14.5	15
Outlet Magnehelic* (in H_2O)	3.4	3.3	3.4	3.4	3.4	3.4	3.5	3.4	3.3

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	300090	301294	301884	302627	303132	303640	304482	305317	306187

① TURNED VALVE TO DRAIN FOR 1 HOUR

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET

SVE MANIFOLD

DATE	3-20-20	5-21-20	6-29-20	7-22-20	9-29-20	11-6-20	11-25-20	1-21-21	2-26-21	3-26-21
TIME	1025	1030	1120	1145	0940	0945	0850	0925	0920	0930
INITIALS	A.H.	AS	A.H.	A.H.	A.H.	A.H.	A.H.	A.H.	AS	A.H.

MAGNEHELIC GAUGE*

CELL 1	SVE-1 (in H_2O)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.23	1.0	0.53
	SVE-2 (in H_2O)	1.6	(AS) ~~1.0~~ 0.9	0.9	0.9	1.0	0.7	0.8	0.59	0.8	0.85
CELL 2	SVE-3 (in H_2O)	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.73	0.8	0.66
	SVE-4 (in H_2O)	1.4	0.9	0.8	0.8	0.8	0.8	0.8	0.45	0.45	0.58
CELL 3	SVE-5 (in H_2O)	1.1	0.7	0.5	1.1	1.2	1.3	1.21	1.15	1.05	1.15
	SVE-6 (in H_2O)	1.4	(AS) ~~1.0~~ 0	0.9	0.9	0.0	0.0	1.13	0.94	0.99	1.0

gauge not functioning?

VACUUM GAUGE

CELL 1	SVE-1 (-wc)	18	13	12	16	17	18	15	22	22	14
	SVE-2 (-wc)	18	11	11	17	17	15	14	22	18	15
CELL 2	SVE-3 (-wc)	12	11	11	11	12	12	12	13	13	12
	SVE-4 (-wc)	10	11	11	12	12	10	11	12	12	11
CELL 3	SVE-5 (-wc)	39	36	36	37	37	39	38	37	42	37
	SVE-6 (-wc)	41	40	38	38	38	40	39	39	40	39

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET

AIR SPARGE MANIFOLD

DATE		3-20-20	5-21-20	6-29-20	7-22-20	9-29-20	11-6-20	11-25-20	1-27-21	2-26-21	3-26-21
TIME		1025	1030	1120	1145	0940	0945	0850	0925	0920	0930
INITIALS		A.H.	AS	A.H.	A.H.	A.H.	A.H.	A.H.	A.H.	AS	A.H.
ROTOMETER											
CELL 1	AS-1 (scfm)	17.0	17.5	17.0	17.0	17.0	18.0	17.0	18.0	17.5	17.0
	AS-2 (scfm)	18.0	18.5	16.0	17.0	18.0	18.0	18.0	19.0	18.5	18.0
	AS-3 (scfm)	17.0	17.0	16.5	17.0	17.0	17.0	17.0	17.0	17.0	17.0
	AS-4 (scfm)	16.5	16.5	16.0	16.0	17.0	16.0	16.0	16.0	16.5	16.5
	AS-5 (scfm)	17.0	17.0	16.0	17.0	17.0	16.0	17.0	18.0	16.5	16.5
CELL 2	AS-6 (scfm)	20.0	19.0	19.0	19.0	19.0	19.0	19.0	19.5	18.0	20.0
	AS-7 (scfm)	20.0	20.5	20.0	19.0	20.0	20.0	19.0	20.0	20.0	20.0
	AS-8 (scfm)	17.0	17.0	17.0	17.0	17.0	17.0	16.5	17.5	17.0	17.0
	AS-9 (scfm)	11.0	11.0	15.0	11.0	11.0	10.0	10.0	11.0	9.0	11.0
	AS-10 (scfm)	18.0	19.0	18.0	18.0	18.0	17.5	17.5	18.0	19.0	18.0
CELL 3	AS-11 (scfm)	22.0	22.0	21.0	21.0	22.0	23.0	20.0	21.0	21.0	22.0
	AS-12 (scfm)	16.0	14.5	15.0	16.0	16.0	14.0	15.0	16.0	16.5	16.0
	AS-13 (scfm)	15.0	14.5	14.5	15.0	15.0	14.0	15.0	15.0	16.0	15.0
	AS-14 (scfm)	16.0	16.0	16.0	16.0	16.5	16.0	16.0	17.0	16.5	16.0
	AS-15 (scfm)	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.0
PRESSURE GAUGE											
CELL 1	AS-1 (psi)	14.0	13.0	13.0	13.5	13.0	12.5	12.5	12.5	12.5	12.5
	AS-2 (psi)	13.5	13.0	12.5	12.5	13.0	12.0	12.0	12.5	12.5	12.5
	AS-3 (psi)	13.5	12.5	11.5	11.5	12.5	11.0	11.5	13.0	12.5	12.0
	AS-4 (psi)	13.5	13.0	13.0	13.0	13.0	13.0	12.5	13.0	13.0	13.0
	AS-5 (psi)	13.5	13.5	11.5	13.5	13.5	13.5	11.0	13.5	12.5	13.5
CELL 2	AS-6 (psi)	13.0	13.5	11.5	13.0	13.0	13.0	13.0	13.0	[illegible]	13.0
	AS-7 (psi)	13.0	13.0	11.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
	AS-8 (psi)	13.0	13.5	11.5	12.0	13.0	13.5	12.0	13.0	14.0	13.0
	AS-9 (psi)	13.5	14.0	12.5	13.0	14.0	14.5	14.5	13.0	14.5	12.5
	AS-10 (psi)	13.0	13.0	11.0	11.5	13.0	13.0	12.5	13.0	13.5	13.0
CELL 3	AS-11 (psi)	12.5	13.5	11.5	11.5	12.0	13.0	11.5	11.5	11.5	11.0
	AS-12 (psi)	14.0	14.5	14.5	13.0	13.5	14.0	14.0	14.0	14.0	12.0
	AS-13 (psi)	13.0	13.0	10.0	10.5	10.5	10.5	10.5	10.5	10.0	10.5
	AS-14 (psi)	14.0	14.0	14.0	13.0	13.5	14.0	13.5	14.0	13.0	14.0
	AS-15 (psi)	13.5	14.0	12.0	13.5	13.0	13.5	13.5	13.5	13.5	13.0

MONTHLY DOCUMENTATION SHEET

WELL HEAD GAUGES

		9-29-20									
DATE		~~3-21-19~~	11-6-20	11-25-20	1-21-21	2-26-21	3-26-21				
TIME		~~1300~~ 0940	0945	0850	0925	1100	0930				
INITIALS		A.H	A.H	A.H	A.H	AS	A.H				
CELL 1	AS-1 (psi)	10.75	10.47	10.61	10.64	9.91	10.64				
	AS-2 (psi)	10.68	10.37	10.57	10.42	9.79	9.98				
	AS-3 (psi)	10.87	10.59	10.88	10.71	9.99	10.12				
	AS-4 (psi)	11.07	10.73	10.92	10.87	10.14	10.13				
	AS-5 (psi)	10.94	10.64	10.74	10.85	10.05	10.37				
CELL 2	AS-6 (psi)	11.38	10.88	11.07	11.11	10.78	10.23				
	AS-7 (psi)	11.48	11.02	10.98	11.28	10.66	10.34				
	AS-8 (psi)	11.44	11.03	11.24	11.31	10.65	10.40				
	AS-9 (psi)	12.12	11.72	11.97	11.89	11.30	10.97				
	AS-10 (psi)	11.36	10.96	11.11	11.22	10.49	10.32				
CELL 3	AS-11 (psi)	11.09	10.81	10.99	10.91	10.50	9.83				
	AS-12 (psi)	11.90	11.73	11.89	11.74	11.47	10.20				
	AS-13 (psi)	11.90	11.74	11.90	11.89	covered by large soil pile	10.91				
	AS-14 (psi)	11.68	11.45	11.37	11.47	10.30	10.15				
	AS-15 (psi)	11.59	11.37	11.46	11.56	10.87	10.51				
CELL 1	SVE-1 (in H_2O)	4.4	4.0	4.1	4.2	3.8	4.0				
	SVE-2 (in H_2O)	5.8	5.6	5.7	5.7	5.4	5.5				
CELL 2	SVE-3 (in H_2O)	5.6	5.4	5.4	5.4	5.1	4.5				
	SVE-4 (in H_2O)	5.5	5.2	5.3	5.2	4.7	4.5				
CELL 3	SVE-5 (in H_2O)	10.9	10.8	10.9	10.8	10.1	9.9				
	SVE-6 (in H_2O)	8.9	8.3	8.5	8.6	8.1	8.1				

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-18-21	3-19-21	3-20-21	3-21-21	3-22-21	3-23-21	3-24-21	3-25-21	3-26-21
TIME	2:54pm	12:48pm	2:40pm	5:55AM	10:49AM	10:54AM	6:22AM	10:35AM	8:50AM
OBSERVER'S INITIALS	MG	MG	KM	KA	MG	MG	KA	MG	MG
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	76°F MOSTLY SUNNY + WINDY	77°F SUNNY + BREEZY	74°F CLEAR	76° CLEAR	81°F MOSTLY CLOUDY	80°F OVERCAST + DAMP	76° OVERCAST DRIZZLE	78°F OVERCAST	75°F OVERCAST + DAMP
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.15	0.05	0.01	0.00	0.00	0.00	0.00	0.01	0.00
PT-701 SVE (-wc)	-39	-32	-34	-36	-39	-44	-48	-42	-44
PT-702 SVE (-wc)	69.6	72.0	73.0	71.2	69.0	67.9	68.0	69.2	71.1
PT-2201 SPRG (psi)	11.5	11.0	11.6	11.5	11.5	11.6	11.5	11.5	11.4
P-401 PUMP (cycles)	92	92	92	92	92	92	92	92	92
P&ID2									
PDT-801 SVE (-wc)	0.08	0.02	0.05	0.08	0.06	0.10	0.07	0.09	0.11
PT-801 SVE (-wc)	-342	-319	-319	-327	-339	-346	-363	-346	-344
PT-802 SVE (-wc)	59.5	61.1	62.6	62.3	59.1	59.0	59.0	61.0	62.3
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1685	1685	1685	1685	1685	1685	1685	1685	1685

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3.18.21	3.19.21	3-20-21	3.21.21	3.22.21	3.23.21	3.24.21	3.25.21	3.26.21
TIME	2:54pm	12:48pm	2:40pm	5:55AM	10:49AM	10:54AM	6:22AM	10:35AM	8:50AM
OBSERVER'S INITIALS	MG	MG	KN	KA	MG	MG	KA	MG	MG
HOURS METERS									
B-701 SVE (hrs)	27391	27413	27426	27454	27482	27507	27526	27554	27576
C-2201 SPRG (hrs)	25059	25081	25094	25122	25151	25175	25194	25222	25244
C-2202 SPRG (hrs)	27017	27039	27053	27080	27109	27133	27152	27181	27203
B-801 SVE (hrs)	29158	29179	29193	29220	29249	29273	29293	29321	29343
C-2301 SPRG (hrs)	28731	28753	28767	28794	28823	28847	28867	28895	28917
C-2302 SPRG (hrs)	28200	28221	28235	28263	28291	28316	28335	28363	28385
SET POINTS									
PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

2021

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-9-21	3-10-21	3-11-21	3-12-21	3-13-21	3-14-21	3-15-21	3-16-21	3-17-21
TIME	12:22pm	10:33AM	2:20pm	1:53pm	5:40am	9:15AM	2:38pm	9:20AM	10:29AM
OBSERVER'S INITIALS	MG	MG	MG	MG	KA	DE	MG	DE	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	80°F PARTLY SUNNY	81°F CLOUDY	82°F SUNNY + BREEZY	80°F OVERCAST	74°F PARTLY CLOUDY	76°F CLOUDY	72°F OVERCAST + SNOWING	70°F CLOUDY	75°F OVERCAST

ALARMS

Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA

P&ID

PDT-701 SVE (-wc)	0.01	0.00	0.00	0.13	0.00	0.07	0.02	0.02	0.00
PT-701 SVE (-wc)	-37	-39	-37	-34	-35	-34	-42	-42	-42
PT-702 SVE (-wc)	68.8	68.8	70.4	71.5	73.0	71.1	70.8	71.1	71.2
PT-2201 SPRG (psi)	11.4	11.4	11.7	11.5	11.2	11.5	11.4	11.1	11.1
P-401 PUMP (cycles)	92	92	92	92	92	92	92	92	92

P&ID2

PDT-801 SVE (-wc)	0.06	0.05	0.07	0.05	0.06	0.05	0.09	0.05	0.00
PT-801 SVE (-wc)	-329	-346	-331	-315	-320	-318	-338	-348	-342
PT-802 SVE (-wc)	59.3	59.3	60.1	61.0	64.2	61.1	62.9	61.1	61.5
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1685	1685	1685	1685	1685	1685	1685	1685	1685

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-9-21	3-10-21	3-11-21	3-12-21	3-13-21	3-14-21	3-15-21	3-16-21	3-17-21
TIME	12:22pm	10:33am	2:20pm	1:53pm	5:40AM	9:15AM	2:38pm	9:20AM	10:29AM
OBSERVER'S INITIALS	MG	MG	MG	MG	KA	DE	MG	DE	MG
HOURS METERS									
B-701 SVE (hrs)	27173	27195	27223	27247	27263	27289	27318	27337	27362
C-2201 SPRG (hrs)	24841	24864	24891	24915	24931	24957	24986	25005	25030
C-2202 SPRG (hrs)	26800	26822	26850	26873	26889	26916	26945	26964	26989
B-801 SVE (hrs)	28940	28962	28990	29014	29029	29056	29085	29104	29129
C-2301 SPRG (hrs)	28514	28536	28564	28587	28603	28630	28659	28678	28703
C-2302 SPRG (hrs)	27982	28004	28032	28056	28072	28098	28127	28146	28171
SET POINTS									
PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

2021

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	2-28-21	3-1-21	3-2-21	3-3-21	3-4-21	3-5-21	3-6-21	3-7-21	3-8-21
TIME	9:52 AM	2:27 pm	3:31 pm	1:56 pm	3:04 pm	8:21 AM	2:44 AM	1:14 pm	10:54 AM
OBSERVER'S INITIALS	DE	MG	MG	MG	MG	MG	KW	MG	MG
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	74°F FOGGY	73°F SUNNY	73°F SUNNY	78°F SUNNY	75°F SUNNY	73°F SUNNY	70°F CLEAR	77°F OVERCAST	79°F SUNNY + BREEZY
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.00	0.00	0.00	0.04	0.01	0.00	0.01	0.03	0.06
PT-701 SVE (-wc)	-41	-33	-37	-37	-34	-35	-34	-34	-36
PT-702 SVE (-wc)	69.9	74.1	71.5	70.5	71.7	73.2	73.3	71.3	70.7
PT-2201 SPRG (psi)	15.4	15.2	15.4	11.5	11.6	11.9	11.9	11.3	11.7
P-401 PUMP (cycles)	92	92	92	92	92	92	92	92	92
P&ID2									
PDT-801 SVE (-wc)	0.07	0.05	0.08	0.11	0.09	0.04	0.14	0.06	0.05
PT-801 SVE (-wc)	-350	-317	-331	-333	-315	-327	-336	-320	-325
PT-802 SVE (-wc)	60.5	64.1	61.6	60.6	61.9	62.3	63.3	61.4	61.0
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1685	1685	1685	1685	1685	1685	1685	1685	1685

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	2-28-21	3-1-21	3-2-21	3-3-21	3-4-21	3-5-21	3-6-21	3-7-21	3-8-21
TIME	9:52AM	2:27pm	3:31pm	1:56pm	3:04pm	8:21AM	2:45AM	1:14pm	10:54AM
OBSERVER'S INITIALS	DE	MG	MG	MG	MG	MG	KN	MG	MG
HOURS METERS									
B-701 SVE (hrs)	26955	26984	27009	27031	27056	27073	27092	27126	27148
C-2201 SPRG (hrs)	24623	24652	24677	24699	24724	24741	24760	24794	24816
C-2202 SPRG (hrs)	26582	26610	26635	26657	26683	26700	26718	26753	26774
B-801 SVE (hrs)	28722	28750	28775	28798	28823	28840	28859	28893	28915
C-2301 SPRG (hrs)	28296	28324	28349	28372	28397	28414	28432	28467	28488
C-2302 SPRG (hrs)	27764	27793	27818	27840	27865	27882	27901	27935	27957
SET POINTS									
PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	2-12-21	2-13-21	2-14-21	2-15-21	2-16-21	2-17-21	2-18-21	2-26-21	2-27-21
TIME	9:50 AM	5:50AM	8:50AM	2:03 pm	12:55pm	1:31 PM	1:24pm	1055	5:10AM
OBSERVER'S INITIALS	K.N.	KA	DE	MG	MG	MG	MG	AS	KA
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	5° P. CLOUDY COLD	68° CLOUDY	68°F CLOUDY	38°F OVERCAST	54°F SUNNY	60°F PARTLY SUNNY	58°F SUNNY	74°F SUNNY, SNOW CLOUDS ON GROUND 40°	72°F SUNNY
ALARMS									
Alarm Code	NA	NA	NA	LAHH-8001 (*) BLDG2 ALM	SYSTEM DOWN	SYSTEM DOWN	SYSTEM DOWN	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.00	0.00	0.00	0.00 ~~0.02~~				0.02	0.07
PT-701 SVE (-wc)	-34	-36	-34	~~0.00~~ 0				-32	-38
PT-702 SVE (-wc)	75.6	76.9	77.8	0.0				72.1	72.4
PT-2201 SPRG (psi)	15.3	15.7	20.4	0.0				15.5	21.6
P-401 PUMP (cycles)	92	92	92	~~92~~ 92 (MG)				92	92
P&ID2									
PDT-801 SVE (-wc)	0.01	0.05	0.04	0.00				0.09	0.01
PT-801 SVE (-wc)	-336	339	-334	-193				-327	-342
PT-802 SVE (-wc)	66.0	65.6	67.4	1.0				62.6	62.0
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0				0.0	0.0
P-501 PUMP (cycles)	1685	1685	1685	1685				1685	1685

(*) SYSTEM OFF WON'T ~~RESTART~~

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	2-12-21	2-13-21	2-14-21	2-15-21	2-16-21	2-17-21	2-18-21	2-26-21	2-27-21
TIME	9:50 am	5:5 pm	8:50AM	2:03 PM	12:55pm	1:31 pm	1:24 pm	1100	5:10AM
OBSERVER'S INITIALS	KN	KA	DE	MG	MG	MG	MG	AS	KA
HOURS METERS									
B-701 SVE (hrs)	26829	26849	26876	26887				26908	26926
C-2201 SPRG (hrs)	24497	24517	24544	24555				24576	24594
C-2202 SPRG (hrs)	26455	26475	26503	26513				26535	26553
B-801 SVE (hrs)	28596	28616	28643	28654				28675	28693
C-2301 SPRG (hrs)	28170	28190	28217	28228				48249	28267
C-2302 SPRG (hrs)	27638	27658	27685	27696				27717	27735
SET POINTS									
PAL-701 SVE (wc)	-20	-20	-20	-20				-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0				100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0				10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0				30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0				0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25				-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0				100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0				10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0				30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0				0.0	0.0
SV-2801 SPRG (min)	40	40	40	40				40	40
SV-2802 SPRG (min)	20	20	20	20				20	20
SV-2901 SPRG (min)	20	20	20	20				20	20
SV-2902 SPRG (min)	20	20	20	20				20	20

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DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	2.3.21	2.4.21	2.5.21	2-6-21	2.7.21	2.8.21	2.9.21	2.10.21	2.11.21
TIME	1:59 PM	1:38 pm	2:24 pm	2:40 Am	11:50 AM	12:34 PM	12:27 pm	10:39 Am	11:10 AM
OBSERVER'S INITIALS	MG	MG	MG	KV	MG	MG	MG	MG	MG
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	73°F CLOUDY	71°F SLEET	72°F SUNNY	72° CLEAR	66°F SUNNY	70°F OVERCAST	70°F SUNNY	69°F OVERCAST	71°F CLEAR
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00
PT-701 SVE (-wc)	-32	-40	-39	-37	-35	-35	-34	-34	-33
PT-702 SVE (-wc)	75.0	74.0	76.4	77.7	79.1	76.6	77.1	77.5	76.6
PT-2201 SPRG (psi)	15.0	15.1	15.0	15.8	15.3	16.9	16.5	15.0	15.1
P-401 PUMP (cycles)	92	92	92	92	92	92	92	92	92
P&ID2									
PDT-801 SVE (-wc)	0.08	0.09	0.16	0.05	0.05	0.08	0.03	0.03	0.00
PT-801 SVE (-wc)	-336	-369	-365	-359	-340	-341	-337	-335	-330
PT-802 SVE (-wc)	62.6	61.1	64.1	65.0	66.2	65.4	65.4	65.4	64.4
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1685	1685	1685	1685	1685	1685	1685	1685	1685

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	2-3-21	2-4-21	2-5-21	2-6-21	2-7-21	2-8-21	2-9-21	2-10-21	2-11-21
TIME	1:59 PM	1:38 PM	2:24 PM	2:40A	11:50 AM	12:34 PM	12:27 PM	10:39 AM	11:10 AM
OBSERVER'S INITIALS	MG	MG	MG	KU	MG	MG	MG	MG	MG
HOURS METERS									
B-701 SVE (hrs)	26617	26641	26666	26678	26711	26736	26760	26782	26806
C-2201 SPRG (hrs)	24285	24309	24334	24346	24379	24404	24428	24450	24474
C-2202 SPRG (hrs)	26244	26267	26292	26305	26338	26362	26386	26408	26433
B-801 SVE (hrs)	28384	28408	28433	28445	28478	28503	28527	28549	28573
C-2301 SPRG (hrs)	27958	27982	28006	28019	28052	28076	28100	28122	28147
C-2302 SPRG (hrs)	27426	27450	27475	27487	27520	27545	27569	27591	27615
SET POINTS									
PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.00	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

(1)

DATE	1-24-21	1-25-21	1-26-21	1-27-21	1-28-21	1-29-21	1-30-21	2-1-21	2-2-21
TIME	2:48 AM	2:32 PM	1:07 PM	12:26 PM	3:00 PM	9:00 AM	5:45 AM	1:04 PM	11:03 AM
OBSERVER'S INITIALS	KN	MG	MG	MG	MG	KA	KA	MG	MG
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	27°F Snow	71°F OVERCAST	71°F OVERCAST	70°F SUNNY	70°F CLOUDY	70°F OVERCAST	72°F CLOUDY	~~72~~ (48) 72°F SUNNY	72°F CLOUDY
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.10	0.00	0.01	0.00	0.00	0.01	0.03	0.07	0.00
PT-701 SVE (-wc)	-33	-31	-32	-30	-27	-29	-33	-30	-31
PT-702 SVE (-wc)	75.1	75.6	77.2	77.2	78.4	77.9	75.2	76.4	76.3
PT-2201 SPRG (psi)	17.5	15.6	15.6	15.4	16.8	21.1	15.7	15.3	15.0
P-401 PUMP (cycles)	92	92	92	92	92	92	92	92	92
P&ID2									
PDT-801 SVE (-wc)	0.03	0.08	0.00	0.14	0.10	0.03	0.08	0.14	0.07
PT-801 SVE (-wc)	-342	-339	-342	-322	-312	-327	-347	-326	-319
PT-802 SVE (-wc)	62.4	62.1	62.8	64.5	65.1	63.4	61.0	64.1	64.5
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1685	1685	1685	1685	1685	1685	1685	1685	1685

(1) OILER ON DUTY COULD NOT GET READINGS ON SUNDAY 1.31.21 DUE TO SNOW STORM.

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	1·24·21	1·25·21	1·26·21	1-27-21	1-28-21	1.29.21	1-30-21	2-1-21	2·2·21
TIME	2:50 Am	2:32 PM	1:07 pm	12:26 pm	3:00 PM	9:00 AM	5:45 AM	1:04 PM	11:03 AM
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	KA	KA	MG	MG
HOURS METERS									
B-701 SVE (hrs)	26366	26402	26425	26448	26475	26492	26513	26569	26591
C-2201 SPRG (hrs)	24034	24070	24093	24116	24143	24160	24181	24237	24259
C-2202 SPRG (hrs)	25993	26029	26051	26075	26101	26119	26140	26195	26217
B-801 SVE (hrs)	28133	28169	28192	28215	28241	28259	28280	28335	28357
C-2301 SPRG (hrs)	27707	27743	27765	27789	27815	27833	27854	27909	27931
C-2302 SPRG (hrs)	27175	27211	27234	27257	27284	27301	27322	27378	27400
SET POINTS									
PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25.	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	11-20-20	11-21-20	11-22-20	11-23-20	11-24-20	11-25-20	1-21-21	1-22-21	1-23-21
TIME	12:44 PM	5:50AM	8:20AM	9:52AM	12:12 pm	0945	1040	2:36 PM	10:59 AM
OBSERVER'S INITIALS	KN	KA	DE	KA	KN	RH	RH	MG	MG
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	PARTLY CLOUDY 54°	CLOUDY 74°	PARTLY CLOUDY 76°F	SUNNY 78°F	CLOUDY / RAINING 36°	Cloudy/rain 70°F	Clear 30°F	SUNNY 70°F	SUNNY 70°F
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.00	0.00	0.00	0.00	0.01	0.02	0.11	0.03	0.08
PT-701 SVE (-wc)	-27	-25	-28	-27	-32	-35	-34	-32	-29
PT-702 SVE (-wc)	74.2	76.7	76.9	76.9	74.0	72.5	75.3	78.0	77.7
PT-2201 SPRG (psi)	14.9	15.2	14.9	17.2	15.4	16.0	15.1	15.1	15.0
P-401 PUMP (cycles)	91	91	91	91	91	91	92	92	92
P&ID2									
PDT-801 SVE (-wc)	0.00	0.00	0.02	0.00	0.00	0.0	0.05	0.02	0.04
PT-801 SVE (-wc)	-325	-319	-333	-320	-347	-357	-351	-340	-326
PT-802 SVE (-wc)	61.5	63.7	62.7	53.5	62.2	60.8	62.0	65.2	64.7
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1685	1685	~~1685~~ MG 1685

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	11-20-20	11-21-20	11-22-20	11-23-20	11-24-20	11-25-20	1-21-21	1-22-21	1-23-21
TIME	12:45pm	5:50AM	8:20AM	9:52AM	12:15pm	0945	1040	2:36 PM	10:59 AM
OBSERVER'S INITIALS	KN	KA	DE	KA	KN	A.H	A.H	MG	MG
HOURS METERS									
B-701 SVE (hrs)	26183	26201	26227	26253	26279	26301	26302	26330	26351
C-2201 SPRG (hrs)	23852	23869	23895	23921	23947	23969	23970	23998	24019
C-2202 SPRG (hrs)	25810	25827	25853	25879	25905	25927	25929	25957	25977
B-801 SVE (hrs)	27950	27968	27994	28020	28046	28068	28069	28097	28118
C-2301 SPRG (hrs)	27524	27541	27568	27593	27619	27641	27643	27671	27691
C-2302 SPRG (hrs)	26993	27010	27036	27063	27088	27110	27111	27139	27160
SET POINTS									
PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

WEEKLY DOCUMENTATION SHEET
BUILDING 1
SYSTEM COMPONENTS

DATE	3-8-21	3.15.21	3-22-21						
TIME	1:04 pm	3:13 pm	12:43 pm						
OBSERVER'S INITIALS	MG	MG	MG						
SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE; MOISTURE, ETC.									
Comments and Notes	NA	NA	NA						
SOIL VAPOR EXTRACTION (SVE) BLOWER B-701									
Pre-Filter Vacuum (-wc)	-32	-36	-35						
Post-Filter Vacuum (-wc)	-58	-59	-59						
Inlet Magnehelic* (in H_2O)	Ø	Ø	Ø 0.52 AH.						
Inlet Vacuum (-wc)	-35.5	-40.1	-38.1						
SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (wc)	30	31	31						
Inlet Temperature (°F)	110	93	115						
Outlet Pressure (wc)	9.5	9.0	9.0						
Outlet Temperature (°F)	94	82	100						
Water Level Sight Glass (in)	4"	3½"	Ø						
AIR SPARGE (SPRG) COMPRESSOR C-2201									
Upper Oil Sight Glass (half pt.)	OK	OK	OK						
Lower Oil Sight Glass (half pt.)	OK	OK	OK						
AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (psi)	11	11.5	11						
Inlet Temperature (°F)	180	170	185						
Outlet Pressure (psi)	16	16	16						
Outlet Temperature (°F)	88	85	88						

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

+ 2021
2020

WEEKLY DOCUMENTATION SHEET
BUILDING 1
SYSTEM COMPONENTS

DATE	11-20-20	11-23-20	11-21-21	1-25-21	2-1-21	2-8-21	2-15-21	2-26-21	MG ~~2~~ 3-1-21
TIME	12:48 pm	9:44AM	1046	3:08 PM	2:02 pm	1:21 PM	2:10 PM	1100	2:57 pm
OBSERVER'S INITIALS	GN	KA	AH	MG	MG	MG	MG	AS	MG

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE; MOISTURE, ETC.

Comments and Notes	NA	NA	NA.	NA	NA	NA	S	NA	NA

SOIL VAPOR EXTRACTION (SVE) BLOWER B-701

Pre-Filter Vacuum (-wc)	-25	-25	-25	-25	-25	-29	S	-29	-31
Post-Filter Vacuum (-wc)	-48	-50	-50	-51	-52	-59	S	-56	-58
Inlet Magnehelic* (in H_2O)	0	0	0.59	Ø	Ø	Ø	S	0.53	Ø
Inlet Vacuum (-wc)	-26.5	-26.2	-27.4	-28.7	-28.8	-37.2	S	-32.4	-33.8

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	30	15	31	32	30	30		30	MG ~~-34~~ (31)
Inlet Temperature (°F)	105	206	90	85	90	70		91	MG ~~-58~~ (88)
Outlet Pressure (wc)	10	16	10	10	10	10	S	10	10
Outlet Temperature (°F)	90	110	80	76	84	63	S	79	78
Water Level Sight Glass (in)	NA	6"	Ø	Ø	2"	5"	S	5"	5"

AIR SPARGE (SPRG) COMPRESSOR C-2201

Upper Oil Sight Glass (half pt.)	OK	OK	ok	OK	OK	OK	S	OK	OK
Lower Oil Sight Glass (half pt.)	OK	OK	ok	OK	OK	OK	S	OK	OK

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	15.5	30	14.5	14.5	15	15.5		15.0	15.0
Inlet Temperature (°F)	200	90	190	187	190	175		190	187
Outlet Pressure (psi)	16	KA ~~30~~ 10	8.5	15.5	16	16		16.0	16.0
Outlet Temperature (°F)	108	90	101	103	102	98		101	99

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET
BUILDING 2
SYSTEM COMPONENTS

DATE	3·8·21	3·15·21	3·22·21						
TIME	12:55pm	3:00pm	11:11 Am						
OBSERVER'S INITIALS	MG	MG	MG						
SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.									
Comments and Notes	N/A	N/A	N/A						
SOIL VAPOR EXTRACTION (SVE) BLOWER B-801									
Pre-Filter Vacuum (-wc)	-21	-22	-21						
Post-Filter Vacuum (-wc)	-26	-28	-26						
Inlet Magnehelic* (in H_2O)	Ø	Ø	Ø						
Inlet Vacuum (-wc)	-24.8	-27.5	-25.0						
SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (wc)	57	60	56						
Inlet Temperature (°F)	100	80	106						
Outlet Pressure (wc)	3	2	2.5						
Outlet Temperature (°F)	84	76	90						
Water Level Sight Glass (in)	2"	1/4"	Ø						
AIR SPARGE (SPRG) COMPRESSOR C-2301									
Upper Oil Sight Glass (half pt.)	OK	OK	OK						
Lower Oil Sight Glass (half pt.)	OK	OK	OK						
AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (psi)	18	18.5	18						
Inlet Temperature (°F)	200	214	205						
Outlet Pressure (psi)	17.5	18.0	17.75						
Outlet Temperature (°F)	120	123	123						

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

+ 2020
2021

WEEKLY DOCUMENTATION SHEET
BUILDING 2
SYSTEM COMPONENTS

DATE	11-17-20	11-23-20	1-21-21	~~1-23~~ 1-25-21 MG	2-1-21	2-8-21	2-15-21	2-26-21	~~2-2~~ MG 3-1-21
TIME	0910	10:02 AM	1025	2:55 PM	1:52 PM	1:10 PM	2:13 pm	1010	2:48 pm
OBSERVER'S INITIALS	A.H	KA	AH	MG	MG	MG	MG	AS	MG
SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.									
Comments and Notes	NA	NA	NA	NA	NA	NA	System Down	NA	NA
SOIL VAPOR EXTRACTION (SVE) BLOWER B-801									
Pre-Filter Vacuum (-wc)	-25	-25	-22	-20	-21	-26		-23	-21
Post-Filter Vacuum (-wc)	-27	-27	-25	-25	-25	-25		-25	-25
Inlet Magnehelic* (in H_2O)	0.0	0.0	0.63	Ø	Ø	Ø		0.30	Ø 0.53 AH 3-26-21
Inlet Vacuum (-wc)	-28.0	-30	-25.5	-25.8	-26.2	-30.8		-24.2	-25.7
SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (wc)	52	52	60	60	60+	60+		58	60
Inlet Temperature (°F)	75	75	88	75	75	65		87	80
Outlet Pressure (wc)	1.0	1.0	1.0	1.0	1.0	1.0		2.0	3.0
Outlet Temperature (°F)	75	86	84	79	73	60		78	62
Water Level Sight Glass (in)	8"	8"	Ø	Ø	1/4"	1 1/4"		1" MG	0
AIR SPARGE (SPRG) COMPRESSOR C-2301									
Upper Oil Sight Glass (half pt.)	ok	OK	ok	OK	OK	OK		OK	OK
Lower Oil Sight Glass (half pt.)	ok	OK	ok	OK	OK	OK		OK	OK
AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (psi)	14.5	16	16	20.0	16.5	17.75		16.5	17.5
Inlet Temperature (°F)	150	160	185	175	175	175		190	183
Outlet Pressure (psi)	14.0	16.5	14.5	MG ~~20.0~~ 19.5	17.5	17.0		16.5	18.5
Outlet Temperature (°F)	76	120	124	98	102	120		120	104

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
BUILDING 1
SVE MANIFOLD

DATE	11-25-20	1-21-21	2-26-21	3-26-21						
TIME	0945	1040	1110	1030						
INITIALS	A. H.	A. H.	AS	A. H.						

MAGNEHELIC GAUGE*

SVE-15 (in H_2O)	0.0	0.0	0.04	0.0						
SVE-14 (in H_2O)	0.10	0.06	0.15	0.04						
SVE-13 (in H_2O)	0.0	0.09	0.20	0.0						
SVE-11 (in H_2O)	0.13	0.13	0.13	0.0						
SVE-9 (in H_2O)	0.11	0.42	0.28	0.14						

VACUUM GAUGE

SVE-15 (-wc)	25	24	30	38						
SVE-14 (-wc)	25	26	31	40						
SVE-13 (-wc)	28	26	30	40						
SVE-11 (-wc)	16	16	25	30						
SVE-9 (-wc)	24	23	28	36						

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
BUILDING 1 UPPER CELL
AIR SPARGE MANIFOLD

DATE		9-29-20	11-25-20	1-21-21	2-26-21		3-26-21				
TIME		1120	0945	1040	1105		1030				
INITIALS		A.H.	A.H.	A.H.	AS		A.H.				
					ROTOMETER						
UPPER CELL	AS-47 (scfm)	0	0	0	0	0	0				
	AS-38 (scfm)	7.0	8.0	8.0	8.5	16.5	8.0				
	AS-37 (scfm)	15.0	16.5	15.5	16.0	9.0	9.0				
	AS-23 (scfm)	12.0	12.5	13.5	14.0	14.0	5.0				
	AS-24 (scfm)	13.0	15.0	16.5	17.5	14.5	7.0				
	AS-39 (scfm)	17.0	15.0	16.5	17.0	13.5	6.0				
	AS-48 (scfm)	16.0	18.0	15.0	15.0	12.0	7.5				
	AS-52 (scfm)	15.0	16.5	17.0	17.0	12.0	9.0				
	AS-56 (scfm)	13.0	15.0	15.5	15.5	12.0	8.0				
	AS-54 (scfm)	13.0	14.0	15.0	15.5	14.0	6.0				
	AS-58 (scfm)	16.0	17.0	15.5	15.5	7.0	7.0				
					PRESSURE GAUGE						
UPPER CELL	AS-47 (psi)	0	0	0	0		0				
	AS-38 (psi)	14.0	17.0	14.0	16.5		13.0				
	AS-37 (psi)	10.0	9.5	10.0	9.0		8.5				
	AS-23 (psi)	14.0	13.5	14.0	14.0		12.0				
	AS-24 (psi)	14.5	14.5	15.0	14.5		13.0				
	AS-39 (psi)	13.5	13.0	14.0	13.5		12.0				
	AS-48 (psi)	13.0	13.0	12.5	12.0		11.5				
	AS-52 (psi)	12.5	12.5	13.0	12.0		11.5				
	AS-56 (psi)	12.5	12.5	12.5	12.0		11.5				
	AS-54 (psi)	14.0	14.0	17.0	14.0		12.0				
	AS-58 (psi)	7.0	8.0	7.0	7.0		7.0				

1 compressor Down.

MONTHLY DOCUMENTATION SHEET
BUILDING 1 LOWER CELL
AIR SPARGE MANIFOLD

DATE		7-22-20	9-29-20	11-25-20	1-21-21	2-26-21	3-26-21				
TIME		1300	1120	0945	1040	1105	1030				
INITIALS		A.H	A.H	A.H.	A.H	AS	A.H				
ROTOMETER											
LOWER CELL	AS-49 (scfm)	6.0	10.0	10.0	11.5	11.0	5.0				
	AS-44 (scfm)	9.0	15.0	13.0	Logbook. Not.	11.5	5.0				
	AS-31 (scfm)	11.5	19.0	18.0	20.0	19.0	8.0				
	AS-32 (scfm)	11.0	18.0	18.0	20.0	18.0	8.0				
	AS-45 (scfm)	7.5	14.0	13.0	15.5	13.5	4.0				
	AS-51 (scfm)	7.5	13.0	13.5	15.0	20.0	13.0				
	AS-55 (scfm)	10.0	15.0	16.0	17.0	16.0	7.0				
	AS-53 (scfm)	8.0	13.0	13.0	15.0	18.0	4.0				
	AS-59 (scfm)	6.0	11.0	10.0	12.0	10.0	5.0				
	AS-57 (scfm)	0	9.0	11.0	14.5	11.5	5.0				
	AS-50 (scfm)	5.0	11.0	11.0	10.0	10.5	5.0				
PRESSURE GAUGE											
LOWER CELL	AS-49 (psi)	12.0	13.0	12.5	12.0	12.5	11.5				
	AS-44 (psi)	13.0	14.5	15.0	15.0	14.5	12.0				
	AS-31 (psi)	12.5	13.0	14.0	13.0	13.5	12.0				
	AS-32 (psi)	12.0	12.5	13.0	11.5	13.0	10.5				
	AS-45 (psi)	14.0	14.0	15.0	14.5	15.0	13.0				
	AS-51 (psi)	12.5	12.5	13.0	12.5	10.5	10.0				
	AS-55 (psi)	12.5	12.5	13.5	12.5	13.0	12.0				
	AS-53 (psi)	13.0	12.5	14.0	13.5	14.0	12.0				
	AS-59 (psi)	13.0	13.5	14.5	13.5	14.0	12.5				
	AS-57 (psi)	12.5	14.0	15.0	14.5	14.5	12.0				
	AS-50 (psi)	13.5	15.0	15.5	15.5	15.0	12.5				

1 Compressor Down

MONTHLY DOCUMENTATION SHEET
BUILDING 1
PID MEASUREMENTS

DATE	2-25-20	3-20-20	5-21-20	6-29-20	7-22-20	9-29-20	11-25-20	1-21-21	2-26-21	3-26-21		
TIME	0930	1130	1110	1200	1300	1120	0945	1040	1115	1030		
INITIALS	A.H.	A.H	AS	A.H.	A.H.	AH	A.H.	A.H	AS	A.H.		

SVE Effluent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
SVE - 15	moisture	moisture	moisture	0.0	0.0	0.0	0.0	moisture	moisture	moisture		
SVE - 14				0.0	0.0	0.0	0.0					
SVE - 13				0.0	0.0	0.0	0.0					
SVE - 11				0.0	0.0	0.0	0.0					
SVE - 9				0.0	0.0	0.0	0.0					
Exhaust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

MONTHLY DOCUMENTATION SHEET
BUILDING 2
SVE MANIFOLD

DATE	11-6-20	11-25-20	1-21-21	2-26-21		3-26-21				
TIME	1015	0935	1025	1025		1010				
INITIALS	A.H.	A.H.	A.H.	AS		A.H.				

MAGNEHELIC GAUGE*

SVE-10 (in H_2O)	0.32 ~~50~~ AH	0.05	0.02	* Full →	0.18	0.07				
SVE-12 (in H_2O)	0.32 ~~18~~ AH	0.17	0.18	* of 0.10 →	0.10	0.15				
SVE-8 (in H_2O)	0.13	0.09	0.09	* H2O coolant	0.15	0.17				
SVE-7 (in H_2O)	0.07	0.02	0.0	* Condensate →	0.05	0.00				

VACUUM GAUGE

SVE-10 (-wc)	50	45	46	51		50				
SVE-12 (-wc)	18	20	10	0		20				
SVE-8 (-wc)	20	28	20	25		30				
SVE-7 (-wc)	63	60	55	64		65				

ELECTRICAL USAGE

Kilowatts (kwh)	809096.10	833856.5	843255.5	897134.00		948228.40				

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading

MONTHLY DOCUMENTATION SHEET
BUILDING 2 UPPER CELL
AIR SPARGE MANIFOLD

DATE		11-6-20	11-25-20	1-21-21	2-26-21	3-26-21					
TIME		1015	0935	0025	1010	1010					
INITIALS		A.H.	A.H.	A.H.	AS	A.H.					
					ROTOMETER						
UPPER CELL	AS-20 (scfm)	9.5	15.0	15.0	16.5	16.0					
	AS-26 (scfm)	8.5	16.0	17.0	18.0	17.5					
	AS-16 (scfm)	8.0	15.0	15.0	17.0	17.0					
	AS-18 (scfm)	4.0	5.0	5.0	4.0	4.0					
	AS-22 (scfm)	9.0	15.0	15.5	17.5	16.5					
	AS-28 (scfm)	8.5	15.5	16.0	18.0	23.0					
	AS-30 (scfm)	5.0	6.0	5.0	6.0	6.0					
	AS-36 (scfm)	8.5	16.0	16.0	18.5	17.5					
	AS-42 (scfm)	9.0	15.0	15.5	17.0	16.0					
	AS-40 (scfm)	9.5	16.0	16.5	18.0	17.5					
	AS-34 (scfm)	9.5	16.5	17.0	18.5	17.5					
					PRESSURE GAUGE						
UPPER CELL	AS-20 (psi)	12.0	12.0	12.0	11.0	11.5					
	AS-26 (psi)	13.5	13.5	14.0	12.5	13.5					
	AS-16 (psi)	13.5	13.5	14.0	13.0	14.0					
	AS-18 (psi)	14.5	17.0	18.0	17.5	19.0					
	AS-22 (psi)	12.0	13.0	13.0	12.0	13.0					
	AS-28 (psi)	12.5	13.0	13.5	12.0	12.0					
	AS-30 (psi)	12.5	15.5	16.0	15.5	17.0					
	AS-36 (psi)	13.5	14.5	15.0	13.5	14.5					
	AS-42 (psi)	12.5	13.0	13.5	12.0	13.0					
	AS-40 (psi)	12.0	13.0	13.0	12.0	13.0					
	AS-34 (psi)	12.0	13.0	13.0	12.0	13.0					

MONTHLY DOCUMENTATION SHEET
BUILDING 2 LOWER CELL
AIR SPARGE MANIFOLD

DATE		11-6-20	11-25-20	1-21-21	2-26-21	3-26-21					
TIME		1015	0935	1025	1015	1010					
INITIALS		AH	AH	AH	AS	AH					
					ROTOMETER						
LOWER CELL	AS-27 (scfm)	11.0	18	19.0	20.0	20.0					
	AS-25 (scfm)	9.0	15	15.5	16.0	15.0					
	AS-17 (scfm)	6.5	12	13.0	13.5	13.0					
	AS-19 (scfm)	8.5	17	18.0	19.5	20.0					
	AS-21 (scfm)	8.0	13.5	13.5	15.0	15.0					
	AS-29 (scfm)	9.5	16.5	14.5	16.0	16.5					
	AS-43 (scfm)	6.0	9.0	9.5	10.0	9.5					
	AS-46 (scfm)	9.0	14.5	15.0	16.0	15.0					
	AS-41 (scfm)	8.0	13.5	14.5	15.0	26.5					
	AS-33 (scfm)	9.5	16.0	16.5	17.0	17.5					
	AS-35 (scfm)	8.0	14.5	15.0	15.5	15.5					
					PRESSURE GAUGE						
LOWER CELL	AS-27 (psi)	12.5	13.5	13.5	13.5	12.5					
	AS-25 (psi)	12.0	12.5	12.5	12.5	12.0					
	AS-17 (psi)	12.5	13.5	13.5	13.5	12.5					
	AS-19 (psi)	13.5	15.0	15.0	15.0	14.0					
	AS-21 (psi)	12.0	13.0	13.0	12.5	12.0					
	AS-29 (psi)	12.5	13.0	14.0	13.5	12.5					
	AS-43 (psi)	12.0	12.0	12.5	12.0	11.5					
	AS-46 (psi)	12.5	13.0	13.5	13.0	12.5					
	AS-41 (psi)	12.0	12.0	12.5	12.0	5.0					
	AS-33 (psi)	12.0	12.5	13.0	13.0	12.0					
	AS-35 (psi)	12.5	13.0	13.0	13.0	12.0					

MONTHLY DOCUMENTATION SHEET
BUILDING 2
PID MEASUREMENTS

DATE	2-25-20	3-20-20	5-21-20	6-29-20	7-22-20	9-29-20	11-6-20	11-25-20	1-21-21	2-26-21	3-26-21	
TIME	0965	1120	1105	1145	1250	1115	1015	0935	1025	1025	1010	
INITIALS	A.H	A.H	AS	A.H	A.H.	A.H.	A.H	A.H	A.H	AS	A.H	

SVE Effluent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
SVE - 10	Moisture	moisture	moisture	0.0	0.0	0.0	moisture	moisture	moisture	moisture	moisture	
SVE - 12	↓	↓	moisture	0.0	0.0	0.0	↓	↓	↓	↓	↓	
SVE - 8	↓	↓	0.0	0.0	0.0	0.0	↓	↓	↓	↓	↓	
SVE - 7	↓	↓	0.0	0.0	0.0	0.0	↓	↓	↓	↓	↓	
Exhaust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Appendix D

First Quarter 2021 Leachate Sampling Data Sheets

February 2021 Groundwater Sampling Checklist

Well ID	Depth to Water	Date of Water Level Reading	Depth of Intake	Sample Date	Total Depth	Notes
RAMW-01	28.79	2-22-21	38.00	2-25-21	46.03	FBLK02
RAMW-02	28.65		37.00	2-25-21	44.79	Collect MS/MSD02
RAMW-03	28.44		38.00	2-24-21	45.26	HSSER-DUP02
RAMW-04	28.29		41.00	2-24-21	44.90	EBLK02
RAMW-05	27.14		36.00	2-24-21	43.73	
RAMW-06	27.18		37.00	2-24-21	44.32	
RAMW-07	31.64		41.00	2-24-21	48.68	
RAMW-08	27.87	2-23-21	37.00	2-23-21	44.33	
GMZ-01	31.25	2-22-21	40.00	2-23-21	47.78	
GMZ-02	28.82		37.00	2-25-21	44.82	Collect MS/MSD01
GMZ-03	28.19		37.00	2-24-21	44.39	HSSER-DUP01
GMZ-04	26.38		38.00	2-23-21	44.90	
MW-07FGA	26.29		39.00	2-23-21	46.24	
MW-203	27.08		40.00	2-23-21	48.47	
PMW-01	28.91		37.00	2-24-21	44.03	
PMW-02	28.94	2-23-21	37.00	2-24-21	44.95	EBLK01
SMW-01	29.24	2-22-21	32.00	2-23-21	39.07	
SMW-02	25.68		32.00	2-23-21	39.65	
SMW-04	28.48		35.00	2-25-21	42.26	
SMW-08	28.70		34.00	2-23-21	41.78	FBLK01
SMW-19	27.27		35.00	2-23-21	41.00	
SMW-20	27.58		33.00	2-24-21	40.08	
SMW-21	27.06		34.00	2-23-21	41.41	
BGW-01	27.18	2-23-21	N/A	N/A	—	Not Sampled
BGW-02	27.53	2-22-21	N/A	N/A	—	Not Sampled
BGW-03	27.59		N/A	N/A	—	Not Sampled

AECOM

Well ID:	GMZ-01

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	2-23-21	Time: Start	0950 (24hr)
Project No:	60651001-4212			Finish	1100
Site Location:	Rockford, Illinois				
Weather:	Sunny 35-45°F	Collector(s):	A. Hellert		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 47.78 Screen interval(ft): 15 Approx. depth of pump intake(ft): 40

Water table depth (ft): 31.28 Casing type/diameter: 2" PVC Minimum purge volume: 8.1 (gals)

Water column length (ft): 16.5 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1000			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1010	5000	12.9	7.30	1594	68.2	2.40	89.1	500	31.28	cloudy/none
1015	7500	12.6	7.21	1606	67.7	2.43	53.2	500	31.28	↓
1020	10,000	13.1	7.19	1621	69.5	2.52	22.4	500	31.28	clear/none
1025	12,500	13.2	7.19	1630	72.5	2.58	10.07	500	31.28	↓
1030	15,000	13.1	7.18	1635	75.1	2.62	4.96	500	31.28	
1035	17,500	12.9	7.18	1643	75.4	2.65	4.82	500	31.28	
1040	20,000	13.0	7.18	1645	77.1	2.67	4.78	500	31.28	↓

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Sample Collector(s): [signature] Date: 2-23-21

SAMPLE COLLECTION DATA Well ID: **GMZ-01**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-GMZ01-422321	VOC's	3 - 40mL Clear Vials	1040	500	
	1,4 Dioxane	" "	1040	500	
	Ferrous Iron	0.46 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	GMZ-02

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2/25/21 Time: Start 0925 (24hr)
Project No: 60651001-4212 Finish 1045
Site Location: Rockford, Illinois
Weather: 24° Sunny Collector(s): A. Sokolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.82 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 28.89 Casing type/diameter: 2" PVC Minimum purge volume: 2.59 (gals)
Water column length (ft): 15.93 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	~~556 MPS~~ ProDSS	19K101414
	Lamotte	2020 wa	1191-3011
	Lamotte	Smart 3 Colorimeter	3495-2215
Begin purge at 0935			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0945	2500	13.0	7.93	1136	63.9	12.27	4.05	250	28.89	clear none
0950	3750	12.9	7.93	1138	40.7	12.22	2.78	250	28.89	
0955	5000	12.8	7.92	1141	36.6	12.19	2.70	250	28.90	
1000	6250	13.1	7.89	1139	32.8	12.29	2.59	250	28.90	
1005	7500	13.2	7.90	1146	12.8	11.80	2.25	250	28.90	
1010	8750	13.2	7.90	1144	8.1	11.55	2.30	250	28.90	
1015	10000	13.3	7.91	1139	7.6	11.68	2.20	250	28.90	
1020	11250	13.3	7.92	1138	7.2	11.65	2.15	250	28.90	
1025	12500	13.3	7.92	1141	7.1	11.69	2.21	250	28.90	

(continued on back)

Sample Collector(s): Andy Sokolowsky Date: 02/25/21

SAMPLE COLLECTION DATA Well ID: **GMZ-02**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-GMZ02- 022521	VOC's	3 - 40mL Clear Vials	1025	250	
HSSER_MS01- 022521	VOC's	3 - 40mL Clear Vials	1025	250	
HSSER-MSD01- 022521	VOC's	3 - 40mL Clear Vials	1025	250	
	Ferrous Iron	0.40 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	GMZ-03

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	02/24/21	Time: Start	1335 (24hr)
Project No:	60651001-4212			Finish	1505
Site Location:	Rockford, Illinois				
Weather:	38° cloudy, windy	Collector(s):	A. Sukolowsky		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft):	44.39	Screen interval(ft):	15	Approx. depth of pump intake(ft):	37
Water table depth (ft):	28.29	Casing type/diameter:	2" PVC	Minimum purge volume:	2.62 (gals)
Water column length (ft):	16.10				(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	~~556 MPS~~ ProDSS	19K101414
	Lamotte	2020we	1191-3011
	Lamotte	Smart3 Colorimeter	3495-2215
Begin purge at 1355			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1405	3000	14.0	8.05	970	6.3	11.36	27.2	300	28.30	cloudy/brown / none
1410	4500	14.0	8.05	971	6.5	11.40	13.9	300	28.30	
1415	6000	13.9	8.05	972	6.8	11.43	7.71	300	28.31	
1420	7500	13.9	8.05	972	6.9	11.38	4.38	300	28.31	
1425	9000	14.0	8.05	973	6.8	11.32	4.14	300	28.31	
1430	10500	14.0	8.04	973	7.0	11.26	4.20	300	28.31	
1435	12000	14.0	8.04	972	7.4	11.25	4.06	300	28.31	
1440	13500	14.0	8.04	972	7.6	11.23	4.01	300	28.31	

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Sample Collector(s): Andy Sukolowsky Date: 02/24/21

SAMPLE COLLECTION DATA Well ID: **GMZ-03**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-GMZ03- 022421	VOC's	3 - 40mL Clear Vials	1440	300	
HSSER-Dup01- 022421	VOC's	3 - 40mL Clear Vials	0000	300	
	Ferrous Iron	0.33 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	GMZ-04

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	02/23/21	Time: Start	1310 (24hr)
Project No:	60651001-4212			Finish	1435
Site Location:	Rockford, Illinois				
Weather:	38° Sunny	Collector(s):	A. Sukolowsky		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): ~~41.40~~ 44.90 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38

Water table depth (ft): 26.40 Casing type/diameter: 2" PVC Minimum purge volume: 3.01 (gals)

Water column length (ft): 18.50 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	19K101414
	Lamotte	2020	1191-3011
	Lamotte	Smart 2 Colorimeter	3495-2215
Begin purge at 1335			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1345	3000	15.1	8.41	1284	-10.1	11.75	68.2	300	26.40	cloudy/orange / none
1350	4500	15.4	8.39	1301	-10.3	11.49	32.2	300	26.40	↓
1355	6000	15.6	8.38	1314	-10.7	11.32	15.4	300	26.40	clear
1400	7500	15.6	8.39	1320	-9.5	11.45	6.15	300	26.40	↓
1405	9000	15.6	8.39	1317	-8.5	11.53	3.39	300	26.40	↓
1410	10500	15.6	8.39	1315	-7.3	11.65	3.30	300	26.40	↓
1415	12000	15.6	8.38	1314	-6.9	11.60	3.20	300	26.40	↓
1420	13500	15.6	8.38	1312	-6.7	11.41	3.15	300	26.40	↓

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Sample Collector(s): Andy Sukolowsky Date: 02/23/21

SAMPLE COLLECTION DATA Well ID: **GMZ-04**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-GMZ04- 022321	VOC's	3 - 40mL Clear Vials	1420	300	
	Ferrous Iron	2.17 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	MW-203

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-23-21 Time: Start 1200 (24hr)
Project No: 60651001-4212 Finish 1252
Site Location: Rockford, Illinois
Weather: Sunny 35-45°F Collector(s): A. Hellatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 48.97 Screen interval(ft): 15 Approx. depth of pump intake(ft): 40
Water table depth (ft): 27.12 Casing type/diameter: 2" SS Minimum purge volume: 10.7 (gals)
Water column length (ft): 21.85 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1205			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1215	5000	13.8	7.41	591	129.2	8.00	2.99	500	27.12	clear/none
1220	7500	13.7	7.78	594	133.5	7.81	3.18	500	27.12	↓
1225	10,000	14.2	7.37	583	133.4	7.76	3.08	500	27.12	↓

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Sample Collector(s): [signature] Date: 2-23-21

SAMPLE COLLECTION DATA Well ID: **MW-203**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-MW203-022321	VOC's	3 - 40mL Clear Vials	1225	500	
" "	1,4 Dioxane	" "	1225	500	
	Ferrous Iron	0.39 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	MW07FGA

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/23/21 Time: Start 1200 (24hr)
Project No: 60651001-4212 Finish 1300
Site Location: Rockford, Illinois
Weather: 38° sunny Collector(s): A. Sokolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 46.24 Screen interval(ft): 15 Approx. depth of pump intake(ft): 39
Water table depth (ft): 26.34 Casing type/diameter: 4" SS Minimum purge volume: 3.24 (gals)
Water column length (ft): 19.90 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	19K101414
	Lamotte	2020 we	1191-3011
	Lamotte	Smart3 Colorimeter	3495-2215
Begin purge at 1210			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1220	3000	13.9	7.29	2310	-15.8	5.16	7.93	300	26.30	clear / none
1225	4500	13.8	7.29	2286	-16.6	5.16	7.87	300	26.30	↓ ↓
1230	6000	13.9	7.29	2261	-16.4	5.16	7.63	300	26.30	
1235	7500	13.9	7.29	2244	-16.0	5.16	7.57	300	26.30	
						AS				

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Sample Collector(s): Andy Sokolowsky Date: 02/23/21

SAMPLE COLLECTION DATA Well ID: **MW-07FGA**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-MW07FGA- 022321	VOC's	3 - 40mL Clear Vials	1235	300	
	Ferrous Iron	0.55 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	PMW-01

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	02/24/21	Time: Start	0940 (24hr)
Project No:	60651001-4212			Finish	1100
Site Location:	Rockford, Illinois				
Weather:	38° Sunny, windy	Collector(s):	A. Sukolowsky		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.03 Screen interval(ft): 25 Approx. depth of pump intake(ft): 37

Water table depth (ft): 28.98 Casing type/diameter: 2" PVC Minimum purge volume: 2.45 (gals)

Water column length (ft): 15.05 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	~~556 MPS~~ Pro DSS	19K101414
	Lamotte	2020 we	1191-3011
	Lamotte	Smart 3 Colorimeter	3495-2215

Begin purge at 0955

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1005	3000	14.6	7.36	794	121.7	6.48	22.7	300	28.98	slightly cloudy / none
1010	4500	14.7	7.34	802	60.6	6.12	8.84	300	28.98	clear / none
1015	6000	14.6	7.34	806	44.9	6.04	5.64	300	28.98	↓ ↓
1020	7500	14.5	7.34	808	35.2	5.97	2.98	300	28.98	
1025	9000	14.6	7.35	810	27.9	6.11	2.46	300	28.98	
1030	10500	14.7	7.35	810	22.3	6.18	2.20	300	28.98	
1035	12000	14.6	7.35	808	21.1	6.04	2.12	300	28.98	
1040	13500	14.6	7.35	807	19.9	6.02	2.10	300	28.98	
1045	15000	14.5	7.35	807	19.2	5.99	2.16	300	28.98	

AS

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Sample Collector(s): Andy Sukolowsky Date: 02/24/21

SAMPLE COLLECTION DATA Well ID: **PMW-01**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-PMW01- 022421	VOC's	3 - 40mL Clear Vials	1045	300	
	Ferrous Iron	0.16 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	PMW-02

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	02/24/21	Time: Start	1100 (24hr)
Project No:	60651001-4212			Finish	1200
Site Location:	Rockford, Illinois				
Weather:	38° sunny, windy	Collector(s):	A. Sukolowsky		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.95 Screen interval(ft): 25 Approx. depth of pump intake(ft): 37

Water table depth (ft): 28.92 Casing type/diameter: 2" PVC Minimum purge volume: 2.61 (gals)

Water column length (ft): 16.03 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	~~556 MPS~~ Pro DSS	19K101414
	Lamotte	2020 we	1191-3011
	Lamotte	Smart 3 Colorimeter	3495-2215
Begin purge at 1105			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1115	3000	13.9	7.06	1461	-113.5	0.58	13.8	300	28.93	clear / none
1120	4500	14.1	7.07	1468	-130.9	0.39	6.68	300	28.93	↓ ↓
1125	6000	14.2	7.08	1471	-138.6	0.31	6.23	300	28.93	
1130	7500	14.2	7.08	1466	-144.7	0.30	5.88	300	28.93	
1135	9000	14.2	7.08	1467	-148.7	0.29	5.42	300	28.93	
1140	10500	14.2	7.08	1463	-152.9	0.29	5.66	300	28.93	

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Sample Collector(s): Andy Sukolowsky Date: 02/24/21

SAMPLE COLLECTION DATA Well ID: **PMW-02**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-PMW02- 022421	VOC's	3 - 40mL Clear Vials	1140	300	
HSSER-EBLK01- 022421	VOC's	3 - 40mL Clear Vials	1155	–	
	Ferrous Iron	1.46 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-01

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	02/25/21	Time: Start	1050 (24hr)
Project No:	60651001-4212			Finish	(S) ~~1115~~ 1200
Site Location:	Rockford, Illinois				
Weather:	29° Sunny	Collector(s):	A. Sukolowsky		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft):	46.03	Screen interval(ft):	15	Approx. depth of pump intake(ft):	38
Water table depth (ft):	28.90	Casing type/diameter:	2" PVC	Minimum purge volume:	2.79 (gals)
Water column length (ft):	17.13				(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	~~556 MPS~~ Pro DSS	19K101414
	Lamotte	2020 we	1191-3011
	Lamotte	Smart3 Colorimeter	349T-2215
Begin purge at 1100			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1110	3000	15.3	7.47	742	-12.0	8.86	6.33	300	28.90	clear / none
1115	4500	15.4	7.46	746	-5.1	8.75	3.24	300	28.90	↓ ↓
1120	6000	15.4	7.45	757	-4.2	8.66	3.01	300	28.90	
1125	7500	15.4	7.45	769	-3.9	8.58	2.87	300	28.90	
1130	9000	15.3	7.45	773	-3.7	8.53	2.80	300	28.90	
1135	10500	15.3	7.45	776	-3.6	8.49	2.85	300	28.90	

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Sample Collector(s): Andy Sukolowsky Date: 02/25/21

SAMPLE COLLECTION DATA Well ID: **RAMW-01**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW01- 022521	VOC's	3 - 40mL Clear Vials	1135	300	
HSSER-FBLK02- 022521	VOC's	3 - 40mL Clear Vials	~~1155~~ 1155	300	
	Ferrous Iron	0.21 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-02

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	2-25-21	Time: Start	1120 (24hr)
Project No:	60651001-4212			Finish	1230
Site Location:	Rockford, Illinois				
Weather:	Sunny 35-45 °F	Collector(s):	R. Hollatz		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.79 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37

Water table depth (ft): 28.74 Casing type/diameter: 2" PVC Minimum purge volume: 7.9 (gals)

Water column length (ft): 16.05 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18010074 3
	Lamotte	2020	90416-117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1130			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1140	5000	14.0	7.37	1552	-101.0	1.54	8.25	500	28.74	Clear/none
1145	7,500	14.2	7.39	1513	-114.3	2.07	7.35	500	28.74	
1150	10,000	14.5	7.37	1491	-114.3	2.40	5.76	500	28.74	
1155	12,500	14.5	7.36	1492	-111.3	2.51	4.24	500	28.74	
1200	15,000	14.5	7.35	1504	-110.8	2.52	3.28	500	28.74	
1205	17,500	14.5	7.34	1516	-111.1	2.54	3.19	500	28.74	
1210	20,000	14.6	7.34	1533	-112.0	2.40	3.11	500	28.74	

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Sample Collector(s): [signature] Date: 2-25-21

SAMPLE COLLECTION DATA Well ID: **RAMW-02**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW02-	VOC's	3 - 40mL Clear Vials	1210	500	
HSSER-MS02-	VOC's	3 - 40mL Clear Vials	1210	500	
HESSER-MSD02-	VOC's	3 - 40mL Clear Vials	1210	500	
	Ferrous Iron	3.09 mg/L			
" "	1,4 Dioxan	" "	1210	500	
" "	" "	" "	1210	500	
" "	" "	" "	1210	500	

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-03

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-24-21 Time: Start 1420 (24hr)
Project No: 60651001-4212 Finish 1520
Site Location: Rockford, Illinois
Weather: Overcast 30-40°F Collector(s): R. Hollis

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 45.26 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
Water table depth (ft): 28.53 Casing type/diameter: 2" PVC Minimum purge volume: 8.2 (gals)
Water column length (ft): 16.73 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	0059S. 4016
Begin purge at 1425			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1425	5000	13.6	7.70	981	103.7	11.24	2.85	500	28.53	clear/none
1440	7500	13.6	7.69	1017	90.4	10.53	2.56	500	28.53	↓
1445	10,000	13.6	7.69	1029	75.1	10.33	2.54	500	28.53	↓
1450	12,500	13.5	7.69	1050	61.2	10.08	2.25	500	28.53	↓
1455	15,000	13.5	7.69	1060	58.7	10.00	2.19	500	28.53	↓
1500	17,500	13.5	7.69	1073	57.9	9.83	2.27	500	28.53	↓

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Sample Collector(s): [signature] Date: 2-24-21

SAMPLE COLLECTION DATA Well ID: **RAMW-03**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW03-022421	VOC's	3 - 40mL Clear Vials	1500	500	
HSSER-Dup02- 022421	VOC's	3 - 40mL Clear Vials	0000	500	
	Ferrous Iron	0.14 mg/L			
" "	1,4 Dioxane	" "	1500	500	
" "	1,4 Dioxane	" "	0000	500	

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-04

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date: 2-24-21	Time:	Start	1300 (24hr)
Project No:	60651001-4212			Finish	1400
Site Location:	Rockford, Illinois				
Weather:	overcast 35-45°F	Collector(s):	A. Hellatz		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.90 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37

Water table depth (ft): 28.31 Casing type/diameter: 2" PVC Minimum purge volume: 812 (gals)

Water column length (ft): 16.59 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1305			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1315	500	13.0	7.75	902	71.0	12.26	6.02	500	28.31	clear/none
1320	7,500	12.6	7.75	897	59.9	11.98	3.65	500	28.31	↓
1325	10,000	12.9	7.75	897	48.7	11.85	2.41	500	28.31	↓
1330	12,500	12.7	7.75	896	47.2	11.88	2.37	500	28.31	↓
1335	15,000	12.7	7.75	895	44.4	11.90	2.46	500	28.31	↓

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Sample Collector(s): [illegible] Date: 2-24-21

SAMPLE COLLECTION DATA Well ID: **RAMW-04**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW04- 022421	VOC's	3 - 40mL Clear Vials	1335	500	
HSSER-EBLK02-022421	VOC's	3 - 40mL Clear Vials	1400	–	
" "	1,4 Dioxane	" "	1375	500	
" "	Ferrous Iron	0.14 mg/L			
" "	1,4 Dioxane	" "	1400	–	

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-05

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-24-21 Time: Start 1155 (24hr)
Project No: 60651001-4212 Finish 1255
Site Location: Rockford, Illinois
Weather: Partly Sunny 35-45°F Collector(s): A. Hellalz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 43.73 Screen interval(ft): 15 Approx. depth of pump intake(ft): 36
Water table depth (ft): 27.19 Casing type/diameter: 2" PVC Minimum purge volume: 8.1 (gals)
Water column length (ft): 16.54 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1200			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1210	5000	14.9	7.62	1408	118.5	10.83	17.8	500	27.19	Clear/none
1215	7500	14.9	7.60	1440	83.4	11.02	14.0	500	27.19	
1220	10,000	14.8	7.60	1459	47.2	11.14	9.66	500	27.19	
1225	12,500	14.9	7.60	1468	31.7	11.18	8.07	500	27.19	
1230	15,000	14.9	7.59	1479	25.9	11.29	6.13	500	27.19	
1235	17,500	14.9	7.58	1485	24.1	11.22	5.93	500	27.19	
1240	20,000	14.8	7.58	1491	24.7	11.23	6.01	500	27.19	

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Sample Collector(s): [signature] Date: 2-24-21

SAMPLE COLLECTION DATA Well ID: **RAMW-05**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW05-022421	VOC's	3 - 40mL Clear Vials	1240	500	
" "	1,4 Dioxane	" "	1240	500	
	Ferrous Iron	0.23 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-06

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	2-24-21	Time: Start	1045 (24hr)
Project No:	60651001-4212			Finish	1140
Site Location:	Rockford, Illinois				
Weather:	Sunny 25-45°F	Collector(s):	A. Hellatz		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.32 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37

Water table depth (ft): 27.22 Casing type/diameter: 2" PVC Minimum purge volume: 8.4 (gals)

Water column length (ft): 17.1 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1050			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1100	5000	15.3	8.01	1651	189.0	10.40	1.58	500	27.22	clear/none
1105	7500	15.5	8.04	1641	172.2	10.50	1.31	500	27.22	↓
1110	10,000	15.4	8.07	1627	151.7	10.32	1.27	500	27.22	↓
1115	12,500	15.5	8.06	1626	135.5	10.30	0.99	500	27.22	↓
1120	15000	15.4	8.06	1622	127.9	10.30	0.95	500	27.22	↓
1125	17,500	15.4	8.06	1622	125.6	10.25	1.01	500	27.22	↓

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Sample Collector(s): [signature] Date: 2-24-21

SAMPLE COLLECTION DATA Well ID: **RAMW-06**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW06-022421	VOC's	3 - 40mL Clear Vials	1125	500	
" "	1,4 Dioxane	" "	1125	500	
	Ferrous Iron	0.21 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-07

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	2-24-21	Time: Start	0945 (24hr)
Project No:	60651001-4212			Finish	1040
Site Location:	Rockford, Illinois				
Weather:	Sunny 35-45°F	Collector(s):	A. Hollatz		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): ~~31~~ 48.68 Screen interval(ft): 15 Approx. depth of pump intake(ft): 41

Water table depth (ft): 31.69 Casing type/diameter: 2" PVC Minimum purge volume: 8.3 (gals)

Water column length (ft): 16.99 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046 - 1117
	Lamotte	Smart 2 Colorimeter	00595 - 4016
Begin purge at 0950			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1000	5000	15.0	6.96	2059	120.0	0.46	3.37	500	31.69	clear/none
1005	7500	15.2	6.95	2116	58.4	0.36	2.28	500	31.69	↓
1010	10,000	15.1	6.94	2139	43.5	0.33	2.50	500	31.69	↓
1015	12,500	15.0	6.94	2157	38.4	0.30	2.05	500	31.69	↓
1020	15,000	15.0	6.94	2147	30.8	0.29	1.78	500	31.69	↓
1025	17,500	15.1	6.94	2149	29.9	0.28	1.82	500	31.69	↓
1030	20,000	14.8	6.94	2150	29.7	0.28	1.76	500	31.69	↓

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Sample Collector(s): [signature] Date: 2-24-21

SAMPLE COLLECTION DATA Well ID: **RAMW-07**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW07-022421	VOC's	3 - 40mL Clear Vials	1030	500	
" "	1,4 Dioxane	" "	1030	500	
	Ferrous Iron	0.43 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	RAMW-08

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-23-21 Time: Start 1430 (24hr)
Project No: 60651001-4212 Finish 1510
Site Location: Rockford, Illinois
Weather: Sunny 35-45°F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.33 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 27.79 Casing type/diameter: 2" PVC Minimum purge volume: 8.1 (gals)
Water column length (ft): 16.54 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1435			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1445	5000	15.3	7.63	1083	119.5	5.78	3.26	500	27.81	clear/none
1450	7500	15.4	7.63	1081	111.9	5.66	3.24	500	27.81	↓
1455	10,000	15.2	7.63	1082	112.1	5.64	3.31	500	27.81	

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Sample Collector(s): [signature] Date: 2-23-21

SAMPLE COLLECTION DATA Well ID: **RAMW-08**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-RAMW08-022321	VOC's	3 - 40mL Clear Vials	1455	500	
" "	1,4 Dioxane	" "	1455	500	
	Ferrous Iron	0.39 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	SMW-01

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/23/21 Time: Start 1055 (24hr)
Project No: 60651001-4212 Finish 1200
Site Location: Rockford, Illinois
Weather: 38° sunny, snow cover Collector(s): A. Sokolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 39.07 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32
Water table depth (ft): 29.24 Casing type/diameter: 2" PVC Minimum purge volume: 1.60 (gals)
Water column length (ft): 9.83 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	BK 101414
	Lamotte	2020 we	1191-3011
	Lamotte	Smart 3 Colorimeter	3495-2215
Begin purge at 1110			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1120	3000	14.1	7.44	1013	6.4	9.22	10.50	300	29.25	clear/none
1125	4500	14.1	7.43	1006	6.9	9.21	8.54	300	29.26	↓
1130	6000	14.0	7.43	991	7.8	9.24	5.24	300	29.27	↓
1135	7500	13.9	7.43	985	8.2	9.26	5.20	300	29.27	↓
1140	9000	13.8	7.43	982	9.0	9.28	4.95	300	29.27	↓
1145	10500	13.8	7.42	992	8.8	9.25	4.87	300	29.27	↓

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Sample Collector(s): Andy Sokolowsky Date: 02/23/21

SAMPLE COLLECTION DATA Well ID: **SMW-01**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-SMW01- 022321	VOC's	3 - 40mL Clear Vials	1145	300	
	Ferrous Iron	0.38 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	SMW-02

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-23-21 Time: Start 1105 (24hr)
Project No: 60651001-4212 Finish 1155
Site Location: Rockford, Illinois
Weather: Sunny 35-45°F Collector(s): A. Hellitz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 39.65 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32
Water table depth (ft): 25.22 Casing type/diameter: 2" PVC Minimum purge volume: 6.9 (gals)
Water column length (ft): 13.43 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D100743
	Lamotte	2020	9046-117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1110			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1120	5000	12.3	7.33	1265	74.3	8.34	18.4	500	25.72	clear/none
1125	7500	12.3	7.32	1273	74.7	8.37	9.97	500	25.72	
1130	10,000	12.4	7.31	1276	79.9	8.37	5.06	500	25.72	
1135	12,500	12.0	7.31	1282	83.2	8.38	5.33	500	25.72	
1140	15,000	12.1	7.31	1283	84.1	8.37	5.12	500	25.72	

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Sample Collector(s): [signature] Date: 2-23-21

SAMPLE COLLECTION DATA Well ID: **SMW-02**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-SMW02-022321	VOC's	3 - 40mL Clear Vials	1146	500	
	1,4, Dioxane	" "	1146	500	
	Ferrous Iron	0.45 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	SMW-04

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	2/24/21	Time: Start	1200 (24hr)
Project No:	60651001-4212			Finish	1325
Site Location:	Rockford, Illinois				
Weather:	29° Sunny	Collector(s):	A. Sukolowsky		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 42.26 Screen interval(ft): 15 Approx. depth of pump intake(ft): 35

Water table depth (ft): 28.51 Casing type/diameter: 2" PVC Minimum purge volume: 2.24 (gals)

Water column length (ft): 13.75 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	~~556 MPS~~ Pro DSS	19K 101414
	Lamotte	2020wi	1191-3011
	Lamotte	Smart3 Colorimeter	3495-2215
Begin purge at 1210			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1220	3000	14.1	6.98	1787	1.2	4.24	5.99	300	28.53	clear / none
1225	4500	14.0	7.04	1801	4.4	4.09		300	28.53	
1230	6000	14.1	7.07	1833	7.1	3.74	2.34	300	28.54	
1235	7500	14.0	7.07	1815	11.9	3.88	2.50	300	28.54	
1240	9000	13.9	7.07	1803	18.0	3.94	2.44	300	28.54	
1245	10500	13.9	7.07	1789	28.0	4.01	2.36	300	28.54	
1250	12000	14.0	7.07	1782	32.0	4.02	2.30	300	28.54	
1255	13500	13.9	7.07	1771	35.6	4.15	2.25	300	28.54	
1300	15000	13.9	7.07	1763	36.9	4.18	2.25	300	28.54	
1305	16500	13.9	7.07	1756	37.4	4.22	2.15	300	28.54	

AS

(continued on back)

Sample Collector(s): Andy Sukolowsky Date: 02/25/21

SAMPLE COLLECTION DATA Well ID: **SMW-04**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-SMW04- 022521	VOC's	3 - 40mL Clear Vials	1305	300	
	Ferrous Iron	1.21 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	SMW-08

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date: 02/23/21	Time:	Start	0930 (24hr)
Project No:	60651001-4212			Finish	1055
Site Location:	Rockford, Illinois				
Weather:	38° sunny, snow cover	Collector(s):	A. Sukolowsky		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.78 Screen interval(ft): 15 Approx. depth of pump intake(ft): 34

Water table depth (ft): 28.71 Casing type/diameter: 2" PVC Minimum purge volume: 2.13 (gals)

Water column length (ft): 13.07 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	19K101414
	Lamotte	2020 WQ	1191-3011
	Lamotte	Smart 3 Colorimeter	3495-2215
Begin purge at 0955			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1005	3000	13.0	7.19	1798	-86.9	0.79	2.70	300	28.71	clear / none
1010	4500	13.1	7.19	1778	-108.8	0.68	2.42	300	28.72	↓ ↓
1015	6000	13.3	7.18	1756	-136.6	0.51	2.00	300	28.72	↓ ↓
1020	7500	13.4	7.18	1744	-140.5	0.47	1.77	300	28.72	↓ ↓
1025	9000	13.6	7.17	1730	-137.5	0.45	1.90	300	28.72	↓ ↓
1030	10500	13.6	7.17	1741	-136.7	0.45	1.85	300	28.72	↓ ↓
1035	12000	13.6	7.17	1753	137.2	0.44	1.87	300	28.72	↓ ↓

AS

(continued on back)

Sample Collector(s): Andy Sukolowsky Date: 02/23/21

SAMPLE COLLECTION DATA Well ID: **SMW-08**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-SMW08- 022321	VOC's	3 - 40mL Clear Vials	1035	300	
HSSER-FBLK01- 022321	VOC's	3 - 40mL Clear Vials	1050	—	
	Ferrous Iron	0.14 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	SMW-19

Ground Water Sample Collection Record

Client:	UTAS Plants 1/2 Facility	Date:	12-23-21	Time: Start	1305 (24hr)
Project No:	60651001-4212			Finish	1420
Site Location:	Rockford, Illinois				
Weather:	Sunny 35-45°F	Collector(s):	A. Hollatz		

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.00 Screen interval(ft): 15 Approx. depth of pump intake(ft): 35

Water table depth (ft): 27.27 Casing type/diameter: 2" SS Minimum purge volume: 6.8 (gals)

Water column length (ft): 13.73 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	18D 100743
	Lamotte	2020	9046-1117
	Lamotte	Smart 2 Colorimeter	00595-4016
Begin purge at 1320			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1330	5000	12.5	7.33	1138	115.1	7.81	24.7	500	27.27	clear/none
1335	7500	12.4	7.31	1107	121.8	7.82	19.7	500	27.27	
1340	10,000	12.8	7.34	1077	129.2	7.90	20.4	500	27.27	
1345	12,500	12.9	7.29	1076	131.4	7.91	13.4	500	27.27	
1350	15,000	13.2	7.28	1075	135.2	7.95	6.84	500	27.27	
1355	17,500	13.1	7.29	1075	139.3	7.98	3.81	500	27.27	
1400	20,000	13.4	7.29	1076	142.1	8.00	3.76	500	27.27	
1405	22,500	13.4	7.29	1076	145.4	8.02	3.91	500	27.27	

(continued on back)

Sample Collector(s): [signature] Date: 12-23-21

SAMPLE COLLECTION DATA Well ID: **SMW-19**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-SMW19-023321	VOC's	3 - 40mL Clear Vials	1405	500	
" "	1,4, Dioxane	" "	1405	500	
	Ferrous Iron	0.24 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	SMW-20

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/24/21 Time: Start 1200 (24hr)
Project No: 60651001-4212 Finish 1330
Site Location: Rockford, Illinois
Weather: 38° Sunny, windy Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 40.08 Screen interval(ft): 15 Approx. depth of pump intake(ft): 33
Water table depth (ft): 27.63 Casing type/diameter: 2" PVC Minimum purge volume: 2.02 (gals)
Water column length (ft): 12.45 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	~~556 MPS~~ Pro DSS	19K101414
	Lamotte	2020 we	1191-3011
	Lamotte	Smart 3 Colorimeter	3495-2215
Begin purge at 1205			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1215	2500	13.7	8.11	911	16.9	12.01	3.21	250	27.63	clear / none
1220	3750	13.9	8.10	909	12.8	12.15	3.00	250	27.63	
1225	5000							250		
* — Pump failure — had to RESTART * — pulled pump + changed										
1255	6500	12.5	8.12	920	8.0	11.88	2.95	300	27.63	
1300	8000	12.7	8.13	924	6.9	11.95	2.90	300	27.63	
1305	9500	12.7	8.13	926	5.9	12.03	2.91	300	27.63	
1310	11000	12.7	8.13	927	5.5	12.07	2.87	300	27.63	
1315	12500	12.8	8.13	929	6.0	12.08	2.86	300	27.63	

(continued on back)

Sample Collector(s): Andy Sukolowsky Date: 02/24/21

SAMPLE COLLECTION DATA Well ID: **SMW-20**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-SMW20- 022421	VOC's	3 - 40mL Clear Vials	1315	300	
	Ferrous Iron	0.97 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

Well ID:	SMW-21

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/23/21 Time: Start 1435 (24hr)
Project No: 60651001-4212 Finish 1550
Site Location: Rockford, Illinois
Weather: 38° Sunny Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.41 Screen interval(ft): 15 Approx. depth of pump intake(ft): 34
Water table depth (ft): 27.11 Casing type/diameter: 2" PVC Minimum purge volume: 2.33 (gals)
Water column length (ft): 14.30 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	19K101414
	Lamotte	2020	1191-3011
	Lamotte	Smart 2 Colorimeter	3495-2215
Begin purge at 1445			

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1455	3000	14.7	8.41	1579	2.6	11.78	21.5	300	27.12	cloudy / none
1500	4500	14.7	8.41	1575	1.3	12.01	12.9	300	27.12	
1505	6000	14.7	8.40	1567	0.2	11.88	8.75	300	27.12	clear
1510	7500	14.7	8.39	1569	3.7	11.85	3.76	300	27.12	
1515	9000	14.7	8.39	1561	3.3	11.93	3.41	300	27.12	
1520	10500	14.7	8.39	1555	3.6	11.72	3.29	300	27.12	
1525	12000	14.7	8.38	1552	3.9	11.76	3.21	300	27.12	
1530	13500	14.7	8.39	1548	3.7	11.81	3.20	300	27.12	

(continued on back)

Sample Collector(s): Andy Sukolowsky Date: 02/23/21

SAMPLE COLLECTION DATA Well ID: **SMW-21**

Sample ID	Parameters	Bottles/Preservatives	Time (24 hr)	Flow Rate (ml/min)	Comments
HSSER-SMW21-022321	VOC's	3 - 40mL Clear Vials	1530	300	
	Ferrous Iron	0.32 mg/L			

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

SGS ACCUTEST

CHAIN OF CUSTODY

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2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job #

Client / Reporting Information

Company Name: AECOM
Street Address: 3333 Warrenville Rd Suite 200
City / State / Zip: Lisle IL 60532
Project Contact / E-mail: Peter.Nellis@aecom.com
Phone # / Fax #: 630-481-1194
Sampler(s) Name(s) / Phone #: D. Hilliard / A. Sokolowski

Project Information

Project Name: GTAR - SDQ Phase 1/2 Facility
Street:
City / State: Rockford IL
Project #: 60605100
Client Purchase Order #:
Project Manager: Peter Nellis

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	* VOC's 624	624 SPAN 1,4 Dioxane										LAB USE ONLY
	MW20-[illegible]		2-26-21	1155	AS	GW	6	X								X	X										
	MW20 SMS[illegible]		2-26-21	1215	AS	GW	6	X								X	X										
	MW20-GM203-[illegible]		2-26-21	1600	AS	GW	6	X								X	X										
	MW20 Dup01-[illegible]		2-26-21	[illegible]	AS	GW	6	X								X	X										
	MW20-GM204-[illegible]		2-25-21	1025	AS	GW	6	X								X	X										
	MW20 MS01-[illegible]		2-25-21	1025	AS	GW	6	X								X	X										
	MW20-MSD01-[illegible]		2-25-21	1025	AS	GW	6	X								X	X										
	MW20 SMS[illegible]		2-25-21	1025	AS	GW	6	X								X	X										
	MW20-[illegible]		2-25-21	—	—	GW	3	X								X											

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

Approved by (SGS Accutest PM): / Date:

- ☑ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* List of 13 VOC's

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1	2		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☐ Cooler Temp.

SGS ACCUTEST

CHAIN OF CUSTODY

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2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job #

Client / Reporting Information

Company Name: AECOM
Street Address: 3333 Warrenville Rd Suite 200
City / State / Zip: Lisle IL 60532
Project Contact / E-mail: [illegible]
Phone # / Fax #: 630-[illegible] 1190
Sampler(s) Name(s) / Phone #: [illegible]

Project Information

Project Name: [illegible] Facility
Street:
City / State:
Project #: 60607001
Client Purchase Order #:
Project Manager: [illegible]

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet): 1,4-Dioxane (8260SPM)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NJ Water	MEOH	ENCORE	1,4-Dioxane (8260SPM)	LAB USE ONLY
	[illegible]		2-22-21	[illegible]	[illegible]	GW	6	X								X X	
	[illegible]		2-23-21	[illegible]	[illegible]	GW	6	X								X X	
	[illegible]		2-22-21	1650	[illegible]	GW	6	X								X X	
	[illegible]		2-23-21	1400	[illegible]	GW	6	X								X X	
	[illegible]		2-22-21	[illegible]	[illegible]	GW	6	X								X X	
	[illegible]		2-22-21	1225	[illegible]	GW	6	X								X X	
	[illegible]		2-22-21	1235	[illegible]	GW	6	X								X X	
	[illegible]		2-22-21	[illegible]	[illegible]	GW	6	X								X X	
	[illegible]		2-22-21	[illegible]	[illegible]	GW	6	X								X X	
	[illegible]		2-22-21	1630	[illegible]	GW	6	X								X X	
	[illegible]		2-24-21	[illegible]	[illegible]	GW	6	X								X X	
	[illegible]		2-24-21	1140	[illegible]	GW	6	X								X X	

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other _____

Approved by (SGS Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "a" (Level 1)
- [ ] Commercial "b" *Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] *NJ Data of Known Quality Protocol Reporting*
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

*Lab to 13 vial's

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [illegible]	2-24-21 1000	1 [illegible] 2-25-21	2 [illegible]		2
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact — Preserved where applicable ☐ — On Ice ☐ — Cooler Temp.

SGS ACCUTEST

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PAGE ___ OF ___

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job #

Client / Reporting Information

Company Name: AECOM
Street Address: 5333 Westerville Rd
City / State / Zip: Lima OH 45807
Project Contact / E-mail: [illegible]
Phone # / Fax #: [illegible]
Sampler(s) Name(s) / Phone #: [illegible]

Project Information

Project Name: [illegible]
Street:
City / State: Rockford OH
Project #: [illegible]
Client Purchase Order #:
Project Manager: [illegible]

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	* VOC's 8260 SIM 1,4-Dioxane										LAB USE ONLY
	[illegible]		3-22-21	1435	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1630	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1135	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1340	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1335	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1400	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1500	AH	GW	6	X								X	X									
	[illegible]		3-22-21	0900	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1135	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1155	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1210	AH	GW	6	X								X	X									
	[illegible]		3-22-21	1210	AH	GW	6	X								X	X									

Turnaround Time (Business days)

Approved by (SGS Accutest PM): / Date:

- ☑ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other_____

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* Lab to 12 VOC's

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [illegible]	3-22-21 1000	1 [illegible]	2 [illegible] 3-22-21 10:30		2
3		3	4		4
5		5			

Custody Seal # ☐ intact ☐ Not intact — Preserved where applicable ☐ — On Ice ☐ — Cooler Temp.

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job #

Client / Reporting Information

Company Name: ARCCOM
Street Address: 2322 Waterville Rd Suite 200
City / State / Zip: Lima IL 60532
Project Contact / E-mail: Peter.Hollatz@arccom.com
Phone # / Fax #: 630-621-1194
Sampler(s) Name(s) / Phone #: A. Hollatz / A. Schantz

Project Information

Project Name: UTAH SFD Plant 1/2 Facility
Street:
City / State: Rockford IL
Project #: 1160 1061
Client Purchase Order #:
Project Manager: Peter Hollatz

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	VOC's	Volpe SVOC 1,4 Dioxane										
	MW02-MW02-012521		1-25-21	12:10	AS	GW	6	X								X	X										
	MW02-TRIP01-012521		1-25-21	---	—	GW	3	X								X											

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

LAB USE ONLY

Turnaround Time (Business days)

- ☒ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other_____

Approved by (SGS Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" "Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* List of 13 VOC's

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	2-2-21 [illegible]	1 [signature] 2-2-21	2 [signature]		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☐ Cooler Temp.

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200
781 Industrial Dr, Elmhurst, IL 60126 (630) 501-1847

Order No.: RES# 58100
Date: 2/17/2021
Technician: MP

YSI

Company: AECOM
Contact: ALLAN HOLLATZ
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
PRO DSS	19K101414	✓	✓
Handheld Display	19K100094	✓	✓

Item	Tech	QC	Item	Tech	QC
Cable 5 '	✓	✓	AC Adaptor	✓	✓
Flow Cell	✓	✓	Stand		
Barb Kit	✓	✓	D.O Kit		
Storage / Cal Cup	✓	✓	Calibration Kit	✓	✓
Sensor Guard	✓	✓			
Manual	✓	✓			
Sonde Cap					
Software					
Extra Batteries					
Display Comm. Cable	✓	✓			
Sonde Comm. Cable					

Calibration Report

PRO DSS			19K101414	
Parameter	***Accuracy***	***Before***	***After***	***Lot #***
Conductivy 1000 µs/cm	*(+/-.5%)*	986	1000	OGA024
pH 7 Buffer	*(+/- .2)*	7.12	7.02	9GC1183
pH mV for 7 Buffer	*(0 +/- 50)*		**-6.7**	
pH 4 Buffer	*(+/- .2)*	4.25	4.00	9GD684
pH mV for 4 Buffer	*(180 +/- 50)*		**159.9**	
pH 10 Buffer	*(+/- .2)*	10.06	10.05	44111
pH mV for 10 Buffer	*(-180 +/- 50)*		**-178.1**	
ORP mV, 237.5	*(+/- 20 mV)*	221.8	238.00	9GE143
DO 100% Sat	*(+/- 2%)*	94.5%	101.5%	
0% DO Check	*(+/- 2%)*		1.90	9GK062
Turbidity 0 NTU	*(+/- 5%)*	1.3	0.0	#REF!
Turbidity 126 NTU	*(+/- 5%)*	109.9	124.0	#REF!

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

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Order No.: RES# 58100
Date: 2/17/2021
Technician: MP

YSI

Company: AECOM
Contact: ALLAN HOLLATZ
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
PRO DSS	19K100869	✓	✓
Handheld Display	19K100968	✓	✓

Item	Tech	QC	Item	Tech	QC
Cable 5 '	✓	✓	AC Adaptor	✓	✓
Flow Cell	✓	✓	Stand		
Barb Kit	✓	✓	D.O Kit		
Storage / Cal Cup	✓	✓	Calibration Kit	✓	✓
Sensor Guard	✓	✓			
Manual	✓	✓			
Sonde Cap					
Software					
Extra Batteries					
Display Comm. Cable	✓				
Sonde Comm. Cable	✓				

Calibration Report

PRO DSS		19K100869		
Parameter	**Accuracy**	**Before**	**After**	**Lot #**
Conductivy 1000 µs/cm	(+/-.5%)	988	1000	OGA024
pH 7 Buffer	(+/- .2)	7.37	7.02	9GC1183
pH mV for 7 Buffer	(0 +/- 50)		**-21.5**	
pH 4 Buffer	(+/- .2)	4.54	4.00	9GD684
pH mV for 4 Buffer	(180 +/- 50)		**143.0**	
pH 10 Buffer	(+/- .2)	10.24	10.05	44111
pH mV for 10 Buffer	(-180 +/- 50)		**-188.6**	
ORP mV, 237.5	(+/- 20 mV)	205.3	238.00	9GE143
DO 100% Sat	(+/- 2%)	94.7%	101.5%	
0% DO Check	(+/- 2%)		0.50	9GK062
Turbidity 0 NTU	(+/- 5%)	0.0	0.0	#REF!
Turbidity 126 NTU	(+/- 5%)	120.5	124.0	#REF!

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Order No.: RES# 58100
Date: 2/17/2021
Technician: MP

YSI

Company: AECOM
Contact: ALLAN HOLLATZ
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
PRO DSS	18D100743	✓	✓
Handheld Display	19K100093	✓	✓

Item	Tech	QC	Item	Tech	QC
Cable 5 '	✓	✓	AC Adaptor	✓	✓
Flow Cell	✓	✓	Stand		
Barb Kit	✓	✓	D.O Kit		
Storage / Cal Cup	✓	✓	Calibration Kit	✓	✓
Sensor Guard	✓	✓			
Manual	✓	✓			
Sonde Cap					
Software					
Extra Batteries					
Display Comm. Cable	✓	✓			
Sonde Comm. Cable					

Calibration Report

PRO DSS		18D100743		
Parameter	***Accuracy***	***Before***	***After***	***Lot #***
Conductivy 1000 µs/cm	*(+/-.5%)*	999	1000	OGA024
pH 7 Buffer	*(+/- .2)*	7.28	7.02	9GC1183
pH mV for 7 Buffer	*(0 +/- 50)*		**-16.5**	
pH 4 Buffer	*(+/- .2)*	4.38	4.00	9GD684
pH mV for 4 Buffer	*(180 +/- 50)*		**152.0**	
pH 10 Buffer	*(+/- .2)*	10.19	10.05	44111
pH mV for 10 Buffer	*(-180 +/- 50)*		**-185.4**	
ORP mV, 237.5	*(+/- 20 mV)*	209.6	238.00	9GE143
DO 100% Sat	*(+/- 2%)*	93.1%	101.5%	
0% DO Check	*(+/- 2%)*		2.00	9GK062
Turbidity 0 NTU	*(+/- 5%)*	0.7	0.0	#REF!
Turbidity 126 NTU	*(+/- 5%)*	142.8	124.0	#REF!

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Project Name: Plant 1

Project Number: 60651001

Date: 02/24/21

Calibration Form

Parameter	Instrument Manf/Model	Instrument Serial No.	Standard Manf/Model	Standard SN/Exp. Date	Standard Value @ __C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
pH 4.00	YSI PO DSS	19K101414	US ENV 0GH202	09/22	4.00 @ 25C	16.0	4.09	4.00	AS 0903	
pH 7.00			US ENV 0GF113	09/22	7.00 @ 25C	16.0	7.29	7.04	AS 0858	
pH 10.00			US ENV 0GH392	09/22	10.00 @ 25C	15.9	10.16	10.11	AS 0907	
Specific Cond.			US ENV 0GL433	12/21	~~1,000~~ 986.0 uS/cm @ 25C	15.8	985	986.0	AS 0854	
ORP			US ENV 0GH1055	5/21	242.7 mV @ ____C	16.1	257.1	242.7	AS 0911	
DO			H2O Saturated Air		100% H20 Sat. Air	15.0	103.1	100.0	AS 0846	
Turbidity	LaMotte 2020we	1191-3011			0 NTU	NA	0.04	0.00	AS 0913	
						NA				
					10 NTU	NA	10.01	10.00	AS 0945	
						NA				

BP = Barometric Pressure (mmHg)

Project Name: UTAS - SER plants 1/2 Facility

Project Number: 60657001

Date: 2-24-21

Calibration Form

Parameter	Instrument Manf/Model	Instrument Serial No.	Standard Manf/Model	Standard SN/Exp. Date	Standard Value @ __C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
pH 4.00	YSI Pro DSS	18D100743	US Environ	06A202 Aug 22	4.00 @ 25C	19.1	4.02	4.00	0903AH	
pH 7.00				06F113 Sep 22	7.00 @ 25C	19.2	7.13	7.03	AH0858	
pH 10.00				06H392 Aug 22	10.00 @ 25C	19.0	10.11	10.07	AH0901	
Specific Cond.				Dec 21 06L433	1007 ~~1,000~~ uS/cm @ 25C	19.2	993	1007	AH0553	
ORP				06H1055 May 21	238 mV @ 20 C	19.3	251.8	231.4	AH0914	
DO			H2O Saturated Air		100% H20 Sat. Air	19.3	98.0	96.9	AH0848	
Turbidity	LaMotte 2020	9046 1117			0 NTU	NA	0.01	0.00	AH0848	
						NA				
					10 NTU	NA	9.97	10.01	AH0846	
						NA				

BP = Barometric Pressure (mmHg)

Project Name: UTAS-SER Plants1/2 Facility

Project Number: 60651001

Date: 2-25-21

Calibration Form

Parameter	Instrument Manf/Model	Instrument Serial No.	Standard Manf/Model	Standard SN/Exp. Date	Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
pH 4.00	YSI Pro DSS	19K101414	US Env 0GH202	9-22	4.00 @ 25C	13.4	3.97	4.00	AH 0912	
								--------		
pH 7.00			US Env 0GF113	9-22	7.05 ~~7.00~~ @ 25C	13.2	7.06	7.05	AH 0908	
								--------		
pH 10.00			US Env 0GH392	9-22	10.14 ~~10.00~~ @ 25C	13.5	9.92	10.14	AH 0905	

Specific Cond.			US Env 0GL433	12-21	1114 uS/cm @ 25C	13.1	1117	1114	AH 0900	

ORP			US Env 0GH1055	5-21	243 mV @ 15.6C	15.6	243.4	243.0	AH 0919	

DO			H2O Saturated Air	—	100% H20 Sat. Air	15.1	98.5	98.8	AH 0854	

Turbidity	LaMotte 2020	1191-3011	—	—	0 NTU	NA	0.07	0.00	AH 0921	
						NA		--------		
					10 NTU	NA	9.98	10.00	AH 0923	
						NA		--------		

BP = Barometric Pressure (mmHg)

Project Name: UTAS-SER Plants1/2 Facility

Project Number: 60651001

Date: 2-25-21

Calibration Form

Parameter	Instrument Manf/Model	Instrument Serial No.	Standard Manf/Model	Standard SN/Exp. Date	Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
pH 4.00	YSI DSS Pro	18PL00743	US Enviro	0G1202 Aug 22	4.00 @ 25C	18.4	3.99	4.00	AH 0913	
								---		
pH 7.00				0GE113 Sep 22	7.03 ~~7.00~~ @ 25C	18.5	7.02	7.03	AH 0907	
								---		
pH 10.00				0G1392 Aug 22	10.08 ~~10.00~~ @ 25C	18.5	10.05	10.08	AH 0916	

Specific Cond.				0G4433 Dec 21	1027 uS/cm @ 25C	18.5	1030	1027	AH 0901	

ORP			↓	0G1055 May 21	236.1 mV @ 16.1 C	16.1	236.1	236.1	AH 0923	

DO			H2O Saturated Air	—	100% H20 Sat. Air	18.8	98.5	98.8	AH 0855	

Turbidity	Turbidity	9046 117	—	—	0 NTU	NA	0.01	0.00	AH 0855	
						NA		---		
					10 NTU	NA	9.96	10.00	AH 0855	
						NA		---		

BP = Barometric Pressure (mmHg)