

## Atmospheric Analysis & Consulting, Inc.

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CLIENT : Eurofins  
PROJECT NAME : MO DNR – Bridgeton Landfill  
AAC PROJECT NO. : 180169  
REPORT DATE : 2/7/2018

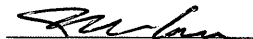
On February 5, 2018, Atmospheric Analysis & Consulting, Inc. received two (2) Six-Liter Silonite Canisters for TRS analysis by ASTM D-5504. Upon receipt, each sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab No.	Initial Pressure (mmHg)
D1 (180981)	180169-106392	679.5
U1 (180982)	180169-106393	685.9

All of the analyses mentioned above were performed in accordance with AAC's ISO/IEC 17025:2005 and NELAP approved Quality Assurance Plan. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at [www.aacalab.com](http://www.aacalab.com).

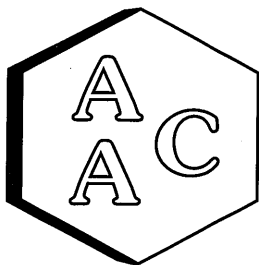
I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. No problems were encountered during receiving, preparation, and/or analysis of these samples. The Laboratory Director or his/her designee, as verified by the following signature, has authorized release of the data contained in this hardcopy report.

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  
PROJECT NO. : 180169  
MATRIX : AIR  
UNITS : ppmV

SAMPLING DATE : 02/01/2018  
RECEIVING DATE : 02/05/2018  
ANALYSIS DATE : 02/06/2018  
REPORT DATE : 02/07/2018

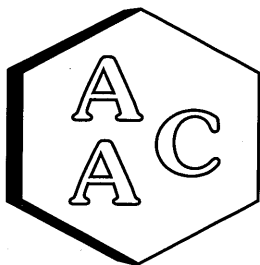
### Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (180981)	U1 (180982)
AAC ID	180169-106392	180169-106393
Canister Dil. Fac.	1.4	1.3
Analyte	Result	Result
Hydrogen Sulfide	< 0.014	< 0.013
Carbonyl Sulfide	< 0.014	< 0.013
Sulfur Dioxide	< 0.014	< 0.013
Methyl Mercaptan	< 0.014	< 0.013
Ethyl Mercaptan	< 0.014	< 0.013
Dimethyl Sulfide	< 0.014	< 0.013
Carbon Disulfide	< 0.014	< 0.013
Isopropyl Mercaptan	< 0.014	< 0.013
tert-Butyl Mercaptan	< 0.014	< 0.013
n-Propyl Mercaptan	< 0.014	< 0.013
Methylethylsulfide	< 0.014	< 0.013
sec-Butyl Mercaptan	< 0.014	< 0.013
Thiophene	< 0.014	< 0.013
iso-Butyl Mercaptan	< 0.014	< 0.013
Diethyl Sulfide	< 0.014	< 0.013
n-Butyl Mercaptan	< 0.014	< 0.013
Dimethyl Disulfide	< 0.014	< 0.013
2-Methylthiophene	< 0.014	< 0.013
3-Methylthiophene	< 0.014	< 0.013
Tetrahydrothiophene	< 0.014	< 0.013
Bromothiophene	< 0.014	< 0.013
Thiophenol	< 0.014	< 0.013
Diethyl Disulfide	< 0.014	< 0.013
Total Unidentified Sulfur	< 0.014	< 0.013
Total Reduced Sulfurs	< 0.014	< 0.013

All unidentified 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: 2/6/2018  
 Analyst: ZB  
 Units: ppbV

Instrument ID: SCD#10  
 Calb. Date: 1/10/2018

### Opening Calibration Verification Standard

510.75 ppbV H<sub>2</sub>S (SS1041)

H <sub>2</sub> S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	2911	516	101.0	0.5
Duplicate	2850	505	98.9	1.6
Triplicate	2932	520	101.8	1.2

511.75 ppbV MeSH (SS1041)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	2875	498	97.2	0.7
Duplicate	2842	492	96.1	0.5
Triplicate	2851	493	96.4	0.2

522.75 ppbV DMS (SS1041)

DMS	Resp. (area)	Result	% Rec *	% RPD ****
Initial	3372	526	100.6	0.6
Duplicate	3363	524	100.3	0.3
Triplicate	3322	518	99.1	0.9

### Method Blank

Analyte	Result
H <sub>2</sub> S	<PQL
MeSH	<PQL
DMS	<PQL

### Duplicate Analysis

Sample ID 180169-106393

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H <sub>2</sub> 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 180169-106393 x2

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H <sub>2</sub> S	<PQL	255.4	255.8	252.7	100.1	99.0	1.2
MeSH	<PQL	255.9	256.7	253.6	100.3	99.1	1.2
DMS	<PQL	261.4	247.3	247.4	94.6	94.6	0.0

### Closing Calibration Verification Standard

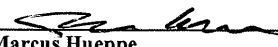
Analyte	Std. Conc.	Result	% Rec **
H <sub>2</sub> S	510.8	499.7	97.8
MeSH	511.8	482.2	94.2
DMS	522.8	477.7	91.4

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

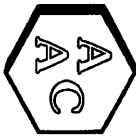
H<sub>2</sub>S: PQL = 10.0 ppbV, MDL = 1.09 ppbV

MeSH: PQL = 10.0 ppbV, MDL = 1.13 ppbV

DMS: PQL = 10.0 ppbV, MDL = 1.39 ppbV

  
 Marcus Hueppe  
 Laboratory Director






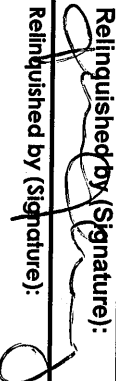

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AAC Project No. \_\_\_\_\_

180169

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### CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client Name MO DNR		Project Name Bradenton Landfill		Analysis Requested			Send report:	
Project Mgr (Print Name) Michael Parms		Project Number					Attn: _____	Phone #: _____
Sampler's Name (Print Name) Teresa Trevany		Sampler's Signature 		Client Sample ID/Description D1 (180981)		Type/No. of Containers -30 -6		Attn: _____ P.O. # _____ Turnaround Time _____ 24 - 48 Hr _____ 72 Hr _____ 5 Day <input checked="" type="checkbox"/> Normal _____ Other (Specify) _____ Special Instructions/remarks: Shipped via UPS. Tracking # 12P01AUG0290089745
AAC Sample No.	Date sampled	Time Sampled	Sample Type	Type/No. of Containers		Type/No. of Containers		
Can #815	2/1/18	1155-1240	Summ-Timed	-30 -6		-30 -6		
Can #823	2/1/18	1210-1305	Summ-Timed	-30 -6		-30 -6		
Relinquished by (Signature): 		Print Name: Teresa Trevany		Date/Time: 2/1/18 1500		Received by (signature): 		Print Name: Michael Parms
Relinquished by (Signature): _____		Print Name: _____		Date/Time: _____		Received by (signature): _____		Print Name: _____

26 CANS + 26 FLOWS UPS