

Atmospheric Analysis & Consulting, Inc.

CLIENT : Eurofins Air Toxics, Inc.
PROJECT NAME : MO DNR – Bridgeton LF
AAC PROJECT NO. : 161552
REPORT DATE : 10/10/2016

On October 7, 2016, Atmospheric Analysis & Consulting, Inc. received two (2) Six-Liter Silonite Canisters for TRS analysis by ASTM D-5504. Upon receipt, each sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab No.	Initial Pressure (mmHg)
D1 (163474)	161552-94346	612.3
U1 (163475)	161552-94347	615.5

ASTM D-5504 Analysis - Up to a 1 mL aliquot of sample is injected into the GC/SCD for analysis following ASTM D-5504 as specified in the SOW.

No problems were encountered during receiving, preparation and/or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# AACI-ASTM D-5504.

I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy data package.

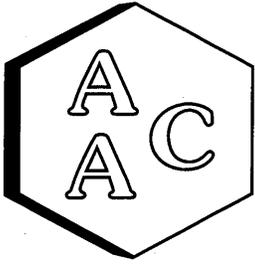
If you have any questions or require further explanation of data results, please contact the undersigned.



Marcus Hueppe
Laboratory Director

This report consists of 4 pages.





Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

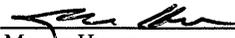
CLIENT : Eurofins Air Toxics, Inc.
PROJECT NO. : 161552
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 10/05/2016
RECEIVING DATE : 10/07/2016
ANALYSIS DATE : 10/07/2016
REPORT DATE : 10/10/2016

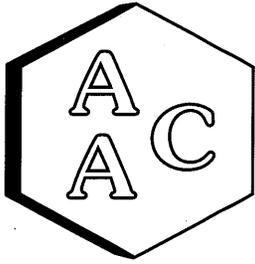
Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (163474)	U1 (163475)
AAC ID	161552-94346	161552-94347
Canister Dil. Fac.	1.5	1.5
Analyte	Result	Result
Hydrogen Sulfide	< 0.015	< 0.015
Carbonyl Sulfide	< 0.015	< 0.015
Sulfur Dioxide	< 0.015	< 0.015
Methyl Mercaptan	< 0.015	< 0.015
Ethyl Mercaptan	< 0.015	< 0.015
Dimethyl Sulfide	< 0.015	< 0.015
Carbon Disulfide	< 0.015	< 0.015
Isopropyl Mercaptan	< 0.015	< 0.015
tert-Butyl Mercaptan	< 0.015	< 0.015
n-Propyl Mercaptan	< 0.015	< 0.015
Methylethylsulfide	< 0.015	< 0.015
sec-Butyl Mercaptan	< 0.015	< 0.015
Thiophene	< 0.015	< 0.015
iso-Butyl Mercaptan	< 0.015	< 0.015
Diethyl Sulfide	< 0.015	< 0.015
n-Butyl Mercaptan	< 0.015	< 0.015
Dimethyl Disulfide	< 0.015	< 0.015
2-Methylthiophene	< 0.015	< 0.015
3-Methylthiophene	< 0.015	< 0.015
Tetrahydrothiophene	< 0.015	< 0.015
Bromothiophene	< 0.015	< 0.015
Thiophenol	< 0.015	< 0.015
Diethyl Disulfide	< 0.015	< 0.015
Total Unidentified Sulfur	< 0.015	< 0.015
Total Reduced Sulfurs	< 0.015	< 0.015

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.


Marcus Hueppe
Laboratory Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report ASTM D-5504

Date Analyzed: 10/7/2016
Analyst: ZB
Units: ppbV

Instrument ID: SCD#10
Calb. Date: 9/19/2016

Opening Calibration Verification Standard

525.5 ppbV H₂S (SS0971)

H ₂ S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	10566	517	98.4	0.2
Duplicate	10512	515	97.9	0.3
Triplicate	10556	517	98.3	0.1

549 ppbV MeSH (SS0988)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	10599	545	99.3	0.4
Duplicate	10527	542	98.7	0.2
Triplicate	10534	542	98.7	0.2

488.8 ppbV CS₂ (SS0972)

CS ₂	Resp. (area)	Result	% Rec *	% RPD ****
Initial	22248	478	97.7	1.1
Duplicate	22061	474	96.9	0.3
Triplicate	21696	466	95.3	1.4

Method Blank

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

Duplicate Analysis

Sample ID 161552-94346

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

Matrix Spike & Duplicate

Sample ID 161552-94346

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H ₂ S	<PQL	262.8	250.6	248.1	95.4	94.4	1.0
MeSH	<PQL	274.5	261.2	257.8	95.2	93.9	1.3
CS ₂	<PQL	244.4	224.2	226.8	91.7	92.8	1.2

Closing Calibration Verification Standard

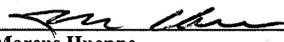
Analyte	Std. Conc.	Result	% Rec **
H ₂ S	525.5	506.6	96.4
MeSH	549.0	544.7	99.2
CS ₂	488.8	466.8	95.5

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

H₂S: PQL = 10.0 ppbV, MDL = 1.51 ppbV

MeSH: PQL = 10.0 ppbV, MDL = 1.48 ppbV

CS₂: PQL = 10.0 ppbV, MDL = 1.44 ppbV


Marcus Hueppe
Laboratory Director



