Commonwealth of Virginia

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

FW: Semi-Monthly Daily LFG Well Temperature Update

1 message

Crystal Bazyk <crystal.bazyk@deq.virginia.gov> Fri, Dec 2, 2022 at 7:08 AM
To: "Blalock, Susan" <susan.blalock@deq.virginia.gov>

Crystal C. Bazyk

Enforcement and Air Compliance/Monitoring Manager

Virginia Department of Environmental Quality

355-A Deadmore Street

Abingdon, VA 24210

276-676-4829

I will be retiring the end of 2022. I will not be responding after December 16, 2022.

From: King, Brandon <BKing@scsengineers.com>
Sent: Thursday, December 1, 2022 1:05 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>; Randall Eads <CityManager@bristolva.org>; Joey Lamie <Joey.Lamie@bristolva.org>; jon.hayes@bristolva.org; 'mmartin@bristolva.org' (mmartin@bristolva.org) <mmartin@bristolva.org>; Jake Chandler <jacob.chandler@bristolva.org>
Cc: Nachman, Lucas <LNachman@scsengineers.com>; Dick, Bob <BDick@scsengineers.com>; Warren, Charles <CWarren@scsengineers.com>; Lock, Tom <TLock@scsengineers.com>; Mahon, Ryan <RMahon@scsengineers.com>
Subject: Semi-Monthly Daily LFG Well Temperature 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 December 1st, 2022 status update on the existing wells, expansion of the gas collection system, and continuing operating and monitoring results, covering the period from November 16-30, 2022.

Thank you,

D. Brandon King

SCS Engineers

Project Manager

15521 Midlothian Turnpike, Suite 305

Midlothian, VA 23113

Main 804-378-7440

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Bimonthly Daily LFG Well Temperature Update_11-30-22_FINAL.pdf
6036K

December 1, 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 – November 15th through November 30th, 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 11/15/22 through 11/30/22, pursuant of compliance provision #2.

DAILY TEMPERATURE READINGS

The City recorded daily temperature readings throughout the second half of November and displayed on the attached table. Existing wells GW-31R and GW-37 each had one recorded reading of 145F on 11/30/22 and 11/27/22 respectively. However, well GW-46 recorded temperatures below 145F throughout the reporting period according to the City's data. New well GW-67 recorded temperatures greater than 145F intermittently during the second half of November according to the City's data. New well GW-57 recorded temperatures greater than 145F at the beginning of this reporting period, but has steadily dropped below 145F since 11/18/22 according to the City's data. SCS conducted November monthly wellfield retest monitoring on 11/17/22 and 11/29/22.

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. According to SCS November 2022 LFG monthly wellfield retest data, exceedance temperatures continue in HOV requested well and GW-37. In addition, LFG well GW-67 recorded temperatures above 145F on 11/17/22 and 11/29/22 during retest activities by SCS. Well GW-52 recorded temperature less than 145F during the 11/17/22 retest by SCS.

SCS collected CO samples via 1.5L Summa Canister at wells GW-37, GW-46, and GW-67 on 11/10/22 and received the laboratory analytical data on 11/18/22. GW-37 was non-detectable and GW-46 recorded a CO concentration of 90.4 ppm. GW-67 recorded a CO concentration of 1,020 ppm. SCS collected CO samples via 1.5L Summa Canister at wells GW-37 and GW-67 on 11/17/22 and received the laboratory analytical data on 11/29/22. GW-37 and GW-67 recorded CO concentrations of 103 ppm and 825 ppm respectively. The laboratory analytical data is included for reference.

NON-ROUTINE O&M

SCS and the City's O&M contractor are currently investigating the 6-inch LFG header to the Permit No. 498 Landfill being blocked with liquid or damaged between the access road and well GW-19. The City's contractor excavated an area of the LFG header near GW-19 and drilled a test port in the 6-inch LFG header, which demonstrated condensate seeping through the test port. The contractor removed a compromised section of LFG header to provide vacuum to well GW-19 on 11/17/22. The contractor will continue to repair the LFG header toward GW-20 and GW-21 in December.

The City's O&M contractor has cleaned, tested and replaced four additional pumps in LFG wells in the central portion of Permit #588 during this reporting period in wells GW-61, GW-49, GW-65, and GW-64. SCS has strategically selected LFG wells near current temperature probe drilling operations to switch out pumps to dewater the drilling area. The O&M contractor is slated to mobilize the week of 12/5/22 and continue switching out pumps.

Connelly is continuing with the drilling and installation of the dedicated temperature probes. Thus far, Connelly has bored and installed casings in TP-1 through TP-7. Current drilling activities are occurring at temperature probe TP-8 as of 11/30/22. There was no damage to the LFG and dewatering system as a result of drilling activities during this reporting period.

SCS-FS O&M conducted and completed work on the south leachate cleanout improvement project during this reporting period. SCS-FS completed excavation activities and installed the 12" and 8" LFG header in the excavated trench from the tie-in location to the existing LFG System near the rim of the eastern side wall to the south end leachate cleanouts. Nine cleanouts coming out the south access shaft have a dedicated QED wellhead tied into an 8" manifold. In addition, a 2" airline and 4" dewatering forcemain traverses in the common trench from the existing LFG System tie-in area towards the low point area, which will allow a simple installation and connection of a sump and condensate pump in the low point area in the future. SCS has activated the leachate cleanouts and is currently monitoring, balancing, and tuning the leachate cleanouts. See photos for reference.

View of 12-inch LFG header tie-in to existing LFG System and 12-inch LFG isolation valve.

View of 12” LFG header, 2” airline, and 4” forcemain in common trench coming off the existing LFG header tie-in location. Camera facing south.

View of south leachate cleanout manifold and nine cleanout tie-ins to the LFG System.

EVALUATION OF LFG SYSTEM

The City is equipped with several functional dedicated pneumatic dewatering pumps available on standby to be switched out in the event a well has a non-functioning pump. The City has set up a dedicated pump cleaning and testing station allowing SCS-FS O&M access to the City's wash bay. This includes an air compressor from a service truck and a water barrel to test the pneumatic pumps to satisfy this need from O&M. SCS-FS O&M will continue to use this testing and cleaning station to clean select pumps based on cycle counter data. SCS recommends the City procure four additional pumps at this time. Some of the pumps pulled were deemed non-repairable upon inspection by the

City's O&M contractor and SCS recommends having several pumps on standby. In addition, the City should also have pump replacement parts on standby. The City's O&M contractor is providing a list of those parts for procurement.

SCS is continuing weekly surface emissions monitoring per the Plan of Action Report dated 7/6/22. The City has provided daily cover throughout the Permit No. 588 Landfill based on soil boring testing results, including soil cover over the LFG, airline, and forcemain piping. Subsequent to the installation of the foam seals to nine select LFG wells for pipe penetrations monitored greater than 500 ppm during weekly SEM events, SCS monitoring data has shown continuing locations greater than 500 ppm. The City has procured well bore skirts per SCS recommendation for installation around the wells as an alternative to reduce LFG emissions around pipe penetrations. The flanges on the well risers imposes a challenge that will require cutting the well bore skirts to wrap it around the well riser underneath the flange. SCS explored the best options to conduct this safely and successfully and anticipates commencement of well bore skirt installation during the first half of December.

SCS Engineers will continue to balance and tune the south cleanouts in December, as well as other LFG System wells. SCS has already noticed improvements in LFG quality at the blower/flare station as a result of the south cleanout improvements. Furthermore, SCS is assessing additional LFG components for future installation in the Permit #588 Landfill at this time.

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

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

Note	Well Depth	Date Drill	Phase	Month	November	November	November	November	November	November	November	November	November	November	November	November	November	November
				Day	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday
				Date	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
				Well Number															
1	102	10/16/2016	Old Well	**35**	72	77	70	70	72	73	74	70	71	78	79	66	64	66	61
2	70	9/6/2017	Old Well	**39**	88	81	79	88	81	82	82	84	80	77	76	79	79	88	82
3	100	9/7/2017	Old Well	**40**	99	105	105	108	101	102	106	104	106	100	102	100	100	99	98
4	110	10/4/2016	Old Well	**46**	130	130	135	134	130	132	138	130	129	130	128	125	133	134	130
5	120	10/4/2016	Old Well	**47**	80	82	78	76	78	77	79	80	88	84	82	86	80	80	75
6	120	9/17/2013	Old Well	**29**	100	102	104	104	106	107	99	100	102	102	100	108	106	100	105
7	100	8/23/2017	Old Well	**30R**	130	130	132	134	135	130	133	133	130	134	136	129	130	133	134
8	120	8/30/2017	Old Well	**31R**	135	144	139	138	138	140	142	140	140	144	139	140	142	144	145
9	70	7/29/2016	Old Well	**32**	85	80	82	82	84	85	85	85	88	80	84	82	82	80	79
10	100	7/28/2016	Old Well	**33**	110	112	110	110	114	112	112	114	110	111	112	111	110	110	109
11	100	7/30/2016	Old Well	**34**	110	115	115	115	111	116	117	115	115	114	112	113	110	114	115
12	100	8/1/2016	Old Well	**36**	76	78	78	76	80	78	81	82	82	84	80	84	85	84	79
13	100	8/24/2017	Old Well	**37**	140	142	140	140	139	138	140	142	143	144	142	145	140	144	142
14	50	8/25/2017	Old Well	**38**	106	105	107	108	105	104	102	100	105	104	108	110	99	98	98
15	75	9/8/2017	Old Well	**41**	140	140	141	142	142	140	139	145	144	142	144	140	140	142	142
16	57	9/8/2017	Old Well	**42**	117	114	115	116	117	118	114	116	117	111	114	110	111	110	115
17	110	10/7/2016	Old Well	**48**	72	72	69	67	74	75	72	71	70	70	75	77	76	76	77
1	120	10/1/2021	New Well	**32R**	120	122	118	114	119	120	122	125	124	119	118	118	116	120	122
2	110	10/1/2021	New Well	**49**	125	126	128	128	130	132	132	130	129	128	128	133	134	135	130
3	96	10/1/2021	New Well	**50**	120	122	120	120	120	127	124	120	119	122	124	120	124	124	121
4	114	10/1/2021	New Well	**51**	129	120	125	125	127	124	126	120	120	127	126	125	122	120	124
5	109	10/1/2021	New Well	**52**	105	108	100	107	106	105	108	110	111	112	112	112	114	110	112
6	91	10/1/2021	New Well	**53**	133	134	135	136	134	134	130	129	133	132	132	134	136	134	133
7	91	10/1/2021	New Well	**54**	119	118	119	119	120	117	116	116	115	114	115	116	119	118	116
8	104	10/1/2021	New Well	**55**	120	122	120	120	124	125	122	122	126	127	128	128	122	125	125
9	109	10/1/2021	New Well	**56**	Well head pulled off	Well head pulled off	114	114	116	115	115	114	113	112	115	114	118	118	119
10	103	10/1/2021	New Well	**57**	148	145	145	142	142	140	139	138	138	129	114	114	112	114	110
11	92	10/1/2021	New Well	**58**	119	118	118	116	115	114	115	117	113	112	112	114	112	111	110
12	72	10/1/2021	New Well	**59**	108	109	108	108	110	111	109	107	106	111	112	110	109	113	108
13	120	10/1/2021	New Well	**60**	122	119	120	122	120	118	115	110	111	112	108	105	111	109	112
14	105	10/1/2021	New Well	**61**	125	124	125	125	122	127	127	126	128	125	120	122	122	124	125
15	120	10/1/2021	New Well	**62**	125	120	122	127	128	123	119	122	122	120	126	124	124	122	119
16	117	10/1/2021	New Well	**63**	125	125	120	122	125	126	124	120	120	121	122	122	126	122	110
17	120	10/1/2021	New Well	**64**	129	133	130	132	134	138	132	130	132	133	130	137	135	135	132
18	100	10/1/2021	New Well	**65**	129	128	132	130	132	132	134	136	130	132	133	132	130	130	134
19	102	10/1/2021	New Well	**66**	127	125	126	129	128	130	130	129	132	133	129	130	126	126	128
20	100	10/1/2021	New Well	**67**	145	140	142	144	145	142	144	146	140	142	142	144	145	145	148
21	75	10/1/2021	New Well	**68**	129	125	126	125	125	128	126	127	126	126	124	120	124	125	125

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Certificate of Analysis

Final Report

Laboratory Order ID 22K0707

Client Name:	SCS Field Services - Harrisburg, PA	Date Received:	November 14, 2022 10:00
	4330 Lewis Road, Suite 1	Date Issued:	November 18, 2022 13:53
	Harrisburg, PA 17111	Project Number:	[none]
Submitted To:	Tom Lock	Purchase Order:	07-SO04485
Client Site I.D.:	Bristol		

Enclosed are the results of analyses for samples received by the laboratory on 11/14/2022 10:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

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.

TNI Accredited
VELAP ID 460021

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	Harrisburg, PA 17111	Project Number:	[none]
Submitted To:	Tom Lock	Purchase Order:	07-SO04485

Client Site I.D.: Bristol

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
37	22K0707-01	Air	11/10/2022 11:32	11/14/2022 10:00
67	22K0707-02	Air	11/10/2022 11:12	11/14/2022 10:00
46	22K0707-03	Air	11/10/2022 11:17	11/14/2022 10:00

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Submitted To:	Tom Lock	Project Number:	[none]
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

ANALYTICAL RESULTS

Project Location:

Field Sample #: 37

Sample ID: 22K0707-01

Sample Matrix: Air

Sampled: 11/10/2022 11:32

Sample Type: LG

Sample Description/Location:

Sub Description/Location:

Canister ID: 063-00069::00130

Canister Size: 1.4

Initial Vacuum(in Hg): 30

Final Vacuum(in Hg): 6.8

Receipt Vacuum(in Hg): 6.8

Flow Controller Type: Passive

Flow Controller ID:

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

Analyte	ppmv Result	MDL	LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Carbon Monoxide, as received	ND	90.0	90.0		9	1	11/17/22 14:14	DFH

ENTHALPY ANALYTICAL

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Submitted To:	Tom Lock	Project Number:	[none]
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

ANALYTICAL RESULTS

Project Location:

Field Sample #: 67

Sample ID: 22K0707-02

Sample Matrix: Air

Sampled: 11/10/2022 11:12

Sample Type: LG

Sample Description/Location:

Sub Description/Location:

Canister ID: 063-00105::262

Canister Size: 1.4

Initial Vacuum(in Hg): 30

Final Vacuum(in Hg): 6.8

Receipt Vacuum(in Hg): 6.8

Flow Controller Type: Passive

Flow Controller ID:

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

Analyte	Result (ppmv)	MDL (ppmv)	LOQ (ppmv)	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Carbon Monoxide, as received	1020	90.0	90.0		9	1	11/17/22 15:07	DFH

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Submitted To:	Tom Lock	Project Number:	[none]
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

ANALYTICAL RESULTS

Project Location:

Field Sample #: 46

Sample ID: 22K0707-03

Sample Matrix: Air

Sampled: 11/10/2022 11:17

Sample Type: LG

Sample Description/Location:

Sub Description/Location:

Canister ID: 063-00146::9203

Canister Size: 1.4

Initial Vacuum(in Hg): 30

Final Vacuum(in Hg): 6.4

Receipt Vacuum(in Hg): 6.4

Flow Controller Type: Passive

Flow Controller ID:

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

Analyte	Result (ppmv)	MDL (ppmv)	LOQ (ppmv)	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Carbon Monoxide, as received	90.4	90.0	90.0		9	1	11/17/22 16:00	DFH

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Submitted To:	Tom Lock	Project Number:	[none]
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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**	
22K0707-01	1.00 mL / 1.00 mL	ALT-145	BFK0717	SFK0664	AG00026
22K0707-02	1.00 mL / 1.00 mL	ALT-145	BFK0717	SFK0664	AG00026
22K0707-03	1.00 mL / 1.00 mL	ALT-145	BFK0717	SFK0664	AG00026

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Submitted To:	Tom Lock	Project Number:	[none]
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BFK0717 - No Prep VOC GC Air										
Blank (BFK0717-BLK1)					Prepared & Analyzed: 11/17/2022					
Carbon Monoxide	<	10.0	ppmv							
LCS (BFK0717-BS1)					Prepared & Analyzed: 11/17/2022					
Methane	4270	500	ppmv	5000		85.4	0-200			
Carbon dioxide	4210	500	ppmv	5000		84.3	0-200			
Oxygen (O2)	5140	500	ppmv	5000		103	0-200			
Nitrogen (N2)	5510	2000	ppmv	5000		110	0-200			
Hydrogen (H2)	5950	200	ppmv	5100		117	0-200			
Carbon Monoxide	4940	10	ppmv	5000		98.7	0-200			
Duplicate (BFK0717-DUP1)			**Source: 22K0628-01**		Prepared & Analyzed: 11/17/2022					
Methane	244000	4500	ppmv		245000			0.256	25	
Carbon dioxide	516000	4500	ppmv		514000			0.522	25	
Oxygen (O2)	<	4500	ppmv		<4500			NA	25	
Hydrogen (H2)	154000	1800	ppmv		155000			0.269	25	
Nitrogen (N2)	<	18000	ppmv		<18000			NA	25	
Carbon Monoxide	808	90.0	ppmv		807			0.167	25	
Duplicate (BFK0717-DUP2)			**Source: 22K0628-02**		Prepared & Analyzed: 11/17/2022					
Methane	66700	4500	ppmv		67100			0.615	25	
Carbon dioxide	613000	4500	ppmv		611000			0.365	25	
Oxygen (O2)	<	4500	ppmv		<4500			NA	25	
Nitrogen (N2)	<	18000	ppmv		<18000			NA	25	
Hydrogen (H2)	254000	1800	ppmv		255000			0.440	25	
Carbon Monoxide	994	90.0	ppmv		995			0.0633	25	
Duplicate (BFK0717-DUP3)			**Source: 22K0628-03**		Prepared & Analyzed: 11/17/2022					
Methane	68300	4500	ppmv		69000			1.01	25	
Carbon dioxide	630000	4500	ppmv		632000			0.365	25	
Oxygen (O2)	4550	4500	ppmv		4610			1.32	25	
Nitrogen (N2)	<	18000	ppmv		<18000			NA	25	
Hydrogen (H2)	212000	1800	ppmv		212000			0.244	25	
Carbon Monoxide	1630	90.0	ppmv		1640			0.761	25	

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

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BFK0717 - No Prep VOC GC Air										
Duplicate (BFK0717-DUP4)				**Source: 22K0623-01**	Prepared & Analyzed: 11/17/2022					
Methane	251000	4500	ppmv		252000			0.730	25	
Carbon dioxide	526000	4500	ppmv		531000			0.871	25	
Oxygen (O2)	<	4500	ppmv		<4500			NA	25	
Hydrogen (H2)	133000	1800	ppmv		134000			0.980	25	
Nitrogen (N2)	22000	18000	ppmv		22200			0.999	25	
Carbon Monoxide	710	90.0	ppmv		710			0.0507	25	
Duplicate (BFK0717-DUP5)				**Source: 22K0623-02**	Prepared & Analyzed: 11/17/2022					
Methane	9980	4500	ppmv		10300			3.54	25	
Carbon dioxide	606000	4500	ppmv		604000			0.187	25	
Oxygen (O2)	15200	4500	ppmv		15300			0.446	25	
Hydrogen (H2)	221000	1800	ppmv		221000			0.144	25	
Nitrogen (N2)	56800	18000	ppmv		57000			0.470	25	
Carbon Monoxide	1730	90.0	ppmv		1740			0.529	25	
Duplicate (BFK0717-DUP6)				**Source: 22K0707-01**	Prepared & Analyzed: 11/17/2022					
Methane	137000	4500	ppmv		136000			0.583	25	
Carbon dioxide	222000	4500	ppmv		220000			0.820	25	
Oxygen (O2)	72300	4500	ppmv		71600			0.921	25	
Hydrogen (H2)	10300	1800	ppmv		10200			1.00	25	
Nitrogen (N2)	479000	18000	ppmv		475000			0.875	25	
Carbon Monoxide	<	90.0	ppmv		<90.0			NA	25	
Duplicate (BFK0717-DUP7)				**Source: 22K0707-02**	Prepared & Analyzed: 11/17/2022					
Methane	185000	4500	ppmv		185000			0.171	25	
Carbon dioxide	559000	4500	ppmv		559000			0.0420	25	
Oxygen (O2)	5950	4500	ppmv		5970			0.315	25	
Nitrogen (N2)	<	18000	ppmv		<18000			NA	25	
Hydrogen (H2)	184000	1800	ppmv		186000			0.666	25	
Carbon Monoxide	1020	90.0	ppmv		1020			0.158	25	

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Certificate of Analysis

Final Report

Laboratory Order ID 22K0707

Client Name:	SCS Field Services - Harrisburg, PA 4330 Lewis Road, Suite 1 Harrisburg, PA 17111	Date Received: Date Issued:	November 14, 2022 10:00 November 18, 2022 13:53
Submitted To:	Tom Lock	Project Number:	[none]
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BFK0717 - No Prep VOC GC Air										
Duplicate (BFK0717-DUP8)				**Source: 22K0707-03**	Prepared & Analyzed: 11/17/2022					
Methane	359000	4500	ppmv		363000			1.02	25	
Carbon dioxide	363000	4500	ppmv		368000			1.26	25	
Oxygen (O2)	13400	4500	ppmv		13700			1.71	25	
Hydrogen (H2)	23000	1800	ppmv		23600			2.81	25	
Nitrogen (N2)	148000	18000	ppmv		150000			1.40	25	
Carbon Monoxide	<	90.0	ppmv		90.4			NA	25	

Certified Analytes included in this Report

Analyte	Certifications	Analyte	Certifications

Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2022
NC	North Carolina DENR	495	07/31/2023
NCDEQ	North Carolina DEQ	495	07/31/2023
NCDOH	North Carolina Department of Health	51714	07/31/2023
NYDOH	New York DOH Drinking Water	12096	04/01/2023
PADEP	NELAP-Pennsylvania Certificate #008	68-03503	10/31/2023
VELAP	NELAP-Virginia Certificate #12157	460021	06/14/2023
WVDEP	West Virginia DEP	350	11/30/2022

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Submitted To:	Tom Lock	Project Number:	[none]
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

Qualifiers and Definitions

RPD	Relative Percent Difference
Qual	Qualifers
-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 ± 10% of the absolute.

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formerly Air, Water & Soil Laboratories

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment due 12/9/2022

COMPANY NAME: SCS Field Services - Harrisburg	INVOICE TO: **Same**	PROJECT NAME/Quote #: **Bristol**
CONTACT: **Mike Byk**	INVOICE CONTACT:	SITE NAME: Bristol
ADDRESS:	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 Seymour | SAMPLER SIGNATURE: Ryan Seymour | **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

063-22K-0002

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: Alt 145 CO		
1)	37			130	1.4	221018-04	30	4 SF 6.8	11/10/22	11:30	30	147	11/10/22	11:32	4	147	LG	x		
2)	67			262	1.4	221018-04	30	4 SF 6.8	11/10/22	11:10	30	169.3	11/10/22	11:12	4	169.3	LG	x		
3)	46			9203	1.4	221018-04	30	4 SF 6.4	11/10/22	11:15	30	150	11/10/22	11:17	4	150	LG	x		
4)				10093	1.4	221026-01	30										LG	x		

20.2 3/0 no ice noseal

RELINQUISHED: Ryan Seymour 11/2022	RECEIVED: fedex DATE / TIME	QC Data Package	LAB USE ONLY
RELINQUISHED: fedex DATE / TIME	RECEIVED: Yo 11/14/22 1000 DATE / TIME	Level I ☐	
RELINQUISHED: DATE / TIME	RECEIVED: DATE / TIME	Level II ☐	
		Level III ☐	
		Level IV ☐	

22K0707

SCS Field Services 22K0707
Bristol
Recd: 11/14/2022 Due: 11/21/2022
v130325002

ENTHALPY ANALYTICAL
formerly *Air, Water & Soil Laboratories*

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment due 12/9/2022

COMPANY NAME: SCS Field Services - Harrisburg	INVOICE TO: **Same**	PROJECT NAME/Quote #: **Bristol**
CONTACT: **Mike Byk**	INVOICE CONTACT:	SITE NAME:
ADDRESS:	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_____

063-22K-0002

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information (Barometric Pres. (in Hg):): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information (Barometric Pres. (in Hg):): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: Alt 145 CO		
1)				10224	1.4	221026-03	30										LG	x		
2)				12408	1.4	221026-03	30										LG	x		
3)																				
4)																				

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

22K0707

SCS Field Services **22K0707**
Bristol
Recd: 11/14/2022 **Due: 11/21/2022**

v130325002

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Certificate of Analysis

Final Report

Laboratory Order ID 22K1038

Client Name:	SCS Field Services - Harrisburg, PA	Date Received:	November 18, 2022 11:20
	4330 Lewis Road, Suite 1	Date Issued:	November 29, 2022 16:03
	Harrisburg, PA 17111	Project Number:	7220028.00
Submitted To:	MIke Byk	Purchase Order:	07-SO04485
Client Site I.D.:	Bristol		

Enclosed are the results of analyses for samples received by the laboratory on 11/18/2022 11:20. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

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.

TNI Accredited
VELAP ID 460021

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	4330 Lewis Road, Suite 1	Date Issued:	November 29, 2022 16:03
	Harrisburg, PA 17111	Project Number:	7220028.00
Submitted To:	MIke Byk	Purchase Order:	07-SO04485

Client Site I.D.: Bristol

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
37	22K1038-01	Air	11/17/2022 10:55	11/18/2022 11:20
67	22K1038-02	Air	11/17/2022 11:02	11/18/2022 11:20

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Client Name:	SCS Field Services - Harrisburg, PA 4330 Lewis Road, Suite 1 Harrisburg, PA 17111	Date Received: Date Issued:	November 18, 2022 11:20 November 29, 2022 16:03
Submitted To:	MIke Byk	Project Number:	7220028.00
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

ANALYTICAL RESULTS

Project Location:

Field Sample #: 37

Sample ID: 22K1038-01

Sample Matrix: Air

Sampled: 11/17/2022 10:55

Sample Type: LV

Sample Description/Location:

Sub Description/Location:

Canister ID: 063-00185::00278

Canister Size: 1.4L

Initial Vacuum(in Hg): 30

Final Vacuum(in Hg): 5.0

Receipt Vacuum(in Hg): 5.0

Flow Controller Type: Passive

Flow Controller ID:

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

Analyte	ppmv Result	MDL	LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Carbon Monoxide, as received	103	90.0	90.0		9	1	11/29/22 10:07	DFH

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Client Name:	SCS Field Services - Harrisburg, PA 4330 Lewis Road, Suite 1 Harrisburg, PA 17111	Date Received: Date Issued:	November 18, 2022 11:20 November 29, 2022 16:03
Submitted To:	MIke Byk	Project Number:	7220028.00
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

ANALYTICAL RESULTS

Project Location:

Field Sample #: 67

Sample ID: 22K1038-02

Sample Matrix: Air

Sampled: 11/17/2022 11:02

Sample Type: LV

Sample Description/Location:

Sub Description/Location:

Canister ID: 063-00207::00300

Canister Size: 1.4L

Initial Vacuum(in Hg): 30

Final Vacuum(in Hg): 6.2

Receipt Vacuum(in Hg): 6.2

Flow Controller Type: Passive

Flow Controller ID:

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

Analyte	ppmv Result	MDL	LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Carbon Monoxide, as received	825	90.0	90.0		9	1	11/29/22 11:00	DFH

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Submitted To:	MIke Byk	Project Number:	7220028.00
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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**	
22K1038-01	1.00 mL / 1.00 mL	ALT-145	BFK1004	SFK0990	AG00026
22K1038-02	1.00 mL / 1.00 mL	ALT-145	BFK1004	SFK0990	AG00026

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Submitted To:	MIke Byk	Project Number:	7220028.00
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BFK1004 - No Prep VOC GC Air										
Blank (BFK1004-BLK1)					Prepared & Analyzed: 11/28/2022					
Carbon Monoxide	<	10.0	ppmv							
LCS (BFK1004-BS1)					Prepared & Analyzed: 11/28/2022					
Methane	4240	500	ppmv	5000		84.7	0-200			
Carbon dioxide	4030	500	ppmv	5000		80.5	0-200			
Oxygen (O2)	5080	500	ppmv	5000		102	0-200			
Nitrogen (N2)	5470	2000	ppmv	5000		109	0-200			
Hydrogen (H2)	5990	200	ppmv	5100		117	0-200			
Carbon Monoxide	4890	10	ppmv	5000		97.8	0-200			
Duplicate (BFK1004-DUP1)			**Source: 22K0962-01**		Prepared & Analyzed: 11/28/2022					
Methane	132000	4500	ppmv		133000			0.551	25	
Carbon dioxide	361000	4500	ppmv		360000			0.212	25	
Oxygen (O2)	37300	4500	ppmv		37400			0.408	25	
Nitrogen (N2)	132000	18000	ppmv		132000			0.000450	25	
Hydrogen (H2)	333000	1800	ppmv		334000			0.0112	25	
Carbon Monoxide	463	90.0	ppmv		464			0.117	25	
Duplicate (BFK1004-DUP2)			**Source: 22K0962-02**		Prepared & Analyzed: 11/28/2022					
Methane	305000	4500	ppmv		303000			0.413	25	
Carbon dioxide	307000	4500	ppmv		304000			0.925	25	
Oxygen (O2)	34200	4500	ppmv		34000			0.542	25	
Hydrogen (H2)	83000	1800	ppmv		82600			0.407	25	
Nitrogen (N2)	233000	18000	ppmv		232000			0.423	25	
Carbon Monoxide	98.4	90.0	ppmv		98.9			0.547	25	
Duplicate (BFK1004-DUP3)			**Source: 22K0962-03**		Prepared & Analyzed: 11/28/2022					
Methane	271000	4500	ppmv		273000			1.09	25	
Carbon dioxide	211000	4500	ppmv		212000			0.372	25	
Oxygen (O2)	82700	4500	ppmv		83600			1.02	25	
Nitrogen (N2)	345000	18000	ppmv		349000			1.04	25	
Hydrogen (H2)	9670	1800	ppmv		9950			2.88	25	
Carbon Monoxide	<	90.0	ppmv		<90.0			NA	25	

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Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BFK1004 - No Prep VOC GC Air										
Duplicate (BFK1004-DUP4)				**Source: 22K0962-04**	Prepared & Analyzed: 11/28/2022					
Methane	455000	4500	ppmv		456000			0.312	25	
Carbon dioxide	375000	4500	ppmv		375000			0.175	25	
Oxygen (O2)	16100	4500	ppmv		16100			0.555	25	
Hydrogen (H2)	7530	1800	ppmv		7460			1.02	25	
Nitrogen (N2)	61800	18000	ppmv		61800			0.0100	25	
Carbon Monoxide	<	90.0	ppmv		<90.0			NA	25	
Duplicate (BFK1004-DUP5)				**Source: 22K0962-05**	Prepared & Analyzed: 11/28/2022					
Methane	342000	4500	ppmv		345000			0.724	25	
Carbon dioxide	397000	4500	ppmv		397000			0.0481	25	
Oxygen (O2)	5200	4500	ppmv		5280			1.63	25	
Nitrogen (N2)	19800	18000	ppmv		20100			1.75	25	
Hydrogen (H2)	191000	1800	ppmv		191000			0.251	25	
Carbon Monoxide	158	90.0	ppmv		162			2.14	25	
Duplicate (BFK1004-DUP6)				**Source: 22K0962-06**	Prepared & Analyzed: 11/28/2022					
Methane	305000	4500	ppmv		307000			0.640	25	
Carbon dioxide	328000	4500	ppmv		330000			0.661	25	
Oxygen (O2)	20500	4500	ppmv		20700			1.02	25	
Hydrogen (H2)	132000	1800	ppmv		131000			0.0206	25	
Nitrogen (N2)	153000	18000	ppmv		154000			0.869	25	
Carbon Monoxide	161	90.0	ppmv		162			0.612	25	
Duplicate (BFK1004-DUP7)				**Source: 22K0962-07**	Prepared & Analyzed: 11/28/2022					
Methane	364000	4500	ppmv		364000			0.0571	25	
Carbon dioxide	207000	4500	ppmv		207000			0.252	25	
Oxygen (O2)	5440	4500	ppmv		5610			3.13	25	
Hydrogen (H2)	90300	1800	ppmv		90100			0.204	25	
Nitrogen (N2)	263000	18000	ppmv		264000			0.279	25	
Carbon Monoxide	<	90.0	ppmv		<90.0			NA	25	

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Submitted To:	MIke Byk	Project Number:	7220028.00
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BFK1004 - No Prep VOC GC Air										
Duplicate (BFK1004-DUP8)			**Source: 22K0962-09**		Prepared & Analyzed: 11/28/2022					
Methane	394000	4500	ppmv		394000			0.0102	25	
Carbon dioxide	378000	4500	ppmv		377000			0.222	25	
Oxygen (O2)	4810	4500	ppmv		4830			0.521	25	
Hydrogen (H2)	111000	1800	ppmv		111000			0.295	25	
Nitrogen (N2)	58700	18000	ppmv		58600			0.169	25	
Carbon Monoxide	227	90.0	ppmv		224			1.16	25	
Duplicate (BFK1004-DUP9)			**Source: 22K0962-10**		Prepared & Analyzed: 11/28/2022					
Methane	380000	4500	ppmv		381000			0.276	25	
Carbon dioxide	350000	4500	ppmv		347000			0.821	25	
Oxygen (O2)	8840	4500	ppmv		8890			0.496	25	
Nitrogen (N2)	140000	18000	ppmv		141000			0.392	25	
Hydrogen (H2)	57200	1800	ppmv		57500			0.570	25	
Carbon Monoxide	93.6	90.0	ppmv		95.9			2.47	25	
Duplicate (BFK1004-DUPA)			**Source: 22K1054-02RE1**		Prepared & Analyzed: 11/29/2022					
Methane	292000	4500	ppmv		289000			0.883	25	
Carbon dioxide	447000	4500	ppmv		443000			0.920	25	
Oxygen (O2)	34100	4500	ppmv		34000			0.417	25	
Nitrogen (N2)	118000	18000	ppmv		118000			0.275	25	
Hydrogen (H2)	72500	1800	ppmv		71900			0.919	25	
Carbon Monoxide	<	90.0	ppmv		<90.0			NA	25	
Duplicate (BFK1004-DUPB)			**Source: 22K1038-01**		Prepared & Analyzed: 11/29/2022					
Methane	147000	4500	ppmv		148000			0.725	25	
Carbon dioxide	231000	4500	ppmv		233000			0.725	25	
Oxygen (O2)	73600	4500	ppmv		74200			0.703	25	
Hydrogen (H2)	13100	1800	ppmv		13000			0.698	25	
Nitrogen (N2)	482000	18000	ppmv		485000			0.671	25	
Carbon Monoxide	102	90.0	ppmv		103			0.615	25	

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

Certificate of Analysis

Final Report

Laboratory Order ID 22K1038

Client Name:	SCS Field Services - Harrisburg, PA 4330 Lewis Road, Suite 1 Harrisburg, PA 17111	Date Received: Date Issued:	November 18, 2022 11:20 November 29, 2022 16:03
Submitted To:	MIke Byk	Project Number:	7220028.00
Client Site I.D.:	Bristol	Purchase Order:	07-SO04485

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

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BFK1004 - No Prep VOC GC Air										
Duplicate (BFK1004-DUPC)				**Source: 22K1038-02**	Prepared & Analyzed: 11/29/2022					
Methane	207000	4500	ppmv		207000			0.281	25	
Carbon dioxide	573000	4500	ppmv		570000			0.527	25	
Oxygen (O2)	5040	4500	ppmv		5000			0.779	25	
Hydrogen (H2)	168000	1800	ppmv		168000			0.0888	25	
Nitrogen (N2)	<	18000	ppmv		<18000			NA	25	
Carbon Monoxide	831	90.0	ppmv		825			0.717	25	

Certified Analytes included in this Report

Analyte	Certifications	Analyte	Certifications

Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2022
NC	North Carolina DENR	495	07/31/2023
NCDEQ	North Carolina DEQ	495	07/31/2023
NCDOH	North Carolina Department of Health	51714	07/31/2023
NYDOH	New York DOH Drinking Water	12096	04/01/2023
PADEP	NELAP-Pennsylvania Certificate #008	68-03503	10/31/2023
VELAP	NELAP-Virginia Certificate #12157	460021	06/14/2023
WVDEP	West Virginia DEP	350	11/30/2022

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

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Qualifiers and Definitions

RPD	Relative Percent Difference
Qual	Qualifers
-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 ± 10% of the absolute.

ENTHALPY ANALYTICAL
formerly ~~Air, Water & Soil Laboratories~~

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment due 12/15/2022

COMPANY NAME: SCS Field Services - Harrisburg	INVOICE TO: **Same**	PROJECT NAME/Quote #: **Bristol**
CONTACT: **Mike Byk**	INVOICE CONTACT:	SITE NAME: Bristol
ADDRESS:	INVOICE ADDRESS:	PROJECT NUMBER: 72208.00
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 Seymour | SAMPLER SIGNATURE: Ryan Seymour | **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

063-22K-0008

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: Alt 145 CO		
1)	37			278	1.4	221109-02	30	~~5.0~~ (5.0)	11/17/22	10:50 PM	30	147	11/17/22	10:55 AM	6	147	LG	x		
2)	67			300	1.4	221109-02	30	~~7~~ (6.2)	11/17/22	10:59 am	30	154	11/17/22	11:02 am.	7	155	LG	x		
3)				✓ 324	1.4	221109-02	30										LG	x		
4)				✓ 11076	1.4	221109-02	30										LG	x		

20.2°C, 310, no ice, no seal

RELINQUISHED: Ryan Seymour	DATE / TIME: 11/17/22 522 pm	RECEIVED: FedEx E	DATE / TIME
RELINQUISHED: FedEx E	DATE / TIME	RECEIVED: CSB	DATE / TIME: 11/18/22 1120
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package: Level I ☐ Level II ☐ Level III ☐ Level IV ☐

LAB USE ONLY

SCS Field Services 22K1038

Bristol

Recd: 11/18/2022 Due: 11/29/2022

v130325002

ENTHALPY ANALYTICAL
formerly Air, Water & Soil Laboratories

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment due 12/15/2022

COMPANY NAME: SCS Field Services - Harrisburg	INVOICE TO: **Same**	PROJECT NAME/Quote #: **Bristol**
CONTACT: **Mike Byk**	INVOICE CONTACT:	SITE NAME:
ADDRESS:	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_____

063-22K-0008

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: Alt 145 CO		
1)				12403	1.4	221109-02	30										LG	x		
2)				12415	1.4	221109-02	30										LG	x		
3)																				
4)																				

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level I ☐
Level II ☐
Level III ☐
Level IV ☐

LAB USE ONLY

SCS Field Services 22K1038
Bristol
Recd: 11/18/2022 Due: 11/29/2022

v130325002