

#### Laboratory Analysis Report

CLIENT PROJECT NO **MATRIX** 

: SCEC : 160019

: AIR : PPB (v/v) DATE RECEIVED DATE REPORTED : 01/07/2016 : 01/10/2016

#### **VOLATILE ORGANIC COMPOUNDS BY EPA TO-15**

Client ID AAC ID Date Sampled Date Analyzed Can Dilution Factor	Result	Porter Ridge 160019-864 01/06/201 01/08/201 1.52 Oualifier	174 6	Sample Reporting Limit (SRL) (MRLxDF's)	St:	160019-864 01/06/201 01/08/201 1.53 Qualifier	175 6	Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
Methane*	2460		1.0	760	2560		1.0	765	500
Benzene**	0.26	J	1.0	0.15	0.32	J	1.0	0.15	0.1
Toluene	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	U	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
Ethylbenzene	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	U	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
m & p-Xylenes	<srl< td=""><td>U</td><td>1.0</td><td>1.52</td><td><srl< td=""><td>U</td><td>1.0</td><td>1.53</td><td>1.0</td></srl<></td></srl<>	U	1.0	1.52	<srl< td=""><td>U</td><td>1.0</td><td>1.53</td><td>1.0</td></srl<>	U	1.0	1.53	1.0
o-Xylene	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>Ü</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	U	1.0	0.76	<srl< td=""><td>Ü</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	Ü	1.0	0.76	0.5
BFB-Surrogate Std. % Recovery		103%				102%			70-130%

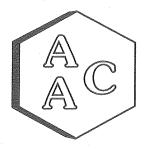
U - Compound was analyzed for, but was not detected at or above the SRL.

J - Analyte was detected. However the analyte concentration is an estimated value.

\*\* - Benzene is being reported down to MDL reporting limits.

\* - Results from EPA Method 18 modified analysis on 01/07/2016.





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#### **VOLATILE ORGANIC COMPOUNDS BY EPA TO-15**

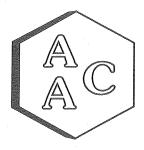
Client ID AAC ID Date Sampled Date Analyzed Can Dilution Factor	Castle	01/06/2010 01/08/2010 01/53	76 6	Sample Reporting Limit (SRL) (MRLxDF's)		Highlands 160019-864 01/06/201 01/08/201 1.51	77 6	Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
Can Dimensi	Result		Analysis DF	(MALIADI 3)	Result	Qualifier	Analysis DF	,	
Methane*	2290		1.0	763	2340		1.0	758	500
Benzene**	0.31	J	1.0	0.15	0.30	J	1.0	0.15	0.1
Toluene	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	U	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
Ethylbenzene	<srl< td=""><td>IJ</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	IJ	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
m & p-Xylenes	<srl< td=""><td>Ū</td><td>1.0</td><td>1.53</td><td><srl< td=""><td>U</td><td>1.0</td><td>1.51</td><td>1.0</td></srl<></td></srl<>	Ū	1.0	1.53	<srl< td=""><td>U</td><td>1.0</td><td>1.51</td><td>1.0</td></srl<>	U	1.0	1.51	1.0
o-Xylene	<srl< td=""><td>TI TI</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	TI TI	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
BFB-Surrogate Std. % Recovery	JAC	104%				105%			70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.

J - Analyte was detected. However the analyte concentration is an estimated value.

\*\* - Benzene is being reported down to MDL reporting limits.

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: AIR : PPB (v/v)

#### **VOLATILE ORGANIC COMPOUNDS BY EPA TO-15**

Client ID AAC ID Date Sampled Date Analyzed Can Dilution Factor	Porter R	anch Comm 160019-864 01/06/2016 01/08/2016 1.52	5	Sample Reporting Limit (SRL) (MRLxDF's)	Но	lleigh Bernso 160019-864 01/06/201 01/08/201 1.52	79 6	Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
CMA Distribute 2 south	Result	Oualifier	Analysis DF	(MIKEAKA S)	Result	Qualifier	Analysis DF		
Methane*	2620		1.0	762	2260		1.0	759	500
Benzene**	0.46	J	1.0	0.15	0.29	J	1.0	0.15	0,1
Toluene	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0,5</td></srl<></td></srl<>	U	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0,5</td></srl<>	U	1.0	0.76	0,5
Ethylbenzene Ethylbenzene	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	U	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
m & p-Xylenes	<srl< td=""><td>IJ</td><td>1.0</td><td>1.52</td><td><srl< td=""><td>U</td><td>1.0</td><td>1.52</td><td>1.0</td></srl<></td></srl<>	IJ	1.0	1.52	<srl< td=""><td>U</td><td>1.0</td><td>1.52</td><td>1.0</td></srl<>	U	1.0	1.52	1.0
o-Xylene	<srl< td=""><td>IJ</td><td>1.0</td><td>0.76</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	IJ	1.0	0.76	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
BFB-Surrogate Std. % Recovery		103%	<u> </u>			104%			70-130%

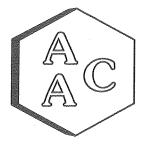
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UNITS

: SCEC : 160019

: AIR : PPB (v/v) DATE RECEIVED DATE REPORTED : 01/07/2016 : 01/10/2016

#### **VOLATILE ORGANIC COMPOUNDS BY EPA TO-15**

Client ID AAC ID Date Sampled Date Analyzed Can Dilution Factor	Po	rter Ranch 1 160019-864 01/06/201 01/08/201 1.40	80 6	Sample Reporting Limit (SRL) (MRLxDF's)		Highlands 160019-864 01/06/201 01/08/201 1.52	81 6	Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
	Result	Qualifier	Analysis DF	(1,1112,112,1,0)	Result	Qualifier	Analysis DF		
Methane*	2260		1.0	699	2290		1.0	760	500
Benzene**	0.35	J	1.0	0.14	0.33	J	1.0	0.15	0.1
Toluene	<srl< td=""><td>Ü</td><td>1.0</td><td>0.70</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	Ü	1.0	0.70	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
Ethylbenzene	<srl< td=""><td>U</td><td>1.0</td><td>0.70</td><td><srl< td=""><td>· U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	U	1.0	0.70	<srl< td=""><td>· U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	· U	1.0	0.76	0.5
m & p-Xylenes	<srl< td=""><td>Ū</td><td>1.0</td><td>1.40</td><td><srl< td=""><td>U</td><td>1.0</td><td>1.52</td><td>1.0</td></srl<></td></srl<>	Ū	1.0	1.40	<srl< td=""><td>U</td><td>1.0</td><td>1.52</td><td>1.0</td></srl<>	U	1.0	1.52	1.0
o-Xylene	<srl< td=""><td>Ū</td><td>1.0</td><td>0.70</td><td><srl< td=""><td>Ü</td><td>1,0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	Ū	1.0	0.70	<srl< td=""><td>Ü</td><td>1,0</td><td>0.76</td><td>0.5</td></srl<>	Ü	1,0	0.76	0.5
BFB-Surrogate Std. % Recovery		103%				104%			70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.

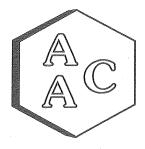
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Laboratory Director





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CLIENT PROJECT NO MATRIX

UNITS

: SCEC : 160019 : AIR

: PPB (v/v)

DATE RECEIVED DATE REPORTED : 01/07/2016 : 01/10/2016

#### **VOLATILE ORGANIC COMPOUNDS BY EPA TO-15**

Client ID AAC ID Date Sampled Date Analyzed Can Dilution Factor	Por	ter Ranch E 160019-864 01/06/201 01/08/201 1.51	82 6	Sample Reporting Limit (SRL) (MRLxDF's)		Highlands 160019-864 01/06/201 01/08/201 1.51	83 6 6	Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF	756	500
Methane*	2370		1.0	755	2330		1.0		_
Benzene**	0.32	J	1.0	0.15	0.35	<u>J</u>	1.0	0.15	0.1
Toluene	<srl< td=""><td>IJ</td><td>1.0</td><td>0.75</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	IJ	1.0	0.75	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
	<srl< td=""><td>II ·</td><td>10</td><td>0.75</td><td><srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<></td></srl<>	II ·	10	0.75	<srl< td=""><td>U</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	U	1.0	0.76	0.5
Ethylbenzene	<srl< td=""><td>11</td><td>10</td><td>1.51</td><td><srl< td=""><td>U</td><td>1.0</td><td>1.51</td><td>1.0</td></srl<></td></srl<>	11	10	1.51	<srl< td=""><td>U</td><td>1.0</td><td>1.51</td><td>1.0</td></srl<>	U	1.0	1.51	1.0
m & p-Xylenes		<del> </del>	1.0	0.75	<srl< td=""><td>TI</td><td>1.0</td><td>0.76</td><td>0.5</td></srl<>	TI	1.0	0.76	0.5
o-Xylene	<srl< td=""><td>L U</td><td>1.0</td><td><u> </u></td><td>-010F</td><td>105%</td><td><u> </u></td><td></td><td>70-130%</td></srl<>	L U	1.0	<u> </u>	-010F	105%	<u> </u>		70-130%
BFB-Surrogate Std. % Recovery		102%				10370			10-130/0-1

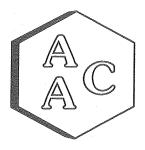
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#### LABORATORY ANALYSIS REPORT

CLIENT : SCEC PROJECT NO. : 160019 MATRIX : AIR

: ppbV

UNITS

SAMPLING DATE : 01/06/2016 RECEIVING DATE : 01/07/2016 ANALYSIS DATE : 01/07/2016 REPORT DATE : 01/08/2016

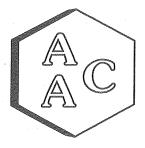
#### Total Reduced Sulfur Compounds Analysis by SCAQMD 307.91

Client ID	Porter Ridge Park	Starter Set Preschool	Castlebay Elementary School	Highlands 2	Porter Ranch Community School	Holleigh Bernson Park
AAC ID	160019-86474	160019-86475	160019-86476	160019-86477	160019-86478	160019-86479
Canister Dil. Fac.	1.52	1.53	1.53	1.51	1.52	1.52
Analyte	Result	Result	Result	Result	Result	Result
Hydrogen Sulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Carbonyl Sulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Sulfur Dioxide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Methyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Ethyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Dimethyl Sulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Carbon Disulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Isopropyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
tert-Butyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
n-Propyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Methylethylsulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
sec-Butyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Thiophene	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
iso-Butyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Diethyl Sulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
n-Butyl Mercaptan	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Dimethyl Disulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
2-Methylthiophene	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
3-Methylthiophene	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Tetrahydrothiophene	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Bromothiophene	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Thiophenol	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Diethyl disulfide	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Total Unidentified Sulfur	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40
Total Reduced Sulfurs as HS	< 2.40	< 2.41	< 2.41	< 2.39	< 2.40	< 2.40

All compound's concentrations expressed in terms of 1/8 (TRS does not include COS and SQ)

Sample Detection Limit (SDL) is equal to Detection Limit (1.58 ppbV) x Canister Dil. Fac. x Analysis Dil. Fac.





#### LABORATORY ANALYSIS REPORT

**CLIENT** 

: SCEC **PROJECT NO.: 160019** 

MATRIX UNITS

: AIR : ppbV

**SAMPLING DATE: 01/06/2016** 

RECEIVING DATE: 01/07/2016

**ANALYSIS DATE : 01/07/2016** 

**REPORT DATE** : 01/08/2016

#### Total Reduced Sulfur Compounds Analysis by SCAQMD 307.91

Client ID	Porter Ranch Estates	Highlands 1	Porter Ranch Estates 2	Highlands 3	
AAC ID	160019-86480	160019-86481	160019-86482	160019-86483	
Canister Dil. Fac.	1.40	1.52	1.51	1.51	
Analyte	Result	Result	Result -	Result	
Hydrogen Sulfide	< 2.21	< 2.40	< 2.38	< 2.39	
Carbonyl Sulfide	< 2.21	< 2.40	< 2.38	< 2.39	
Sulfur Dioxide	< 2.21	< 2.40	< 2.38	< 2.39	
Methyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
Ethyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
Dimethyl Sulfide	< 2.21	< 2.40	< 2.38	< 2.39	
Carbon Disulfide	. < 2.21	< 2.40	< 2.38	< 2.39	
Isopropyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
tert-Butyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
n-Propyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
Methylethylsulfide	< 2.21	< 2.40	< 2.38	< 2.39	
sec-Butyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
Thiophene	< 2.21	< 2.40	< 2.38	< 2.39	
iso-Butyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
Diethyl Sulfide	< 2.21	< 2.40	< 2.38	< 2.39	
n-Butyl Mercaptan	< 2.21	< 2.40	< 2.38	< 2.39	
Dimethyl Disulfide	< 2.21	< 2.40	< 2.38	< 2.39	
2-Methylthiophene	< 2.21	< 2.40	< 2.38	< 2.39	
3-Methylthiophene	< 2.21	< 2.40	< 2.38	< 2.39	
Tetrahydrothiophene	< 2.21	< 2.40	< 2.38	< 2.39	
Bromothiophene	< 2.21	< 2.40	< 2.38	< 2.39	
Thiophenol	< 2.21	< 2.40	< 2.38	< 2.39	
Diethyl disulfide	< 2.21	< 2.40	< 2.38	< 2.39	
Total Unidentified Sulfur	< 2.21	< 2.40	< 2.38	< 2.39	
Total Reduced Sulfurs as HS	< 2.21	< 2.40	< 2.38	< 2.39	

All compound's concentrations expressed in terms of \( \frac{1}{2} \) (TRS does not include COS and SQ)

Sample Detection Limit (SDL) is equal to Detection Limit (1.58 ppbV) x Canister Dil. Fac. x Analysis Dil. Fac.

# AAC# 160019

Client/Project Name: So Cal Gas Company		Client Project No.: 2045.1063	o.: 2045.1063		ANALYSES RE	REQUESTED	STED	Laboratory Name: Atmospheric Analysis and Consulting. Inc.	pheric Analysis
Project Location: Aliso Canyon				en ced	or	hod		Lab Contact: Marcus Hueppe	eppe
Contact: Rudy Nunez	Sampler (Signature)	A		SCAQM Hydroge I Reduc mpound	PAMS O-15	PA Meti thane		Lab Phone No.: 805-650-1642	-1642
Sample	The second secon	SAMPLE	PLE	91 (H e and	s by PA T	ed EF 3 Me		Turnaround Time 24 Hour	Aus.
Description				307.9 ulfide	/0C' E	odifie	•		
#	Date Sta	Start Time End Time	Time Type	S	\	М		Remarks	<b>71</b>
1 Porter Ridge Park	1-6-2016 18		0	×	×	×	86474	QA/QC DATA PACKAGE ON ALL	AGE ON ALL
2 Starter Set Preschool		-	Canister	×	×	×	25238	SAMPLES	Š
3 Castlebay Elementary School	5431	_	) <sub>o</sub> Canister	×	×	×	8828	Email data to: munez@montrose-env.com	nontrose-env.com
4 Highlands 2	hobi		Canister	×	×	×	272	Email data to: Ms. Ruth Custance	uth Custance
5 Porter Ranch Community School	1928		Canister	×	×	×	86478	Email Address: RCustance@Geosyntec.com	e@Geosyntec.com
6 Holleigh Bernson Park	8451			×	×	×	2042		
7 Porter Ranch Estates	2003		Canister	×	×	×	8228		
8 Highlands 1	2032		<b>c</b> Canister	×	×	×	2548		
9 Porter Ranch Estates 2	2051		< Canister €	×	×	×	86482		
10 Highlands 3	V 2112		Canister	×	×	×	80483		
			-	•		-			
Relinquished by (Signature):	Company: SCEC		Date 1-6-2016	Time 2135	-71	Received by	ed by (Signature):	Company: Date:	ie: Time:
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#### LABORATORY REPORT

January 8, 2016

Glenn La Fevers Southern California Gas Company 12801 Tampa Ave Northridge, CA 91326-1045

RE: So Cal Gas Company / 2045.1063

Dear Glenn:

Enclosed are the results of the samples submitted to our laboratory on January 6, 2016. For your reference, these analyses have been assigned our service request number P1600069.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at <a href="https://www.alsglobal.com">www.alsglobal.com</a>. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**ALS | Environmental** 

By Sup Anderson at 11:41 am Jan 08 2016

Sue Anderson Project Manager



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P1600069

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Client: Southern California Gas Company Service Request No:

Project: So Cal Gas Company / 2045.1063

#### **CASE NARRATIVE**

The samples were received intact under chain of custody on January 6, 2016 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

#### C1 through C6 Hydrocarbon and TGNMO Analysis

The samples were analyzed per modified EPA Method TO-3 for C1 through >C6 hydrocarbons and total gaseous non-methane organics as methane using a gas chromatograph equipped with a flame ionization detector (FID). This procedure is described in laboratory SOP VOA-TO3C1C6. This method is included on the laboratory's DoD-ELAP scope of accreditation, however it is not part of the NELAP or AIHA-LAP accreditation.

#### Sulfur Analysis

The samples were also analyzed for seven sulfur compounds and total reduced sulfur as hydrogen sulfide (TRS as  $H_2S$ ) per ASTM D 5504-12 using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD). All compounds with the exception of hydrogen sulfide and carbonyl sulfide are quantitated against the initial calibration curve for methyl mercaptan. The results for TRS as  $H_2S$  were determined by obtaining the total response for all chromatographic peaks and quantitating the value against the initial calibration curve for hydrogen sulfide thus generating a result specified as "Total Reduced Sulfur as Hydrogen Sulfide". This method is included on the laboratory's NELAP scope of accreditation, however it is not part of the DoD-ELAP or AlHA-LAP accreditation.

#### Volatile Organic Compound Analysis

The samples were also analyzed for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. According to the method, the use of Tedlar bags is considered a method modification. This



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Client: Southern California Gas Company Project: So Cal Gas Company / 2045.1063 Service Request No: P1600069

#### **CASE NARRATIVE**

method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation, however it is not part of the AIHA-LAP accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.



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#### ALS Environmental - Simi Valley

#### CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L15-398
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	977273
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413- 15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA01627201 5-5
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at <a href="https://www.alsglobal.com">www.alsglobal.com</a>, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

#### DETAIL SUMMARY REPORT

Client: Southern California Gas Company Service Request: P1600069

Project ID: So Cal Gas Company / 2045.1063

Date Received: 1/6/2016 Time Received: 21:35 TO-3 Modified - C1C6+ Bag ASTM D 5504-12 - Sulfur Bag TO-15 Modified - VOC Bags

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	TO-3 M ASTM E TO-15 N
SS-09	P1600069-001	Air	1/6/2016	16:52	X X X
SS-3H	P1600069-002	Air	1/6/2016	16:59	X - X - X
SF-2/5	P1600069-003	Air	1/6/2016	17:11	X - X - X
SF-1	P1600069-004	Air	1/6/2016	17:17	X - X - X
P-40	P1600069-005	Air	1/6/2016	17:26	X - X - X
MA1-A	P1600069-006	Air	1/6/2016	17:42	X - X - X
T-3 Low Road	P1600069-007	Air	1/6/2016	17:54	X - X - X

# SCEC 1631 E. Saint Andrew Place Santa Ana, CA 92705 (714) 282-8247 fax

			***						· · /	
Client/Project Name: So Cal Gas Company	any	Client Proj	Client Project No.: 2045.1063	15.1063		ANALY	ANALYSES REQUESTED	TED	Laboratory Name: ALS	S
Project Location: Aliso Canyon			0.1		is I CI-		ر ا		Lab Contact: Kelly Horiuchi	loriuchi
Contact: Rudy Nunez	Sampler (Signature)	ature)			nodifiec SUMO s hane	118 BTE	9204-1 12 Sulfu 12504-1		Lab Phone No.: 805-577-2088	577-2088
Sample		0	SAMPLE	•	DT & 8		Selecte Splecte		Turnaround Time 24 Hour	Hour
Description #	Date	Start Time	End Time	Туре	EPA C		3		R	Remarks:
1 SS-09	9102-9-1	1650	7591	Tedlar Bag	×	×	×		QA/QC DATA PACE	@A/QC DATA PACKAGE ON ALL SAMPLES
2 SS-3H	_	Г	1659	Tedlar Bag	×	×	×			
3 R-1		100	255 ABC	Tedlar Bag	×	×	×		Email data to: mur	Email data to: munez@montrose-env.com
4 SF-2/5			11/21	Tedlar Bag	×	×	×		Email data to:	Email data to: Ms. Ruth Custance
5 SF-1			212	Tedlar Bag	×	·	×		Email Address: RCu	Email Address: RCustance@Geosyntec.com
6 P-40			1726	Tedlar Bag	×	×	×	,		:
7 MA1-A			2461	Tedlar Bag	×	×	×			
8 T-3 Low Road		1 294	hses	Tedlar Bag	×	×	×			
9 T-3 High Road	>	7	351'8 CE	Tedlar Bag	×	×	×			
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Relinquished by (Signature)	Company:			Date	Time		Received by (Signature)	ature):	Company:	Date: Time:
Relinquished by (Signature):	Company:			Date	Time		Received by (Signature):	ature):	Company:	Date: Time:

# **ALS Environmental**

		Company / 2045.1063			-	Work order:	P1600069			
	(s) received on				Date opened:	1/6/16	by:	KKEL	PE	
_			m out	-	_					C
		all samples received by ALS							ndication	of
отриансе	e or nonconformity	y. Thermal preservation and	i pri wili only be e	valuated either at	the request of th	e chent and/or as requi	ired by the metho	Yes	<u>No</u>	N/A
1	Were sample	e containers properly	marked with cl	ient sample ID	?			×		
2	_	containers arrive in go		1				X		
3	Were chain-	of-custody papers used	d and filled out	t?				X		
4	Did sample o	container labels and/o	r tags agree wi	th custody pap	ers?			X		
5	Was sample	volume received adeq	uate for analys	is?				X		
6	Are samples	within specified holdir	ng times?					X		
7	Was proper t	temperature (thermal	preservation) o	of cooler at rec	eipt adhered	to?				X
8	Were custod	y seals on outside of c	ooler/Box/Con	tainer?					X	
		Location of seal(s)?					Sealing Lid?			X
	_	re and date included?								X
	Were seals in									$\overline{\times}$
9		ers have appropriate <b>p</b>		_		Client specified in	nformation?			X
		ent indication that the			eserved?					X
	·	vials checked for prese								X
		ent/method/SOP require	-		imple pH and	if necessary alter	it?			X
10	Tubes:	Are the tubes cap	_							X
11	Badges:	Are the badges p								$\boxtimes$
		Are dual bed bad	ges separated a	and individual	y capped and	intact?				X
Lab	Sample ID	Container	Required	Received	Adjusted	VOA Headspace	Receij	ot / Pres	ervatio	1
		Description	рН *	pН	pН	(Presence/Absence)		Comme	nts	
	9-001.01	5.0 L Tedlar Bag								
	9-002.01	5.0 L Tedlar Bag								
	9-003.01 9-004.01	5.0 L Tedlar Bag 5.0 L Tedlar Bag								
	9-005.01	5.0 L Tedlar Bag								
P160006	9-006.01	5.0 L Tedlar Bag								
P160006	9-007.01	5.0 L Tedlar Bag								
Б 1	1.		ID 1 \		<u> </u>	1				
Explai	n any discrepan	cies: (include lab sample	ID numbers):							

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SS-09

Client Project ID: So Cal Gas Company / 2045.1063

ALS Project ID: P1600069

ALS Sample ID: P1600069-001

Test Code: EPA TO-3 Modified Date Collected: 1/6/16
Instrument ID: HP5890 II/GC8/FID Date Received: 1/6/16
Analyst: Mike Conejo Date Analyzed: 1/7/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	4.8	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	3.8	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	23	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# RESULTS OF ANALYSIS Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SS-3H ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-002

Test Code: EPA TO-3 Modified Date Collected: 1/6/16
Instrument ID: HP5890 II/GC8/FID Date Received: 1/6/16
Analyst: Mike Conejo Date Analyzed: 1/7/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	2.9	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	1.9	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	12	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# RESULTS OF ANALYSIS Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SF-2/5 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-003

Test Code: EPA TO-3 Modified Date Collected: 1/6/16
Instrument ID: HP5890 II/GC8/FID Date Received: 1/6/16
Analyst: Mike Conejo Date Analyzed: 1/7/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	2.5	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	2.9	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	17	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SF-1 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-004

Test Code: EPA TO-3 Modified Date Collected: 1/6/16
Instrument ID: HP5890 II/GC8/FID Date Received: 1/6/16
Analyst: Mike Conejo Date Analyzed: 1/7/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	2.4	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	1.9	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	11	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# RESULTS OF ANALYSIS Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: P-40 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-005

Test Code: EPA TO-3 Modified Date Collected: 1/6/16
Instrument ID: HP5890 II/GC8/FID Date Received: 1/6/16
Analyst: Mike Conejo Date Analyzed: 1/7/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	2.5	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	2.1	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	13	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# RESULTS OF ANALYSIS Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: MA1-A ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-006

Test Code: EPA TO-3 Modified Date Collected: 1/6/16
Instrument ID: HP5890 II/GC8/FID Date Received: 1/6/16
Analyst: Mike Conejo Date Analyzed: 1/7/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	3.3	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	4.3	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	26	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# RESULTS OF ANALYSIS Page 1 of 1

**Southern California Gas Company** 

Client Sample ID: T-3 Low Road

Client Project ID: So Cal Gas Company / 2045.1063

ALS Project ID: P1600069

ALS Sample ID: P1600069-007

Test Code: EPA TO-3 Modified Date Collected: 1/6/16
Instrument ID: HP5890 II/GC8/FID Date Received: 1/6/16
Analyst: Mike Conejo Date Analyzed: 1/7/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Test Notes:

**Client:** 

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	4.3	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	2.2	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	13	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# RESULTS OF ANALYSIS Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: Method Blank

Client Project ID: P1600069

Client Project ID: So Cal Gas Company / 2045.1063

ALS Sample ID: P160107-MB

Test Code: EPA TO-3 Modified Date Collected: NA
Instrument ID: HP5890 II/GC8/FID Date Received: NA
Analyst: Mike Conejo Date Analyzed: 1/07/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.0 ml(s)

Compound	Result	MRL	Data
	ppmV	ppmV	Qualifier
Methane	ND	0.50	
C <sub>2</sub> as Ethane	ND	0.50	
C <sub>3</sub> as Propane	ND	0.50	
C <sub>4</sub> as n-Butane	ND	0.50	
C <sub>5</sub> as n-Pentane	ND	0.50	
C <sub>6</sub> as n-Hexane	ND	0.50	
C <sub>6</sub> + as n-Hexane	ND	0.50	
Total Gaseous Nonmethane Organics (TGNMO) as Methane	ND	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

#### LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: Lab Control Sample

Client Project ID: So Cal Gas Company / 2045.1063

ALS Project ID: P1600069

ALS Sample ID: P160107-LCS

Test Code: EPA TO-3 Modified Date Collected: NA
Instrument ID: HP5890 II/GC8/FID Date Received: NA
Analyst: Mike Conejo Date Analyzed: 1/07/16

Sampling Media: 5.0 L Tedlar Bag Volume(s) Analyzed: NA ml(s)

				ALS	
Compound	Spike Amount	Result	% Recovery	Acceptance	Data
	ppmV	ppmV		Limits	Qualifier
Methane	1,020	955	94	83-107	
Ethane	1,010	1,020	101	77-111	
Propane	1,010	1,010	100	78-110	
n-Butane	1,010	969	96	73-109	
n-Pentane	1,010	1,040	103	75-115	
n-Hexane	1,020	1,080	106	73-121	

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SS-09 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-001

Test Code: ASTM D 5504-12 Date Collected: 1/6/16
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: 16:52
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/7/16
Test Notes: Time Analyzed: 07:57

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SS-3H ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-002

Test Code: ASTM D 5504-12 Date Collected: 1/6/16
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: 16:59
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/7/16
Test Notes: Time Analyzed: 08:13

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SF-2/5 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-003

Test Code: ASTM D 5504-12 Date Collected: 1/6/16
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: 17:11
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/7/16
Test Notes: Time Analyzed: 08:30

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SF-1 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-004

Test Code: ASTM D 5504-12 Date Collected: 1/6/16
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: 17:17
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/7/16
Test Notes: Time Analyzed: 08:50

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result ppbV	MRL ppbV	Data Qualifier
7792.06.4	II. 1 C 10°1.			Quanner
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: P-40 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-005

Test Code: ASTM D 5504-12 Date Collected: 1/6/16
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: 17:26
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/7/16
Test Notes: Time Analyzed: 09:07

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: MA1-A ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-006

Test Code: ASTM D 5504-12 Date Collected: 1/6/16
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: 17:42
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/7/16
Test Notes: Time Analyzed: 09:22

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: T-3 Low Road ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-007

Test Code: ASTM D 5504-12 Date Collected: 1/6/16
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: 17:54
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/7/16
Test Notes: Time Analyzed: 09:45

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

# RESULTS OF ANALYSIS Page 1 of 1

Client: Southern California Gas Company
Client Project ID: So Cal Cas Company / 2045 1063

Client Project ID: So Cal Gas Company / 2045.1063 ALS Project ID: P1600069

#### Total Reduced Sulfur as Hydrogen Sulfide

Test Code: ASTM D 5504-12

Instrument ID: Agilent 7890A/GC22/SCD Date(s) Collected: 1/6/16
Analyst: Mike Conejo Date Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag(s) Date Analyzed: 1/7/16

		Injection				
Client Sample ID	ALS Sample ID	Volume	Time	Result	MRL	Data
		ml(s)	Analyzed	ppbV	ppbV	Qualifier
SS-09	P1600069-001	2.0	07:57	ND	5.0	
SS-3H	P1600069-002	2.0	08:13	ND	5.0	
SF-2/5	P1600069-003	2.0	08:30	ND	5.0	
SF-1	P1600069-004	2.0	08:50	ND	5.0	
P-40	P1600069-005	2.0	09:07	ND	5.0	
MA1-A	P1600069-006	2.0	09:22	ND	5.0	
T-3 Low Road	P1600069-007	2.0	09:45	ND	5.0	
Method Blank	P160107-MB	2.0	07:40	ND	5.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: Method Blank

Client Project ID: P1600069

Client Project ID: So Cal Gas Company / 2045.1063

ALS Sample ID: P160107-MB

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 7890A/GC22/SCD Time Collected: NA
Analyst: Mike Conejo Date Received: NA
Sample Type: 5.0 L Tedlar Bag Date Analyzed: 1/07/16
Test Notes: Time Analyzed: 07:40

Volume(s) Analyzed: 2.0 ml(s)

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
7783-06-4	Hydrogen Sulfide	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	5.0	
74-93-1	Methyl Mercaptan	ND	2.5	
75-08-1	Ethyl Mercaptan	ND	2.5	
75-15-0	Carbon Disulfide	ND	2.5	
75-66-1	tert-Butyl Mercaptan	ND	2.5	
110-01-0	Tetrahydrothiophene	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: Lab Control Sample
Client Project ID: So Cal Gas Company / 2045.1063
ALS Project ID: P1600069
ALS Sample ID: P160107-LCS

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 7890A/GC22/SCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 1/07/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: NA ml(s)

					ALS	
CAS#	Compound	Spike Amount	Result	% Recovery	Acceptance	Data
		ppbV	${f ppbV}$		Limits	Qualifier
7783-06-4	Hydrogen Sulfide	1,000	940	94	65-138	
463-58-1	Carbonyl Sulfide	1,000	851	85	60-135	
74-93-1	Methyl Mercaptan	1.000	868	87	57-140	

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SS-09 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-001

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

CAS#	Compound	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	1.3	0.31	
108-88-3	Toluene	1.5	1.3	
100-41-4	Ethylbenzene	ND	1.2	
179601-23-1	m,p-Xylenes	ND	1.2	
95-47-6	o-Xylene	ND	1.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SS-3H ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-002

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

CAS#	Compound	Result	MRL	Data
		${f ppbV}$	ppbV	Qualifier
71-43-2	Benzene	ND	0.31	_
108-88-3	Toluene	ND	1.3	
100-41-4	Ethylbenzene	ND	1.2	
179601-23-1	m,p-Xylenes	ND	1.2	
95-47-6	o-Xylene	ND	1.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SF-2/5 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-003

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
71-43-2	Benzene	ND	0.31	_
108-88-3	Toluene	ND	1.3	
100-41-4	Ethylbenzene	ND	1.2	
179601-23-1	m,p-Xylenes	ND	1.2	
95-47-6	o-Xylene	ND	1.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: SF-1 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-004

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
71-43-2	Benzene	ND	0.31	_
108-88-3	Toluene	ND	1.3	
100-41-4	Ethylbenzene	ND	1.2	
179601-23-1	m,p-Xylenes	ND	1.2	
95-47-6	o-Xylene	ND	1.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: P-40 ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-005

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

CAS#	Compound	Result	MRL	Data
		ppbV	ppbV	Qualifier
71-43-2	Benzene	ND	0.31	_
108-88-3	Toluene	ND	1.3	
100-41-4	Ethylbenzene	ND	1.2	
179601-23-1	m,p-Xylenes	ND	1.2	
95-47-6	o-Xylene	ND	1.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: MA1-A ALS Project ID: P1600069
Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-006

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

CAS#	Compound	Result	MRL	Data
		${f ppbV}$	ppbV	Qualifier
71-43-2	Benzene	ND	0.31	_
108-88-3	Toluene	ND	1.3	
100-41-4	Ethylbenzene	ND	1.2	
179601-23-1	m,p-Xylenes	ND	1.2	
95-47-6	o-Xylene	ND	1.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: T-3 Low Road

ALS Project ID: P1600069

Client Project ID: So Cal Gas Company / 2045.1063

ALS Sample ID: P1600069-007

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

CAS#	Compound	Result	MRL	Data
		${f ppbV}$	ppbV	Qualifier
71-43-2	Benzene	ND	0.31	_
108-88-3	Toluene	ND	1.3	
100-41-4	Ethylbenzene	ND	1.2	
179601-23-1	m,p-Xylenes	ND	1.2	
95-47-6	o-Xylene	ND	1.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### RESULTS OF ANALYSIS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: Method Blank

ALS Project ID: P1600069

Client Project ID: So Cal Gas Company / 2045.1063

ALS Sample ID: P160107-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

CAS#	Compound	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	0.031	
108-88-3	Toluene	ND	0.13	
100-41-4	Ethylbenzene	ND	0.12	
179601-23-1	m,p-Xylenes	ND	0.12	
95-47-6	o-Xylene	ND	0.12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

#### SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

Client: Southern California Gas Company

Client Project ID: So Cal Gas Company / 2045.1063 ALS Project ID: P1600069

Test Code: EPA TO-15 Modified

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 1/6/16
Analyst: Simon Cao Date(s) Received: 1/6/16
Sample Type: 5.0 L Tedlar Bag(s) Date(s) Analyzed: 1/7/16

Test Notes:

		1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene		
Client Sample ID	ALS Sample ID	Percent	Percent	Percent	Acceptance	Data
		Recovered	Recovered	Recovered	Limits	Qualifier
Method Blank	P160107-MB	84	104	105	70-130	
Lab Control Sample	P160107-LCS	85	102	108	70-130	
SS-09	P1600069-001	87	106	116	70-130	
SS-3H	P1600069-002	83	107	114	70-130	
SF-2/5	P1600069-003	87	107	116	70-130	
SF-1	P1600069-004	85	106	113	70-130	
P-40	P1600069-005	87	105	116	70-130	
MA1-A	P1600069-006	88	107	118	70-130	
T-3 Low Road	P1600069-007	87	106	118	70-130	
T-3 Low Road	P1600069-007DUF	82	107	117	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

#### LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: Lab Control Sample

ALS Project ID: P1600069

Client Project ID: So Cal Gas Company / 2045.1063

ALS Sample ID: P160107-LCS

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.125 Liter(s)

Test Notes:

					ALS			
CAS#	Compound	Spike Amount	Result	% Recovery	Acceptance	Data		
		ppbV	${f ppbV}$		Limits	Qualifier		
71-43-2	Benzene	70.8	58.8	83	61-110			
108-88-3	Toluene	57.9	50.1	87	67-117			
100-41-4	Ethylbenzene	50.2	44.7	89	69-123			
179601-23-1	m,p-Xylenes	98.6	87.4	89	67-125			
95-47-6	o-Xylene	48.4	42.3	87	67-124			

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result. Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

#### LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 1

Client: Southern California Gas Company

Client Sample ID: T-3 Low Road ALS Project ID: P1600069

Client Project ID: So Cal Gas Company / 2045.1063 ALS Sample ID: P1600069-007DUP

Test Code: EPA TO-15 Modified Date Collected: 1/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 1/6/16
Analyst: Simon Cao Date Analyzed: 1/7/16

Sample Type: 5.0 L Tedlar Bag Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

	Duplicate					
Compound	Sample Result Sample Result Av		Average	% RPD	RPD	Data
	ppbV	ppbV			Limit	Qualifier
Benzene	ND	ND	-	-	25	_
Toluene	ND	ND	-	-	25	
Ethylbenzene	ND	ND	-	-	25	
m,p-Xylenes	ND	ND	-	-	25	
o-Xylene	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.