

Atmospheric Analysis & Consulting, Inc.

CLIENT : Eurofins
PROJECT NAME : MO DNR – Bridgeton LF
AAC PROJECT NO. : 170108
REPORT DATE : 1/27/2017

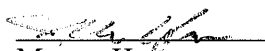
On January 25, 2017, Atmospheric Analysis & Consulting, Inc. received two (2) Six-Liter Silonite Canisters for TRS analysis by ASTM D-5504. Upon receipt, the sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab No.	Initial Pressure (mmHg)
D1 (163948)	170108-96405	623.8
U1 (163949)	170108-96406	625.3

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.

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.

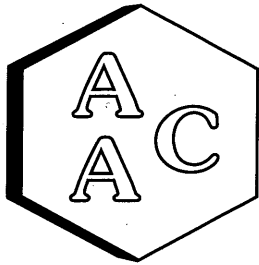
If you have any questions or require further explanation of data results, please contact the undersigned.



Marcus Huéppe
Laboratory Director

This report consists of 4 pages.





Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

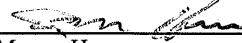
CLIENT : Eurofins
PROJECT NO. : 170108
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 01/23/2017
RECEIVING DATE : 01/25/2017
ANALYSIS DATE : 01/26/2017
REPORT DATE : 01/27/2017

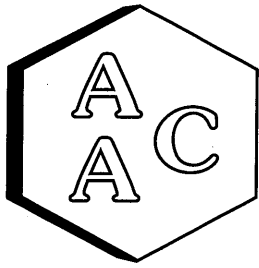
Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	D1 (163948)	U1 (163949)
AAC ID	170108-96405	170108-96406
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 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: 1/26/2017
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	13522	503	95.8	0.4
Duplicate	13508	503	95.7	0.5
Triplicate	13698	510	97.0	0.9

549 ppbV MeSH (SS0988)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	13873	540	98.3	1.3
Duplicate	13946	543	98.9	0.7
Triplicate	14332	558	101.6	2.0

488.8 ppbV CS₂ (SS0972)

CS ₂	Resp. (area)	Result	% Rec *	% RPD ****
Initial	31998	509	104.2	0.3
Duplicate	31750	505	103.4	0.4
Triplicate	31929	508	104.0	0.1

Method Blank

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

Duplicate Analysis

Sample ID 170108-96405

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	<PQL	<PQL	0.0	0.0

Matrix Spike & Duplicate

Sample ID 170108-96405

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H ₂ S	<PQL	262.8	237.0	239.0	90.2	91.0	0.8
MeSH	<PQL	274.5	254.3	254.1	92.7	92.6	0.1
CS ₂	<PQL	244.4	227.5	228.5	93.1	93.5	0.5

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H ₂ S	525.5	503.7	95.8
MeSH	549.0	542.1	98.7
CS ₂	488.8	536.1	109.7

* 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

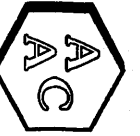
MeSH: PQL = 10.0 ppbV, MDL = 1.48 ppbV

CS₂: PQL = 10.0 ppbV, MDL = 1.44 ppbV



 Marcus Hueppe
 Laboratory Director





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AAC Project No. 170108

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CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client Name NO DNR			Project Name Rideth UF			Analysis Requested			Send report:		
Project Mgr (Print Name) Michael Penn			Project Number			Type/No. of Containers <i>4 stainless steel pressure</i>			Attn:		
Sampler's Name (Print Name) Fresca Trevany			Sampler's Signature <i>[Signature]</i>			DSSD			Phone#:		
AAC Sample No.	Date Sampled	Time Sampled	Sample Type	Client Sample ID/Description	Type/No. of Containers <i>4 stainless steel pressure</i>						
Can #820	1/23/17	10:30 11:15	Summa-Timed	D1 (163948)	-30 -L	X	96465				
Can #824	1/23/17	10:40 11:25	Summa-Timed	V1 (163949)	-30 -L	X	96466				
Relinquished by (Signature): <i>[Signature]</i>						Received by (signature): <i>[Signature]</i>			Print Name: 0955		
Relinquished by (Signature): <i>[Signature]</i>						Received by (signature): <i>[Signature]</i>			Print Name: 0955		
Print Name: Fresca Trevany						Date/Time: 1/23/17 1345			Print Name: 0955		
Print Name:						Date/Time:			Print Name:		

2x CANS + 2x FLOW S

Turnaround Time
 24 - 48 Hr 72 Hr
 5 Day Normal
 Other (Specify) _____
 Special Instructions/remarks:
 Shipped via UPS
 Tracking # _____
 1720V101602982425H