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Automated Report

Technical Report for

Providence Engineering

Valero-CAMS, Baton Rouge, LA

712-001

SGS Job Number: JD12456

Sampling Date: 08/24/20



Report to:

Providence Engineering
1201 Main Street
Baton Rouge, LA 70802
paulhollis@providenceeng.com; brandonkilpatrick@providenceeng.com
ATTN: Paul Hollis

Total number of pages in report: 35



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: Shalini Williams 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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Test results relate only to samples analyzed.

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Sample Summary

Providence Engineering

Job No: JD12456

Valero-CAMS, Baton Rouge, LA

Project No: 712-001

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:

Organics ND = Not detected above the MDL

JD12456-1	08/24/20	13:20 PH	08/31/20	AIR	Ambient Air Comp.	CAMS 550
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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: CAMS 550		
Lab Sample ID: JD12456-1		Date Sampled: 08/24/20
Matrix: AIR - Ambient Air Comp. Summa ID: A838		Date Received: 08/31/20
Method: TO-15		Percent Solids: n/a
Project: Valero-CAMS, Baton Rouge, LA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W19181.D	1	09/10/20 19:38	DFT	n/a	n/a	V6W807
Run #2							

Run #1	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	3.9	0.20	0.11	ppbv		9.3	0.48	0.26	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	0.10	ug/m3
71-43-2	78.11	Benzene	0.13	0.20	0.012	ppbv	J	0.42	0.64	0.038	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	0.18	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	0.38	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	0.085	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	0.096	ug/m3
100-44-7	126	Benzyl Chloride ^a	ND	0.20	0.057	ppbv		ND	1.0	0.29	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	0.075	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	0.12	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	0.13	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	0.098	ug/m3
74-87-3	50.49	Chloromethane	0.77	0.20	0.015	ppbv		1.6	0.41	0.031	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	0.13	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	0.13	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	0.15	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	0.076	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	0.049	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	0.067	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	0.14	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	0.085	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	0.088	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	0.19	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.51	0.20	0.017	ppbv		2.5	0.99	0.084	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	0.28	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	0.029	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	0.048	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	0.091	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	0.11	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	0.13	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	0.11	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	0.091	ug/m3

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

Report of Analysis

Client Sample ID:	CAMS 550	Date Sampled:	08/24/20
Lab Sample ID:	JD12456-1	Date Received:	08/31/20
Matrix:	AIR - Ambient Air Comp. Summa ID: A838	Percent Solids:	n/a
Method:	TO-15		
Project:	Valero-CAMS, Baton Rouge, LA		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	2.8	0.50	0.22	ppbv		5.3	0.94	0.41	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	0.065	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.20	0.038	ppbv		ND	0.72	0.14	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	0.15	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	0.13	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	0.13	ug/m3
142-82-5	100.2	Heptane	0.14	0.20	0.018	ppbv	J	0.57	0.82	0.074	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	0.49	ug/m3
110-54-3	86.17	Hexane	0.51	0.20	0.011	ppbv		1.8	0.70	0.039	ug/m3
591-78-6	100	2-Hexanone ^a	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.65	0.20	0.065	ppbv		1.6	0.49	0.16	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	0.052	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.34	0.20	0.042	ppbv		1.0	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone ^a	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	0.069	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	0.14	ug/m3
115-07-1	42	Propylene	ND	0.50	0.016	ppbv		ND	0.86	0.027	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.019	ppbv		ND	0.85	0.081	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	0.18	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	0.19	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	0.16	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene ^a	ND	0.20	0.089	ppbv		ND	1.5	0.66	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	0.16	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	0.17	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.25	0.20	0.022	ppbv		1.2	0.93	0.10	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	0.042	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.040	0.031	ppbv		ND	0.27	0.21	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	0.15	ug/m3
108-88-3	92.14	Toluene	0.33	0.20	0.014	ppbv		1.2	0.75	0.053	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.22	0.20	0.028	ppbv		1.2	1.1	0.16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	0.056	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	0.12	ug/m3
	106.2	m,p-Xylene	0.26	0.20	0.034	ppbv		1.1	0.87	0.15	ug/m3
95-47-6	106.2	o-Xylene	0.10	0.20	0.017	ppbv	J	0.43	0.87	0.074	ug/m3
1330-20-7	106.2	Xylenes (total)	0.37	0.20	0.017	ppbv		1.6	0.87	0.074	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		65-128%

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

Report of Analysis

Client Sample ID:	CAMS 550	Date Sampled:	08/24/20
Lab Sample ID:	JD12456-1	Date Received:	08/31/20
Matrix:	AIR - Ambient Air Comp. Summa ID: A838	Percent Solids:	n/a
Method:	TO-15		
Project:	Valero-CAMS, Baton Rouge, LA		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
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(a) Associated CCV outside of control limits high, sample was ND.

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
- Summa Canister and Flow Controller Log

SGS North America Inc. - Dayton
 2235 Route 130, Dayton, NJ 08810
 TEL 732-329-0200 FAX 732-329-3499
 www.sgs.com/ehsusa

FED Ex Tracking # 7715 4426 7305
 Bottle Order Control # VP-08720-105
 SGS Quote #
 SGS Job # JD12456

Client / Reporting Information		Project Information				Weather Parameters					Requested Analysis								
Company Name: PROVIDENCE		Project Name:				Temperature (Fahrenheit)					Requested Analysis								
Address: 1201 MAIN ST.		Street:				Start: Maximum:													
City: B.R. LA 70902		City: State:				Stop: Minimum:													
Project Contact: PAUL HOLLIS@PROVIDENCEONG.COM		Project #:				Atmospheric Pressure (inches of Hg)													
Phone # 225-766-7400 Fax # 225-766-7440		Client Purchase Order #:				Start: Maximum:													
Sampler(s) Name(s): PAUL HOLLIS						Stop: Minimum:					Other weather comment:								
Lab Sample #	Field ID / Point of Collection	Air Type			Sampling Equipment Info			Start Sampling Information					Stop Sampling Information						
		Indoor (I) Soil Vap (SV) Ambient (A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure (*Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure (*Hg)	Interior Temp (F)	Sampler Init.				
1	CAMS 550	A	A838	6L	537	8/23/20	1320	30.0	75	PAH	8/24/20	1320	5.25	75	PAH	X			
Initial Assessment: 480x Label Verification:																			
Turnaround Time (Business days)						Data Deliverable Information						Comments / Remarks							
<input checked="" type="checkbox"/> Standard - 15 Days <input type="checkbox"/> 10 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day <input type="checkbox"/> Other						Approved By: _____ Date: _____						All NJDEP TO-15 is mandatory Full T1 Comm A Comm B Reduced T2 Full T1 Other: DKQP reporting				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 Laboratory		Date/Time		Received By		Relinquished By		Date/Time		Received By		Relinquished by		Date/Time		Received By			
1 A. Shah		8/23/20 14:40		Paul Hollis		2 Paul Hollis		8/24/20 16:30		Fed Ex		3 Fed Ex		8/31/2020 11:00		4			
Relinquished by:		Date/Time:		Received By:		Relinquished By:		Date/Time:		Received By:		Relinquished by:		Date/Time:		Received By:			
3				3		4				4		5				Custody Seal #			

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TO-15

Sumra

SGS Sample Receipt Summary

Job Number: JD12456

Client: PROVIDENCE ENG

Project: PROVIDENCE - CAMS

Date / Time Received: 8/31/2020 11:10:00 AM

Delivery Method: Fed Ex

Airbill #'s: 7713 4926 7305

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

Cooler Security

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

- | | | |
|------------------------------|--------------------------|--------------------------|
| 1. Temp criteria achieved: | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | N/A | |
| 3. Cooler media: | N/A | |
| 4. No. Coolers: | N/A | |

Quality Control Preservation

- | | | | |
|---------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Test Strip Lot #s:	pH 1-12: 229517	pH 12+: 208717	Other: (Specify) _____
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Comments

SM089-03
Rev. Date 12/7/17

JD12456: Chain of Custody

Page 2 of 2

Summa Canister and Flow Controller Log

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA
Received: 08/31/20

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3

SUMMA CANISTERS													
Shipping							Receiving						
Summa ID	Vac L	Date " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A838	6	29.4	08/07/20	DFT	CP108266W18569.D		JD12456-1	09/01/20	JT	5.5			1

SGS Bottle Order(s):
 VP-08720-105

Prep Date **Room Temp(F)** **Bar Pres "Hg**
 08/07/20 70 29.92

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)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W807-MB	6W19176.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.11	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.012	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.057	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.015	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.017	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.22	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.038	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W807-MB	6W19176.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.018	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.011	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.065	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.042	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.016	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.019	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.089	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.022	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.031	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.014	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.028	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.034	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.017	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.017	ppbv		ND	0.87	ug/m3

4.1.1
4

Method Blank Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W807-MB	6W19176.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	88% 65-128%

4.1.1
4

Method Blank Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-MB	6W18555.D	1	07/28/20	TCH	n/a	n/a	V6W781

The QC reported here applies to the following samples:

Method: TO-15

V6W781-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.11	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.012	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.057	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.015	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.017	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.22	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.038	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-MB	6W18555.D	1	07/28/20	TCH	n/a	n/a	V6W781

The QC reported here applies to the following samples:

Method: TO-15

V6W781-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.018	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.011	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.065	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.042	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.016	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.019	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.089	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.022	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.031	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.014	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.028	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.034	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.017	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.017	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-MB	6W18555.D	1	07/28/20	TCH	n/a	n/a	V6W781

The QC reported here applies to the following samples:

Method: TO-15

V6W781-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	91% 65-128%

4.1.2
4

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W807-BS	6W19173.D	1	09/10/20	DFT	n/a	n/a	V6W807
V6W807-BSD	6W19174.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	11.4	114	11.1	111	3	70-130/30
106-99-0	1,3-Butadiene	10	9.9	99	9.8	98	1	70-130/30
71-43-2	Benzene	10	9.8	98	9.6	96	2	70-130/30
75-27-4	Bromodichloromethane	10	11.7	117	11.4	114	3	70-130/30
75-25-2	Bromoform	10	11.4	114	11.1	111	3	70-130/30
74-83-9	Bromomethane	10	9.9	99	9.8	98	1	70-130/30
593-60-2	Bromoethene	10	9.3	93	9.5	95	2	70-130/30
100-44-7	Benzyl Chloride	10	15.2	152* a	14.8	148* a	3	70-130/30
75-15-0	Carbon disulfide	10	10.5	105	10.3	103	2	70-130/30
108-90-7	Chlorobenzene	10	9.6	96	9.4	94	2	70-130/30
75-00-3	Chloroethane	10	10.5	105	10.3	103	2	70-130/30
67-66-3	Chloroform	10	10.4	104	10.3	103	1	70-130/30
74-87-3	Chloromethane	10	10.1	101	9.9	99	2	70-130/30
107-05-1	3-Chloropropene	10	11.2	112	11.0	110	2	70-130/30
95-49-8	2-Chlorotoluene	10	10.7	107	10.4	104	3	70-130/30
56-23-5	Carbon tetrachloride	10	11.0	110	10.8	108	2	70-130/30
110-82-7	Cyclohexane	10	10.6	106	10.5	105	1	70-130/30
75-34-3	1,1-Dichloroethane	10	11.0	110	10.8	108	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.3	113	11.1	111	2	70-130/30
106-93-4	1,2-Dibromoethane	10	11.7	117	11.5	115	2	70-130/30
107-06-2	1,2-Dichloroethane	10	12.1	121	11.8	118	3	70-130/30
78-87-5	1,2-Dichloropropane	10	11.1	111	10.9	109	2	70-130/30
123-91-1	1,4-Dioxane	10	11.7	117	11.4	114	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.2	102	9.9	99	3	70-130/30
124-48-1	Dibromochloromethane	10	12.5	125	12.2	122	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	11.6	116	11.4	114	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	11.5	115	11.2	112	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	11.9	119	11.7	117	2	70-130/30
541-73-1	m-Dichlorobenzene	10	12.0	120	11.7	117	3	70-130/30
95-50-1	o-Dichlorobenzene	10	11.8	118	11.4	114	3	70-130/30
106-46-7	p-Dichlorobenzene	10	11.9	119	11.6	116	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	12.8	128	12.5	125	2	70-130/30
64-17-5	Ethanol	10	11.1	111	10.7	107	4	70-130/30
100-41-4	Ethylbenzene	10	9.7	97	9.5	95	2	70-130/30
141-78-6	Ethyl Acetate	10	12.7	127	12.5	125	2	70-130/30
622-96-8	4-Ethyltoluene	10	11.3	113	10.9	109	4	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W807-BS	6W19173.D	1	09/10/20	DFT	n/a	n/a	V6W807
V6W807-BSD	6W19174.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.8	98	9.5	95	3	70-130/30
76-14-2	Freon 114	10	9.8	98	9.6	96	2	70-130/30
142-82-5	Heptane	10	10.7	107	10.5	105	2	70-130/30
87-68-3	Hexachlorobutadiene	10	10.1	101	9.8	98	3	70-130/30
110-54-3	Hexane	10	10.8	108	10.6	106	2	70-130/30
591-78-6	2-Hexanone	10	14.1	141* a	13.7	137* a	3	70-130/30
67-63-0	Isopropyl Alcohol	10	12.2	122	11.9	119	2	70-130/30
75-09-2	Methylene chloride	10	9.4	94	9.2	92	2	70-130/30
78-93-3	Methyl ethyl ketone	10	11.8	118	11.6	116	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	13.3	133* a	13.1	131* a	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.1	101	9.9	99	2	70-130/30
80-62-6	Methylmethacrylate	10	12.0	120	11.8	118	2	70-130/30
115-07-1	Propylene	10	12.3	123	12.0	120	2	70-130/30
100-42-5	Styrene	10	10.3	103	10.1	101	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.2	102	10	100	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	11.8	118	11.4	114	3	70-130/30
79-00-5	1,1,2-Trichloroethane	10	11.0	110	10.7	107	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	14.2	142* a	13.6	136* a	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.5	115	11.2	112	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.6	106	10.3	103	3	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	11.1	111	10.8	108	3	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	11.8	118	11.6	116	2	70-130/30
127-18-4	Tetrachloroethylene	10	9.5	95	9.5	95	0	70-130/30
109-99-9	Tetrahydrofuran	10	11.9	119	11.6	116	3	70-130/30
108-88-3	Toluene	10	9.7	97	9.6	96	1	70-130/30
79-01-6	Trichloroethylene	10	10.4	104	10.2	102	2	70-130/30
75-69-4	Trichlorofluoromethane	10	10.1	101	9.9	99	2	70-130/30
75-01-4	Vinyl chloride	10	10.3	103	10.1	101	2	70-130/30
108-05-4	Vinyl Acetate	10	12.0	120	11.7	117	3	70-130/30
	m,p-Xylene	20	19.5	98	19.0	95	3	70-130/30
95-47-6	o-Xylene	10	10.2	102	9.9	99	3	70-130/30
1330-20-7	Xylenes (total)	30	29.7	99	28.9	96	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W807-BS	6W19173.D	1	09/10/20	DFT	n/a	n/a	V6W807
V6W807-BSD	6W19174.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	99%	65-128%

(a) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-BS	6W18552.D	1	07/28/20	TCH	n/a	n/a	V6W781
V6W781-BSD	6W18553.D	1	07/28/20	TCH	n/a	n/a	V6W781

The QC reported here applies to the following samples:

Method: TO-15

V6W781-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	9.7	97	9.9	99	2	70-130/30
106-99-0	1,3-Butadiene	10	10.9	109	11.1	111	2	70-130/30
71-43-2	Benzene	10	9.6	96	9.9	99	3	70-130/30
75-27-4	Bromodichloromethane	10	10.9	109	11.1	111	2	70-130/30
75-25-2	Bromoform	10	11.1	111	11.4	114	3	70-130/30
74-83-9	Bromomethane	10	10.5	105	10.6	106	1	70-130/30
593-60-2	Bromoethene	10	10.4	104	10.6	106	2	70-130/30
100-44-7	Benzyl Chloride	10	10.2	102	10.5	105	3	70-130/30
75-15-0	Carbon disulfide	10	10.7	107	10.9	109	2	70-130/30
108-90-7	Chlorobenzene	10	9.7	97	10	100	3	70-130/30
75-00-3	Chloroethane	10	10.5	105	10.8	108	3	70-130/30
67-66-3	Chloroform	10	9.9	99	10.1	101	2	70-130/30
74-87-3	Chloromethane	10	10.9	109	11.0	110	1	70-130/30
107-05-1	3-Chloropropene	10	10.6	106	10.7	107	1	70-130/30
95-49-8	2-Chlorotoluene	10	10.1	101	10.5	105	4	70-130/30
56-23-5	Carbon tetrachloride	10	10.3	103	10.5	105	2	70-130/30
110-82-7	Cyclohexane	10	9.9	99	10.2	102	3	70-130/30
75-34-3	1,1-Dichloroethane	10	10.2	102	10.4	104	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.4	104	10.6	106	2	70-130/30
106-93-4	1,2-Dibromoethane	10	10.9	109	11.1	111	2	70-130/30
107-06-2	1,2-Dichloroethane	10	9.7	97	9.9	99	2	70-130/30
78-87-5	1,2-Dichloropropane	10	11.2	112	11.5	115	3	70-130/30
123-91-1	1,4-Dioxane	10	10.1	101	10.2	102	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.5	95	9.6	96	1	70-130/30
124-48-1	Dibromochloromethane	10	11.2	112	11.5	115	3	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.7	107	11.0	110	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.9	109	11.2	112	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	11.1	111	11.4	114	3	70-130/30
541-73-1	m-Dichlorobenzene	10	9.8	98	10.0	100	2	70-130/30
95-50-1	o-Dichlorobenzene	10	9.7	97	10	100	3	70-130/30
106-46-7	p-Dichlorobenzene	10	9.1	91	9.5	95	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.6	106	10.9	109	3	70-130/30
64-17-5	Ethanol	10	9.2	92	9.4	94	2	70-130/30
100-41-4	Ethylbenzene	10	9.4	94	9.7	97	3	70-130/30
141-78-6	Ethyl Acetate	10	11.5	115	11.9	119	3	70-130/30
622-96-8	4-Ethyltoluene	10	10.2	102	10.5	105	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-BS	6W18552.D	1	07/28/20	TCH	n/a	n/a	V6W781
V6W781-BSD	6W18553.D	1	07/28/20	TCH	n/a	n/a	V6W781

The QC reported here applies to the following samples:

Method: TO-15

V6W781-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.1	101	10.3	103	2	70-130/30
76-14-2	Freon 114	10	9.9	99	10	100	1	70-130/30
142-82-5	Heptane	10	10.7	107	11.0	110	3	70-130/30
87-68-3	Hexachlorobutadiene	10	9.0	90	9.3	93	3	70-130/30
110-54-3	Hexane	10	10.2	102	10.5	105	3	70-130/30
591-78-6	2-Hexanone	10	10.3	103	10.6	106	3	70-130/30
67-63-0	Isopropyl Alcohol	10	9.5	95	9.6	96	1	70-130/30
75-09-2	Methylene chloride	10	10.2	102	10.4	104	2	70-130/30
78-93-3	Methyl ethyl ketone	10	9.9	99	10.2	102	3	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.8	108	11.1	111	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.4	94	9.6	96	2	70-130/30
80-62-6	Methylmethacrylate	10	10.6	106	10.9	109	3	70-130/30
115-07-1	Propylene	10	9.9	99	10.0	100	1	70-130/30
100-42-5	Styrene	10	9.9	99	10.2	102	3	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.8	98	10	100	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.7	107	11.0	110	3	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.7	107	10.9	109	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	7.6	76	7.8	78	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.2	102	10.5	105	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10	100	10.3	103	3	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.3	103	10.5	105	2	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.3	103	10.5	105	2	70-130/30
127-18-4	Tetrachloroethylene	10	11.6	116	11.8	118	2	70-130/30
109-99-9	Tetrahydrofuran	10	10.0	100	10.3	103	3	70-130/30
108-88-3	Toluene	10	10.2	102	10.5	105	3	70-130/30
79-01-6	Trichloroethylene	10	11.3	113	11.5	115	2	70-130/30
75-69-4	Trichlorofluoromethane	10	9.6	96	9.8	98	2	70-130/30
75-01-4	Vinyl chloride	10	11.2	112	11.4	114	2	70-130/30
108-05-4	Vinyl Acetate	10	10.3	103	10.6	106	3	70-130/30
	m,p-Xylene	20	17.5	88	18.1	91	3	70-130/30
95-47-6	o-Xylene	10	9.5	95	9.8	98	3	70-130/30
1330-20-7	Xylenes (total)	30	27.0	90	27.9	93	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD12456

Account: PROVLABR Providence Engineering

Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-BS	6W18552.D	1	07/28/20	TCH	n/a	n/a	V6W781
V6W781-BSD	6W18553.D	1	07/28/20	TCH	n/a	n/a	V6W781

The QC reported here applies to the following samples:

Method: TO-15

V6W781-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	107%	106%	65-128%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD12808-2DUP	6W19179.D	1	09/10/20	DFT	n/a	n/a	V6W807
JD12808-2	6W19178.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Compound	JD12808-2 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone	6.5		6.2		5	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	ND		ND		nc	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	8.9		7.9		12	25
107-05-1	3-Chloropropene	ND		ND		nc	25
95-49-8	2-Chlorotoluene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.63	J	0.57	J	10	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
64-17-5	Ethanol	19.4		16.9		14	25
100-41-4	Ethylbenzene	2.9		2.6		11	25
141-78-6	Ethyl Acetate	3.8		3.5		8	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD12808-2DUP	6W19179.D	1	09/10/20	DFT	n/a	n/a	V6W807
JD12808-2	6W19178.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Compound	JD12808-2 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-13-1	Freon 113	ND		ND		nc	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	ND		ND		nc	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	ND		ND		nc	25
591-78-6	2-Hexanone	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	15.2		13.8		10	25
75-09-2	Methylene chloride	4.0		3.6		11	25
78-93-3	Methyl ethyl ketone	ND		ND		nc	25
108-10-1	Methyl Isobutyl Ketone	ND		ND		nc	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
115-07-1	Propylene	332	E	294	E	12	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	ND		ND		nc	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	Tertiary Butyl Alcohol	ND		ND		nc	25
127-18-4	Tetrachloroethylene	ND		ND		nc	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25
108-88-3	Toluene	ND		ND		nc	25
79-01-6	Trichloroethylene	ND		ND		nc	25
75-69-4	Trichlorofluoromethane	ND		ND		nc	25
75-01-4	Vinyl chloride	5.0		4.5		11	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	8.6		7.8		10	25
95-47-6	o-Xylene	2.3		2.1		9	25
1330-20-7	Xylenes (total)	10.9		10		9	25

* = Outside of Control Limits.

4.3.1
4

Duplicate Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD12808-2DUP	6W19179.D	1	09/10/20	DFT	n/a	n/a	V6W807
JD12808-2	6W19178.D	1	09/10/20	DFT	n/a	n/a	V6W807

The QC reported here applies to the following samples:

Method: TO-15

JD12456-1

CAS No.	Surrogate Recoveries	DUP	JD12808-2	Limits
460-00-4	4-Bromofluorobenzene	92%	95%	65-128%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-SCC	6W18569.D	1	07/29/20	TCH	n/a	n/a	V6W781

The QC reported here (Summa A869) applies to the following samples: Method: TO-15

Batch CP10826 cleaned 07/13/20: JD12456-1(A838)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.11	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.012	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.057	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.015	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.017	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.22	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.038	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	ug/m3

4.4.1
4

Summa Cleaning Certification

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-SCC	6W18569.D	1	07/29/20	TCH	n/a	n/a	V6W781

The QC reported here (Summa A869) applies to the following samples: Method: TO-15

Batch CP10826 cleaned 07/13/20: JD12456-1(A838)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.018	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.011	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.065	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.042	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.016	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.019	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.089	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.022	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.031	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.014	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.028	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.034	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.017	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.017	ppbv		ND	0.87	ug/m3

4.4.1
4

Summa Cleaning Certification

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W781-SCC	6W18569.D	1	07/29/20	TCH	n/a	n/a	V6W781

The QC reported here (Summa A869) applies to the following samples: Method: TO-15

Batch CP10826 cleaned 07/13/20: JD12456-1(A838)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	92% 65-128%

4.4.1
4

Instrument Performance Check (BFB)

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V6W751-BFB	Injection Date: 06/12/20
Lab File ID: 6W17865.D	Injection Time: 16:00
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	13588	18.6	Pass
75	30.0 - 66.0% of mass 95	34341	47.1	Pass
95	Base peak, 100% relative abundance	72968	100.0	Pass
96	5.0 - 9.0% of mass 95	4755	6.52	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	55227	75.7	Pass
175	4.0 - 9.0% of mass 174	4154	5.69 (7.52) ^a	Pass
176	93.0 - 101.0% of mass 174	53291	73.0 (96.5) ^a	Pass
177	5.0 - 9.0% of mass 176	3563	4.88 (6.69) ^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
V6W751-IC751	6W17866.D	06/12/20	16:48	00:48	Initial cal 0.1
V6W751-IC751	6W17867.D	06/12/20	17:37	01:37	Initial cal 0.2
V6W751-IC751	6W17868.D	06/12/20	18:32	02:32	Initial cal 0.5
V6W751-IC751	6W17869.D	06/12/20	19:20	03:20	Initial cal 0.04
V6W751-IC751	6W17870.D	06/12/20	20:07	04:07	Initial cal 5
V6W751-ICC751	6W17871.D	06/12/20	20:55	04:55	Initial cal 10
V6W751-IC751	6W17872.D	06/12/20	21:44	05:44	Initial cal 20
V6W751-IC751	6W17873.D	06/12/20	22:37	06:37	Initial cal 40
V6W751-ICV751	6W17875.D	06/13/20	00:13	08:13	Initial cal verification 10

4.5.1
4

Instrument Performance Check (BFB)

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V6W781-BFB	Injection Date: 07/28/20
Lab File ID: 6W18550.D	Injection Time: 09:08
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	10669	18.6	Pass
75	30.0 - 66.0% of mass 95	26725	46.6	Pass
95	Base peak, 100% relative abundance	57323	100.0	Pass
96	5.0 - 9.0% of mass 95	3812	6.65	Pass
173	Less than 2.0% of mass 174	169	0.29 (0.37) ^a	Pass
174	50.0 - 120.0% of mass 95	46261	80.7	Pass
175	4.0 - 9.0% of mass 174	3397	5.93 (7.34) ^a	Pass
176	93.0 - 101.0% of mass 174	45053	78.6 (97.4) ^a	Pass
177	5.0 - 9.0% of mass 176	2906	5.07 (6.45) ^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
V6W781-CC751	6W18551.D	07/28/20	09:56	00:48	Continuing cal 10
V6W781-BS	6W18552.D	07/28/20	10:45	01:37	Blank Spike
V6W781-BSD	6W18553.D	07/28/20	11:33	02:25	Blank Spike Duplicate
V6W781-MB	6W18555.D	07/28/20	13:19	04:11	Method Blank
ZZZZZZ	6W18556.D	07/28/20	15:09	06:01	(unrelated sample)
ZZZZZZ	6W18557.D	07/28/20	15:57	06:49	(unrelated sample)
ZZZZZZ	6W18558.D	07/28/20	16:45	07:37	(unrelated sample)
ZZZZZZ	6W18559.D	07/28/20	17:32	08:24	(unrelated sample)
JD10334-8	6W18560.D	07/28/20	18:20	09:12	(used for QC only; not part of job JD12456)
JD10334-8DUP	6W18561.D	07/28/20	19:07	09:59	Duplicate
ZZZZZZ	6W18562.D	07/28/20	19:56	10:48	(unrelated sample)
ZZZZZZ	6W18563.D	07/28/20	20:44	11:36	(unrelated sample)
ZZZZZZ	6W18564.D	07/28/20	21:33	12:25	(unrelated sample)
ZZZZZZ	6W18565.D	07/28/20	22:21	13:13	(unrelated sample)
ZZZZZZ	6W18566.D	07/28/20	23:10	14:02	(unrelated sample)
ZZZZZZ	6W18567.D	07/29/20	00:04	14:56	(unrelated sample)
V6W781-SCC	6W18569.D	07/29/20	01:47	16:39	Summa Cleaning Certification
ZZZZZZ	6W18570.D	07/29/20	02:36	17:28	(unrelated sample)
ZZZZZZ	6W18571.D	07/29/20	03:24	18:16	(unrelated sample)
ZZZZZZ	6W18572.D	07/29/20	04:13	19:05	(unrelated sample)
ZZZZZZ	6W18573.D	07/29/20	04:59	19:51	(unrelated sample)
ZZZZZZ	6W18574.D	07/29/20	05:46	20:38	(unrelated sample)
ZZZZZZ	6W18575.D	07/29/20	06:33	21:25	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V6W796-BFB	Injection Date: 08/24/20
Lab File ID: 6W18920.D	Injection Time: 16:43
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	21413	19.7	Pass
75	30.0 - 66.0% of mass 95	50848	46.8	Pass
95	Base peak, 100% relative abundance	108589	100.0	Pass
96	5.0 - 9.0% of mass 95	7314	6.74	Pass
173	Less than 2.0% of mass 174	798	0.73 (0.94) ^a	Pass
174	50.0 - 120.0% of mass 95	85093	78.4	Pass
175	4.0 - 9.0% of mass 174	6407	5.90 (7.53) ^a	Pass
176	93.0 - 101.0% of mass 174	82251	75.7 (96.7) ^a	Pass
177	5.0 - 9.0% of mass 176	5612	5.17 (6.82) ^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
V6W796-IC796	6W18921.D	08/24/20	17:30	00:47	Initial cal 0.04
V6W796-IC796	6W18922.D	08/24/20	18:17	01:34	Initial cal 0.1
V6W796-IC796	6W18923.D	08/24/20	19:04	02:21	Initial cal 0.2
V6W796-IC796	6W18924.D	08/24/20	19:54	03:11	Initial cal 0.5
V6W796-IC796	6W18925.D	08/24/20	20:40	03:57	Initial cal 5
V6W796-ICC796	6W18926.D	08/24/20	21:28	04:45	Initial cal 10
V6W796-IC796	6W18927.D	08/24/20	22:18	05:35	Initial cal 20
V6W796-IC796	6W18928.D	08/24/20	23:11	06:28	Initial cal 40
V6W796-ICV796	6W18932.D	08/25/20	11:00	18:17	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V6W807-BFB	Injection Date: 09/10/20
Lab File ID: 6W19171.D	Injection Time: 11:03
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	23155	25.0	Pass
75	30.0 - 66.0% of mass 95	48384	52.2	Pass
95	Base peak, 100% relative abundance	92616	100.0	Pass
96	5.0 - 9.0% of mass 95	6260	6.76	Pass
173	Less than 2.0% of mass 174	703	0.76 (1.06) ^a	Pass
174	50.0 - 120.0% of mass 95	66563	71.9	Pass
175	4.0 - 9.0% of mass 174	4978	5.37 (7.48) ^a	Pass
176	93.0 - 101.0% of mass 174	64376	69.5 (96.7) ^a	Pass
177	5.0 - 9.0% of mass 176	4254	4.59 (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
V6W807-CC796	6W19172.D	09/10/20	11:51	00:48	Continuing cal 10
V6W807-BS	6W19173.D	09/10/20	12:39	01:36	Blank Spike
V6W807-BSD	6W19174.D	09/10/20	13:26	02:23	Blank Spike Duplicate
V6W807-MB	6W19176.D	09/10/20	15:06	04:03	Method Blank
ZZZZZZ	6W19177.D	09/10/20	16:07	05:04	(unrelated sample)
JD12808-2	6W19178.D	09/10/20	17:06	06:03	(used for QC only; not part of job JD12456)
JD12808-2DUP	6W19179.D	09/10/20	17:55	06:52	Duplicate
ZZZZZZ	6W19180.D	09/10/20	18:42	07:39	(unrelated sample)
JD12456-1	6W19181.D	09/10/20	19:38	08:35	CAMS 550
ZZZZZZ	6W19182.D	09/10/20	20:26	09:23	(unrelated sample)
ZZZZZZ	6W19183.D	09/10/20	21:15	10:12	(unrelated sample)
ZZZZZZ	6W19184.D	09/10/20	22:03	11:00	(unrelated sample)
ZZZZZZ	6W19185.D	09/10/20	22:51	11:48	(unrelated sample)
ZZZZZZ	6W19186.D	09/10/20	23:39	12:36	(unrelated sample)
V6W807-SCC	6W19188.D	09/11/20	01:22	14:19	Summa Cleaning Certification
V6W807-SCC	6W19189.D	09/11/20	02:15	15:12	Summa Cleaning Certification
V6W807-SCC	6W19191.D	09/11/20	04:02	16:59	Summa Cleaning Certification
V6W807-SCC	6W19192.D	09/11/20	04:56	17:53	Summa Cleaning Certification
V6W807-SCC	6W19193.D	09/11/20	05:49	18:46	Summa Cleaning Certification
V6W807-SCC	6W19194.D	09/11/20	06:43	19:40	Summa Cleaning Certification
V6W807-ECC796	6W19196.D	09/11/20	10:19	23:16	Ending cal 10

Surrogate Recovery Summary

Job Number: JD12456
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Method: TO-15	Matrix: AIR
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD12456-1	6W19181.D	96
JD12808-2DUP	6W19179.D	92
V6W781-SCC	6W18569.D	92
V6W807-BS	6W19173.D	99
V6W807-BSD	6W19174.D	99
V6W807-MB	6W19176.D	88
V6W781-BS	6W18552.D	107
V6W781-BSD	6W18553.D	106
V6W781-MB	6W18555.D	91

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

4.6.1
4