

Atmospheric Analysis & Consulting, Inc.

CLIENT : Eurofins
PROJECT NAME : MO DNR – Bridgeton Landfill
AAC PROJECT NO. : 171777
REPORT DATE : 11/9/2017


On November 8, 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 (172989)	171777-104487	667.0
U1 (174037)	171777-104488	662.7

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.

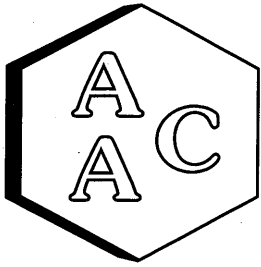
I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. No problems were encountered during receiving, preparation, and/or analysis of these samples. The Laboratory Director or his/her designee, as verified by the following signature,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





Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

CLIENT : Eurofins
PROJECT NO. : 171777
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 11/06/2017
RECEIVING DATE : 11/08/2017
ANALYSIS DATE : 11/08/2017
REPORT DATE : 11/09/2017

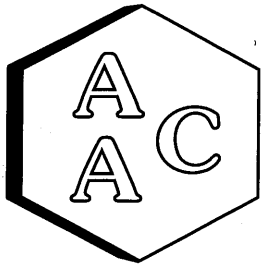
Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (172989)	U1 (174037)
AAC ID	171777-104487	171777-104488
Canister Dil. Fac.	1.4	1.4
Analyte	Result	Result
Hydrogen Sulfide	< 0.014	< 0.014
Carbonyl Sulfide	< 0.014	< 0.014
Sulfur Dioxide	< 0.014	< 0.014
Methyl Mercaptan	< 0.014	< 0.014
Ethyl Mercaptan	< 0.014	< 0.014
Dimethyl Sulfide	< 0.014	< 0.014
Carbon Disulfide	< 0.014	< 0.014
Isopropyl Mercaptan	< 0.014	< 0.014
tert-Butyl Mercaptan	< 0.014	< 0.014
n-Propyl Mercaptan	< 0.014	< 0.014
Methylethylsulfide	< 0.014	< 0.014
sec-Butyl Mercaptan	< 0.014	< 0.014
Thiophene	< 0.014	< 0.014
iso-Butyl Mercaptan	< 0.014	< 0.014
Diethyl Sulfide	< 0.014	< 0.014
n-Butyl Mercaptan	< 0.014	< 0.014
Dimethyl Disulfide	< 0.014	< 0.014
2-Methylthiophene	< 0.014	< 0.014
3-Methylthiophene	< 0.014	< 0.014
Tetrahydrothiophene	< 0.014	< 0.014
Bromothiophene	< 0.014	< 0.014
Thiophenol	< 0.014	< 0.014
Diethyl Disulfide	< 0.014	< 0.014
Total Unidentified Sulfur	< 0.014	< 0.014
Total Reduced Sulfurs	< 0.014	< 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: 11/8/2017
Analyst: ZB
Units: ppbV

Instrument ID: SCD#10
Calb. Date: 8/11/2017

Opening Calibration Verification Standard

528.25 ppbV H₂S (SS1032)

H ₂ S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	6188	517	97.9	0.9
Duplicate	6139	513	97.1	1.6
Triplicate	6397	534	101.2	2.5

491 ppbV MeSH (SS1032)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	5509	470	95.6	1.1
Duplicate	5505	469	95.6	1.2
Triplicate	5696	486	98.9	2.3

523 ppbV DMS (SS1032)

DMS	Resp. (area)	Result	% Rec *	% RPD ****
Initial	7157	518	99.0	1.1
Duplicate	7256	525	100.4	0.3
Triplicate	7288	527	100.8	0.8

Method Blank

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

Duplicate Analysis

Sample ID 171768-104463

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H ₂ S	66415.9	63099.4	64757.7	5.1
MeSH	<PQL	<PQL	0.0	0.0
DMS	<PQL	<PQL	0.0	0.0

Matrix Spike & Duplicate

Sample ID 171768-104463 x200

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H ₂ S	323.8	264.1	607.2	610.6	103.3	103.9	0.6
MeSH	<PQL	245.5	251.3	248.5	102.4	101.2	1.2
DMS	<PQL	261.5	279.2	280.1	106.8	107.1	0.3

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H ₂ S	528.3	506.4	95.9
MeSH	491.0	475.4	96.8
DMS	523.0	527.0	100.8

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

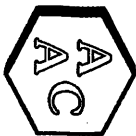
H₂S: PQL = 10.0 ppbV, MDL = 1.09 ppbV

MeSH: PQL = 10.0 ppbV, MDL = 1.13 ppbV

DMS: PQL = 10.0 ppbV, MDL = 1.39 ppbV


 Marcus Hueppe
 Laboratory Director





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

AAC Project No. 171777

Page 1 of 1

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client Name MO DNR		Project Name Bridgeton Landfill		Analysis Requested		Send report:	
Project Mgr (Print Name) Michael Pans		Project Number				Attn: _____	
Sampler's Name (Print Name) Teresa Murray		Sampler's Signature <i>Teresa Murray</i>				Phone#: _____	
AAC Sample No.	Date Sampled	Time Sampled	Sample Type	Client Sample ID/Description	Type/Make of Containers <i>styrofoam/lead resistant</i>	Send invoice to: _____	
Can # 916	11/6/17	1135	Summa-Timed	D1 (172989)	-30-5	Attn: _____	
Can # 958	11/6/17	1145	Summa-Timed	V1 (174037)	-30-6	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 # 1Z1204out6029067850	
Relinquished By (Signature): <i>Teresa Murray</i>		Print Name: Teresa Murray		Received by (Signature): <i>Michael Pans</i>		Print Name: Michael Pans	
Relinquished by (Signature):		Print Name:		Received by (Signature):		Print Name:	
Date/Time 11/6/17 1330		Date/Time					

UPS 262645 4 262645