Atmospheric Analysis & Consulting, Inc.

CLIENT	:	Eurofins
PROJECT NAME	:	MO DNR – Bridgeton Landfill
AAC PROJECT NO.	:	180483
REPORT DATE	:	4/6/2018

On April 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 (181376)	180483-107735	608.7
U1 (181377)	180483-107736	608.2

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.aaclab.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.

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

CLIENT	**: Eurofins**	**SAMPLING DATE**	**: 04/03/2018**
PROJECT NO.	**: 180483**	**RECEIVING DATE**	**: 04/05/2018**
MATRIX	**: AIR**	**ANALYSIS DATE**	**: 04/05/2018**
UNITS	**: ppmV**	**REPORT DATE**	**: 04/06/2018**

Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	**D1 (181376)**	**U1 (181377)**
AAC ID	**180483-107735**	**180483-107736**
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	< 0.015	< 0.015

All unidentified compound's concentrations expressed in terms of H_2S (TRS does not include COS and SO_2)
Sample Reporting Limit (SRL) is equal to Reporting Limit x Canister Dil. Fac. x Analysis Dil. Fac.

Marcus Hueppe
Laboratory Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report
ASTM D-5504

Date Analyzed: 4/5/2018
Analyst: ZB
Units: ppbV

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

Opening Calibration Verification Standard

510.75 ppbV H2S (SS1041)

H_2S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	3009	533	104.4	1.7
Duplicate	2892	513	100.4	2.2
Triplicate	2971	527	103.1	0.5

511.75 ppbV MeSH (SS1041)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	2949	510	99.7	0.1
Duplicate	2972	514	100.5	0.9
Triplicate	2918	505	98.7	1.0

522.75 ppbV DMS (SS1041)

DMS	Resp. (area)	Result	% Rec *	% RPD ****
Initial	3342	521	99.7	0.5
Duplicate	3333	520	99.4	0.2
Triplicate	3302	515	98.5	0.7

Method Blank

Analyte	Result
H_2S	<PQL
MeSH	<PQL
DMS	<PQL

Duplicate Analysis **Sample ID** 180452-107667

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H_2S	<PQL	<PQL	0.0	0.0
MeSH	<PQL	<PQL	0.0	0.0
DMS	27.6	26.4	27.0	4.7

Matrix Spike & Duplicate **Sample ID** 180452-107667 x2

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H_2S	<PQL	255.4	255.4	258.4	100.0	101.2	1.2
MeSH	<PQL	255.9	256.0	251.9	100.0	98.4	1.6
DMS	13.5	261.4	255.6	249.7	93.0	90.8	2.3

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H_2S	510.8	503.0	98.5
MeSH	511.8	487.9	95.3
DMS	522.8	487.1	93.2

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

H2S: PQL = 10.0 ppbV, MDL = 1.09 ppbV
MeSH: PQL = 10.0 ppbV, MDL = 1.13 ppbV
DMS: PQL = 10.0 ppbV, MDL = 1.39 ppbV

Marcus Hueppe
Laboratory Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

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

AAC Project No. 180483 Page 1 of 1

CHAIN OF CUSTODY/ ANALYSIS REQUEST FORM

Client Name	Project Name	Analysis Requested	Send report:
MO DNR	Bridgeton Landfill		
Project Mgr (Print Name)	Project Number		Attn:
Michael Parris			
Sampler's Name (Print Name)	Sampler's Signature		Phone#:
Teresa Thevay			Fax#

AAC Sample No.	Date Sampled	Time Sampled	Sample Type	Client Sample ID/Description	Type/No. of Containers start pressure/end pressure	TO-15				Send invoice to:
Can #823	4/3/18	1100-1145	Summa-fized	D1 (181376)	-30 / -6	X			107735	
Can #815	4/3/18	1110-1150	Summa-fized	U1 (181377)	-30 / -6	X			107736	
										Attn:
										P.O. #
										Turnaround Time
										24 - 48 Hr ____ 72 Hr ____
										5 Day ✓ Normal ____
										Other (Specify) ____
										Special Instructions/remarks: Shipped via UPS. Tracking # 1ZR04A602922610313

Relinquished by (Signature):	Print Name:	Date/Time	Received by (signature):	Print Name
	Teresa Thevay	4/3/18 1400		
Relinquished by (Signature):	Print Name:	Date/Time	Received by (signature):	Print Name
				4/5/18 1145

2xCANS+2xFLOWS UPS