

Atmospheric Analysis & Consulting, Inc.

CLIENT : Yorke Engineering
PROJECT NAME : Odor Sampling & Analysis
PROJECT NUMBER : 0357-007-01
AAC PROJECT NO. : 202141
REPORT DATE : 12/02/2020

On November 24, 2020, Atmospheric Analysis & Consulting, Inc. received one (1) Six-Liter Silonite Canister for Total Reduced Sulfur analysis by SCAQMD 307.91. Upon receipt, the sample was assigned a unique Laboratory ID number as follows:

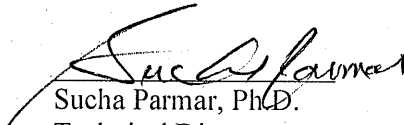
Client ID	Lab No.	Return Pressure (mmHg)
Outside AAA	202141-14807	565.6

This analysis is performed in accordance with AAC's Quality Manual. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. No problems were encountered during receiving, preparation, and/or analysis of this sample.

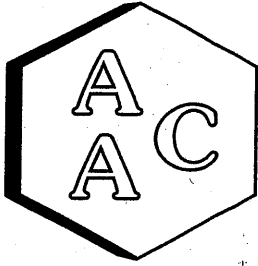
The Technical Director or his/her designee, as verified by the following signature, has authorized release of the data.

If you have any questions or require further explanation of data results, please contact the undersigned.


Sucha Parmar, Ph.D.
Technical Director

This report consists of 4 pages.





Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

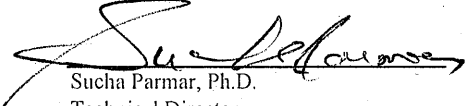
CLIENT : Yorke Engineering
PROJECT NO. : 202141
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 11/19/2020
RECEIVING DATE : 11/24/2020
ANALYSIS DATE : 11/25/2020
REPORT DATE : 12/02/2020

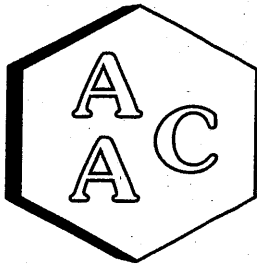
Total Reduced Sulfur Compounds Analysis by SCAQMD 307.91

Client ID	Outside AAA
AAC ID	202141-14807
Canister Dil. Fac.	1.8
Analyte	Result
Hydrogen Sulfide	< 0.014
COS / SO ₂	< 0.014
Methyl Mercaptan	< 0.014
Ethyl Mercaptan	< 0.014
Dimethyl Sulfide	< 0.014
Carbon Disulfide	< 0.014
Isopropyl Mercaptan	< 0.014
tert-Butyl Mercaptan	< 0.014
n-Propyl Mercaptan	< 0.014
Methylethylsulfide	< 0.014
sec-Butyl Mercaptan / Thiophene	< 0.014
iso-Butyl Mercaptan	< 0.014
Diethyl Sulfide	< 0.014
n-Butyl Mercaptan	< 0.014
Dimethyl Disulfide	< 0.014
2-Methylthiophene	< 0.014
3-Methylthiophene	< 0.014
Tetrahydrothiophene	< 0.014
Bromothiophene	< 0.014
Thiophenol	< 0.014
Diethyl Disulfide	< 0.014
Total Unidentified Sulfur	< 0.014
Total Reduced Sulfurs	< 0.014

All unidentified compound's concentrations expressed in terms of H₂S (TRS does not include COS and SO₂)
Sample Reporting Limit (SRL) is equal to Reporting Limit x Canister Dil. Fac. x Analysis Dil. Fac.


Sucha Parmar, Ph.D.
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

SCAQMD 307.91

Date Analyzed: 11/30/2020
 Analyst: DL
 Units: ppbV

Instrument ID: SCD#10
 Calb. Date: 11/16/2020

Opening Calibration Verification Standard

576.8 ppbV H₂S (SSI 227)

H ₂ S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	4620	559	96.9	0.2
Duplicate	4590	555	96.3	0.5
Triplicate	4623	559	97.0	0.3

573.3 ppbV MeSH (SSI 227)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	5287	546	95.2	3.1
Duplicate	5547	573	99.9	1.7
Triplicate	5534	571	99.7	1.4

509.8 ppbV DMS (SSI 227)

DMS	Resp. (area)	Result	% Rec *	% RPD ****
Initial	5714	488	95.7	1.9
Duplicate	5804	496	97.2	0.4
Triplicate	5963	509	99.9	2.3

Method Blank

Analyte	Result
H ₂ S	<PQL
MeSH	<PQL
DMS	<PQL

Duplicate Analysis

Sample ID 202150-14874

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H ₂ S	<PQL	<PQL	0.0	0.0
MeSH	<PQL	<PQL	0.0	0.0
DMS	<PQL	<PQL	0.0	0.0

Matrix Spike & Duplicate

Sample ID 202150-14874 x10

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H ₂ S	<PQL	288.4	281.4	273.1	97.6	94.7	3.0
MeSH	<PQL	286.6	289.9	289.2	101.2	100.9	0.2
DMS	<PQL	254.9	260.7	265.3	102.3	104.1	1.8

Closing Calibration Verification Standard

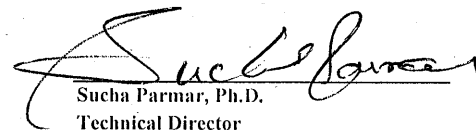
Analyte	Std. Conc.	Result	% Rec **
H ₂ S	576.8	583.0	101.1
MeSH	573.3	542.0	94.6
DMS	509.8	486.9	95.5

* Must be 95-105%, ** Must be 90-110%, *** Must be < 10%, **** Must be < 5% RPD from Mean result.

H₂S: PQL = 10.0 ppbV, MDL = 1.60 ppbV

MeSH: PQL = 10.0 ppbV, MDL = 1.60 ppbV

DMS: PQL = 10.0 ppbV, MDL = 1.60 ppbV


 Sucha Parmar, Ph.D.
 Technical Director



