

## Atmospheric Analysis & Consulting, Inc.

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CLIENT : Eurofins  
PROJECT NAME : MO DNR – Bridgeton Landfill  
AAC PROJECT NO. : 171006  
REPORT DATE : 7/20/2017


On July 17, 2017, 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 (172350)	171006-100871	673.3
U1 (172351)	171006-100872	623.1

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).

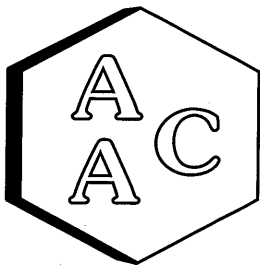
I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. No problems were encountered during receiving, preparation, and/or analysis of these samples. The Laboratory Director or his/her designee, as verified by the following signature, 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. : 171006  
MATRIX : AIR  
UNITS : ppmV

SAMPLING DATE : 07/13/2017  
RECEIVING DATE : 07/17/2017  
ANALYSIS DATE : 07/19/2017  
REPORT DATE : 07/20/2017

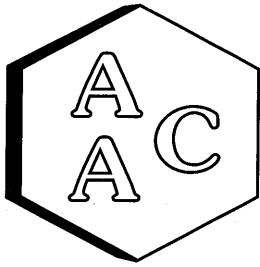
### Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (172350)	U1 (172351)
AAC ID	171006-100871	171006-100872
Canister Dil. Fac.	1.4	1.5
Analyte	Result	Result
Hydrogen Sulfide	< 0.014	< 0.015
Carbonyl Sulfide	< 0.014	< 0.015
Sulfur Dioxide	< 0.014	< 0.015
Methyl Mercaptan	< 0.014	< 0.015
Ethyl Mercaptan	< 0.014	< 0.015
Dimethyl Sulfide	< 0.014	< 0.015
Carbon Disulfide	< 0.014	< 0.015
Isopropyl Mercaptan	< 0.014	< 0.015
tert-Butyl Mercaptan	< 0.014	< 0.015
n-Propyl Mercaptan	< 0.014	< 0.015
Methylethylsulfide	< 0.014	< 0.015
sec-Butyl Mercaptan	< 0.014	< 0.015
Thiophene	< 0.014	< 0.015
iso-Butyl Mercaptan	< 0.014	< 0.015
Diethyl Sulfide	< 0.014	< 0.015
n-Butyl Mercaptan	< 0.014	< 0.015
Dimethyl Disulfide	< 0.014	< 0.015
2-Methylthiophene	< 0.014	< 0.015
3-Methylthiophene	< 0.014	< 0.015
Tetrahydrothiophene	< 0.014	< 0.015
Bromothiophene	< 0.014	< 0.015
Thiophenol	< 0.014	< 0.015
Diethyl Disulfide	< 0.014	< 0.015
Total Unidentified Sulfur	< 0.014	< 0.015
Total Reduced Sulfurs	< 0.014	< 0.015

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: 7/19/2017  
 Analyst: ZB  
 Units: ppbV

Instrument ID: SCD#10  
 Calb. Date: 7/18/2017

### Opening Calibration Verification Standard

*528.25 ppbV H2S (SS1032)*

H <sub>2</sub> S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	3121	502	95.0	1.4
Duplicate	3256	524	99.2	2.8
Triplicate	3123	502	95.1	1.4

*491 ppbV MeSH (SS1032)*

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	2839	473	96.3	1.7
Duplicate	2938	489	99.7	1.7
Triplicate	2891	482	98.1	0.1

*523 ppbV DMS (SS1032)*

DMS	Resp. (area)	Result	% Rec *	% RPD ****
Initial	3225	521	99.5	0.0
Duplicate	3222	520	99.4	0.1
Triplicate	3230	521	99.7	0.1

### Method Blank

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

### Duplicate Analysis

Sample ID 171018-100937

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H <sub>2</sub> S	588.0	577.1	582.5	1.9
MeSH	<PQL	<PQL	0.0	0.0
DMS	<PQL	<PQL	0.0	0.0

### Matrix Spike & Duplicate

Sample ID 171018-100937 x10

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H <sub>2</sub> S	58.3	264.1	352.9	345.7	109.5	107.2	2.1
MeSH	<PQL	245.5	267.8	254.8	109.1	103.8	5.0
DMS	<PQL	261.5	284.5	280.1	108.8	107.1	1.6

### Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H <sub>2</sub> S	528.3	499.9	94.6
MeSH	491.0	464.7	94.6
DMS	523.0	501.8	95.9

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

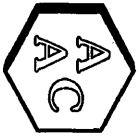
H<sub>2</sub>S: PQL = 10.0 ppbV, MDL = 1.51 ppbV

MeSH: PQL = 10.0 ppbV, MDL = 1.48 ppbV

CS<sub>2</sub>: PQL = 10.0 ppbV, MDL = 1.44 ppbV

Marcus Hueppe  
 Laboratory Director





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AAC Project No. 171086

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**CHAIN OF CUSTODY / ANALYSIS REQUEST FORM**

Client Name <b>MD DNR</b>		Project Name <b>Reddick Landfill</b>		Analysis Requested		Send report:	
Project Mgr (Print Name) <b>Michael Paris</b>		Project Number				Attn: _____	
Sampler's Name (Print Name) <b>Teresa Meyers</b>		Sampler's Signature <i>Teresa Meyers</i>				Phone#: _____	
AAC Sample No.		Date Sampled		Time Sampled		Fax# _____	
Can #955		7/13/17		1055-1140		Send invoice to: _____	
Can #956		7/13/17		1105-1158		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 # 1Z2040660294159055	
Relinquished by (Signature): <i>[Signature]</i>		Print Name: <b>Teresa Meyers</b>		Date/Time 7/13/17 1330		Received by (signature): <i>[Signature]</i>	
Relinquished by (Signature):		Print Name:		Date/Time		Received by (signature):	

2x CAN5 + 2x Flow 205