Bridgeton Landfill, LLC

Monthly Data Submittals

January, 2016

Required by Section 52.E of Agreed Order, Case No. 13SL-CC01088
Effective May 13, 2013

Contents:

Provided Separately:

– Flare Raw Data Excel Spreadsheet
– Gas Wellfield Raw Data Excel Spreadsheet

February 20, 2016

Commentary on Data

February 20, 2016

The following observations and comments are offered during this time period:

Gas Volume

- As seen in Attachment B-1, gas collection volumetric rate in for this month averaged 2,997 SCFM, as normalized per the MDNR weekly flow and TRS sampling results.

Gas Quality

- Attachments D and E contain the monthly data related to gas quality as measured at the respective wellheads.

- Attachment E-1 details vertical wells which had oxygen levels over 5% at one or more weekly monitoring events during this reporting period. These consisted of 8 older GEW wells (<#-120) that are experiencing low flows; 12 new GEW wells (>#-120) that are experiencing restricted flows; 12 GIW wells that have low gas flow due to the cooling loops that are installed within these wells. By the end of the month, the majority of these wells still exhibited oxygen at the wellhead at or greater than 5%. All these wells, except the new GEWs are low-flow/vacuum sensitive wells with valves only slightly open. On-going tuning, maintenance and pump operation is being performed to manage the oxygen content. These wells are in the south quarry area where the flexible membrane liner cap is in place to prevent atmospheric intrusion into the waste mass.

- Attachment E-2 contains gas temperatures as measured at the wellheads. Ten (10) vertical wells (excluding GIW wells) decreased by 30°F during this reporting period. Additionally, five (5) vertical wells (excluding GIW wells) increased by 30°F or more. All wells that exhibited changes greater than 30 degrees are all within the historical gas temperature norms for these wells or within the range of temperatures of nearby vertical wells.

- A detailed review of the gas extraction wells in the neck area was conducted. Maximum temperatures are consistent with previous months in each of the gas extraction wells in vicinity to the neck. Carbon monoxide (CO) results during this reporting period showed stable month-over-month based on historic levels within the Neck Area wells.

- All wells in the North Quarry during this reporting period exhibited a maximum wellhead temperature under 145° F with the exception of GEW-054. The well had a maximum well head temperature of 155°F, but it returned to 145°F (the 12-month rolling average is 144°F) by the end of the month. The only North Quarry well that had detections of carbon monoxide during this reporting period was GEW-053 (49 ppm). Carbon monoxide (CO) results showed non-detect (ND) for all other North quarry wells.

- Review of weekly gas quality in Attachment E reveals that all of the active North Quarry gas wells continue to have low, if any, oxygen and healthy methane and carbon dioxide levels indicating normal wellfield conditions for aged waste at all locations, consistent with GCCS wellfield conditions observed in the North Quarry for some time.

Settlement

- The South Quarry exhibited monthly maximum settlement up to 1.53 feet over 34 days (1.35 feet over 30 days) for this reporting period (see Attachment F); which is comparable to last month's rate. The rate of settlement directly south of the neck continues to be small and stable compared to previous months.

Bird Monitoring and Mitigation

- Bridgeton Landfill conducted bird monitoring during this reporting period in accordance with the Approved Bird Hazard Monitoring and Mitigation Plan. Logs of bird population observations were provided to the Airport on a weekly basis. No change in bird population or bird hazards were observed and no bird mitigation measures were necessary.

Low Fill Project Area

- Enclosed is the requested clean fill placement figure in accordance with the June 19, 2015 letter from the Missouri Department of Natural Resources (MDNR) granting modification approval to Permit number 0118912. This modification allows for the acceptance of clean fill and use thereof as a method of re-establishing positive surface drainage and maintaining structural stability of landfill infrastructure. Condition four (4) of this approval is satisfied via the text below and the accompanying figure.

- Clean fill activities commenced in late December and have continued into early January on a region of differential settlement located in the northeastern portion of the South Quarry. The total cubic yardage of fill material used is still to be determined. The enclosed figure indicates this fill area as well as clean fill materials stockpile areas on the West Lake OU2 portion of the property and the Bridgeton Landfill North Quarry portion of the property in support of this project. Upon conclusion of the fill project the requested cubic yardage, drainage features (if applicable), and drawings showing the completed location area shall be provided with the following monthly report.

- The previous monthly submittal was performed outside of the standard site surveying schedule as the previous event occurred before substantial work had begun on the northeastern fill project. Therefore the figure submitted in this monthly report is the same as last month, representative of January fill operations. Future reports will feature the previous month's figure as with other figures submitted in this report (i.e. the February figure will be submitted with the March report).

ATTACHMENT A

WORK COMPLETED AND PLANNED

Bridgeton Landfill, LLC
Monthly Summary of Work Completed and Planned

Work Completed in January 2016

Gas Collection and Control System

- Continued operation and maintenance of GCCS System and GIW wells.
- Began header realignment project to improve condensate management and header vacuum distribution.

Alternative Heat Extraction System

- Continued operation and maintenance of the HES.

Leachate Management System

- Continued to enhance operational efficiency of the pretreatment facility.
- Permeate continued to be discharged directly to MSD – Bissell Point Facility or other approved disposal facilities as determined by MSD.

Pre-Treatment Facility

- Continued ongoing operation of facility.
- Continued to optimize operation efficiency of pre-treatment facility.

Other Projects

- Continued North Quarry cap enhancements.
- Continued low area fill project in South Quarry.
- Continued acceptance of clean fill.

Work Planned for February 2016

Gas Collection and Control System

- Continue operation and maintenance of GCCS system.
- Continue header realignment project to improve condensate management and header vacuum distribution.
- Continue upgrades to GCCS system as necessary.

Alternative Heat Extraction System

- Continued operation and maintenance of the HES.

Leachate Management System

- Continued routine operation of previously installed and upgraded features.
- Begin hauling activated sludge from the 1 million gallon aeration tanks. It is projected that approximately 1.2 million gallons will be shipped over a period of one week.

Pre-Treatment Facility

- Ongoing operation of facility.
- Continue to optimize operation efficiency of pre-treatment facility.

Other Projects:

- Continue fill projects for north slope of south quarry and low area on east slope
- Continue acceptance of clean fill materials for future fill projects.
- Complete north quarry cap enhancement project (weather permitting).

ATTACHMENT B

DAILY FLARE MONITORING DATA

ATTACHMENT B-1

FLOW DATA TABLE

Daily Flare Monitoring Data - Bridgeton Landfill
January 2016

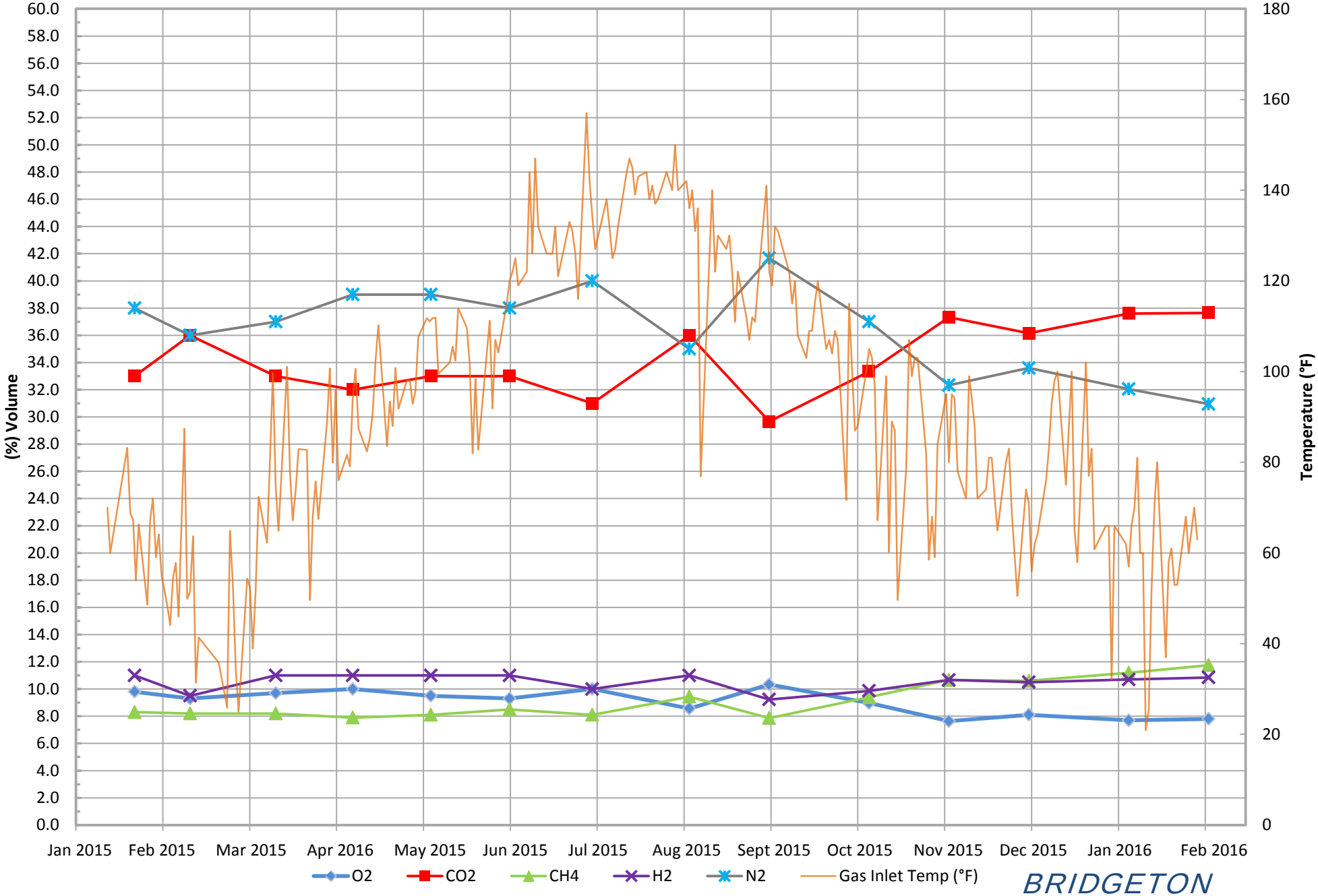
Date	Average Device Flow* (scfm)				Total Avg. Flow** (scfm)
	Utility Flare (FL-100)	Utility Flare (FL-120)	Utility Flare (FL-140)	Aux. Utility Flare	
1/1/2015	0	0	3,193		3,193
1/2/2015	0	0	3,197		3,197
1/3/2015	0	0	3,116		3,116
1/4/2015	0	0	3,043		3,043
1/5/2015	0	0	2,957	23	2,980
1/6/2015	0	0	2,687	427	3,115
1/7/2015	0	0	2,929	242	3,170
1/8/2015	0	0	3,098		3,098
1/9/2015	0	0	3,040		3,040
1/10/2015	0	0	2,945		2,945
1/11/2015	0	0	2,983		2,983
1/12/2015	0	0	2,957		2,957
1/13/2015	0	0	2,968		2,968
1/14/2015	0	0	2,981		2,981
1/15/2015	0	0	2,973		2,973
1/16/2015	0	0	2,985		2,985
1/17/2015	0	0	3,006		3,006
1/18/2015	0	0	2,970		2,970
1/19/2015	0	0	2,930	28	2,958
1/20/2015	0	0	2,986		2,986
1/21/2015	0	0	2,977		2,977
1/22/2015	0	0	3,029		3,029
1/23/2015	0	0	3,065		3,065
1/24/2015	0	0	3,070		3,070
1/25/2015	0	0	2,952		2,952
1/26/2015	0	0	2,909		2,909
1/27/2015	0	0	2,934		2,934
1/28/2015	0	0	2,848		2,848
1/29/2015	0	0	2,836		2,836
1/30/2015	0	0	2,830		2,830
1/31/2015	0	0	2,805		2,805
				Average	**2,997**

* Flows normalized to **Blower Outlet Flowmeter - EPA Method 2 measurement verified

ATTACHMENT B-2

FLOW DATA GRAPHS

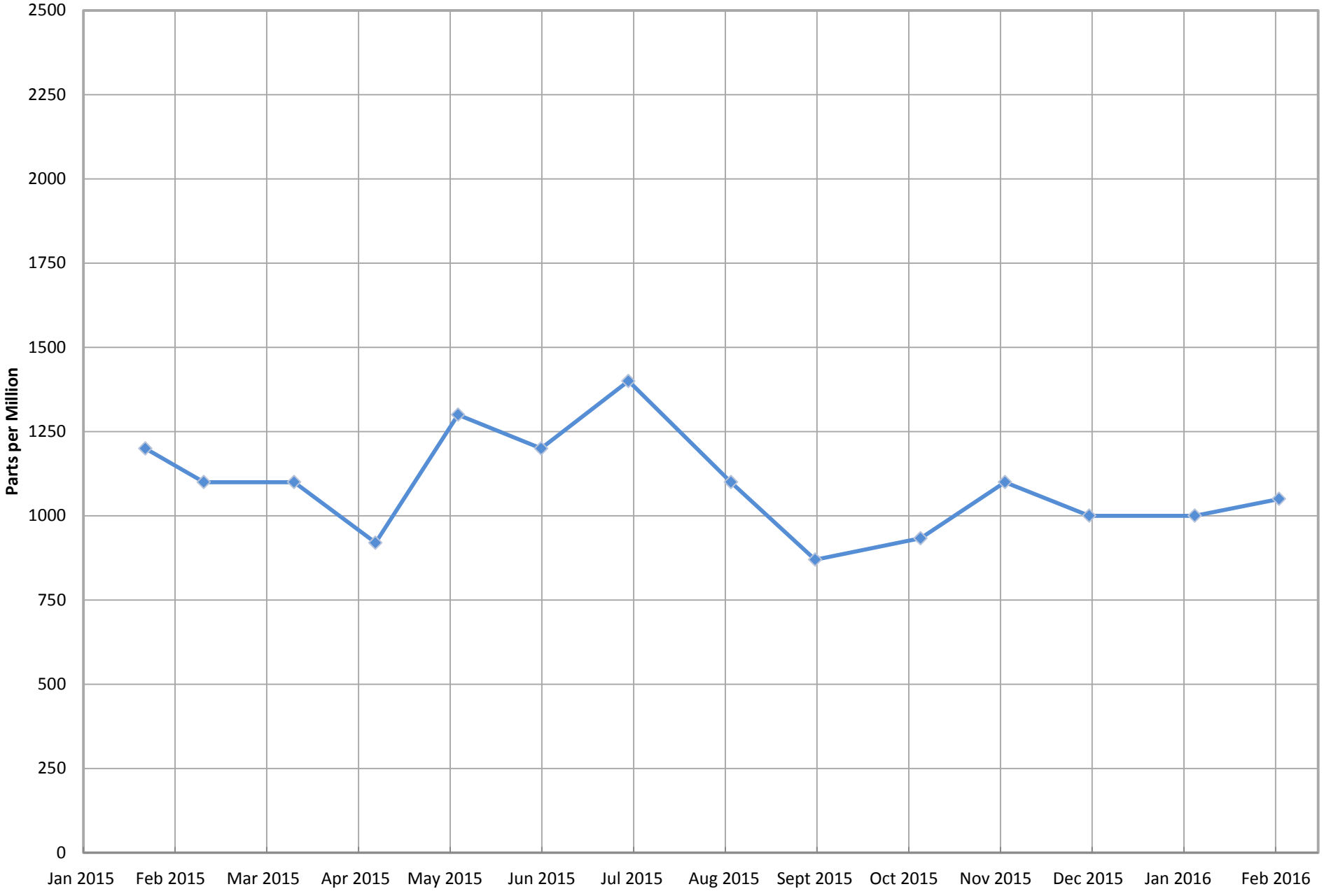
Inlet Gas and Temperature*



*Gas data collected from Laboratory Reports. Temperature data collected from field readings.
*Data for 12/1/15 was added in the January Monthly Report.

BRIDGETON LANDFILL

Inlet Carbon Monoxide*

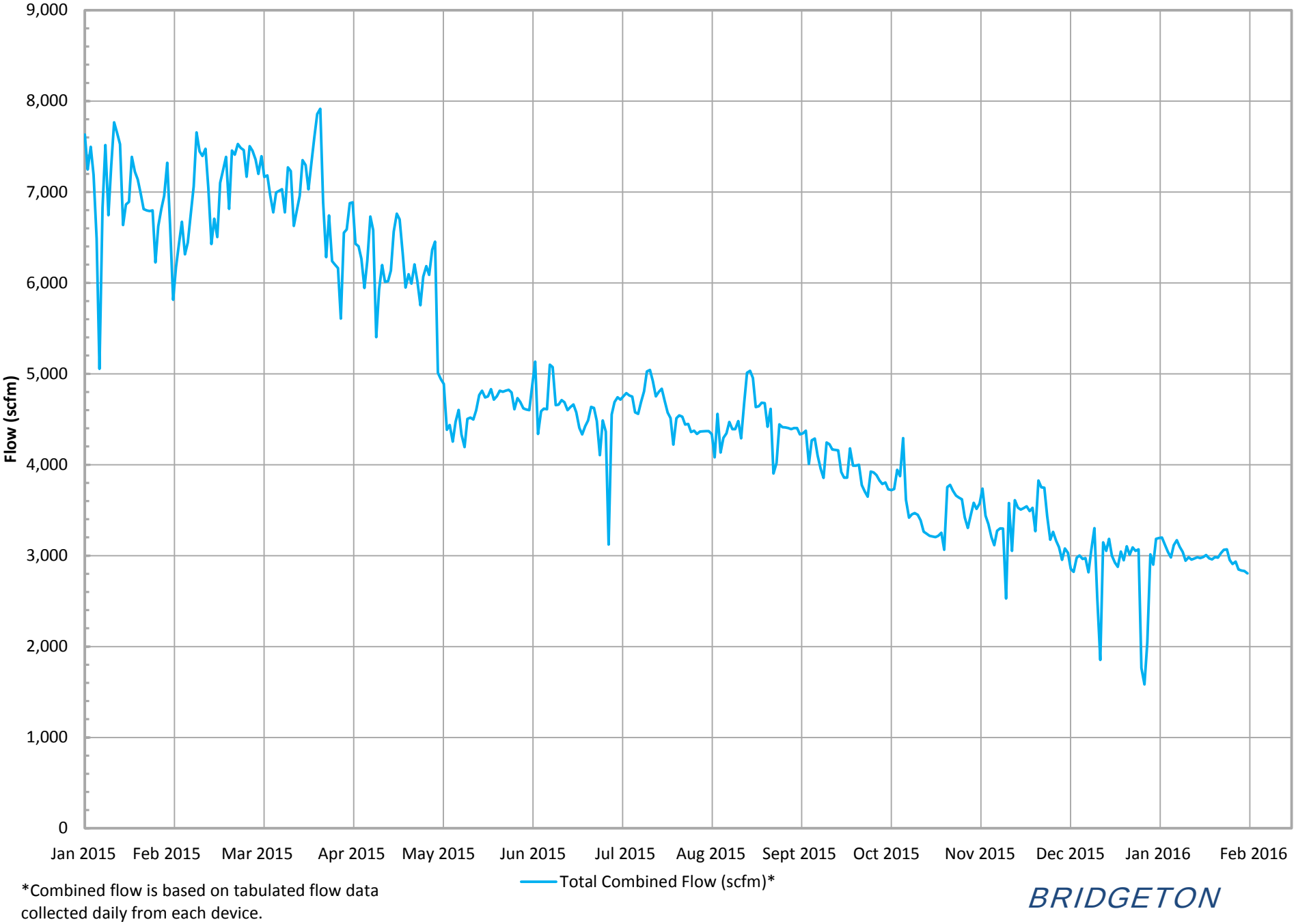


*Data collected from Laboratory Reports.

*Data for 12/1/15 was added in the January Monthly Report.

BRIDGETON LANDFILL

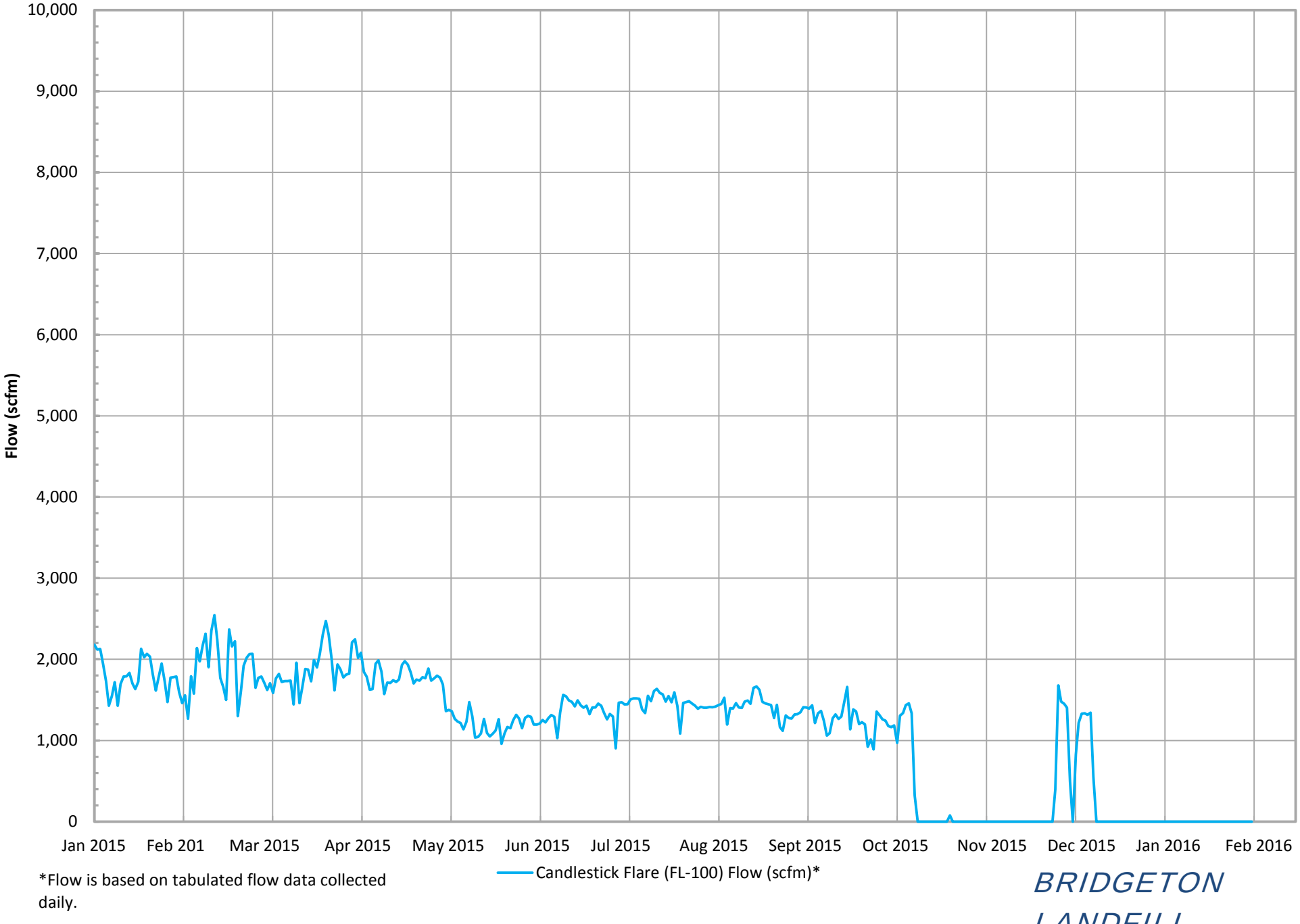
Total Combined Flow (scfm)*



*Combined flow is based on tabulated flow data collected daily from each device.

BRIDGETON LANDFILL

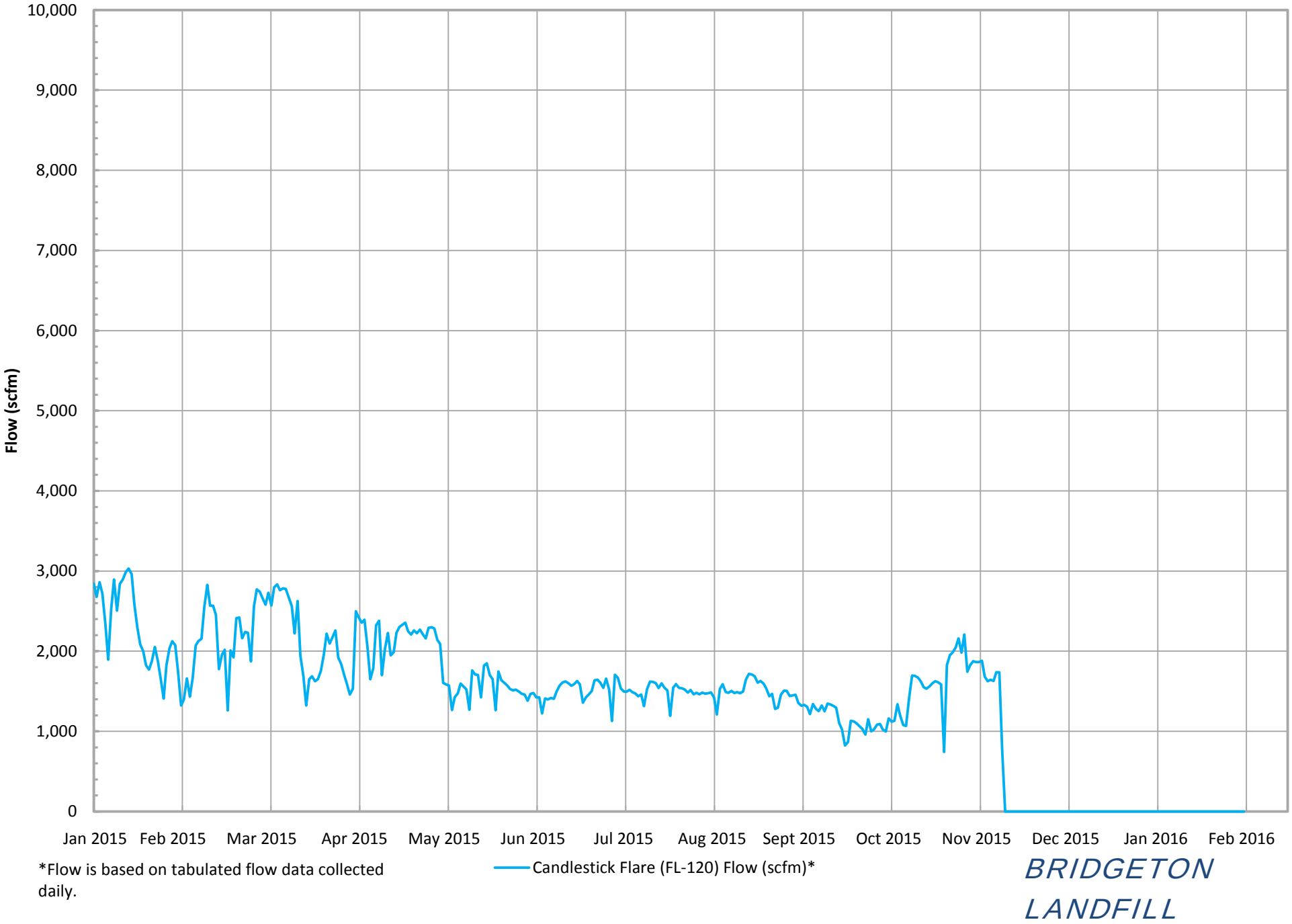
Candlestick Flare (FL-100) Flow (scfm)*



*Flow is based on tabulated flow data collected daily.

BRIDGETON LANDFILL

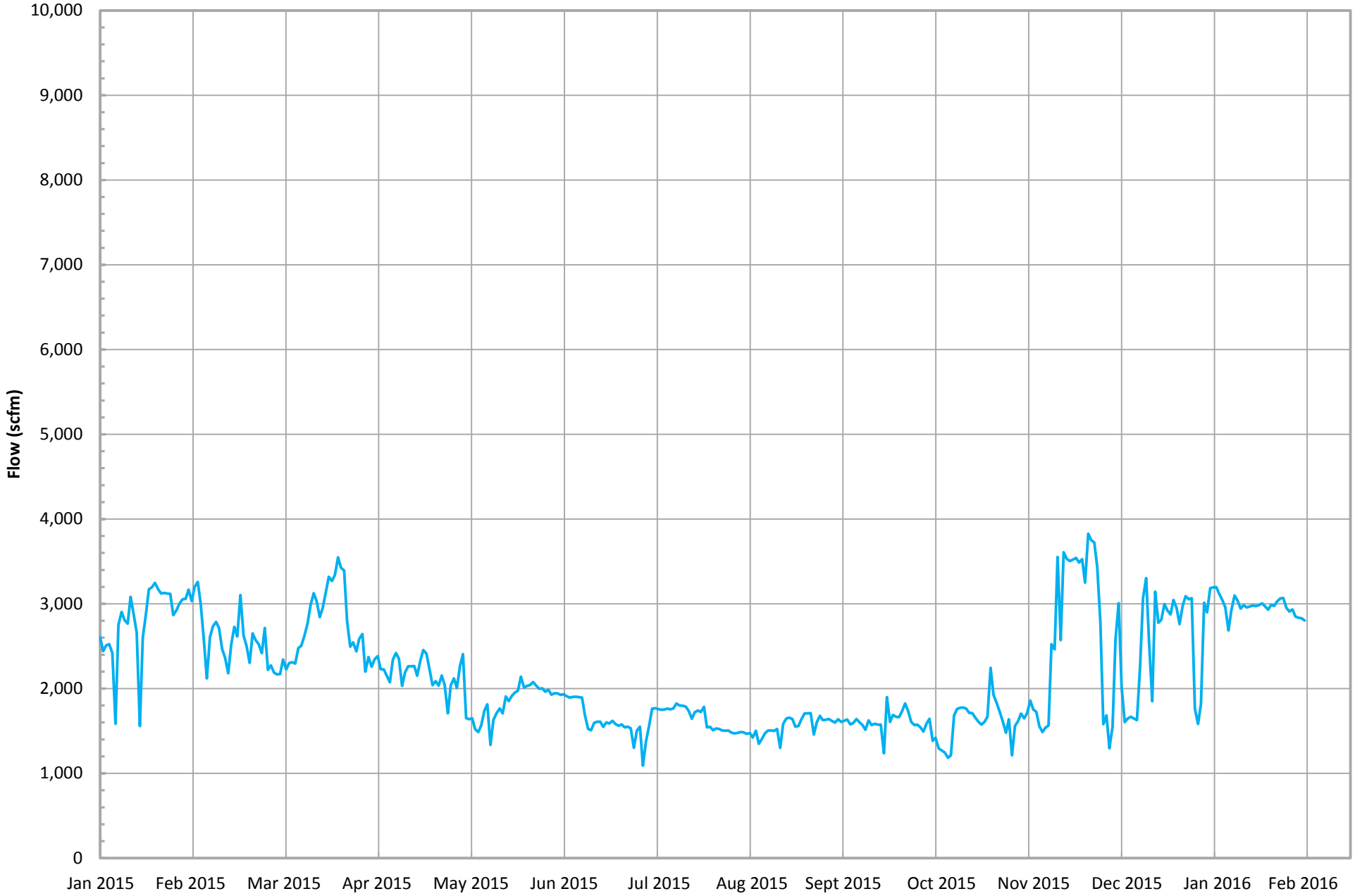
Candlestick Flare (FL-120) Flow (scfm)*



*Flow is based on tabulated flow data collected daily.

BRIDGETON LANDFILL

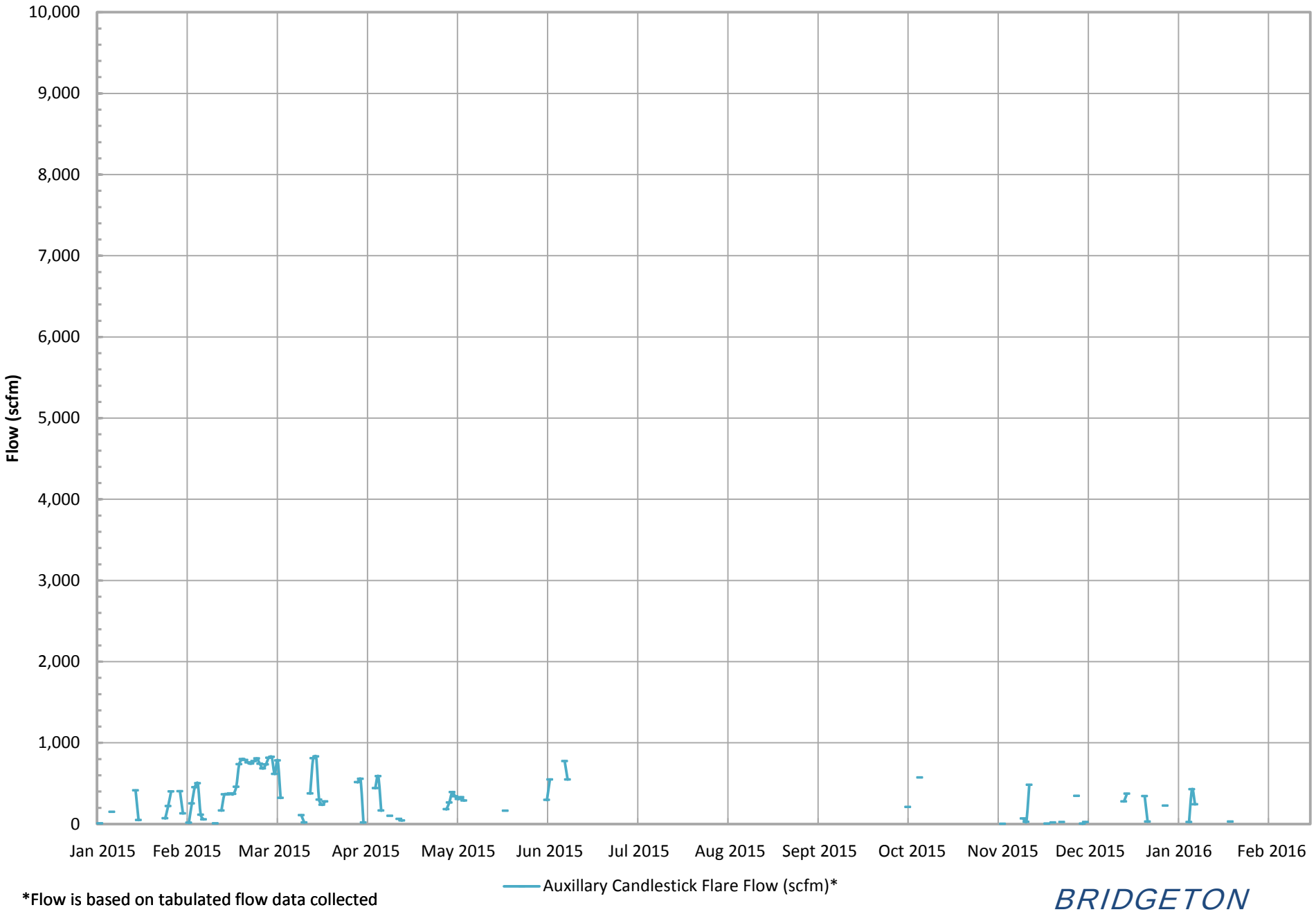
Candlestick Flare (FL-140) Flow (scfm)*



*Flow is based on tabulated flow data collected daily.

BRIDGETON LANDFILL

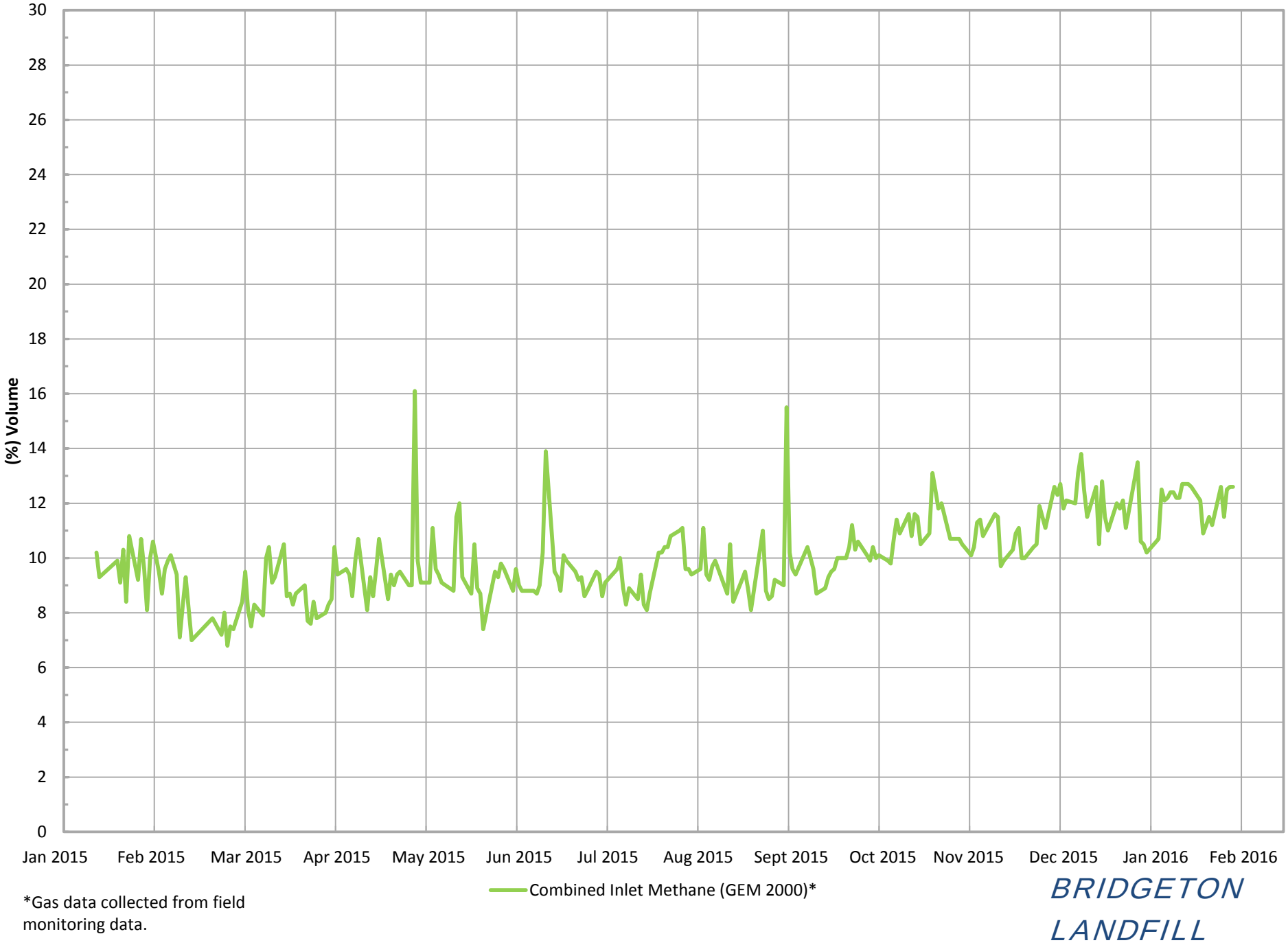
Auxillary Candlestick Flare Flow (scfm)*



*Flow is based on tabulated flow data collected daily.

BRIDGETON LANDFILL

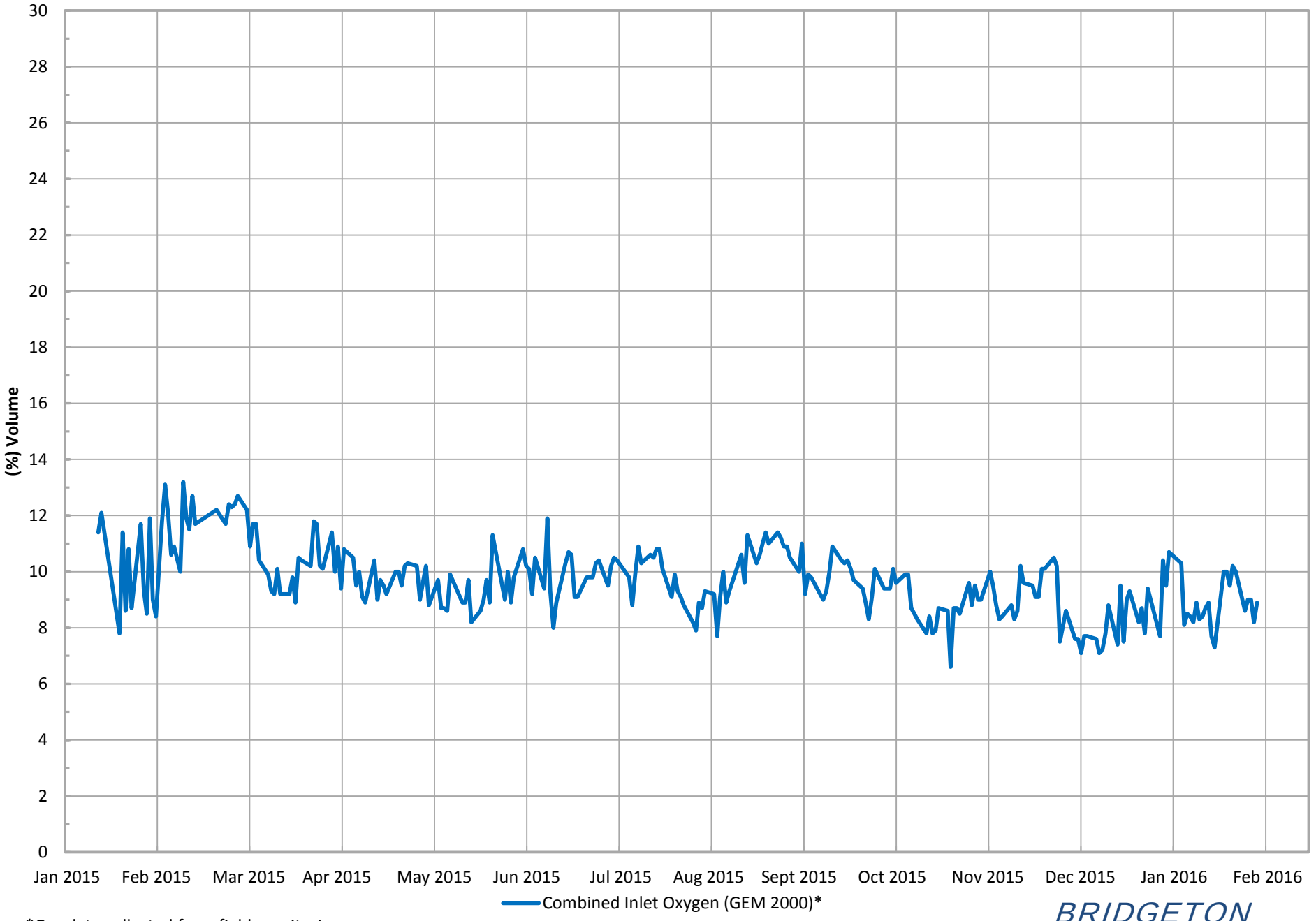
Combined Inlet Methane (Field Data)*



*Gas data collected from field monitoring data.

BRIDGETON LANDFILL

Combined Inlet Oxygen (Field Data)*

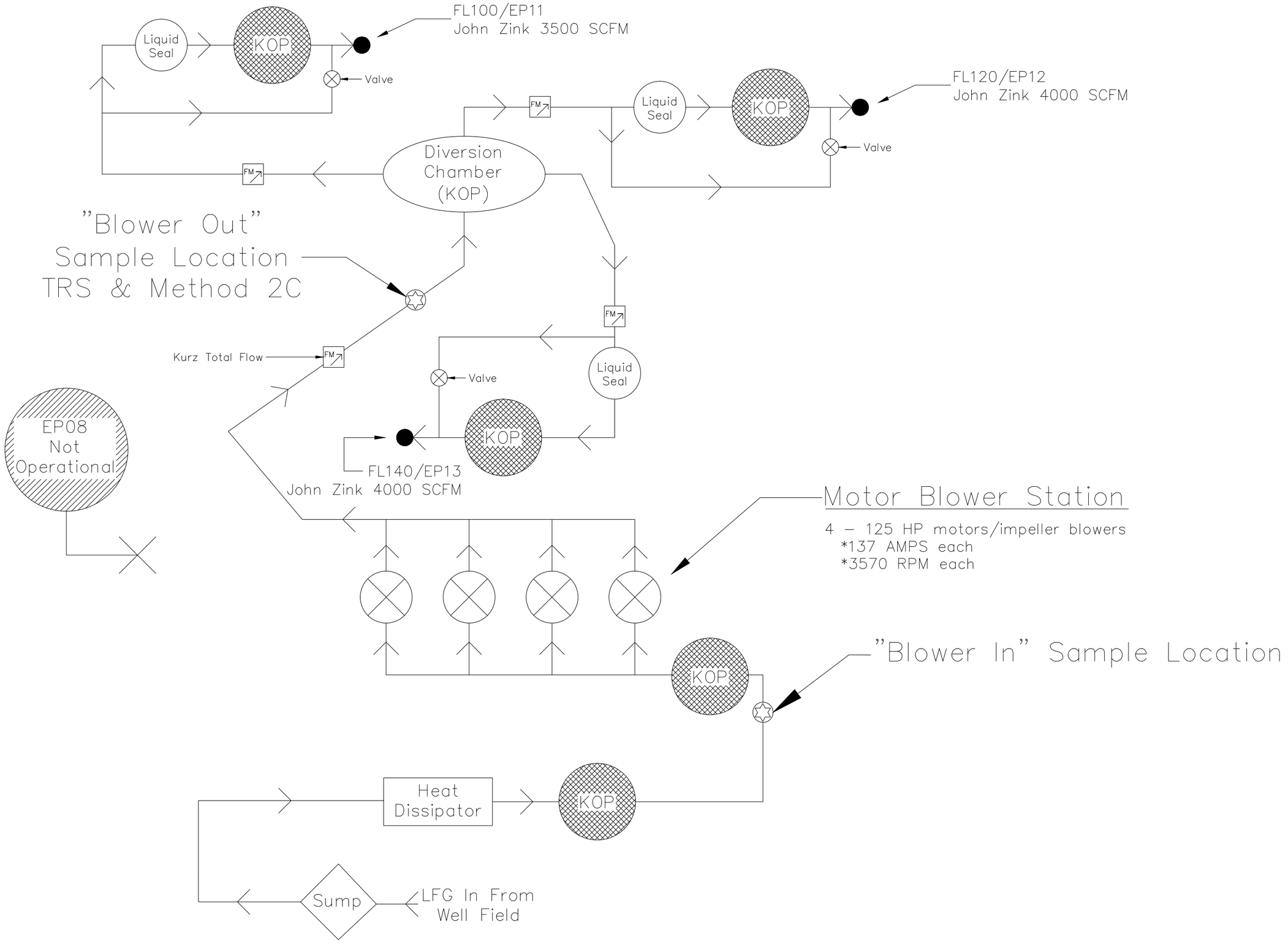


*Gas data collected from field monitoring data.

BRIDGETON LANDFILL

ATTACHMENT B-3

FLARE TRS / FLARE STATION FLOW



PREPARED FOR:
BRIDGETON LANDFILL, LLC

FIGURE 1 - FLARE COMPOUND
PROCESS FLOW DIAGRAM
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI

No.	DATE	REVISION DESCRIPTION

Weaver Consultants Group

WEAVER CONSULTANTS GROUP
6301 EAST HWY AB
COLUMBIA, MISSOURI 65201
(636)-431-3399
www.wcgrp.com

DRAWN BY:	DT
REVIEWED BY:	DAR
DATE:	5/20/2015
FILE:	0120-131-10
CAD:	Figure 1 - Flow Diagram - REV.dwg

SHEET 1 OF 1

TABLE 1 **Bridgeton Landfill, LLC.**

Summary of Key LFG Tested Parameters **January 05, 2015 to February 02, 2016**

Flare Compound: *Blower Outlet*

SAMPLE	DATE	VELOCITY	FLOW	TRS[2]
EVENT #		ft/sec	dscfm	ppm_{vd}
48-05 [1] [2]	2/2/2016	33.03	2730	1200
				1100
				1100 [3]
				1300 [3]
47-04	1/27/2016	34.46	2791	1400
				1600
46-03	1/20/2016	35.93	2910	1700
				1800
45-02	1/13/2016	35.01	2836	1700
				1500
44-01 [1] [2]	1/5/2016	34.30	2926	1400
				1300
				1310 [4]

Notes:

[1] Indicates velocity/flow determined by EPA Method 2

[2] Split Samples, different lab and test method

[3] "Split Sample" tested at ALS Environmental

[4] "Split Sample" tested at Analytical Soluntions, Inc.

	PARAMETER	Blower Out
Date	Test Date	2/2/16
Start	Run Start Time	9:08
	Run Finish Time	11:05
	Net Traversing Points	16 (2 x 8)
Θ	Net Run Time, minutes	1:56:20
C_p	Pitot Tube Coeficient	0.99
P_{Br}	Barometric Pressure, inches of Mercury	29.08
% H_2O	Moisture Content of LFG, %	1.34
% RH	Relative Humidity, %	47.90
M_{fd}	Dry Mole Fraction	0.987
%CH_4	Methane, %	12.30
%CO_2	Carbon Dioxide, %	39.20
%O_2	Oxygen, %	8.40
%Balance	Assumed as Nitorgen, %	29.30
%H_2	Hydrogen, %	10.70
%CO	Carbon Monoxide, %	0.10
M_d	Dry Molecular Weight, lb/lb-Mole	30.36
M_s	Wet Molecular weight, lb/lb-Mole	30.20
P_g	Flue Gas Static Pressure, inches of H_2O	30.22
P_s	Absolute Flue Gas Pressure, inches of Mercury	31.30
t_s	Average Stack Gas Temperature, °F	75
ΔP_{avg}	Average Velocity Head, inches of H_2O	0.269
v_s	Average LFG Velocity, feet/second	33.03
A_s	Stack Crossectional Area, square feet	1.35
Q_{sd}	Dry Volumetric Flow Rate, dry scfm	2,730
Q_s	Standard Volumetric Flow Rate, scfm	2,767
Q_{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	2,682
$Q_{lb/hr}$	Dry Air Flow Rate at Standard Conditions, lb/hr	12,908
NHV	Net Heating Value, Btu/scf	158
LFG_{CH4}	Methane, lb/hr	839.1
	Methane, grains/dscf	35.86
LFG_{CO2}	Carbon Dioxide, lb/hr	7,336.1
	Carbon Dioxide, grains/dscf	313.52
LFG_{O2}	Oxygen, lb/hr	1143.0
	Oxygen, grains/dscf	48.85
LFG_{N2}	Balance gas as Nitrogen, lb/hr	3,490.3
	Balance gas as Nitrogen, grains/dscf	149.17
LFG_{H4}	Hydrogen, lb/hr	91.7
	Hydrogen, grains/dscf	3.92
LFG_{CO}	Carbon Monoxide, lb/hr	11.9
	Carbon Monoxide, grains/dscf	0.51

		Blower Out Sample #1	Blower Out Sample #2
H_2S	Hydrogen Sulfide Concentration, ppmd	48.00	43.00
	Hydrogen Sulfide Rate, lb/hr	0.70	0.62
	Hydrogen Sulfide Rate, grains/dscf	0.030	0.027
COS	Carbonyl Sulfide Concentration, ppmd	0.63	0.53
	Carboynl Sulfide Rate, lb/hr	0.02	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd	180.00	150.00
	Methyl Mercaptan Rate, lb/hr	3.68	3.07
	Methyl Mercaptan Rate, grains/dscf	0.157	0.131
C_2H_6S	Ethyl Mercaptan Concentration, ppmd	2.50	2.40
	Ethyl Mercaptan Rate, lb/hr	0.07	0.06
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd	880.00	810.00
	Dimethyl Sulfide Rate, lb/hr	23.25	21.40
	Dimethyl Sulfide Rate, grains/dscf	0.994	0.915
CS_2	Carbon Disulfide Concentration, ppmd	0.63	0.53
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd	67.00	64.00
	Dimethyl Disulfide Rate, lb/hr	2.68	2.07
	Dimethyl Disulfide Rate, grains/dscf	0.115	0.089

❶ **$E_{TRS-SO2}$**	TRS-->SO2 Emission Concentration, ppmd	1,200.00	1,100.00
	TRS-->SO2 Emission Rate, lb/hr	32.69	29.97
	TRS-->SO2 Emission Rate, grains/dscf	1.397	1.281

❶ TRS assumed moelcular mass = SO2, 64.06 gram/mole, I.e. 1 TRS in LFG assumed to = 1 SO2 emitted from the stack

Tuesday, February 02, 2016

LOCATION	TIME	FLOW -SCFM			Method 2 vs. Fleetzoom	Method 2 vs Kurz
		Method 2	FleetZoom	Kurz FM		
BLOWER OUT	9:08	2,767	3,259	2,904	-17.8%	-5.0%

Air TECHNOLOGY Laboratories, Inc.

February 10, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Republic Services
ATTN: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H020311-01/03

Enclosed are results for sample(s) received 2/03/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers, Nicholas Bauer and David Randall, Weaver Consultants Group, on 2/05/16 (ASTM D1946) and 2/09/16 (EPA 15/16).

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

Standard	☐	48 hours	■
Same Day	☐	72 hours	☐
24 hours	☐	96 hours	☐
Other:		5 day	☐

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

PAGE: 1 OF 1

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.: PO4862452 5544160
Bill to: Republic Services
Attn: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	EPA 15/16 + TRS & ASTM1946 + H2+ CO	ASTM 1946, BTU/SCF	ASTM D5504 V 2/3/16	per D. Randall		
H020316-01	5960	-19.4	-3.96	-5	Blower Outlet 1	2/2/2016	931	C	LFG	NA	X	X	X			
-02	4431	-19.61	-3.95	-2	Blower Outlet 2	2/2/2016	1026	C	LFG	NA	X	X	X			
-03	5958	-20.97	-3.96	-4	LFG CSU EP14	2/2/2016	811	C	LFG	NA	X	X				

AUTHORIZATION TO PERFORM WORK: Dave Penoyer — COMPANY: Republic Services — DATE/TIME:

SAMPLED BY: Ryan Ayers — COMPANY: Republic Services — DATE/TIME

RELINQUISHED BY: Ryan Ayers — 2-3-16 1600 — RECEIVED BY: FedEx — DATE/TIME

RELINQUISHED BY: FedEx — RECEIVED BY: [signature] — 2/3/16 0705 — DATE/TIME

RELINQUISHED BY — RECEIVED BY — DATE/TIME

METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLi Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: H=HCl N=None / Container: B=Bag C=Can V=VOA O=Other *Rev. 03 - 5/7/09*

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 02/03/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H020311-01		H020311-02		H020311-03			
Client Sample I.D.:	Blower Outlet 1		Blower Outlet 2		LFG CSU EP14			
Date/Time Sampled:	2/2/16 9:31		2/2/16 10:26		2/2/16 8:11			
Date/Time Analyzed:	2/4/16 12:43		2/4/16 12:58		2/4/16 13:12			
QC Batch No.:	160204GC8A1		160204GC8A1		160204GC8A1			
Analyst Initials:	AS		AS		AS			
Dilution Factor:	3.2		2.7		3.0			
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v		
Hydrogen	10.8	3.2	10.9	2.7	11	3.0		
Carbon Dioxide	37.3	0.032	38.0	0.027	33	0.030		
Oxygen/Argon	7.9	1.6	7.7	1.3	9.3	1.5		
Nitrogen	31.3	3.2	30.6	2.7	38	3.0		
Methane	11.7	0.0032	11.8	0.0027	7.3	0.0030		
Carbon Monoxide	0.10	0.0032	0.11	0.0027	0.083	0.0030		
Net Heating Value (BTU/ft3)	157.8	3.2	157.6	2.7	119	3.0		
Gross Heating Value (BTU/ft3)	178.9	3.2	178.6	2.7	136	3.0		

Results normalized including non-methane hydrocarbons
BTU values based on D1946 analysis and non-methane analysis assumed as propane
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 2-5-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160204GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	2/4/16 10:45		2/4/16 10:00		2/4/16 10:15			
Analyst Initials:	AS		AS		AS			
Datafile:	04feb010		04feb007		04feb008			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	112	70-130%	111	70-130%	0.0	<30
Carbon Dioxide	ND	0.010	100	70-130%	99	70-130%	0.8	<30
Oxygen/Argon	ND	0.50	100	70-130%	99	70-130%	0.8	<30
Nitrogen	ND	1.0	100	70-130%	100	70-130%	0.6	<30
Methane	ND	0.0010	93	70-130%	93	70-130%	0.9	<30
Carbon Monoxide	ND	0.0010	112	70-130%	111	70-130%	0.6	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ **Date:** 2-5-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 02/03/16
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	H020311-01		H020311-02		H020311-03			
Client Sample I.D.:	Blower Outlet 1		Blower Outlet 2		LFG CSU EP14			
Date/Time Sampled:	2/2/16 9:31		2/2/16 10:26		2/2/16 8:11			
Date/Time Analyzed:	2/8/16 16:02		2/8/16 17:38		2/9/16 8:20			
QC Batch No.:	160208GC3A1		160208GC3A1		160208GC3A1			
Analyst Initials:	AS		AS		AS			
Dilution Factor:	3.2		2.7		3.0			
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv		
Hydrogen Sulfide	48 d	6.3	43 d	5.3	13	0.59		
Carbonyl Sulfide	ND	0.63	ND	0.53	ND	0.59		
Methyl Mercaptan	180 d	6.3	150 d	5.3	150 d	5.9		
Ethyl Mercaptan	2.5	0.63	2.4	0.53	1.6	0.59		
Dimethyl Sulfide	880 d	63.0	810 d	53.0	980 d	59.0		
Carbon Disulfide	ND	0.63	ND	0.53	ND	0.59		
Dimethyl Disulfide	67 d	6.3	64 d	5.3	89 d	5.9		
Total Reduced Sulfur	1,200	0.63	1,100	0.53	1,300	0.59		

ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary dilution

Reviewed/Approved By: _____ Date 2-9-16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 160208GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	2/8/16 13:51		2/8/16 13:23		2/8/16 13:38			
Analyst Initials:	AS		AS		AS			
Datafile:	08feb008		08feb006		08feb007			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	94	70-130%	95	70-130%	0.3	<30
Carbonyl Sulfide	ND	0.20	110	70-130%	109	70-130%	0.6	<30
Methyl Mercaptan	ND	0.20	90	70-130%	89	70-130%	0.3	<30
Ethyl Mercaptan	ND	0.20	90	70-130%	87	70-130%	3.0	<30
Dimethyl Sulfide	ND	0.20	100	70-130%	101	70-130%	1.2	<30
Carbon Disulfide	ND	0.20	104	70-130%	103	70-130%	1.2	<30
Dimethyl Disulfide	ND	0.20	108	70-130%	108	70-130%	0.5	<30

ND = Not Detected (Below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date: 2-9-16
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

February 5, 2016

David Randall
Weaver Consultants Group
6301 East HWY AB
Columbia, MO 65201

RE: Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63

Dear David:

Enclosed are the results of the samples submitted to our laboratory on February 3, 2016. For your reference, these analyses have been assigned our service request number P1600503.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Samantha Henningsen

By Samantha Henningsen at 2:16 pm, Feb 05, 2016

Samantha Henningsen
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Weaver Consultants Group Service Request No: P1600503
Project: Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63

CASE NARRATIVE

The samples were received intact under chain of custody on February 3, 2016 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

BTU and CHONS Analysis

The results for BTU and CHONS were generated according to ASTM D 3588-98. The following analyses were performed and used to calculate the BTU and CHONS results. This method is not included on the laboratory's NELAP, DoD-ELAP, or AIHA-LAP scope of accreditation.

C2 through C6 Hydrocarbon Analysis

The samples were analyzed according to modified EPA Method TO-3 for C2 through >C6 hydrocarbons using a gas chromatograph equipped with a flame ionization detector (FID). This method is included on the laboratory's DoD-ELAP scope of accreditation, however it is not part of the NELAP or AIHA-LAP accreditation.

Fixed Gases Analysis

The samples were also analyzed for fixed gases (hydrogen, oxygen/argon, nitrogen, carbon monoxide, methane and carbon dioxide) according to modified EPA Method 3C (single injection) using a gas chromatograph equipped with a thermal conductivity detector (TCD). This method is included on the laboratory's DoD-ELAP scope of accreditation, however it is not part of the NELAP or AIHA-LAP accreditation.

Sulfur Analysis

The samples were analyzed for twenty sulfur compounds per ASTM D 5504-12 using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD). All compounds with the exception of hydrogen sulfide and carbonyl sulfide are quantitated against the initial calibration curve for methyl mercaptan. This method is included on the laboratory's NELAP scope of accreditation, however it is not part of the DoD-ELAP or AIHA-LAP accreditation.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Weaver Consultants Group Service Request No: P1600503
Project: Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63

The analysis of Blower Out-Bag 5 Cal and Blower Out-Tedlar were performed past the holding time. The results have been flagged accordingly.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L15-398
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	977273
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272015-5
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Weaver Consultants Group

Service Request: P1600503

Project ID: Bridgeton LF Monthly Permit Flare LFG Testing-SPL / 0120-131-10-63

Date Received: 2/3/2016

Time Received: 09:45

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-3 Modified - C1C6+ Can	ASTM D1946-90(2006) - Fxd Gases Can	3C Modified - Fxd Gases Can	ASTM D5504-01 - H2S Can	ASTM D 5504-12 - Sulfur Can	TO-3 Modified - C1C6+ Bag	3C Modified - Fxd Gases Bag
Blower Out #1 (Can)	P1600503-001	Air	2/2/2016	09:31	SSC00163	0.65	3.53	X	X	X	X	X		
Blower Out #2 (Can)	P1600503-002	Air	2/2/2016	10:26	SSC00230	1.21	3.64	X	X	X	X	X		
Blower Out-Bag 5 Cal	P1600503-003	Air	2/2/2016	11:10									X	X
Blower Out-Tedlar	P1600503-004	Air	2/2/2016	11:00									X	X

Blower Out-Bag 5 Cal sample results void from evaluation due to apparent sample tubing and/or lab GC injection leak or ambient intrusion

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) **2 Day (75%)** 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. PL1605503

ALS Contact:

Company Name & Address (Reporting Information)	Project Name	Analysis Method
Weaver Consultants Group **6301 East Highway AB** **Columbia, MO 65201**	**Bridgeton LF Monthly Permit Flare LFG Testing - SPLIT** Project Number: **0120-131-10-63**	
Project Manager: **David A. Randall**	P.O. # / Billing Information: Bill to WCG with reference project no.	
Phone: **573-645-2650** Fax:	Sampler (Print & Sign): **Jenny Holt**	
Email Address for Result Reporting: drandall@wcgrp.com		

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	ASTM D5504 + TRS	ASTM 1946, fixed gases, + H2, CO, & Btu	Comments e.g. Actual Preservative or specific instructions
Blower Out # 1 (Can)	1	2/2/2016	931						✓	✓	
Blower Out #2 (Can)	2	2/2/2016	1026						✓	✓	
Blower Out - Bag 5 Cal	3	2/2/2016	1110	NA	NA	NA	NA	0.5L	✓	✓	
Blower Out - Tedlar	4	2/2/2016	1100	NA	NA	NA	NA	0.5L	✓	✓	

Report Tier Levels - please select

Tier I - Results (Default if not specified) _____ **Tier III (Results + QC & Calibration Summaries)** ✓ EDD required Yes / No

Tier II (Results + QC Summaries) _____ Tier IV (Data Validation Package) 10% Surcharge _____ Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Jenny Holt	2/2/16	12:00pm		2/3/16	0945
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: Weaver Consultants Group Work order: P1600503

Project: Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63

Sample(s) received on: 2/3/16 Date opened: 2/3/16 by: KKELPE

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1600503-001.02	6.0 L Silonite Can					
P1600503-002.02	6.0 L Silonite Can					
P1600503-003.01	1.0 L Tedlar Bag					
P1600503-004.01	1.0 L Tedlar Bag					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group** ALS Project ID: P1600503
Client Sample ID: **Blower Out #1 (Can)** ALS Sample ID: P1600503-001
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63**

Test Code: ASTM D3588-98
Analyst: Mike Conejo Date Collected: 2/2/16
Sample Type: 6.0 L Silonite Canister Date Received: 2/3/16
Test Notes:

Canister Dilution Factor: 2.01

Components	Result Volume %	Result Weight %	Data Qualifier
Hydrogen	**9.11**	**0.60**	
Oxygen	**8.26**	**8.62**	
Nitrogen	**31.98**	**29.21**	
Carbon Monoxide	**0.09**	**0.09**	
Methane	**12.25**	**6.41**	
Carbon Dioxide	**38.16**	**54.76**	
Hydrogen Sulfide	< 0.01	< 0.01	
C2 as Ethane	< 0.01	< 0.01	
C3 as Propane	< 0.01	**0.01**	
C4 as n-Butane	**0.03**	**0.06**	
C5 as n-Pentane	**0.06**	**0.15**	
C6 as n-Hexane	**0.02**	**0.07**	
> C6 as n-Hexane	< 0.01	< 0.01	
TOTALS	**99.99**	**99.99**	

Components	Mole %	Weight %
Carbon	**18.34**	**19.89**
Hydrogen	**24.89**	**2.27**
Oxygen	**33.62**	**48.57**
Nitrogen	**23.14**	**29.27**
Sulfur	< 0.10	< 0.10

Specific Gravity (Air = 1)		**1.0587**
Specific Volume	ft3/lb	**12.38**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**159.0**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**141.7**
Gross Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**156.0**
Net Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**139.0**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**1,968.3**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**1,753.9**
Compressibility Factor "Z" (60 F, 14.696 psia)		**0.9982**

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group** ALS Project ID: P1600503
Client Sample ID: **Blower Out #2 (Can)** ALS Sample ID: P1600503-002
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63**

Test Code: ASTM D3588-98
Analyst: Mike Conejo Date Collected: 2/2/16
Sample Type: 6.0 L Silonite Canister Date Received: 2/3/16
Test Notes:

Canister Dilution Factor: 1.91

Components	Result Volume %	Result Weight %	Data Qualifier
Hydrogen	**9.17**	**0.60**	
Oxygen	**8.23**	**8.58**	
Nitrogen	**31.85**	**29.09**	
Carbon Monoxide	**0.09**	**0.08**	
Methane	**12.29**	**6.43**	
Carbon Dioxide	**38.23**	**54.86**	
Hydrogen Sulfide	< 0.01	< 0.01	
C2 as Ethane	< 0.01	< 0.01	
C3 as Propane	< 0.01	< 0.01	
C4 as n-Butane	**0.02**	**0.03**	
C5 as n-Pentane	**0.03**	**0.06**	
C6 as n-Hexane	**0.03**	**0.09**	
> C6 as n-Hexane	**0.04**	**0.14**	
TOTALS	**99.99**	**99.99**	

Components	Mole %	Weight %
Carbon	**18.42**	**20.00**
Hydrogen	**24.99**	**2.28**
Oxygen	**33.59**	**48.58**
Nitrogen	**23.01**	**29.13**
Sulfur	< 0.10	< 0.10

Specific Gravity (Air = 1)		**1.0589**
Specific Volume	ft3/lb	**12.37**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**160.1**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**142.7**
Gross Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**157.1**
Net Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**140.0**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**1,981.7**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**1,766.0**
Compressibility Factor "Z" (60 F, 14.696 psia)		**0.9982**

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group** ALS Project ID: P1600503
Client Sample ID: **Blower Out-Bag 5 Cal** ALS Sample ID: P1600503-003
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63**

Test Code: ASTM D3588-98
Analyst: Mike Conejo
Sample Type: 1.0 L Tedlar Bag
Test Notes:

VOID DUE TO AMBIENT INTRUSION/BIAS

Date Collected: 2/2/16
Date Received: 2/3/16

Components	Result Volume %	Result Weight %	Data Qualifier
Hydrogen	**5.32**	**0.36**	
Oxygen	**13.84**	**14.78**	
Nitrogen	**50.49**	**47.18**	
Carbon Monoxide	**0.05**	**0.04**	
Methane	**7.35**	**3.94**	
Carbon Dioxide	**22.92**	**33.65**	
Hydrogen Sulfide	< 0.01	< 0.01	**H1**
C2 as Ethane	< 0.01	< 0.01	
C3 as Propane	< 0.01	< 0.01	
C4 as n-Butane	< 0.01	< 0.01	
C5 as n-Pentane	< 0.01	**0.02**	
C6 as n-Hexane	< 0.01	< 0.01	
> C6 as n-Hexane	< 0.01	< 0.01	
TOTALS	**99.99**	**99.99**	

Components	Mole %	Weight %	
Carbon	**12.38**	**12.17**	
Hydrogen	**16.43**	**1.35**	
Oxygen	**30.00**	**39.28**	
Nitrogen	**41.18**	**47.20**	
Sulfur	< 0.10	< 0.10	**H1**

Specific Gravity (Air = 1)		**1.0349**
Specific Volume	ft3/lb	**12.66**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**92.5**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**82.4**
Gross Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**90.8**
Net Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**80.9**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**1,171.4**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**1,043.0**
Compressibility Factor "Z" (60 F, 14.696 psia)		**0.9989**

H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group** ALS Project ID: P1600503
Client Sample ID: **Blower Out-Tedlar** ALS Sample ID: P1600503-004
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63**

Test Code: ASTM D3588-98
Analyst: Mike Conejo Date Collected: 2/2/16
Sample Type: 1.0 L Tedlar Bag Date Received: 2/3/16
Test Notes:

Components	Result Volume %	Result Weight %	Data Qualifier
Hydrogen	**8.59**	**0.57**	
Oxygen	**8.74**	**9.13**	
Nitrogen	**33.33**	**30.46**	
Carbon Monoxide	**0.09**	**0.08**	
Methane	**12.31**	**6.44**	
Carbon Dioxide	**36.68**	**52.66**	
Hydrogen Sulfide	< 0.01	< 0.01	**H1**
C2 as Ethane	**0.01**	< 0.01	
C3 as Propane	< 0.01	**0.01**	
C4 as n-Butane	**0.04**	**0.07**	
C5 as n-Pentane	**0.07**	**0.16**	
C6 as n-Hexane	**0.03**	**0.09**	
> C6 as n-Hexane	**0.08**	**0.32**	
TOTALS	**99.99**	**99.99**	

Components	Mole %	Weight %	
Carbon	**18.02**	**19.61**	
Hydrogen	**25.14**	**2.30**	
Oxygen	**32.80**	**47.56**	
Nitrogen	**24.05**	**30.53**	
Sulfur	< 0.10	< 0.10	**H1**

Specific Gravity (Air = 1)		**1.0584**
Specific Volume	ft3/lb	**12.38**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**163.9**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/ft3	**146.3**
Gross Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**160.7**
Net Heating Value (Water Saturated at 0.25636 psia)	BTU/ft3	**143.5**
Gross Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**2,028.6**
Net Heating Value (Dry Gas @ 60 F, 14.696 psia)	BTU/lb	**1,811.3**
Compressibility Factor "Z" (60 F, 14.696 psia)		**0.9982**

H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out #1 (Can)** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P1600503-001

Test Code: ASTM D1946 Date Collected: 2/2/16
Instrument ID: HP5890 II/GC1/TCD Date Received: 2/3/16
Analyst: Mike Conejo Date Analyzed: 2/4/16
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

Canister Dilution Factor: 2.01

CAS #	Compound	Result %, v/v	MRL %, v/v	Data Qualifier
1333-74-0	**Hydrogen**	**9.11**	0.20	
7782-44-7	**Oxygen***	**8.26**	0.20	
7727-37-9	**Nitrogen**	**32.0**	0.20	
630-08-0	Carbon Monoxide	ND	0.20	
74-82-8	**Methane**	**12.2**	0.20	
124-38-9	**Carbon Dioxide**	**38.1**	0.20	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out #2 (Can)** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P1600503-002

Test Code: ASTM D1946 Date Collected: 2/2/16
Instrument ID: HP5890 II/GC1/TCD Date Received: 2/3/16
Analyst: Mike Conejo Date Analyzed: 2/4/16
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

Canister Dilution Factor: 1.91

CAS #	Compound	Result %, v/v	MRL %, v/v	Data Qualifier
1333-74-0	**Hydrogen**	**9.17**	0.19	
7782-44-7	**Oxygen***	**8.23**	0.19	
7727-37-9	**Nitrogen**	**31.9**	0.19	
630-08-0	Carbon Monoxide	ND	0.19	
74-82-8	**Methane**	**12.3**	0.19	
124-38-9	**Carbon Dioxide**	**38.2**	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out-Bag 5 Cal**
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63**

ALS Project ID: P1600503
ALS Sample ID: P1600503-003

Test Code: ASTM D1946
Instrument ID: HP5890 II/GC1/TCD
Analyst: Mike Conejo
Sample Type: 1.0 L Tedlar Bag
Test Notes:

VOID DUE TO AMBIENT INTRUSION/BIAS

Date Collected: 2/2/16
Date Received: 2/3/16
Date Analyzed: 2/3/16
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result %, v/v	MRL %, v/v	Data Qualifier
1333-74-0	**Hydrogen**	**5.32**	0.10	
7782-44-7	**Oxygen***	**13.8**	0.10	
7727-37-9	**Nitrogen**	**50.5**	0.10	
630-08-0	Carbon Monoxide	ND	0.10	
74-82-8	**Methane**	**7.36**	0.10	
124-38-9	**Carbon Dioxide**	**22.9**	0.10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out-Tedlar** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P1600503-004

Test Code: ASTM D1946 Date Collected: 2/2/16
Instrument ID: HP5890 II/GC1/TCD Date Received: 2/3/16
Analyst: Mike Conejo Date Analyzed: 2/4/16
Sample Type: 1.0 L Tedlar Bag Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result %, v/v	MRL %, v/v	Data Qualifier
1333-74-0	**Hydrogen**	**8.61**	0.10	
7782-44-7	**Oxygen***	**8.76**	0.10	
7727-37-9	**Nitrogen**	**33.4**	0.10	
630-08-0	Carbon Monoxide	ND	0.10	
74-82-8	**Methane**	**12.3**	0.10	
124-38-9	**Carbon Dioxide**	**36.8**	0.10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Method Blank** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P160203-MB

Test Code: ASTM D1946 Date Collected: NA
Instrument ID: HP5890 II/GC1/TCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 2/03/16
Sample Type: 1.0 L Tedlar Bag Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result %, v/v	MRL %, v/v	Data Qualifier
1333-74-0	Hydrogen	ND	0.10	
7782-44-7	Oxygen*	ND	0.10	
7727-37-9	Nitrogen	ND	0.10	
630-08-0	Carbon Monoxide	ND	0.10	
74-82-8	Methane	ND	0.10	
124-38-9	Carbon Dioxide	ND	0.10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Method Blank** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P160204-MB

Test Code: ASTM D1946 Date Collected: NA
Instrument ID: HP5890 II/GC1/TCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 2/04/16
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result %, v/v	MRL %, v/v	Data Qualifier
1333-74-0	Hydrogen	ND	0.10	
7782-44-7	Oxygen*	ND	0.10	
7727-37-9	Nitrogen	ND	0.10	
630-08-0	Carbon Monoxide	ND	0.10	
74-82-8	Methane	ND	0.10	
124-38-9	Carbon Dioxide	ND	0.10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Weaver Consultants Group** ALS Project ID: P1600503
Client Sample ID: **Lab Control Sample** ALS Sample ID: P160204-LCS
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63**

Test Code: ASTM D1946 Date Collected: NA
Instrument ID: HP5890 II/GC1/TCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 2/04/16
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppmV	Result ppmV	% Recovery	ALS Acceptance Limits	Data Qualifier
1333-74-0	Hydrogen	40,000	**37,500**	**94**	83-114	
7782-44-7	Oxygen*	25,000	**25,300**	**101**	84-121	
7727-37-9	Nitrogen	50,000	**50,500**	**101**	88-122	
630-08-0	Carbon Monoxide	50,000	**49,800**	**100**	87-118	
74-82-8	Methane	40,000	**40,600**	**102**	85-116	
124-38-9	Carbon Dioxide	50,000	**48,400**	**97**	84-117	

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Weaver Consultants Group** ALS Project ID: P1600503
Client Sample ID: **Lab Control Sample** ALS Sample ID: P160203-LCS
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63**

Test Code: ASTM D1946 Date Collected: NA
Instrument ID: HP5890 II/GC1/TCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 2/03/16
Sample Type: 1.0 L Tedlar Bag Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppmV	Result ppmV	% Recovery	ALS Acceptance Limits	Data Qualifier
1333-74-0	Hydrogen	40,000	**38,200**	**96**	83-114	
7782-44-7	Oxygen*	25,000	**25,300**	**101**	84-121	
7727-37-9	Nitrogen	50,000	**49,600**	**99**	88-122	
630-08-0	Carbon Monoxide	50,000	**50,600**	**101**	87-118	
74-82-8	Methane	40,000	**41,600**	**104**	85-116	
124-38-9	Carbon Dioxide	50,000	**49,200**	**98**	84-117	

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out #1 (Can)** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P1600503-001

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: 2/2/16
Time Collected: 09:31
Date Received: 2/3/16
Date Analyzed: 2/4/16
Time Analyzed: 08:00
Volume(s) Analyzed: 0.050 ml(s)

Canister Dilution Factor: 2.01

CAS #	Compound	Result µg/m³		MRL µg/m³	Result ppbV		MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	**35,000**		280	**25,000**		200	
463-58-1	Carbonyl Sulfide	**620**		490	**250**		200	
74-93-1	Methyl Mercaptan	**250,000**		400	**130,000**		200	
75-08-1	Ethyl Mercaptan	**3,000**		510	**1,200**		200	
75-18-3	Dimethyl Sulfide	**2,200,000**		510	**860,000**		200	
75-15-0	Carbon Disulfide	**340**		310	**110**		100	
75-33-2	Isopropyl Mercaptan	**1,300**		630	**430**		200	
75-66-1	tert-Butyl Mercaptan		ND	740		ND	200	
107-03-9	n-Propyl Mercaptan		ND	630		ND	200	
624-89-5	Ethyl Methyl Sulfide	**15,000**		630	**4,700**		200	
110-02-1	Thiophene	**20,000**		690	**5,800**		200	
513-44-0	Isobutyl Mercaptan	**1,300**		740	**360**		200	
352-93-2	Diethyl Sulfide		ND	740		ND	200	
109-79-5	n-Butyl Mercaptan	**2,700**		740	**740**		200	
624-92-0	Dimethyl Disulfide	**110,000**		390	**28,000**		100	
616-44-4	3-Methylthiophene	**990**		810	**250**		200	
110-01-0	Tetrahydrothiophene	**2,200**		720	**620**		200	
638-02-8	2,5-Dimethylthiophene		ND	920		ND	200	
872-55-9	2-Ethylthiophene		ND	920		ND	200	
110-81-6	Diethyl Disulfide		ND	500		ND	100	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out #2 (Can)** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P1600503-002

Test Code: ASTM D 5504-12 Date Collected: 2/2/16
Instrument ID: Agilent 6890A/GC13/SCD Time Collected: 10:26
Analyst: Mike Conejo Date Received: 2/3/16
Sample Type: 6.0 L Silonite Canister Date Analyzed: 2/4/16
Test Notes: Time Analyzed: 08:17
Volume(s) Analyzed: 0.050 ml(s)

Canister Dilution Factor: 1.91

CAS #	Compound	Result µg/m³		MRL µg/m³	Result ppbV		MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	**44,000**		270	**31,000**		190	
463-58-1	Carbonyl Sulfide	**600**		470	**240**		190	
74-93-1	Methyl Mercaptan	**350,000**		380	**180,000**		190	
75-08-1	Ethyl Mercaptan	**3,800**		490	**1,500**		190	
75-18-3	Dimethyl Sulfide	**2,400,000**		490	**930,000**		190	
75-15-0	Carbon Disulfide	**330**		300	**100**		96	
75-33-2	Isopropyl Mercaptan	**1,600**		590	**520**		190	
75-66-1	tert-Butyl Mercaptan		ND	700		ND	190	
107-03-9	n-Propyl Mercaptan		ND	590		ND	190	
624-89-5	Ethyl Methyl Sulfide	**18,000**		590	**5,600**		190	
110-02-1	Thiophene	**25,000**		660	**7,300**		190	
513-44-0	Isobutyl Mercaptan	**1,600**		700	**440**		190	
352-93-2	Diethyl Sulfide		ND	700		ND	190	
109-79-5	n-Butyl Mercaptan	**4,100**		700	**1,100**		190	
624-92-0	Dimethyl Disulfide	**150,000**		370	**38,000**		96	
616-44-4	3-Methylthiophene	**1,900**		770	**480**		190	
110-01-0	Tetrahydrothiophene	**3,700**		690	**1,000**		190	
638-02-8	2,5-Dimethylthiophene		ND	880		ND	190	
872-55-9	2-Ethylthiophene		ND	880		ND	190	
110-81-6	Diethyl Disulfide		ND	480		ND	96	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out-Bag 5 Cal** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P1600503-003

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 1.0 L Tedlar Bag
Test Notes: **H1**

VOID DUE TO AMBIENT INTRUSION/BIAS

Date Collected: 2/2/16
Time Collected: 11:10
Date Received: 2/3/16
Date Analyzed: 2/3/16
Time Analyzed: 15:57
Volume(s) Analyzed: 0.010 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	**44,000**	700	**32,000**	500	
463-58-1	Carbonyl Sulfide	ND	1,200	ND	500	
74-93-1	Methyl Mercaptan	**260,000**	980	**130,000**	500	
75-08-1	Ethyl Mercaptan	**2,900**	1,300	**1,100**	500	
75-18-3	Dimethyl Sulfide	**1,500,000**	1,300	**580,000**	500	
75-15-0	Carbon Disulfide	ND	780	ND	250	
75-33-2	Isopropyl Mercaptan	ND	1,600	ND	500	
75-66-1	tert-Butyl Mercaptan	ND	1,800	ND	500	
107-03-9	n-Propyl Mercaptan	ND	1,600	ND	500	
624-89-5	Ethyl Methyl Sulfide	**8,100**	1,600	**2,600**	500	
110-02-1	Thiophene	**9,800**	1,700	**2,900**	500	
513-44-0	Isobutyl Mercaptan	ND	1,800	ND	500	
352-93-2	Diethyl Sulfide	ND	1,800	ND	500	
109-79-5	n-Butyl Mercaptan	ND	1,800	ND	500	
624-92-0	Dimethyl Disulfide	**34,000**	960	**9,000**	250	
616-44-4	3-Methylthiophene	ND	2,000	ND	500	
110-01-0	Tetrahydrothiophene	ND	1,800	ND	500	
638-02-8	2,5-Dimethylthiophene	ND	2,300	ND	500	
872-55-9	2-Ethylthiophene	ND	2,300	ND	500	
110-81-6	Diethyl Disulfide	ND	1,200	ND	250	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Blower Out-Tedlar** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P1600503-004

Test Code: ASTM D 5504-12 Date Collected: 2/2/16
Instrument ID: Agilent 6890A/GC13/SCD Time Collected: 11:00
Analyst: Mike Conejo Date Received: 2/3/16
Sample Type: 1.0 L Tedlar Bag Date Analyzed: 2/3/16
Test Notes: **H1** Time Analyzed: 15:34
Volume(s) Analyzed: 0.010 ml(s)

CAS #	Compound	Result µg/m³		MRL µg/m³	Result ppbV		MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	**66,000**		700	**47,000**		500	
463-58-1	Carbonyl Sulfide		ND	1,200		ND	500	
74-93-1	Methyl Mercaptan	**340,000**		980	**170,000**		500	
75-08-1	Ethyl Mercaptan	**4,300**		1,300	**1,700**		500	
75-18-3	Dimethyl Sulfide	**2,100,000**		1,300	**840,000**		500	
75-15-0	Carbon Disulfide		ND	780		ND	250	
75-33-2	Isopropyl Mercaptan	**2,000**		1,600	**650**		500	
75-66-1	tert-Butyl Mercaptan		ND	1,800		ND	500	
107-03-9	n-Propyl Mercaptan		ND	1,600		ND	500	
624-89-5	Ethyl Methyl Sulfide	**16,000**		1,600	**5,200**		500	
110-02-1	Thiophene	**28,000**		1,700	**8,200**		500	
513-44-0	Isobutyl Mercaptan		ND	1,800		ND	500	
352-93-2	Diethyl Sulfide		ND	1,800		ND	500	
109-79-5	n-Butyl Mercaptan	**5,900**		1,800	**1,600**		500	
624-92-0	Dimethyl Disulfide	**140,000**		960	**37,000**		250	
616-44-4	3-Methylthiophene	**3,000**		2,000	**750**		500	
110-01-0	Tetrahydrothiophene	**5,700**		1,800	**1,600**		500	
638-02-8	2,5-Dimethylthiophene		ND	2,300		ND	500	
872-55-9	2-Ethylthiophene		ND	2,300		ND	500	
110-81-6	Diethyl Disulfide		ND	1,200		ND	250	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**

Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Project ID: P1600503

Total Reduced Sulfur as Hydrogen Sulfide

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 6.0 L Silonite Canister(s)
Test Notes:

Date(s) Collected: 2/2/16
Date Received: 2/3/16
Date Analyzed: 2/4/16

Client Sample ID	ALS Sample ID	Canister Dilution Factor	Injection Volume ml(s)	Time Analyzed	**Result µg/m³**	MRL µg/m³	**Result ppbV**	MRL ppbV	Data Qualifier
Blower Out #1 (Can)	P1600503-001	2.01	0.050	08:00	**1,500,000**	280	**1,100,000**	200	
Blower Out #2 (Can)	P1600503-002	1.91	0.050	08:17	**1,800,000**	270	**1,300,000**	190	
Method Blank	P160204-MB	1.00	1.0	07:24	ND	7.0	ND	5.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**

Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Project ID: P1600503

Total Reduced Sulfur as Hydrogen Sulfide

Test Code: ASTM D 5504-12
Instrument ID: Agilent 6890A/GC13/SCD
Analyst: Mike Conejo
Sample Type: 1.0 L Tedlar Bag(s)
Test Notes:

Date(s) Collected: 2/2/16
Date Received: 2/3/16
Date Analyzed: 2/3/16

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Time Analyzed	**Result µg/m³**	MRL µg/m³	**Result ppbV**	MRL ppbV	Data Qualifier
Blower Out-Bag 5 Cal	P1600503-003	0.010	15:57	**1,100,000**	700	**780,000**	500	**H1**
Blower Out-Tedlar	P1600503-004	0.010	15:34	**1,700,000**	700	**1,200,000**	500	**H1**
Method Blank	P160203-MB	1.0	14:32	ND	7.0	ND	5.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
H1 = Sample analysis performed past holding time. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Method Blank** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P160203-MB

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 6890A/GC13/SCD Time Collected: NA
Analyst: Mike Conejo Date Received: NA
Sample Type: 1.0 L Tedlar Bag Date Analyzed: 2/03/16
Test Notes: Time Analyzed: 14:32
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Weaver Consultants Group**
Client Sample ID: **Method Blank** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P160204-MB

Test Code:	ASTM D 5504-12	Date Collected:	NA
Instrument ID:	Agilent 6890A/GC13/SCD	Time Collected:	NA
Analyst:	Mike Conejo	Date Received:	NA
Sample Type:	6.0 L Silonite Canister	Date Analyzed:	2/04/16
Test Notes:		Time Analyzed:	07:24
		Volume(s) Analyzed:	1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Weaver Consultants Group**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P160203-LCS

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 6890A/GC13/SCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 2/03/16
Sample Type: 1.0 L Tedlar Bag Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppbV	Result ppbV	% Recovery	ALS Acceptance Limits	Data Qualifier
7783-06-4	Hydrogen Sulfide	2,000	**2,510**	**126**	65-138	
463-58-1	Carbonyl Sulfide	2,000	**2,390**	**120**	60-135	
74-93-1	Methyl Mercaptan	2,000	**2,450**	**123**	57-140	

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Weaver Consultants Group**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1600503
Client Project ID: **Bridgeton LF Monthly Permit Flare LFG Testing-SPLIT / 0120-131-10-63** ALS Sample ID: P160204-LCS

Test Code: ASTM D 5504-12 Date Collected: NA
Instrument ID: Agilent 6890A/GC13/SCD Date Received: NA
Analyst: Mike Conejo Date Analyzed: 2/04/16
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppbV	Result ppbV	% Recovery	ALS Acceptance Limits	Data Qualifier
7783-06-4	Hydrogen Sulfide	2,000	**2,490**	**125**	65-138	
463-58-1	Carbonyl Sulfide	2,000	**2,340**	**117**	60-135	
74-93-1	Methyl Mercaptan	2,000	**2,370**	**119**	57-140	

Bridgeton Landfill, LLC.
Weeklty TRS Sampling Summary

Kurz FM =	**2,938**	scfm
Fleetzoom Total =	**3,404**	scfm

$\Delta =$ **14%**

	PARAMETER	Blower Out #1	Blower Out #2
Date	Test Date		1/27/16
Time	Start - Finish	14:53	15:05
%CH_4	Methane, %	11.30	11.50
%CO_2	Carbon Dioxide, %	35.60	36.30
%O_2	Oxygen, %	8.50	8.30
%Balance	Assumed as Nitorgen, %	34.00	33.20
%H_2	Hydrogen, %	9.70	9.80
%CO	Carbon Monoxide, %	0.088	0.091
P_g	Flue Gas Static Pressure, inches of H_2O	17.46	17.03
t_s	Blower Outlet LFG Temperature, °F	91	91
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H2O)	2,791	
Q_s	Kurz FM, Standard Volumetric Flow Rate, scfm	2,938	
NHV	Net Heating Value, Btu/scf	146.1	151.4
LFG_{CH4}	Methane, lb/hr	788.1	802.0
	Methane, grains/dscf	32.94	33.53
LFG_{CO2}	Carbon Dioxide, lb/hr	6,811.0	6,944.9
	Carbon Dioxide, grains/dscf	284.73	290.33
LFG_{O2}	Oxygen, lb/hr	1,182.4	1,154.6
	Oxygen, grains/dscf	49.43	48.27
LFG_{N2}	Balance gas as Nitrogen, lb/hr	4,140.5	4,043.1
	Balance gas as Nitrogen, grains/dscf	173.09	169.02
LFG_{H4}	Hydrogen, lb/hr	85.0	85.9
	Hydrogen, grains/dscf	3.55	3.59
LFG_{CO}	Carbon Monoxide, lb/hr	10.7	11.1
	Carbon Monoxide, grains/dscf	0.43	0.44

		Blower Out #1	Blower Out #2
H_2S	Hydrogen Sulfide Concentration, ppmd	46.00	42.00
	Hydrogen Sulfide Rate, lb/hr	0.68	0.62
	Hydrogen Sulfide Rate, grains/dscf	0.028	0.026
COS	Carbonyl Sulfide Concentration, ppmd	0.55	0.56
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd	180.00	190.00
	Methyl Mercaptan Rate, lb/hr	3.76	3.97
	Methyl Mercaptan Rate, grains/dscf	0.157	0.166
C_2H_6S	Ethyl Mercaptan Concentration, ppmd	2.30	2.40
	Ethyl Mercaptan Rate, lb/hr	0.06	0.06
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd	1,000.00	1,200.00
	Dimethyl Sulfide Rate, lb/hr	27.01	32.41
	Dimethyl Sulfide Rate, grains/dscf	1.129	1.355
CS_2	Carbon Disulfide Concentration, ppmd	0.55	0.56
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd	86.00	99.00
	Dimethyl Disulfide Rate, lb/hr	3.52	4.05
	Dimethyl Disulfide Rate, grains/dscf	0.147	0.169

❶$E_{TRS-SO2}$	TRS-->SO2 Emission Concentration, ppmd	1,400.00	1,600.00
	TRS-->SO2 Emission Rate, lb/hr	38.99	44.56
	TRS-->SO2 Emission Rate, grains/dscf	1.630	1.863

❶ TRS assumed moelcular mass = SO2, 64.06 gram/mole, I.e. 1 TRS in LFG assumed to = 1 SO2 emitted from the stack

AIR TECHNOLOGY
Laboratories, Inc.

February 10, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Republic Services
ATTN: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H012803-01/02

Enclosed are results for sample(s) received 1/28/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers and David Randall, Weaver Consultants Group, on 2/03/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

Standard	☐	48 hours	■
Same Day	☐	72 hours	☐
24 hours	☐	96 hours	☐
Other:		5 day	☐

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

PAGE: 1 OF 1

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO5544106
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	EPA 15/16 + TRS & ASTM1946 + H2+ CO	ASTM 1946, BTU/SCF				
	Canister ID	Sample Start	Sample End	Lab Receive												
H012803-01	1537	-20	-3.5		Outlet A	1/27/2016	1453	C	LFG	NA	X	X				
↓ -02	1615	-19.9	-3.5		Outlet B	1/27/2016	1505	C	LFG	NA	X	X				

AUTHORIZATION TO PERFORM WORK: Dave Penoyer — COMPANY: Republic Services — DATE/TIME:

SAMPLED BY: Ryan Ayers — COMPANY: Republic Services — DATE/TIME

RELINQUISHED BY: Ryan Ayers — 1-27-16 — 1630 — DATE/TIME — RECEIVED BY — DATE/TIME

RELINQUISHED BY: FedEx — DATE/TIME — RECEIVED BY: [signature] — 1/28/16 0851

RELINQUISHED BY — DATE/TIME — RECEIVED BY — DATE/TIME

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012803-01		H012803-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	1/27/16 14:53		1/27/16 15:05					
Date/Time Analyzed:	1/29/16 9:40		1/29/16 10:16					
QC Batch No.:	160129GC8A1		160129GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.8					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	9.7	2.7	9.8	2.8				
Carbon Dioxide	35.6	0.027	36.3	0.028				
Oxygen/Argon	8.5	1.4	8.3	1.4				
Nitrogen	34.0	2.7	33.2	2.8				
Methane	11.3	0.0027	11.5	0.0028				
Carbon Monoxide	0.088	0.0027	0.091	0.0028				
Net Heating Value (BTU/ft3)	146.1	2.7	151.4	2.8				
Gross Heating Value (BTU/ft3)	165.6	2.7	171.3	2.8				

Results normalized including non-methane hydrocarbons
BTU values based on D1946 analysis and non-methane analysis assumed as propane
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 2-2-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160129GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/29/16 9:18		1/29/16 8:34		1/29/16 8:49			
Analyst Initials:	AS		AS		AS			
Datafile:	29-jan003		29-jan.		29-jan001			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	100	70-130%	101	70-130%	0.5	<30
Carbon Dioxide	ND	0.010	101	70-130%	100	70-130%	1.0	<30
Oxygen/Argon	ND	0.50	106	70-130%	105	70-130%	0.4	<30
Nitrogen	ND	1.0	105	70-130%	105	70-130%	0.0	<30
Methane	ND	0.0010	101	70-130%	101	70-130%	0.2	<30
Carbon Monoxide	ND	0.0010	109	70-130%	108	70-130%	1.1	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 2-2-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Client:	**Republic Services**
Attn:	**Jim Getting**
Project Name:	**Bridgeton Landfill**
Project No.:	**NA**
Date Received:	**01/28/16**
Matrix:	**Air**
Reporting Units:	**ppmv**

EPA 15/16

Lab No.:	H012803-01		H012803-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	1/27/16 14:53		1/27/16 15:05					
Date/Time Analyzed:	1/29/16 9:04		1/29/16 9:44					
QC Batch No.:	160129GC3A1		160129GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.8					
ANALYTE	**Result ppmv**	**RL ppmv**	**Result ppmv**	**RL ppmv**				
Hydrogen Sulfide	46 d	5.5	42 d	5.6				
Carbonyl Sulfide	ND	0.55	ND	0.56				
Methyl Mercaptan	180 d	5.5	190 d	5.6				
Ethyl Mercaptan	2.3	0.55	2.4	0.56				
Dimethyl Sulfide	1,000 d	55.0	1,200 d	56.0				
Carbon Disulfide	ND	0.55	ND	0.56				
Dimethyl Disulfide	86 d	5.5	99 d	5.6				
Total Reduced Sulfur	1,400	0.55	1,600	0.56				

ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary dilution

Reviewed/Approved By: _____ **Date** 2-2-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 160129GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/29/16 8:52		1/29/16 8:27		1/29/16 8:41			
Analyst Initials:	AS		AS		AS			
Datafile:	29jan003		29jan001		29jan002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	96	70-130%	95	70-130%	2.0	<30
Carbonyl Sulfide	ND	0.20	101	70-130%	103	70-130%	1.3	<30
Methyl Mercaptan	ND	0.20	106	70-130%	107	70-130%	0.8	<30
Ethyl Mercaptan	ND	0.20	102	70-130%	100	70-130%	1.6	<30
Dimethyl Sulfide	ND	0.20	102	70-130%	99	70-130%	3.3	<30
Carbon Disulfide	ND	0.20	100	70-130%	97	70-130%	2.3	<30
Dimethyl Disulfide	ND	0.20	103	70-130%	101	70-130%	1.8	<30

ND = Not Detected (Below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date: 2-2-16
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Bridgeton Landfill, LLC.
Weeklty TRS Sampling Summary

Kurz FM =	**3,063**	**scfm**
Fleetzoom Total =	**3,490**	**scfm**

$\Delta =$ **12%**

	PARAMETER	Blower Out #1	Blower Out #2
Date	Test Date		1/20/16
Time	Start - Finish	15:07	15:18
%CH_4	Methane, %	10.60	10.90
%CO_2	Carbon Dioxide, %	35.30	35.60
%O_2	Oxygen, %	8.70	8.60
%Balance	Assumed as Nitorgen, %	34.60	34.30
%H_2	Hydrogen, %	10.10	10.00
%CO	Carbon Monoxide, %	0.100	0.100
P_g	Flue Gas Static Pressure, inches of H_2O	23.99	23.99
t_s	Blower Outlet LFG Temperature, °F	91	91
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H2O)	2,910	
Q_s	Kurz FM, Standard Volumetric Flow Rate, scfm	3,063	
NHV	Net Heating Value, Btu/scf	140.0	143.0
LFG_{CH4}	Methane, lb/hr	770.8	792.6
	Methane, grains/dscf	30.90	31.78
LFG_{CO2}	Carbon Dioxide, lb/hr	7,042.1	7,101.9
	Carbon Dioxide, grains/dscf	282.33	284.73
LFG_{O2}	Oxygen, lb/hr	1,261.9	1,247.4
	Oxygen, grains/dscf	50.59	50.01
LFG_{N2}	Balance gas as Nitrogen, lb/hr	4,393.6	4,355.5
	Balance gas as Nitrogen, grains/dscf	176.15	174.62
LFG_{H4}	Hydrogen, lb/hr	92.3	91.4
	Hydrogen, grains/dscf	3.70	3.66
LFG_{CO}	Carbon Monoxide, lb/hr	12.7	12.7
	Carbon Monoxide, grains/dscf	0.48	0.48

		Blower Out #1	Blower Out #2
H_2S	Hydrogen Sulfide Concentration, ppmd	50.00	50.00
	Hydrogen Sulfide Rate, lb/hr	0.77	0.77
	Hydrogen Sulfide Rate, grains/dscf	0.031	0.031
COS	Carbonyl Sulfide Concentration, ppmd	0.55	0.55
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd	210.00	230.00
	Methyl Mercaptan Rate, lb/hr	4.58	5.02
	Methyl Mercaptan Rate, grains/dscf	0.184	0.201
C_2H_6S	Ethyl Mercaptan Concentration, ppmd	2.50	2.60
	Ethyl Mercaptan Rate, lb/hr	0.07	0.07
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd	1,300.00	1,400.00
	Dimethyl Sulfide Rate, lb/hr	36.61	39.43
	Dimethyl Sulfide Rate, grains/dscf	1.468	1.581
CS_2	Carbon Disulfide Concentration, ppmd	0.55	0.55
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd	87.00	100.00
	Dimethyl Disulfide Rate, lb/hr	3.71	4.27
	Dimethyl Disulfide Rate, grains/dscf	0.149	0.171

❶$E_{TRS-SO2}$	TRS-->SO2 Emission Concentration, ppmd	1,700.00	1,800.00
	TRS-->SO2 Emission Rate, lb/hr	49.37	52.27
	TRS-->SO2 Emission Rate, grains/dscf	1.979	2.096

❶ TRS assumed moelcular mass = SO2, 64.06 gram/mole, I.e. 1 TRS in LFG assumed to = 1 SO2 emitted from the stack

Air TECHNOLOGY Laboratories, Inc.

January 25, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Republic Services
ATTN: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H012101-01/02

Enclosed are results for sample(s) received 1/21/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers and David Randall, Weaver Consultants Group, on 1/25/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures
Note: The cover letter is an integral part of this analytical report.

CHAIN OF CUSTODY RECORD

Air TECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

TURNAROUND TIME				DELIVERABLES		PAGE: 1 OF 1
Standard	☐	48 hours	■	EDD	☐	Condition upon receipt:
Same Day	☐	72 hours	☐	EDF	☐	Sealed Yes ☐ No ☐
24 hours	☐	96 hours	☐	Level 3	☐	Intact Yes ☐ No ☐
Other:		5 day	☐	Level 4	☐	Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO5544106
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST					
	Canister ID	Sample Start	Sample End	Lab Receive							EPA 15/16 + TRS & ASTM1946 + H2+ CO	ASTM 1946, BTU/SCF				
#012101-01	1618	-20.4	-3.5	-2.5	Outlet A	1/20/2016	1507	C	LFG	NA	X	X				
1 -02	1531	-20.1	-3.5	-2.5	Outlet B	1/20/2016	1518	C	LFG	NA	X	X				

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	**COMMENTS**
SAMPLED BY: Ryan Ayers	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY: Ryan Ayers 1-20-16 1600	DATE/ RECEIVED BY	DATE/TIME	
RELINQUISHED BY: FedEx	DATE/ RECEIVED BY	DATE/TIME 1/21/16 0904	
RELINQUISHED BY	DATE/ RECEIVED BY	DATE/TIME	

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/21/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012101-01		H012101-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	1/20/16 15:07		1/20/16 15:18					
Date/Time Analyzed:	1/21/16 14:47		1/21/16 15:02					
QC Batch No.:	160121GC8A1		160121GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	10.1	2.7	10.0	2.7				
Carbon Dioxide	35.3	0.027	35.6	0.027				
Oxygen/Argon	8.7	1.4	8.6	1.4				
Nitrogen	34.6	2.7	34.3	2.7				
Methane	10.6	0.0027	10.9	0.0027				
Carbon Monoxide	0.1	0.0027	0.1	0.0027				
Net Heating Value (BTU/ft3)	140	2.7	143	2.7				
Gross Heating Value (BTU/ft3)	159	2.7	162	2.7				

Results normalized including non-methane hydrocarbons
BTU values based on D1946 analysis and non-methane analysis assumed as propane
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1/22/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160121GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/21/16 14:03		1/21/16 13:34		1/21/16 13:48			
Analyst Initials:	AS		AS		AS			
Datafile:	21jan012		21jan010		21jan011			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	111	70-130%	112	70-130%	1.5	<30
Carbon Dioxide	ND	0.010	107	70-130%	106	70-130%	1.1	<30
Oxygen/Argon	ND	0.50	103	70-130%	102	70-130%	0.9	<30
Nitrogen	ND	1.0	103	70-130%	102	70-130%	0.8	<30
Methane	ND	0.0010	94	70-130%	94	70-130%	0.3	<30
Carbon Monoxide	ND	0.0010	112	70-130%	112	70-130%	0.3	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ **Date:** 1/23/16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/21/16
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	H012101-01		H012101-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	1/20/16 15:07		1/20/16 15:18					
Date/Time Analyzed:	1/22/16 14:06		1/22/16 14:42					
QC Batch No.:	160122GC3A1		160122GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv				
Hydrogen Sulfide	50 d	5.5	50 d	5.5				
Carbonyl Sulfide	ND	0.55	ND	0.55				
Methyl Mercaptan	210 d	5.5	230 d	5.5				
Ethyl Mercaptan	2.5	0.55	2.6	0.55				
Dimethyl Sulfide	1,300 d	55.0	1,400 d	55.0				
Carbon Disulfide	ND	0.55	ND	0.55				
Dimethyl Disulfide	87 d	5.5	100 d	5.5				
Total Reduced Sulfur	1,700	0.55	1,800	0.55				

ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary dilution

Reviewed/Approved By: _____ Date 1/25/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 160122GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/22/16 13:55		1/22/16 13:29		1/22/16 13:43			
Analyst Initials:	AS		AS		AS			
Datafile:	22jan004		22jan002		22jan003			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	103	70-130%	105	70-130%	2.2	<30
Carbonyl Sulfide	ND	0.20	108	70-130%	109	70-130%	0.8	<30
Methyl Mercaptan	ND	0.20	114	70-130%	115	70-130%	0.3	<30
Ethyl Mercaptan	ND	0.20	106	70-130%	106	70-130%	0.1	<30
Dimethyl Sulfide	ND	0.20	104	70-130%	106	70-130%	1.4	<30
Carbon Disulfide	ND	0.20	110	70-130%	108	70-130%	2.0	<30
Dimethyl Disulfide	ND	0.20	105	70-130%	105	70-130%	0.2	<30

ND = Not Detected (Below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date: 1/25/16
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Bridgeton Landfill, LLC.
Weeklty TRS Sampling Summary

Kurz FM =	**2,985**	scfm
Fleetzoom Total =	**3,188**	scfm

$\Delta =$ **6%**

	PARAMETER	Blower Out #1	Blower Out #2
Date	Test Date		1/13/16
Time	Start - Finish	10:19	10:29
%CH_4	Methane, %	11.20	11.40
%CO_2	Carbon Dioxide, %	37.00	37.70
%O_2	Oxygen, %	8.00	7.70
%Balance	Assumed as Nitorgen, %	32.70	31.50
%H_2	Hydrogen, %	10.50	11.00
%CO	Carbon Monoxide, %	0.095	0.098
P_g	Flue Gas Static Pressure, inches of H_2O	16.61	16.61
t_s	Blower Outlet LFG Temperature, °F	57	57
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H2O)	2,836	
Q_s	Kurz FM, Standard Volumetric Flow Rate, scfm	2,985	
NHV	Net Heating Value, Btu/scf	144.9	150.6
LFG_{CH4}	Methane, lb/hr	793.8	807.9
	Methane, grains/dscf	32.65	33.24
LFG_{CO2}	Carbon Dioxide, lb/hr	7,193.7	7,329.8
	Carbon Dioxide, grains/dscf	295.93	301.53
LFG_{O2}	Oxygen, lb/hr	1,130.9	1,088.5
	Oxygen, grains/dscf	46.52	44.78
LFG_{N2}	Balance gas as Nitrogen, lb/hr	4,046.8	3,898.3
	Balance gas as Nitrogen, grains/dscf	166.48	160.37
LFG_{H4}	Hydrogen, lb/hr	93.5	98.0
	Hydrogen, grains/dscf	3.85	4.03
LFG_{CO}	Carbon Monoxide, lb/hr	11.8	12.1
	Carbon Monoxide, grains/dscf	0.46	0.47

		Blower Out #1	Blower Out #2
H_2S	Hydrogen Sulfide Concentration, ppmd	61.00	52.00
	Hydrogen Sulfide Rate, lb/hr	0.92	0.78
	Hydrogen Sulfide Rate, grains/dscf	0.038	0.032
COS	Carbonyl Sulfide Concentration, ppmd	0.55	0.53
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd	250.00	190.00
	Methyl Mercaptan Rate, lb/hr	5.31	4.04
	Methyl Mercaptan Rate, grains/dscf	0.219	0.166
C_2H_6S	Ethyl Mercaptan Concentration, ppmd	2.80	2.60
	Ethyl Mercaptan Rate, lb/hr	0.08	0.07
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd	1,200.00	1,100.00
	Dimethyl Sulfide Rate, lb/hr	32.94	30.19
	Dimethyl Sulfide Rate, grains/dscf	1.355	1.242
CS_2	Carbon Disulfide Concentration, ppmd	0.55	0.53
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd	96.00	81.00
	Dimethyl Disulfide Rate, lb/hr	4.00	3.37
	Dimethyl Disulfide Rate, grains/dscf	0.164	0.139

❶$E_{TRS-SO2}$	TRS-->SO2 Emission Concentration, ppmd	1,700.00	1,500.00
	TRS-->SO2 Emission Rate, lb/hr	48.11	42.45
	TRS-->SO2 Emission Rate, grains/dscf	1.979	1.746

❶ TRS assumed moelcular mass = SO2, 64.06 gram/mole, I.e. 1 TRS in LFG assumed to = 1 SO2 emitted from the stack

Air TECHNOLOGY Laboratories, Inc.

January 19, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Republic Services
ATTN: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H011405-01/02

Enclosed are results for sample(s) received 1/14/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers and David Randall, Weaver Consultants Group, on 1/18/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures
Note: The cover letter is an integral part of this analytical report.

CHAIN OF CUSTODY RECORD

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

TURNAROUND TIME				DELIVERABLES		PAGE: 1 OF 1
Standard	☐	48 hours	■	EDD	☐	Condition upon receipt:
Same Day	☐	72 hours	☐	EDF	☐	Sealed Yes ☐ No ☐
24 hours	☐	96 hours	☐	Level 3	☐	Intact Yes ☐ No ☐
Other:		5 day	☐	Level 4	☐	Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING	
P.O. No.:	PO~~4862452~~ 5544160
Bill to:	Republic Services JD 1/15/16
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST					
	Canister ID	Sample Start	Sample End	Lab Receive							EPA 15/16 + TRS & ASTM1946 + H2+ CO	ASTM 1946, BTU/SCF				
#011405-01	1617	-20.5	-3.5	-2.5	Outlet A	1/13/2016	1019	C	LFG	NA	X	X				
↓ -02	1533	-20.4	-3.5	-2	Outlet B	1/13/2016	1029	C	LFG	NA	X	X				

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	
SAMPLED BY: Ryan Ayers	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY: Ryan Ayers	DATE: 1-13-16 1100	RECEIVED BY	DATE/TIME
RELINQUISHED BY: FED EX	DATE:	RECEIVED BY: [signature]	DATE/TIME: 1/14/16 K601
RELINQUISHED BY	DATE:	RECEIVED BY	DATE/TIME

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/14/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011405-01		H011405-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	1/13/16 10:19		1/13/16 10:29					
Date/Time Analyzed:	1/15/16 10:40		1/15/16 10:55					
QC Batch No.:	160115GC8A1		160115GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	10.5	2.7	11.0	2.7				
Carbon Dioxide	37.0	0.027	37.7	0.027				
Oxygen/Argon	8.0	1.4	7.7	1.3				
Nitrogen	32.7	2.7	31.5	2.7				
Methane	11.2	0.0027	11.4	0.0027				
Carbon Monoxide	0.095	0.0027	0.098	0.0027				
Net Heating Value (BTU/ft3)	144.9	2.7	150.6	2.7				
Gross Heating Value (BTU/ft3)	164.6	2.7	171.0	2.7				

Results normalized including non-methane hydrocarbons
BTU values based on D1946 analysis and non-methane analysis assumed as propane
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1-18-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160115GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/15/16 8:55		1/15/16 8:08		1/15/16 8:22			
Analyst Initials:	AS		AS		AS			
Datafile:	15jan003		15jan.ru		15jan001			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	99	70-130%	97	70-130%	1.5	<30
Carbon Dioxide	ND	0.010	98	70-130%	95	70-130%	2.3	<30
Oxygen/Argon	ND	0.50	103	70-130%	100	70-130%	2.5	<30
Nitrogen	ND	1.0	102	70-130%	100	70-130%	2.2	<30
Methane	ND	0.0010	102	70-130%	100	70-130%	2.0	<30
Carbon Monoxide	ND	0.0010	109	70-130%	107	70-130%	2.4	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 1-18-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/14/16
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	H011405-01		H011405-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	1/13/16 10:19		1/13/16 10:29					
Date/Time Analyzed:	1/15/16 13:24		1/15/16 14:14					
QC Batch No.:	160115GC3A2		160115GC3A2					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv				
Hydrogen Sulfide	61 d	5.5	52 d	5.3				
Carbonyl Sulfide	ND	0.55	ND	0.53				
Methyl Mercaptan	250 d	5.5	190 d	5.3				
Ethyl Mercaptan	2.8	0.55	2.6	0.53				
Dimethyl Sulfide	1,200 d	55.0	1,100 d	53.0				
Carbon Disulfide	ND	0.55	ND	0.53				
Dimethyl Disulfide	96 d	5.5	81 d	5.3				
Total Reduced Sulfur	1,700	0.55	1,500	0.53				

ND = Not Detected (below RL)
RL = Reporting Limit
d = reported from a secondary dilution

Reviewed/Approved By: _____ Date 1-18-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 160115GC3A2
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/15/16 13:11		1/15/16 12:31		1/15/16 12:59			
Analyst Initials:	AS		AS		AS			
Datafile:	15jan014		15jan012		15jan013			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	95	70-130%	94	70-130%	1.1	<30
Carbonyl Sulfide	ND	0.20	103	70-130%	102	70-130%	0.9	<30
Methyl Mercaptan	ND	0.20	100	70-130%	100	70-130%	0.8	<30
Ethyl Mercaptan	ND	0.20	118	70-130%	120	70-130%	1.6	<30
Dimethyl Sulfide	ND	0.20	93	70-130%	93	70-130%	0.2	<30
Carbon Disulfide	ND	0.20	93	70-130%	95	70-130%	1.8	<30
Dimethyl Disulfide	ND	0.20	109	70-130%	109	70-130%	0.1	<30

ND = Not Detected (Below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date: 1-18-16
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

	PARAMETER	Blower Out
Date	Test Date	1/5/16
Start	Run Start Time	7:24
	Run Finish Time	8:51
	Net Traversing Points	16 (2 x 8)
Θ	Net Run Time, minutes	1:26:15
C_p	Pitot Tube Coeficient	0.99
P_{Br}	Barometric Pressure, inches of Mercury	29.38
% H_2O	Moisture Content of LFG, %	0.72
% RH	Relative Humidity, %	41.50
M_{fd}	Dry Mole Fraction	0.993
%CH_4	Methane, %	11.20
%CO_2	Carbon Dioxide, %	37.60
%O_2	Oxygen, %	7.70
%Balance	Assumed as Nitorgen, %	32.05
%H_2	Hydrogen, %	10.70
%CO	Carbon Monoxide, %	0.10
M_d	Dry Molecular Weight, lb/lb-Mole	30.03
M_s	Wet Molecular weight, lb/lb-Mole	29.94
P_g	Flue Gas Static Pressure, inches of H_2O	16.40
P_s	Absolute Flue Gas Pressure, inches of Mercury	31.21
t_s	Average Stack Gas Temperature, °F	60
ΔP_{avg}	Average Velocity Head, inches of H_2O	0.295
v_s	Average LFG Velocity, feet/second	34.30
A_s	Stack Crossectional Area, square feet	1.35
Q_{sd}	Dry Volumetric Flow Rate, dry scfm	2,926
Q_s	Standard Volumetric Flow Rate, scfm	2,948
Q_{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	2,784
$Q_{lb/hr}$	Dry Air Flow Rate at Standard Conditions, lb/hr	13,685
NHV	Net Heating Value, Btu/scf	142
LFG_{CH4}	Methane, lb/hr	819.1
	Methane, grains/dscf	32.65
LFG_{CO2}	Carbon Dioxide, lb/hr	7,543.2
	Carbon Dioxide, grains/dscf	300.73
LFG_{O2}	Oxygen, lb/hr	1123.2
	Oxygen, grains/dscf	44.78
LFG_{N2}	Balance gas as Nitrogen, lb/hr	4,092.8
	Balance gas as Nitrogen, grains/dscf	163.17
LFG_{H4}	Hydrogen, lb/hr	98.3
	Hydrogen, grains/dscf	3.92
LFG_{CO}	Carbon Monoxide, lb/hr	12.8
	Carbon Monoxide, grains/dscf	0.51

		Blower Out Sample #1	Blower Out Sample #2
H_2S	Hydrogen Sulfide Concentration, ppmd	61.00	56.00
	Hydrogen Sulfide Rate, lb/hr	0.95	0.87
	Hydrogen Sulfide Rate, grains/dscf	0.038	0.035
COS	Carbonyl Sulfide Concentration, ppmd	0.53	0.53
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd	200.00	170.00
	Methyl Mercaptan Rate, lb/hr	4.39	3.73
	Methyl Mercaptan Rate, grains/dscf	0.175	0.149
C_2H_6S	Ethyl Mercaptan Concentration, ppmd	2.60	2.50
	Ethyl Mercaptan Rate, lb/hr	0.07	0.07
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd	920.00	890.00
	Dimethyl Sulfide Rate, lb/hr	26.06	25.21
	Dimethyl Sulfide Rate, grains/dscf	1.039	1.005
CS_2	Carbon Disulfide Concentration, ppmd	0.53	0.53
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd	96.00	90.00
	Dimethyl Disulfide Rate, lb/hr	4.12	3.12
	Dimethyl Disulfide Rate, grains/dscf	0.164	0.125

❶ **$E_{TRS-SO2}$**	TRS-->SO2 Emission Concentration, ppmd	1,400.00	1,300.00
	TRS-->SO2 Emission Rate, lb/hr	40.88	37.96
	TRS-->SO2 Emission Rate, grains/dscf	1.630	1.514

❶ TRS assumed moelcular mass = SO2, 64.06 gram/mole, I.e. 1 TRS in LFG assumed to = 1 SO2 emitted from the stack

Tuesday, January 05, 2016

LOCATION	TIME	FLOW -SCFM			Method 2 vs. Fleetzoom	Method 2 vs Kurz
		Method 2	FleetZoom	Kurz FM		
BLOWER OUT	7:24	2,948	3,059	2,896	-3.8%	1.7%

Air TECHNOLOGY Laboratories, Inc.

January 11, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Republic Services
ATTN: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H010603-01

Enclosed are results for sample(s) received 1/06/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers and David Randall, Weaver Consultants Group, on 1/08/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures
Note: The cover letter is an integral part of this analytical report.

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME				DELIVERABLES		PAGE: 1 OF 1
Standard	☐	48 hours	■	EDD	☐	Condition upon receipt:
Same Day	☐	72 hours	☐	EDF	☐	Sealed Yes ☐ No ☐
24 hours	☐	96 hours	☐	Level 3	☐	Intact Yes ☐ No ☐
Other:		5 day	☐	Level 4	☐	Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING	
P.O. No.:	PO4862452 5/9/2016 JS Verbal
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST: EPA 15/16 + TRS & ASTM1946 + H2+ CO	ASTM 1946, BTU/SCF	ASTM D5504			
	Canister ID	Sample Start	Sample End	Lab Receive												
H0106003-01	6058	-21.59	-4.27	-2	Blower Outlet 1	1/5/2016	755	C	LFG	NA	X	X	X			
-02	5959	-20.63	-3.98	-2	Blower Outlet 2	1/5/2016	822	C	LFG	NA	X	X	X			
-03	5976	-21.08	-3.99	-2.5	LFG CSU EP14	1/5/2016	950	C	LFG	NA	X	X				

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		COMPANY: Republic Services	DATE/TIME:	COMMENTS
SAMPLED BY: Ryan Ayers		COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY:	1-5-16 1330	DATE/ RECEIVED BY	DATE/TIME	
RELINQUISHED BY: FED EX		DATE/ RECEIVED BY	1/6/16 0919 DATE/TIME	
RELINQUISHED BY		DATE/ RECEIVED BY	DATE/TIME	

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H010603-01		H010603-02		H010603-03			
Client Sample I.D.:	Blower Outlet 1		Blower Outlet 2		LFG CSU EP 14			
Date/Time Sampled:	1/5/16 7:55		1/5/16 8:22		1/5/16 9:50			
Date/Time Analyzed:	1/6/16 15:52		1/6/16 16:06		1/6/16 16:21			
QC Batch No.:	160106GC8A2		160106GC8A2		160106GC8A2			
Analyst Initials:	AS		AS		AS			
Dilution Factor:	2.7		2.7		2.7			
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v		
Hydrogen	10.6	2.7	10.8	2.7	11.3	2.7		
Carbon Dioxide	37.7	0.027	37.5	0.027	32.0	0.027		
Oxygen/Argon	7.8	1.3	7.6	1.3	9.5	1.4		
Nitrogen	32.1	2.7	32.0	2.7	40.0	2.7		
Methane	11.1	0.0027	11.3	0.0027	6.3	0.0027		
Carbon Monoxide	0.10	0.0027	0.10	0.0027	0.089	0.0027		
Net Heating Value (BTU/ft3)	145.6	2.7	148.6	2.7	106.2	2.7		
Gross Heating Value (BTU/ft3)	165.4	2.7	168.7	2.7	121.8	2.7		

Results normalized including non-methane hydrocarbons
BTU values based on D1946 analysis and non-methane analysis assumed as propane
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1-8-16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160106GC8A2
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/6/16 15:04		1/6/16 13:36		1/6/16 13:50			
Analyst Initials:	AS		AS		AS			
Datafile:	06jan020		06jan017		06jan018			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	100	70-130%	99	70-130%	0.2	<30
Carbon Dioxide	ND	0.010	97	70-130%	97	70-130%	0.0	<30
Oxygen/Argon	ND	0.50	99	70-130%	100	70-130%	0.3	<30
Nitrogen	ND	1.0	100	70-130%	100	70-130%	0.4	<30
Methane	ND	0.0010	91	70-130%	92	70-130%	0.4	<30
Carbon Monoxide	ND	0.0010	111	70-130%	111	70-130%	0.5	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 1-8-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/16
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	H010603-01		H010603-02					
Client Sample I.D.:	Blower Outlet 1		Blower Outlet 2					
Date/Time Sampled:	1/5/16 7:55		1/5/16 8:22					
Date/Time Analyzed:	1/7/16 9:41		1/7/16 10:19					
QC Batch No.:	160107GC3A1		160107GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	**Result ppmv**	**RL ppmv**	**Result ppmv**	**RL ppmv**				
Hydrogen Sulfide	61 d	5.3	56 d	5.3				
Carbonyl Sulfide	ND	0.53	ND	0.53				
Methyl Mercaptan	200 d	5.3	170 d	5.3				
Ethyl Mercaptan	2.6	0.53	2.5	0.53				
Dimethyl Sulfide	920 d	53.0	890 d	53.0				
Carbon Disulfide	ND	0.53	ND	0.53				
Dimethyl Disulfide	96 d	5.3	90 d	5.3				
Total Reduced Sulfur	1,400	0.53	1,300	0.53				

ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary dilution

Reviewed/Approved By: _____ Date 1-11-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 160107GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/7/16 9:25		1/7/16 9:02		1/7/16 9:13			
Analyst Initials:	AS		AS		AS			
Datafile:	07jan003		07jan001		07jan002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	83	70-130%	83	70-130%	0.4	<30
Carbonyl Sulfide	ND	0.20	101	70-130%	103	70-130%	1.8	<30
Methyl Mercaptan	ND	0.20	91	70-130%	91	70-130%	0.3	<30
Ethyl Mercaptan	ND	0.20	118	70-130%	118	70-130%	0.1	<30
Dimethyl Sulfide	ND	0.20	91	70-130%	92	70-130%	1.5	<30
Carbon Disulfide	ND	0.20	83	70-130%	85	70-130%	1.3	<30
Dimethyl Disulfide	ND	0.20	94	70-130%	98	70-130%	3.9	<30

ND = Not Detected (Below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date: 1-8-16
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/16
Matrix: Air
Reporting Units: ppmv

ASTM D5504

Lab No.:	H010603-01		H010603-02					
Client Sample I.D.:	Blower Outlet 1		Blower Outlet 2					
Date/Time Sampled:	1/5/16 7:55		1/5/16 8:22					
Date/Time Analyzed:	1/7/16 9:41		1/7/16 10:19					
QC Batch No.:	160107GC3A1		160107GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv				
Hydrogen Sulfide	61 d	5.3	56 d	5.3				
Carbonyl Sulfide	ND	0.53	ND	0.53				
Methyl Mercaptan	200 d	5.3	170 d	5.3				
Ethyl Mercaptan	2.6	0.53	2.5	0.53				
Dimethyl Sulfide	920 d	53.0	890 d	53.0				
Carbon Disulfide	ND	0.53	ND	0.53				
Dimethyl Disulfide	96 d	5.3	90 d	5.3				
Total Reduced Sulfur	1,400	0.53	1,300	0.53				

ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary dilution

Reviewed/Approved By: _____ Date 1-8-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 160107GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by ASTM D5504

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/7/16 9:25		1/7/16 9:02		1/7/16 9:13			
Analyst Initials:	AS		AS		AS			
Datafile:	07jan003		07jan001		07jan002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	83	70-130%	83	70-130%	0.4	<30
Carbonyl Sulfide	ND	0.20	101	70-130%	103	70-130%	1.8	<30
Methyl Mercaptan	ND	0.20	91	70-130%	91	70-130%	0.3	<30
Ethyl Mercaptan	ND	0.20	118	70-130%	118	70-130%	0.1	<30
Dimethyl Sulfide	ND	0.20	91	70-130%	92	70-130%	1.5	<30
Carbon Disulfide	ND	0.20	83	70-130%	85	70-130%	1.3	<30
Dimethyl Disulfide	ND	0.20	94	70-130%	98	70-130%	3.9	<30

ND = Not Detected (Below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date: 1-8-16
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

ANALYTICAL SOLUTION, INC. **(AnSol)**

1/25/2016

Analytical Report

Sample log # : R0107b1

Purchase Order #:	0120-131-10-27		
Company :	**Weaver Boos Consultants**	Requester :	David Randall
Address :	*6301 East Hwy AB* *Columbia, MO 65201*	Phone:	(888) 660-0346
		Fax:	
Sample Description :	*Bio Gas*	Customer Project:	***Bridgeton LF***
Number of Samples :	*2*	Received Date :	*1/7/16*
Total Report Page:	*3*		

Note: This report is submitted to the requester through E-mail only. Please let us know if your need this document security signed, or a hard copy report by mail or fax.

Results:

All results are attached in following pages.

The unit conversion is based on standard conditions at 60^{o}F and 14.73 psia, where applied

Submitted by: Sherman S. Chao, Ph.D.
Tel: (630) 230-9378, Fax: (630) 230-9376

Disclaimer:

1/25/2016 **Analytical Report** **Sample log # : R0107b1**

GAS COMPONENT –

Sample ID:	**Conc Unit**	**R0107b01**	**R0107b02**
		Blower outlet, 1/5/16	Flare LFG, CSU, EP14, 1/5/16
Hydrogen	%	9.20	9.27
Methane	%	10.82	6.35
Carbon dioxide	%	35.1	30.5
Nitrogen	%	34.1	42.0
Oxygen	%	10.76	11.91
Relative density *		1.050	1.043
GHV, dry (14.73 psi) *	Btu/scf	140	95
NHV, dry (14.73 psi) *	Btu/scf	124	84
Total organic Cl	ppmv	8.75	7.58
	mg/M^3	13.10	11.34

Note: Major component concentrations were normalized to 100% on a dry basis. Oxygen and Argon cannot be separated; therefore, the oxygen result may include a small amount of Argon. Some results may be reported with additional significance for reference. All components are identified by GC retention times only. (ASTM D1945/EPA 3C)

* 60^oF and 14.73 psia , ASTM D3588

1/25/2016 **Analytical Report** **Sample log # :** **R0107b1**

Compound Speciation – Sulfur

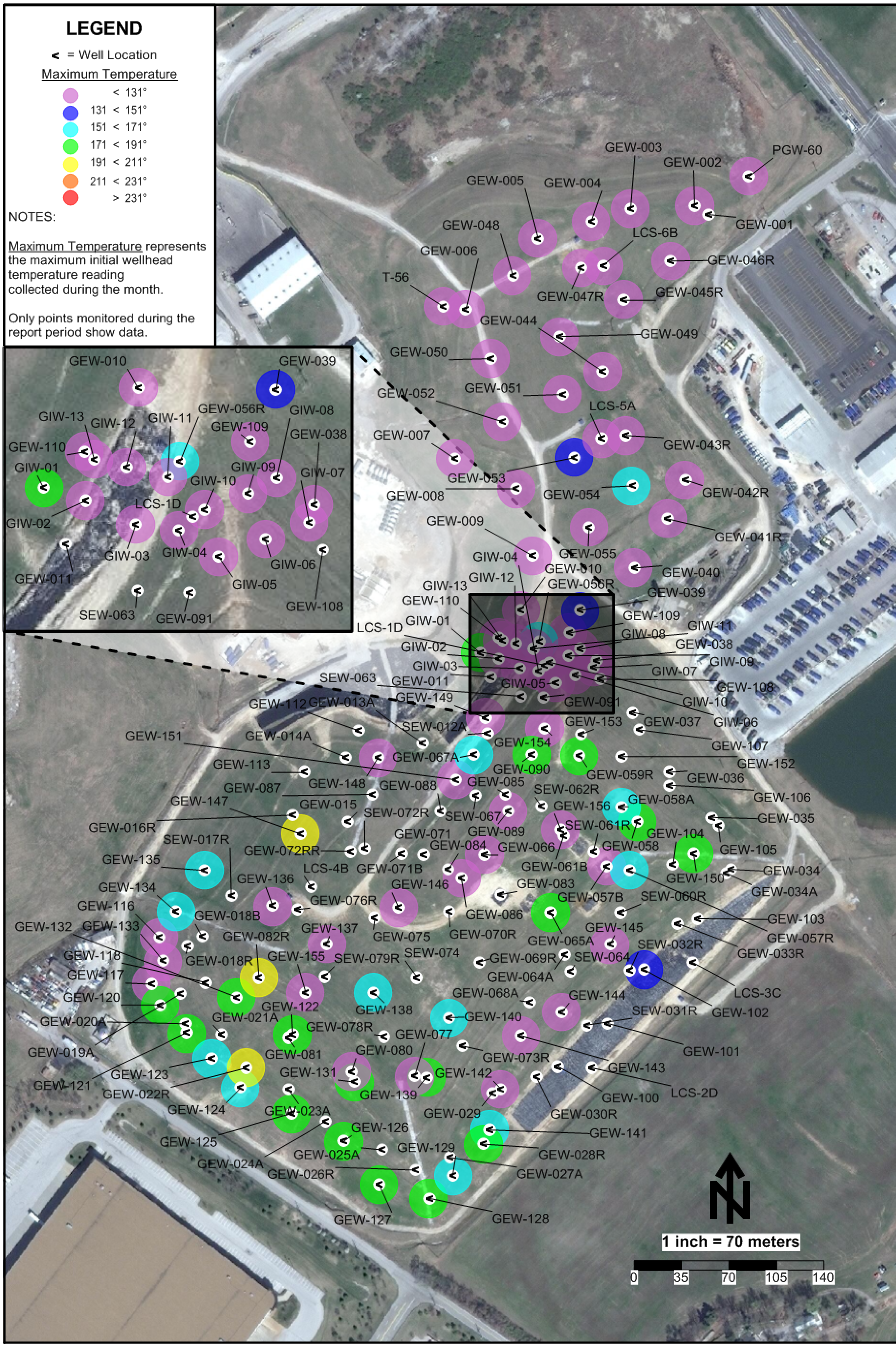
	R0107b01
Sulfur Compounds, ppmv	Blower outlet, 1/5/16
Hydrogen sulfide	73
Carbonyl sulfide	0.14
Methyl mercaptan	244
Ethyl mercaptan	1.13
Dimethyl sulfide/IPM	956
Carbon disulfide (CS_2)	0.08
t-Butyl mercaptan (TBM)	<0.10
n-Propyl mercaptan (NPM)	<0.10
Methyl ethyl sulfide/NBM	3.25
Thiophene	2.76
S-Butyl mercaptan (SBM)	0.24
Diethyl sulfide	<0.10
Dimethyl disulfide *	11.31
Ethyl methyl disulfide *	<0.10
Diethyl disulfide *	<0.10
Others (as S)	5.83
Total S (ppmv):	1310
(mg/M^3):	1772

Note: ASTM D5504. Some results were reported with additional significance for reference. The normal detection limit of each sulfur compound is 0.1 ppmv. Hydrogen sulfide is determined by a GC-TCD method as the concentration is beyond the normal liner range of D5504 method.

* 1.0 ppmv sulfur compound = 2.0 ppmv component as sulfur

ATTACHMENT C

GAS WELL ANALYSIS MAPS



Initial Temperature Maximums - January 2016 - Bridgeton Landfill

LEGEND

< = Well Location

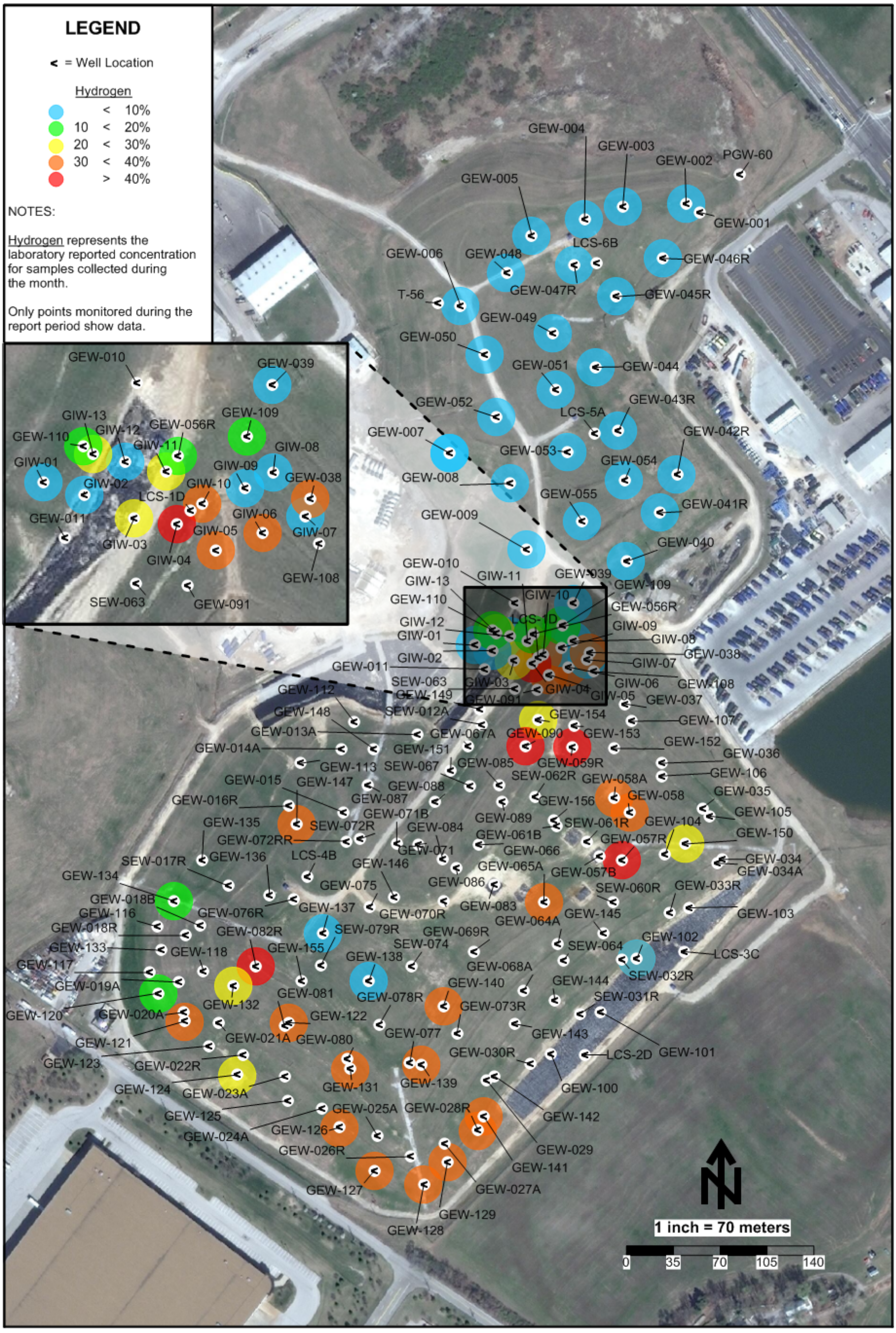
Hydrogen

		<	10%
10	<	<	20%
20	<	<	30%
30	<	<	40%
		>	40%

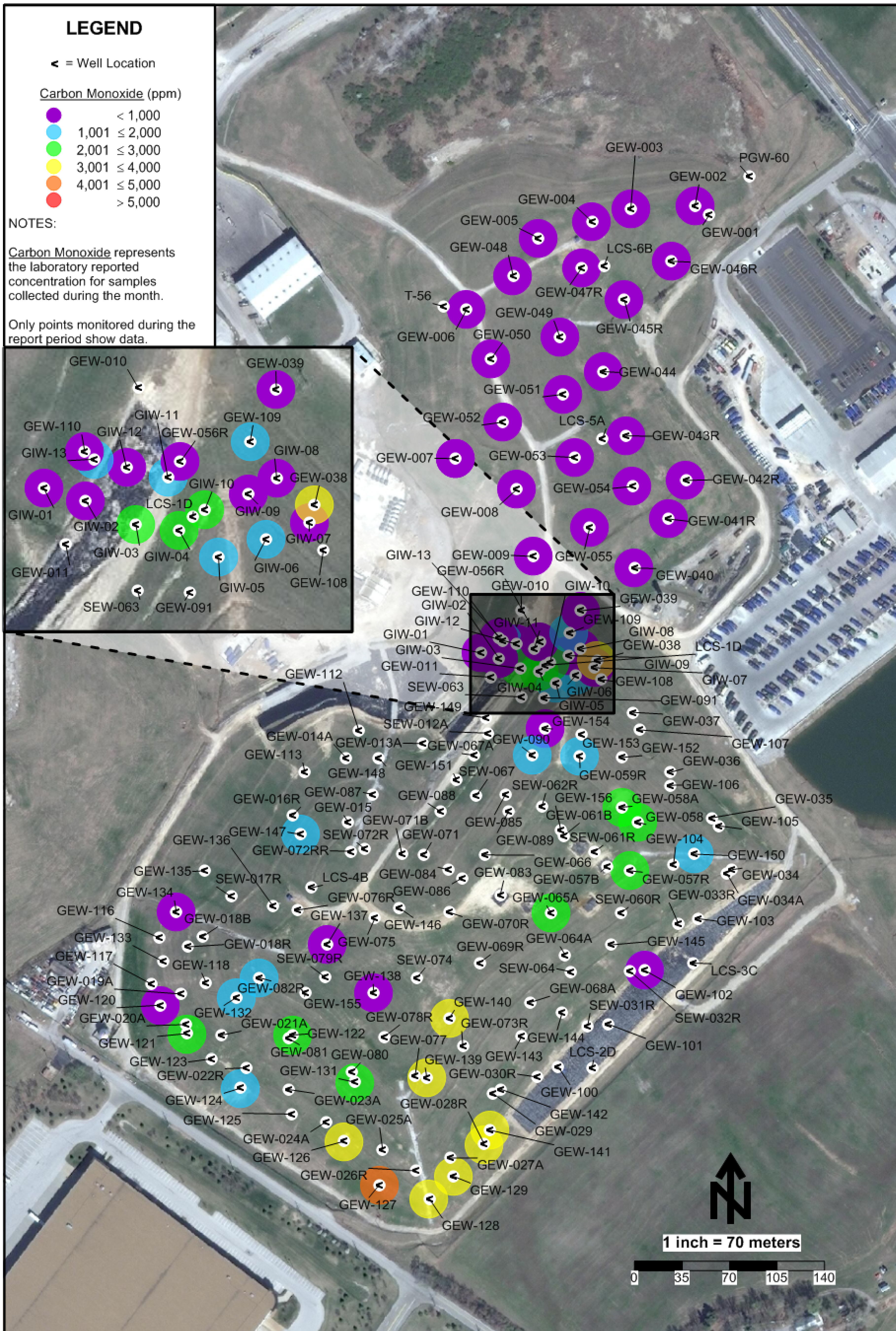
NOTES:

Hydrogen represents the laboratory reported concentration for samples collected during the month.

Only points monitored during the report period show data.



Hydrogen Data Map - January 2016 - Bridgeton Landfill



Carbon Monoxide Data Map - January 2016 - Bridgeton Landfill

ATTACHMENT D

LABORATORY DATA

ATTACHMENT D-1

LAB ANALYSIS SUMMARY

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
North Quarry								
GEW-002	9/10/2015	55	41	ND	ND	ND	ND	
GEW-002	10/12/2015	56	41	ND	ND	ND	ND	
GEW-002	11/13/2015	54	43	ND	ND	ND	ND	
GEW-002	12/14/2015	41	32	3.2	23	ND	35	See Note 3
GEW-002	12/31/2015	53	40	ND	5.7	0.1	ND	Resample
GEW-002	1/14/2016	55	43	ND	ND	ND	ND	
GEW-003	9/10/2015	49	36	2.8	13	0.1	ND	See Note 1
GEW-003	10/12/2015	47	35	2.9	15	0.1	ND	See Note 1 and 3
GEW-003	11/10/2015	50	40	ND	8.7	0.1	ND	
GEW-003	12/14/2015	42	37	ND	20	ND	ND	
GEW-003	1/14/2016	52	39	ND	6.7	0.1	ND	
GEW-004	9/10/2015	53	40	ND	6.3	0.1	ND	
GEW-004	10/12/2015	54	40	ND	5.8	0.1	ND	
GEW-004	11/10/2015	49	40	ND	10	0.1	ND	
GEW-004	12/14/2015	45	37	ND	16	ND	ND	
GEW-004	1/14/2016	52	40	ND	7	0.1	ND	
GEW-005	9/10/2015	52	38	ND	10	0.1	ND	
GEW-005	10/12/2015	47	35	1.7	16	ND	ND	See Note 3
GEW-005	11/10/2015	44	36	ND	19	0.03	ND	
GEW-005	12/15/2015	41	34	ND	23	ND	ND	
GEW-005	1/14/2016	42	34	ND	24	ND	ND	
GEW-006	9/10/2015	55	38	ND	6.5	ND	ND	
GEW-006	11/10/2015	51	40	ND	8.1	ND	ND	
GEW-006	1/14/2016	52	37	ND	10	ND	ND	
GEW-007	9/11/2015	57	40	ND	ND	ND	ND	
GEW-007	11/11/2015	56	41	ND	ND	ND	ND	
GEW-007	1/14/2016	57	41	ND	ND	ND	ND	
GEW-007	1/27/2016	56	39	ND	4	ND	ND	
GEW-008	9/11/2015	49	47	ND	ND	0.7	ND	
GEW-008	10/12/2015	50	46	ND	ND	1.3	ND	
GEW-008	11/11/2015	49	47	ND	ND	2.1	ND	
GEW-008	12/15/2015	42	42	1.8	8.6	1.4	ND	See Note 3
GEW-008	1/27/2016	50	47	ND	ND	1.6	ND	
GEW-009	9/11/2015	51	40	1.5	7	0.8	ND	See Note 1
GEW-009	10/12/2015	52	41	ND	5.1	0.8	ND	
GEW-009	11/11/2015	46	39	2	12	0.4	ND	See Note 1 and 3
GEW-009	12/15/2015	39	40	ND	19	0.3	ND	
GEW-009	1/27/2016	51	41	ND	6.7	0.5	ND	
GEW-040	9/8/2015	56	40	ND	ND	ND	ND	
GEW-040	10/12/2015	57	40	ND	ND	ND	ND	
GEW-040	11/10/2015	52	37	2.4	8.5	ND	ND	See Note 1 and 3
GEW-040	12/14/2015	54	38	1.9	6.6	ND	ND	See Note 3
GEW-040	1/14/2016	57	41	ND	ND	ND	ND	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-041R	9/8/2015	56	40	ND	3.6	ND	ND	
GEW-041R	11/10/2015	47	37	1.6	15	ND	ND	See Note 3
GEW-041R	1/14/2016	56	42	ND	ND	ND	ND	
GEW-042R	9/8/2015	55	41	ND	ND	ND	ND	
GEW-042R	10/12/2015	56	41	ND	ND	ND	ND	
GEW-042R	11/10/2015	42	35	5	18	ND	ND	See Note 1 and 3
GEW-042R	12/14/2015	49	40	2.3	8.3	ND	ND	See Note 3
GEW-042R	1/14/2016	55	42	ND	ND	ND	ND	
GEW-043R	9/8/2015	54	41	ND	ND	0.2	ND	
GEW-043R	11/11/2015	53	44	ND	ND	ND	ND	
GEW-043R	1/14/2016	55	43	ND	ND	0.2	ND	
GEW-044	9/10/2015	55	38	ND	5.9	ND	ND	
GEW-044	11/10/2015	47	37	ND	15	ND	ND	
GEW-044	1/14/2016	56	40	ND	ND	ND	ND	
GEW-045R	9/10/2015	58	39	ND	ND	ND	ND	
GEW-045R	10/12/2015	58	38	ND	ND	ND	ND	
GEW-045R	11/10/2015	58	39	ND	ND	ND	ND	
GEW-045R	12/14/2015	57	38	ND	3.9	ND	ND	
GEW-045R	1/14/2016	56	43	ND	ND	ND	ND	
GEW-046R	9/10/2015	53	40	ND	5	0.1	ND	
GEW-046R	10/12/2015	56	41	ND	ND	0.1	ND	
GEW-046R	11/10/2015	53	41	ND	4.7	0.1	ND	
GEW-046R	12/14/2015	47	39	ND	13	ND	ND	
GEW-046R	1/14/2016	54	41	ND	4.7	0.1	ND	
GEW-047R	9/10/2015	49	38	ND	12	0.1	ND	
GEW-047R	10/12/2015	47	37	ND	15	ND	ND	
GEW-047R	11/10/2015	41	37	ND	21	0.1	ND	
GEW-047R	12/14/2015	37	33	ND	29	ND	ND	
GEW-047R	1/14/2016	40	35	ND	24	0.05	ND	
GEW-048	9/10/2015	53	39	ND	7.5	ND	ND	
GEW-048	10/12/2015	55	39	ND	4.9	ND	ND	
GEW-048	11/10/2015	53	40	ND	5.7	ND	ND	
GEW-048	12/15/2015	49	38	ND	12	ND	ND	
GEW-048	1/14/2016	52	39	ND	8.4	ND	ND	
GEW-049	9/10/2015	50	35	2.9	12	0.1	ND	See Note 1
GEW-049	10/12/2015	54	39	ND	6.2	0.1	ND	
GEW-049	11/10/2015	46	37	ND	15	0.1	ND	
GEW-049	12/15/2015	46	37	ND	16	ND	ND	
GEW-049	1/27/2016	45	34	ND	20	0.1	ND	
GEW-050	9/10/2015	56	39	ND	4.4	0.1	ND	
GEW-050	11/10/2015	48	37	ND	13	ND	ND	
GEW-050	1/14/2016	53	39	ND	7.9	0.1	ND	
GEW-051	9/10/2015	54	41	ND	ND	1	ND	
GEW-051	11/10/2015	53	42	ND	3.3	1	ND	
GEW-051	1/27/2016	55	41	ND	ND	1	ND	
GEW-052	9/10/2015	52	39	ND	8.1	0.1	ND	
GEW-052	11/11/2015	43	37	1.7	18	0.04	ND	See Note 1 and 3
GEW-052	1/14/2016	45	36	ND	19	0.04	ND	
GEW-053	9/11/2015	49	41	ND	ND	5.7	63	
GEW-053	10/12/2015	50	41	ND	ND	5.7	64	
GEW-053	11/11/2015	49	42	ND	3.3	4.8	55	
GEW-053	12/15/2015	49	41	ND	4.8	4.5	51	
GEW-053	1/27/2016	50	41	ND	3.9	4.7	49	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-054	9/11/2015	51	41	ND	ND	4.3	34	
GEW-054	10/28/2015	52	41	ND	3.5	2.2	ND	
GEW-054	11/11/2015	52	43	ND	ND	2.6	ND	
GEW-054	12/15/2015	50	42	ND	ND	5.1	39	
GEW-054	1/27/2016	53	42	ND	ND	4.0	ND	
GEW-055	9/10/2015	48	39	2.6	9.4	1.4	ND	
GEW-055	10/12/2015	50	40	2	7.3	1.4	30	See Note 3
GEW-055	11/11/2015	52	43	ND	3.2	1.2	ND	
GEW-055	12/15/2015	51	41	ND	5.8	1.8	ND	
GEW-055	1/27/2016	54	42	ND	ND	1.0	ND	

Notes: (1) Based on the comparison of field to laboratory readings, oxygen to balance gas ratios, and historical concentrations, the sample was determined to be suspect due to oxygen introduction which likely occurred during sample collection or laboratory analytical methods. (2) MDNR also collected duplicate LFG samples at these locations during this sampling period. (3) Based on the oxygen verification readings taken with an Envision meter, it was determined there is a sample train leak. (4) Based on the oxygen verification readings taken with an Envision meter, it was determined that the readings are accurate. (5) Flare station gas concentration data is an average of FL-100, FL-120, and FL-140.

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
South Quarry								
GEW-010	9/11/2015	40	39	4.3	16	0.6	78	
GEW-010	10/14/2015	42	44	2.9	11	0.6	79	See Note 4
GEW-010	11/11/2015	53	42	ND	3.9	0.6	50	
GEW-010	12/16/2015	54	40	ND	4.4	ND	35	
GEW-010	1/26/2016	53	43	ND	3.0	0.2	ND	
GEW-022R	9/21/2015	0.9	65	ND	ND	29	4,100	
GEW-022R	11/12/2015	0.8	65	ND	ND	30	4,800	
GEW-028R	11/13/2015	0.1	59	ND	4.9	34	3,600	
GEW-028R	1/26/2016	0.1	60	1.5	5.1	33	3,600	
GEW-038	9/11/2015	0.3	46	5.4	19	28	3,000	
GEW-038	10/14/2015	0.3	45	5.6	20	28	3,000	See Note 4
GEW-038	11/11/2015	0.2	33	9.8	35	21	2,100	
GEW-038	12/16/2015	0.2	33	10	36	20	2,100	See Note 4
GEW-038	1/26/2016	0.3	56	2.2	8	33	3,200	
GEW-039	9/11/2015	39	52	ND	4.8	2.3	190	
GEW-039	10/14/2015	39	53	ND	3.9	2.4	170	
GEW-039	11/11/2015	39	55	ND	ND	2.7	170	
GEW-039	12/16/2015	37	54	ND	4.5	3.3	150	
GEW-039	1/26/2016	42	56	ND	ND	0.7	52	
GEW-056R	9/11/2015	0.6	56	ND	ND	39	2,400	
GEW-056R	10/14/2015	12	42	ND	23	22	1,300	
GEW-056R	11/11/2015	14	42	ND	24	18	1,100	
GEW-056R	12/16/2015	1.8	54	ND	5.8	37	2,000	
GEW-056R	1/26/2016	16	39	ND	31	13	700	
GEW-057R	9/18/2015	0.4	52	ND	5.4	38	2,400	
GEW-057R	11/11/2015	0.5	53	ND	3.8	40	2,800	
GEW-057R	1/14/2016	0.4	54	ND	ND	40	2,200	
GEW-058	9/18/2015	0.3	46	4	14	33	2,400	
GEW-058	11/11/2015	3.5	48	3.6	14	30	2,100	See Note 3
GEW-058	1/14/2016	3.8	54	ND	5.5	35	2,100	
GEW-058A	9/18/2015	5.1	55	ND	3.6	34	2,400	
GEW-058A	11/11/2015	0.4	49	3.3	12	35	2,500	
GEW-058A	1/14/2016	0.3	51	2	7.1	39	2,500	
GEW-059R	9/18/2015	1.5	51	ND	ND	41	1,700	
GEW-059R	11/11/2015	0.8	51	ND	4.4	41	1,800	
GEW-059R	1/14/2016	0.9	48	1.9	6.9	41	1,900	See Note 3
GEW-065A	9/21/2015	0.4	57	ND	3.7	36	3,100	
GEW-065A	11/12/2015	0.4	58	ND	ND	37	3,200	
GEW-065A	1/14/2016	0.4	58	ND	ND	36	2,900	
GEW-082R	9/21/2015	0.8	53	ND	3.7	40	2,200	
GEW-082R	11/12/2015	0.9	55	ND	ND	40	2,300	
GEW-082R	1/14/2016	0.8	56	ND	ND	40	2,000	
GEW-086	9/18/2015	12	36	5.3	40	5.6	520	
GEW-086	11/12/2015	10	34	8.7	44	2.7	430	
GEW-090	9/18/2015	5	51	ND	ND	40	2,200	
GEW-090	11/12/2015	5.5	49	ND	3.6	40	2,200	
GEW-090	1/26/2016	5	50	ND	ND	42	1,900	
GEW-102	11/13/2015	2.1	59	ND	3.3	34	2,100	
GEW-102	1/14/2016	2.3	60	ND	ND	34	1,700	
GEW-104	11/13/2015	0.4	43	5.7	21	29	1,500	
GEW-109	9/11/2015	4.8	49	2.5	14	28	2,000	See Note 1
GEW-109	10/14/2015	5.3	50	ND	12	30	2,000	
GEW-109	11/11/2015	5.6	60	ND	ND	31	2,400	
GEW-109	12/16/2015	3.6	42	5	24	25	1,500	See Note 3

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-109	1/26/2016	2.3	36	7.9	34	19	1,300	See Note 4
GEW-110	9/11/2015	7.7	23	11	52	6.6	570	
GEW-110	10/15/2015	3.8	15	14	62	5.2	380	See Note 4
GEW-110	11/11/2015	7.8	43	4.1	23	22	1,400	
GEW-110	12/16/2015	6	33	8.7	39	13	990	See Note 4
GEW-110	1/26/2016	4.2	23	11	51	11	630	See Note 4
GEW-116	11/12/2015	2.8	50	6.2	22	17	1,800	
GEW-117	9/18/2015	4	69	ND	ND	22	2,700	
GEW-117	11/12/2015	3.7	66	ND	4.8	22	2,600	
GEW-120	9/15/2015	11	65	ND	5.1	17	1,600	
GEW-120	11/12/2015	7.6	68	ND	ND	21	2,100	
GEW-120	1/14/2016	15	69	ND	ND	11	880	
GEW-121	9/15/2015	2.2	53	2.7	9.5	31	2,800	
GEW-121	11/12/2015	2.3	46	5	18	28	2,200	See Note 3
GEW-121	1/14/2016	3.8	60	ND	ND	33	2,600	
GEW-122	9/15/2015	5.2	50	2.3	8.3	32	2,500	
GEW-122	11/12/2015	5.3	55	ND	ND	35	2,800	
GEW-122	1/14/2016	3.5	57	ND	ND	37	3,000	
GEW-123	9/15/2015	6.6	55	3.1	11	23	3,500	
GEW-123	11/12/2015	1.6	51	4.9	17	24	3,200	See Note 3
GEW-124	9/15/2015	8.3	56	2.7	9.8	22	2,000	
GEW-124	11/13/2015	7	61	ND	ND	28	2,100	
GEW-124	1/15/2016	6.8	62	ND	ND	27	1,900	
GEW-125	9/18/2015	1.7	57	ND	ND	36	3,200	
GEW-125	11/12/2015	0.5	59	ND	ND	36	3,600	
GEW-126	9/15/2015	5.5	54	ND	ND	36	3,700	
GEW-126	11/12/2015	8.2	54	ND	ND	33	3,300	
GEW-126	1/14/2016	6.2	54	ND	ND	36	3,500	
GEW-127	11/13/2015	0.4	62	ND	ND	33	4,100	
GEW-127	1/14/2016	0.3	65	ND	ND	32	4,400	
GEW-128	11/13/2015	0.7	61	ND	ND	34	3,800	
GEW-128	1/14/2016	0.9	64	ND	ND	32	3,600	
GEW-129	9/15/2015	1.8	58	ND	3.4	34	3,500	
GEW-129	11/13/2015	0.7	58	ND	3.3	36	3,400	
GEW-129	1/14/2016	1.0	62	ND	ND	34	3,300	
GEW-131	9/15/2015	20	44	2.4	8.8	23	1,500	
GEW-131	11/12/2015	20	47	ND	4.6	26	1,700	
GEW-131	1/26/2016	15	51	ND	ND	31	2,100	
GEW-132	11/12/2015	6.9	43	5.9	26	17	1,200	See Note 4
GEW-132	1/14/2016	8.7	50	2.9	15	23	1,700	
GEW-133	11/12/2015	0.4	53	3	11	32	3,800	
GEW-134	9/18/2015	17	57	ND	10	15	990	
GEW-134	11/12/2015	11	43	5.8	28	11	770	See Note 1 and 3
GEW-134	1/14/2016	17	58	ND	13	11	750	
GEW-135	9/14/2015	3.8	51	2.7	9.8	31	1,900	
GEW-135	9/18/2015	4.7	56	ND	4.9	32	2,000	See Note 2
GEW-135	11/13/2015	4.8	47	4.2	15	28	1,500	See Note 3
GEW-137	11/12/2015	11	29	6.6	52	0.6	71	See Note 3
GEW-137	1/14/2016	13	36	ND	49	0.3	36	
GEW-138	9/14/2015	11	49	1.7	21	16	1,400	
GEW-138	9/18/2015	11	43	2.4	31	11	960	See Note 2
GEW-138	11/12/2015	2.8	23	10	56	8	670	
GEW-138	1/15/2016	13	50	2.2	25	9.2	730	See Note 4

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-139	9/14/2015	14	49	3.5	19	14	1,000	
GEW-139	9/15/2015	0.5	59	ND	4.1	34	4,600	See Note 2
GEW-139	11/13/2015	0.9	47	4	19	29	3,300	
GEW-139	1/14/2016	1.4	54	1.8	6.6	35	3,600	
GEW-140	1/15/2016	1.7	60	ND	ND	35	3,300	
GEW-141	9/15/2015	2	61	ND	ND	32	3,700	
GEW-141	11/13/2015	1.7	60	1.6	5.5	30	3,500	See Note 1 and 3
GEW-141	1/14/2016	1.1	60	ND	ND	33	3,300	
GEW-142	11/13/2015	0.2	51	4.1	15	29	3,500	
GEW-143	9/15/2015	0.3	46	2.5	9.1	41	3,500	
GEW-143	11/13/2015	0.2	49	3.3	12	35	3,200	
GEW-144	11/13/2015	0.8	56	1.9	6.6	33	3,500	
GEW-145	11/13/2015	1.7	52	2.9	10	32	2,700	See Note 3
GEW-146	11/12/2015	3.1	18	13	64	2	220	
GEW-147	9/15/2015	4.9	52	ND	3.6	37	2,200	
GEW-147	11/13/2015	5.1	51	ND	3.6	38	2,300	
GEW-147	1/15/2016	4.9	54	ND	3.5	36	2,000	
GEW-149	11/12/2015	9.6	55	2.4	14	18	1,600	See Note 1
GEW-150	11/13/2015	9	60	2	7.9	20	1,600	
GEW-150	1/14/2016	4	63	1.9	6.6	23	1,700	See Note 3
GEW-151	9/15/2015	5.7	50	3.4	14	26	1,800	
GEW-151	11/12/2015	11	56	ND	ND	28	2,200	
GEW-152	9/15/2015	5.9	51	ND	3.4	38	3,000	
GEW-152	11/13/2015	4.1	49	2.3	8.2	35	2,900	See Note 1 and 3
GEW-153	9/15/2015	20	38	ND	31	9.3	340	
GEW-153	11/13/2015	20	45	ND	19	15	580	
GEW-154	1/15/2016	21	33	ND	20	24	850	
GEW-156	11/12/2015	4.6	37	9.1	40	9.4	1,100	
GIW-01	9/11/2015	2.7	67	ND	ND	25	2,600	
GIW-01	10/14/2015	1.4	56	3.7	13	24	2,800	See Note 1 and 3
GIW-01	11/13/2015	2.6	66	ND	4.4	25	2,700	
GIW-01	12/9/2015	2.5	68	ND	ND	26	2,500	
GIW-01	1/26/2016	0.5	16	17	60	6.6	580	See Note 4
GIW-02	9/11/2015	5.2	63	ND	3.1	27	2,500	
GIW-02	10/14/2015	7.8	63	ND	ND	25	2,300	
GIW-02	11/13/2015	4.7	22	12	55	5.8	370	See Note 1
GIW-02	12/10/2015	5.7	33	9	44	8.5	610	See Note 4
GIW-02	1/26/2016	6.4	28	10	47	8.3	510	See Note 4
GIW-03	9/11/2015	0.4	60	ND	ND	36	3,400	
GIW-03	10/14/2015	0.3	41	7.5	27	24	2,300	See Note 4
GIW-03	11/13/2015	0.2	38	8.3	30	23	2,200	
GIW-03	12/10/2015	0.1	24	13	47	14	1,300	See Note 4
GIW-03	1/26/2016	0.4	48	4.7	17	29	2,500	See Note 4
GIW-04	9/11/2015	0.6	43	4.2	15	36	2,100	
GIW-04	10/14/2015	0.5	43	4.4	16	36	2,200	See Note 4
GIW-04	11/13/2015	0.5	41	5	18	35	2,200	
GIW-04	12/10/2015	0.5	35	6.9	25	32	1,900	See Note 4
GIW-04	1/26/2016	0.5	50	2	6	41	2,300	See Note 4
GIW-05	9/11/2015	2.4	48	4.4	16	28	1,900	
GIW-05	10/14/2015	1.9	32	10.0	37	18	1,100	See Note 4
GIW-05	11/13/2015	2.6	58	ND	ND	37	1,900	
GIW-05	12/09/2015	2.3	51	2.3	8.2	35	1,700	See Note 3
GIW-05	1/26/2016	1.7	56	1.7	6	34	1,400	See Note 4

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GIW-06	9/11/2015	0.9	59	ND	3.9	34	2,000	
GIW-06	10/14/2015	0.9	57	1.7	6.1	34	1,700	See Note 4
GIW-06	11/13/2015	0.9	56	1.8	6.2	34	1,700	
GIW-06	12/10/2015	1	56	1.8	6.3	34	1,600	See Note 4
GIW-06	1/27/2016	1.0	59	ND	ND	36	1,500	
GIW-07	9/11/2015	25	56	2.5	8.8	7.5	730	
GIW-07	10/14/2015	31	54	1.7	5.8	7.1	700	See Note 4
GIW-07	11/13/2015	30	53	2.2	7.9	6.9	660	
GIW-07	12/10/2015	26	58	ND	4.5	9.6	870	
GIW-07	1/27/2016	29	59	ND	3	8.6	660	
GIW-08	9/11/2015	13	45	3.6	37	1.1	300	
GIW-08	10/14/2015	19	62	2.8	12	5.0	740	See Note 4
GIW-08	11/13/2015	19	56	4	15	5.4	740	
GIW-08	12/09/2015	24	59	2	10	4.7	570	
GIW-08	12/10/2015	24	63	ND	4.9	6.7	860	See Note 2
GIW-08	1/27/2016	26	59	ND	13	2.2	320	
GIW-09	9/11/2015	2.5	17	12	64	4.2	400	
GIW-09	10/14/2015	3	13	15	66	2.2	260	See Note 4
GIW-09	11/13/2015	3.9	13	16	64	2.4	220	
GIW-09	12/10/2015	5	21	14	55	5.4	340	See Note 4
GIW-09	1/27/2016	11.0	31	9	40	8.9	590	See Note 4
GIW-10	9/11/2015	0.3	54	ND	ND	43	3,300	
GIW-10	10/14/2015	3.6	51	ND	ND	42	2,900	
GIW-10	11/13/2015	1.3	50	ND	4.5	42	3,200	
GIW-10	12/10/2015	0.4	42	5.1	18	34	2,500	See Note 1
GIW-10	1/26/2016	0.3	31	7.7	28	32	2,100	See Note 4
GIW-11	9/11/2015	2.9	44	5.4	24	23	2,200	
GIW-11	10/14/2015	2.9	47	4.8	19	26	2,500	See Note 4
GIW-11	11/13/2015	3.2	48	4.2	17	27	2,500	
GIW-11	12/09/2015	2.4	53	2.7	12	29	2,500	See Note 4
GIW-11	1/26/2016	4	46	4.1	19	27	1,900	See Note 4
GIW-12	9/11/2015	7.1	23	9.4	55	5.2	440	
GIW-12	10/14/2015	5.2	20	11	57	5.9	510	See Note 4
GIW-12	11/13/2015	4.3	21	12	56	6.5	530	
GIW-12	12/09/2015	4.2	24	10	55	6.5	470	See Note 4
GIW-12	1/26/2016	4.2	20	11	61	4.9	320	See Note 4
GIW-13	9/11/2015	10	62	ND	5.6	20	1,600	
GIW-13	10/14/2015	8.5	57	ND	7	25	2,000	
GIW-13	11/13/2015	4.3	63	ND	3.2	28	2,500	
GIW-13	12/09/2015	10	58	ND	5.7	25	1,700	
GIW-13	1/26/2016	11.0	58	ND	6.8	22	1,500	
Flare Station[2]	9/1/2015	7.9	29.7	10.3	41.7	9.2	870	See Note 5
Flare Station²	10/6/2015	9.4	33.3	9.0	37.0	9.9	933	See Note 5
Flare Station²	11/3/2015	10.7	37.3	8.0	32.0	10.7	1,100	See Note 5
Flare Station²	12/1/2015	10.6	36.2	8.1	33.6	10.5	1000	See Note 6
Flare Station²	1/5/2016	11.2	37.6	7.7	32.1	10.7	1,000	See Note 6
Flare Station²	2/2/2016	11.8	37.7	7.8	31.0	10.9	1,050	See Note 6

Notes: (1) Based on the comparison of field to laboratory readings, oxygen to balance gas ratios, and historical concentrations, the sample was determined to be suspect due to oxygen introduction which likely occurred during sample collection or laboratory analytical methods. (2) MDNR also collected duplicate LFG samples at these locations during this sampling period. (3) Based on the oxygen verification readings taken with an Envision meter, it was determined there is a sample train leak. (4) Based on the oxygen verification readings taken with an Envision meter, it was determined that the readings are accurate. (5) Flare station gas concentration data is an average of FL-100, FL-120, and FL-140. (6) Flare station gas concentration data is an average of Outlets 1 & 2.

ND = Analyte not detected in sample.

² = Flare Station Inlet measured at EPA Method 2 flow port (blower outlet)

ATTACHMENT D-2

LAB ANALYSIS REPORTS

Air TECHNOLOGY Laboratories, Inc.

February 10, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Republic Services
ATTN: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H012804-01/30

Enclosed are results for sample(s) received 1/28/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers, Nicholas Bauer and David Randall, Weaver Consultants Group, on 2/05/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME				DELIVERABLES		PAGE: 1 OF 4
Standard	☐	48 hours	☐	EDD	☐	Condition upon receipt:
Same Day	☐	72 hours	☐	EDF	☐	Sealed Yes ☐ No ☐
24 hours	☐	96 hours	☐	Level 3	☐	Intact Yes ☐ No ☐
Other:		5 day	■	Level 4	☐	Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING	
P.O. No.:	PO4862452 ~~5544160~~
Bill to:	Republic Services 21411
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST: D1946 + CO, H2					
	Canister ID	Sample Start	Sample End	Lab Receive												
H012804-01	5834	-21	-4.7	-3	GEW-56R	1/26/2016	844	C	LFG	NA	X					
-02	A7670	-20.78	-5	-3.5	GEW-10	1/26/2016	857	C	LFG	NA	X					
-03	3131	-20.9	-4.7	-3	GEW-110	1/26/2016	913	C	LFG	NA	X					
-04	A7775	-20.75	-4.7	-3.5	GIW-10	1/26/2016	1037	C	LFG	NA	X					
-05	5910	-21.1	-5	-3	GIW-4	1/26/2016	1053	C	LFG	NA	X					
-06	A7747	-20.85	-5	-3	GIW-3	1/26/2016	1106	C	LFG	NA	X					
-07	A7818	-21.1	-4.9	-3	GIW-2	1/26/2016	~~1113~~ 1118	C	LFG	NA	X					
-08	A8055	-20.85	-5	-4	GEW-131	1/26/2016	1457	C	LFG	NA	X					
-09	A8076	-21.15	-5	-3.5	GEW-90	1/26/2016	1519	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		COMPANY: Republic Services	DATE/TIME:
SAMPLED BY: Ryan Ayers		COMPANY: Republic Services	DATE/TIME
RELINQUISHED BY: Ryan Ayers	1-27-16 1400	DATE/RECEIVED BY	DATE/TIME
RELINQUISHED BY: FedEx		DATE/RECEIVED BY	DATE/TIME
RELINQUISHED BY		DATE/RECEIVED BY	DATE/TIME

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

Standard	☐	48 hours	☐
Same Day	☐	72 hours	☐
24 hours	☐	96 hours	☐
Other:		5 day	■

DELIVERABLES

EDD ☐
EDF ☐
Level 3 ☐
Level 4 ☐

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO~~4862452~~
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
H012804-10	A7666	-21	-5	-3.5	GEW-38	1/26/2016	838	C	LFG	NA	X					
-11	5323	-21	-5	-3	GEW-109	1/26/2016	847	C	LFG	NA	X					
-12	A7649	-20.9	-5	-3.5	GEW-39	1/26/2016	900	C	LFG	NA	X					
-13	5927	-21	-5	-3	GIW-5	1/26/2016	1028	C	LFG	NA	X					
-14	5815	-20.9	-5	-3.5	GIW-11	1/26/2016	1042	C	LFG	NA	X					
-15	4648	-21.1	-5	-4	GIW-12	1/26/2016	1058	C	LFG	NA	X					
-16	6130	-21	-5	-3.5	GIW-13	1/26/2016	1115	C	LFG	NA	X					
-17	5818	-21	-5	-3.5	GIW-1	1/26/2016	1125	C	LFG	NA	X					
-18	A8071	-21.2	-5	-3.5	GEW-28R	1/26/2016	1406	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer — COMPANY: Republic Services — DATE/TIME:

SAMPLED BY: Ryan Ayers — COMPANY: Republic Services — DATE/TIME

RELINQUISHED BY: Ryan Ayers 1-27-16 1400 — DATE/RECEIVED BY — DATE/TIME

RELINQUISHED BY: FED EX — DATE/RECEIVED BY: [illegible] 1/28/16 0851 — DATE/TIME

RELINQUISHED BY — DATE/RECEIVED BY — DATE/TIME

COMMENTS

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME				DELIVERABLES		PAGE: 3 OF 4	
Standard	☐	48 hours	☐	EDD	☐	Condition upon receipt:	
Same Day	☐	72 hours	☐	EDF	☐	Sealed Yes ☐	No ☐
24 hours	☐	96 hours	☐	Level 3	☐	Intact Yes ☐	No ☐
Other:		5 day	■	Level 4	☐	Chilled _____	deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING	
P.O. No.:	PO~~4862452~~
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST: D1946 + CO, H2					
	Canister ID	Sample Start	Sample End	Lab Receive												
Ha2804-19	3130	-20.9	-5	-4	GEW-51	1/27/2016	936	C	LFG	NA	X					
-20	4658	-21	-4.85	-3.5	GEW-54	1/27/2016	954	C	LFG	NA	X					
-21	A8064	-20.85	-4.9	-4	GEW-8	1/27/2016	1012	C	LFG	NA	X					
-22	A7744	-20.8	-4.95	-4	GIW-9	1/27/2016	1057	C	LFG	NA	X					
-23	~~5331~~ 5831 m	-20.75	-5	-4	GIW-8	1/27/2016	1112	C	LFG	NA	X					
-24	5829	-20.85	-4.9	-4	GIW-7	1/27/2016	1124	C	LFG	NA	X					
-25	5825	-20.4	-4.9	-4	GIW-6	1/27/2016	1138	C	LFG	NA	X					
-26	A8086	-20.9	-5	-4	GEW-49	1/27/2016	930	C	LFG	NA	X					
-27	A8061	-21	-5	-4	GEW-53	1/27/2016	938	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	**COMMENTS**
SAMPLED BY: Ryan Ayers	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY: Ryan Ayers 1-27-16 1400	DATE/ RECEIVED BY	DATE/TIME	
RELINQUISHED BY: FedEx	DATE/ RECEIVED BY: [illegible] 1/28/16 0851	DATE/TIME	
RELINQUISHED BY	DATE/ RECEIVED BY	DATE/TIME	

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

Standard	☐	48 hours	☐
Same Day	☐	72 hours	☐
24 hours	☐	96 hours	☐
Other:		5 day	■

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

PAGE: 4 **OF** 4

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO4862452
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
H012804-28	5306	-21	-5	-4	GEW-55	1/27/2016	948	C	LFG	NA	X					
-29	5269	-20.8	-5	-4	GEW-9	1/27/2016	959	C	LFG	NA	X					
-30	5308	-21	-5	-3.5	GEW-7	1/27/2016	1009	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: **Dave Penoyer** COMPANY: **Republic Services** DATE/TIME:

SAMPLED BY: **Ryan Ayers** COMPANY: **Republic Services** DATE/TIME

RELINQUISHED BY: R Ayers 1-27-16 1400 DATE/TIME RECEIVED BY: DATE/TIME

RELINQUISHED BY: FEDEX DATE/TIME RECEIVED BY: 1/28/16 0851

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

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012804-01		H012804-02		H012804-03		H012804-04	
Client Sample I.D.:	GEW-56R		GEW-10		GEW-110		GIW-10	
Date/Time Sampled:	1/26/16 8:44		1/26/16 8:57		1/26/16 9:13		1/26/16 10:37	
Date/Time Analyzed:	2/2/16 10:26		2/2/16 10:41		2/2/16 10:55		2/2/16 11:10	
QC Batch No.:	160202GC8A1		160202GC8A1		160202GC8A1		160202GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.8		2.9		2.8		2.9	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	13	2.8	0.16 d	0.029	11	2.8	32	2.9
Carbon Dioxide	39	0.028	43	0.029	23	0.028	31	0.029
Oxygen/Argon	ND	1.4	ND	1.4	11	1.4	7.7	1.4
Nitrogen	31	2.8	3.0	2.9	51	2.8	28	2.9
Methane	16	0.0028	53	0.0029	4.2	0.0028	0.30	0.0029
Carbon Monoxide	0.070	0.0028	ND	0.0029	0.063	0.0028	0.21	0.0029

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160203GC8A1

Reviewed/Approved By: _____ Date 2-4-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012804-05		H012804-06		H012804-07		H012804-08	
Client Sample I.D.:	GIW-4		GIW-3		GIW-2		GEW-131	
Date/Time Sampled:	1/26/16 10:53		1/26/16 11:06		1/26/16 11:18		1/26/16 14:57	
Date/Time Analyzed:	2/2/16 11:24		2/2/16 11:39		2/2/16 11:53		2/2/16 12:08	
QC Batch No.:	160202GC8A1		160202GC8A1		160202GC8A1		160202GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.8		2.8		2.8		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	41	2.8	29	2.8	8.3	2.8	31	3.0
Carbon Dioxide	50	0.028	48	0.028	28	0.028	51	0.030
Oxygen/Argon	1.8	1.4	4.7	1.4	9.7	1.4	ND	1.5
Nitrogen	6.3	2.8	17	2.8	47	2.8	ND	3.0
Methane	0.50	0.0028	0.39	0.0028	6.4	0.0028	15	0.0030
Carbon Monoxide	0.23	0.0028	0.25	0.0028	0.051	0.0028	0.21	0.0030

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 2-4-16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012804-09		H012804-10		H012804-11		H012804-12	
Client Sample I.D.:	GEW-90		GEW-38		GEW-109		GEW-39	
Date/Time Sampled:	1/26/16 15:19		1/26/16 8:38		1/26/16 8:47		1/26/16 9:00	
Date/Time Analyzed:	2/2/16 12:23		2/2/16 12:38		2/2/16 12:52		2/2/16 13:07	
QC Batch No.:	160202GC8A1		160202GC8A1		160202GC8A1		160202GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.9		2.9		2.8		2.9	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	42	2.9	33	2.9	19	2.8	0.72 d	0.029
Carbon Dioxide	50	0.029	56	0.029	36	0.028	56	0.029
Oxygen/Argon	ND	1.4	2.2	1.4	7.9	1.4	ND	1.4
Nitrogen	ND	2.9	8.0	2.9	34	2.8	ND	2.9
Methane	4.8	0.0029	0.30	0.0029	2.3	0.0028	42	0.0029
Carbon Monoxide	0.19	0.0029	0.32	0.0029	0.13	0.0028	0.0052	0.0029

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160203GC8A1

Reviewed/Approved By: _____ Date 2-4-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012804-13		H012804-14		H012804-15		H012804-16	
Client Sample I.D.:	GIW-5		GIW-11		GIW-12		GIW-13	
Date/Time Sampled:	1/26/16 10:28		1/26/16 10:42		1/26/16 10:58		1/26/16 11:15	
Date/Time Analyzed:	2/2/16 13:21		2/2/16 13:36		2/2/16 13:50		2/2/16 14:05	
QC Batch No.:	160202GC8A1		160202GC8A1		160202GC8A1		160202GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.8		2.9		3.0		2.9	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	34	2.8	27	2.9	4.9	3.0	22	2.9
Carbon Dioxide	56	0.028	46	0.029	20	0.030	58	0.029
Oxygen/Argon	1.7	1.4	4.1	1.4	11	1.5	ND	1.4
Nitrogen	5.9	2.8	19	2.9	61	3.0	6.8	2.9
Methane	1.7	0.0028	4.0	0.0029	4.2	0.0030	11	0.0029
Carbon Monoxide	0.14	0.0028	0.19	0.0029	0.032	0.0030	0.15	0.0029

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 2-4-16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client:	**Republic Services**
Attn:	**Jim Getting**
Project Name:	**Bridgeton Landfill**
Project No.:	**NA**
Date Received:	**01/28/16**
Matrix:	**Air**
Reporting Units:	**% v/v**

ASTM D1946

Lab No.:	H012804-17		H012804-18		H012804-19		H012804-20	
Client Sample I.D.:	GIW-1		GEW-28R		GEW-51		GEW-54	
Date/Time Sampled:	1/26/16 11:25		1/26/16 14:06		1/27/16 9:36		1/27/16 9:54	
Date/Time Analyzed:	2/2/16 16:01		2/2/16 16:15		2/2/16 16:30		2/2/16 16:44	
QC Batch No.:	160202GC8A2		160202GC8A2		160202GC8A2		160202GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.9		2.9		3.0		2.9	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	6.6	2.9	33	2.9	1.0 d	0.030	4.0	2.9
Carbon Dioxide	16	0.029	60	0.029	41	0.030	42	0.029
Oxygen/Argon	17	1.4	1.5	1.4	ND	1.5	ND	1.4
Nitrogen	60	2.9	5.1	2.9	ND	3.0	ND	2.9
Methane	0.50	0.0029	0.071	0.0029	55	0.0030	53	0.0029
Carbon Monoxide	0.058	0.0029	0.36	0.0029	ND	0.0030	ND	0.0029

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160203GC8A1

Reviewed/Approved By: _____ **Date** 2-4-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012804-21		H012804-22		H012804-23		H012804-24	
Client Sample I.D.:	GEW-8		GIW-9		GIW-8		GIW-7	
Date/Time Sampled:	1/27/16 10:12		1/27/16 10:57		1/27/16 11:12		1/27/16 11:24	
Date/Time Analyzed:	2/2/16 16:59		2/2/16 17:13		2/2/16 17:28		2/2/16 17:42	
QC Batch No.:	160202GC8A2		160202GC8A2		160202GC8A2		160202GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.0		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	1.6 d	0.030	8.9	3.0	2.2 d	0.030	8.6	3.0
Carbon Dioxide	47	0.030	31	0.030	59	0.030	59	0.030
Oxygen/Argon	ND	1.5	9.3	1.5	ND	1.5	ND	1.5
Nitrogen	ND	3.0	40	3.0	13	3.0	3.0	3.0
Methane	50	0.0030	11	0.0030	26	0.0030	29	0.0030
Carbon Monoxide	ND	0.0030	0.059	0.0030	0.032	0.0030	0.066	0.0030

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160203GC8A1

Reviewed/Approved By: _____ Date 2-4-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012804-25		H012804-26		H012804-27		H012804-28	
Client Sample I.D.:	GIW-6		GEW-49		GEW-53		GEW-55	
Date/Time Sampled:	1/27/16 11:38		1/27/16 9:30		1/27/16 9:38		1/27/16 9:48	
Date/Time Analyzed:	2/2/16 17:57		2/2/16 18:11		2/2/16 18:26		2/2/16 18:40	
QC Batch No.:	160202GC8A2		160202GC8A2		160202GC8A2		160202GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.0		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	36	3.0	0.058 d	0.030	4.7	3.0	0.99 d	0.030
Carbon Dioxide	59	0.030	34	0.030	41	0.030	42	0.030
Oxygen/Argon	ND	1.5	ND	1.5	ND	1.5	ND	1.5
Nitrogen	ND	3.0	20	3.0	3.9	3.0	ND	3.0
Methane	1.0	0.0030	45	0.0030	50	0.0030	54	0.0030
Carbon Monoxide	0.15	0.0030	ND	0.0030	0.0049	0.0030	ND	0.0030

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160203GC8A1

Reviewed/Approved By: _____ Date 2-4-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/28/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H012804-29		H012804-30					
Client Sample I.D.:	GEW-9		GEW-7					
Date/Time Sampled:	1/27/16 9:59		1/27/16 10:09					
Date/Time Analyzed:	2/2/16 18:55		2/2/16 19:09					
QC Batch No.:	160202GC8A2		160202GC8A2					
Analyst Initials:	AS		AS					
Dilution Factor:	3.0		2.9					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	0.50 d	0.030	ND d	0.029				
Carbon Dioxide	41	0.030	39	0.029				
Oxygen/Argon	ND	1.5	ND	1.4				
Nitrogen	6.7	3.0	3.7	2.9				
Methane	51	0.0030	56	0.0029				
Carbon Monoxide	ND	0.0030	ND	0.0029				

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160203GC8A1

Reviewed/Approved By: _____ Date 2-4-16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160202GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	2/2/16 9:51		2/2/16 9:21		2/2/16 9:35			
Analyst Initials:	AS		AS		AS			
Datafile:	02feb007		02feb005		02feb006			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	83	70-130%	84	70-130%	0.9	<30
Carbon Dioxide	ND	0.010	97	70-130%	94	70-130%	3.0	<30
Oxygen/Argon	ND	0.50	110	70-130%	109	70-130%	0.8	<30
Nitrogen	ND	1.0	109	70-130%	108	70-130%	0.9	<30
Methane	ND	0.0010	98	70-130%	98	70-130%	0.4	<30
Carbon Monoxide	ND	0.0010	104	70-130%	105	70-130%	1.3	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 2-5-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

QC Batch No.: 160202GC8A2
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	2/2/16 15:46		2/2/16 15:03		2/2/16 15:17			
Analyst Initials:	AS		AS		AS			
Datafile:	02feb031		02feb028		02feb029			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	83	70-130%	83	70-130%	0.2	<30
Carbon Dioxide	ND	0.010	95	70-130%	93	70-130%	1.9	<30
Oxygen/Argon	ND	0.50	109	70-130%	109	70-130%	0.2	<30
Nitrogen	ND	1.0	108	70-130%	108	70-130%	0.2	<30
Methane	ND	0.0010	100	70-130%	100	70-130%	0.3	<30
Carbon Monoxide	ND	0.0010	108	70-130%	109	70-130%	1.0	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 2-5-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

QC Batch # 160203GC8A1
Matrix: Air
Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	2/3/2016 8:43		2/3/2016 8:34		2/3/2016 8:39			
Analyst Initials:	AS		AS		AS			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	%Rec	Criteria	%Rec	Criteria	RPD	Criteria
Hydrogen	ND	0.01	92	70-130	93	70-130	0.5	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By: Mark Johnson
Operations Manager

Date: 2-5-16

The cover letter is an integral part of this analytical report.

Air TECHNOLOGY Laboratories, Inc.

January 28, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Republic Services
ATTN: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H011806-01/42

Enclosed are results for sample(s) received 1/18/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers and David Randall, Weaver Consultants Group, on 1/27/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

Standard ■ 48 hours ☐
Same Day ☐ 72 hours ☐
24 hours ☐ 96 hours ☐
Other:

DELIVERABLES

EDD ☐
EDF ☐
Level 3 ☐
Level 4 ☐

PAGE: 1 OF 5

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:
Project Name: Bridgeton Landfill
Report To: Jim Getting
Company: Republic Services
Street: 13570 St. Charles Rock Rd.
City/State/Zip: Bridgeton , MO 63044
Phone& Fax: 314-683-3921
e-mail: JGetting@republicservices.com

BILLING

P.O. No.: PO5544106
Bill to: Republic Services
Attn: Jim Getting
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
H01806-01	GEW-40	1/14/2016	755	C	LFG	NA	X					
-02	GEW-41R	1/14/2016	807	C	LFG	NA	X					
-03	GEW-42R	1/14/2016	816	C	LFG	NA	X					
-04	GEW-43R	1/14/2016	850	C	LFG	NA	X					
-05	GEW-44	1/14/2016	905	C	LFG	NA	X					
-06	GEW-45R	1/14/2016	914	C	LFG	NA	X					
-07	GEW-46R	1/14/2016	937	C	LFG	NA	X					
-08	GEW-2	1/14/2016	945	C	LFG	NA	X					
-09	GEW-3	1/14/2016	954	C	LFG	NA	X					
-10	GEW-4	1/14/2016	1002	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services DATE/TIME:

SAMPLED BY: Ryan Ayers COMPANY: Republic Services DATE/TIME

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
[signature]	1-15-16 1400		
FED EX		[signature]	1/16/16 1124

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other

Rev. 03 - 5/7/09

AirTECHNOLOGY Laboratories, Inc.

01 E. Gale Ave., Suite 130
of Industry, CA 91748
626-964-4032
626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

Standard	■	48 hours	☐
Same Day	☐	72 hours	☐
24 hours	☐	96 hours	☐
Other:			

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO5544106
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
#011806-11	GEW-47R	1/14/2016	1023									
-12	GEW-5	1/14/2016	1030									
-13	GEW-48	1/14/2016	1046									
-14	GEW-6	1/14/2016	1053									
-15	GEW-50	1/14/2016	1101									
-16	GEW-52	1/14/2016	1108									
-17	GEW-7	1/14/2016	1116									
-18	GEW-150	1/14/2016	1137									
-19	GEW-58A	1/14/2016	1349									
-20	GEW-58	1/14/2016	1356									

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services DATE/TIME:

SAMPLED BY: Ryan Ayers COMPANY: Republic Services DATE/TIME

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	1-15-16 1400		
FED EX			1/18/16 1124

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

CHAIN OF CUSTODY RECORD

AirTECHNOLOGY Laboratories, Inc.
01 E. Gale Ave., Suite 130
of Industry, CA 91748
626-964-4032
626-964-5832

TURNAROUND TIME				DELIVERABLES	
Standard	■	48 hours	☐	EDD	☐
Same Day	☐	72 hours	☐	EDF	☐
24 hours	☐	96 hours	☐	Level 3	☐
Other:				Level 4	☐

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO5544106
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
H01806-21	GEW-57R	1/14/2016	1404	C	LFG	NA	X					
-22	GEW-59R	1/14/2016	1415	C	LFG	NA	X					
-23	GEW-65A	1/14/2016	1424	C	LFG	NA	X					
-24	GEW-102	1/14/2016	1435	C	LFG	NA	X					
-25	GEW-82R	1/14/2016	1444	C	LFG	NA	X					
-26	GEW-137	1/14/2016	817	C	LFG	NA	X					
-27	GEW-134	1/14/2016	849	C	LFG	NA	X					
-28	GEW-120	1/14/2016	909	C	LFG	NA	X					
-29	GEW-121	1/14/2016	924	C	LFG	NA	X					
-30	GEW-~~123~~ 132 1/19/16	1/14/2016	951	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services DATE/TIME:

SAMPLED BY: Ryan Ayers COMPANY: Republic Services DATE/TIME

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
~~RELINQUISHED BY~~	1-15-16 1400		
RELINQUISHED BY FEDEX	DATE/TIME	RECEIVED BY	DATE/TIME
RELINQUISHED BY	DATE/TIME	RECEIVED BY	1/19/16 1124 DATE/TIME

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

ID CONF'D PER RAYERS 1/19/16 DL

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

CHAIN OF CUSTODY RECORD

AirTECHNOLOGY Laboratories, Inc.
01 E. Gale Ave., Suite 130
of Industry, CA 91748
626-964-4032
626-964-5832

PAGE: 4 OF 5

TURNAROUND TIME				DELIVERABLES	
Standard	■	48 hours	☐	EDD	☐
Same Day	☐	72 hours	☐	EDF	☐
24 hours	☐	96 hours	☐	Level 3	☐
Other:				Level 4	☐

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO5544106
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

ANALYSIS REQUEST

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
Hal1806-31	GEW-122	1/14/2016	1055	C	LFG	NA	X					
-32	GEW-126	1/14/2016	1123	C	LFG	NA	X					
-33	GEW-139	1/14/2016	1437	C	LFG	NA	X					
-34	GEW-141	1/14/2016	1451	C	LFG	NA	X					
-35	GEW-129	1/14/2016	1506	C	LFG	NA	X					
-36	GEW-128	1/14/2016	1518	C	LFG	NA	X					
-37	GEW-127	1/14/2016	1531	C	LFG	NA	X					
-38	GEW-124	1/15/2016	1037	C	LFG	NA	X					
-39	GEW-138	1/15/2016	1055	C	LFG	NA	X					
-40	GEW-154	1/15/2016	1143	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services DATE/TIME:

SAMPLED BY: Ryan Ayers COMPANY: Republic Services DATE/TIME

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
[signature]	1-15-16 1400		
FedEx		[signature]	1/18/16 1124

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

CHAIN OF CUSTODY RECORD

AirTECHNOLOGY Laboratories, Inc.
01 E. Gale Ave., Suite 130
of Industry, CA 91748
626-964-4032
626-964-5832

TURNAROUND TIME				DELIVERABLES		PAGE: 5 OF 5
Standard	■	48 hours	☐	EDD	☐	Condition upon receipt:
Same Day	☐	72 hours	☐	EDF	☐	Sealed Yes ☐ No ☐
24 hours	☐	96 hours	☐	Level 3	☐	Intact Yes ☐ No ☐
Other:				Level 4	☐	Chilled _____ deg C

Project No.:	
Project Name:	Bridgeton Landfill
Report To:	Jim Getting
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	JGetting@republicservices.com

BILLING

P.O. No.:	PO5544106
Bill to:	Republic Services
	Attn: Jim Getting
	13570 St. Charles Rock Rd.
	Bridgeton, MO 63044

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST: D1946 + CO, H2					
H0118G-41	GEW-147	1/15/2016	1208	C	LFG	NA	X					
-42	GEW-140	1/15/2016	1233	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	
SAMPLED BY: Ryan Ayers	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY: [signature]	DATE/TIME: 1-15-16 1400	RECEIVED BY	DATE/TIME
RELINQUISHED BY: [signature]	DATE/TIME	RECEIVED BY: [signature]	DATE/TIME: 1/18/16 1124
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME

METHOD OF TRANSPORT (circle one): Walk-In **FedEx** UPS Courier ATLI Other_____

COMMENTS

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Preservation: **H**=HCl **N**=None / Container: **B**=Bag **C**=Can **V**=VOA **O**=Other *Rev. 03 - 5/7/09*

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-01		H011806-02		H011806-03		H011806-04	
Client Sample I.D.:	GEW-40		GEW-41R		GEW-42R		GEW-43R	
Date/Time Sampled:	1/14/16 7:55		1/14/16 8:07		1/14/16 8:16		1/14/16 8:50	
Date/Time Analyzed:	1/20/16 10:16		1/20/16 10:31		1/20/16 10:45		1/20/16 11:00	
QC Batch No.:	160120GC8A1		160120GC8A1		160120GC8A1		160120GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.032	ND d	0.032	ND d	0.032	0.18 d	0.032
Carbon Dioxide	41	0.032	42	0.032	42	0.032	43	0.032
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.6	ND	1.6
Nitrogen	ND	3.2	ND	3.2	ND	3.2	ND	3.2
Methane	57	0.0032	56	0.0032	55	0.0032	55	0.0032
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0032	ND	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160122GC8A1

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-05		H011806-06		H011806-07		H011806-08	
Client Sample I.D.:	GEW-44		GEW-45R		GEW-46R		GEW-2	
Date/Time Sampled:	1/14/16 9:05		1/14/16 9:14		1/14/16 9:37		1/14/16 9:45	
Date/Time Analyzed:	1/20/16 11:15		1/20/16 11:30		1/20/16 11:44		1/20/16 11:59	
QC Batch No.:	160120GC8A1		160120GC8A1		160120GC8A1		160120GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.032	ND d	0.032	0.092 d	0.032	ND d	0.032
Carbon Dioxide	40	0.032	43	0.032	41	0.032	43	0.032
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.6	ND	1.6
Nitrogen	ND	3.2	ND	3.2	4.7	3.2	ND	3.2
Methane	56	0.0032	56	0.0032	54	0.0032	55	0.0032
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0032	ND	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160122GC8A1

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-09		H011806-10		H011806-11		H011806-12	
Client Sample I.D.:	GEW-3		GEW-4		GEW-47R		GEW-5	
Date/Time Sampled:	1/14/16 9:54		1/14/16 10:02		1/14/16 10:23		1/14/16 10:30	
Date/Time Analyzed:	1/20/16 12:13		1/20/16 12:28		1/20/16 12:42		1/20/16 12:57	
QC Batch No.:	160120GC8A1		160120GC8A1		160120GC8A1		160120GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	0.100 d	0.032	0.097 d	0.032	0.048 d	0.032	ND d	0.032
Carbon Dioxide	39	0.032	40	0.032	35	0.032	34	0.032
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.6	ND	1.6
Nitrogen	8.4	3.2	6.7	3.2	24	3.2	24	3.2
Methane	52	0.0032	52	0.0032	40	0.0032	42	0.0032
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0032	ND	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160122GC8A1

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-13		H011806-14		H011806-15		H011806-16	
Client Sample I.D.:	GEW-48		GEW-6		GEW-50		GEW-52	
Date/Time Sampled:	1/14/16 10:46		1/14/16 10:53		1/14/16 11:01		1/14/16 11:08	
Date/Time Analyzed:	1/20/16 13:11		1/20/16 13:26		1/20/16 13:41		1/20/16 13:55	
QC Batch No.:	160120GC8A1		160120GC8A1		160120GC8A1		160120GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.032	ND d	0.032	0.080 d	0.032	0.037 d	0.032
Carbon Dioxide	39	0.032	37	0.032	39	0.032	36	0.032
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.6	ND	1.6
Nitrogen	8.4	3.2	10	3.2	7.9	3.2	19	3.2
Methane	52	0.0032	52	0.0032	53	0.0032	45	0.0032
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0032	ND	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160122GC8A1

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client:	**Republic Services**
Attn:	**Jim Getting**
Project Name:	**Bridgeton Landfill**
Project No.:	**NA**
Date Received:	**01/18/16**
Matrix:	**Air**
Reporting Units:	**% v/v**

ASTM D1946

Lab No.:	H011806-17		H011806-18		H011806-19		H011806-20	
Client Sample I.D.:	GEW-7		GEW-150		GEW-58A		GEW-58	
Date/Time Sampled:	1/14/16 11:16		1/14/16 11:37		1/14/16 13:49		1/14/16 13:56	
Date/Time Analyzed:	1/20/16 14:10		1/20/16 14:24		1/20/16 14:39		1/20/16 14:53	
QC Batch No.:	160120GC8A1		160120GC8A1		160120GC8A1		160120GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.4		3.4	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.032	23	3.2	39	3.4	35	3.4
Carbon Dioxide	41	0.032	63	0.032	51	0.034	54	0.034
Oxygen/Argon	ND	1.6	1.9	1.6	2.0	1.7	ND	1.7
Nitrogen	ND	3.2	6.6	3.2	7.1	3.4	5.5	3.4
Methane	57	0.0032	3.8	0.0032	0.32	0.0034	3.8	0.0034
Carbon Monoxide	ND	0.0032	0.17	0.0032	0.25	0.0034	0.21	0.0034

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160122GC8A1

Reviewed/Approved By: _____ **Date** 1/27/16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-21		H011806-22		H011806-23		H011806-24	
Client Sample I.D.:	GEW-57R		GEW-59R		GEW-65A		GEW-102	
Date/Time Sampled:	1/14/16 14:04		1/14/16 14:15		1/14/16 14:24		1/14/16 14:35	
Date/Time Analyzed:	1/20/16 16:46		1/20/16 17:01		1/20/16 17:15		1/20/16 17:30	
QC Batch No.:	160120GC8A2		160120GC8A2		160120GC8A2		160120GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.4		3.4		3.4		3.4	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	40	3.4	41	3.4	36	3.4	34	3.4
Carbon Dioxide	54	0.034	48	0.034	58	0.034	60	0.034
Oxygen/Argon	ND	1.7	1.9	1.7	ND	1.7	ND	1.7
Nitrogen	ND	3.4	6.9	3.4	ND	3.4	ND	3.4
Methane	0.44	0.0034	0.86	0.0034	0.36	0.0034	2.3	0.0034
Carbon Monoxide	0.22	0.0034	0.19	0.0034	0.29	0.0034	0.17	0.0034

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-25		H011806-26		H011806-27		H011806-28	
Client Sample I.D.:	GEW-82R		GEW-137		GEW-134		GEW-120	
Date/Time Sampled:	1/14/16 14:44		1/14/16 8:17		1/14/16 8:49		1/14/16 9:09	
Date/Time Analyzed:	1/20/16 17:45		1/20/16 17:59		1/20/16 18:14		1/20/16 18:28	
QC Batch No.:	160120GC8A2		160120GC8A2		160120GC8A2		160120GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.4		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	40	3.4	0.31 d	0.032	11	3.2	11	3.2
Carbon Dioxide	56	0.034	36	0.032	58	0.032	69	0.032
Oxygen/Argon	ND	1.7	ND	1.6	ND	1.6	ND	1.6
Nitrogen	ND	3.4	49	3.2	13	3.2	ND	3.2
Methane	0.77	0.0034	13	0.0032	17	0.0032	15	0.0032
Carbon Monoxide	0.20	0.0034	0.0036	0.0032	0.075	0.0032	0.088	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 160122GC8A1

Reviewed/Approved By: _____ Date 1/27/16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-29		H011806-30		H011806-31		H011806-32	
Client Sample I.D.:	GEW-121		GEW-132		GEW-122		GEW-126	
Date/Time Sampled:	1/14/16 9:24		1/14/16 9:51		1/14/16 10:55		1/14/16 11:23	
Date/Time Analyzed:	1/21/16 8:16		1/21/16 8:31		1/21/16 8:45		1/21/16 9:00	
QC Batch No.:	160120GC8A2		160120GC8A2		160120GC8A2		160120GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	33	3.2	23	3.2	37	3.2	36	3.2
Carbon Dioxide	60	0.032	50	0.032	57	0.032	54	0.032
Oxygen/Argon	ND	1.6	2.9	1.6	ND	1.6	ND	1.6
Nitrogen	ND	3.2	15	3.2	ND	3.2	ND	3.2
Methane	3.8	0.0032	8.7	0.0032	3.5	0.0032	6.2	0.0032
Carbon Monoxide	0.26	0.0032	0.17	0.0032	0.30	0.0032	0.35	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client:	**Republic Services**
Attn:	**Jim Getting**
Project Name:	**Bridgeton Landfill**
Project No.:	**NA**
Date Received:	**01/18/16**
Matrix:	**Air**
Reporting Units:	**% v/v**

ASTM D1946

Lab No.:	H011806-33		H011806-34		H011806-35		H011806-36	
Client Sample I.D.:	GEW-139		GEW-141		GEW-129		GEW-128	
Date/Time Sampled:	1/14/16 14:37		1/14/16 14:51		1/14/16 15:06		1/14/16 15:18	
Date/Time Analyzed:	1/21/16 9:15		1/21/16 9:30		1/21/16 9:44		1/21/16 9:59	
QC Batch No.:	160120GC8A2		160120GC8A2		160120GC8A2		160120GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.4		3.4		3.4		3.4	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	35	3.4	33	3.4	34	3.4	32	3.4
Carbon Dioxide	54	0.034	60	0.034	62	0.034	64	0.034
Oxygen/Argon	1.8	1.7	ND	1.7	ND	1.7	ND	1.7
Nitrogen	6.6	3.4	ND	3.4	ND	3.4	ND	3.4
Methane	1.4	0.0034	1.1	0.0034	0.98	0.0034	0.88	0.0034
Carbon Monoxide	0.36	0.0034	0.33	0.0034	0.33	0.0034	0.36	0.0034

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ **Date** 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-37		H011806-38		H011806-39		H011806-40	
Client Sample I.D.:	GEW-127		GEW-124		GEW-138		GEW-154	
Date/Time Sampled:	1/14/16 15:31		1/15/16 10:37		1/15/16 10:55		1/15/16 11:43	
Date/Time Analyzed:	1/21/16 10:13		1/21/16 10:28		1/21/16 10:42		1/21/16 10:57	
QC Batch No.:	160120GC8A2		160120GC8A2		160120GC8A2		160120GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.4		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	32	3.4	27	3.2	9.2	3.2	24	3.2
Carbon Dioxide	65	0.034	62	0.032	50	0.032	33	0.032
Oxygen/Argon	ND	1.7	ND	1.6	2.2	1.6	ND	1.6
Nitrogen	ND	3.4	ND	3.2	25	3.2	20	3.2
Methane	0.29	0.0034	6.8	0.0032	13	0.0032	21	0.0032
Carbon Monoxide	0.44	0.0034	0.19	0.0032	0.073	0.0032	0.085	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/18/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H011806-41		H011806-42					
Client Sample I.D.:	GEW-147		GEW-140					
Date/Time Sampled:	1/15/16 12:08		1/15/16 12:33					
Date/Time Analyzed:	1/21/16 14:18		1/21/16 14:33					
QC Batch No.:	160121GC8A1		160121GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	3.2		3.2					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	36	3.2	35	3.2				
Carbon Dioxide	54	0.032	60	0.032				
Oxygen/Argon	ND	1.6	ND	1.6				
Nitrogen	3.5	3.2	ND	3.2				
Methane	4.9	0.0032	1.7	0.0032				
Carbon Monoxide	0.20	0.0032	0.33	0.0032				

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1/27/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160120GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/20/16 9:30		1/20/16 8:56		1/20/16 9:10			
Analyst Initials:	AS		AS		AS			
Datafile:	20jan005		20jan003		20jan004			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	109	70-130%	111	70-130%	2.4	<30
Carbon Dioxide	ND	0.010	100	70-130%	103	70-130%	3.2	<30
Oxygen/Argon	ND	0.50	98	70-130%	101	70-130%	3.2	<30
Nitrogen	ND	1.0	99	70-130%	102	70-130%	3.3	<30
Methane	ND	0.0010	94	70-130%	93	70-130%	0.9	<30
Carbon Monoxide	ND	0.0010	106	70-130%	106	70-130%	0.1	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 1/27/16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

QC Batch No.: 160120GC8A2
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/20/16 16:03		1/20/16 16:17		1/20/16 16:32			
Analyst Initials:	AS		AS		AS			
Datafile:	20jan031		20jan032		20jan033			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	109	70-130%	110	70-130%	0.3	<30
Carbon Dioxide	ND	0.010	102	70-130%	102	70-130%	0.2	<30
Oxygen/Argon	ND	0.50	101	70-130%	101	70-130%	0.1	<30
Nitrogen	ND	1.0	102	70-130%	102	70-130%	0.2	<30
Methane	ND	0.0010	102	70-130%	102	70-130%	0.5	<30
Carbon Monoxide	ND	0.0010	109	70-130%	110	70-130%	0.8	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 1/27/16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

QC Batch No.: 160121GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	1/21/16 14:03		1/21/16 13:34		1/21/16 13:48			
Analyst Initials:	AS		AS		AS			
Datafile:	21jan012		21jan010		21jan011			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	111	70-130%	112	70-130%	1.5	<30
Carbon Dioxide	ND	0.010	107	70-130%	106	70-130%	1.1	<30
Oxygen/Argon	ND	0.50	103	70-130%	102	70-130%	0.9	<30
Nitrogen	ND	1.0	103	70-130%	102	70-130%	0.8	<30
Methane	ND	0.0010	94	70-130%	94	70-130%	0.3	<30
Carbon Monoxide	ND	0.0010	112	70-130%	112	70-130%	0.3	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 1/27/16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

QC Batch # 160122GC8A1
Matrix: Air
Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	1/22/2016 8:36		1/22/2016 8:26		1/22/2016 8:31			
Analyst Initials:	AS		AS		AS			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	%Rec	Criteria	%Rec	Criteria	RPD	Criteria
Hydrogen	ND	0.01	89	70-130	92	70-130	2.5	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By: _____ Date: 1/27/16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

ATTACHMENT E

GAS WELLFIELD DATA

ATTACHMENT E-1

WELLFIELD DATA TABLE

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-002	1/6/2016 14:22	54.7	38.2	0.0	7.1	119.6		27	27	-0.6	-0.6	-11.3
GEW-002	1/14/2016 9:43	54.9	42.6	0.0	2.5	124.9		20	13	0.2	0.2	-11.3
GEW-002	1/14/2016 9:47	56.1	41.3	0.0	2.6	124.9		23	19	0.1	0.1	-11.0
GEW-002	1/21/2016 13:21	57.4	38.3	0.0	4.3	118.6		18	20	-0.5	-0.5	-7.5
GEW-002	1/28/2016 9:16	54.7	40.8	0.0	4.5	121.8		23	21	-0.8	-0.8	-10.8
GEW-002	1/28/2016 9:17	54.4	41.7	0.0	3.9	121.2		20	14	-0.6	-0.6	-11.6
GEW-003	1/6/2016 14:24	53.0	38.7	0.0	8.3	109.5		0	0	0.3	0.3	-11.0
GEW-003	1/6/2016 14:25	52.4	39.6	0.0	8.0	112.8		15	12	0.2	0.2	-10.7
GEW-003	1/14/2016 9:53	52.0	39.9	0.0	8.1	113.0		24	24	-0.6	-0.6	-10.5
GEW-003	1/14/2016 9:56	52.3	36.4	0.0	11.3	113.3		15	15	-0.6	-0.6	-10.5
GEW-003	1/21/2016 13:24	54.2	35.3	0.0	10.5	110.9		34	34	0.0	0.0	-8.6
GEW-003	1/28/2016 9:20	50.7	38.7	0.0	10.6	110.9		17	14	-0.7	-0.7	-10.8
GEW-003	1/28/2016 9:22	50.8	38.6	0.0	10.6	108.1		0	0	-0.5	-0.5	-11.1
GEW-004	1/6/2016 14:27	52.6	40.0	0.0	7.4	106.0		8	11	0.3	0.3	-10.8
GEW-004	1/6/2016 14:28	54.9	40.6	0.0	4.5	109.5		16	16	0.2	0.2	-11.0
GEW-004	1/14/2016 10:01	53.1	39.9	0.0	7.0	117.8		15	13	-0.5	-0.5	-10.7
GEW-004	1/14/2016 10:04	53.2	38.8	0.0	8.0	117.6		25	25	-0.5	-0.5	-10.7
GEW-004	1/21/2016 13:28	53.0	38.5	0.0	8.5	115.7		15	12	0.0	0.0	-8.4
GEW-004	1/28/2016 9:25	51.6	38.6	0.0	9.8	117.5		17	19	-0.6	-0.6	-11.4
GEW-004	1/28/2016 9:27	51.3	39.6	0.0	9.1	114.5		25	25	-0.4	-0.4	-11.6
GEW-005	1/6/2016 14:35	45.3	38.0	0.0	16.7	95.4		31	27	-0.1	0.0	-10.2
GEW-005	1/14/2016 10:29	42.9	35.1	0.0	22.0	95.2		23	20	-0.4	-0.4	-10.5
GEW-005	1/14/2016 10:33	43.0	32.5	0.0	24.5	92.3		29	30	-0.2	-0.2	-11.0
GEW-005	1/21/2016 13:48	50.9	38.0	0.0	11.1	77.4		0	0	0.6	0.6	-8.0
GEW-005	1/21/2016 13:49	51.0	37.9	0.0	11.1	92.5		30	29	0.4	0.4	-7.5
GEW-005	1/28/2016 10:04	41.2	34.4	0.0	24.4	95.6		23	24	-0.4	-0.4	-11.3
GEW-005	1/28/2016 10:05	41.2	34.9	0.0	23.9	93.4		0	0	-0.2	-0.2	-11.9
GEW-006	1/6/2016 14:39	52.3	38.6	0.0	9.1	88.7		22	16	-0.2	-0.1	-10.2
GEW-006	1/14/2016 10:51	52.2	37.1	0.0	10.7	89.5		13	11	-0.3	-0.3	-10.5
GEW-006	1/14/2016 10:55	52.0	34.7	0.0	13.3	89.7		13	13	-0.3	-0.3	-10.7
GEW-006	1/21/2016 14:25	53.2	37.3	0.0	9.5	87.8		14	14	0.0	0.0	-8.2
GEW-006	1/28/2016 10:10	51.1	37.0	0.0	11.9	89.9		20	20	-0.4	-0.4	-10.7
GEW-006	1/28/2016 10:11	51.1	37.4	0.0	11.5	89.2		15	15	-0.3	-0.3	-12.4
GEW-007	1/6/2016 14:46	54.8	38.4	0.0	6.8	94.6		11	13	-2.2	-2.2	-10.3
GEW-007	1/14/2016 11:14	57.2	41.0	0.0	1.8	95.9		7	6	-2.6	-2.6	-11.0
GEW-007	1/14/2016 11:18	57.4	36.7	0.0	5.9	96.4		28	28	-2.6	-2.6	-11.0
GEW-007	1/22/2016 8:51	57.9	39.5	0.0	2.6	91.5		10	10	-3.6	-3.6	-12.4
GEW-007	1/27/2016 10:07	57.4	38.0	0.0	4.6	93.4		10	10	-3.1	-3.1	-11.3
GEW-007	1/27/2016 10:11	57.7	40.1	0.0	2.2	93.6		12	13	-3.1	-3.1	-11.0
GEW-008	1/6/2016 15:08	51.1	43.5	0.0	5.4	112.5		20	20	-0.9	-0.9	-10.5
GEW-008	1/15/2016 9:06	52.7	43.8	0.0	3.5	112.5		23	24	-1.4	-1.4	-11.7
GEW-008	1/22/2016 8:45	51.2	44.8	0.0	4.0	111.8		26	26	-1.5	-1.5	-12.0

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-008	1/27/2016 10:06	50.4	44.4	0.0	5.2	112.2		20	22	-0.9	-0.9	-11.2
GEW-008	1/27/2016 10:13	51.4	44.6	0.2	3.8	111.6		16	21	-0.8	-0.8	-10.9
GEW-009	1/6/2016 15:05	49.3	41.3	0.0	9.4	122.1		0	0	-0.2	-0.2	-16.3
GEW-009	1/15/2016 8:59	52.4	40.4	0.0	7.2	122.3		13	13	-0.4	-0.4	-17.1
GEW-009	1/22/2016 8:48	51.0	41.6	0.0	7.4	119.6		14	8	-0.3	-0.3	-16.2
GEW-009	1/27/2016 9:58	53.2	40.9	0.0	5.9	121.0		0	11	-0.1	-0.2	-10.3
GEW-009	1/27/2016 10:02	52.7	39.0	0.0	8.3	121.2		0	0	-0.1	-0.1	-12.7
GEW-010	1/5/2016 14:13	56.7	40.0	0.3	3.0	61.9				-2.8	-2.8	-16.4
GEW-010	1/5/2016 14:14	56.8	39.2	0.2	3.8	63.3		2	3	-4.5	-4.5	-16.1
GEW-010	1/11/2016 14:20	48.5	46.4	0.5	4.6	52.6		4	5	-8.2	-8.3	-17.0
GEW-010	1/21/2016 10:24	34.4	51.3	0.0	14.3	28.3		43	43	-0.2	-0.2	-16.2
GEW-010	1/26/2016 8:52	54.6	42.7	0.2	2.5	35.0		3	3	-4.9	-4.8	-13.6
GEW-010	1/26/2016 9:00	55.2	42.2	0.3	2.3	35.3		4	3	-4.9	-4.9	-13.2
GEW-022R	1/26/2016 13:52	1.5	66.7	0.4	31.4	192.6				1.5	0.1	1.3
GEW-022R	1/26/2016 13:53	1.1	66.6	0.2	32.1	192.8				1.5	0.3	2.2
GEW-028R	1/26/2016 14:03	0.0	62.3	0.8	36.9	178.2				-14.7	-14.7	-14.7
GEW-028R	1/26/2016 14:08	0.0	51.9	2.6	45.5	178.2				-14.2	-14.7	-14.7
GEW-038	1/5/2016 13:53	0.4	48.0	4.0	47.6	50.8		10	3	0.0	-0.1	-16.1
GEW-038	1/5/2016 13:55	0.4	50.6	3.1	45.9	50.9		3	1	-0.1	0.0	-15.8
GEW-038	1/11/2016 14:19	0.3	46.3	5.8	47.6	42.7		11	2	-0.5	-0.6	-17.4
GEW-038	1/11/2016 14:19	0.3	46.4	6.0	47.3	42.7		9	3	-0.6	-0.6	-17.1
GEW-038	1/21/2016 10:11	0.7	28.9	8.5	61.9	26.8		4	7	-0.4	-0.6	-15.5
GEW-038	1/21/2016 10:12	0.3	43.4	6.8	49.5	27.2		9	9	-0.2	-0.3	-16.0
GEW-038	1/26/2016 8:36	0.4	54.9	2.1	42.6	32.4		11	12	-0.1	-0.1	-12.8
GEW-038	1/26/2016 8:40	0.2	54.9	2.1	42.8	32.1		6	5	-0.1	-0.1	-13.1
GEW-039	1/5/2016 13:58	34.1	52.5	0.1	13.3	133.3				-1.6	-1.6	-16.6
GEW-039	1/5/2016 13:59	36.4	48.9	0.0	14.7	133.3				-1.6	-1.6	-16.1
GEW-039	1/11/2016 14:24	34.2	53.2	0.2	12.4	134.0				-1.6	-1.6	-18.2
GEW-039	1/11/2016 14:24	37.2	50.9	0.2	11.7	134.1				-1.5	-1.5	-18.0
GEW-039	1/21/2016 10:15	32.9	59.6	0.2	7.3	67.8				0.6	0.6	-0.5
GEW-039	1/21/2016 10:16	42.3	55.0	0.0	2.7	73.8				0.6	0.6	-0.6
GEW-039	1/26/2016 8:58	44.4	51.8	0.2	3.6	120.4				0.1	0.1	-22.9
GEW-039	1/26/2016 9:03	43.8	51.8	0.0	4.4	120.2				-0.1	-0.1	-23.3
GEW-040	1/6/2016 13:38	62.0	36.9	0.0	1.1	82.9		41	41	0.3	0.3	-11.1
GEW-040	1/6/2016 13:39	59.8	39.2	0.0	1.0	85.7		11	10	-0.1	-0.1	-11.3
GEW-040	1/12/2016 7:56	61.4	36.5	0.1	2.0	81.1		0	0	-0.5	-0.5	-11.7
GEW-040	1/14/2016 7:52	58.7	40.3	0.0	1.0	84.0		12	15	0.0	0.0	-11.0
GEW-040	1/14/2016 7:57	59.6	38.7	0.0	1.7	84.5		18	19	0.0	0.0	-10.9
GEW-040	1/20/2016 11:25	59.0	40.1	0.1	0.8	86.9		0	0	-0.2	-0.2	-12.7
GEW-040	1/28/2016 8:54	58.3	40.7	0.1	0.9	84.9		36	37	-0.2	-0.2	-11.3
GEW-041R	1/6/2016 13:57	57.9	35.7	0.0	6.4	99.9		0	12	0.2	0.2	-11.1
GEW-041R	1/6/2016 13:58	58.7	39.6	0.0	1.7	102.1		14	8	0.1	0.1	-11.1

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-041R	1/14/2016 8:04	57.7	40.7	0.0	1.6	103.2		0	5	0.0	0.0	-10.7
GEW-041R	1/14/2016 8:09	58.3	39.8	0.0	1.9	103.0		16	20	0.0	0.0	-10.8
GEW-041R	1/20/2016 11:28	53.5	41.2	0.0	5.3	44.9		0	0	0.7	0.7	1.2
GEW-041R	1/20/2016 11:28	52.1	42.7	0.0	5.2	47.0		0	0	0.7	0.7	1.0
GEW-041R	1/28/2016 8:55	58.8	40.4	0.1	0.7	102.6		34	34	-0.1	-0.1	-10.8
GEW-042R	1/6/2016 14:00	55.4	40.2	0.0	4.4	111.6		27	29	-1.1	-1.0	-3.9
GEW-042R	1/14/2016 8:14	56.4	42.5	0.0	1.1	109.5		9	7	-0.7	-0.8	-3.5
GEW-042R	1/14/2016 8:18	57.2	41.3	0.0	1.5	110.1		12	15	-0.7	-0.7	-3.2
GEW-042R	1/20/2016 11:31	55.7	41.6	0.0	2.7	103.8		15	7	-0.8	-0.8	-5.6
GEW-042R	1/28/2016 9:01	58.1	38.9	0.0	3.0	94.6		11	8	-0.7	-0.8	-2.9
GEW-043R	1/6/2016 14:04	56.4	41.3	0.0	2.3	126.3		54	54	-0.9	-0.9	-10.3
GEW-043R	1/14/2016 8:48	56.2	41.9	0.0	1.9	126.5		27	27	-0.4	-0.4	-10.8
GEW-043R	1/14/2016 8:53	56.4	42.0	0.0	1.6	128.1		22	15	-0.3	-0.3	-11.1
GEW-043R	1/20/2016 11:35	55.5	41.3	0.0	3.2	128.7		16	22	0.3	0.3	-12.0
GEW-043R	1/20/2016 11:36	56.1	41.9	0.0	2.0	129.3		25	25	0.1	0.1	-12.5
GEW-043R	1/28/2016 9:02	58.1	37.6	0.0	4.3	130.8		22	30	-0.4	-0.4	-10.8
GEW-043R	1/28/2016 9:03	56.7	41.2	0.0	2.1	129.9		24	28	-0.1	-0.1	-11.1
GEW-044	1/6/2016 14:07	55.5	40.8	0.0	3.7	72.0		33	34	-1.2	-1.3	-10.8
GEW-044	1/14/2016 9:03	56.5	41.1	0.0	2.4	72.9		13	13	-0.8	-0.8	-6.2
GEW-044	1/14/2016 9:07	57.5	38.8	0.0	3.7	73.1		34	32	-0.7	-0.7	-4.0
GEW-044	1/20/2016 11:39	55.8	40.4	0.0	3.8	71.3		0	0	-0.4	-0.4	-6.8
GEW-044	1/28/2016 9:07	56.3	39.9	0.0	3.8	72.2		3	3	-0.2	-0.2	-4.7
GEW-045R	1/6/2016 14:09	56.5	41.4	0.0	2.1	79.7		16	10	-0.2	-0.1	-11.0
GEW-045R	1/14/2016 9:12	56.0	42.6	0.0	1.4	82.8		13	5	-0.1	-0.1	-10.8
GEW-045R	1/14/2016 9:17	56.6	42.2	0.0	1.2	83.2		5	11	-0.2	-0.2	-10.8
GEW-045R	1/20/2016 11:42	56.4	40.8	0.0	2.8	77.3		10	10	-0.1	-0.1	-12.2
GEW-045R	1/28/2016 9:10	56.9	40.2	0.0	2.9	82.0		7	5	0.4	0.4	-11.1
GEW-045R	1/28/2016 9:12	56.7	41.8	0.0	1.5	83.2		7	6	-0.3	-0.3	-10.9
GEW-046R	1/6/2016 14:11	54.2	41.5	0.0	4.3	88.4		12	10	0.2	0.2	-11.1
GEW-046R	1/6/2016 14:12	54.0	41.4	0.0	4.6	91.7		26	26	0.1	0.1	-11.1
GEW-046R	1/14/2016 9:22	53.8	41.4	0.0	4.8	92.9		0	0	-0.2	-0.3	-11.0
GEW-046R	1/14/2016 9:40	55.0	39.4	0.0	5.6	93.2		17	17	-0.2	-0.2	-11.1
GEW-046R	1/20/2016 11:45	53.0	41.7	0.0	5.3	91.1		0	9	-0.2	-0.2	-12.3
GEW-046R	1/28/2016 9:11	54.0	40.3	0.0	5.7	91.3		10	10	-0.2	-0.2	-11.4
GEW-047R	1/6/2016 14:33	47.1	38.4	0.0	14.5	109.0		0	0	0.0	-0.1	-10.5
GEW-047R	1/14/2016 10:21	40.4	35.2	0.1	24.3	110.2		17	16	-0.4	-0.4	-10.2
GEW-047R	1/14/2016 10:26	41.2	34.2	0.2	24.4	105.6		37	38	-0.2	-0.2	-10.8
GEW-047R	1/21/2016 13:42	56.5	38.3	0.0	5.2	63.7		0	0	0.5	0.5	-8.0
GEW-047R	1/21/2016 13:44	55.4	40.5	0.0	4.1	94.4		28	28	0.3	0.3	-7.4
GEW-047R	1/28/2016 10:01	44.7	34.9	0.3	20.1	110.4		0	0	-0.4	-0.4	-11.4
GEW-047R	1/28/2016 10:02	44.7	36.0	0.2	19.1	106.7		0	0	-0.3	-0.3	-11.7
GEW-048	1/6/2016 14:37	52.3	37.9	0.0	9.8	103.6		30	30	-0.2	-0.2	-10.5

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-048	1/14/2016 10:45	53.5	38.4	0.0	8.1	103.6		16	12	-0.3	-0.3	-9.5
GEW-048	1/14/2016 10:49	52.8	36.4	0.0	10.8	103.6		17	16	-0.2	-0.3	-6.0
GEW-048	1/21/2016 14:13	54.3	38.5	0.0	7.2	99.8		17	11	0.2	0.2	-5.4
GEW-048	1/21/2016 14:16	53.9	38.7	0.0	7.4	102.1		19	22	-0.1	-0.1	-5.8
GEW-048	1/28/2016 10:06	51.6	32.9	0.1	15.4	103.2		31	30	-0.8	-0.9	-11.0
GEW-048	1/28/2016 10:07	51.2	37.8	0.0	11.0	102.6		0	0	-0.5	-0.5	-8.6
GEW-049	1/6/2016 14:50	49.0	37.4	0.1	13.5	109.9		34	34	-1.4	-1.4	-5.9
GEW-049	1/6/2016 14:51	48.5	37.4	0.0	14.1	109.8		20	22	-1.0	-1.0	-4.5
GEW-049	1/15/2016 8:45	53.2	34.8	0.0	12.0	109.2		15	15	-0.7	-0.8	-6.2
GEW-049	1/21/2016 14:44	56.7	36.8	0.0	6.5	106.7		35	39	-0.1	-0.1	-4.6
GEW-049	1/27/2016 9:28	46.7	35.3	0.1	17.9	107.4		0	0	-0.5	-0.5	-3.6
GEW-049	1/27/2016 9:32	46.1	33.5	0.0	20.4	104.5		0	0	-0.3	-0.3	-4.8
GEW-049	1/28/2016 10:08	50.4	35.4	0.0	14.2	108.1		12	13	-0.1	-0.1	-6.2
GEW-050	1/6/2016 14:41	52.4	38.2	0.0	9.4	106.1		36	35	-0.1	0.0	-5.9
GEW-050	1/14/2016 11:00	54.0	37.4	0.0	8.6	106.3		33	33	-0.2	-0.2	-5.0
GEW-050	1/14/2016 11:03	53.4	35.7	0.0	10.9	106.3		34	34	-0.2	-0.2	-4.3
GEW-050	1/21/2016 14:30	54.7	37.7	0.0	7.6	103.2		34	0	0.0	-0.1	-4.0
GEW-050	1/28/2016 10:10	51.0	36.8	0.0	12.2	106.3		15	20	-0.3	-0.3	-8.0
GEW-051	1/6/2016 14:53	53.7	39.6	0.0	6.7	125.1		21	20	-0.3	-0.3	-10.2
GEW-051	1/15/2016 8:47	58.7	40.6	0.0	0.7	125.1		14	14	-0.6	-0.6	-11.4
GEW-051	1/21/2016 14:48	55.0	40.1	0.0	4.9	120.4		0	0	0.5	0.6	-10.3
GEW-051	1/21/2016 14:49	54.9	40.7	0.0	4.4	122.9		0	0	0.4	0.4	-10.5
GEW-051	1/27/2016 9:30	56.0	40.6	0.0	3.4	122.5		11	9	-0.4	-0.4	-10.0
GEW-051	1/27/2016 9:38	57.2	39.5	0.1	3.2	123.0		8	18	-0.3	-0.3	-10.7
GEW-052	1/6/2016 14:44	47.7	36.8	0.0	15.5	111.8		33	33	0.0	0.0	-10.3
GEW-052	1/14/2016 11:07	45.4	36.2	0.0	18.4	112.6		33	33	-0.1	-0.1	-11.1
GEW-052	1/14/2016 11:11	46.0	33.5	0.0	20.5	112.3		13	13	0.0	0.0	-11.0
GEW-052	1/21/2016 14:37	49.9	35.9	0.0	14.2	109.3		34	34	-0.1	-0.1	-10.1
GEW-053	1/6/2016 14:55	50.1	40.0	0.0	9.9	137.6		19	19	-0.3	-0.3	-10.3
GEW-053	1/6/2016 14:56	50.7	40.9	0.0	8.4	138.0		18	16	-0.3	-0.3	-10.6
GEW-053	1/15/2016 8:50	54.1	40.1	0.0	5.8	137.9		20	16	-0.8	-0.8	-11.7
GEW-053	1/15/2016 8:51	53.5	42.0	0.0	4.5	138.3		15	14	-0.8	-0.8	-11.6
GEW-053	1/21/2016 15:09	51.7	40.7	0.0	7.6	136.6		21	16	0.0	0.0	-10.8
GEW-053	1/21/2016 15:10	51.5	41.3	0.0	7.2	136.9		13	19	0.0	0.0	-10.9
GEW-053	1/27/2016 9:37	51.4	40.8	0.0	7.8	137.3		16	18	-0.7	-0.6	-11.0
GEW-053	1/27/2016 9:40	51.0	38.0	0.0	11.0	137.3		15	19	-0.7	-0.7	-10.8
GEW-054	1/6/2016 15:00	52.5	39.3	0.0	8.2	147.6		35	36	-1.0	-1.0	-10.7
GEW-054	1/6/2016 15:00	52.7	40.8	0.0	6.5	147.6		33	27	-1.0	-1.0	-10.7
GEW-054	1/15/2016 8:54	53.0	41.4	0.0	5.6	150.5		32	35	-1.2	-1.2	-12.2
GEW-054	1/15/2016 8:54	53.3	43.4	0.0	3.3	150.5		34	35	-1.1	-1.2	-12.4
GEW-054	1/21/2016 15:15	52.8	36.9	0.0	10.3	154.7		32	37	-0.6	-0.5	-10.5
GEW-054	1/21/2016 15:17	51.5	43.4	0.0	5.1	154.9		47	41	-0.8	-0.9	-9.4

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-054	1/27/2016 9:49	52.9	41.7	0.0	5.4	145.1		41	41	-2.7	-2.8	-10.2
GEW-054	1/27/2016 9:56	54.5	40.6	0.2	4.7	143.9		0	0	-1.3	-1.3	-10.9
GEW-055	1/6/2016 15:02	51.1	41.8	0.0	7.1	120.2		11	13	-0.1	-0.1	-10.5
GEW-055	1/15/2016 8:57	55.4	42.7	0.0	1.9	121.2		0	0	-0.4	-0.5	-11.9
GEW-055	1/21/2016 15:19	53.4	42.4	0.0	4.2	118.8		8	7	0.2	0.2	-11.0
GEW-055	1/21/2016 15:20	53.7	42.1	0.0	4.2	121.2		31	31	0.0	0.0	-11.2
GEW-055	1/27/2016 9:47	54.6	42.1	0.0	3.3	122.1		10	11	-0.7	-0.6	-10.9
GEW-055	1/27/2016 9:51	55.0	41.8	0.0	3.2	122.8		0	0	-0.7	-0.7	-11.2
GEW-056R	1/5/2016 14:07	11.0	34.7	0.3	54.0	165.1				-6.0	-6.0	-8.7
GEW-056R	1/5/2016 14:08	11.1	36.6	0.3	52.0	165.5				-6.1	-6.0	-10.3
GEW-056R	1/11/2016 14:16	12.8	33.9	0.5	52.8	164.6				-6.8	-7.3	-13.9
GEW-056R	1/11/2016 14:16	12.6	36.0	0.5	50.9	164.6				-6.8	-7.0	-12.7
GEW-056R	1/21/2016 10:20	14.1	47.2	0.0	38.7	161.8				-6.7	-6.7	-12.0
GEW-056R	1/21/2016 10:21	16.4	43.3	0.0	40.3	162.1				-6.8	-6.8	-15.5
GEW-056R	1/26/2016 8:38	17.3	39.7	0.0	43.0	161.0				-5.1	-5.3	-10.2
GEW-056R	1/26/2016 8:47	17.7	40.3	0.1	41.9	161.4				-5.2	-5.4	-10.0
GEW-057B	1/28/2016 10:35	1.8	49.2	1.8	47.2	100.8				-7.8	-7.4	-8.0
GEW-057R	1/14/2016 14:03	0.6	56.4	1.0	42.0	161.8				-8.2	-8.2	-8.1
GEW-057R	1/14/2016 14:06	0.6	56.5	0.6	42.3	162.3				-7.8	-7.3	-7.6
GEW-058	1/14/2016 13:53	4.4	56.5	0.7	38.4	184.6				-10.7	-10.3	-10.8
GEW-058	1/14/2016 13:57	4.1	54.5	0.8	40.6	184.4				-10.3	-9.8	-10.7
GEW-058A	1/14/2016 13:47	0.6	52.0	1.3	46.1	165.9				-5.9	-6.2	-8.9
GEW-058A	1/14/2016 13:51	0.3	54.4	1.3	44.0	167.8				-5.8	-6.2	-10.5
GEW-059R	1/14/2016 14:13	1.1	57.7	0.0	41.2	186.1				-9.7	-9.7	-0.1
GEW-059R	1/14/2016 14:18	0.8	59.6	0.0	39.6	186.3				-9.3	-9.2	0.2
GEW-065A	1/14/2016 14:23	0.6	63.9	0.0	35.5	180.3				-11.1	-9.8	-10.5
GEW-065A	1/14/2016 14:27	0.4	59.1	0.2	40.3	180.8				-10.2	-11.2	-10.5
GEW-066	1/14/2016 16:17	0.0	1.3	20.5	78.2	70.2				-13.7	-13.8	-0.1
GEW-067A	1/28/2016 10:50	7.8	32.8	7.4	52.0	165.0				-0.7	-0.9	-7.0
GEW-067A	1/28/2016 10:51	7.6	35.8	7.6	49.0	158.1				-1.1	-1.4	-9.2
GEW-077	1/27/2016 11:16	0.2	56.9	3.2	39.7	65.9				-12.0	-11.8	-12.4
GEW-080	1/27/2016 11:19	0.2	35.4	14.8	49.6	49.6				-12.3	-12.7	-12.7
GEW-080	1/27/2016 11:19	0.0	20.2	15.0	64.8	51.5				-13.0	-13.3	-13.3
GEW-082R	1/14/2016 14:43	1.4	62.3	0.0	36.3	196.6				-12.7	-13.1	-15.8
GEW-082R	1/14/2016 14:47	1.8	59.3	0.0	38.9	196.6				-13.1	-12.9	-15.1
GEW-086	1/27/2016 10:52	18.5	37.5	5.2	38.8	86.8				-2.3	-2.3	-10.3
GEW-086	1/27/2016 10:52	17.0	40.1	5.2	37.7	87.0				-2.4	-2.5	-11.2
GEW-089	1/28/2016 10:41	8.0	35.0	10.6	46.4	82.6				-0.9	-0.9	-10.4
GEW-089	1/28/2016 10:42	8.8	33.8	10.3	47.1	86.1				-1.0	-1.0	-10.4
GEW-090	1/26/2016 15:14	5.8	52.4	0.3	41.5	185.2				-11.8	-13.1	-12.2
GEW-090	1/26/2016 15:22	5.3	51.4	0.2	43.1	184.7				-12.0	-13.7	-12.2
GEW-102	1/14/2016 14:33	3.7	63.8	0.0	32.5	144.0				-19.0	-18.7	-18.8

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-102	1/14/2016 14:37	3.3	57.4	0.3	39.0	142.2				-18.8	-18.9	-18.8
GEW-109	1/5/2016 14:02	8.0	51.7	0.0	40.3	61.1		3	4	-2.6	-2.6	-16.6
GEW-109	1/11/2016 14:22	6.0	41.7	4.2	48.1	47.9		5	4	-2.8	-2.8	-17.5
GEW-109	1/21/2016 10:20	9.3	49.3	0.3	41.1	25.4		4	5	-0.6	-0.6	-0.6
GEW-109	1/26/2016 8:45	2.8	36.1	8.8	52.3	32.5		6	6	-18.2	-18.2	-21.8
GEW-109	1/26/2016 8:50	2.2	20.7	12.5	64.6	32.1		7	9	-20.2	-20.2	-22.0
GEW-110	1/5/2016 14:26	4.3	27.0	10.8	57.9	79.5		10	15	-0.2	-0.2	-16.4
GEW-110	1/5/2016 14:27	4.6	29.6	11.0	54.8	79.1		7	7	-0.3	-0.3	-16.8
GEW-110	1/11/2016 14:23	10.7	23.9	12.7	52.7	51.8		12	14	-0.3	-0.3	-18.3
GEW-110	1/11/2016 14:25	6.4	22.8	12.5	58.3	51.5		11	10	-0.2	-0.2	-18.0
GEW-110	1/21/2016 10:23	5.9	29.4	14.3	50.4	97.1		8	8	-0.1	-0.1	-0.3
GEW-110	1/21/2016 10:23	5.3	25.3	14.5	54.9	98.0		8	8	-0.1	-0.1	-0.4
GEW-110	1/26/2016 9:07	4.0	24.7	12.1	59.2	87.8		10	9	-0.1	-0.1	-13.8
GEW-110	1/26/2016 9:15	4.2	24.3	12.4	59.1	88.4		2	10	-0.1	-0.2	-14.5
GEW-116	1/26/2016 14:46	4.4	57.0	2.8	35.8	35.5		3	0	-9.3	-8.8	-13.8
GEW-117	1/26/2016 14:44	5.5	56.2	2.0	36.3	57.4				-13.3	-13.3	-13.6
GEW-120	1/14/2016 9:05	16.7	65.8	0.0	17.5	172.7				-3.4	-3.4	-3.6
GEW-120	1/14/2016 9:13	16.0	64.7	0.1	19.2	173.1				-3.4	-3.4	-3.4
GEW-121	1/14/2016 9:18	4.3	60.0	0.0	35.7	186.3				-14.2	-14.8	-14.1
GEW-121	1/14/2016 9:28	4.3	58.0	0.1	37.6	186.3				-14.7	-15.1	-15.2
GEW-122	1/14/2016 10:48	4.1	57.6	0.1	38.2	190.8				-11.3	-11.3	-11.4
GEW-122	1/14/2016 10:59	4.0	54.6	0.1	41.3	190.5				-10.3	-10.7	-10.7
GEW-123	1/14/2016 9:35	9.6	49.5	4.2	36.7	170.7				-17.0	-16.7	-17.2
GEW-123	1/14/2016 9:37	10.2	53.0	4.3	32.5	170.8				-16.3	-16.6	-15.9
GEW-124	1/14/2016 11:05	3.9	50.8	3.1	42.2	83.7				-16.6	-16.5	-16.4
GEW-124	1/15/2016 10:32	7.7	62.4	0.1	29.8	157.6				-16.0	-16.0	-16.1
GEW-124	1/15/2016 10:40	7.1	57.4	0.1	35.4	157.5				-15.6	-16.3	-15.7
GEW-125	1/14/2016 11:09	0.2	57.9	0.2	41.7	190.2				-16.4	-16.3	-16.4
GEW-125	1/14/2016 11:11	0.3	59.0	0.1	40.6	190.2				-16.2	-16.3	-16.1
GEW-125	1/15/2016 10:23	0.2	24.9	6.9	68.0	71.2				-16.7	-17.0	-17.0
GEW-125	1/15/2016 10:25	0.2	26.0	6.4	67.4	70.0				-17.0	-17.3	-17.2
GEW-126	1/14/2016 11:18	7.2	54.2	0.0	38.6	189.1				-17.1	-17.1	-16.7
GEW-126	1/14/2016 11:27	6.4	51.7	0.1	41.8	189.1				-16.5	-16.7	-16.1
GEW-127	1/14/2016 11:32	0.6	58.7	0.3	40.4	183.0				-16.1	-15.7	-16.7
GEW-127	1/14/2016 11:33	0.3	63.0	0.1	36.6	183.0				-15.2	-16.2	-16.7
GEW-127	1/14/2016 15:24	0.2	62.0	0.1	37.7	184.6				-16.8	-16.8	-17.2
GEW-127	1/14/2016 15:33	0.2	65.1	0.2	34.5	184.6				-15.7	-17.3	-16.7
GEW-128	1/14/2016 11:38	1.4	59.5	0.2	38.9	180.8				-16.8	-16.6	-17.2
GEW-128	1/14/2016 11:40	1.3	60.7	0.1	37.9	180.8				-16.2	-15.9	-16.9
GEW-128	1/14/2016 15:12	1.5	61.7	0.2	36.6	181.9				-15.1	-15.1	-16.7
GEW-128	1/14/2016 15:20	1.4	61.8	0.2	36.6	181.9				-15.4	-16.2	-17.4
GEW-129	1/14/2016 11:44	1.2	57.0	0.1	41.7	165.4				-12.3	-12.3	-16.9

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-129	1/14/2016 11:46	1.3	60.4	0.0	38.3	165.0				-14.7	-15.7	-16.6
GEW-129	1/14/2016 14:57	1.2	60.6	0.1	38.1	165.0				-16.3	-16.3	-17.4
GEW-129	1/14/2016 15:08	0.9	63.7	0.1	35.3	165.0				-13.9	-14.5	-14.8
GEW-131	1/26/2016 14:53	15.4	54.8	0.0	29.8	177.2				-7.0	-7.0	-13.1
GEW-131	1/26/2016 15:01	16.1	53.1	0.1	30.7	177.2				-7.6	-7.6	-13.1
GEW-132	1/14/2016 9:43	9.2	48.0	2.9	39.9	171.7				-14.4	-14.7	-15.5
GEW-132	1/14/2016 9:54	10.0	50.4	2.8	36.8	171.7				-13.7	-13.7	-13.7
GEW-133	1/14/2016 8:57	0.5	34.6	10.1	54.8	63.3		8	6	-16.7	-16.8	-16.7
GEW-133	1/14/2016 8:59	1.0	49.8	4.0	45.2	64.7		9	2	-16.8	-17.1	-17.2
GEW-134	1/14/2016 8:44	18.0	54.8	0.4	26.8	162.3				-17.3	-17.1	-17.4
GEW-134	1/14/2016 8:52	18.3	55.4	0.4	25.9	163.2				-17.1	-17.1	-17.6
GEW-135	1/14/2016 8:37	5.1	42.4	6.1	46.4	155.4				-13.7	-10.4	-16.4
GEW-135	1/14/2016 8:38	5.4	41.8	6.2	46.6	154.1				-12.2	-11.5	-10.7
GEW-136	1/14/2016 8:29	3.4	26.8	12.9	56.9	112.8				-13.7	-13.7	-14.0
GEW-136	1/14/2016 8:31	2.9	23.8	13.6	59.7	111.6				-6.9	-6.8	-16.9
GEW-137	1/14/2016 8:07	13.5	35.4	0.5	50.6	119.4				-14.7	-14.7	-15.0
GEW-137	1/14/2016 8:23	13.3	36.3	0.4	50.0	121.5				-14.7	-14.4	-15.0
GEW-138	1/15/2016 10:49	14.3	49.5	1.5	34.7	148.5				-2.8	-2.8	-14.7
GEW-138	1/15/2016 10:58	14.4	49.1	1.6	34.9	152.9				-2.7	-2.7	-14.1
GEW-139	1/14/2016 11:57	1.9	53.2	1.3	43.6	183.0				-7.9	-7.7	-14.9
GEW-139	1/14/2016 11:58	2.0	55.4	1.3	41.3	183.0				-10.7	-10.7	-14.9
GEW-139	1/14/2016 14:31	2.0	52.4	1.6	44.0	181.0				-11.5	-11.5	-15.5
GEW-139	1/14/2016 14:40	1.8	55.0	1.7	41.5	181.2				-11.0	-11.4	-15.2
GEW-140	1/15/2016 12:26	2.4	60.3	0.0	37.3	160.5				18.2	18.2	18.5
GEW-140	1/15/2016 12:36	2.4	56.9	0.2	40.5	137.3				19.0	19.0	19.1
GEW-141	1/14/2016 11:51	1.4	57.9	0.1	40.6	154.5				-17.6	-17.3	-17.5
GEW-141	1/14/2016 11:52	1.4	61.0	0.1	37.5	157.5				-17.9	-17.4	-17.2
GEW-141	1/14/2016 14:45	1.1	58.7	0.2	40.0	157.9				-17.9	-18.2	-17.7
GEW-141	1/14/2016 14:53	1.4	59.7	0.3	38.6	153.7				-17.7	-18.2	-17.7
GEW-142	1/15/2016 11:12	0.3	54.8	0.1	44.8	88.2				7.1	7.1	7.2
GEW-142	1/15/2016 11:14	0.2	60.3	0.0	39.5	88.0				7.4	7.4	7.4
GEW-143	1/15/2016 11:18	0.2	51.4	3.6	44.8	94.2				-17.5	-17.2	-17.6
GEW-143	1/15/2016 11:19	0.2	51.3	3.1	45.4	93.6				-17.4	-17.2	-17.4
GEW-144	1/15/2016 11:28	0.4	32.3	11.5	55.8	70.2				-12.6	-11.3	-12.7
GEW-144	1/15/2016 11:29	0.4	34.8	10.4	54.4	70.7				-13.6	-13.6	-14.1
GEW-145	1/29/2016 11:50	0.0	6.0	21.8	72.2	80.3				-15.6	-16.6	-16.5
GEW-145	1/29/2016 11:52	0.0	3.8	22.1	74.1	86.0				-16.1	-15.6	-16.4
GEW-146	1/15/2016 11:03	7.2	31.5	9.0	52.3	69.5				-7.3	-7.7	-15.8
GEW-146	1/15/2016 11:05	7.3	30.0	9.0	53.7	70.0				-9.7	-9.6	-14.1
GEW-147	1/15/2016 12:01	5.9	54.7	0.1	39.3	191.6				-16.7	-17.0	-16.5
GEW-147	1/15/2016 12:12	5.6	56.1	0.2	38.1	191.9				-16.6	-16.5	-17.0
GEW-148	1/27/2016 11:12	0.4	21.2	15.4	63.0	43.7				-11.8	-12.2	-12.5

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-148	1/27/2016 11:12	0.4	20.3	15.3	64.0	45.2				-11.8	-12.3	-12.1
GEW-149	1/15/2016 11:53	10.4	32.0	9.0	48.6	123.7		27	28	-1.3	-1.2	-18.0
GEW-149	1/15/2016 11:54	10.0	33.4	8.8	47.8	120.7		15	17	-0.5	-0.5	-18.0
GEW-150	1/14/2016 11:35	6.4	66.0	0.0	27.6	184.6				-8.0	-8.0	-7.8
GEW-150	1/14/2016 11:40	3.3	67.1	0.0	29.6	184.1				-8.5	-8.0	-8.9
GEW-151	1/27/2016 11:06	0.8	26.1	11.8	61.3	47.2				-10.8	-10.8	-11.3
GEW-151	1/27/2016 11:06	0.5	26.8	11.4	61.3	47.3				-9.1	-10.5	-9.7
GEW-154	1/15/2016 11:39	20.8	35.3	1.2	42.7	51.5		8	15	-12.4	-12.7	-12.5
GEW-154	1/15/2016 11:47	23.2	34.3	1.2	41.3	48.9		15	9	-15.4	-15.6	-15.9
GEW-155	1/14/2016 7:58	5.6	26.9	10.6	56.9	111.1				-1.4	-1.3	-13.3
GEW-155	1/14/2016 7:59	5.5	27.0	10.6	56.9	111.6				-1.4	-1.4	-12.8
GEW-156	1/14/2016 11:45	8.3	27.5	11.7	52.5	101.9				-1.1	-1.1	-10.6
GEW-156	1/14/2016 11:45	8.7	26.4	11.8	53.1	102.0				-1.2	-1.1	-9.9
GIW-01	1/5/2016 14:28	5.7	47.9	4.9	41.5	183.0		45	45	-14.4	-14.4	-15.5
GIW-01	1/11/2016 14:32	2.9	46.3	4.9	45.9	166.9		0	27	-16.7	-16.7	-17.0
GIW-01	1/11/2016 14:33	2.8	46.1	4.9	46.2	166.6		13	8	-16.7	-16.7	-17.5
GIW-01	1/21/2016 10:05	0.7	23.1	15.4	60.8	143.6		46	14	-12.6	-13.7	-16.2
GIW-01	1/21/2016 10:06	0.5	19.6	16.1	63.8	143.6		38	41	-12.6	-13.1	-16.3
GIW-01	1/26/2016 11:24	0.5	17.8	18.6	63.1	146.6		0	21	-9.8	-8.9	-13.3
GIW-01	1/26/2016 11:27	0.6	18.6	18.9	61.9	147.2		0	0	-7.9	-8.4	-13.2
GIW-02	1/5/2016 14:13	0.3	44.9	7.5	47.3	54.1		9	8	-0.9	-0.9	-16.3
GIW-02	1/5/2016 14:14	0.3	43.7	7.4	48.6	54.3		7	7	-1.1	-1.0	-16.7
GIW-02	1/14/2016 15:33	1.0	59.5	3.5	36.0	75.5		24	15	-3.1	-3.7	-16.3
GIW-02	1/21/2016 9:59	0.2	35.2	19.0	45.6	26.6		0	0	-1.0	-1.0	-16.0
GIW-02	1/21/2016 10:00	0.0	20.8	20.7	58.5	26.7		0	0	-0.8	-0.8	-16.5
GIW-02	1/26/2016 11:15	6.8	30.9	10.1	52.2	54.9		26	30	-9.8	-9.9	-14.3
GIW-02	1/26/2016 11:22	6.9	29.2	10.4	53.5	54.9		93	88	-9.1	-9.6	-13.7
GIW-03	1/5/2016 14:10	0.1	19.3	9.6	71.0	49.4		15	8	-1.2	-1.3	-15.7
GIW-03	1/5/2016 14:11	0.4	29.1	8.6	61.9	51.2		0	0	-1.2	-1.1	-15.3
GIW-03	1/14/2016 15:31	1.1	65.5	0.1	33.3	75.0		12	12	0.9	0.8	-16.2
GIW-03	1/14/2016 15:32	1.1	64.5	0.0	34.4	75.2		0	0	-0.7	-0.5	-16.8
GIW-03	1/21/2016 9:58	0.5	41.2	7.0	51.3	27.6		0	10	-1.9	-1.9	-15.8
GIW-03	1/21/2016 9:58	0.4	46.4	6.5	46.7	28.0		9	10	-1.9	-2.0	-16.3
GIW-03	1/26/2016 11:03	0.6	53.4	4.5	41.5	35.9		18	10	-0.9	-1.1	-13.7
GIW-03	1/26/2016 11:09	0.2	47.6	4.8	47.4	36.0		0	0	-1.1	-1.1	-13.9
GIW-04	1/5/2016 14:07	0.7	23.0	17.8	58.5	49.3		0	0	-3.3	-3.3	-15.3
GIW-04	1/5/2016 14:08	0.2	18.8	18.1	62.9	50.6		0	0	-4.1	-4.2	-15.3
GIW-04	1/14/2016 15:28	0.3	13.3	17.7	68.7	71.4		0	0	-3.1	-3.1	-16.6
GIW-04	1/14/2016 15:28	0.2	8.3	17.4	74.1	72.3		8	6	-4.0	-4.0	-16.9
GIW-04	1/21/2016 9:54	1.8	20.3	20.6	57.3	22.6		0	0	-3.0	-3.0	-15.9
GIW-04	1/21/2016 9:54	0.6	14.0	20.8	64.6	23.1		0	0	-4.3	-4.3	-16.1
GIW-04	1/26/2016 10:48	0.6	44.0	3.6	51.8	33.3		9	9	-7.7	-7.8	-13.7

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GIW-04	1/26/2016 10:57	0.7	42.5	3.7	53.1	33.3		9	11	-9.6	-9.6	-14.5
GIW-05	1/5/2016 14:18	2.3	57.2	0.2	40.3	51.7		14	13	15.2	15.6	-15.5
GIW-05	1/5/2016 14:19	2.5	61.3	0.0	36.2	55.8		22	22	8.4	8.4	-15.8
GIW-05	1/11/2016 14:28	9.5	35.3	3.6	51.6	43.1		0	33	-15.8	-15.8	-17.5
GIW-05	1/21/2016 10:17	2.5	59.1	0.0	38.4	25.7		0	0	-8.9	-8.9	-15.2
GIW-05	1/26/2016 10:26	2.1	56.2	2.5	39.2	33.4		38	19	-10.9	-10.4	-11.7
GIW-05	1/26/2016 10:31	2.4	57.3	1.7	38.6	33.3		0	4	-10.4	-10.4	-11.5
GIW-06	1/5/2016 13:54	1.1	33.3	1.1	64.5	47.3		19	0	-15.5	-15.3	-15.0
GIW-06	1/14/2016 15:46	3.3	57.7	2.1	36.9	73.6		0	0	-14.1	-14.1	-16.8
GIW-06	1/21/2016 10:05	5.9	52.3	0.0	41.8	26.3		8	8	-0.1	-0.1	-16.4
GIW-06	1/27/2016 11:33	1.4	58.4	0.0	40.2	46.2		0	7	-12.2	-11.7	-11.8
GIW-06	1/27/2016 11:40	1.4	56.4	0.3	41.9	46.6		7	0	-10.8	-10.7	-12.2
GIW-07	1/5/2016 13:56	1.2	60.9	0.5	37.4	50.5		10	11	-12.8	-12.7	-15.2
GIW-07	1/14/2016 15:44	2.8	55.8	2.7	38.7	73.4		34	0	-16.1	-15.7	-16.8
GIW-07	1/21/2016 10:16	2.6	38.2	3.4	55.8	24.8		12	12	-7.9	-7.9	-15.0
GIW-07	1/27/2016 11:19	29.8	55.3	0.6	14.3	51.9		6	0	-11.2	-11.2	-13.9
GIW-07	1/27/2016 11:27	30.0	55.3	0.5	14.2	51.6		7	8	-11.2	-10.9	-13.1
GIW-08	1/5/2016 13:59	3.6	42.6	10.9	42.9	59.1				-5.3	-5.4	-15.4
GIW-08	1/5/2016 13:59	4.3	38.2	11.1	46.4	59.1				-5.8	-6.1	-16.0
GIW-08	1/14/2016 15:39	3.4	15.2	12.4	69.0	81.0				-3.1	-2.2	-16.8
GIW-08	1/14/2016 15:40	3.4	15.0	12.4	69.2	81.0				-2.8	-2.8	-16.6
GIW-08	1/21/2016 10:11	9.1	26.9	15.1	48.9	40.6				-8.4	-9.8	-16.5
GIW-08	1/21/2016 10:12	8.7	26.8	13.4	51.1	40.6				-9.6	-6.7	-16.3
GIW-08	1/27/2016 11:07	26.3	54.4	0.1	19.2	48.9				-10.4	-10.1	-16.1
GIW-08	1/27/2016 11:14	26.5	54.3	0.1	19.1	48.0				-10.3	-10.4	-14.2
GIW-09	1/5/2016 14:01	8.1	19.4	14.5	58.0	59.7				-7.5	-7.3	-16.2
GIW-09	1/5/2016 14:02	8.3	18.8	14.5	58.4	60.2				-9.3	-5.8	-15.2
GIW-09	1/14/2016 15:37	2.8	27.7	11.7	57.8	81.3				-3.1	-3.1	-16.7
GIW-09	1/14/2016 15:37	2.9	17.2	12.3	67.6	81.3				-3.1	-3.1	-17.0
GIW-09	1/21/2016 10:09	9.5	32.2	12.3	46.0	40.1				-9.0	-8.9	-16.4
GIW-09	1/21/2016 10:10	10.0	29.3	12.7	48.0	40.5				-7.4	-7.5	-16.2
GIW-09	1/27/2016 10:52	11.7	33.1	9.1	46.1	63.5				-4.5	-4.6	-11.2
GIW-09	1/27/2016 10:59	11.7	31.7	9.9	46.7	63.0				-4.5	-4.2	-14.7
GIW-10	1/5/2016 14:04	8.7	17.4	13.2	60.7	48.6		0	0	-7.8	-7.8	-15.5
GIW-10	1/5/2016 14:05	3.6	18.6	10.8	67.0	49.8		4	3	-11.2	-11.2	-15.9
GIW-10	1/14/2016 15:25	0.6	35.1	7.5	56.8	72.5		4	6	-13.6	-13.6	-16.9
GIW-10	1/14/2016 15:26	0.7	35.3	6.5	57.5	71.9		6	9	-15.9	-15.9	-16.4
GIW-10	1/21/2016 10:04	6.5	51.2	0.2	42.1	25.2		8	11	-0.1	-0.1	-15.6
GIW-10	1/26/2016 10:31	0.4	37.3	7.4	54.9	33.5		6	8	-11.9	-11.9	-11.9
GIW-10	1/26/2016 10:39	0.4	21.1	10.4	68.1	33.4		9	8	-12.8	-12.7	-14.2
GIW-11	1/5/2016 14:22	2.7	55.8	4.4	37.1	61.0				-4.4	-4.4	-16.0
GIW-11	1/11/2016 14:30	4.3	47.2	4.7	43.8	57.6				-4.9	-4.8	-17.5

January 2016 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GIW-11	1/21/2016 9:53	7.6	32.3	5.8	54.3	43.5				-5.0	-5.0	-16.2
GIW-11	1/21/2016 9:54	6.3	38.2	5.4	50.1	43.8				-5.0	-5.0	-15.9
GIW-11	1/26/2016 10:41	4.1	48.4	4.3	43.2	46.4				-3.9	-3.9	-13.6
GIW-11	1/26/2016 10:44	3.0	38.5	4.7	53.8	46.6				-3.9	-3.9	-13.4
GIW-12	1/5/2016 14:23	2.3	41.7	10.4	45.6	65.4				-3.0	-3.0	-15.7
GIW-12	1/5/2016 14:24	1.8	31.0	11.3	55.9	65.6				-3.0	-3.0	-16.2
GIW-12	1/11/2016 14:31	2.1	25.0	11.9	61.0	65.1				-3.3	-3.3	-17.5
GIW-12	1/11/2016 14:32	2.2	18.8	12.5	66.5	65.4				-3.3	-3.3	-17.1
GIW-12	1/21/2016 9:57	6.8	23.6	9.1	60.5	53.7				-2.9	-3.0	-15.7
GIW-12	1/21/2016 9:58	7.7	20.9	9.3	62.1	53.9				-3.0	-3.0	-15.5
GIW-12	1/26/2016 10:57	4.3	22.5	11.2	62.0	56.1				-2.6	-2.6	-14.1
GIW-12	1/26/2016 11:00	3.7	19.6	11.8	64.9	55.8				-2.6	-2.5	-13.0
GIW-13	1/5/2016 14:26	14.7	47.6	0.6	37.1	57.0				-12.6	-12.7	-12.4
GIW-13	1/11/2016 14:28	16.9	50.7	0.6	31.8	44.1				-13.4	-13.2	-13.4
GIW-13	1/21/2016 10:01	16.6	54.1	0.3	29.0	32.1				-11.2	-11.1	-11.3
GIW-13	1/26/2016 11:12	12.7	57.4	0.3	29.6	35.7				-9.8	-9.9	-9.8
GIW-13	1/26/2016 11:17	12.3	52.8	0.3	34.6	35.7				-9.3	-9.3	-9.4
LCS-5A	1/6/2016 14:58	53.8	42.4	0.0	3.8	91.2				-10.3	-10.3	-10.9
LCS-5A	1/13/2016 13:47	61.1	38.9	0.0	0.0	91.0				-10.3	-10.3	-10.6
LCS-5A	1/21/2016 15:13	57.4	40.1	0.0	2.5	88.7				-10.1	-9.8	-10.1
LCS-6B	1/6/2016 14:30	51.2	40.4	0.4	8.0	60.1		7	7	-1.4	-1.3	-10.3
LCS-6B	1/13/2016 13:51	54.1	38.9	0.4	6.6	59.9		5	5	-0.5	-0.5	-11.2
LCS-6B	1/21/2016 13:35	53.7	38.3	0.8	7.2	36.4		9	9	-0.5	-0.6	-7.9
PGW-60	1/4/2016 8:16	55.8	44.1	0.1	0.0	39.8		10	13	-0.4	-0.3	-8.3
PGW-60	1/20/2016 11:51	61.5	34.0	0.6	3.9	39.3		30	30	-1.0	-1.0	-12.2
PGW-60	1/28/2016 9:18	61.0	37.4	0.3	1.3	49.6		13	7	21.6	21.8	-11.5
PGW-60	1/28/2016 9:19	58.9	39.7	0.1	1.3	48.9		0	11	4.3	4.2	-11.6
SEW-002	1/26/2016 14:06	1.6	11.8	13.5	73.1	36.3		9	0	-12.7	-12.8	-14.1
SEW-002	1/26/2016 14:07	1.6	26.7	11.3	60.4	36.4		4	0	-12.7	-12.8	-14.3
T-56	1/14/2016 10:57	47.8	34.3	0.6	17.3	47.7		21	23	-0.1	-0.1	-10.7

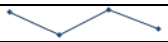
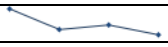
ATTACHMENT E-2

MAXIMUM WELLHEAD TEMPERATURE TABLE

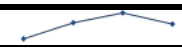
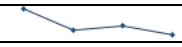
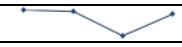
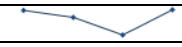
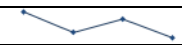
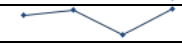
Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	October 2015	November 2015	December 2015	Janaury 2016		
GEW-001	--	--	--	--		
GEW-002	119.9	116.5	122.0	124.9		
GEW-003	119.4	117.3	111.9	113.3		
GEW-004	121.0	120.4	115.0	117.8		
GEW-005	97.3	97.9	93.4	95.6		
GEW-006	94.0	95.0	84.0	89.9		
GEW-007	99.2	96.9	90.5	96.4		
GEW-008	115.0	114.3	111.8	112.5		
GEW-009	126.3	125.4	124.5	122.3		
GEW-010	100.4	77.3	59.9	63.3		
GEW-011	--	51.5	--	--		
GEW-013A	--	--	--	--		
GEW-014A	--	--	--	--		
GEW-015	--	--	--	--		
GEW-016R	--	--	--	--		
GEW-018B	--	--	--	--		
GEW-018R	--	150.1	--	--		
GEW-019A	--	--	--	--		
GEW-020A	110.6	146.2	90.0	--		
GEW-021A	--	156.2	--	--		
GEW-022R	193.7	192.5	170.0	192.8		
GEW-023A	--	--	--	--		
GEW-024A	--	--	--	--		
GEW-025A	--	--	--	--		
GEW-026R	68.0	--	--	--		
GEW-027A	--	--	90.0	--		
GEW-028R	194.8	195.1	150.0	178.2		
GEW-029	--	--	--	--		
GEW-030R	--	--	--	--		
GEW-033R	--	--	--	--		
GEW-034	--	--	--	--		
GEW-034A	--	--	--	--		
GEW-035	--	--	--	--		
GEW-036	--	--	--	--		
GEW-037	--	--	--	--		
GEW-038	101.7	108.6	59.9	50.9		
GEW-039	136.0	136.6	136.0	134.1		
GEW-040	94.8	93.4	87.4	86.9		
GEW-041R	107.2	108.7	95.2	103.2		
GEW-042R	105.2	110.4	99.9	111.6		
GEW-043R	130.5	138.3	127.0	130.8		
GEW-044	90.3	95.6	80.0	73.1		
GEW-045R	92.9	92.1	75.0	83.2		
GEW-046R	100.0	100.1	81.2	93.2		

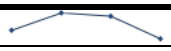
Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	October 2015	November 2015	December 2015	Janaury 2016		
GEW-047R	115.7	115.0	103.5	110.4		
GEW-048	107.0	105.8	101.3	103.6		
GEW-049	113.2	112.5	100.7	109.9		
GEW-050	108.6	109.7	101.5	106.3		
GEW-051	128.0	125.8	122.1	125.1		
GEW-052	115.0	114.7	109.0	112.6		
GEW-053	140.7	139.3	144.0	138.0		
GEW-054	150.9	144.0	147.7	154.9		
GEW-055	129.9	125.1	116.8	122.8		
GEW-056R	171.6	168.8	165.9	165.5		
GEW-057B	158.4	80.0	167.0	100.8		
GEW-057R	188.5	176.7	185.0	162.3		
GEW-058	187.9	185.7	172.0	184.6		
GEW-058A	181.9	164.0	188.0	167.8		
GEW-059R	186.3	186.8	142.0	186.3		
GEW-061B	92.8	55.3	44.0	--		
GEW-064A	--	--	--	--		
GEW-065A	194.2	191.3	192.0	180.8		
GEW-066	--	--	--	70.2		
GEW-067A	186.3	160.0	189.1	165.0		
GEW-068A	--	--	--	--		
GEW-069R	--	--	--	--		
GEW-070R	--	--	--	--		
GEW-071	--	--	--	--		
GEW-071B	--	--	--	--		
GEW-072RR	--	--	--	--		
GEW-073R	--	--	--	--		
GEW-075	--	--	--	--		
GEW-076R	--	--	--	--		
GEW-077	184.1	90.0	111.0	65.9		
GEW-078R	--	--	--	--		
GEW-080	90.7	40.0	50.0	51.5		
GEW-081	--	--	--	--		
GEW-082R	192.5	194.9	180.0	196.6		
GEW-083	--	--	--	--		
GEW-084	--	--	--	--		
GEW-085	--	--	--	--		
GEW-086	106.0	97.1	110.0	87.0		
GEW-087	--	--	--	--		
GEW-088	--	--	--	--		
GEW-089	93.6	80.0	55.0	86.1		
GEW-090	189.6	187.4	173.0	185.2		
GEW-091	--	--	--	--		
GEW-100	--	--	--	--		
GEW-101	--	--	--	--		

Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	October 2015	November 2015	December 2015	Janaury 2016		
GEW-102	85.6	148.8	188.0	144.0		
GEW-103	--	--	--	--		
GEW-104	97.3	81.5	55.0	--		
GEW-105	95.2	75.0	45.0	--		
GEW-106	--	--	--	--		
GEW-107	89.5	40.0	--	--		
GEW-108	--	--	--	--		
GEW-109	180.9	81.9	102.6	61.1		
GEW-110	120.2	133.0	95.6	98.0		
GEW-112	--	--	--	--		
GEW-113	--	--	--	--		
GEW-116	88.9	82.5	77.0	35.5		
GEW-117	82.4	115.5	70.0	57.4		
GEW-118	--	--	--	--		
GEW-120	177.7	186.8	171.2	173.1		
GEW-121	189.1	189.1	187.4	186.3		
GEW-122	183.5	184.6	193.7	190.8		
GEW-123	190.7	193.7	192.6	170.8		
GEW-124	166.4	163.2	111.6	157.6		
GEW-125	91.3	191.9	192.6	190.2		
GEW-126	193.3	191.3	184.6	189.1		
GEW-127	176.2	188.0	186.3	184.6		
GEW-128	182.4	183.5	182.2	181.9		
GEW-129	162.2	159.6	166.4	165.4		
GEW-130	--	--	--	--		
GEW-131	175.8	161.1	125.1	177.2		
GEW-132	177.7	182.5	181.4	171.7		
GEW-133	103.2	71.2	71.4	64.7		
GEW-134	173.6	176.2	168.3	163.2		
GEW-135	186.3	186.8	178.7	155.4		
GEW-136	134.7	184.6	136.6	112.8		
GEW-137	120.2	115.5	120.1	121.5		
GEW-138	162.7	164.5	157.0	152.9		
GEW-139	188.3	188.5	184.6	183.0		
GEW-140	184.6	185.7	183.0	160.5		
GEW-141	147.7	153.7	148.5	157.9		
GEW-142	159.6	115.2	104.2	88.2		
GEW-143	118.3	109.0	103.0	94.2		
GEW-144	109.0	98.3	71.9	70.7		
GEW-145	85.6	144.2	137.6	86.0		
GEW-146	99.0	89.7	77.3	70.0		
GEW-147	190.2	191.3	184.1	191.9		
GEW-148	172.3	71.4	136.3	45.2		
GEW-149	153.3	172.6	171.7	123.7		
GEW-150	172.7	182.4	136.3	184.6		

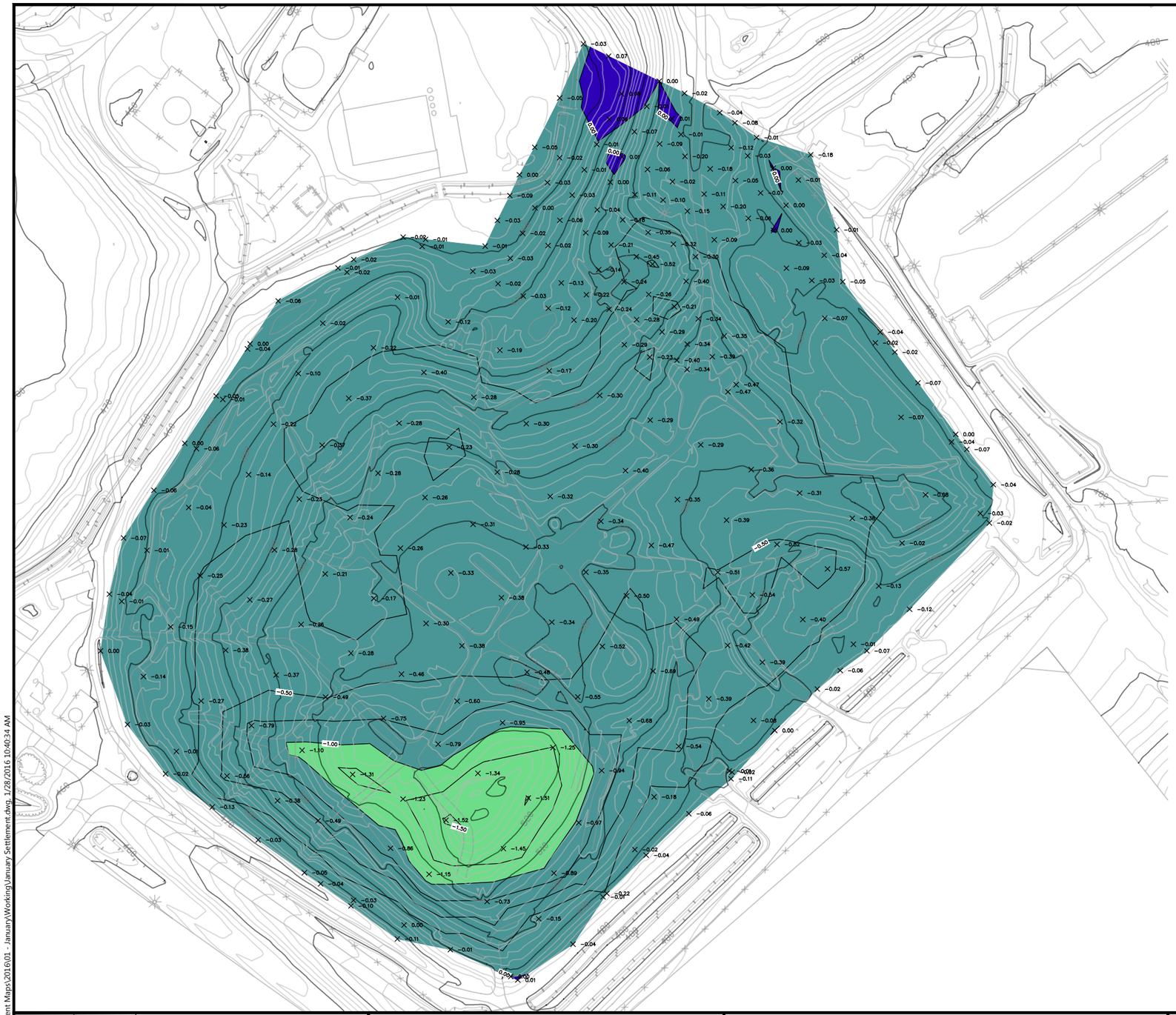
Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	October 2015	November 2015	December 2015	Janaury 2016		
GEW-151	93.6	189.2	171.2	47.3		
GEW-152	179.8	192.5	--	--		
GEW-153	136.2	130.5	46.2	--		
GEW-154	191.9	184.1	144.7	51.5		
GEW-155	120.4	122.6	108.6	111.6		
GEW-156	160.1	118.6	124.0	102.0		
GIW-01	188.5	189.1	189.6	183.0		
GIW-02	91.1	77.3	63.8	75.5		
GIW-03	89.6	74.8	63.5	75.2		
GIW-04	92.7	71.2	61.9	72.3		
GIW-05	88.7	61.8	59.3	55.8		
GIW-06	87.5	72.2	60.5	73.6		
GIW-07	89.5	69.5	59.6	73.4		
GIW-08	86.0	68.5	59.2	81.0		
GIW-09	88.3	78.6	66.8	81.3		
GIW-10	90.7	70.9	60.2	72.5		
GIW-11	93.2	74.9	62.2	61.0		
GIW-12	96.2	83.6	74.7	65.6		
GIW-13	87.8	71.7	60.0	57.0		
LCS-1D	--	--	--	--		
LCS-2D	--	--	--	--		
LCS-3C	--	--	--	--		
LCS-4B	--	--	--	--		
LCS-5A	94.6	94.7	90.0	91.2		
LCS-6B	88.8	79.8	73.0	60.1		
PGW-60	88.3	81.9	60.0	49.6		
SEW-002	78.0	54.3	38.0	36.4		
SEW-012A	--	--	--	--		
SEW-017R	--	--	--	--		
SEW-031R	--	--	--	--		
SEW-032R	--	--	--	--		
SEW-060R	--	--	--	--		
SEW-061R	--	--	--	--		
SEW-062R	--	--	--	--		
SEW-063	--	--	--	--		
SEW-064	--	--	--	--		
SEW-067	--	--	--	--		
SEW-072R	--	--	--	--		
SEW-074	--	--	--	--		
SEW-079R	--	--	--	--		
T-56	77.0	69.4	40.0	47.7		

-- = Indicates no data available.

ATTACHMENT F

SETTLEMENT FRONT MAP



N

0 200'

GRAPHIC SCALE

NOTES

1. EXISTING CONTOURS DEVELOPED FROM SITE AERIAL TOPOGRAPHIC SURVEY BY COOPER AERIAL SURVEYS, CO. ON FEBRUARY 10, 2015.
2. FOR CLARITY, NOT ALL SITE FEATURES MAY BE SHOWN.
3. ELEVATION DIFFERENCE DETERMINED BY SUBTRACTING SPOT ELEVATIONS SURVEYED ON 12-15-15 FROM SPOT ELEVATIONS SURVEYED ON 1-18-16.
4. SURVEY POINTS WERE PERFORMED USING GPS METHODS.
5. SETTLEMENT RANGE SURFACE WAS GENERATED FROM THE SPOT ELEVATION DIFFERENCES.
6. ELEVATION DIFFERENCES THAT ARE SHOWN AS NEGATIVE INDICATE SPOTS OF SETTLEMENT.
7. ANY POINTS THAT ARE NOT A GROUND-TO-GROUND COMPARISON TO THE PREVIOUS MONTH'S POINTS, OR THAT WERE NOT SURVEYED IN THE SAME LOCATION AS THE PREVIOUS MONTH ARE NOT INCLUDED AND WERE NOT USED IN ANY SURFACE GENERATION.

LEGEND

× −0.42 — SPOT ELEVATION DIFFERENCE (1-18-16 TO 12-15-15)

MINOR ELEVATION CHANGE CONTOUR (0.25 FEET)

−0.50 — MAJOR ELEVATION CHANGE CONTOUR (0.50 FEET)

1–18 — SETTLEMENT FRONT CONTOUR FOR AREA WITH 1.35' PER 30 DAYS FOR CURRENT PERIOD OF DAYS (AREA REPRESENTS 1.53' OVER 34 DAYS BASED ON CONVERSION)

ELEVATION CHANGE (FEET)

Number	Minimum Elev. Change	Maximum Elev. Change	Area (sq.ft.)	Color
1	−5.00	−4.00	0.00	
2	−4.00	−3.00	0.00	
3	−3.00	−2.00	0.00	
4	−2.00	−1.00	90613.35	
5	−1.00	0.00	1433658.10	
6	0.00	1.00	16248.61	

REV. NO.	DATE	DESCRIPTION

BRIDGETON LANDFILL

CB&I Environmental & Infrastructure, Inc.

STATE OF ILLINOIS LICENSED DESIGN FIRM #184004093

BRIDGETON LANDFILL
BRIDGETON, MO

SETTLEMENT MAP
DECEMBER 15, 2015 THROUGH JANUARY 18, 2016

DRAWN BY:	ORC	APPROVED BY:	JPV	PROJ. NO.:	155162	DATE:	FEBRUARY 2016

T:\AutoCAD\Projects\Bridgeton LF\Settlement Maps\2016\01 - January\Working\January Settlement.dwg, 1/28/2016 10:40:34 AM

ATTACHMENT G

SUMMARY OF ODOR COMPLAINTS

January 1, 2015 – January 31, 2015 / MDNR ODOR COMPLAINTS

Name: Dan Hofmann

Message: Odor logged January 1, 2016, at 9:00 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol overlapped with the time of observation cited in this concern. No odor associated with the Bridgeton Landfill was observed. The concern location cited is directly adjacent to another known odor source and of significant distance from the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 2, 2016, at 7:17 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent western origin on this date, placing this location upwind from the Bridgeton Landfill. No odor related to the Bridgeton Landfill was observed during the odor patrols performed on this date. This was not a Bridgeton Landfill odor.

Name: Caitlyn Williams

Message: Odor logged January 2, 2016, at 7:33 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent western origin on this date, placing this location upwind from the Bridgeton Landfill. No odor related to the Bridgeton Landfill was observed during the odor patrols performed on this date. This was not a Bridgeton Landfill odor.

Name: Jacobi

Message: Odor logged January 2, 2016, at 10:00 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent western origin on this date, placing this location outside the downwind pathway from the Bridgeton Landfill. An odor patrol was performed by Bridgeton Landfill within the hour of the stated observation time, no odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Bob Labeaume

Message: Odor logged January 2, 2016, at 9:00 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent western origin on this date, placing this location outside the downwind pathway from the Bridgeton Landfill. An odor patrol was performed by Bridgeton Landfill within the hour of the stated observation time, no odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 3, 2016, at 6:30 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location referenced was immediately adjacent to another known odor source, unrelated to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 5, 2016, at 6:50 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent south southeastern origin on this date, placing this concern directly upwind of the Bridgeton Landfill and downwind of another known odor source. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 5, 2016, at 7:42 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent south southeastern origin on this date, placing this concern a significant distance directly upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 5, 2016, at 5:33 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent south southeastern origin on this date, placing this concern well upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 5, 2016, at 5:33 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent south southeastern origin on this date, placing this concern well upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 5, 2016, at 5:33 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent south southeastern origin on this date, placing this concern well upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 6, 2016, at 7:21 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southeastern origin placing this concern location well outside the downwind pathway of the Bridgeton Landfill on this date. This was not a Bridgeton Landfill odor.

Name: Meagan

Message: Odor logged January 6, 2016, at 9:23 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southeastern origin placing this concern location well outside the downwind pathway of the Bridgeton Landfill on this date. This was not a Bridgeton Landfill odor.

Name: Meagan

Message: Odor logged January 6, 2016, at 9:23 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southeastern origin placing this concern location well outside the downwind pathway of the Bridgeton Landfill on this date. This was not a Bridgeton Landfill odor.

Name: Meagan

Message: Odor logged January 6, 2016, at 9:23 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southeastern origin placing this concern location well outside the downwind pathway of the Bridgeton Landfill on this date. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 7, 2016, at 12:21 pm strength of 3

Follow-up: The following concern is of substantial distance from the Bridgeton Landfill in an area with no history of confirmed Bridgeton Landfill odor. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 7, 2016, at 12:21 pm strength of 3

Follow-up: The following concern is of substantial distance from the Bridgeton Landfill in an area with no history of confirmed Bridgeton Landfill odor during a period of eastern winds placing this location well outside the downwind pathway of the Bridgeton Landfill. This is not a Bridgeton Landfill odor.

Name: Meagan

Message: Odor logged January 7, 2016, at 10:20 am strength of 8

Follow-up: The following concern is of substantial distance from the Bridgeton Landfill in an area with no history of confirmed Bridgeton Landfill odor during a period of southeastern winds placing this location well upwind of the Bridgeton Landfill. This is not a Bridgeton Landfill odor.

Name: Meagan

Message: Odor logged January 7, 2016, at 10:20 am strength of 8

Follow-up: The following concern is of substantial distance from the Bridgeton Landfill in an area with no history of confirmed Bridgeton Landfill odor during a period of southeastern winds placing this location well upwind of the Bridgeton Landfill. This is not a Bridgeton Landfill odor.

Name: Jenina Kenessey

Message: Odor logged January 6, 2016, at 11:50 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed immediately before the time referenced in this concern. No odor related to the Bridgeton Landfill was observed at any point. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 8, 2016, at 7:45 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southern to southeastern origin on this date and at the time cited in this concern, placing this concern location directly upwind of the Bridgeton Landfill. No odor was observed during odor patrols on this date. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 4, 2016, at 8:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern location is of greater distance from the Bridgeton Landfill than any previously confirmed odor observations and was outside the downwind pathway of the Bridgeton Landfill at the time of this concern. Odor patrols on this date did not observe any off-site odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor. This is one of seven submittals received in quick succession on this date featuring similar input data and are believed to have been form the same obviously inaccurate source. This response covers all of these submittals.

Name: m

Message: Odor logged January 8, 2016, at 5:57 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time stated in this concern winds were of a southwestern origin placing this location outside of the Bridgeton Landfill's downwind pathway and directly downwind of another known odor source. This was not a Bridgeton Landfill odor.

Name: m

Message: Odor logged January 8, 2016, at 8:27 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time stated in this concern winds were of a southwestern origin placing this location a substantial distance outside of the Bridgeton Landfill's downwind pathway. This was not a Bridgeton Landfill odor.

Name: various

Message: Odor logged January 9, 2016, at 8:52 pm strength of 3

Follow-up: 14 concerns were received on the date of January 9, 2016. Investigation of these concerns reveals that they were clustered around and in the immediate downwind pathway of another known odor source with observed off-site odor emissions on this date. These concerns were not associated with Bridgeton Landfill odor.

Name: Michelle Barbeau

Message: Odor logged January 11, 2016, at 2:51 pm strength of 5

Follow-up: The following concern lacks essential location data.

Name: NA

Message: Odor logged January 11, 2016, at 4:10 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location cited in this concern was immediately downwind of another known odor source throughout the day of this concern. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 12, 2016, at 4:10 pm strength of 7

Follow-up: Six concerns were submitted between 8:04 AM and 8:08 AM all cite locations along the I-70 corridor immediately adjacent to and downwind from another known odor source. This is a clear sign of misattributed odor.

Name: Theresa Ravens

Message: Odor logged January 12, 2016, at 7:16 am strength of 5

Follow-up: The following concern is located directly adjacent to another known odor source with frequent off-site odor emissions, including on the date of this concern. This was not a Bridgeton Landfill odor.

Name: Theresa Ravens

Message: Odor logged January 11, 2016, at 8:00 pm strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were calm at the time of this concern, no odor related to the Bridgeton Landfill was observed at

multiple points between this location and the Bridgeton Landfill during odor patrols performed before and after this the time cited in this concern. This location is of greater distance from the Bridgeton Landfill than any previously confirmed odor. The submitter in question previously on this same date erroneously submitted a Bridgeton Landfill concern for what was clearly not a Bridgeton Landfill odor. This is not believed to be a Bridgeton Landfill odor.

Name: Theresa Ravens

Message: Odor logged January 11, 2016, at 7:00 am strength of 10

Follow-up: The following concern is located directly adjacent to another known odor source with frequent off-site odor emissions, including on the date of this concern. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 12, 2016, at 5:26 pm strength of 10

Follow-up: The following concern is located directly adjacent to another known odor source with frequent off-site odor emissions, including on the date of this concern. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 12, 2016, at 5:27 pm strength of 10

Follow-up: The following concern is located directly adjacent to another known odor source with frequent off-site odor emissions, including on the date of this concern. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 12, 2016, at 7:00 pm strength of 8

Follow-up: The following concern is of significant distance from the Bridgeton Landfill and of far closer proximity to another known odor source with frequent off-site odor emissions. Winds were of low velocity/calm at this time. No odor related to the Bridgeton Landfill was observed during multiple odor patrols on this date, both before and after the time of this observation. This was not a Bridgeton Landfill odor.

Name: Jaime Wittmaier

Message: Odor logged January 12, 2016, at 5:20 pm strength of 7

Follow-up: The following concern is of significant distance from the Bridgeton Landfill and of far closer proximity to another known odor source with frequent off-site odor emissions. Winds were of low velocity/calm at this time. No odor related to the Bridgeton Landfill was observed during multiple odor patrols on this date, both before and after the time of this observation. This was not a Bridgeton Landfill odor.

Name: Jaime Wittmaier

Message: Odor logged January 12, 2016, at 5:20 pm strength of 7

Follow-up: The following concern is of significant distance from the Bridgeton Landfill and of far closer proximity to another known odor source with frequent off-site odor emissions. Winds were of low velocity/calm at this time. No odor related to the Bridgeton Landfill was observed during multiple odor patrols on this date, both before and after the time of this observation. This was not a Bridgeton Landfill odor.

Name: Mary Menke

Message: Odor logged January 13, 2016, at 6:40 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located immediately south of the Bridgeton Landfill. Winds were of a persistent southern origin throughout this date, placing this location directly downwind of another known odor source. This was not a Bridgeton Landfill odor.

Name: Theresa Ravens

Message: Odor logged January 14, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located immediately adjacent to another known odor source with frequent off-site emissions. Winds were of a persistent southwestern origin on this date, placing this location directly downwind of the other odor source and upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 14, 2016, at 4:36 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located immediately adjacent to another known odor source with frequent off-site emissions. Winds were of a persistent southwestern origin on this date, placing this location directly downwind of the other odor source and upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 14, 2016, at 7:37 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the southeast of the Bridgeton Landfill. Winds were of a persistent southwestern origin on this date, placing this location outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source with observed off-site odor emissions on this date and time. This was not a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged January 15, 2016, at 5:08 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the southeast of the Bridgeton Landfill. Winds were of a persistent southwestern to western origin at the point of this concern, placing this location outside the downwind pathway of the Bridgeton Landfill. An odor patrol performed shortly after this concern did not observe odor related to the Bridgeton Landfill. Odor related to another source was observed in close proximity to this location on this date. This is not believed to have been a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged January 15, 2016, at 5:08 pm strength of 10

Follow-up: This concern is a duplicate of a previously submitted concern.

Name: Sharon Bishop

Message: Odor logged January 15, 2016, at 6:39 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the east of the Bridgeton Landfill. Winds were of a persistent western origin. An odor related to an unknown source was observed throughout the day in close proximity to this concern location. This was the likely source of this odor but the Bridgeton Landfill cannot be conclusively ruled out at this time. (PBO)

Name: NA

Message: Odor logged January 16, 2016, at 1:46 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the southwest of the Bridgeton Landfill. Winds were of a persistent southwestern origin on this date, placing this location outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source with observed off-site odor emissions on this date. This was not a Bridgeton Landfill odor.

Name: David McComber

Message: Odor logged January 16, 2016, at 1:47 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located a substantial distance to the southwest of the Bridgeton Landfill and within significantly closer proximity to another known odor source with frequent off-site odors. Winds were of a persistent southwestern origin placing this location well upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 16, 2016, at 9:56 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located a substantial distance to the southwest of the Bridgeton Landfill and within significantly closer proximity to another known odor source with frequent off-site odors. Winds were of a persistent southwestern origin placing this location well upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Rebecca Comer Kelleher

Message: Odor logged January 16, 2016, at 4:00 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the southwest of the Bridgeton Landfill and is of closer proximity to another known odor source with frequent off-site odors. Winds were of a persistent southwestern origin placing this location outside the downwind pathway of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Bruce Hunt

Message: Odor logged January 18, 2016, at 5:15 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located a significant distance to the southwest of the Bridgeton Landfill and significantly closer to another known odor source. On this date winds were of a

persistent western origin placing this location directly downwind of that other known source. This was not a Bridgeton Landfill odor.

Name: Tabitha Vaughn

Message: Odor logged January 19, 2016, at 6:42 am strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is of such substantial distance as to render it clearly erroneous.

Name: St Charles Surgery Center

Message: Odor logged January 19, 2016, at 6:51 am strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is of such substantial distance as to render it clearly erroneous.

Name: Tabitha Vaughn

Message: Odor logged January 19, 2016, at 6:52 am strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is of such substantial distance as to render it clearly erroneous.

Name: NA

Message: Odor logged January 20, 2016, at 7:00 am strength of 10

Follow-up: On January 20th five concerns were submitted within 12 minutes total with an observation time of 7:00 am to 7:05 am. All concerns reference I-70 as the location. These locations are all immediately adjacent to another known odor source with associated odor observed on this date and at these times. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 20, 2016, at 6:55 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is of such substantial distance as to demonstrate it as clearly erroneous.

Name: NA

Message: Odor logged January 20, 2016, at 7:35 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location provided is immediately adjacent to another known odor source with associated odor observed on this date and at a time shortly before the stated time of observation. This was not a Bridgeton Landfill odor.

Name: Mel Leib

Message: Odor logged January 21, 2016, at 6:00 pm strength of 10

Follow-up: The following concern cites a location within the confines of the MSD Bridgeton to Bissell Pump Station 1 area, located inside the Bridgeton Landfill property boundaries. As such any odor observed at this location would not be "off-site" and this concern is therefore invalid.

Name: NA

Message: Odor logged January 20, 2016, at 4:30 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location provided is immediately adjacent to another known odor source with associated odor observed on this date and at a time shortly after the stated time of observation. This was not a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged January 22, 2016, at 6:42 am strength of 7

Follow-up: The following concern was investigated by Bridgeton Landfill staff within one hour of receipt. No odor related to the Bridgeton Landfill was observed at multiple points in close proximity with this concern location. This was not a Bridgeton Landfill odor.

Name: Greg and Ellen Wortham

Message: Odor logged January 22, 2016, at 8:32 am strength of 5

Follow-up: The following concern was submitted very shortly after the conclusion of a Bridgeton Landfill odor patrol with multiple observation points in the immediate vicinity of this concern location. No odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Daniel Ising

Message: Odor logged January 23, 2016, at 7:52 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located a significant distance to the southwest of the Bridgeton Landfill and significantly closer to another known odor source. On this date winds were of a persistent western origin placing this location directly downwind of that other known source. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 26, 2016, at 7:30 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location provided is immediately adjacent to another known odor source with associated odor observed on this date and at a time shortly before the stated time of observation. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 26, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location provided is immediately adjacent to another known odor source with associated odor observed on the same date and time as the stated time of observation. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 24, 2016, at 3:00 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted more than two days after the stated observation date and time. Winds were of a persistent southern origin on this date placing this location directly upwind of the Bridgeton Landfill and directly downwind of another known odor source in the area. This was not a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged January 27, 2016, at 5:36 am strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the southwest of the Bridgeton Landfill. Winds were of a persistent southwestern origin placing this location outside the downwind pathway of the Bridgeton Landfill and downwind of another known odor source. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 27, 2016, at 7:00 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the southwest of the Bridgeton Landfill and is immediately adjacent to another known odor source with frequent off-site odors. Winds were of a persistent southwestern origin placing this location outside the downwind pathway of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: David McComber

Message: Odor logged January 27, 2016, at 8:05 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location of this concern is located to the southwest of the Bridgeton Landfill. Winds were of a persistent southwestern origin placing this location outside the downwind pathway of the Bridgeton Landfill and downwind of another known odor source. A Bridgeton Landfill odor patrol performed shortly after the time cited in this concern detected a garbage odor unrelated to the Bridgeton Landfill at multiple points. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 27, 2016, at 6:23 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location provided is immediately adjacent to another known odor source with associated odor observed on the same date and time as the stated time of observation. Winds on this date place the concern location upwind of the Bridgeton Landfill and downwind of the other known odor source. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 27, 2016, at 11:32 pm strength of 2

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location provided is immediately adjacent to another known odor source with associated odor observed on the same date and time as the stated time of observation. Winds on this date place the concern location upwind of the Bridgeton Landfill and downwind of the other known odor source. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 28, 2016, at 8:30 am strength of 1

Follow-up: The following concern lacks essential location data.

Name: Neil Monson

Message: Odor logged January 28, 2016, at 7:15 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: Mandy Lanham

Message: Odor logged January 28, 2016, at 8:18 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: Mandy Lanham

Message: Odor logged January 28, 2016, at 8:18 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: Holly Griffin

Message: Odor logged January 28, 2016, at 8:15 am strength of 9

Follow-up: The following concern lacks essential location data.

Name: Margie MENKE

Message: Odor logged January 28, 2016, at 9:09 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Multiple odor patrols performed on this date, including one less than an hour before and another less than an hour after did not observe any odor originating from the Bridgeton Landfill at observation points in close proximity to this concern location. A garbage odor was observed in close proximity at multiple points in close proximity to this location however, and was the likely odor referenced in this concern submittal.

Name: NA

Message: Odor logged January 28, 2016, at 9:22 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 28, 2016, at 7:39 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff observed odor at this location shortly before the time cited in this concern. The odor was not consistent with potential odor sources related to the Bridgeton Landfill. The odor was instead of a strong decomposing garbage and/or fecal waste smell. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 28, 2016, at 8:47 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: David McComber – AT&T

Message: Odor logged January 28, 2016, at 8:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol by Bridgeton Landfill staff observed a garbage/fecal waste odor in close geographical proximity to this concern within the hour referenced in this concern. This was not a Bridgeton Landfill odor.

Name: David Blackwell

Message: Odor logged January 28, 2016, at 7:00 am strength of 4

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol by Bridgeton Landfill staff was performed shortly after the time cited in this concern. No odor related to the Bridgeton Landfill was observed and at the time of this concern this location was of a direct upwind position from the Bridgeton Landfill. A strong garbage/fecal waste odor was present throughout this area on this date and is believed to have originated from a source upwind of this location at the time cited in this concern. This was not a Bridgeton Landfill odor.

Name: Rebecca Tobar

Message: Odor logged January 28, 2016, at 6:30 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol by Bridgeton Landfill staff was performed shortly after the time cited in this concern. No odor related to the Bridgeton Landfill was observed and at the time of this concern this location was of a direct upwind position from the Bridgeton Landfill. A strong garbage/fecal waste odor was present throughout this area on this date and is believed to have originated from a source upwind of this location at the time cited in this concern. This was not a Bridgeton Landfill odor.

Name: Rachel Benjamin

Message: Odor logged January 28, 2016, at 8:15 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 28, 2016, at 1:00 pm strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged January 28, 2016, at 2:27 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor observation was performed at this location minutes after the time cited in this concern. No odor related to the Bridgeton Landfill was observed.

Name: NA

Message: Odor logged January 28, 2016, at 6:13 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No evidence suggests that this was related to a Bridgeton Landfill odor and instead was likely related to another known odor source of closer proximity to this concern source. This was not a Bridgeton Landfill odor.

Name: Sharon Bishop

Message: Odor logged January 28, 2016, at 8;20 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. On the morning of January 28 a fill project on the northern portion of the south quarry was performing a tie in with the existing liner and odor was observed. Odor controls were employed and the project was completed as expeditiously as possible. As this concern is of a downwind position from the Bridgeton Landfill and corresponds chronologically with this work there is potential for this to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 28, 2016, at 10:18 pm strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No evidence suggests that this was related to a Bridgeton Landfill odor and instead was likely related to another known odor source of closer proximity to this concern source. This was not a Bridgeton Landfill odor.

Name: loretta

Message: Odor logged January 29, 2016, at 12:11 am strength of 10

Follow-up: The following concern failed to provide a real address and/or GPS coordinates for this concern and therefore cannot be investigated.

Name: NA

Message: Odor logged January 29, 2016, at 3:17 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No evidence suggests that this was related to a Bridgeton Landfill odor and instead was likely related to another known odor source of closer proximity to this concern source. This was not a Bridgeton Landfill odor.

Name: Margie MENKE

Message: Odor logged January 29, 2016, at 5:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed at times before, during, and after the time cited in this concern. No odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Debi Disser

Message: Odor logged January 29, 2016, at 7:08 am strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed shortly following the time referenced in this concern. A garbage odor unrelated to the Bridgeton Landfill was observed at a point between another known source of odor in the area matching this odor profile and this concern location. This was not a Bridgeton Landfill odor.

Name: Debi Disser

Message: Odor logged January 29, 2016, at 7:09 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed shortly following the time referenced in this concern. A garbage odor unrelated to the Bridgeton Landfill was observed at a point between another known source of odor in the area matching this odor profile and this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 28, 2016, at 8:00 am strength of 9

Follow-up: The following concern lacks necessary location data.

Name: Pauline Tulloch

Message: Odor logged January 28, 2016, at 4:35 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No evidence suggests that this was related to a Bridgeton Landfill odor and instead was likely related to another known odor source of closer proximity to this concern source. This was not a Bridgeton Landfill odor.

Name: Theresa Ravens

Message: Odor logged January 29, 2016, at 3:46 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No evidence suggests that this was related to a Bridgeton Landfill odor and instead was likely related to another known odor source of closer proximity to this concern source. This was not a Bridgeton Landfill odor.

Name: Theresa Ravens

Message: Odor logged January 29, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed within the hour of this concern submittal observed a garbage odor unassociated with the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Theresa Ravens

Message: Odor logged January 29, 2016, at 7:00 am strength of 7

Follow-up: The following concern failed to provide a real address and/or GPS coordinates for this concern and therefore cannot be investigated.

Name: Maria Moehle

Message: Odor logged January 29, 2016, at 5:45 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No evidence suggests that this was related to a Bridgeton Landfill odor and instead was likely related to another known odor source of closer proximity to this concern source. This was not a Bridgeton Landfill odor.

Name: Caitlyn Williams

Message: Odor logged January 28, 2016, at 6:04 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No evidence suggests that this was related to a Bridgeton Landfill odor and instead was likely related to another known odor source of closer proximity to this concern source. This was not a Bridgeton Landfill odor.

Name: Emily jacobi

Message: Odor logged January 30, 2016, at 10:22 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed shortly before the observation time cited in this concern noted a garbage odor at points in close proximity to this concern. This was not a Bridgeton Landfill odor.

Name: Emily jacobi

Message: Odor logged January 30, 2016, at 10:22 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed shortly before the observation time cited in this concern noted a garbage odor at points in close proximity to this concern. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged January 30, 2016, at 5:05 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: Dawn Chapman

Message: Odor logged January 30, 2016, at 3:15 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill by a substantial distance on this date. This was clearly not a Bridgeton Landfill odor.

Name: brieann McCormick

Message: Odor logged January 30, 2016, at 5:09 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 30, 2016, at 7:45 pm strength of 10

Follow-up: The following concern lacks necessary location data.

Name: David Blackwell

Message: Odor logged January 30, 2016, at 2:00 pm strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: Judy McCown

Message: Odor logged January 30, 2016, at 6:30 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: Abbey Deckard

Message: Odor logged January 29, 2016, at 10:30 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and

downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 28, 2016, at 6:15 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 30, 2016, at 3:00 pm strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 30, 2016, at 2:15 pm strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 30, 2016, at 7:45 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged January 30, 2016, at 1:46 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited was persistently upwind of the Bridgeton Landfill on this date and downwind of another odor source with observed off-site odor emissions on this date in close proximity to this concern location. This was not a Bridgeton Landfill odor.

ATTACHMENT H

LIQUID CHARACTERIZATION DATA AND DISCHARGE LOG

Bridgeton Landfill - Leachate PreTreatment Plant

January 2016

Liquid Characterization Data

Liquid characterization data is made available to MDNR on an ongoing basis. No additional lechate characterization data, beyond that produced for MSD, was collected during the prior month.

Hauled Disposal to MSD – Bissell Point

Date	Waste	Source	Transporter	Quantity
1/1/2016	LPTP Activated Sludge/ Permeate	Tank 1 (T1)	MBI	0
1/2/2016				0
1/3/2016				0
1/4/2016				0
1/5/2016				0
1/6/2016				0
1/7/2016				0
1/8/2016				0
1/9/2016				0
1/10/2016				0
1/11/2016				0
1/12/2016				0
1/13/2016				0
1/14/2016				0
1/15/2016				0
1/16/2016				0
1/17/2016				0
1/18/2016				0
1/19/2016				0
1/20/2016				0
1/21/2016				0
1/22/2016				0
1/23/2016				0
1/24/2016				0
1/25/2016				0
1/26/2016				0
1/27/2016				0
1/28/2016				0
1/29/2016				0
1/30/2016				0
1/31/2016				0
			Total=	**0**

Direct Discharge to MSD

Date	Waste	Source	Quantity (gal)
1/1/2016	LPTP Permeate	Through Tank AST 97k (MSD Sampling Point 013)	223,913
1/2/2016			230,252
1/3/2016			234,174
1/4/2016			230,443
1/5/2016			208,330
1/6/2016			215,165
1/7/2016			236,913
1/8/2016			238,713
1/9/2016			241,600
1/10/2016			137,669
1/11/2016			157,904
1/12/2016			210,556
1/13/2016			205,669
1/14/2016			196,989
1/15/2016			190,336
1/16/2016			179,882
1/17/2016			172,035
1/18/2016			236,249
1/19/2016			160,791
1/20/2016			190,078
1/21/2016			154,182
1/22/2016			206,356
1/23/2016			206,721
1/24/2016			214,389
1/25/2016			231,576
1/26/2016			225,369
1/27/2016			228,130
1/28/2016			234,445
1/29/2016			132,193
1/30/2016			212,608
1/31/2016			219,765
		Total =	**6,363,395**

ATTACHMENT I

LOW FILL PROJECT AREA

LEGEND

- SOLID WASTE BOUNDARY
- Q — QUARRY WALL
- FILL BOUNDRIES

0 200 400 Feet

BRIDGETON LANDFILL, LLC 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	JAN 2016 FILL BOUNDRIES	FEEZOR ENGINEERING, INC. Engineering for a Better World	DESIGNED BY: APPROVED BY:	DRAWING NO.: 001
FULL SITE PLAN VIEW W/ AERIAL				
PROJECT NO: BT-057	FILE PATH: c:\Users\Paul\Dropbox\Bridgeton\BT-057\drawings\Infrastructure Site Plan 2014 Q1 - CAD\arch\Title Block 42x30 XREF - TEMPLATE.dwg		REVISION	DATE