



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

MONITORING AND ANALYSIS
REPORT OF LABORATORY ANALYSIS

(Page 1 of 4)

To: Rafael Reynosa
Sr. Enforcement Manager
Compliance & Enforcement

Laboratory No. 1822720-01
Requested By Eduardo Esparza

Rule No. NA

Sampling Location

Gem No.1
W. Pier D Street
Long Beach, CA 90802

ST No. NA

Report Created 10/04/2018

ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS, AND RESULTS

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

See attached results and sample information.

Comments: COC requested H2S analysis, however sample was in a canister and H2S analysis was not possible. TCA and PAMS analyses were assigned to provide relatability/traceability to other ambient samples.

Reviewed By:

Stephen Dutz
Principal A.Q. Chemist
Laboratory Services

Date Reviewed:

10/04/18

Approved By:

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

Date Approved:

10/5/18



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(Page 2 of 4)

Laboratory No. 1822720-01

Sample Description SUMMA Canister 54579

Sample Date 08/15/2018

Received Date 08/15/2018

Analyzed Date 08/24/2018

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 | 27 | 0.1 | 0.3 | 100-700 |
| Total Calibrated, ppbC | 12 | 0.1 | 0.3 | |
| Ethane (FID), ppbv | 0.6 | 0.05 | 0.2 | |
| Ethylene (FID), ppbv | J (0.1) | 0.05 | 0.2 | 0.7-4.1 |
| Acetylene (FID), ppbv | J (0.07) | 0.05 | 0.2 | |
| Propane (FID), ppbv | 0.3 | 0.03 | 0.1 | 0.4-5.0 |
| Propylene (FID), ppbv | J (0.06) | 0.03 | 0.1 | 0.2-0.7 |
| Isobutane (FID), ppbv | 0.09 | 0.02 | 0.08 | 0.2-0.9 |
| n-Butane (FID), ppbv | 0.1 | 0.02 | 0.08 | 0.3-1.7 |
| 1-Butene (FID), ppbv | J (0.02) | 0.02 | 0.08 | 0.1-0.3 |
| trans-2-Butene (FID), ppbv | ND | 0.02 | 0.08 | |
| cis-2-Butene (FID), ppbv | ND | 0.02 | 0.08 | |
| Isopentane (FID), ppbv | 0.7 | 0.02 | 0.06 | |
| 1-Pentene (FID), ppbv | J (0.02) | 0.02 | 0.06 | |
| n-Pentane (FID), ppbv | 0.07 | 0.02 | 0.06 | 0.1-0.6 |
| Isoprene (FID), ppbv | ND | 0.02 | 0.06 | |
| trans-2-Pentene (FID), ppbv | ND | 0.02 | 0.06 | |
| cis-2-Pentene (FID), ppbv | ND | 0.02 | 0.06 | |
| 2,2-Dimethylbutane (FID), ppbv | ND | 0.02 | 0.05 | |
| Cyclopentane (FID), ppbv | ND | 0.02 | 0.06 | |
| 2,3-Dimethylbutane (FID), ppbv | ND | 0.02 | 0.05 | |
| 2-Methylpentane (FID), ppbv | ND | 0.02 | 0.05 | |
| 3-Methylpentane (FID), ppbv | J (0.02) | 0.02 | 0.05 | |
| 1-Hexene (FID), ppbv | ND | 0.02 | 0.05 | <0.1-0.1 |
| n-Hexane (FID), ppbv | J (0.03) | 0.02 | 0.05 | 0.1-0.2 |
| Methylcyclopentane (FID), ppbv | J (0.02) | 0.02 | 0.05 | |
| 2,4-Dimethylpentane (FID), ppbv | ND | 0.01 | 0.04 | |
| Benzene (FID), ppbv | 0.07 | 0.02 | 0.05 | 0.1-0.5 |
| Cyclohexane (FID), ppbv | ND | 0.02 | 0.05 | |
| 2-Methylhexane (FID), ppbv | J (0.01) | 0.01 | 0.04 | |
| 2,3-Dimethylpentane (FID), ppbv | J (0.01) | 0.01 | 0.04 | |
| 3-Methylhexane (FID), ppbv | 0.05 | 0.01 | 0.04 | |



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(Page 3 of 4)

Laboratory No. 1822720-01 - continued

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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> |
|------------------------------------|---------------|------------|------------|--------------------|
| 2,2,4-Trimethylpentane (FID), ppbv | J (0.02) | 0.01 | 0.04 | |
| n-Heptane (FID), ppbv | J (0.02) | 0.01 | 0.04 | 0.1-0.2 |
| Methylcyclohexane (FID), ppbv | J (0.02) | 0.01 | 0.04 | |
| 2,3,4-Trimethylpentane (FID), ppbv | ND | 0.01 | 0.04 | |
| Toluene (FID), ppbv | J (0.04) | 0.01 | 0.04 | 0.1-0.6 |
| 2-Methylheptane (FID), ppbv | ND | 0.01 | 0.04 | |
| 3-Methylheptane (FID), ppbv | ND | 0.01 | 0.04 | |
| n-Octane (FID), ppbv | J (0.02) | 0.01 | 0.04 | <0.1-0.3 |
| Ethylbenzene (FID), ppbv | ND | 0.01 | 0.04 | 0.1-0.2 |
| m+p-Xylene (FID), ppbv | J (0.02) | 0.01 | 0.04 | 0.1-0.2 |
| Styrene (FID), ppbv | J (0.03) | 0.01 | 0.04 | <0.1-0.2 |
| o-Xylene (FID), ppbv | J (0.01) | 0.01 | 0.04 | 0.1-0.2 |
| n-Nonane (FID), ppbv | ND | 0.01 | 0.03 | <0.1-0.1 |
| Isopropylbenzene (FID), ppbv | ND | 0.01 | 0.03 | |
| n-Propylbenzene (FID), ppbv | ND | 0.01 | 0.03 | |
| m-Ethyltoluene (FID), ppbv | ND | 0.01 | 0.03 | |
| p-Ethyltoluene (FID), ppbv | ND | 0.01 | 0.03 | |
| 1,3,5-Trimethylbenzene (FID), ppbv | ND | 0.01 | 0.03 | |
| o-Ethyltoluene (FID), ppbv | ND | 0.01 | 0.03 | |
| 1,2,4-Trimethylbenzene (FID), ppbv | J (0.03) | 0.01 | 0.03 | |
| n-Decane (FID), ppbv | ND | 0.01 | 0.03 | <0.1-0.1 |
| 1,2,3-Trimethylbenzene (FID), ppbv | ND | 0.01 | 0.03 | |
| m-Diethylbenzene (FID), ppbv | ND | 0.01 | 0.03 | |
| p-Diethylbenzene (FID), ppbv | ND | 0.01 | 0.03 | |
| n-Undecane (FID), ppbv | ND | 0.009 | 0.03 | <0.1 |
| n-Dodecane (FID), ppbv | ND | 0.008 | 0.02 | <0.1 |

Qualifiers

ND = Non-detect

J = Value is between method detection and reporting limits.

S/N 54579

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
SAMPLE ANALYSIS REQUEST

DISTRICT INFORMATION
 INVOICE SOURCE
LABORATORY NO. 1022720

TO: SCAQMD LAB: OTHER:
SOURCE NAME: Gem No. 1 I.D. No. _____
Source Address: W. Pier D Street City: Long Beach 90802
Mailing Address: _____ City: _____ Zip: _____
Contact Person: _____ Title: _____ Tel: _____

Analysis Requested by: Eduardo Esparza Date: 08/15/18
Approved by: _____ Office: C&E Budget #: 50-375
REASON REQUESTED: Court/Hearing Board Permit Pending Hazardous/Toxic Spill
Suspected Violation Rule(s) Other H₂S

Sample Collected by: Eduardo Esparza Date: 08/15/18 Time: 1005hrs

Specify the description and location where the sample was collected:
Air sample taken downwind from Gem No 1 tanker while docked at T121,

Analysis Requested: H₂S

| Relinquished by | Received by | Firm/Agency | Date | Time |
|------------------------|----------------------|-------------------|-----------------|--------------|
| <u>Eduardo Esparza</u> | <u>Iliana Garcia</u> | <u>SCAQMD Lab</u> | <u>08-15-18</u> | <u>10:17</u> |
| | | | | |
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Remarks: part of offshore odors surveillance.