



Blalock, Susan <susan.blalock@deq.virginia.gov>

Fwd: FW: Semi-Monthly Daily LFG Well Temperature and Status Update

1 message

Blalock, Susan <susan.blalock@deq.virginia.gov>
To: Susan Blalock <susan.blalock@deq.virginia.gov>

Mon, May 2, 2022 at 2:33 PM

From: King, Brandon <BKing@scsengineers.com>
Sent: Monday, May 2, 2022 2:02 PM
To: crystal.bazyk@deq.virginia.gov; hall.kristen@epa.gov; jeff.hurst@deq.virginia.gov; willard.erinm@epa.gov; stacy.bowers@deq.virginia.gov; David Cochran <dcochran@bristolva.org>; mmaine@bristolva.org; Randall Eads <CityManager@bristolva.org>
Cc: Lock, Tom <TLock@scsengineers.com>; Dick, Bob <BDick@scsengineers.com>; Nachman, Lucas <LNachman@scsengineers.com>
Subject: Semi-Monthly Daily LFG Well Temperature and Status Update

Ms. Hall and Ms. Bazyk,

In accordance with EPA's letter, "Approval of Higher Operating Temperature Values of Landfill Gas Wells and Submission of Gas Treatment Alternatives at the Bristol Virginia Integrated Solid Waste Facility" from August 2021, I am providing the May 1, 2022 status report on the existing wells, expansion of the gas collection system, and continuing operating and monitoring results, covering the period from April 16-30, 2022.

Let me know if you have any questions.

Thank you,

D. Brandon King

Project Manager

SCS Engineers

15521 Midlothian Turnpike

5/2/22, 2:34 PM

Commonwealth of Virginia Mail - Fwd: FW: Semi-Monthly Daily LFG Well Temperature and Status Update

Suite 305

Midlothian, VA 23113

Office: (804) 578-7440

Office Direct: (804) 486-1902

Mobile: (804) 840-7846



Semi-monthly Daily LFG Well Temperature Update_5-2-22.pdf

719K

May 2, 2022

File No. 02218208.04

MEMORANDUM

TO: Kristin Hall, EPA Region III
Crystal Bayzk, VDEQ-SWRO

FROM: D. Brandon King, SCS Engineers
Robert E. Dick, SCS Engineers

SUBJECT: Semi-monthly Status Update – April 16th through April 29th, 2022
Bristol Integrated Waste Management Facility, Bristol, Virginia

In accordance with the Environmental Protection Agency (EPA) Region III letter, *Approval of Higher Operating Temperature Values for Landfill Gas Wells and Submission of Gas Treatment Alternatives at the Bristol Virginia Integrated Solid Waste Management Facility*, dated 8/23/21, SCS is submitting this semi-monthly status update to satisfy the condition of compliance provision #2. This compliance provision report includes daily temperature readings of the existing and new wells installed. In addition, this report includes a summary of work accomplished during this reporting period of 4/15/22 through 4/29/22, pursuant of compliance provision #2.

DAILY TEMPERATURE READINGS

Exhibit 1. Daily Temperature Readings

	Mon	Tues	Wed	Thurs	Fri	Mon	Tues	Wed	Thurs	Fri
Well ID	4/18	4/19	4/20	4/21	4/22	4/25	4/26	4/27	4/28	4/29
GW-31R	NM	NM	NM	145	NM	NM	NM	NM	NM	NM
GW-35	NM	NM	NM	80	80	NM	NM	NM	NM	NM
GW-37	NM	NM	NM	145	NM	NM	NM	NM	NM	NM
GW-39	NM	NM	NM	120	118	NM	NM	NM	NM	NM
GW-40	NM	NM	NM	80	84	NM	NM	NM	NM	NM
GW-47	NM	NM	NM	80	76	NM	NM	NM	NM	NM
GW-49	NM	NM	NM	130	NM	NM	NM	NM	NM	NM
GW-52	NM	NM	NM	120	NM	NM	NM	NM	NM	NM
GW-53	NM	NM	NM	65	NM	NM	NM	NM	NM	NM
GW-54	NM	NM	NM	140	NM	NM	NM	NM	NM	NM
GW-55	NM	NM	NM	120	NM	NM	NM	NM	NM	NM
GW-58	NM	NM	NM	70	NM	NM	NM	NM	NM	NM
GW-59	NM	NM	NM	110	NM	NM	NM	NM	NM	NM



GW-60	NM	NM	NM	120	NM	NM	NM	NM	NM	NM
GW-61	NM	NM	NM	120	NM	NM	NM	NM	NM	NM
GW-62	NM	NM	NM	116	NM	NM	NM	NM	NM	NM
GW-64	NM	NM	NM	83	NM	NM	NM	NM	NM	NM
GW-66	NM	NM	NM	80	NM	NM	NM	NM	NM	NM
GW-67	NM	NM	NM	140	NM	NM	NM	NM	NM	NM
GW-68	NM	NM	NM	110	NM	NM	NM	NM	NM	NM

Note: All temperature data is reported in degrees Fahrenheit

Temperature HOV request letter sent to EPA dated 3/8/22 for temperature readings shown in red.

NM= No Measurements/ Not Monitored

LFG ANALYTICAL DATA REVIEW

The City and SCS are still awaiting the EPA's evaluation of the Higher Operating Value for Temperature Request letter submitted to EPA on 3/8/22. In April 2022, exceedance temperatures persist in HOV requested wells GW-31R and GW-37 with SCS recording temperatures of 158F and 159F respectively on 4/21/22. Temperature values below the regulatory threshold of 145°F, were recorded in all other wells. SCS recorded CO samples via 1.5L Summa Canisters at GW-31R and GW-37 on 4/6/22 and had the samples sent to Enthalpy Analytical for EPA Method CO ALT 145 laboratory analysis. The two samples were analyzed on 4/14/22 and the results showed CO concentrations below the minimal detection limit (MDL) of 90 parts per million (ppm). The laboratory analytical results for EPA Method CO ALT 145 from the report dated 4/15/22 are attached for reference.

The City of Bristol's Environmental Health and Safety Coordinator's last week was the week of 4/25/22. In addition, the City's Environmental Technician was on vacation during the week of 4/25/22. The City is reviewing a proposal to install automated wellhead temperature sensors to provide remote temperature data through SCS eTools. If automated temperature sensors are installed in the LFG wellfield, these semi-monthly status update reports will be formatted with an appendix showing daily temperatures generated from SCS eTools.

NON-ROUTINE O&M

SCS Field Services (FS) O&M removed the lateral LFG header piping, pneumatic airline, and dewatering forcemain piping to LFG vertical wells GW-40, GW-41, GW-46, GW-53, and horizontal collector HC-1 to accommodate waste placement operations on 4/18/22. SCS raised HC-1 18-feet. SCS-FS O&M moved the lateral LFG header piping, air and forcemain piping from vertical wells GW-57 and GW-58 and raised LFG vertical well GW-46 15-feet on 4/19/22. SCS-FS O&M reinstalled LFG, air, and forcemain piping to LFG wells GW-40, GW-41, GW-53, GW-55, GW-57, and horizontal collector HC-1 upon completion of waste placement operations by the City in these respective areas on 4/20-21/22.

SCS-FS O&M removed the pneumatic dewatering pump from LFG vertical extraction well GW-67 on 4/13/22. The float was free but the pump was not working. SCS-FS O&M removed the pneumatic dewatering pumps from LFG vertical extraction wells GW-60 and GW-61 on 4/14/22. The pumps were clogged with scale and were non-operational as a result. There were two pumps available in the maintenance building these wells were replaced with that were also non-operational once installed.

EVALUATION OF LFG SYSTEM

There should be several functional dedicated pneumatic dewatering pumps available on standby to be switched out in the event a well has a non-functioning pump. SCS-FS O&M recommends a dedicated pneumatic pump testing and cleaning station be set up on-site in order to confirm the operational status of dewatering pneumatic pumps at the Facility. SCS-FS O&M will be coordinating with the City for the procurement and installation set up of a pump testing and cleaning station.

Furthermore, SCS Engineers advises the City to procure a QED AP4.5 Ultra High-Temperature pneumatic pump with dedicated high temperature tubing bundle to compare overall performance and time duration between pump maintenance (e.g. pump pulling and cleaning) to the One Pump by Pump One. Looking further ahead, it will be important for the City to have at least 4 or 5 additional dewatering pumps that are tested and confirmed to be operational to have on standby.

Please contact SCS or City personnel if you have any questions or require additional information.

cc: Randall Eads, City of Bristol
David Cochran, City of Bristol
Michael Maine, City of Bristol
Erin Willard, EPA Region III
Jeff Hurst, VDEQ-SWRO
Stacy Bowers, VDEQ-SWRO
Tom Lock, SCS Field Services
Robert E. Dick, P.E., SCS Engineers



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Certificate of Analysis

Final Report

Laboratory Order ID 22D0556

Client Name:	SCS Field Services - Harrisburg, PA	Date Received:	April 8, 2022 10:31
	4330 Lewis Road, Suite 1	Date Issued:	April 15, 2022 14:30
	Harrisburg, PA 17111	Project Number:	07220028.00
Submitted To:	Tom Lock	Purchase Order:	07-SO04251
Client Site I.D.:	Bristol CO in Air		

Enclosed are the results of analyses for samples received by the laboratory on 04/08/2022 10:31. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads 'Ted Soyars'.

Ted Soyars
Technical Director

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Enthalpy Analytical, Inc.





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4330 Lewis Road, Suite 1 Date Issued: April 15, 2022 14:30

Harrisburg, PA 17111 Project Number: 07220028.00
Submitted To: Tom Lock Purchase Order: 07-SO04251
Client Site I.D.: Bristol CO in Air

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
31R	22D0556-01	Air	04/06/2022 15:31	04/08/2022 10:31
37	22D0556-02	Air	04/06/2022 15:37	04/08/2022 10:31



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Date Issued: April 15, 2022 14:30

Harrisburg, PA 17111

Submitted To: Tom Lock

Project Number: 07220028.00

Client Site I.D.: Bristol CO in Air

Purchase Order: 07-SO04251

ANALYTICAL RESULTS

Project Location:

Sample Description/Location:

Initial Vacuum(in Hg): 20

Field Sample #: 31R

Sub Description/Location:

Final Vacuum(in Hg): 9.8

Sample ID: 22D0556-01

Canister ID: 11298

Receipt Vacuum(in Hg): 9.8

Sample Matrix: Air

Canister Size: 1.4

Flow Controller Type: Passive

Sampled: 4/6/2022 15:31

Flow Controller ID: PG001

Sample Type: LG

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis ALT-145

Analyte	ppmv			Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
	Result	MDL	LOQ					
Carbon Monoxide, as received	ND	90.0	90.0		9	1	4/14/22 13:29	DFH

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis EPA 3C

Analyte	Vol%			Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
	Result	MDL	LOQ					
Methane, as received	23.3	0.45	0.45		9	1	4/14/22 13:29	DFH
Carbon dioxide, as received	35.6	0.45	0.45		9	1	4/14/22 13:29	DFH
Oxygen (O2), as received	1.71	0.45	0.45		9	1	4/14/22 13:29	DFH
Hydrogen (H2), as received	0.61	0.18	0.18		9	1	4/14/22 13:29	DFH
Nitrogen (N2), as received	34.5	0.45	0.45		9	1	4/14/22 13:29	DFH
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/14/22 13:29	DFH



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Submitted To: Tom Lock

Project Number: 07220028.00

Client Site I.D.: Bristol CO in Air

Purchase Order: 07-SO04251

ANALYTICAL RESULTS

Project Location:

Sample Description/Location:

Initial Vacuum(in Hg): 20

Field Sample #: 37

Sub Description/Location:

Final Vacuum(in Hg): 10.2

Sample ID: 22D0556-02

Canister ID: 12401

Receipt Vacuum(in Hg): 10.2

Sample Matrix: Air

Canister Size: 1.4

Flow Controller Type: Passive

Sampled: 4/6/2022 15:37

Flow Controller ID: PG001

Sample Type: LG

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis ALT-145

Analyte	ppmv			Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
	Result	MDL	LOQ					
Carbon Monoxide, as received	ND	90.0	90.0		9	1	4/14/22 14:31	DFH

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis EPA 3C

Analyte	Vol%			Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
	Result	MDL	LOQ					
Methane, as received	12.6	0.45	0.45		9	1	4/14/22 14:31	DFH
Carbon dioxide, as received	17.6	0.45	0.45		9	1	4/14/22 14:31	DFH
Oxygen (O2), as received	7.19	0.45	0.45		9	1	4/14/22 14:31	DFH
Hydrogen (H2), as received	0.30	0.18	0.18		9	1	4/14/22 14:31	DFH
Nitrogen (N2), as received	53.0	0.90	0.90		18	1	4/15/22 9:56	DFH
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/14/22 14:31	DFH



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Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis			Preparation Method:	No Prep VOC GC Air	
22D0556-01	1.00 mL / 1.00 mL	ALT-145	BFD0539	SFD0495	AG00026
22D0556-02	1.00 mL / 1.00 mL	ALT-145	BFD0539	SFD0495	AG00026
22D0556-01	1.00 mL / 1.00 mL	EPA 3C	BFD0539	SFD0495	AG00026
22D0556-02	1.00 mL / 1.00 mL	EPA 3C	BFD0539	SFD0495	AG00026
22D0556-02RE1	1.00 mL / 1.00 mL	EPA 3C	BFD0539	SFD0537	AG00026



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Purchase Order: 07-SO04251

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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Batch BFD0539 - No Prep VOC GC Air

Blank (BFD0539-BLK1)

Prepared & Analyzed: 04/14/2022

Methane	<	0.05	Vol%
Carbon dioxide	<	0.05	Vol%
Oxygen (O2)	<	0.05	Vol%
Hydrogen (H2)	<	0.02	Vol%
Nitrogen (N2)	<	0.05	Vol%
Carbon Monoxide	<	10.0	ppmv
Carbon Monoxide	<	0.001	Vol%

LCS (BFD0539-BS1)

Prepared & Analyzed: 04/14/2022

Methane	4520	0.05	ppmv	5000	90.3	70-130
Methane	4520	500	ppmv	5000	90.3	0-200
Carbon dioxide	4680	500	ppmv	5000	93.6	0-200
Carbon dioxide	4680	0.05	ppmv	5000	93.6	70-130
Oxygen (O2)	4760	500	ppmv	5000	95.3	0-200
Oxygen (O2)	4760	0.05	ppmv	5000	95.3	70-130
Hydrogen (H2)	5260	200	ppmv	5100	103	0-200
Nitrogen (N2)	4870	500	ppmv	5000	97.5	0-200
Nitrogen (N2)	4870	0.05	ppmv	5000	97.5	70-130
Hydrogen (H2)	5260	0.02	ppmv	5100	103	70-130
Carbon Monoxide	4650	10	ppmv	5000	93.0	0-200
Carbon Monoxide	4650	0.001	ppmv	5000	93.0	70-130

Duplicate (BFD0539-DUP1)

Source: 22D0556-01

Prepared & Analyzed: 04/14/2022

Methane	233000	4500	ppmv	233000	0.156	25
Methane	23.3	0.45	Vol%	23.3	0.156	5
Carbon dioxide	358000	4500	ppmv	356000	0.489	25
Carbon dioxide	35.8	0.45	Vol%	35.6	0.489	5
Oxygen (O2)	17400	4500	ppmv	17100	1.34	25
Oxygen (O2)	1.74	0.45	Vol%	1.71	1.34	5
Nitrogen (N2)	346000	4500	ppmv	345000	0.252	25
Nitrogen (N2)	34.6	0.45	Vol%	34.5	0.252	5
Hydrogen (H2)	6110	1800	ppmv	6120	0.265	25



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Harrisburg, PA 17111

Submitted To: Tom Lock

Project Number: 07220028.00

Client Site I.D.: Bristol CO in Air

Purchase Order: 07-SO04251

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Reporting			Spike Level	Source Result	%REC		RPD		Qual
	Result	Limit	Units			%REC	Limits	RPD	Limit	

Batch BFD0539 - No Prep VOC GC Air

Duplicate (BFD0539-DUP1)				Source: 22D0556-01		Prepared & Analyzed: 04/14/2022				
Hydrogen (H2)	0.61	0.18	Vol%		0.61		0.265		5	
Carbon Monoxide	<	90.0	ppmv		<90.0		NA		25	
Carbon Monoxide	<	0.009	Vol%		<0.009		NA		5	

Duplicate (BFD0539-DUP2)				Source: 22D0556-02		Prepared & Analyzed: 04/14/2022				
Methane	125000	4500	ppmv		126000		1.09		25	
Methane	12.5	0.45	Vol%		12.6		1.09		5	
Carbon dioxide	175000	4500	ppmv		176000		0.396		25	
Carbon dioxide	17.5	0.45	Vol%		17.6		0.396		5	
Oxygen (O2)	71900	4500	ppmv		71900		0.0468		25	
Oxygen (O2)	7.19	0.45	Vol%		7.19		0.0468		5	
Hydrogen (H2)	3100	1800	ppmv		3030		2.20		25	
Hydrogen (H2)	0.31	0.18	Vol%		0.30		2.20		5	
Nitrogen (N2)	514000	4500	ppmv		516000		0.425		25	
Carbon Monoxide	<	0.009	Vol%		<0.009		NA		5	
Carbon Monoxide	<	90.0	ppmv		<90.0		NA		25	

Duplicate (BFD0539-DUP3)				Source: 22D0546-01		Prepared & Analyzed: 04/14/2022				
Methane	527000	4500	ppmv		526000		0.0431		25	
Methane	52.7	0.45	Vol%		52.6		0.0431		5	
Carbon dioxide	35.6	0.45	Vol%		35.7		0.238		5	
Carbon dioxide	356000	4500	ppmv		357000		0.238		25	
Oxygen (O2)	4730	4500	ppmv		4740		0.224		25	
Oxygen (O2)	0.47	0.45	Vol%		0.47		0.224		5	
Hydrogen (H2)	<	1800	ppmv		<1800		NA		25	
Hydrogen (H2)	<	0.18	Vol%		<0.18		NA		5	
Nitrogen (N2)	1.90	0.45	Vol%		1.90		0.0986		5	
Nitrogen (N2)	19000	4500	ppmv		19000		0.0986		25	
Carbon Monoxide	<	0.009	Vol%		<0.009		NA		5	
Carbon Monoxide	<	90.0	ppmv		<90.0		NA		25	



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Enthalpy Analytical

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Qual

Batch BFD0539 - No Prep VOC GC Air

Duplicate (BFD0539-DUP4)				Source: 22D0699-01		Prepared & Analyzed: 04/14/2022				
Methane	40.1	0.45	Vol%			40.2		0.238	5	
Methane	401000	4500	ppmv			402000		0.238	25	
Carbon dioxide	352000	4500	ppmv			354000		0.557	25	
Carbon dioxide	35.2	0.45	Vol%			35.4		0.557	5	
Oxygen (O2)	<	4500	ppmv			<4500		NA	25	
Oxygen (O2)	<	0.45	Vol%			<0.45		NA	5	
Hydrogen (H2)	11600	1800	ppmv			11800		1.70	25	
Nitrogen (N2)	6990	4500	ppmv			6910		1.12	25	
Nitrogen (N2)	0.70	0.45	Vol%			0.69		1.12	5	
Hydrogen (H2)	1.16	0.18	Vol%			1.18		1.70	5	
Carbon Monoxide	<	90.0	ppmv			<90.0		NA	25	
Carbon Monoxide	<	0.009	Vol%			<0.009		NA	5	

Certified Analytes included in this Report

Analyte	Certifications	Analyte	Certifications
EPA 3C in Air			
Methane	VELAP		
Oxygen (O2)	VELAP		
Nitrogen (N2)	VELAP		



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Code	Description	Laboratory ID	Expires
MADEP	Massachusetts DEP	M-VA913	06/30/2022
MdDOE	Maryland DE Drinking Water	341	12/31/2022
NC	North Carolina DENR	495	07/31/2022
NCDEQ	North Carolina DEQ	495	12/31/2022
NCDOH	North Carolina Department of Health	51714	07/31/2022
NJDEP	NELAP-New Jersey DEP	VA015	06/30/2022
NYDOH	New York DOH Drinking Water	12096	04/01/2023
PADEP	NELAP-Pennsylvania Certificate #007	68-03503	10/31/2022
VELAP	NELAP-Virginia Certificate #11739	460021	06/14/2022
WVDEP	West Virginia DEP	350	05/31/2022

Qualifiers and Definitions

RPD	Relative Percent Difference
Qual	Qualifiers
-RE	Denotes sample was re-analyzed
PF	Preparation Factor
MDL	Method Detection Limit
LOQ	Limit of Quantitation
ppbv	parts per billion by volume

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

All EPA method 3C results are reported as normalized values when the sum total of all evaluated constituents is outside $\pm 10\%$ of the absolute.

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment due 4/4/22

COMPANY NAME: SCS Field Services - Harrisburg		INVOICE TO: Same		PROJECT NAME/Quote #: Bristol CO in Air	
CONTACT: Tom Lock		INVOICE CONTACT:		SITE NAME: Bristol Town Landfill	
ADDRESS: 4309 Linglestown Road #115 - PA		INVOICE ADDRESS:		PROJECT NUMBER: 07220028.00	
PHONE #:		INVOICE PHONE #:		P.O. #:	
FAX #:		EMAIL:		Pretreatment Program:	
Is sample for compliance reporting? YES NO		Regulatory State: VA		Is sample from a chlorinated supply? YES NO	
PWS I.D. #:		SAMPLER NAME (PRINT): Ryan DeHart		SAMPLER SIGNATURE: [Signature]	
Turn Around Time: Circle: 10 5 Days or __ Day					
Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other LV					

CLIENT SAMPLE I.D.		Regulator Info		Canister Information				Sampling Start Information				Sampling Stop Information				Matrix (See Codes)	ANALYSIS		
		Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister Vacuum (in Hg)	Barometric Pres. (in Hg): 27.49				Barometric Pres. (in Hg): 27.49						
									Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)		Ending Sample Temp °F	Alt 145 CO	EPA-3C
1)	31R	P600		11298	1.4	BC220316-0	20.0	9.8	4/6/22	3:30pm	18"	149	4/6/22	3:31pm	7"	149	LG	x	x
2)	37	<u>1</u>		12401	1.4	BC220316-0	20.0	10.2	4/6/22	3:36pm	18"	149	4/6/22	3:37pm	8"	149	LG	x	x
3)				12407	1.4	BC220316-0	20.0										LG	x	
4)				12662	1.4	BC220316-0	20.0										LG	x	
20.7°C 310 No ice no fans																			

RELINQUISHED:		RECEIVED:		DATE / TIME		QC Data Package		LAB USE ONLY	
INQUISHED:		RECEIVED:		DATE / TIME		Level I		□	
INQUISHED:		RECEIVED:		DATE / TIME		Level II		□	
INQUISHED:		RECEIVED:		DATE / TIME		Level III		□	
INQUISHED:		RECEIVED:		DATE / TIME		Level IV		□	

20.7°C 310 no ice no seal

063-22C-0011

SCS Field Services 22D0556
Carbon Monoxide Monitoring - Br
Recd: 04/08/2022 Due: 04/15/2022

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment due 4/4/22

COMPANY NAME: SCS Field Services - Harrisburg		INVOICE TO: Same	PROJECT NAME/Quote #: Bristol CO in Air
CONTACT: Tom Lock		INVOICE CONTACT:	SITE NAME:
ADDRESS: 4309 Linglestown Road #115 - PA		INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #:		INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL:	Pretreatment Program:	
Is sample for compliance reporting? YES NO		Regulatory State:	Is sample from a chlorinated supply? YES NO
			PWS I.D. #:
SAMPLER NAME (PRINT):		SAMPLER SIGNATURE:	Turn Around Time: Circle: 10 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.		Regulator Info		Canister Information				Sampling Start Information				Sampling Stop Information				Matrix (See Codes)	ANALYSIS		
		Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister Vacuum (in Hg)	Barometric Pres. (in Hg):				Barometric Pres. (in Hg):						
									Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)		Ending Sample Temp °F	Alt 145 CO	
1)				12663	1.4	BC220316-0	20.0									LG	x		
2)				12664	1.4	BC220316-0	20.0									LG	x		
3)																			
4)																			

20.7°C 310 Note NO Seal

RELINQUISHED:	RECEIVED:	DATE / TIME	QC Data Package	LAB USE ONLY
INQUIRED:	RECEIVED:	DATE / TIME	Level I	<input type="checkbox"/>
INQUIRED:	RECEIVED:	DATE / TIME	Level II	<input type="checkbox"/>
INQUIRED:	RECEIVED:	DATE / TIME	Level III	<input type="checkbox"/>
INQUIRED:	RECEIVED:	DATE / TIME	Level IV	<input type="checkbox"/>

SCS Field Services 22D0556
Carbon Monoxide Monitoring - Br
Recd: 04/08/2022 Due: 04/15/2022

v130325002

Bristol CO in air (9)



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 22D0556

Client Name: SCS Field Services - Harrisburg, PA
4330 Lewis Road, Suite 1

Date Received: April 8, 2022 10:31
Date Issued: April 15, 2022 14:30

Harrisburg, PA 17111

Submitted To: Tom Lock

Project Number: 07220028.00

Client Site I.D.: Bristol CO in Air

Purchase Order: 07-SO04251

Sample Conditions Checklist

Samples Received at:	20.70°C
How were samples received?	FedEx Express
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments