



**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**  
21865 Copley Dr., Diamond Bar, CA 91765-4182

**MONITORING AND ANALYSIS**  
**REPORT OF LABORATORY ANALYSIS**

(Page 1 of 3)

**To:** Rafael Reynosa  
Sr. Enforcement Manager  
Compliance & Enforcement

**Laboratory No.** 1931030-02

**Requested By** Jessica Torres

**Rule No.** NA

**ST No.** NA

**Report Created** 11/13/2019

**Sampling Location**

Facility ID 800128  
So Cal Gas, Aliso Canyon  
12801 Tampa Ave  
Northridge, CA 91326

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**ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS, AND RESULTS**

**Volatile Organic Compounds (VOCs) in Ambient Air by GC/FID**

**See attached results and sample information.**

**Reviewed By:** Rafael Torres for S. Dutz

Stephen Dutz  
Principal A.Q. Chemist  
Laboratory Services

**Date Reviewed:** 11/13/19

**Approved By:** [Signature]

Aaron Katzenstein, Ph.D.  
Senior Manager  
Laboratory Services  
(909) 396-2219

**Date Approved:** 11/13/19



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**Laboratory No.** 1931030-02  
**Sample Description** Tedlar Bag Sample 1B  
**Sample Comments** GC/FID results should be considered estimates due to uncertainty associated with large dilution (150,000x).  
**Sample Date 11/06/2019**                      **Received Date 11/06/2019**                      **Analyzed Date 11/07/2019**

**Volatile Organic Compounds (VOCs) in Ambient Air by GC/FID**

<u>Analyte, Unit</u>	<u>Result</u>	<u>MDL</u>	<u>MRL</u>	<u>Ambient Avg</u>
Total NMOC, ppbC	99000000	15000	45000	100-700
Total Calibrated, ppbC	99000000	15000	45000	
Ethane, ppbv	43000000 (EH)	7500	22000	
Ethylene, ppbv	ND	7500	22000	0.7-4.1
Acetylene, ppbv	ND	7500	22000	
Propane, ppbv	2800000 (EH)	5000	15000	0.4-5.0
Propylene, ppbv	ND	5000	15000	0.2-0.7
Isobutane, ppbv	290000	3800	11000	0.2-0.9
n-Butane, ppbv	330000	3800	11000	0.3-1.7
1-Butene, ppbv	ND	3800	11000	0.1-0.3
trans-2-Butene, ppbv	ND	3800	11000	
cis-2-Butene, ppbv	ND	3800	11000	
Isopentane, ppbv	98000	3000	9000	
1-Pentene, ppbv	ND	3000	9000	
n-Pentane, ppbv	62000	3000	9000	0.1-0.6
Isoprene, ppbv	ND	3000	9000	
trans-2-Pentene, ppbv	ND	3000	9000	
cis-2-Pentene, ppbv	ND	3000	9000	
2,2-Dimethylbutane, ppbv	4500	2500	7500	
Cyclopentane, ppbv	5500	3000	9000	
2,3-Dimethylbutane, ppbv	5200	2500	7500	
2-Methylpentane, ppbv	15000	2500	7500	
3-Methylpentane, ppbv	9500	2500	7500	
1-Hexene, ppbv	ND	2500	7500	<0.1-0.1
n-Hexane, ppbv	16000	2500	7500	0.1-0.2
Methylcyclopentane, ppbv	12000	2500	7500	
2,4-Dimethylpentane, ppbv	ND	2100	6400	
Benzene, ppbv	7700	2500	7500	0.1-0.5
Cyclohexane, ppbv	13000	2500	7500	
2-Methylhexane, ppbv	3600	2100	6400	



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**Laboratory No.** 1931030-02 - continued  
**Sample Description** Tedlar Bag Sample 1B  
**Sample Comments** GC/FID results should be considered estimates due to uncertainty associated with large dilution (150,000x).  
**Sample Date 11/06/2019**                      **Received Date 11/06/2019**                      **Analyzed Date 11/07/2019**

**Volatile Organic Compounds (VOCs) in Ambient Air by GC/FID**

<u>Analyte, Unit</u>	<u>Result</u>	<u>MDL</u>	<u>MRL</u>	<u>Ambient Avg</u>
2,3-Dimethylpentane, ppbv	2800	2100	6400	
3-Methylhexane, ppbv	3500	2100	6400	
2,2,4-Trimethylpentane, ppbv	2600	1900	5600	
n-Heptane, ppbv	5400	2100	6400	0.1-0.2
Methylcyclohexane, ppbv	12000	2100	6400	
2,3,4-Trimethylpentane, ppbv	ND	1900	5600	
Toluene, ppbv	6100	2100	6400	0.1-0.6
2-Methylheptane, ppbv	ND	1900	5600	
3-Methylheptane, ppbv	ND	1900	5600	
n-Octane, ppbv	2300	1900	5600	<0.1-0.3
Ethylbenzene, ppbv	ND	1900	5600	0.1-0.2
m+p-Xylene, ppbv	2300	1900	5600	0.1-0.2
Styrene, ppbv	ND	1900	5600	<0.1-0.2
o-Xylene, ppbv	ND	1900	5600	0.1-0.2
n-Nonane, ppbv	ND	1700	5000	<0.1-0.1
Isopropylbenzene, ppbv	ND	1700	5000	
n-Propylbenzene, ppbv	ND	1700	5000	
m-Ethyltoluene, ppbv	ND	1700	5000	
p-Ethyltoluene, ppbv	ND	1700	5000	
1,3,5-Trimethylbenzene, ppbv	ND	1700	5000	
o-Ethyltoluene, ppbv	ND	1700	5000	
1,2,4-Trimethylbenzene, ppbv	ND	1700	5000	
n-Decane, ppbv	ND	1500	4500	<0.1-0.1
1,2,3-Trimethylbenzene, ppbv	ND	1700	5000	
m-Diethylbenzene, ppbv	ND	1500	4500	
p-Diethylbenzene, ppbv	ND	1500	4500	
n-Undecane, ppbv	ND	1400	4100	<0.1
n-Dodecane, ppbv	ND	1200	3800	<0.1

\* J = Value is between method detection and reporting limits.

EH = Estimated; Exceeds Upper Range

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
SAMPLE ANALYSIS REQUEST**

DISTRICT INFORMATION  
 INVOICE SOURCE  
 LABORATORY NO. 1931030

TO: SCAQMD LAB:  OTHER:  \_\_\_\_\_  
 SOURCE NAME: So Cal Gas, Aliso Canyon I.D. No. 500128  
 Source Address: 12801 Tampa Ave City: Northridge  
 Mailing Address: 12801 Tampa Ave City: Northridge Zip: 91320  
 Contact Person: Uliana Micovic Title: Environmental Specialist Tel: (818) 960-8627

Analysis Requested by: Jessica Torres Date: 11/6/19  
 Approved by: [Signature] Office: C&E Budget #: 60-375  
 REASON REQUESTED: Court/Hearing Board  Permit Pending  Hazardous/Toxic Spill   
 Suspected Violation Rule(s) Other

Sample Collected by: Joseph Liaw Date: 11/6/19 Time: 925 hours

Specify the description and location where the sample was collected:

Well FF38<sup>ABC</sup> well header (34.3098, -118.5445)  
 Sample 1A - 926 hours, 11/6/19 - 0.7L Tedlar Bag  
 Sample ~~1A~~ 1B - 929 hours, 11/6/19 - 0.7L Tedlar Bag

Analysis Requested: TO-15<sub>I6</sub> Fixed gases (Helium, C2-C12 analysis)

Relinquished by	Received by	Firm/Agency	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	SCAQMD	11/6/19	930hrs
<u>[Signature]</u>	<u>Iliana Garcia</u>	SCAQMD Lab	11/06/19	1420

Remarks:

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TO Rafael Reynosa  
Sr. Enforcement Manager  
Compliance & Enforcement

LABORATORY NO. 1931030-02

FACILITY ID 800128

SAMPLE(S) DESCRIBED AS  
Sample 1B - 0.7 L Tedlar Bag

DATE RECEIVED 11/6/19

PROJECT/ ST NO/ RULE 402

SAMPLING LOCATION  
Well FF38 Header  
So Cal Gas, Aliso Canyon  
Porter Ranch, CA 91326

REQUESTED BY Jessica Torres

DATE ANALYZED 11/7/19

ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS

Total Reduced Sulfur (TRS) by SCAQMD Method 307-91

	Result (ppb)
Hydrogen sulfide	< 5
Carbonyl sulfide	17
Methyl mercaptan*	7
Dimethyl sulfide	17
Carbon disulfide*	26
iso-Propyl mercaptan*	7
ter-Butyl mercaptan*	158
THT/Thiophene*	240
<b>Total Reduced Sulfur*</b>	<b>472</b>
(*As Dimethyl sulfide)	

Note: THT & Thiophene co-elute and cannot be distinguished.

Sample diluted 5x.

Sample hold time exceeded 24 hours prior to analysis.

Carbonyl sulfide and carbon disulfide may be overstated by ~20% due to artifacts in clean tedlar bags eluting at the same retention times. Results provided for information only.

Date Reviewed: 11/12/19

Reviewed By: 

Brad Parrack, Principal A.Q. Chemist  
Laboratory Services

Date Approved: 11/13/2019

Approved By: 

Aaron Katzenstein, Ph.D., Senior Manager  
Laboratory Services  
(909) 396-2219

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**SAMPLE(S) DESCRIBED AS**  
Sample 1B - 0.7 L Tedlar Bag

**LABORATORY NO.** 1931030-02

**REQUESTED BY** Jessica Torres

**Total Reduced Sulfur (TRS) by SCAQMD Method 307-91  
Quality Control Tests and Results Matrix**

	<b>Calibration Drift (ppb)</b>				<b>Lab Air Blank (ppb)</b>
	<b>Prepared</b>	<b>Measured</b>	<b>% Recovery</b>		<b>Measured</b>
Hydrogen sulfide	27.0	26.9	99.5	Hydrogen sulfide	< 1.0
Carbonyl sulfide	30.0	29.8	99.5	Carbonyl sulfide	< 1.0
Dimethyl sulfide	27.0	27.1	100.4	Dimethyl sulfide	< 1.0
				Unknown	< 1.0 *

	<b>Calibration Control (ppb)</b>				<b>N2 Bag Blank (ppb)</b>
	<b>Prepared</b>	<b>Measured</b>	<b>% Recovery</b>		<b>Measured</b>
Hydrogen sulfide	4.5	4.6	102.8	Hydrogen sulfide	< 1.0
Carbonyl sulfide	5.0	4.6	92.0	Carbonyl sulfide/SO <sub>2</sub>	< 1.0
Dimethyl sulfide	4.5	4.4	97.4	Dimethyl sulfide	< 1.0
				Unknown	< 1.0 *

\*Calibrated using Dimethyl sulfide

**BATCH NO.** B19K023

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# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT SAMPLE ANALYSIS REQUEST

DISTRICT INFORMATION  
 INVOICE SOURCE  
LABORATORY NO. 1931030

TO: SCAQMD LAB:  OTHER:   
SOURCE NAME: So Cal Gas, Aliso Canyon I.D. No. 500128  
Source Address: 12801 Tampa Ave City: Northridge  
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Contact Person: Uliana Micovic Title: Environmental Specialist Tel: (818) 910-8027

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Sample 1B - 929 hours, 11/6/19 - 0.7L Tedlar Bag - TRS

Analysis Requested: T0-15<sub>I6</sub> Fixed gases (Helium, C2-C12 analysis)

Relinquished by	Received by	Firm/Agency	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	SCAQMD	11/6/19	930hrs
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Remarks: