

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

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

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<b>TO:</b> Jason Low, Ph.D. Atmospheric Measurements Manager Science and Technology Advancement	<b>LABORATORY NO:</b> <u>1616019</u>
	<b>REFERENCE NO:</b> <u>MSF-145-77</u>
<b>SAMPLE DESCRIPTION:</b> Grab samples Canister # 54553 54612	<b>DATE SAMPLED:</b> <u>06/08/16</u>
	<b>DATE RECEIVED:</b> <u>06/08/16</u>
	<b>DATE ANALYZED:</b> <u>06/23/16</u>
<b>SAMPLE LOCATION:</b> Orphan Well Project 323 Firmin St. Los Angeles, CA	<b>ANALYZED BY:</b> <u>Brian Sinajon</u>
	<b>REQUESTED BY:</b> <u>Jason Low</u>

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Qualitative Analysis and Quantitation of Toxic Organics by Gas Chromatography (GC) with  
Mass Spectrometry (MS) and Flame Ionization Detection (FID)

Note: See attached for speciated results.

Date Approved: 7/5/16

Approved By:   
Solomon Teffera, Acting Sr. Manager  
Laboratory Services Branch  
(909) 396-2199

Lab Number: 1616019

Location: Orphan Well Project 323 Firmin St. Los Angeles, CA

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

Qualitative Analysis and Quantitation of Toxic Organics by Gas Chromatography (GC) with Mass Spectrometry (MS) and Flame Ionization Detection (FID)

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<b>Sample Date</b>	06/08/16	06/08/16
<b>Canister</b>	54553	54612
<b>Sampling Location</b>	Inside Rogalski	Inside Rogalski
<b>NMOC, ppbv</b>	750000*	628000*

<u>Compound</u>	<u>Conc. (ppbv)</u>	<u>Conc. (ppbv)</u>
acetylene+ethylene	306000*	238000*
propylene	10	9.5
propane	11100*	9770*
Freon-12	0.46	0.5
chloromethane	1.5	1.1
isobutane	3360*	2950*
1-butene	2.5	2.2
n-butane	379	333
isopentane	1060	925
Freon-11	0.2	0.2
n-pentane	19	17
isoprene	0.5	0.5
methylene chloride	0.2	0.3
carbon disulfide	26	27
2,2-dimethylbutane	3970*	3500*
cyclopentane	20	18
2,3-dimethylbutane	9380*	8290*
2-methylpentane	65	58
3-methylpentane	648	573
n-hexane	4.4	3.9
methylcyclopentane	8.0	8.6
2,4-dimethylpentane	1420*	1260*
benzene	0.3	0.4
carbon tetrachloride	<0.1	0.1
cyclohexane	100	89
3-methylhexane	30	29
n-heptane	2.7	2.7
2,3,4-trimethylpentane	395	354
2,3,4-trimethylpentane-F	N.D.	N.D.

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<u>Compound</u>	<u>Conc. (ppbv)</u>	<u>Conc. (ppbv)</u>
toluene	N.D.	N.D.
2-methylheptane	375	356
styrene	N.D.	N.D.
m+p-xylene	N.D.	N.D.
o-xylene	N.D.	N.D.

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**Additional Compounds**

Canister	54553	54612
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Sampling Location	Inside Rogalski	Inside Rogalski
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<u>Compound</u>	<u>Conc. (ppbv)</u>	<u>Conc. (ppbv)</u>
1-Propene, 2-methyl-	2070*	See pages 5 and 6
Butane, 2,3-dimethyl-	4410*	
Pentane, 2,2,3,4-tetramethyl-	385	
Butane, 2,2,3-trimethyl-	393	
Hexane, 3-methyl-	1180*	
Cyclopentane, 1,1-dimethyl-	1650*	
Cyclopentane, 1,3-dimethyl-, trans-	177	
Pentane, 3-ethyl-	525	
Cyclopentane, 1,2-dimethyl-	639	
Cyclopentane, 1,1,3-trimethyl-	1380*	
Butane, 2,2,3-trimethyl-	266	
Cyclopentane, 1,2,3-trimethyl-, (1.alpha.,2.alpha.,3.beta.)-	631	
Cyclopentane, 1,2,3-trimethyl-, (1.alpha.,2.alpha.,3.beta.)-	382	
Pentane, 2,3,3-trimethyl-	131	

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<b><u>Compound</u></b>	<b><u>Conc. (ppbv)</u></b>	<b><u>Conc. (ppbv)</u></b>
Cyclopentane, 1,1,3,3-tetramethyl-	92	See pages 5 and 6
Cyclopentane, 1-ethenyl-3-ethyl-2-methyl-	173	
Cyclohexane, 1,1-dimethyl-	64	
1.alpha.,2.beta.,3.alpha.,4.beta.-Tetramethylcyclopentane	232	
2,3-Dimethyl-3-heptene, (Z)-	699	
1,1,4-Trimethylcyclohexane	31	
Cyclohexane, 1-ethyl-1-methyl-	156	
Cyclohexane, 1,2,4-trimethyl-	356	
Cyclohexane, 1,1,3,5-tetramethyl-, trans-	363	
2-Octene, 2,6-dimethyl-	283	
Cyclohexane, 1,1,3,5-tetramethyl-, cis-	420	
2,3-Dimethyl-3-heptene, (Z)-	243	
Cyclohexene, 4-methyl-1-(1-methylethyl)-	155	

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**Additional Compounds**

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<u>Compound</u>	<u>Conc. (ppbv)</u>	<u>Conc. (ppbv)</u>
Neopentane	See pages 3 and 4	1810*
Pentane, 2,2-dimethyl-		340
Butane, 2,2,3-trimethyl-		348
Hexane, 3-methyl-		1040*
Cyclopentane, 1,1-dimethyl-		1470*
Cyclopentane, 1,3-dimethyl-, trans-		157
Pentane, 3-ethyl-		466
Cyclopentane, 1,2-dimethyl-		568
Cyclopentane, 1,1,3-trimethyl-		1230*
Butane, 2,2,3-trimethyl-		236
Hexane, 2-methyl-4-methylene-		563
Cyclopentane, 1,2,3-trimethyl-, (1.alpha.,2.alpha.,3.beta.)-		341
Hexane, 2,3,4-trimethyl-		117
Cyclopentane, 1,1,3,3-tetramethyl-		82
Cyclopentane, 1,1,3,4-tetramethyl-, cis-		997
1,4-Hexadiene, 3-ethyl-		155
Cyclohexane, 1,1-dimethyl-		57
1,1,4-Trimethylcyclohexane		480
Cyclohexane, 1-ethyl-1-methyl-		142
Cyclohexane, 1,2,4-trimethyl-		321

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<b><u>Compound</u></b>	<b><u>Conc. (ppbv)</u></b>	<b><u>Conc. (ppbv)</u></b>
2,3,3-Trimethyl-1-hexene	See pages 3 and 4	327
Cyclohexane, 1,1,3,5-tetramethyl-, trans-		90
Cyclohexane, 1,1,3,5-tetramethyl-, cis-		169
Cyclopentane, 1,2,3,4,5-pentamethyl-		116
1R,2c,3t,4t-Tetramethyl-cyclohexane		255
Cyclohexane, 1,1,3,5-tetramethyl-, cis-		378
2,3-Dimethyl-3-heptene, (Z)-		218
Cyclopentene, 1-isopropyl-4,5-dimethyl-		140
Cyclopentane, (2-methylbutylidene)-		175

N.D. = Not detected.

\* Exceeded normal calibration including as a dilution. Values including NMOC are estimates.

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

DISTRICT INFORMATION  
 I.D. No. **WO #: 1616019**  
 L  
**LAB**



TO: SCAQMD LAB:  OTHER:   
 SOURCE NAME: Orphan Well Project Dogur 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: 9:35am

SAMPLE DESCRIPTION: CEL Can. Air  
54553 - Inside Foghorn 10 well - 304 prob  
54612 - " " " "

54553 - Surface of well 10:05  
54603 - Surface well  
used for Mattell well  
May be higher level

REQUESTED ANALYSIS: ± Methane  
TO-15

Relinquished by	Received by	Firm/Agency	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	SCAQMD LAB	6/8/16	12:30

Remarks: