

Atmospheric Analysis & Consulting, Inc.

CLIENT : Eurofins Air Toxics, Inc.
PROJECT NAME : MO DNR – Bridgeton Landfill
AAC PROJECT NO. : 161823
REPORT DATE : 12/12/2016

On December 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 (163480)	161823-95627	669.9
U1 (163935)	161823-95628	649.1

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.

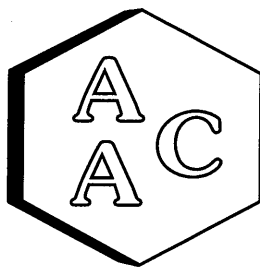
I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy data package.

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. : 161823
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 12/07/2016
RECEIVING DATE : 12/09/2016
ANALYSIS DATE : 12/09/2016
REPORT DATE : 12/12/2016

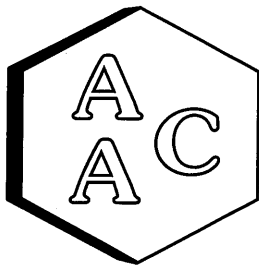
Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (163480)	U1 (163935)
AAC ID	161823-95627	161823-95628
Canister Dil. Fac.	1.3	1.4
Analyte	Result	Result
Hydrogen Sulfide	< 0.013	< 0.014
Carbonyl Sulfide	< 0.013	< 0.014
Sulfur Dioxide	< 0.013	< 0.014
Methyl Mercaptan	< 0.013	< 0.014
Ethyl Mercaptan	< 0.013	< 0.014
Dimethyl Sulfide	< 0.013	< 0.014
Carbon Disulfide	< 0.013	< 0.014
Isopropyl Mercaptan	< 0.013	< 0.014
tert-Butyl Mercaptan	< 0.013	< 0.014
n-Propyl Mercaptan	< 0.013	< 0.014
Methylethylsulfide	< 0.013	< 0.014
sec-Butyl Mercaptan	< 0.013	< 0.014
Thiophene	< 0.013	< 0.014
iso-Butyl Mercaptan	< 0.013	< 0.014
Diethyl Sulfide	< 0.013	< 0.014
n-Butyl Mercaptan	< 0.013	< 0.014
Dimethyl Disulfide	< 0.013	< 0.014
2-Methylthiophene	< 0.013	< 0.014
3-Methylthiophene	< 0.013	< 0.014
Tetrahydrothiophene	< 0.013	< 0.014
Bromothiophene	< 0.013	< 0.014
Thiophenol	< 0.013	< 0.014
Diethyl Disulfide	< 0.013	< 0.014
Total Unidentified Sulfur	< 0.013	< 0.014
Total Reduced Sulfurs	< 0.013	< 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.


Marcus Hueppe
Laboratory Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report ASTM D-5504

Date Analyzed: 12/9/2016
Analyst: ZB
Units: ppbV

Instrument ID: SCD#10
Calb. Date: 10/18/2016

Opening Calibration Verification Standard

525.5 ppbV H₂S (SS0971)

H ₂ S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	14240	530	100.8	0.9
Duplicate	14034	522	99.4	0.6
Triplicate	14068	523	99.6	0.3

549 ppbV MeSH (SS0988)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	13622	530	96.6	0.0
Duplicate	13590	529	96.3	0.2
Triplicate	13648	531	96.8	0.2

488.8 ppbV CS₂ (SS0972)

CS ₂	Resp. (area)	Result	% Rec *	% RPD ****
Initial	31237	497	101.7	1.0
Duplicate	30884	492	100.6	0.1
Triplicate	30634	488	99.8	0.9

Method Blank

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

Duplicate Analysis

Sample ID 161808-95586

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	169.4	173.9	171.6	2.6

Matrix Spike & Duplicate

Sample ID 161808-95586 x10

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H ₂ S	<PQL	262.8	244.6	256.1	93.1	97.5	4.6
MeSH	<PQL	274.5	254.4	257.2	92.7	93.7	1.1
CS ₂	17.2	244.4	266.1	270.2	101.7	103.3	1.5

Closing Calibration Verification Standard

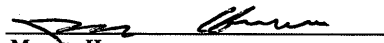
Analyte	Std. Conc.	Result	% Rec **
H ₂ S	525.5	530.3	100.9
MeSH	549.0	517.1	94.2
CS ₂	488.8	465.1	95.1

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

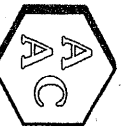
H₂S: PQL = 10.0 ppbV, MDL = 1.51 ppbV

MeSH: PQL = 10.0 ppbV, MDL = 1.48 ppbV

CS₂: PQL = 10.0 ppbV, MDL = 1.44 ppbV


 Marcus Hueppe
 Laboratory Director





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AAC Project No.

61823

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CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client Name MO DPR		Project Name Bridgeport Landfill		Analysis Requested		Send report:	
Project Mgr (Print Name) Michael Ferris		Project Number				Attn: _____	
Sampler's Name (Print Name) Teresa Trevany		Sampler's Signature <i>[Signature]</i>				Phone#: _____	
AAC Sample No.		Date sampled	Time sampled	Sample Type	Client Sample ID/Description	Sp/Per/Alt-at-Station/Pressure	Fax#: _____
Can #842	12/7/16	1000-1645		SUMMA-Timed	DI (163480)	-30'-5"	Send invoice to: _____
Can #834	12/7/16	1610-1050		SUMMA-Timed	VI (163935)	-30'-5"	Attn: _____
							P.O. # 3ESPT10363
							Turnaround Time 24-Hr _____ 48-Hr _____
							5 Day <input checked="" type="checkbox"/> Normal _____
							Other (Specify) _____
							Special Instructions/remarks: Snipped via UPS. Tracking # 1ZPK01000292568947
Relinquished by (Signature): <i>[Signature]</i>		Print Name: Teresa Trevany		Date/Time 12/7/16 1400		Received by (signature): <i>[Signature]</i>	
Relinquished by (Signature): <i>[Signature]</i>		Print Name: Teresa Trevany		Date/Time 12/09/16 0930		Received by (signature): <i>[Signature]</i>	
		Print Name: John Zachman				Print Name	

-UPS