

Atmospheric Analysis & Consulting, Inc.

CLIENT : Eurofins Air Toxics, Inc.
PROJECT NAME : MO DNR – Bridgeton LF
AAC PROJECT NO. : 161331
REPORT DATE : 9/8/2016

On September 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 (162246)	161331-93301	618.1
U1 (162953)	161331-93302	619.0

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.

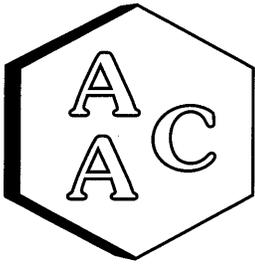
I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy data package.

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. : 161331
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 09/02/2016
RECEIVING DATE : 09/07/2016
ANALYSIS DATE : 09/07/2016
REPORT DATE : 09/08/2016

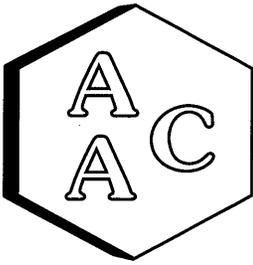
Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (162246)	U1 (162953)
AAC ID	161331-93301	161331-93302
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 as H ₂ S	< 0.015	< 0.015

All 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: 9/7/2016
Analyst: ZB
Units: ppbV

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

Opening Calibration Verification Standard

525.5 ppbV H₂S (SS0971)

H ₂ S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	10534	512	97.3	1.2
Duplicate	10396	505	96.1	0.1
Triplicate	10304	500	95.2	1.0

488.8 ppbV CS₂ (SS0972)

CS ₂	Resp. (area)	Result	% Rec *	% RPD ****
Initial	22815	475	97.1	1.0
Duplicate	22537	469	95.9	0.3
Triplicate	22435	467	95.5	0.7

Method Blank

Analyte	Result
H ₂ S	<PQL
CS ₂	<PQL

Duplicate Analysis

Sample ID 161331-93301

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

Matrix Spike & Duplicate

Sample ID 161331-93301

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H ₂ S	<PQL	262.8	237.3	242.3	90.3	92.2	2.1
CS ₂	<PQL	244.4	229.6	232.2	93.9	95.0	1.2

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H ₂ S	525.5	481.0	91.5
CS ₂	488.8	450.0	92.1

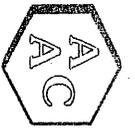
* Must be 95-105%, ** Must be 90-110%, *** Must be < 10%, **** Must be < 5% RPD from Mean result.

H₂S: PQL = 10.0 ppbV, MDL = 1.57 ppbV

CS₂: PQL = 10.0 ppbV, MDL = 1.57 ppbV

Marcus Hueppe
Laboratory Director





ATMOSPHERIC ANALYSIS & CONSULTING, INC.
 1534 Eastman Avenue, Suite A
 Ventura, California 93003
 Phone (805) 650-1642 Fax (805) 650-1644
 E-mail: info@aacldb.com

AAC Project No. 161331

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CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client Name MO DNR		Project Name Ridgeman LF		Analysis Requested		Send report:	
Project Mgr (Print Name) Michael Paris		Project Number		Analysis Requested		Attn: _____	
Sampler's Name (Print Name) Teresa Travenay		Sampler's Signature <i>[Signature]</i>		Analysis Requested		Phone#: _____	
AAC Sample No.		Date Sampled	Time Sampled	Sample Type	Client Sample ID/Description	Type of Sample	Send Invoice to:
Can #816	9/2/16	1035-	1115-	Summa-Timed	D1 (162246)	Summa-Timed	Attn: _____
Can #823	9/2/16	1045-	1125-	Summa-Timed	U1 (162953)	Summa-Timed	P.O. # <u>3ESP170079</u>
							Turnaround Time 24-Hr _____ 48-Hr _____
							5 Day <input checked="" type="checkbox"/> Normal _____
							Other (Specify) _____
							Special Instructions/remarks: Shipping via UPS Tracking # 1ZK0100298332109
Relinquished by (Signature): <i>[Signature]</i>		Print Name: Teresa Travenay		Received by (signature): <i>[Signature]</i>		Print Name: UCPS	
Relinquished by (Signature): <i>[Signature]</i>		Print Name:		Received by (signature):		Print Name:	

2x CANUS + 2x #2FLOWNS