

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

**MONITORING & ANALYSIS**  
**REPORT OF LABORATORY ANALYSIS**

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 REVISED

<p><b>TO</b> Jason Low, Atmospheric Monitoring Manager Monitoring &amp; Analysis</p> <p><b>SAMPLE(S) DESCRIBED AS</b></p> <p>Two 0.7 L Tedlar bags</p> <p><b>SAMPLING LOCATION</b></p> <p>Orphan Well Project 323 Firmin St Los Angeles, CA 90026</p>	<p><b>LABORATORY NO</b> 1616017</p> <p><b>DATE RECEIVED</b> 6/8/2016</p> <p><b>FACILITY ID</b> NA</p> <p><b>REQUESTED BY</b> Jason Low</p> <p><b>PROJECT/ST NO</b> Other</p> <p><b>DATE ANALYZED</b> 6/8/2016</p>
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**ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS**  
**Total Reduce Sulfur (TRS) by SCAQMD Method 307-91.**

	1616017-01 10146-7DA-215	1616017-02 9981-7DA-174
Hydrogen sulfide <sup>(1)</sup> ppm	36	22
Methyl mercaptan <sup>(2)</sup> ppm <sup>(3)</sup>	0.5	0.2
Unknown <sup>(2)</sup> ppm <sup>(3)</sup>	2.1	1.4
<b>Total Reduced Sulfur, ppm</b>	<b>39</b>	<b>24</b>

- (1) Analyzed on Jerome 631-X Hydrogen Sulfide Analyzer, H<sub>2</sub>S concentrations above GC SCD range.
- (2) Calibrated using methyl mercaptan.
- (3) Sample diluted 1:100 for analysis.

Date 6/29/2016

Approved by   
 Solomon Teffera, Acting Senior Manager  
 Laboratory Services  
 909-396-2199

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

MONITORING & ANALYSIS  
REPORT OF LABORATORY ANALYSIS

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TO Jason Low, Atmospheric Measurement Manager  
Monitoring & Analysis

LABORATORY NO. 1616017

FACILITY ID NA

SAMPLE(S) DESCRIBED AS  
Two 0.7 L Tedlar Bags

DATE RECEIVED 6/8/16

PROJECT/ ST NO/ RULE Other

SAMPLING LOCATION

Orphan Well Project  
323 Firmin St.  
Los Angeles CA, 90026

REQUESTED BY Jason Low

DATE ANALYZED 6/8/16

ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS

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

	1616017-01	1616017-02
	10146-7DA-215	9981-7DA-174
Hydrogen sulfide <sup>1</sup>	36 ppm	22 ppm
Methyl mercaptan <sup>2</sup>	0.5 ppm <sup>3</sup>	0.2 ppm <sup>3</sup>
Unknown <sup>2</sup>	2.1 ppm <sup>3</sup>	1.4 ppm <sup>3</sup>
Total Reduced Sulfur	39 ppm	24 ppm

<sup>1</sup>Analyzed on Jerome 631-X Hydrogen Sulfide Analyzer; H2S concentrations too high for SCD

<sup>2</sup>Calibrated using methyl mercaptan

<sup>3</sup>Sample diluted 1:100 into external tedlar bag

Date Approved: 6/10/16

Approved By: 

Solomon Teffera, Acting Senior Manager  
Laboratory Services  
(909) 396-2199

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

**MONITORING & ANALYSIS  
REPORT OF LABORATORY ANALYSIS**

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**SAMPLE(S) DESCRIBED AS**  
Two 0.7 L Tedlar Bags

**LABORATORY NO.** 1616017

**REQUESTED BY** Jason Low

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

<b>Control (ppb)</b>			<b>Lab Air Blank (ppb)</b>	
	<b>Prepared</b>	<b>Measured</b>	<b>% Recovery</b>	<b>Measured</b>
Methyl mercaptan	1.01	1.08	107.5	Hydrogen sulfide 8.3 <sup>1 2</sup>
Ethyl mercaptan	1.04	1.16	111.5	Carbonyl sulfide/SO2 2.8 <sup>1</sup>
Isopropyl mercaptan	1.04	1.21	116.9	Carbonyl sulfide 3.6 <sup>1</sup>
1-Propanethiol	1.03	1.03	100.0	Methyl mercaptan < 1 ppb
				Ethyl mercaptan < 1 ppb
				Isopropyl mercaptan < 1 ppb
<b>Calibration Drift (ppb)</b>			<b>N2 Bag Blank (ppb)</b>	
	<b>Prepared</b>	<b>Measured</b>	<b>% Recovery</b>	<b>Measured</b>
Methyl mercaptan	30.15	27.57	91.4	Methyl mercaptan < 10 ppb
Ethyl mercaptan	31.20	28.69	92.0	Ethyl mercaptan < 10 ppb
Isopropyl mercaptan	31.05	28.27	91.0	Unknown 2.3 <sup>1</sup>
1-Propanethiol	30.90	27.11	87.7	1-Propanethiol < 10 ppb
<b>SRM 2731 (ppm, analyzed on Jerome)</b>				
	<b>Prepared</b>	<b>Measured</b>	<b>% Recovery</b>	
Hydrogen sulfide	20.4	17	83.3	

<sup>1</sup>Calibrated using Methyl Mercaptan

<sup>2</sup> Samples contained high levels of H2S which contaminated the system and caused subsequent injections to contain H2S from the carry over

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

DISTRICT INFORMATION  
 INVO  
 LAP

WO #: 1616017



LABOR

TO: SCAQMD LAB:  OTHER:   
 SOURCE NAME: Orphan Well Project : DOGGR I.D. No. \_\_\_\_\_  
 Source Address: 323 Firmin St., City: Los Angeles  
 Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Contact Person: Jason Low Title: Atmos. Meas. Manager Tel: 909-396-2269

Analysis Requested by: Jason Low Date: 06-08-16  
 Approved by: Jason Low Office: M&A Budget #: \_\_\_\_\_  
 REASON REQUESTED: Court/Hearing Board  Permit Pending  Hazardous/Toxic Spill   
 Suspected Violation Rule(s) \_\_\_\_\_ Other

Sample Collected by: Jason Low Date: 06-08-16 Time: 9:50

**SAMPLE DESCRIPTION:**

10196-7DA-215 BAG #1 0.7L Tedlar Bag  
 9981-7DA-174 TRAG #2

**REQUESTED ANALYSIS:**

H<sub>2</sub>S + Speciated Sulfur (H<sub>2</sub>S by Jerome is ok if SCD not available)

Relinquished by	Received by	Firm/Agency	Date	Time
<i>[Signature]</i>	<i>[Signature]</i>	SCAQMD LAB	6/8/16	12:19

Remarks: