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## Technical Report for

### Providence Engineering

Valero-CAMS, Baton Rouge, LA

712-001

SGS Job Number: JC78992

Sampling Date: 11/27/18

#### Report to:

Providence Engineering

kevincalhoun@providenceeng.com

ATTN: Kevin Calhoun

Total number of pages in report: 10



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.

A handwritten signature in black ink, appearing to read "Brian McGuire".

**Brian McGuire**  
General Manager

**Client Service contact: Victoria Pushkova 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: JC78992**

**Valero-CAMS, Baton Rouge, LA**  
**Project No: 712-001**

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC78992-1	11/27/18	11:30 KH	12/03/18	AIR	Ambient Air Comp.	CAMS 444

**Sample Results**

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**Report of Analysis**

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## Report of Analysis

Client Sample ID:	CAMS 444	Date Sampled:	11/27/18
Lab Sample ID:	JC78992-1	Date Received:	12/03/18
Matrix:	AIR - Ambient Air Comp. Summa ID: M232	Percent Solids:	n/a
Method:	TO-15		
Project:	Valero-CAMS, Baton Rouge, LA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W67758.D	1	12/10/18 23:14	TCH	n/a	n/a	V3W2626
Run #2							

Run #	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	2.2	0.20	0.11	ppbv		5.2	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	0.11	0.20	0.012	ppbv	J	0.35	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	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	0.53	0.20	0.015	ppbv		1.1	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	0.58	0.20	0.017	ppbv		2.9	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

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

### Report of Analysis

<b>Client Sample ID:</b> CAMS 444		<b>Date Sampled:</b> 11/27/18
<b>Lab Sample ID:</b> JC78992-1		<b>Date Received:</b> 12/03/18
<b>Matrix:</b> AIR - Ambient Air Comp. Summa ID: M232		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 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	1.9	0.50	0.22	ppbv		3.6	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	ND	0.20	0.018	ppbv		ND	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	ND	0.20	0.011	ppbv		ND	0.70	0.039	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.49	0.20	0.065	ppbv		1.2	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	0.35	0.20	0.042	ppbv		1.0	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	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	ND	0.20	0.089	ppbv		ND	1.5	0.66	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.12	0.20	0.033	ppbv	J	0.59	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	ND	0.20	0.022	ppbv		ND	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	0.11	0.20	0.014	ppbv	J	0.41	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	0.30	0.20	0.028	ppbv		1.7	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	0.22	0.20	0.034	ppbv		0.96	0.87	0.15	ug/m3
95-47-6	106.2	o-Xylene	0.14	0.20	0.017	ppbv	J	0.61	0.87	0.074	ug/m3
1330-20-7	106.2	Xylenes (total)	0.36	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	79%		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

## Misc. Forms

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### Custody Documents and Other Forms

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**Includes the following where applicable:**

- Chain of Custody
- Summa Canister and Flow Controller Log

AIR

SGS North America Inc. - Dayton  
2235 Route 130, Dayton, NJ 08810  
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www.sgs.com/nahusa

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # <b>JC78992</b>

Client / Reporting Information			Project Information			Weather Parameters					Requested Analysis	
<b>Company Name</b> Providence Engineering <b>Address</b> 1201 Main Street City State Zip Baton Rouge LA 70802 <b>Project Contact</b> Paul Hollis/Karen Hudson paulhollis@providenceeng.com Phone # <b>225-766-7400</b> Fax # <b>225-766-7440</b>			<b>Project Name:</b> Valero Refining <b>Street</b>  <b>City State</b> Meroux LA <b>Project #</b> 712-001 <b>Client Purchase Order #</b>			<b>Temperature (Fahrenheit)</b> Start: Maximum: Stop: Minimum: <b>Atmospheric Pressure (Inches of Hg)</b> Start: Maximum: Stop: Minimum:					Requested Analysis TO-15	
<b>Sample(s) Name(s)</b> Karen Hudson			<b>Other weather comment:</b>									

Lab Sample #	Field ID / Point of Collection	Air Type	Sampling Equipment Info			Start Sampling Information					Stop Sampling Information					TO-15
			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)	
(	<b>CAMS 444</b>	<b>A</b>	M232	6L	537	11/28/18	11:30	30	75	KH	11/27/18	11:30	4	75	KH	<b>X</b>

Turnaround Time (Business days) <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: _____	<b>Data Deliverable Information</b> All NJDEP TO-15 is mandatory Full T1 Comm A _____ Comm B _____ Reduced T2 _____ Full T1 _____ Other: _____ DKQP reporting _____	Comments / Remarks Fedex Ship/COC seal Initial Assessment <u>4/8 TH</u> Label Verification _____ 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: 1	Date/Time:	Received By: <i>[Signature]</i>	Relinquished By: <i>[Signature]</i>	Date/Time:	Received By: Fed Ex
Relinquished by: Fed Ex	Date/Time: 12/3/18 1300	Received By: <i>[Signature]</i>	Relinquished By: <i>[Signature]</i>	Date/Time:	Received By: 4
Relinquished by: 5	Date/Time:	Received By: <i>[Signature]</i>	Custody Seal # <i>[Signature]</i>	Date/Time:	Received By: 4

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## SGS Sample Receipt Summary

Job Number: JC78992

Client: PROVIDENCE ENG

Project: PROVIDENCE - CAMS

Date / Time Received: 12/3/2018 12:00:00 PM

Delivery Method: \_\_\_\_\_

Airbill #'s: \_\_\_\_\_

**Cooler Temps (Raw Measured) °C:**

**Cooler Temps (Corrected) °C:**

**Cooler Security**

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

**Cooler Temperature**

- |  |     |
|--|-----|
| 1. Temp criteria achieved: <input type="checkbox"/> <u>Y</u> <input type="checkbox"/> <u>N</u> |     |
| 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"/> <u>Y</u>            | <input checked="" type="checkbox"/> <u>N</u> | <input type="checkbox"/> <u>N/A</u>            |
| 2. Trip Blank listed on COC:    | <input type="checkbox"/> <u>Y</u>            | <input checked="" type="checkbox"/> <u>N</u> | <input type="checkbox"/> <u>N/A</u>            |
| 3. Samples preserved properly:  | <input checked="" type="checkbox"/> <u>Y</u> | <input type="checkbox"/> <u>N</u>            | <input type="checkbox"/> <u>N/A</u>            |
| 4. VOCs headspace free:         | <input type="checkbox"/> <u>Y</u>            | <input type="checkbox"/> <u>N</u>            | <input checked="" type="checkbox"/> <u>N/A</u> |

**Sample Integrity - Documentation**

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

**Sample Integrity - Condition**

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

**Sample Integrity - Instructions**

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

Test Strip Lot #s:      pH 1-12: 216017      pH 12+: 208717      Other: (Specify) \_\_\_\_\_

Comments

SM089-03  
Rev. Date 12/7/17

**JC78992: Chain of Custody**

Page 2 of 2

# Summa Canister and Flow Controller Log

**Job Number:** JC78992  
**Account:** PROVLABR Providence Engineering  
**Project:** Valero-CAMS, Baton Rouge, LA  
**Received:** 12/03/18

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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
M232	6	29.4	10/23/18	JT	CP10015	3W67043.D	JC78992-1	12/06/18	GP	3.5			1

**SGS Bottle Order(s):**  
 VP-102218-49

**Prep Date**      **Room Temp(F)**      **Bar Pres "Hg**  
 10/23/18          70                                  29.92