

## Atmospheric Analysis & Consulting, Inc.

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CLIENT : Eurofins Air Toxics, Inc.  
PROJECT NAME : MO DNR – Bridgeton LF  
AAC PROJECT NO. : 161150  
REPORT DATE : 8/10/2016

On August 9, 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 (162951)	161150-92324	596.6
U1 (162952)	161150-92325	618.9

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.

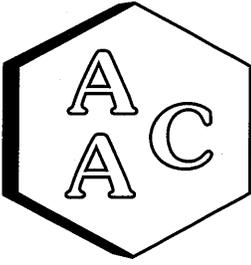
I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy data package.

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. : 161150  
MATRIX : AIR  
UNITS : ppmV

SAMPLING DATE : 08/05/2016  
RECEIVING DATE : 08/09/2016  
ANALYSIS DATE : 08/09/2016  
REPORT DATE : 08/10/2016

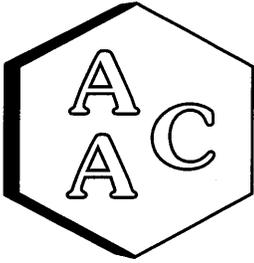
### Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (162951)	U1 (162952)
AAC ID	161150-92324	161150-92325
Canister Dil. Fac.	1.6	1.5
Analyte	Result	Result
Hydrogen Sulfide	< 0.016	< 0.015
Carbonyl Sulfide	< 0.016	< 0.015
Sulfur Dioxide	< 0.016	< 0.015
Methyl Mercaptan	< 0.016	< 0.015
Ethyl Mercaptan	< 0.016	< 0.015
Dimethyl Sulfide	< 0.016	< 0.015
Carbon Disulfide	< 0.016	< 0.015
Isopropyl Mercaptan	< 0.016	< 0.015
tert-Butyl Mercaptan	< 0.016	< 0.015
n-Propyl Mercaptan	< 0.016	< 0.015
Methylethylsulfide	< 0.016	< 0.015
sec-Butyl Mercaptan	< 0.016	< 0.015
Thiophene	< 0.016	< 0.015
iso-Butyl Mercaptan	< 0.016	< 0.015
Diethyl Sulfide	< 0.016	< 0.015
n-Butyl Mercaptan	< 0.016	< 0.015
Dimethyl Disulfide	< 0.016	< 0.015
2-Methylthiophene	< 0.016	< 0.015
3-Methylthiophene	< 0.016	< 0.015
Tetrahydrothiophene	< 0.016	< 0.015
Bromothiophene	< 0.016	< 0.015
Thiophenol	< 0.016	< 0.015
Diethyl disulfide	< 0.016	< 0.015
Total Unidentified Sulfur	< 0.016	< 0.015
Total Reduced Sulfurs as H <sub>2</sub> S	< 0.016	< 0.015

All compound's concentrations expressed in terms of H<sub>2</sub>S (TRS does not include COS and SO<sub>2</sub>)  
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: 8/9/2016  
 Analyst: ZB  
 Units: ppbV

Instrument ID: SCD#10  
 Calb. Date: 8/8/2016

### Opening Calibration Verification Standard

525.5 ppbV H<sub>2</sub>S (SS0971)

H <sub>2</sub> S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	10613	515	98.1	1.0
Duplicate	10717	520	99.0	0.1
Triplicate	10841	526	100.2	1.1

488.8 ppbV CS<sub>2</sub> (SS0972)

CS <sub>2</sub>	Resp. (area)	Result	% Rec *	% RPD ****
Initial	23587	491	100.4	0.5
Duplicate	23706	493	100.9	0.0
Triplicate	23838	496	101.5	0.5

### Method Blank

Analyte	Result
H <sub>2</sub> S	<PQL
CS <sub>2</sub>	<PQL

### Duplicate Analysis

Sample ID 161150-92324

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H <sub>2</sub> S	<PQL	<PQL	0.0	0.0
CS <sub>2</sub>	<PQL	<PQL	0.0	0.0

### Matrix Spike & Duplicate

Sample ID 161150-92324

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H <sub>2</sub> S	<PQL	262.8	258.5	258.9	98.4	98.5	0.1
CS <sub>2</sub>	<PQL	244.4	246.7	255.5	100.9	104.6	3.5

### Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H <sub>2</sub> S	525.5	541.3	103.0
CS <sub>2</sub>	488.8	531.2	108.7

\* Must be 95-105%, \*\* Must be 90-110%, \*\*\* Must be < 10%, \*\*\*\* Must be < 5% RPD from Mean result.  
 PQL = 10.0 ppbV as H<sub>2</sub>S, MDL = 1.55 ppbV as H<sub>2</sub>S

  
 Marcus Hueppe  
 Laboratory Director



