

Bridgeton Landfill, LLC

Monthly Data Submittals

May, 2016

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

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Provided Separately:

- Flare Raw Data Excel Spreadsheet
- Gas Wellfield Raw Data Excel Spreadsheet

June 20, 2016

Commentary on Data

June 20, 2016

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

Gas Volume

- As seen in Attachment B-1, the gas collection volumetric rate in for this month averaged 2,734 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 contains vertical wells which had oxygen levels over 5% at one (1) or more weekly monitoring events during this reporting period. These consisted of seven (7) older GEW wells (<#-120) that are experiencing low flows; 25 new GEW wells (>#-120) that are experiencing restricted flows; and six (6) 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 of these wells 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. Four (4) vertical wells (excluding GIW wells) decreased by 30°F during this reporting period. Additionally, 13 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. Well GEW-160 exhibited a wellhead temperature increase greater than 30°F. Well GEW-160 was installed in December 2015 within the south quarry area/neck area and vacuum has been adjusted over time as part of normal GCCS operations. The wellhead temperatures at GEW-160 are similar as the wellhead temperatures of nearby wells. Maximum temperatures are consistent with previous months in each of the gas extraction wells in vicinity to the neck.
- All wells in the North Quarry during this reporting period exhibited a maximum wellhead temperature under 145°F with the exception of GEW-054. Well GEW-054 had a maximum well head temperature of 155°F which is consistent with historic readings.

Carbon monoxide (CO) results showed non-detect (ND) for all other North quarry wells, with the exception of GEW-053 (66 ppm) and GEW-054 (42 ppm).

- 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 1.17 feet over 27 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 with respect to landfill activities.

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 May on a region of differential settlement located in the southeast portions 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.

ATTACHMENT A

WORK COMPLETED AND PLANNED

Bridgeton Landfill, LLC
Monthly Summary of Work Completed and Planned

Work Completed in May 2016

Gas Collection and Control System

- Continued operation and maintenance of GCCS System and GIW wells.
- Continued 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 routine operation of previously installed and upgraded features.
- Began work on West Lift Station including the replacement of flow meters and valves.

Pre-Treatment Facility

- Continued ongoing operation of facility.
- Continued to optimize operation efficiency of pre-treatment facility.
- Permeate continued to be discharged directly to MSD – Bissell Point Facility or other approved disposal facilities as determined by MSD.

Other Projects

- Continued North Quarry cap enhancements.
- Complete low-area fill project in South Quarry
- Continued acceptance of clean fill.
- Complete stormwater enhancements around the Simpson asphalt facility.

Work Planned for June 2016

Gas Collection and Control System

- Continue operation and maintenance of GCCS system.
- Continue upgrades to GCCS system as necessary.

Alternative Heat Extraction System

- Continued operation and maintenance of the HES.
- Begin installation of Neck HES.

Leachate Management System

- Continued routine operation of previously installed and upgraded features.

Pre-Treatment Facility

- Ongoing operation of facility.
- Continue to optimize operation efficiency of pre-treatment facility.
- Permeate continued to be discharged directly to MSD – Bissell Point Facility or other approved disposal facilities as determined by MSD.

Other Projects:

- Continue acceptance of clean fill materials for future fill projects.
- Upgrades to Outfall 007.
- Demolition of buildings in the Southwest portion of the property.
- Abandonment of GC-5 and installation of SEW-3.

ATTACHMENT B

DAILY FLARE MONITORING DATA

ATTACHMENT B-1

FLOW DATA TABLE

Daily Flare Monitoring Data - Bridgeton Landfill
May 2016

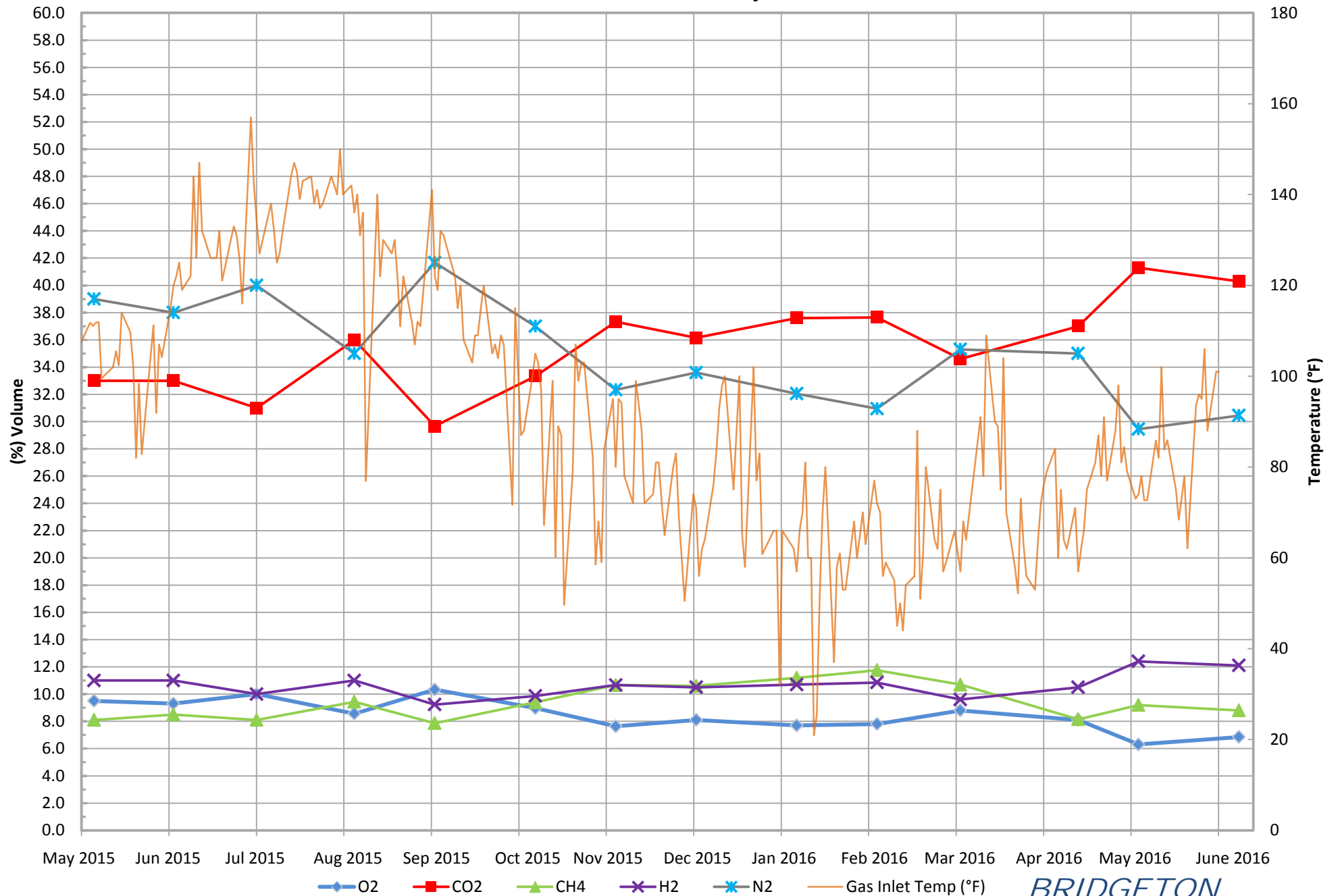
Date	Average Device Flow* (scfm)				Total Avg. Flow** (scfm)
	Utility Flare (FL-100)	Utility Flare (FL-120)	Utility Flare (FL-140)	Aux. Utility Flare***	
5/1/2016	0	0	2,424	253	2,676
5/2/2016	0	0	2,322	249	2,571
5/3/2016	0	0	2,273	246	2,519
5/4/2016	0	0	2,280	241	2,520
5/5/2016	0	0	2,345	243	2,588
5/6/2016	0	0	2,367	246	2,613
5/7/2016	0	0	2,345	244	2,589
5/8/2016	0	0	2,342	245	2,586
5/9/2016	0	0	2,347	243	2,591
5/10/2016	0	0	2,505	244	2,748
5/11/2016	0	0	2,513	247	2,761
5/12/2016	0	0	2,364	242	2,606
5/13/2016	0	0	2,492	243	2,736
5/14/2016	0	0	2,565	249	2,814
5/15/2016	0	0	2,597	252	2,849
5/16/2016	0	0	2,604	252	2,856
5/17/2016	0	0	2,561	247	2,808
5/18/2016	0	0	2,486	244	2,730
5/19/2016	0	0	2,462	240	2,702
5/20/2016	0	0	2,427	233	2,660
5/21/2016	0	0	2,420	279	2,698
5/22/2016	0	0	2,458	283	2,740
5/23/2016	0	0	2,474	290	2,764
5/24/2016	0	0	2,493	173	2,666
5/25/2016	0	0	2,523	208	2,731
5/26/2016	0	0	2,610	473	3,083
5/27/2016	0	0	2,430	413	2,842
5/28/2016	0	0	2,456	415	2,871
5/29/2016	0	0	2,511	417	2,928
5/30/2016	0	0	2,525	395	2,919
5/31/2016	0	0	2,568	410	2,978
				Average	2,734

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

ATTACHMENT B-2

FLOW DATA GRAPHS

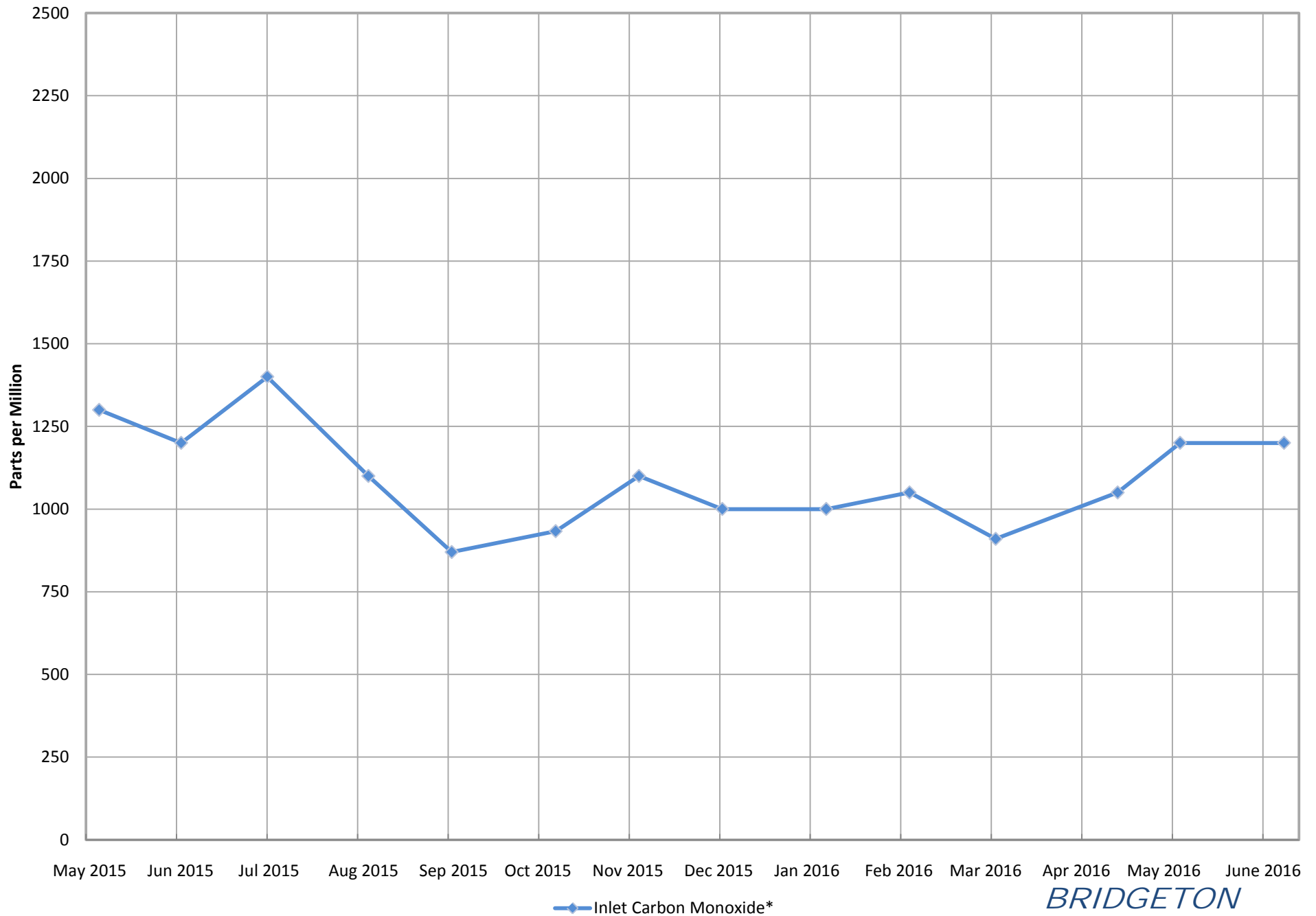
Inlet Gas and Temperature*



*Gas data collected from Laboratory Reports. Temperature data collected from field readings.

*BRIDGETON
LANDFILL*

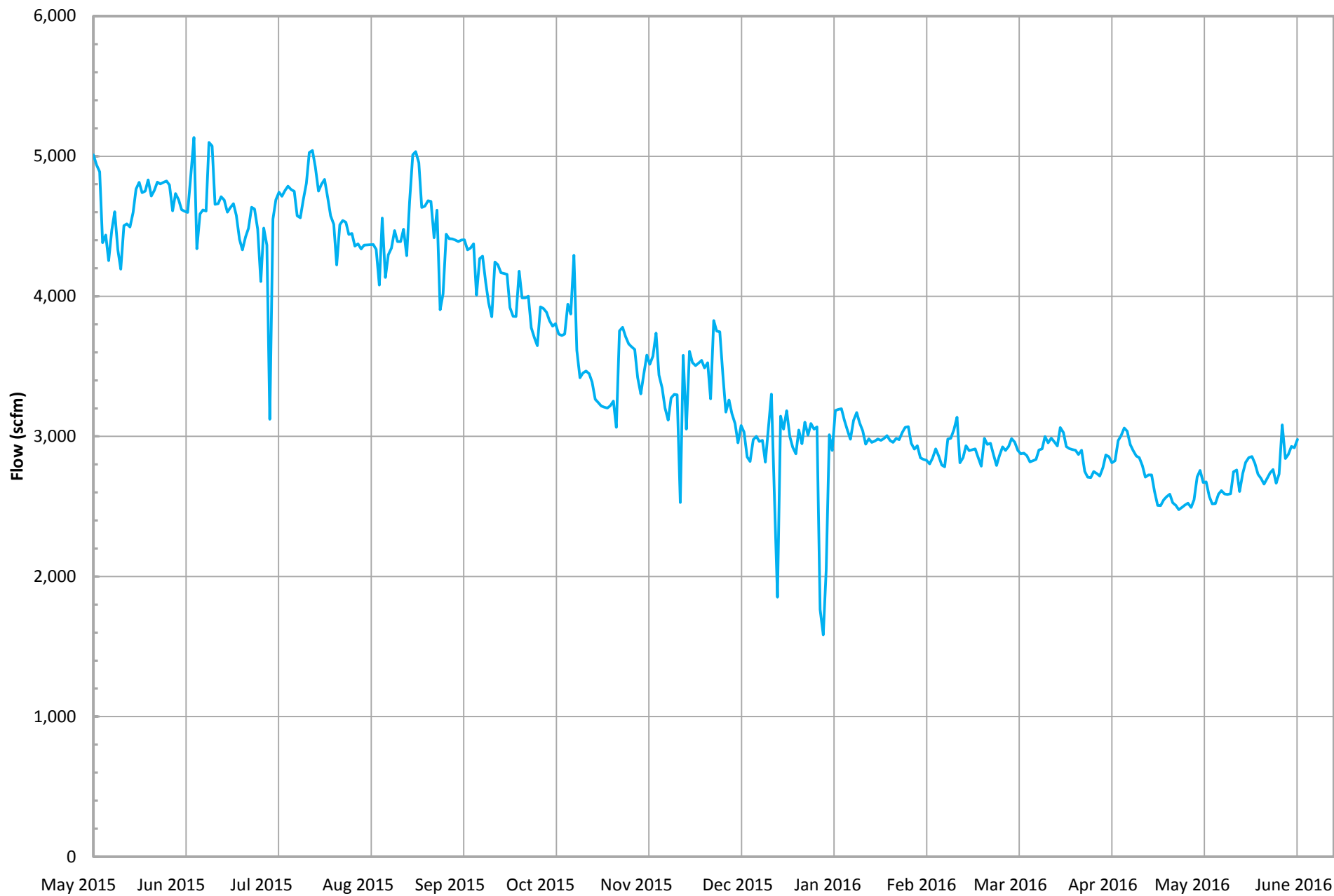
Inlet Carbon Monoxide*



*Data collected from Laboratory Reports.

*BRIDGETON
LANDFILL*

Total Combined Flow (scfm)*

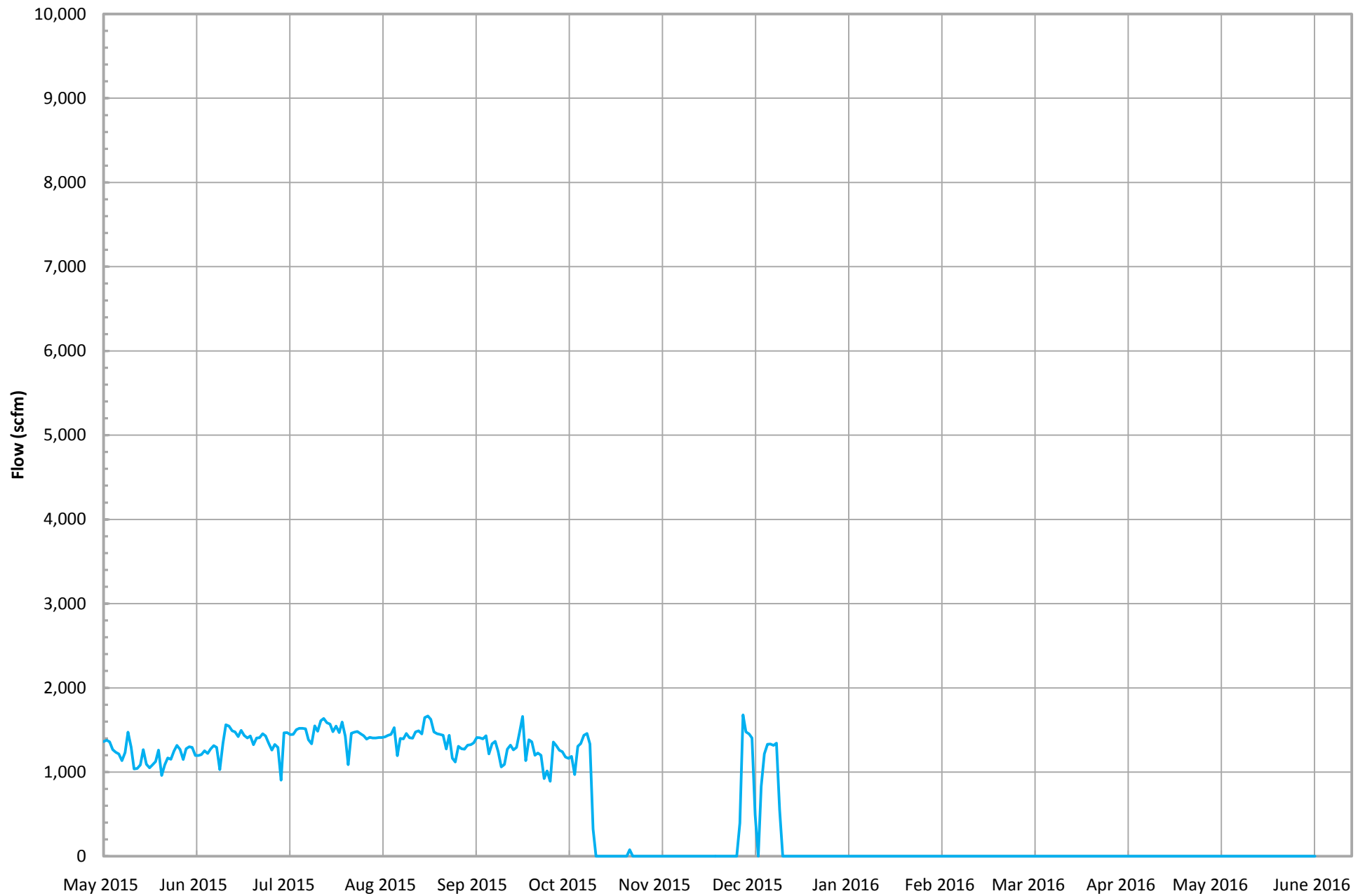


*Combined flow is based on tabulated flow data collected daily from each device.

— Total Combined Flow (scfm)*

*BRIDGETON
LANDFILL*

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

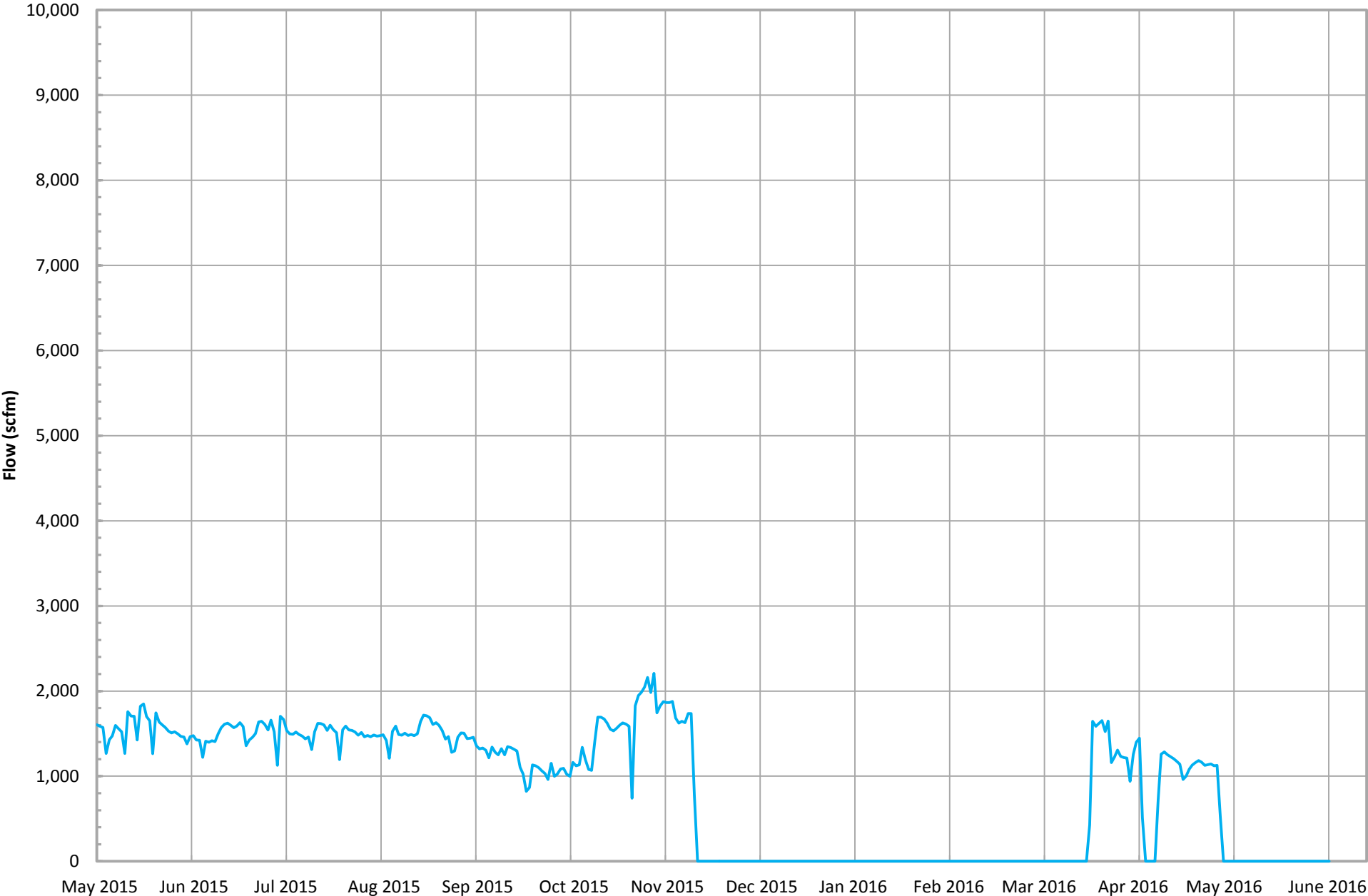


*Flow is based on tabulated flow data collected daily.

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

**BRIDGETON
LANDFILL**

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

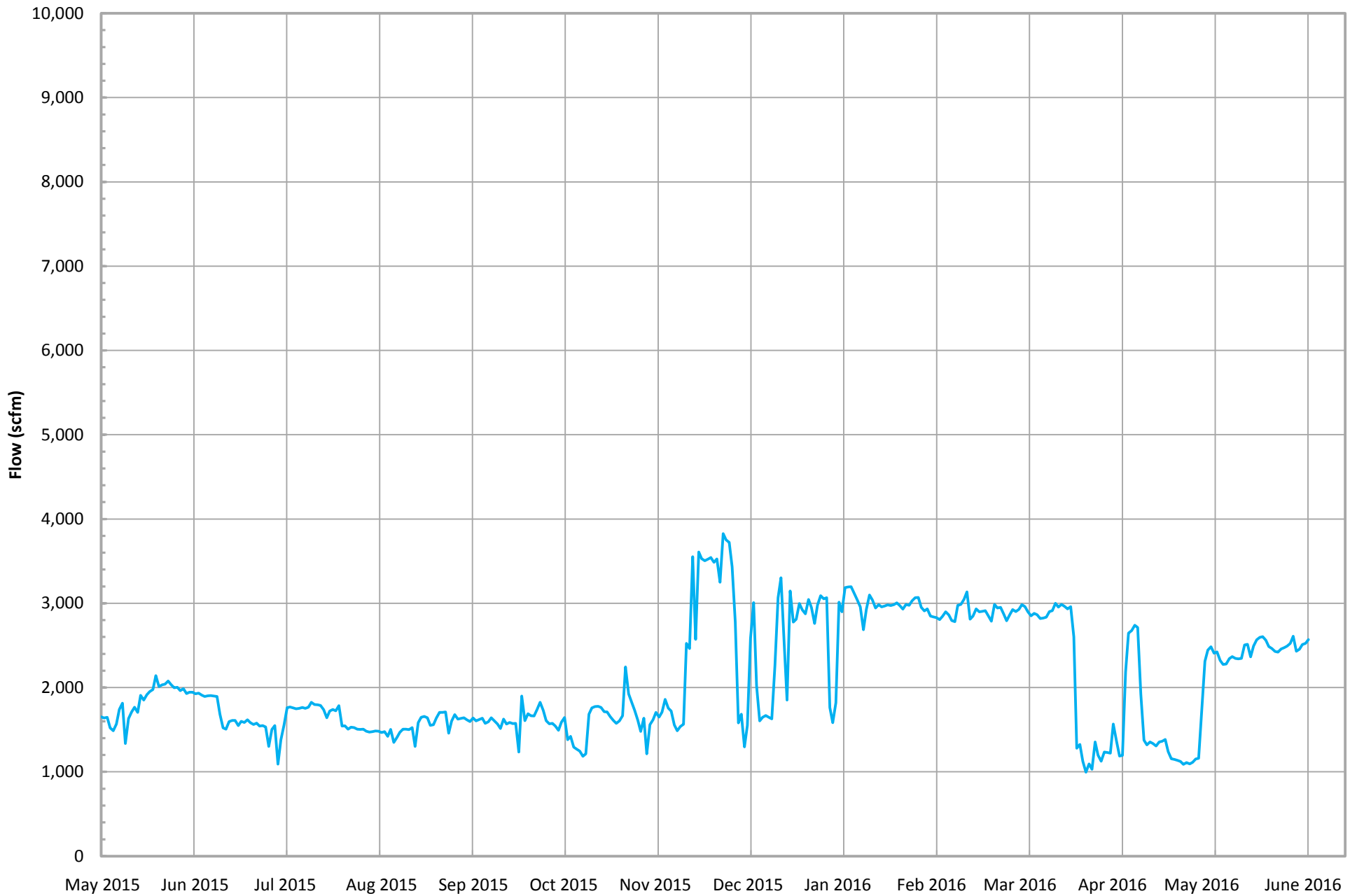


*Flow is based on tabulated flow data collected daily.

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

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

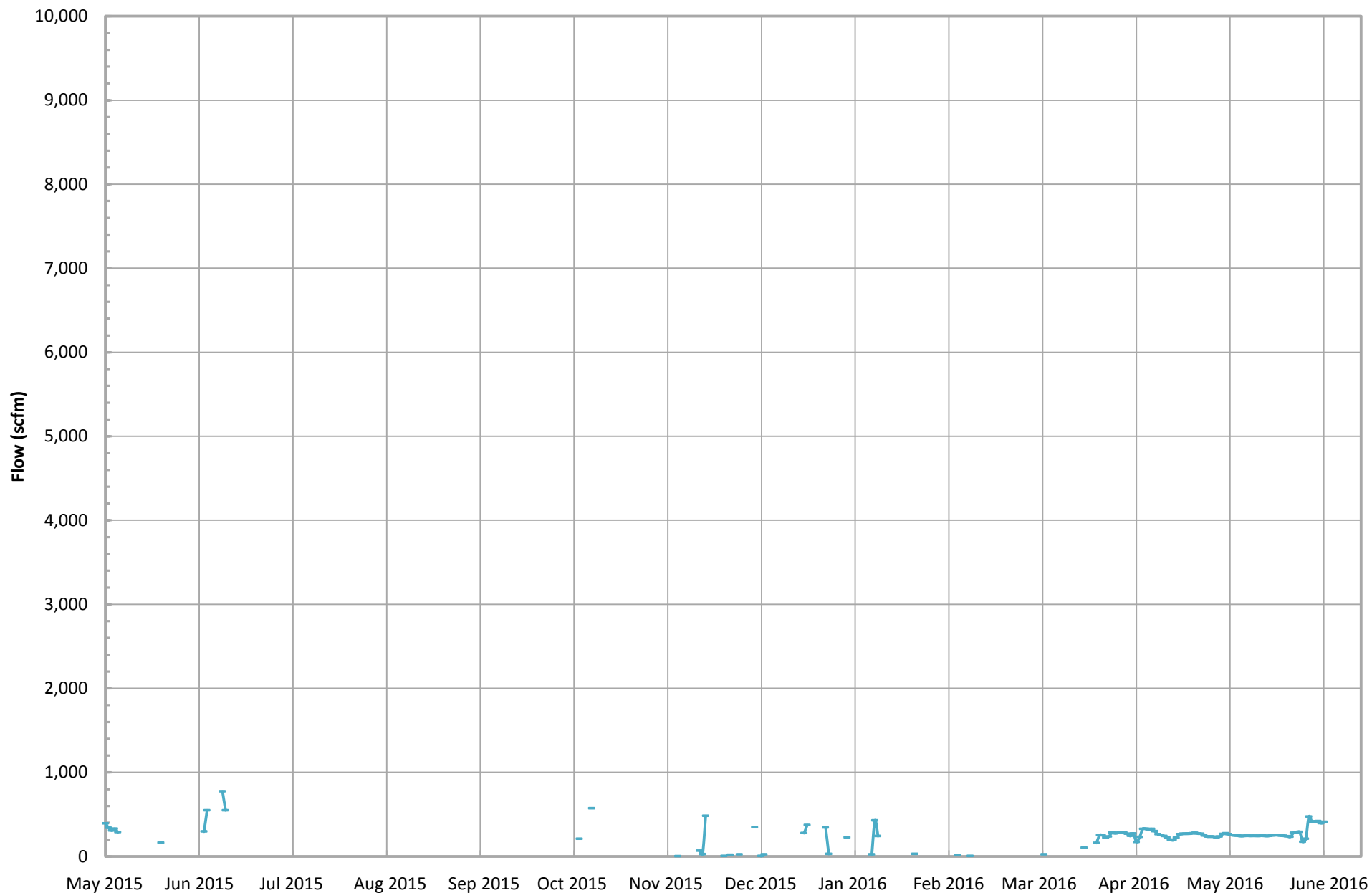


*Flow is based on tabulated flow data collected daily.

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

*BRIDGETON
LANDFILL*

Auxillary Candlestick Flare Flow (scfm)*

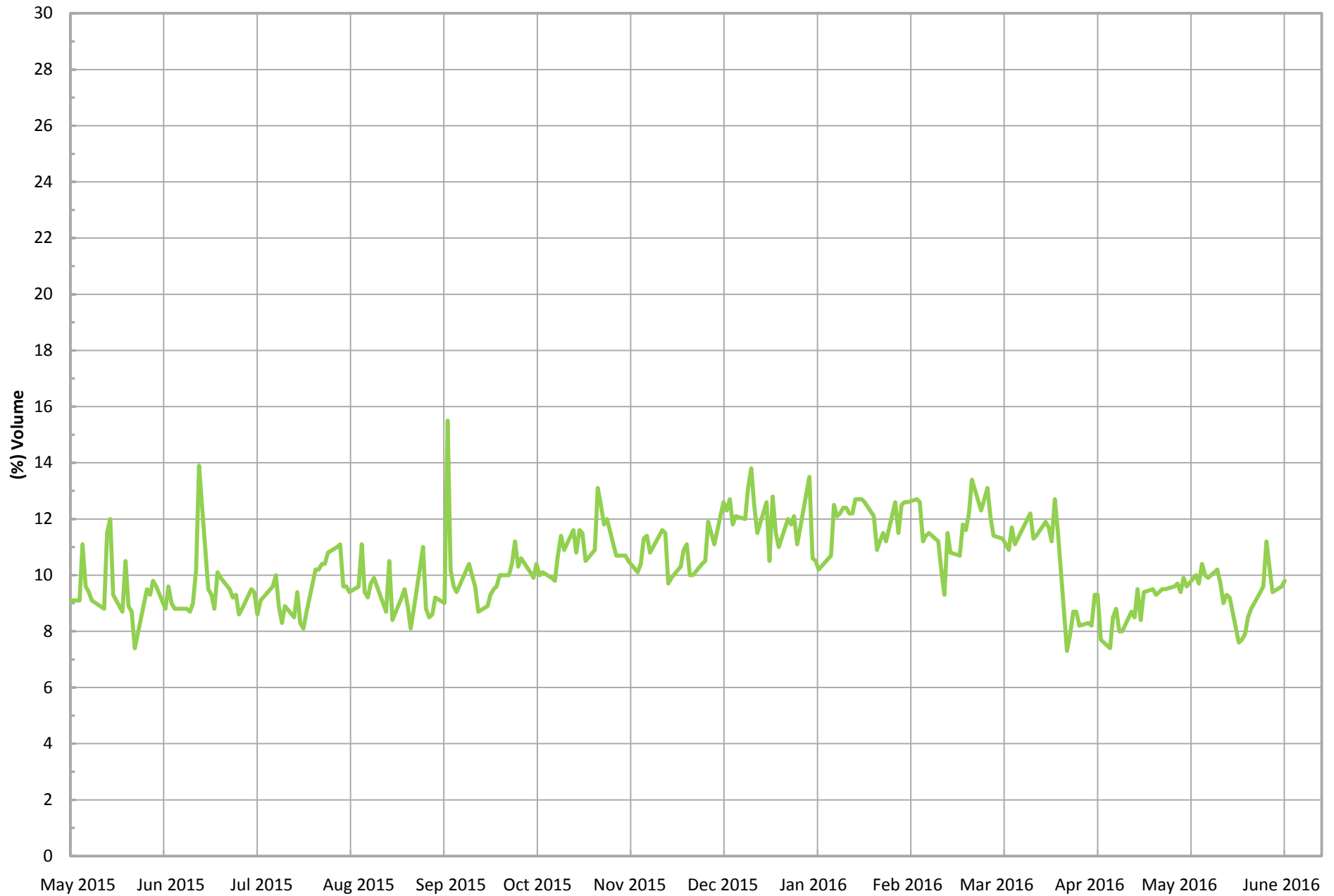


*Flow is based on tabulated flow data collected daily.

— Auxillary Candlestick Flare Flow (scfm)*

*BRIDGETON
LANDFILL*

Combined Inlet Methane (Field Data)*

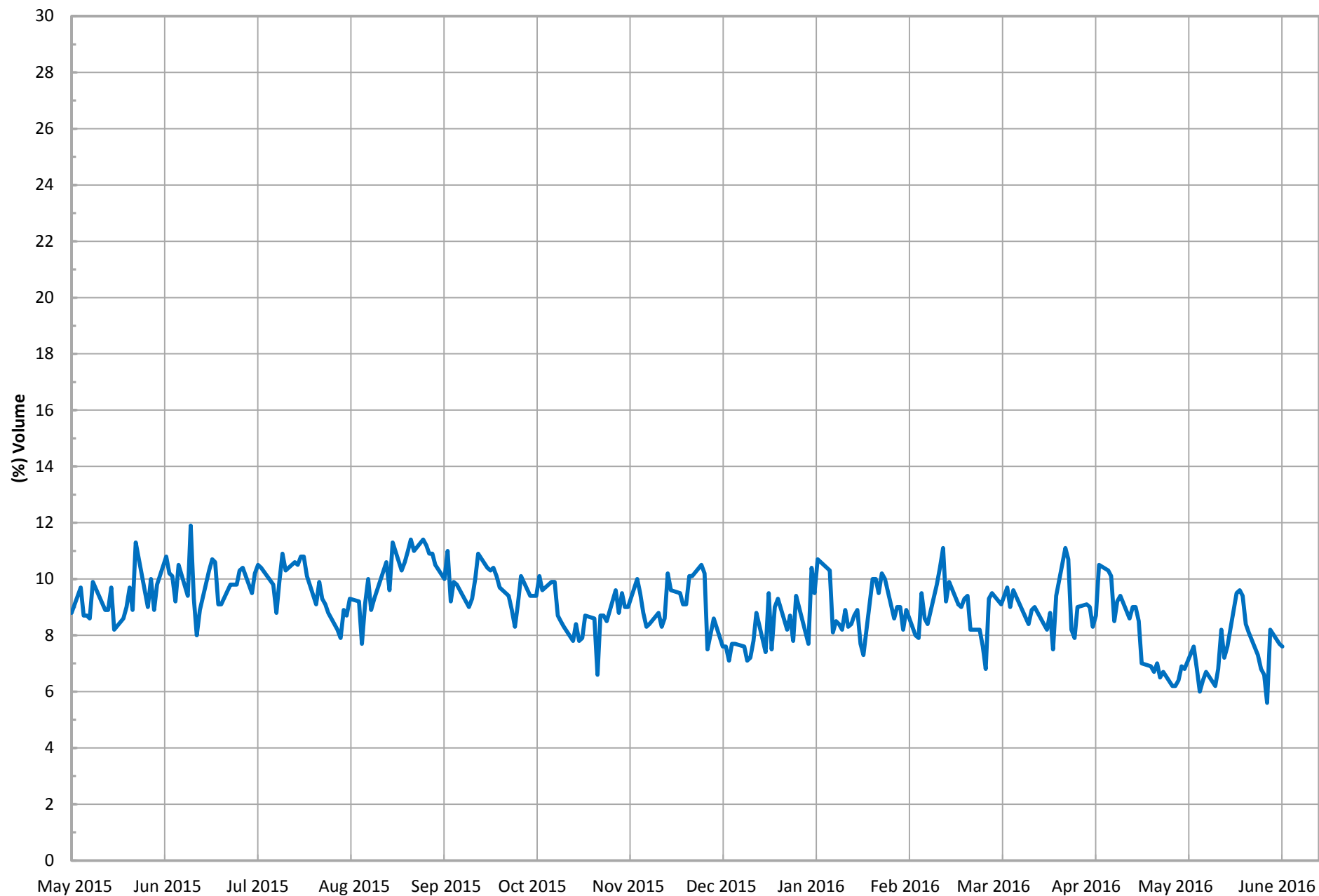


*Gas data collected from field monitoring data.

Combined Inlet Methane (Field Data)*

*BRIDGETON
LANDFILL*

Combined Inlet Oxygen (Field Data)*



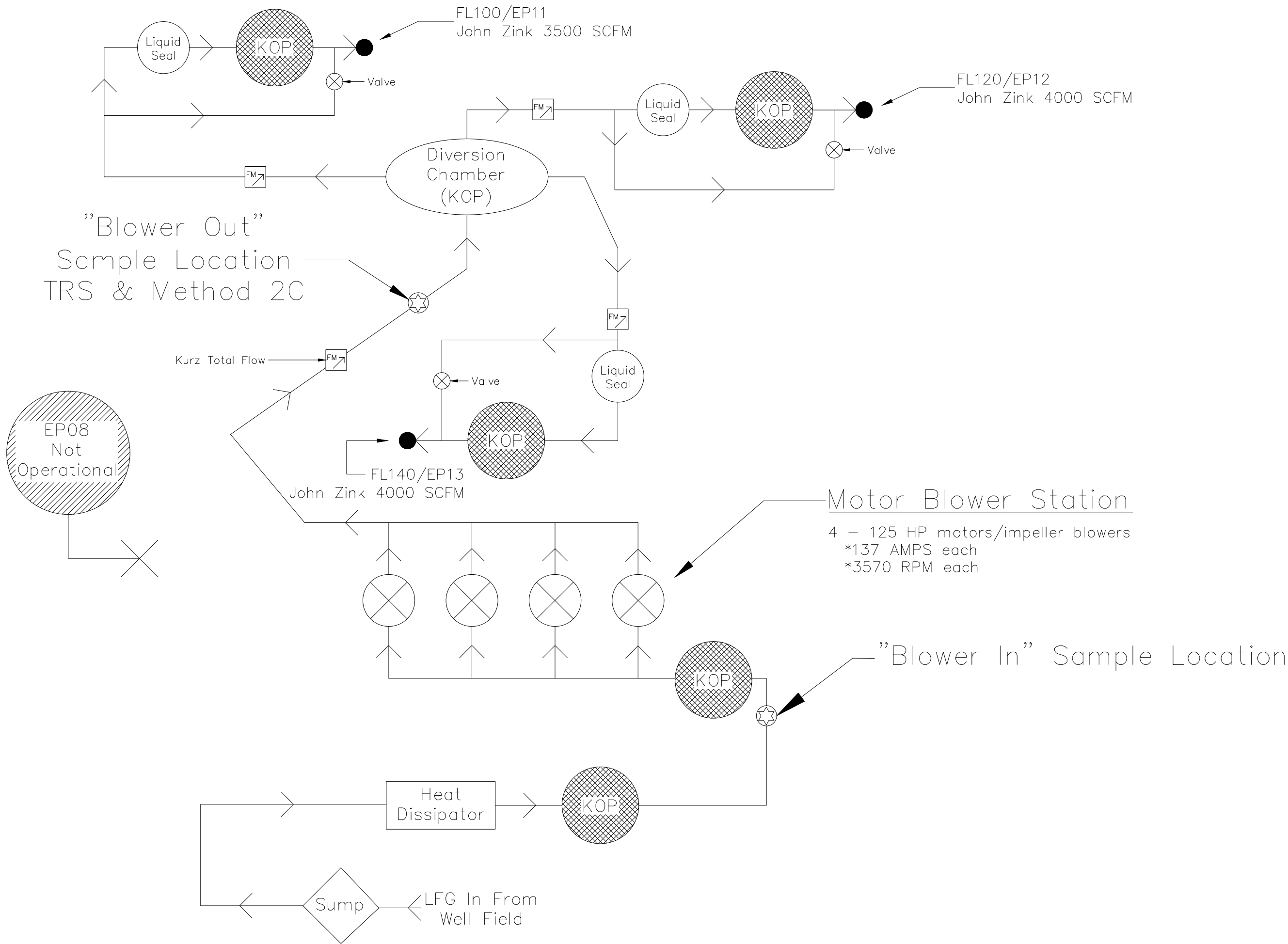
*Gas data collected from field monitoring data.

— Combined Inlet Oxygen (Field Data)*

*BRIDGETON
LANDFILL*

ATTACHMENT B-3

FLARE TRS / FLARE STATION FLOW



PREPARED FOR:
BRIDGETON LANDFILL, LLC

**FIGURE 1 - FLARE COMPOUND
PROCESS FLOW DIAGRAM**
13370 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI

REVISION DESCRIPTION	
No.	DATE

Weaver Consultants Group

WEAVER CONSULTANTS GROUP
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COLUMBIA, MISSOURI 65201
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DRAWN BY: DT
REVIEWED BY: DAR
DATE: 5/20/2015
FILE: 0120-131-10
CAD: Figure 1 - Flare Compound

SHEET 1 OF 1

I:\PROJECTS\120131 Bridgeton\Bridgeton Air Compliance 2015\TRS Assistance\Figure 1 - Flow Diagram - REV.dwg ,dthoenen;May 20, 2015

TABLE 1
Summary of Key LFG Tested Parameters
Flare Compound: *Blower Outlet*

Bridgeton Landfill, LLC.
May 3, 2016 to June 7, 2016

SAMPLE EVENT #	DATE	VELOCITY ft/sec	FLOW dscfm	TRS ppm _{vd}
66-23 ¹	6/7/2016	26.76	2073	1700
				1600
65-22 ²	6/1/2016	30.75	2491	1100
				1500
64-21 ²	5/24/2016	28.68	2323	1400
				1600
63-20 ²	5/19/2016	29.85	2418	1200
				1300
62-19 ²	5/10/2016	30.32	2456	1400
				1400
61-18 ¹	5/3/2016	25.61	2086	1400
				1600

Notes:

¹ Indicates velocity/flow determined by EPA Method 2

² Indicates velocity/flow determined by KURZ

PARAMETER		Blower Out
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL140)		
Date	Test Date	6/7/16
Start	Run Start Time	8:00
	Run Finish Time	9:46
	Net Traversing Points	8 (2 x 4)
Θ	Net Run Time, minutes	1:45:35
C _p	Pitot Tube Coefficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.47
% H ₂ O	Moisture Content of LFG, %	3.50
% RH	Relative Humidity, %	65.00
M _{fd}	Dry Mole Fraction	0.965
%CH ₄	Methane, %	8.80
%CO ₂	Carbon Dioxide, %	40.30
%O ₂	Oxygen, %	6.85
%Balance	Assumed as Nitrogen, %	30.45
%H ₂	Hydrogen, %	12.10
%CO	Carbon Monoxide, %	0.12
M _d	Dry Molecular Weight, lb/lb-Mole	31.16
M _s	Wet Molecular weight, lb/lb-Mole	30.70
P _g	Flue Gas Static Pressure, inches of H ₂ O	23.39
P _s	Absolute Flue Gas Pressure, inches of Mercury	31.19
t _s	Average Stack Gas Temperature, °F	97
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.172
v _s	Average LFG Velocity, feet/second	26.76
A _s	Stack Crosssectional Area, square feet	1.35
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	2,073
Q _s	Standard Volumetric Flow Rate, scfm	2,146
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	2,172
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	10,061
NHV	Net Heating Value, Btu/scf	149
LFG _{CH4}	Methane, lb/hr	455.9
	Methane, grains/dscf	25.66
LFG _{CO2}	Carbon Dioxide, lb/hr	5,727.8
	Carbon Dioxide, grains/dscf	322.32
LFG _{O2}	Oxygen, lb/hr	707.9
	Oxygen, grains/dscf	39.83
LFG _{N2}	Balance gas as Nitrogen, lb/hr	2,754.8
	Balance gas as Nitrogen, grains/dscf	155.02
LFG _{H4}	Hydrogen, lb/hr	78.8
	Hydrogen, grains/dscf	4.43
LFG _{CO}	Carbon Monoxide, lb/hr	10.9
	Carbon Monoxide, grains/dscf	0.61

		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	29.00	22.00
	Hydrogen Sulfide Rate, lb/hr	0.32	0.24
	Hydrogen Sulfide Rate, grains/dscf	0.018	0.014
COS	Carbonyl Sulfide Concentration, ppmvd	0.59	0.56
	Carbonyl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmvd	250.00	230.00
	Methyl Mercaptan Rate, lb/hr	3.88	3.57
	Methyl Mercaptan Rate, grains/dscf	0.219	0.201
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	3.00	3.00
	Ethyl Mercaptan Rate, lb/hr	0.06	0.06
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	1,200.00	1,200.00
	Dimethyl Sulfide Rate, lb/hr	24.08	24.08
	Dimethyl Sulfide Rate, grains/dscf	1.355	1.355
CS ₂	Carbon Disulfide Concentration, ppmvd	1.00	1.10
	Carbon Disulfide Rate, lb/hr	0.02	0.03
	Carbon Disulfide Rate, grains/dscf	0.001	0.002
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	110.00	110.00
	Dimethyl Disulfide Rate, lb/hr	3.35	2.70
	Dimethyl Disulfide Rate, grains/dscf	0.188	0.152
①E _{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	1,700.00	1,600.00
	TRS-->SO2 Emission Rate, lb/hr	35.17	33.10
	TRS-->SO2 Emission Rate, grains/dscf	1.979	1.863

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

Tuesday, June 07, 2016

LOCATION	TIME	FLOW -SCFM			Method 2 vs. Fleetzoom	Method 2 vs Kurz	Kurz vs Fleetzoom
		Method 2	FleetZoom	Kurz FM			
BLOWER OUT	8:00	2,146	2,456	2,241	-14.5%	-4.4%	-9.6%

PARAMETER		Blower Out
EP14 NORTH QUARRY LFG ONLY		
Date	Test Date	6/7/16
Start	Run Start Time	7:39
	Run Finish Time	9:20
	Net Traversing Points	8 (2 x 4)
Θ	Net Run Time, minutes	1:41:00
C _p	Pitot Tube Coefficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.47
% H ₂ O	Moisture Content of LFG, %	1.08
% RH	Relative Humidity, %	41.00
M _{fd}	Dry Mole Fraction	0.989
%CH ₄	Methane, %	40.95
%CO ₂	Carbon Dioxide, %	33.10
%O ₂	Oxygen, %	3.45
%Balance	Assumed as Nitrogen, %	21.50
%H ₂	Hydrogen, %	3.05
%CO	Carbon Monoxide, %	0.00
M _d	Dry Molecular Weight, lb/lb-Mole	28.47
M _s	Wet Molecular weight, lb/lb-Mole	28.36
P _g	Flue Gas Static Pressure, inches of H ₂ O	1.36
P _s	Absolute Flue Gas Pressure, inches of Mercury	29.57
t _s	Average Stack Gas Temperature, °F	83
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.027
v _s	Average LFG Velocity, feet/second	11.19
A _s	Stack Crosssectional Area, square feet	0.51
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	328
Q _s	Standard Volumetric Flow Rate, scfm	331
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	344
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	1,453
NHV	Net Heating Value, Btu/scf	372.7
LFG _{CH4}	Methane, lb/hr	335.4
	Methane, grains/dscf	119.39
LFG _{CO2}	Carbon Dioxide, lb/hr	743.6
	Carbon Dioxide, grains/dscf	264.73
LFG _{O2}	Oxygen, lb/hr	56.4
	Oxygen, grains/dscf	20.06
LFG _{N2}	Balance gas as Nitrogen, lb/hr	307.5
	Balance gas as Nitrogen, grains/dscf	109.46
LFG _{H4}	Hydrogen, lb/hr	3.1
	Hydrogen, grains/dscf	1.12
LFG _{CO}	Carbon Monoxide, lb/hr	0.0
	Carbon Monoxide, grains/dscf	0.02

		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	12.00	53.00
	Hydrogen Sulfide Rate, lb/hr	0.02	0.09
	Hydrogen Sulfide Rate, grains/dscf	0.007	0.033
COS	Carbonyl Sulfide Concentration, ppmvd	0.59	0.61
	Carbonyl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmvd	1.50	1.80
	Methyl Mercaptan Rate, lb/hr	0.00	0.00
	Methyl Mercaptan Rate, grains/dscf	0.001	0.002
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	0.76	0.61
	Ethyl Mercaptan Rate, lb/hr	0.00	0.00
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.001
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	7.90	8.10
	Dimethyl Sulfide Rate, lb/hr	0.03	0.03
	Dimethyl Sulfide Rate, grains/dscf	0.009	0.009
CS ₂	Carbon Disulfide Concentration, ppmvd	0.59	0.61
	Carbon Disulfide Rate, lb/hr	0.00	0.00
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	0.59	0.61
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E _{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	24.00	63.00
	TRS-->SO2 Emission Rate, lb/hr	0.08	0.21
	TRS-->SO2 Emission Rate, grains/dscf	0.028	0.073

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

Tuesday, June 07, 2016

LOCATION	TIME	FLOW -SCFM		Method 2 vs. Fleetzoom
		Method 2	FleetZoom	
EP14 NQ GAS	7:39	331	296	10.6%

FM vs M2 = 5.4%

June 15, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H060802-01/04

Enclosed are results for sample(s) received 6/08/16 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 Nick Bauer, Mike Lambrich and Ryan Ayers; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 6/10/16.

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.



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	<input type="checkbox"/>	48 hours	EDD	<input checked="" type="checkbox"/>	Condition upon receipt:	
Same Day	<input type="checkbox"/>	72 hours	EDF	<input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>	
24 hours	<input type="checkbox"/>	96 hours	Level 3	<input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>	
Other:		5 day	Level 4	<input checked="" type="checkbox"/>	Chilled _____ deg C	

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

BILLING		ANALYSIS REQUEST					
P.O. No.: PO4862452		EPA 15/16 + TRS	ASTM 1946 + H2 + CO & BTU/SCF		ASTM 1946 + H2 + CO & BTU/SCF (by CH4 ONLY)		
Bill to: Republic Services							
Attn: Nick Bauer							
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	EPA 15/16 + TRS	ASTM 1946 + H2 + CO & BTU/SCF		ASTM 1946 + H2 + CO & BTU/SCF (by CH4 ONLY)		
	Canister ID	Sample Start	Sample End	Lab Receive												
H060802-01	1296	-20.24	-3.69	-4	Blower Outlet 1	6/7/2016	800	C	LFG	NA	X	X				
↓ -02	6009	-20.05	-2.5	-3	Blower Outlet 2	6/7/2016	829	C	LFG	NA	X	X				
↓ -03	1295	-20.45	-3.5	-4	NQ EP14 1	6/7/2016	800	C	LFG	NA	X			X		
↓ -04	1301	-18.88	-3.42	-4.5	NQ EP14 2	6/7/2016	824	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: <i>[Signature]</i>	DATE/TIME: 6-7-16 1300	DATE/TIME:	DATE/TIME:	
RELINQUISHED BY: <i>[Signature]</i>	DATE/TIME: 6/8/16 0914	DATE/TIME:	DATE/TIME:	
RELINQUISHED BY:	DATE/TIME:	DATE/TIME:	DATE/TIME:	
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____				

H060802

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 06/08/16
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	H060802-01	H060802-02	H060802-03	H060802-04				
Client Sample I.D.:	Blower Outlet 1	Blower Outlet 2	NQ EP14 1	NQ EP14 2				
Date/Time Sampled:	6/7/16 8:00	6/7/16 8:29	6/7/16 8:00	6/7/16 8:24				
Date/Time Analyzed:	6/8/16 14:49	6/8/16 15:30	6/8/16 16:11	6/9/16 8:02				
QC Batch No.:	160608GC3A1	160608GC3A1	160608GC3A1	160608GC3A1				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.0	2.8	3.0	3.1				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	29 d	5.9	22 d	5.6	12	0.59	53 d	6.1
Carbonyl Sulfide	ND	0.59	ND	0.56	ND	0.59	ND	0.61
Methyl Mercaptan	250 d	5.9	230 d	5.6	1.5	0.59	1.8	0.61
Ethyl Mercaptan	3.0	0.59	3.0	0.56	0.76	0.59	ND	0.61
Dimethyl Sulfide	1,200 d	59.0	1,200 d	56.0	7.9	0.59	8.1	0.61
Carbon Disulfide	1.0	0.59	1.1	0.56	ND	0.59	ND	0.61
Dimethyl Disulfide	110 d	5.9	110 d	5.6	ND	0.59	ND	0.61
Total Reduced Sulfur	1,700	0.59	1,600	0.56	24	0.59	63	0.61

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date 6-10-16

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

page 1 of 1

H060802

3 of 177

QC Batch No.: 160608GC3A1
Matrix: Air
Units: ppmv


QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	6/8/16 10:32		6/8/16 10:07		6/8/16 10:19			
Analyst Initials:	AS		AS		AS			
Datafile:	08jun004		08jun002		08jun003			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	90	70-130%	87	70-130%	3.4	<30
Carbonyl Sulfide	ND	0.20	102	70-130%	99	70-130%	3.4	<30
Methyl Mercaptan	ND	0.20	85	70-130%	86	70-130%	0.4	<30
Ethyl Mercaptan	ND	0.20	115	70-130%	113	70-130%	1.8	<30
Dimethyl Sulfide	ND	0.20	96	70-130%	93	70-130%	3.5	<30
Carbon Disulfide	ND	0.20	93	70-130%	91	70-130%	1.7	<30
Dimethyl Disulfide	ND	0.20	105	70-130%	104	70-130%	0.8	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:


Mark J. Johnson
Operations Manager

Date: 6-10-16

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: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 06/08/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H060802-01	H060802-02		
Client Sample I.D.:	Blower Outlet 1	Blower Outlet 2		
Date/Time Sampled:	6/7/16 8:00	6/7/16 8:29		
Date/Time Analyzed:	6/9/16 10:42	6/9/16 10:57		
QC Batch No.:	160609GC8A1	160609GC8A1		
Analyst Initials:	AS	AS		
Dilution Factor:	3.0	2.8		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	12.2	3.0	12.0	2.8
Carbon Dioxide	40.5	0.030	40.1	0.028
Oxygen/Argon	6.8	1.5	6.9	1.4
Nitrogen	30.2	3.0	30.7	2.8
Methane	8.9	0.0030	8.7	0.0028
Carbon Monoxide	0.12	0.0030	0.12	0.0028
Net Heating Value (BTU/ft3)	148.9	3.0	149.1	2.8
Gross Heating Value (BTU/ft3)	169.2	3.0	169.3	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: _____



Mark Johnson
Operations Manager

Date

6-10-16

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 06/08/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H060802-03	H060802-04		
Client Sample I.D.:	NQ EP14 1	NQ EP14 2		
Date/Time Sampled:	6/7/16 8:00	6/7/16 8:24		
Date/Time Analyzed:	6/9/16 11:12	6/9/16 11:26		
QC Batch No.:	160609GC8A1	160609GC8A1		
Analyst Initials:	AS	AS		
Dilution Factor:	3.0	3.1		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND	3.0	ND	3.1
Carbon Dioxide	32.8	0.030	33.4	0.031
Oxygen/Argon	3.6	1.5	3.3	1.5
Nitrogen	21.9	3.0	21.1	3.1
Methane	40.6	0.0030	41.3	0.0031
Carbon Monoxide	ND	0.0030	ND	0.0031
Net Heating Value (BTU/ft3) methane only	369.6	3.0	375.8	3.1
Gross Heating Value (BTU/ft3) methane only	410.5	3.0	417.3	3.1

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

Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date 6-10-16

The cover letter is an integral part of this analytical report



QC Batch No.: 160609GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	6/9/16 9:29		6/9/16 8:45		6/9/16 9:00			
Analyst Initials:	AS		AS		AS			
Datafile:	09jun004		09jun001		09jun002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	109	70-130%	109	70-130%	0.3	<30
Carbon Dioxide	ND	0.010	102	70-130%	101	70-130%	1.2	<30
Oxygen/Argon	ND	0.50	102	70-130%	100	70-130%	1.1	<30
Nitrogen	ND	1.0	103	70-130%	102	70-130%	1.0	<30
Methane	ND	0.0010	105	70-130%	104	70-130%	0.8	<30
Carbon Monoxide	ND	0.0010	120	70-130%	120	70-130%	0.5	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:



Mark J. Johnson
Operations Manager

Date:

6-10-16

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

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 65-22
06/01/2016

Kurz FM = **2,622** scfm
Fleetzoom Total = **3,279** scfm $\Delta = 20.1\%$

PARAMETER		Outlet A	Outlet B
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL120 & FL140)			
Date	Test Date		6/1/16
Time	Start	13:52	14:06
*%CH ₄	Methane, %	9.40	10.20
*%CO ₂	Carbon Dioxide, %	39.00	39.90
*%O ₂	Oxygen, %	6.90	6.60
*%Balance	Assumed as Nitrogen, %	44.70	43.30
P _g	Flue Gas Static Pressure, inches of H ₂ O	29.39	30.07
t _s	Blower Outlet LFG Temperature, °F	135	136
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	2,491	
Q _s	Kurz FM, Standard Volumetric Flow Rate, scfm	2,622	
LFG _{CH₄}	Methane, lb/hr	585.0	634.8
	Methane, grains/dscf	27.41	29.74
LFG _{CO₂}	Carbon Dioxide, lb/hr	6,658.8	6,812.4
	Carbon Dioxide, grains/dscf	311.92	319.12
LFG _{O₂}	Oxygen, lb/hr	856.6	819.3
	Oxygen, grains/dscf	40.13	38.38
LFG _{N₂}	Balance gas as Nitrogen, lb/hr	4,858.0	4,705.8
	Balance gas as Nitrogen, grains/dscf	227.57	220.44
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	0.63	0.63
	Hydrogen Sulfide Rate, lb/hr	0.01	0.01
	Hydrogen Sulfide Rate, grains/dscf	0.000	0.000
COS	Carbonyl Sulfide Concentration, ppmvd	0.63	0.63
	Carbonyl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₃ S	Methyl Mercaptan Concentration, ppmvd	7.60	97.00
	Methyl Mercaptan Rate, lb/hr	0.14	1.81
	Methyl Mercaptan Rate, grains/dscf	0.007	0.085
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	0.63	1.70
	Ethyl Mercaptan Rate, lb/hr	0.02	0.04
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.002
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	1,000.00	1,200.00
	Dimethyl Sulfide Rate, lb/hr	24.11	28.93
	Dimethyl Sulfide Rate, grains/dscf	1.129	1.355
CS ₂	Carbon Disulfide Concentration, ppmvd	0.84	0.93
	Carbon Disulfide Rate, lb/hr	0.02	0.03
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	31.00	140.00
	Dimethyl Disulfide Rate, lb/hr	1.13	5.12
	Dimethyl Disulfide Rate, grains/dscf	0.053	0.240
①E _{TRS-SO₂}	TRS-->SO ₂ Emission Concentration, ppmvd	1,100.00	1,500.00
	TRS-->SO ₂ Emission Rate, lb/hr	27.34	37.28
	TRS-->SO ₂ Emission Rate, grains/dscf	1.281	1.746
TPY =		119.75	163.29
① TRS assumed molecular mass = SO ₂ , 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO ₂ emitted from the stack			

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 65-22
06/01/2016

Fleetzoom Total = 294 scfm

PARAMETER		EP14 NQ	EP14 NQ-2
EP14 NORTH QUARRY LFG ONLY			
Date	Test Date		6/1/16
Time	Start	14:48	15:00
*%CH₄	Methane, %	41.90	42.80
*%CO₂	Carbon Dioxide, %	33.20	32.90
*%O₂	Oxygen, %	2.90	3.00
*%Balance	Assumed as Nitrogen, %	22.00	21.30
P_g	Flue Gas Static Pressure, inches of H ₂ O	1.12	1.08
t_s	Blower Outlet LFG Temperature, °F	110.20	107.00
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	279	
Q_s	Fleetzoom Standard Volumetric Flow Rate, scfm	294	
LFG_{CH4}	Methane, lb/hr	292.6	298.9
	Methane, grains/dscf	122.16	124.78
LFG_{CO2}	Carbon Dioxide, lb/hr	636.1	630.4
	Carbon Dioxide, grains/dscf	265.53	263.13
LFG_{O2}	Oxygen, lb/hr	40.4	41.8
	Oxygen, grains/dscf	16.86	17.45
LFG_{N2}	Balance gas as Nitrogen, lb/hr	268.3	259.8
	Balance gas as Nitrogen, grains/dscf	112.00	108.44
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		EP14 NQ	EP14 NQ-2
H₂S	Hydrogen Sulfide Concentration, ppmvd	27.00	38.00
	Hydrogen Sulfide Rate, lb/hr	0.04	0.06
	Hydrogen Sulfide Rate, grains/dscf	0.017	0.024
COS	Carbonyl Sulfide Concentration, ppmvd	0.61	0.63
	Carbonyl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH₄S	Methyl Mercaptan Concentration, ppmvd	1.70	1.30
	Methyl Mercaptan Rate, lb/hr	0.00	0.00
	Methyl Mercaptan Rate, grains/dscf	0.001	0.001
C₂H₆S	Ethyl Mercaptan Concentration, ppmvd	0.61	0.63
	Ethyl Mercaptan Rate, lb/hr	0.00	0.00
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.001
(CH₃)₂S	Dimethyl Sulfide Concentration, ppmvd	5.30	5.40
	Dimethyl Sulfide Rate, lb/hr	0.01	0.01
	Dimethyl Sulfide Rate, grains/dscf	0.006	0.006
CS₂	Carbon Disulfide Concentration, ppmvd	0.61	0.63
	Carbon Disulfide Rate, lb/hr	0.00	0.00
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C₂H₆S₂	Dimethyl Disulfide Concentration, ppmvd	0.61	0.63
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E_{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	35.00	45.00
	TRS-->SO2 Emission Rate, lb/hr	0.10	0.13
	TRS-->SO2 Emission Rate, grains/dscf	0.041	0.052
TPY =		0.43	0.55
① TRS assumed molecular mass = SO2, 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO2 emitted from the stack			

June 6, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H060201-01/04

Enclosed are results for sample(s) received 6/02/16 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 Nick Bauer, Mike Lambrich and Ryan Ayers; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 6/06/16.

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,

A handwritten signature in blue ink that appears to read "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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



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: Nick Bauer
Company: Republic Services
Street: 13570 St. Charles Rock Rd.
City/State/Zip: Bridgeton, MO 63044
Phone & Fax: 314-683-3921
e-mail: Nbauer@republicservices.com

BILLING

P.O. No.: PO4862452
Bill to: Republic Services
Attn: Nick Bauer
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						
	Canister ID	Sample Start	Sample End	Lab Receive													
HAG0201-01	1539	-19	-3.5	-5	South Quarry Outlet 1	6/1/2016	1352	C	LFG	NA	X						
-02	1617	-19	-3.4	-5	South Quarry Outlet 2	6/1/2016	1406	C	LFG	NA	X						
-03	J1722	-19.6	-3.5	-4.5	North Quarry Outlet 1	6/1/2016	1448	C	LFG	NA	X						
-04	1614	-19.3	-3.5	-5	North Quarry Outlet 2	6/1/2016	1500	C	LFG	NA	X						

AUTHORIZATION TO PERFORM WORK: Dave Penoyer

COMPANY: Republic Services

DATE/TIME:

COMMENTS

SAMPLED BY: Corey McMillen

COMPANY: Republic Services

DATE/TIME

RELINQUISHED BY: Corey McMillen

6/1/16

DATE/RECEIVED BY

DATE/TIME

RELINQUISHED BY: [Signature]

DATE/RECEIVED BY

DATE/TIME

RELINQUISHED BY: [Signature]

DATE/RECEIVED BY

DATE/TIME

METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATL 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: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 06/02/16
 Matrix: Air
 Reporting Units: ppmv

Page 2 of 3
 H060201

EPA 15/16

Lab No.:	H060201-01		H060201-02		H060201-03		H060201-04	
Client Sample I.D.:	South Quarry Outlet 1		South Quarry Outlet 2		North Quarry Outlet 1		North Quarry Outlet 2	
Date/Time Sampled:	6/1/16 13:52		6/1/16 14:06		6/1/16 14:48		6/1/16 15:00	
Date/Time Analyzed:	6/2/16 11:32		6/2/16 11:59		6/2/16 12:43		6/2/16 13:18	
QC Batch No.:	160602GC3A1		160602GC3A1		160602GC3A1		160602GC3A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.1		3.2	
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	ND	0.63	ND	0.63	27 d	6.1	38 d	6.3
Carbonyl Sulfide	ND	0.63	ND	0.63	ND	0.61	ND	0.63
Methyl Mercaptan	7.6	0.63	97 d	6.3	1.7	0.61	1.3	0.63
Ethyl Mercaptan	ND	0.63	1.7	0.63	ND	0.61	ND	0.63
Dimethyl Sulfide	1,000 d	63.0	1,200 d	63.0	5.3	0.61	5.4	0.63
Carbon Disulfide	0.84	0.63	0.93	0.63	ND	0.61	ND	0.63
Dimethyl Disulfide	31	0.63	140 d	6.3	ND	0.61	ND	0.63
Total Reduced Sulfur	1,100	0.63	1,500	0.63	35	0.61	45	0.63

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: _____

Mark Johnson

Mark Johnson
Operations Manager

Date _____

6/6/16

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

page 1 of 1

QC Batch No.: 160602GC3A1
Matrix: Air
Units: ppmv

Page 3 of 3
H060201

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	6/2/16 11:19		6/2/16 10:54		6/2/16 11:07			
Analyst Initials:	AS		AS		AS			
Datafile:	02jun003		02Jun001		02jun002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	91	70-130%	89	70-130%	2.8	<30
Carbonyl Sulfide	ND	0.20	86	70-130%	83	70-130%	3.4	<30
Methyl Mercaptan	ND	0.20	91	70-130%	88	70-130%	2.9	<30
Ethyl Mercaptan	ND	0.20	92	70-130%	91	70-130%	1.6	<30
Dimethyl Sulfide	ND	0.20	88	70-130%	88	70-130%	0.0	<30
Carbon Disulfide	ND	0.20	84	70-130%	81	70-130%	3.9	<30
Dimethyl Disulfide	ND	0.20	95	70-130%	95	70-130%	0.6	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark J. Johnson
Operations Manager

Date: _____

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

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 64-21
05/24/2016

Kurz FM = 2,445 scfm
Fleetzoom Total = 2,684 scfm $\Delta = 8.9\%$

PARAMETER		Outlet A	Outlet B
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL120 & FL140)			
Date	Test Date		5/24/16
Time	Start	8:52	9:05
*%CH ₄	Methane, %	9.60	9.50
*%CO ₂	Carbon Dioxide, %	41.80	38.90
*%O ₂	Oxygen, %	6.80	6.80
*%Balance	Assumed as Nitrogen, %	41.80	44.80
P _g	Flue Gas Static Pressure, inches of H ₂ O	23.76	23.17
t _s	Blower Outlet LFG Temperature, °F	96	100
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	2,323	
Q _s	Kurz FM, Standard Volumetric Flow Rate, scfm	2,445	
LFG _{CH₄}	Methane, lb/hr	557.3	551.5
	Methane, grains/dscf	27.99	27.70
LFG _{CO₂}	Carbon Dioxide, lb/hr	6,656.7	6,194.9
	Carbon Dioxide, grains/dscf	334.32	311.12
LFG _{O₂}	Oxygen, lb/hr	787.4	787.4
	Oxygen, grains/dscf	39.54	39.54
LFG _{N₂}	Balance gas as Nitrogen, lb/hr	4,237.2	4,541.3
	Balance gas as Nitrogen, grains/dscf	212.80	228.08
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	11.00	0.59
	Hydrogen Sulfide Rate, lb/hr	0.14	0.01
	Hydrogen Sulfide Rate, grains/dscf	0.007	0.000
COS	Carbonyl Sulfide Concentration, ppmvd	0.59	0.59
	Carbonyl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₃ S	Methyl Mercaptan Concentration, ppmvd	210.00	27.00
	Methyl Mercaptan Rate, lb/hr	3.66	0.47
	Methyl Mercaptan Rate, grains/dscf	0.184	0.024
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	2.10	0.59
	Ethyl Mercaptan Rate, lb/hr	0.05	0.01
	Ethyl Mercaptan Rate, grains/dscf	0.002	0.001
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	970.00	1,200.00
	Dimethyl Sulfide Rate, lb/hr	21.81	26.98
	Dimethyl Sulfide Rate, grains/dscf	1.095	1.355
CS ₂	Carbon Disulfide Concentration, ppmvd	0.73	0.81
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	100.00	180.00
	Dimethyl Disulfide Rate, lb/hr	3.41	6.14
	Dimethyl Disulfide Rate, grains/dscf	0.171	0.308
①E _{TRS-SO₂}	TRS-->SO ₂ Emission Concentration, ppmvd	1,400.00	1,600.00
	TRS-->SO ₂ Emission Rate, lb/hr	32.45	37.09
	TRS-->SO ₂ Emission Rate, grains/dscf	1.630	1.863
		TPY =	
		142.15	162.46
① TRS assumed molecular mass = SO ₂ , 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO ₂ emitted from the stack			

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 64-21
05/24/2016

Fleetzoom Total = 302 scfm

PARAMETER		EP14 NQ	EP14 NQ-2
EP14 NORTH QUARRY LFG ONLY			
Date	Test Date		5/24/16
Time	Start	9:33	9:46
*%CH₄	Methane, %	45.50	45.40
*%CO₂	Carbon Dioxide, %	36.90	36.30
*%O₂	Oxygen, %	1.30	1.20
*%Balance	Assumed as Nitrogen, %	16.30	17.10
P_g	Flue Gas Static Pressure, inches of H ₂ O	1.02	1.06
t_s	Blower Outlet LFG Temperature, °F	95.10	95.20
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	287	
Q_s	Fleetzoom Standard Volumetric Flow Rate, scfm	302	
LFG_{CH4}	Methane, lb/hr	326.7	326.0
	Methane, grains/dscf	132.65	132.36
LFG_{CO2}	Carbon Dioxide, lb/hr	726.8	715.0
	Carbon Dioxide, grains/dscf	295.13	290.33
LFG_{O2}	Oxygen, lb/hr	18.6	17.2
	Oxygen, grains/dscf	7.56	6.98
LFG_{N2}	Balance gas as Nitrogen, lb/hr	204.4	214.4
	Balance gas as Nitrogen, grains/dscf	82.98	87.06
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		EP14 NQ	EP14 NQ-2
H₂S	Hydrogen Sulfide Concentration, ppmvd	11.00	41.00
	Hydrogen Sulfide Rate, lb/hr	0.02	0.06
	Hydrogen Sulfide Rate, grains/dscf	0.007	0.025
COS	Carbonyl Sulfide Concentration, ppmvd	0.59	0.59
	Carbonyl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH₄S	Methyl Mercaptan Concentration, ppmvd	1.30	1.80
	Methyl Mercaptan Rate, lb/hr	0.00	0.00
	Methyl Mercaptan Rate, grains/dscf	0.001	0.002
C₂H₆S	Ethyl Mercaptan Concentration, ppmvd	0.59	0.59
	Ethyl Mercaptan Rate, lb/hr	0.00	0.00
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.001
(CH₃)₂S	Dimethyl Sulfide Concentration, ppmvd	7.00	7.40
	Dimethyl Sulfide Rate, lb/hr	0.02	0.02
	Dimethyl Sulfide Rate, grains/dscf	0.008	0.008
CS₂	Carbon Disulfide Concentration, ppmvd	0.59	0.59
	Carbon Disulfide Rate, lb/hr	0.00	0.00
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C₂H₆S₂	Dimethyl Disulfide Concentration, ppmvd	0.59	0.59
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E_{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	20.00	52.00
	TRS-->SO2 Emission Rate, lb/hr	0.06	0.15
	TRS-->SO2 Emission Rate, grains/dscf	0.023	0.061
TPY =		0.25	0.65
① TRS assumed molecular mass = SO2, 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO2 emitted from the stack			

May 27, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H052502-01/04

Enclosed are results for sample(s) received 5/25/16 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 Nick Bauer, Mike Lambrich and Ryan Ayers; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 5/27/16.

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,

A handwritten signature in blue ink, appearing to read "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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



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: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: Nbauer@republicservices.com

BILLING

P.O. No.: PO4862452

Bill to: Republic Services

Attn: Nick Bauer

13570 St. Charles Rock Rd.

Bridgeton, MO 63044

ANALYSIS REQUEST

EPA 15/16 + TRS

LAB USE ONLY

Canister Pressures ("hg)

Canister ID Sample Start Sample End Lab Receive

SAMPLE IDENTIFICATION

SAMPLE
DATE

SAMPLE
TIME

CONTAINER
QTY/TY

MATRIX

PRESERVA-
TION

H052502-01
-82
-83
-84

1537 -20.1 -3.6 -4
1616 -20.3 -3.6 -4
J1717 -19.8 -3.5 -4
J1721 -20 -3.5 -4

SQ OU 1
SQ OU 2
NQ OU 1
NQ OU 2

5/24/2016
5/24/2016
5/24/2016
5/24/2016

852
905
933
946

C
C
C
C

LFG
LFG
LFG
LFG

NA
NA
NA
NA

X
X
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

5-24-16 1100

DATE/RECEIVED BY

DATE/TIME

RELINQUISHED BY: Dave Penoyer

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

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/25/16
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	H052502-01	H052502-02	H052502-03	H052502-04				
Client Sample I.D.:	SQ OU 1	SQ OU 2	NQ OU 1	NQ OU 2				
Date/Time Sampled:	5/24/16 8:52	5/24/16 9:05	5/24/16 9:33	5/24/16 9:46				
Date/Time Analyzed:	5/26/16 8:50	5/26/16 9:36	5/26/16 10:20	5/26/16 10:33				
QC Batch No.:	160526GC3A1	160526GC3A1	160526GC3A1	160526GC3A1				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.0	3.0	3.0	3.0				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	11	0.59	ND	0.59	11	0.59	41 d	5.9
Carbonyl Sulfide	ND	0.59	ND	0.59	ND	0.59	ND	0.59
Methyl Mercaptan	210 d	5.9	27	0.59	1.3	0.59	1.8	0.59
Ethyl Mercaptan	2.1	0.59	ND	0.59	ND	0.59	ND	0.59
Dimethyl Sulfide	970 d	59.0	1,200 d	59.0	7.0	0.59	7.4	0.59
Carbon Disulfide	0.73	0.59	0.81	0.59	ND	0.59	ND	0.59
Dimethyl Disulfide	100 d	5.9	180 d	5.9	ND	0.59	ND	0.59
Total Reduced Sulfur	1,400	0.59	1,600	0.59	20	0.59	52	0.59

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date

5-27-16

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

page 1 of 1

QC Batch No.: 160526GC3A1
Matrix: Air
Units: ppmv

Page 3 of 3
H052502


QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/26/16 8:34		5/26/16 8:07		5/26/16 8:19			
Analyst Initials:	AS		AS		AS			
Datafile:	26may002		26may		26may001			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	82	70-130%	83	70-130%	1.0	<30
Carbonyl Sulfide	ND	0.20	98	70-130%	93	70-130%	5.3	<30
Methyl Mercaptan	ND	0.20	77	70-130%	80	70-130%	3.8	<30
Ethyl Mercaptan	ND	0.20	98	70-130%	102	70-130%	3.7	<30
Dimethyl Sulfide	ND	0.20	84	70-130%	86	70-130%	2.1	<30
Carbon Disulfide	ND	0.20	79	70-130%	80	70-130%	0.6	<30
Dimethyl Disulfide	ND	0.20	94	70-130%	92	70-130%	2.3	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


Mark J. Johnson
Operations Manager

Date: _____

5-27-16

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

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 63-20
05/19/2016

Kurz FM = 2,545 scfm
Fleetzoom Total = 2,986 scfm $\Delta = 14.8\%$

PARAMETER		Outlet A	Outlet B
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL120 & FL140)			
Date	Test Date		5/19/16
Time	Start	14:30	14:38
*%CH ₄	Methane, %	9.10	9.40
*%CO ₂	Carbon Dioxide, %	40.80	39.90
*%O ₂	Oxygen, %	7.00	7.00
*%Balance	Assumed as Nitrogen, %	43.10	43.70
P _g	Flue Gas Static Pressure, inches of H ₂ O	24.36	24.36
t _s	Blower Outlet LFG Temperature, °F	117	117
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	2,418	
Q _s	Kurz FM, Standard Volumetric Flow Rate, scfm	2,545	
LFG _{CH4}	Methane, lb/hr	549.8	567.9
	Methane, grains/dscf	26.53	27.41
LFG _{CO2}	Carbon Dioxide, lb/hr	6,762.5	6,613.3
	Carbon Dioxide, grains/dscf	326.32	319.12
LFG _{O2}	Oxygen, lb/hr	843.6	843.6
	Oxygen, grains/dscf	40.71	40.71
LFG _{N2}	Balance gas as Nitrogen, lb/hr	4,547.2	4,610.5
	Balance gas as Nitrogen, grains/dscf	219.42	222.48
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	0.59	0.59
	Hydrogen Sulfide Rate, lb/hr	0.01	0.01
	Hydrogen Sulfide Rate, grains/dscf	0.000	0.000
COS	Carbonyl Sulfide Concentration, ppmvd	0.59	0.59
	Carbonyl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmvd	14.00	35.00
	Methyl Mercaptan Rate, lb/hr	0.25	0.63
	Methyl Mercaptan Rate, grains/dscf	0.012	0.031
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	0.59	0.59
	Ethyl Mercaptan Rate, lb/hr	0.01	0.01
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.001
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	870.00	890.00
	Dimethyl Sulfide Rate, lb/hr	20.36	20.83
	Dimethyl Sulfide Rate, grains/dscf	0.982	1.005
CS ₂	Carbon Disulfide Concentration, ppmvd	0.72	0.72
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	160.00	170.00
	Dimethyl Disulfide Rate, lb/hr	5.68	6.03
	Dimethyl Disulfide Rate, grains/dscf	0.274	0.291
①E _{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	1,200.00	1,300.00
	TRS-->SO2 Emission Rate, lb/hr	28.95	31.37
	TRS-->SO2 Emission Rate, grains/dscf	1.397	1.514
TPY =		126.81	137.38
① TRS assumed molecular mass = SO ₂ , 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO ₂ emitted from the stack			

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 63-20
05/19/2016

Fleetzoom Total = 245 scfm

PARAMETER		EP14 NQ	EP14 NQ-2
EP14 NORTH QUARRY LFG ONLY			
Date	Test Date		5/19/16
Time	Start	13:46	13:58
*%CH₄	Methane, %	50.40	50.20
*%CO₂	Carbon Dioxide, %	36.80	37.20
*%O₂	Oxygen, %	1.00	0.90
*%Balance	Assumed as Nitrogen, %	11.80	11.70
P_g	Flue Gas Static Pressure, inches of H ₂ O	1.27	1.52
t_s	Blower Outlet LFG Temperature, °F	84.90	84.50
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	233	
Q_s	Fleetzoom Standard Volumetric Flow Rate, scfm	245	
LFG_{CH4}	Methane, lb/hr	293.2	292.0
	Methane, grains/dscf	146.94	146.36
LFG_{CO2}	Carbon Dioxide, lb/hr	587.3	593.6
	Carbon Dioxide, grains/dscf	294.33	297.53
LFG_{O2}	Oxygen, lb/hr	11.6	10.4
	Oxygen, grains/dscf	5.82	5.23
LFG_{N2}	Balance gas as Nitrogen, lb/hr	119.9	118.8
	Balance gas as Nitrogen, grains/dscf	60.07	59.56
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		EP14 NQ	EP14 NQ-2
H₂S	Hydrogen Sulfide Concentration, ppmv	16.00	16.00
	Hydrogen Sulfide Rate, lb/hr	0.02	0.02
	Hydrogen Sulfide Rate, grains/dscf	0.010	0.010
COS	Carbonyl Sulfide Concentration, ppmv	0.59	0.59
	Carbonyl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH₃S	Methyl Mercaptan Concentration, ppmv	2.60	1.60
	Methyl Mercaptan Rate, lb/hr	0.00	0.00
	Methyl Mercaptan Rate, grains/dscf	0.002	0.001
C₂H₅S	Ethyl Mercaptan Concentration, ppmv	0.59	0.59
	Ethyl Mercaptan Rate, lb/hr	0.00	0.00
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.001
(CH₃)₂S	Dimethyl Sulfide Concentration, ppmv	6.90	6.80
	Dimethyl Sulfide Rate, lb/hr	0.02	0.02
	Dimethyl Sulfide Rate, grains/dscf	0.008	0.008
CS₂	Carbon Disulfide Concentration, ppmv	0.59	0.59
	Carbon Disulfide Rate, lb/hr	0.00	0.00
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C₂H₆S₂	Dimethyl Disulfide Concentration, ppmv	0.59	0.59
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E_{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmv	27.00	26.00
	TRS-->SO2 Emission Rate, lb/hr	0.06	0.06
	TRS-->SO2 Emission Rate, grains/dscf	0.031	0.030
TPY =		0.27	0.26
① TRS assumed molecular mass = SO ₂ , 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO ₂ emitted from the stack			

May 26, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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 CA013332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H052003-01/04

Enclosed are results for sample(s) received 5/20/16 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 Nick Bauer, Mike Lambrich and Ryan Ayers; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 5/26/16.

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: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: Nbauer@republicservices.com

BILLING

P.O. No.: PO4862452

Bill to: Republic Services

Attn: Nick Bauer

13570 St. Charles Rock Rd.

Bridgeton, MO 63044

ANALYSIS REQUEST

EPA 15/16 + TRS

LAB USE ONLY

Canister Pressures ("hg)

Canister ID Sample Start Sample End Lab Receive

SAMPLE IDENTIFICATION

SAMPLE
DATESAMPLE
TIMECONTAINER
QTY/TYPE

MATRIX

PRESERVA-
TION

1052003-01 1613 -19.8 -3.5 -4 NQ Outlet A 5/19/2016 1346 C LFG NA X

1052003-02 1612 -19.7 -3.5 -4 NQ Outlet B 5/19/2016 1358 C LFG NA X

1052003-03 1540 -19.5 -3.5 -4 SQ Outlet A 5/19/2016 1430 C LFG NA X

1052003-04 1531 -19.7 -3.5 -4 SQ Outlet B 5/19/2016 1438 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 5-19-16 1515

DATE/RECEIVED BY

DATE/TIME

RELINQUISHED BY: Dave Penoyer 5/20/16 0905

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

Client: Republic Services
 Attn: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 05/20/16
 Matrix: Air
 Reporting Units: ppmv

Page 2 of 3
 H052003

EPA 15/16

Lab No.:	H052003-01		H052003-02		H052003-03		H052003-04	
Client Sample I.D.:	NQ Outlet A		NQ Outlet B		SQ Outlet A		SQ Outlet B	
Date/Time Sampled:	5/19/16 13:46		5/19/16 13:58		5/19/16 14:30		5/19/16 14:38	
Date/Time Analyzed:	5/25/16 12:16		5/25/16 13:07		5/25/16 13:32		5/25/16 14:09	
QC Batch No.:	160525GC3A1		160525GC3A1		160525GC3A1		160525GC3A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.0		3.0		3.0	
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	16 d	5.9	16 d	5.9	ND	0.59	ND	0.59
Carbonyl Sulfide	ND	0.59	ND	0.59	ND	0.59	ND	0.59
Methyl Mercaptan	2.6	0.59	1.6	0.59	14	0.59	35 d	5.9
Ethyl Mercaptan	ND	0.59	ND	0.59	ND	0.59	ND	0.59
Dimethyl Sulfide	6.9	0.59	6.8	0.59	870 d	59.0	890 d	59.0
Carbon Disulfide	ND	0.59	ND	0.59	0.72	0.59	0.72	0.59
Dimethyl Disulfide	ND	0.59	ND	0.59	160 d	59.0	170 d	5.9
Total Reduced Sulfur	27	0.59	26	0.59	1,200	0.59	1,300	0.59

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date 5-25-16

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

QC Batch No.: 160525GC3A1
Matrix: Air
Units: ppmv

Page 3 of 3
H052003


QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/25/16 12:04		5/25/16 11:27		5/25/16 11:39			
Analyst Initials:	AS		AS		AS			
Datafile:	25may004		25may001		25may002			
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%	1.4	<30
Carbonyl Sulfide	ND	0.20	112	70-130%	111	70-130%	0.8	<30
Methyl Mercaptan	ND	0.20	91	70-130%	91	70-130%	0.4	<30
Ethyl Mercaptan	ND	0.20	123	70-130%	122	70-130%	1.4	<30
Dimethyl Sulfide	ND	0.20	98	70-130%	99	70-130%	0.6	<30
Carbon Disulfide	ND	0.20	97	70-130%	98	70-130%	1.5	<30
Dimethyl Disulfide	ND	0.20	110	70-130%	109	70-130%	1.1	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:


Mark J. Johnson
Operations Manager

Date:

5-25-16

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

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 62-19
05/10/2016

Kurz FM = **2,585** scfm
Fleetzoom Total = **3,011** scfm $\Delta = 14.1\%$

PARAMETER		Outlet A	Outlet B
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL120 & FL140)			
Date	Test Date		5/10/16
Time	Start	14:27	14:38
*%CH ₄	Methane, %	9.60	11.00
*%CO ₂	Carbon Dioxide, %	42.20	43.20
*%O ₂	Oxygen, %	6.30	6.20
*%Balance	Assumed as Nitrogen, %	41.90	39.60
P _g	Flue Gas Static Pressure, inches of H ₂ O	24.86	26.55
t _s	Blower Outlet LFG Temperature, °F	120	125
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	2,456	
Q _s	Kurz FM, Standard Volumetric Flow Rate, scfm	2,585	
LFG _{CH4}	Methane, lb/hr	589.2	675.2
	Methane, grains/dscf	27.99	32.07
LFG _{CO2}	Carbon Dioxide, lb/hr	7,105.5	7,273.9
	Carbon Dioxide, grains/dscf	337.52	345.51
LFG _{O2}	Oxygen, lb/hr	771.3	759.0
	Oxygen, grains/dscf	36.64	36.05
LFG _{N2}	Balance gas as Nitrogen, lb/hr	4,490.7	4,244.2
	Balance gas as Nitrogen, grains/dscf	213.31	201.60
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	0.61	0.63
	Hydrogen Sulfide Rate, lb/hr	0.01	0.01
	Hydrogen Sulfide Rate, grains/dscf	0.000	0.000
COS	Carbonyl Sulfide Concentration, ppmvd	0.61	0.63
	Carbonyl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₃ S	Methyl Mercaptan Concentration, ppmvd	150.00	100.00
	Methyl Mercaptan Rate, lb/hr	2.76	1.84
	Methyl Mercaptan Rate, grains/dscf	0.131	0.087
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	1.50	1.50
	Ethyl Mercaptan Rate, lb/hr	0.04	0.04
	Ethyl Mercaptan Rate, grains/dscf	0.002	0.002
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	940.00	970.00
	Dimethyl Sulfide Rate, lb/hr	22.35	23.06
	Dimethyl Sulfide Rate, grains/dscf	1.061	1.095
CS ₂	Carbon Disulfide Concentration, ppmvd	0.74	0.83
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	130.00	170.00
	Dimethyl Disulfide Rate, lb/hr	4.69	6.13
	Dimethyl Disulfide Rate, grains/dscf	0.223	0.291
①E _{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	1,400.00	1,400.00
	TRS-->SO2 Emission Rate, lb/hr	34.31	34.31
	TRS-->SO2 Emission Rate, grains/dscf	1.630	1.630
TPY =		150.30	150.30
① TRS assumed molecular mass = SO ₂ , 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO ₂ emitted from the stack			

Bridgeton Landfill, LLC.
Weekly TRS Sampling Summary
Event 62-19
05/10/2016

Fleetzoom Total = 256 scfm

PARAMETER		EP14 NQ	EP14 NQ-2
EP14 NORTH QUARRY LFG ONLY			
Date	Test Date		5/10/16
Time	Start	15:27	15:39
*%CH₄	Methane, %	49.50	52.00
*%CO₂	Carbon Dioxide, %	37.00	38.10
*%O₂	Oxygen, %	1.40	1.20
*%Balance	Assumed as Nitrogen, %	12.10	8.70
P_g	Flue Gas Static Pressure, inches of H ₂ O	1.28	1.50
t_s	Blower Outlet LFG Temperature, °F	112.00	112.00
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	243	
Q_s	Fleetzoom Standard Volumetric Flow Rate, scfm	256	
LFG_{CH4}	Methane, lb/hr	301.1	316.4
	Methane, grains/dscf	144.32	151.60
LFG_{CO2}	Carbon Dioxide, lb/hr	617.5	635.9
	Carbon Dioxide, grains/dscf	295.93	304.72
LFG_{O2}	Oxygen, lb/hr	17.0	14.6
	Oxygen, grains/dscf	8.14	6.98
LFG_{N2}	Balance gas as Nitrogen, lb/hr	128.5	92.4
	Balance gas as Nitrogen, grains/dscf	61.60	44.29
<i>* Fixed gas results based on field parameter data collection at the time of sampling, via Envirovision Landfill Gas Analyzer</i>			
		EP14 NQ	EP14 NQ-2
H₂S	Hydrogen Sulfide Concentration, ppmvd	4.40	42.00
	Hydrogen Sulfide Rate, lb/hr	0.01	0.05
	Hydrogen Sulfide Rate, grains/dscf	0.003	0.026
COS	Carbonyl Sulfide Concentration, ppmvd	0.63	0.63
	Carbonyl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH₄S	Methyl Mercaptan Concentration, ppmvd	1.40	1.40
	Methyl Mercaptan Rate, lb/hr	0.00	0.00
	Methyl Mercaptan Rate, grains/dscf	0.001	0.001
C₂H₆S	Ethyl Mercaptan Concentration, ppmvd	0.63	0.63
	Ethyl Mercaptan Rate, lb/hr	0.00	0.00
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.001
(CH₃)₂S	Dimethyl Sulfide Concentration, ppmvd	5.60	5.70
	Dimethyl Sulfide Rate, lb/hr	0.01	0.01
	Dimethyl Sulfide Rate, grains/dscf	0.006	0.006
CS₂	Carbon Disulfide Concentration, ppmvd	0.63	0.63
	Carbon Disulfide Rate, lb/hr	0.00	0.00
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C₂H₆S₂	Dimethyl Disulfide Concentration, ppmvd	0.63	0.63
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E_{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	13.00	51.00
	TRS-->SO2 Emission Rate, lb/hr	0.03	0.12
	TRS-->SO2 Emission Rate, grains/dscf	0.015	0.059
TPY =		0.14	0.54
① TRS assumed molecular mass = SO ₂ , 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO ₂ emitted from the stack			

May 16, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H051102-01/04

Enclosed are results for sample(s) received 5/11/16 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 Nick Bauer, Mike Lambrich and Ryan Ayers; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 5/13/16.

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.



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: Nick Bauer
Company: Republic Services
Street: 13570 St. Charles Rock Rd.
City/State/Zip: Bridgeton, MO 63044
Phone& Fax: 314-683-3921
e-mail: Nbauer@republicservices.com

BILLING

P.O. No.: PO4862452 6544160
Bill to: Republic Services
Attn: Nick Bauer
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					
	Canister ID	Sample Start	Sample End	Lab Receive																
H 05 1102-01	1618	-18.75	-3.5	-4.5	South Quarry Outlet 1	5/10/2016	1427	C	LFG	NA	X									
-02	1620	-18.85	-3.5	-5	South Quarry Outlet 2	5/10/2016	1438	C	LFG	NA	X									
-03	1535	-19	-3.5	-5	North Quarry Outlet 1	5/10/2016	1527	C	LFG	NA	X									
-04	J1723	-18.8	-3.5	-5	North Quarry Outlet 2	5/10/2016	1539	C	LFG	NA	X									

AUTHORIZATION TO PERFORM WORK: Dave Penoyer

COMPANY: Republic Services

DATE/TIME:

SAMPLED BY: Corey McMillen

COMPANY: Republic Services

DATE/TIME

RELINQUISHED BY: Corey McMillen

5/10/16

DATE/RECEIVED BY

DATE/TIME

RELINQUISHED BY: FedEx

5-11-16

DATE/RECEIVED BY

5-11-16 11:55

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: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/11/16
Matrix: Air
Reporting Units: ppmv

Page 2 of 3
 H051102

EPA 15/16

Lab No.:	H051102-01	H051102-02	H051102-03	H051102-04				
Client Sample I.D.:	South Quarry Outlet 1	South Quarry Outlet 2	North Quarry Outlet 1	North Quarry Outlet 2				
Date/Time Sampled:	5/10/16 14:27	5/10/16 14:38	5/10/16 15:27	5/10/16 15:39				
Date/Time Analyzed:	5/12/16 9:51	5/12/16 10:35	5/12/16 11:19	5/12/16 11:32				
QC Batch No.:	160512GC3A1	160512GC3A1	160512GC3A1	160512GC3A1				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.1	3.2	3.2	3.2				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	ND	0.61	ND	0.63	4.4	0.63	42 d	6.3
Carbonyl Sulfide	ND	0.61	ND	0.63	ND	0.63	ND	0.63
Methyl Mercaptan	150 d	6.1	100 d	6.3	1.4	0.63	1.4	0.63
Ethyl Mercaptan	1.5	0.61	1.5	0.63	ND	0.63	ND	0.63
Dimethyl Sulfide	940 d	61.0	970 d	63.0	5.6	0.63	5.7	0.63
Carbon Disulfide	0.74	0.61	0.83	0.63	ND	0.63	ND	0.63
Dimethyl Disulfide	130 d	6.1	170 d	6.3	ND	0.63	ND	0.63
Total Reduced Sulfur	1,400	0.61	1,400	0.63	13	0.63	51	0.63

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date 5-13-16

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

QC Batch No.: 160512GC3A1
Matrix: Air
Units: ppmv

Page 3 of 3
H051102

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/12/16 9:31		5/12/16 9:07		5/12/16 9:19			
Analyst Initials:	AS		AS		AS			
Datafile:	12may003		12may001		12may002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	76	70-130%	74	70-130%	3.1	<30
Carbonyl Sulfide	ND	0.20	97	70-130%	95	70-130%	2.1	<30
Methyl Mercaptan	ND	0.20	76	70-130%	75	70-130%	1.1	<30
Ethyl Mercaptan	ND	0.20	103	70-130%	102	70-130%	1.4	<30
Dimethyl Sulfide	ND	0.20	83	70-130%	82	70-130%	1.8	<30
Carbon Disulfide	ND	0.20	77	70-130%	76	70-130%	1.3	<30
Dimethyl Disulfide	ND	0.20	85	70-130%	85	70-130%	0.4	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:


Mark J. Johnson
Operations Manager

Date: 5-13-16

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

PARAMETER		Blower Out
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL140)		
Date	Test Date	5/3/16
Start	Run Start Time	8:01
	Run Finish Time	9:28
	Net Traversing Points	8 (2 x 4)
Θ	Net Run Time, minutes	1:27:00
C _p	Pitot Tube Coefficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.64
% H ₂ O	Moisture Content of LFG, %	1.81
% RH	Relative Humidity, %	62.90
M _{fd}	Dry Mole Fraction	0.982
%CH ₄	Methane, %	9.20
%CO ₂	Carbon Dioxide, %	41.30
%O ₂	Oxygen, %	6.30
%Balance	Assumed as Nitrogen, %	29.50
%H ₂	Hydrogen, %	12.40
%CO	Carbon Monoxide, %	0.12
M _d	Dry Molecular Weight, lb/lb-Mole	30.22
M _s	Wet Molecular weight, lb/lb-Mole	29.99
P _g	Flue Gas Static Pressure, inches of H ₂ O	19.96
P _s	Absolute Flue Gas Pressure, inches of Mercury	31.10
t _s	Average Stack Gas Temperature, °F	77
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.159
v _s	Average LFG Velocity, feet/second	25.61
A _s	Stack Crosssectional Area, square feet	1.35
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	2,086
Q _s	Standard Volumetric Flow Rate, scfm	2,124
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	2,079
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	9,815
NHV	Net Heating Value, Btu/scf	147
LFG _{CH4}	Methane, lb/hr	479.6
	Methane, grains/dscf	26.82
LFG _{CO2}	Carbon Dioxide, lb/hr	5,905.8
	Carbon Dioxide, grains/dscf	330.32
LFG _{O2}	Oxygen, lb/hr	655.0
	Oxygen, grains/dscf	36.64
LFG _{N2}	Balance gas as Nitrogen, lb/hr	2,685.2
	Balance gas as Nitrogen, grains/dscf	150.18
LFG _{H4}	Hydrogen, lb/hr	81.2
	Hydrogen, grains/dscf	4.54
LFG _{CO}	Carbon Monoxide, lb/hr	10.9
	Carbon Monoxide, grains/dscf	0.61

		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	19.00	30.00
	Hydrogen Sulfide Rate, lb/hr	0.21	0.33
	Hydrogen Sulfide Rate, grains/dscf	0.012	0.019
COS	Carbonyl Sulfide Concentration, ppmvd	0.59	0.63
	Carbonyl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmvd	220.00	220.00
	Methyl Mercaptan Rate, lb/hr	3.44	3.44
	Methyl Mercaptan Rate, grains/dscf	0.192	0.192
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	2.50	2.80
	Ethyl Mercaptan Rate, lb/hr	0.05	0.06
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	970.00	1,100.00
	Dimethyl Sulfide Rate, lb/hr	19.58	22.21
	Dimethyl Sulfide Rate, grains/dscf	1.095	1.242
CS ₂	Carbon Disulfide Concentration, ppmvd	0.71	0.80
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	99.00	110.00
	Dimethyl Disulfide Rate, lb/hr	3.03	2.72
	Dimethyl Disulfide Rate, grains/dscf	0.169	0.152
①E _{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	1,400.00	1,600.00
	TRS-->SO2 Emission Rate, lb/hr	29.14	33.31
	TRS-->SO2 Emission Rate, grains/dscf	1.630	1.863

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

Tuesday, May 03, 2016

LOCATION	TIME	FLOW -SCFM			Method 2 vs. Fleetzoom	Method 2 vs Kurz	Kurz vs Fleetzoom
		Method 2	FleetZoom	Kurz FM			
BLOWER OUT	8:01	2,124	2,206	2,188	-3.9%	-3.0%	-0.8%

PARAMETER		Blower Out
EP14 NORTH QUARRY LFG ONLY		
Date	Test Date	5/3/16
Start	Run Start Time	7:45
	Run Finish Time	9:17
	Net Traversing Points	8 (2 x 4)
Θ	Net Run Time, minutes	1:32:00
C _p	Pitot Tube Coefficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.62
% H ₂ O	Moisture Content of LFG, %	1.82
% RH	Relative Humidity, %	69.00
M _{fd}	Dry Mole Fraction	0.982
%CH ₄	Methane, %	48.95
%CO ₂	Carbon Dioxide, %	37.15
%O ₂	Oxygen, %	1.65
%Balance	Assumed as Nitrogen, %	12.40
%H ₂	Hydrogen, %	0.00
%CO	Carbon Monoxide, %	0.00
M _d	Dry Molecular Weight, lb/lb-Mole	28.20
M _s	Wet Molecular weight, lb/lb-Mole	28.02
P _g	Flue Gas Static Pressure, inches of H ₂ O	1.23
P _s	Absolute Flue Gas Pressure, inches of Mercury	29.71
t _s	Average Stack Gas Temperature, °F	69
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.022
v _s	Average LFG Velocity, feet/second	10.01
A _s	Stack Crosssectional Area, square feet	0.51
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	300
Q _s	Standard Volumetric Flow Rate, scfm	305
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	308
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	1,317
NHV	Net Heating Value, Btu/scf	445
LFG _{CH4}	Methane, lb/hr	366.7
	Methane, grains/dscf	142.71
LFG _{CO2}	Carbon Dioxide, lb/hr	763.5
	Carbon Dioxide, grains/dscf	297.13
LFG _{O2}	Oxygen, lb/hr	24.7
	Oxygen, grains/dscf	9.60
LFG _{N2}	Balance gas as Nitrogen, lb/hr	162.2
	Balance gas as Nitrogen, grains/dscf	63.13
LFG _{H4}	Hydrogen, lb/hr	0.0
	Hydrogen, grains/dscf	0.00
LFG _{CO}	Carbon Monoxide, lb/hr	0.0
	Carbon Monoxide, grains/dscf	0.02

		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmvd	59.00	63.00
	Hydrogen Sulfide Rate, lb/hr	0.09	0.10
	Hydrogen Sulfide Rate, grains/dscf	0.037	0.039
COS	Carbonyl Sulfide Concentration, ppmvd	0.72	0.59
	Carbonyl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmvd	1.40	1.40
	Methyl Mercaptan Rate, lb/hr	0.00	0.00
	Methyl Mercaptan Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmvd	0.72	0.59
	Ethyl Mercaptan Rate, lb/hr	0.00	0.00
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.001
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmvd	5.80	5.80
	Dimethyl Sulfide Rate, lb/hr	0.02	0.02
	Dimethyl Sulfide Rate, grains/dscf	0.007	0.007
CS ₂	Carbon Disulfide Concentration, ppmvd	0.72	0.59
	Carbon Disulfide Rate, lb/hr	0.00	0.00
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmvd	0.72	0.59
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E _{TRS-SO2}	TRS-->SO2 Emission Concentration, ppmvd	66.00	71.00
	TRS-->SO2 Emission Rate, lb/hr	0.20	0.21
	TRS-->SO2 Emission Rate, grains/dscf	0.077	0.083

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

Tuesday, May 03, 2016

LOCATION	TIME	FLOW -SCFM		Method 2 vs. Fleetzoom
		Method 2	FleetZoom	
EP14 NQ GAS	7:45	305	252	17.4%

May 6, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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 CA013332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H050402-01/04

Enclosed are results for sample(s) received 5/04/16 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 Nick Bauer, Mike Lambrich and Ryan Ayer; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 5/06/16.

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.



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: Nick Bauer
Company: Republic Services
Street: 13570 St. Charles Rock Rd.
City/State/Zip: Bridgeton, MO 63044
Phone& Fax: 314-683-3921
e-mail: NBauer@republicservices.com

BILLING

P.O. No.: PO4862452 5544160
Bill to: Republic Services
Attn: Nick Bauer
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	ASTM 1946 + H2 + CO & BTU/SCF	ASTM 1946 + H2 + CO & BTU/SCF (by CH4 ONLY)			
	Canister ID	Sample Start	Sample End	Lab Receive												
H050402-01	5936	-19.99	-3.92	-4	Blower Outlet 1	5/3/2016	813	C	LFG	NA	X	X				
-02	4432	-19.78	-3.92	-5	Blower Outlet 2	5/3/2016	843	C	LFG	NA	X	X				
-03	2875	-16.43	-2.69	-7	NQ EP14 1	5/3/2016	748	C	LFG	NA	X		X			
-04	7131	-20.41	-3.87	-4	NQ EP14 2	5/3/2016	806	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: [Signature] 5-3-16 1100

DATE/RECEIVED BY

DATE/TIME

RELINQUISHED BY: [Signature]

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

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/04/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H050402-01	H050402-02		
Client Sample I.D.:	Blower Outlet 1	Blower Outlet 2		
Date/Time Sampled:	5/3/16 8:13	5/3/16 8:43		
Date/Time Analyzed:	5/4/16 17:12	5/4/16 17:27		
QC Batch No.:	160504GC8A1	160504GC8A1		
Analyst Initials:	AS	AS		
Dilution Factor:	3.0	3.2		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	12.3	3.0	12.5	3.2
Carbon Dioxide	41.3	0.030	41.3	0.032
Oxygen/Argon	6.3	1.5	6.3	1.6
Nitrogen	29.6	3.0	29.3	3.2
Methane	9.2	0.0030	9.2	0.0032
Carbon Monoxide	0.12	0.0030	0.12	0.0032
Net Heating Value (BTU/ft3)	145.0	3.0	148.9	3.2
Gross Heating Value (BTU/ft3)	165.0	3.0	169.3	3.2

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: Mark Johnson
Operations Manager

Date 5/6/16

The cover letter is an integral part of this analytical report



Client: Republic Services
 Attn: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 05/04/16
 Matrix: Air
 Reporting Units: % v/v

Page 3 of 6
 H050402

ASTM D1946

Lab No.:	H050402-03	H050402-04		
Client Sample I.D.:	NQ EP14 1	NQ EP14 2		
Date/Time Sampled:	5/3/16 7:48	5/3/16 8:06		
Date/Time Analyzed:	5/4/16 17:42	5/4/16 17:56		
QC Batch No.:	160504GC8A1	160504GC8A1		
Analyst Initials:	AS	AS		
Dilution Factor:	3.6	3.0		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND	3.6	ND	3.0
Carbon Dioxide	37.1	0.036	37.2	0.030
Oxygen/Argon	ND	1.8	ND	1.5
Nitrogen	11.7	3.6	11.8	3.0
Methane	49.0	0.0036	48.9	0.0030
Carbon Monoxide	ND	0.0036	ND	0.0030
Net Heating Value (BTU/ft3) methane only	445.9	3.6	445.0	3.0
Gross Heating Value (BTU/ft3) methane only	495.2	3.6	494.3	3.0

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

Reviewed/Approved By: Mark Johnson
 Operations Manager

Date 5/6/16

The cover letter is an integral part of this analytical report



QC Batch No.: 160504GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/4/16 11:40		5/4/16 10:56		5/4/16 15:44			
Analyst Initials:	AS		AS		AS			
Datafile:	04may013		04may011		04may028			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	110	70-130%	108	70-130%	1.6	<30
Carbon Dioxide	ND	0.010	93	70-130%	93	70-130%	0.7	<30
Oxygen/Argon	ND	0.50	96	70-130%	97	70-130%	0.6	<30
Nitrogen	ND	1.0	97	70-130%	97	70-130%	0.1	<30
Methane	ND	0.0010	93	70-130%	94	70-130%	0.7	<30
Carbon Monoxide	ND	0.0010	109	70-130%	111	70-130%	1.5	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:

Mark J. Johnson
Operations Manager

Date:

5/6/16

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: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/04/16
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	H050402-01	H050402-02	H050402-03	H050402-04				
Client Sample I.D.:	Blower Outlet 1	Blower Outlet 2	NQ EP14 1	NQ EP14 2				
Date/Time Sampled:	5/3/16 8:13	5/3/16 8:43	5/3/16 7:48	5/3/16 8:06				
Date/Time Analyzed:	5/5/16 12:50	5/5/16 13:30	5/5/16 14:09	5/5/16 14:35				
QC Batch No.:	160505GC3A1	160505GC3A1	160505GC3A1	160505GC3A1				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.0	3.2	3.6	3.0				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	19 d	5.9	30 d	6.3	59 d	7.2	63 d	5.9
Carbonyl Sulfide	ND	0.59	ND	0.63	ND	0.72	ND	0.59
Methyl Mercaptan	220 d	5.9	220 d	6.3	1.4	0.72	1.4	0.59
Ethyl Mercaptan	2.5	0.59	2.8	0.63	ND	0.72	ND	0.59
Dimethyl Sulfide	970 d	59.0	1,100 d	63.0	5.8	0.72	5.8	0.59
Carbon Disulfide	0.71	0.59	0.80	0.63	ND	0.72	ND	0.59
Dimethyl Disulfide	99 d	5.9	110 d	6.3	ND	0.72	ND	0.59
Total Reduced Sulfur	1,400	0.59	1,600	0.63	66	0.72	71	0.59

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: _____

Mark Johnson
Mark Johnson
Operations Manager

Date _____

5/6/16

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

page 1 of 1

QC Batch No.: 160505GC3A1
Matrix: Air
Units: ppmv

Page 6 of 6
H050402

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/5/16 9:56		5/5/16 9:19		5/5/16 9:31			
Analyst Initials:	AS		AS		AS			
Datafile:	05may004		05may001		05may002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	87	70-130%	87	70-130%	0.2	<30
Carbonyl Sulfide	ND	0.20	105	70-130%	104	70-130%	0.5	<30
Methyl Mercaptan	ND	0.20	82	70-130%	82	70-130%	0.2	<30
Ethyl Mercaptan	ND	0.20	107	70-130%	105	70-130%	2.5	<30
Dimethyl Sulfide	ND	0.20	88	70-130%	86	70-130%	2.6	<30
Carbon Disulfide	ND	0.20	90	70-130%	88	70-130%	1.9	<30
Dimethyl Disulfide	ND	0.20	98	70-130%	99	70-130%	0.3	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark J. Johnson
Operations Manager

Date: _____

5/6/16

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

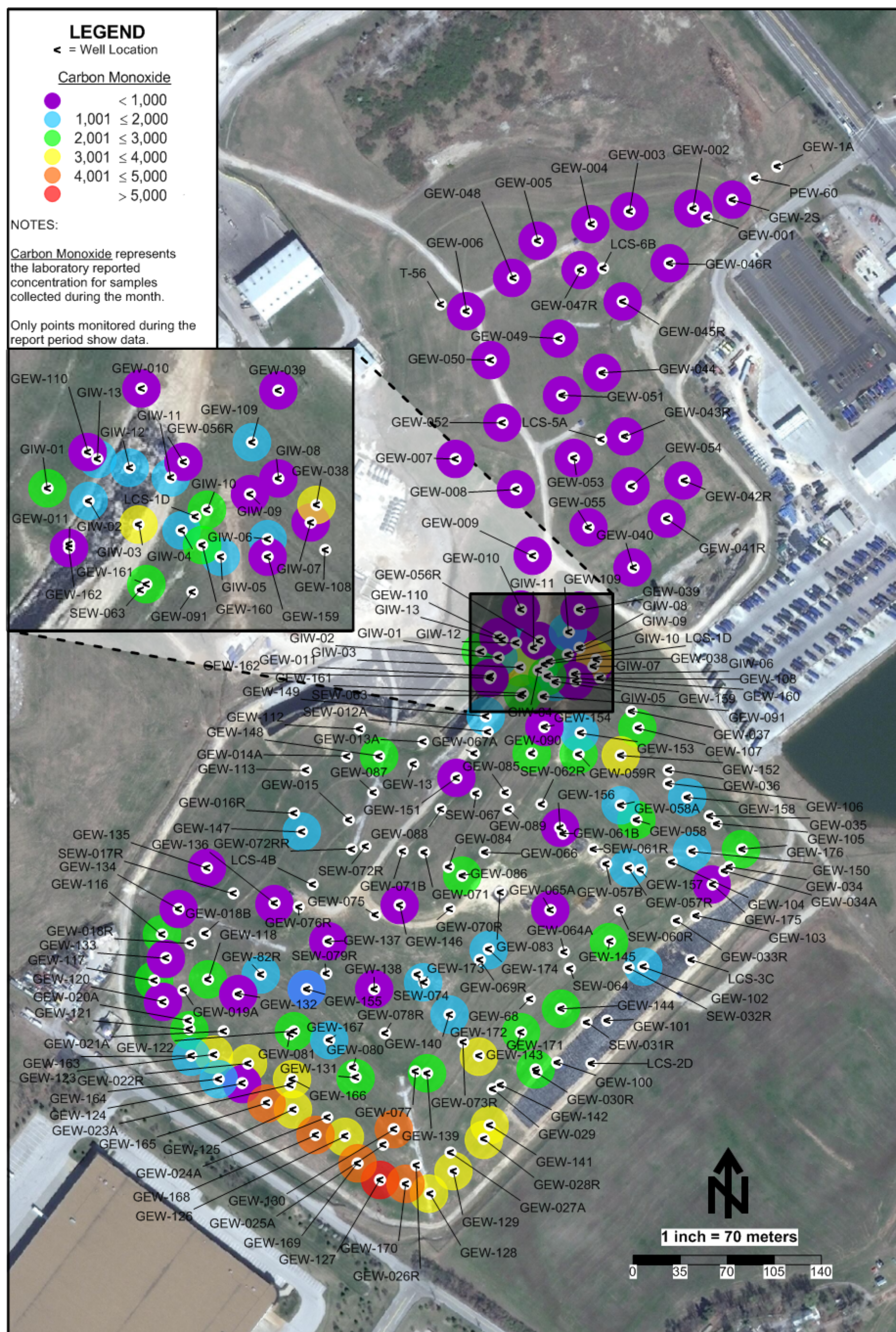


AirTECHNOLOGY Laboratories, Inc.

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

ATTACHMENT C

GAS WELL ANALYSIS MAPS



Carbon Monoxide Data Map - May 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
		North Quarry					(ppm)	
GEW-002	1/14/2016	55	43	ND	ND	ND	ND	
GEW-002	2/15/2016	52	41	1.7	5.8	ND	ND	See Note 3
GEW-002	3/7/2016	56	42	ND	ND	0.04	ND	
GEW-002	4/14/2016	54	42	ND	3.6	ND	ND	
GEW-002	5/13/2016	52	39	2	6.8	ND	ND	See Note 3
GEW-02S	5/13/2016	60	37	ND	ND	ND	ND	
GEW-003	1/14/2016	52	39	ND	6.7	0.1	ND	
GEW-003	2/15/2016	56	42	ND	ND	0.1	ND	
GEW-003	3/7/2016	54	40	ND	5	0.1	ND	
GEW-003	4/14/2016	45	37	1.9	16	0.1	ND	See Note 3
GEW-003	5/13/2016	52	39	ND	8.2	0.1	ND	
GEW-004	1/14/2016	52	40	ND	6.7	0.1	ND	
GEW-004	2/15/2016	55	41	ND	3.3	0.1	ND	
GEW-004	3/7/2016	56	41	ND	ND	0.1	ND	
GEW-004	4/14/2016	51	39	ND	8.3	0.1	ND	
GEW-004	5/13/2016	50	39	ND	11	0.1	ND	
GEW-005	1/14/2016	42	34	ND	24	ND	ND	
GEW-005	2/15/2016	54	38	ND	7.6	0.07	ND	
GEW-005	3/7/2016	53	38	ND	8	0.1	ND	
GEW-005	4/14/2016	50	37	ND	12	0.05	ND	
GEW-005	5/13/2016	31	27	4.0	38	0.03	ND	See Note 3
GEW-006	1/14/2016	52	37	ND	10	ND	ND	
GEW-006	3/7/2016	56	38	ND	5.4	ND	ND	
GEW-006	5/12/2016	50	37	ND	13	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-007	3/7/2016	57	41	ND	ND	ND	ND	
GEW-007	5/12/2016	55	39	ND	4.5	ND	ND	
GEW-008	1/27/2016	50	47	ND	ND	1.6	ND	
GEW-008	2/15/2016	50	47	ND	ND	0.7	ND	
GEW-008	3/7/2016	49	47	ND	ND	1.6	ND	
GEW-008	4/18/2016	49	46	ND	ND	ND	ND	
GEW-008	5/12/2016	50	47	ND	ND	1	ND	
GEW-009	1/27/2016	51	41	ND	6.7	0.5	ND	
GEW-009	2/17/2016	54	43	ND	ND	0.7	ND	
GEW-009	3/7/2016	54	43	ND	ND	0.9	ND	
GEW-009	4/18/2016	50	42	ND	5.7	ND	ND	
GEW-009	5/12/2016	54	42	ND	ND	0.7	ND	
GEW-040	1/14/2016	57	41	ND	ND	ND	ND	
GEW-040	2/15/2016	55	38	1.4	5.2	ND	ND	See Note 3
GEW-040	3/7/2016	55	38	ND	5	ND	ND	
GEW-040	4/14/2016	57	40	ND	ND	ND	ND	
GEW-040	5/9/2016	58	40	ND	ND	ND	ND	
GEW-041R	1/14/2016	56	42	ND	ND	ND	ND	
GEW-041R	3/7/2016	57	41	ND	ND	ND	ND	
GEW-041R	5/9/2016	57	40	ND	ND	ND	ND	
GEW-042R	1/14/2016	55	42	ND	ND	ND	ND	
GEW-042R	2/15/2016	56	41	ND	ND	0.04	ND	
GEW-042R	3/7/2016	56	42	ND	ND	ND	ND	
GEW-042R	4/14/2016	55	43	ND	ND	ND	ND	
GEW-042R	5/18/2016	55	42	ND	ND	ND	ND	
GEW-043R	1/14/2016	55	43	ND	ND	0.2	ND	
GEW-043R	3/7/2016	55	43	ND	ND	0.05	ND	
GEW-043R	5/9/2016	55	41	ND	3.3	0.2	ND	
GEW-044	1/14/2016	56	40	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-044	3/7/2016	58	40	ND	ND	ND	ND	
GEW-044	5/9/2016	51	35	ND	ND	ND	ND	
GEW-045R	1/14/2016	56	43	ND	ND	ND	ND	
GEW-045R	2/15/2016	57	39	ND	ND	ND	ND	
GEW-045R	3/7/2016	58	40	ND	ND	ND	ND	
GEW-045R	4/14/2016	53	43	ND	3.3	ND	ND	
GEW-045R	5/9/2016	53	40	ND	5.5	ND	ND	
GEW-046R	1/14/2016	54	41	ND	4.7	0.1	ND	
GEW-046R	2/15/2016	55	40	ND	4.3	0.1	ND	
GEW-046R	3/7/2016	55	40	ND	4.4	0.1	ND	
GEW-046R	4/14/2016	50	39	ND	10	0.1	ND	
GEW-046R	5/13/2016	52	39	ND	7.9	0.1	ND	
GEW-047R	1/14/2016	40	35	ND	24	0.05	ND	
GEW-047R	2/15/2016	50	38	ND	11	0.2	ND	
GEW-047R	3/7/2016	52	39	ND	8.1	0.1	ND	
GEW-047R	4/14/2016	54	42	ND	ND	0.1	ND	
GEW-047R	5/13/2016	41	33	3.1	23	0.1	ND	See Note 3
GEW-048	1/14/2016	52	39	ND	8.4	ND	ND	
GEW-048	2/15/2016	56	40	ND	3.8	0.03	ND	
GEW-048	3/7/2016	57	40	ND	ND	ND	ND	
GEW-048	4/14/2016	53	38	ND	8.5	ND	ND	
GEW-048	5/13/2016	53	39	ND	7.3	0.04	ND	
GEW-049	1/27/2016	45	34	ND	20	0.1	ND	
GEW-049	2/15/2016	55	37	ND	6.3	0.1	ND	
GEW-049	3/7/2016	57	40	ND	ND	0.1	ND	
GEW-049	4/14/2016	55	38	ND	5.3	0.06	ND	
GEW-049	5/13/2016	48	36	ND	15.0	0.05	ND	
GEW-050	1/14/2016	53	39	ND	7.9	0.1	ND	
GEW-050	3/7/2016	56	39	ND	4.6	0.1	ND	
GEW-050	5/12/2016	54	37	ND	7.5	ND	ND	
GEW-051	1/27/2016	55	41	ND	ND	1	ND	
GEW-051	3/7/2016	55	42	ND	ND	1.2	ND	
GEW-051	5/13/2016	55	41	ND	ND	1.1	ND	
GEW-052	1/14/2016	45	36	ND	19	0.04	ND	
GEW-052	3/7/2016	53	38	ND	8.9	0.1	ND	
GEW-052	5/12/2016	54	38	ND	7	0.04	ND	
GEW-053	1/27/2016	50	41	ND	3.9	4.7	49	
GEW-053	2/15/2016	50	41	ND	ND	5.8	57	
GEW-053	3/7/2016	49	41	ND	ND	5.7	65	
GEW-053	4/14/2016	49	42	ND	ND	6.1	81	
GEW-053	5/13/2016	50	42	ND	ND	4.7	66	
GEW-054	1/27/2016	53	42	ND	ND	4	ND	
GEW-054	2/15/2016	51	41	ND	3.4	4.3	ND	
GEW-054	3/7/2016	53	43	ND	ND	3.1	34	
GEW-054	4/14/2016	51	42	ND	ND	4.9	41	
GEW-054	5/13/2016	49	42	ND	ND	5	42	
GEW-055	1/27/2016	54	42	ND	ND	1.0	ND	
GEW-055	2/15/2016	54	43	ND	ND	1.4	ND	
GEW-055	3/7/2016	54	43	ND	ND	1.1	ND	
GEW-055	4/14/2016	52	41	ND	4.1	1.2	ND	
GEW-055	5/13/2016	53	43	ND	ND	1.4	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 Enviroson meter, it was determined there is a sample train leak.

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
South Quarry								
GEW-010	1/26/2016	53	43	ND	3.0	0.2	ND	
GEW-010	2/16/2016	50	41	1.6	6.5	0.2	31	See Note 4
GEW-010	3/3/2016	38	50	ND	9.2	1.7	130	
GEW-010	4/13/2016	41	53	ND	4.3	1.0	110	
GEW-010	5/12/2016	44	49	ND	5.1	0.6	76	
GEW-022R	3/9/2016	0.7	65	ND	ND	30	4,300	
GEW-022R	5/10/2016	0.4	56	3.4	12	26	4,000	See Note 4
GEW-028R	1/26/2016	0.1	60	1.5	5.1	33	3,600	
GEW-028R	3/9/2016	0.1	61	ND	ND	34	4,300	
GEW-028R	5/10/2016	0.1	45	4.6	17	31	3,800	
GEW-038	1/26/2016	0.3	56	2.2	8	33	3,200	
GEW-038	2/16/2016	0.3	44	6.6	24	25	2,600	See Note 4
GEW-038	3/3/2016	0.3	44	7.4	27	21	2,500	
GEW-038	4/13/2016	0.4	35	9.6	35	19	2,200	See Note 4
GEW-038	5/12/2016	0.5	49	4.6	17	27	3,100	See Note 4
GEW-039	1/26/2016	42	56	ND	ND	0.7	52	
GEW-039	2/16/2016	42	55	ND	ND	0.9	75	
GEW-039	3/3/2016	39	56	ND	ND	2	160	
GEW-039	4/13/2016	37	59	ND	ND	2.8	230	
GEW-039	5/12/2016	35	52	ND	10	1.3	120	
GEW-056R	1/26/2016	16	39	ND	31	13	700	
GEW-056R	2/16/2016	20	38	ND	30	10	620	
GEW-056R	3/3/2016	17	39	ND	32	11	610	
GEW-056R	4/13/2016	12	39	ND	35	13	750	
GEW-056R	5/12/2016	12	39	ND	36	11	640	
GEW-057R	1/14/2016	0.4	54	ND	ND	40	2,200	
GEW-057R	5/9/2016	10	48	3.9	24	13	1,400	See Note 4
GEW-058	1/14/2016	3.8	54	ND	5.5	35	2,100	
GEW-058	5/9/2016	5	51	1.7	6.9	34	2,200	See Note 4
GEW-058A	1/14/2016	0.3	51	2	7.1	39	2,500	
GEW-058A	3/9/2016	0.5	43	4.9	18	33	2,100	
GEW-058A	5/9/2016	0.4	38	6.3	23	32	2,000	See Note 4
GEW-059R	1/14/2016	0.9	48	1.9	6.9	41	1,900	See Note 3
GEW-059R	3/9/2016	1.3	50	ND	4.4	42	2,000	
GEW-059R	5/9/2016	0.9	50	ND	ND	45	2,600	
GEW-065A	1/14/2016	0.4	58	ND	ND	36	2,900	
GEW-065A	5/9/2016	1.1	17	14	57	9.9	760	See Note 4
GEW-082R	1/14/2016	0.8	56	ND	ND	40	2,000	
GEW-082R	3/9/2016	0.8	54	ND	ND	40	2,000	
GEW-082R	5/10/2016	14	49	ND	ND	33	1,300	
GEW-086	5/10/2016	5.7	48	ND	3.7	41	2,300	
GEW-090	1/26/2016	5	50	ND	ND	42	1,900	
GEW-090	3/9/2016	7.3	49	ND	ND	39	2,100	
GEW-090	5/10/2016	0.9	56	ND	4.1	36	2,100	
GEW-102	1/14/2016	2.3	60	ND	ND	34	1,700	
GEW-102	3/9/2016	1.3	56	ND	3.4	36	1,400	
GEW-102	5/9/2016	2.4	54	1.7	6	33	1,300	
GEW-107	5/10/2016	0.4	60	ND	3.8	33	3,000	See Note 3
GEW-109	1/26/2016	2.3	36	7.9	34	19	1,300	See Note 4
GEW-109	2/16/2016	3.4	63	ND	ND	32	2,300	
GEW-109	3/3/2016	11	46	2.9	21	19	1,100	
GEW-109	4/13/2016	10	52	ND	9.7	26	1,600	
GEW-109	5/12/2016	11	53	ND	13	22	1,100	
GEW-110	1/26/2016	4.2	23	11	51	11	630	See Note 4
GEW-110	2/16/2016	7	34	9	36	14	810	See Note 4

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-110	3/3/2016	2	36	8	32	21	1,200	
GEW-110	4/13/2016	9.7	35	5	38	11	870	See Note 4
GEW-110	5/12/2016	1	12	16	67	4.6	340	See Note 4
GEW-116	5/10/2016	3.3	61	2.3	8.4	24	2,200	See Note 4
GEW-117	5/10/2016	7.5	63	ND	4.8	22	2,300	
GEW-118	5/10/2016	1.6	49	1.8	6.2	40	2,200	See Note 3
GEW-120	1/14/2016	15	69	ND	ND	11	880	
GEW-120	3/2/2016	13	60	1.6	14	11	950	
GEW-120	5/11/2016	16	59	1.9	14	7.7	470	See Note 4
GEW-121	1/14/2016	3.8	60	ND	ND	33	2,600	
GEW-121	3/2/2016	4.5	61	ND	ND	31	2,600	
GEW-121	5/11/2016	6.6	56	ND	4.6	30	2,200	
GEW-122	1/14/2016	3.5	57	ND	ND	37	3,000	
GEW-122	3/2/2016	5.2	56	ND	3.1	34	2,900	
GEW-122	5/11/2016	14	53	ND	8.7	23	2,100	
GEW-123	5/11/2016	4	59	ND	ND	31	3,400	
GEW-124	1/15/2016	6.8	62	ND	ND	27	1,900	
GEW-124	3/2/2016	7.2	63	ND	2.9	26	1,800	
GEW-124	5/11/2016	0.1	5.9	20	71	2.1	220	See Note 4
GEW-125	5/11/2016	0.5	60	ND	ND	36	3,300	
GEW-126	1/14/2016	6.2	54	ND	ND	36	3,500	
GEW-126	3/2/2016	10	56	ND	ND	30	3,200	
GEW-126	5/10/2016	11	54	ND	4.3	28	3,200	
GEW-127	1/14/2016	0.3	65	ND	ND	32	4,400	
GEW-127	3/2/2016	1.3	61	1.6	5.6	29	4,100	
GEW-127	5/10/2016	0.8	65	ND	ND	30	5,100	
GEW-128	1/14/2016	0.9	64	ND	ND	32	3,600	
GEW-128	3/2/2016	6.5	66	ND	ND	25	2,800	
GEW-128	5/10/2016	3.4	61	ND	ND	32	3,400	
GEW-129	1/14/2016	1.0	62	ND	ND	34	3,300	
GEW-129	3/2/2016	5.4	59	ND	ND	32	3,000	
GEW-129	5/10/2016	1.8	58	ND	5.8	31	3,400	
GEW-130	5/10/2016	0.3	58	ND	ND	38	4,400	
GEW-131	1/26/2016	15	51	ND	ND	31	2,100	
GEW-131	3/2/2016	10	47	3.4	12	27	2,200	
GEW-131	5/11/2016	20	49	ND	ND	28	2,300	
GEW-132	1/14/2016	8.7	50	2.9	15	23	1,700	
GEW-132	3/2/2016	7.4	49	3.4	19	20	1,700	
GEW-132	5/11/2016	8.7	45	4.3	29	12	880	
GEW-133	5/11/2016	0.2	12	17	62	8.6	750	See Note 4
GEW-134	1/14/2016	17	58	ND	13	11	750	
GEW-134	5/12/2016	5.7	25	13	52	4.8	400	See Note 4
GEW-135	5/12/2016	4.1	31	9	40	15	910	See Note 4
GEW-136	5/12/2016	3.8	23	12	55	5.9	360	See Note 4
GEW-137	1/14/2016	13	36	ND	49	0.3	36	
GEW-137	3/4/2016	14	44	ND	39	1	ND	
GEW-137	5/12/2016	11	31	2.2	56	0.1	ND	See Note 3
GEW-138	1/15/2016	13	50	2.2	25	9.2	730	See Note 4
GEW-138	3/4/2016	14	65	ND	7.8	12	1,300	
GEW-138	5/12/2016	5.1	29	5.0	58	2.5	320	See Note 4
GEW-139	1/14/2016	1.4	54	1.8	6.6	35	3,600	
GEW-139	3/4/2016	1	60	ND	ND	35	4,000	
GEW-139	5/12/2016	1.1	41	6.7	26	25	2,700	See Note 4
GEW-140	1/15/2016	1.7	60	ND	ND	35	3,300	
GEW-140	3/4/2016	9.4	58	ND	3.7	28	2,000	
GEW-140	5/12/2016	7.6	39	6.8	29	17	1,600	See Note 4

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Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-141	1/14/2016	1.1	60	ND	ND	33	3,300	
GEW-141	3/4/2016	1.3	62	ND	ND	32	3,900	
GEW-141	5/10/2016	0.4	59	ND	ND	34	3,800	
GEW-143	5/18/2016	0.2	37	7.3	27	28	2,800	See Note 4
GEW-144	5/18/2016	0.7	51	3.3	12	31	2,900	See Note 4
GEW-145	3/4/2016	4	56	ND	3.5	35	2,400	
GEW-145	5/18/2016	1.3	54	ND	4.6	37	2,900	
GEW-146	5/12/2016	2.8	14	13	69	0.6	97	See Note 4
GEW-147	1/15/2016	4.9	54	ND	3.5	36	2,000	
GEW-147	3/9/2016	10	49	ND	6.8	32	1,900	
GEW-147	5/12/2016	8.9	50	1.9	8.7	30	1,700	See Note 3
GEW-148	5/12/2016	3.5	46	4.4	16	29	2,400	See Note 3
GEW-149	3/9/2016	6.8	35	8.5	38	11	970	See Note 4
GEW-149	5/12/2016	8	43	5.6	27	15	1,400	See Note 4
GEW-150	1/14/2016	4	63	1.9	6.6	23	1,700	See Note 3
GEW-150	3/9/2016	4	27	12	45	11	830	
GEW-150	5/12/2016	10	55	2.9	12	19	1,800	See Note 4
GEW-151	5/12/2016	0.2	6.9	19	68	6.3	570	See Note 4
GEW-152	3/9/2016	6.2	47	2.2	7.9	35	2,800	
GEW-152	5/18/2016	7.4	50	ND	5	36	3,100	
GEW-153	3/9/2016	23	45	ND	12	18	810	
GEW-153	5/13/2016	21	47	ND	7.7	23	1,100	
GEW-154	1/15/2016	21	33	ND	20	24	850	
GEW-154	3/9/2016	14	24	11	45	5.7	270	
GEW-154	5/12/2016	11	27	9.9	40	12	840	See Note 4
GEW-155	3/9/2016	7.9	37	8.9	41	4.8	430	
GEW-155	5/12/2016	4.3	34	6.1	41	4.3	700	See Note 3
GEW-155	5/18/2016	4.4	48	ND	19	27	1,300	
GEW-156	5/12/2016	6.3	20	12	60	1.5	230	See Note 4
GEW-158	5/18/2016	0.8	45	4.9	19	30	1,900	See Note 4
GEW-159	3/9/2016	13	43	ND	35	7.8	660	
GEW-159	5/13/2016	16	51	ND	22	8.2	590	
GEW-160	5/12/2016	3	54	1.8	6.6	33	2,800	See Note 3
GEW-161	5/12/2016	1.3	28	4.3	25	40	3,000	See Note 4
GEW-162	5/12/2016	15	56	3.6	13	11	940	See Note 3
GEW-163	5/11/2016	6.8	47	6.2	27	11	1,300	See Note 4
GEW-164	5/11/2016	6.3	73	1.8	6.6	11	1,800	See Note 4
GEW-165	5/11/2016	1	69	ND	3.9	22	4,400	
GEW-166	5/11/2016	1.4	56	1.8	7	31	3,800	See Note 4
GEW-167	5/11/2016	4.2	35	7.9	34	18	1,600	See Note 4
GEW-168	5/11/2016	0.4	67	ND	ND	27	4,400	
GEW-169	5/10/2016	0.2	63	ND	3.9	30	5,000	
GEW-170	5/10/2016	0.8	65	ND	ND	30	4,500	
GEW-171	5/18/2016	1.3	47	5.2	19	27	2,800	See Note 4
GEW-172	5/18/2016	0.2	47	2.3	8	41	3,500	See Note 4
GEW-173	5/12/2016	12	47	2.9	22	15	1,800	See Note 4
GEW-174	5/12/2016	10	50	ND	17	21	1,700	
GEW-175	5/18/2016	16	50	4.2	19	11	980	See Note 4
GEW-176	5/18/2016	6.5	61	ND	ND	30	2,700	
GIW-01	1/26/2016	0.5	16	17	60	6.6	580	See Note 4
GIW-01	2/16/2016	1.7	61	2.7	9.8	24	2,500	See Note 4
GIW-01	3/3/2016	2.3	70	ND	ND	23	2,500	
GIW-01	4/13/2016	2	68	ND	ND	26	2,800	
GIW-01	5/10/2016	2.2	67	ND	ND	26	2,700	
GIW-02	1/26/2016	6.4	28	9.7	47	8.3	510	See Note 4
GIW-02	2/17/2016	8	40	7.8	33	10	620	See Note 4

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GIW-02	3/3/2016	6.3	30	11	48	3.9	290	
GIW-02	4/13/2016	5.5	35	9.2	42	8.6	660	See Note 4
GIW-02	5/10/2016	5.1	42	6.7	31	14	1,200	See Note 4
GIW-03	1/26/2016	0.4	48	4.7	17	29	2,500	See Note 4
GIW-03	2/17/2016	0.3	36	9.3	33	21	2,100	See Note 4
GIW-03	3/3/2016	0.1	8.2	19	69	2.9	460	
GIW-03	4/13/2016	0.6	65	ND	ND	32	3,400	
GIW-03	5/10/2016	0.5	58	3.1	11	26	3,300	See Note 4
GIW-04	1/26/2016	0.5	50	1.8	6.3	41	2,300	See Note 4
GIW-04	2/17/2016	0.6	43	4.2	15	36	2,300	See Note 3
GIW-04	3/3/2016	0.4	42	3.5	12	41	1,700	
GIW-04	4/13/2016	0.2	13	17	60	10	690	See Note 4
GIW-04	5/10/2016	0.6	36	6.2	23	33	1,900	See Note 4
GIW-05	1/26/2016	1.7	56	1.7	5.9	34	1,400	See Note 4
GIW-05	2/16/2016	2.2	57	ND	4.7	34	1,700	
GIW-05	3/3/2016	2.8	56	1.5	5.4	33	1,500	
GIW-05	4/13/2016	4.9	56	ND	5.5	31	1,500	
GIW-05	5/10/2016	1.6	59	ND	ND	36	1,700	
GIW-06	1/27/2016	1	59	ND	ND	36	1,500	
GIW-06	2/17/2016	1.1	59	ND	ND	36	1,500	
GIW-06	3/2/2016	1.1	61	ND	4.1	31	1,500	
GIW-06	4/13/2016	1.2	58	ND	4.8	34	1,300	
GIW-06	5/11/2016	1	49	3.6	13	32	1,200	See Note 4
GIW-07	1/27/2016	29	59	ND	3	8.6	660	
GIW-07	2/17/2016	15	68	ND	ND	15	1,500	
GIW-07	3/2/2016	19	42	6.9	25	7.2	710	
GIW-07	4/13/2016	9.3	42	8.1	30	11	1,300	See Note 4
GIW-07	5/12/2016	9	37	9.8	36	7.5	890	See Note 4
GIW-08	1/27/2016	26	59	ND	13	2.2	320	
GIW-08	2/17/2016	25	62	ND	10	2.2	360	
GIW-08	3/2/2016	19	66	ND	12	1.7	290	
GIW-08	4/13/2016	17	51	ND	28	1.6	250	
GIW-08	5/12/2016	16	70	ND	6.7	6.3	690	
GIW-09	1/27/2016	11	31	9.3	40	8.9	590	See Note 4
GIW-09	2/17/2016	6.2	17	14	57	4.9	320	See Note 4
GIW-09	3/2/2016	2.4	17	15	60	5.4	400	
GIW-09	4/13/2016	1.4	9.9	17	68	2.7	270	See Note 4
GIW-09	5/12/2016	1.5	25	11	56	5.9	480	See Note 4
GIW-10	1/26/2016	0.3	31	7.7	28	32	2,100	See Note 4
GIW-10	2/17/2016	0.4	53	ND	ND	44	3,200	
GIW-10	3/3/2016	5.6	47	ND	15	31	1,700	
GIW-10	4/13/2016	6.8	49	ND	14	29	2,000	
GIW-10	5/12/2016	3.1	50	ND	11	35	2,100	
GIW-11	1/26/2016	4	46	4.1	19	27	1,900	See Note 4
GIW-11	2/16/2016	4.4	39	6	29	21	1,700	See Note 4
GIW-11	3/3/2016	5.7	40	5.2	34	15	1,600	
GIW-11	4/13/2016	4.7	49	4.3	23	18	2,100	See Note 4
GIW-11	5/12/2016	5.5	48	4.3	24	17	1,900	See Note 4
GIW-12	1/26/2016	4.2	20	11	61	4.9	320	See Note 4
GIW-12	2/16/2016	5.3	20	12	60	2.6	240	See Note 4
GIW-12	3/3/2016	8	25	8.5	54	4.3	340	
GIW-12	4/13/2016	8.5	31	6.4	46	6.9	570	See Note 4
GIW-12	5/12/2016	0.7	38	9.5	35	16	1,800	See Note 4
GIW-13	1/26/2016	11	58	ND	6.8	22	1,500	
GIW-13	2/16/2016	13	58	ND	7.6	21	1,500	
GIW-13	3/3/2016	8.7	62	ND	7.6	21	1,700	

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Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GIW-13	4/13/2016	9.9	62	ND	7.7	20	1,600	
GIW-13	5/12/2016	9.5	64	ND	4.6	21	1,500	
Flare Station ²	1/5/2016	11.2	37.6	7.7	32.1	10.7	1,000	See Note 6
Flare Station ²	2/2/2016	11.8	37.7	7.8	31.0	10.9	1,050	See Note 6
Flare Station ²	3/2/2016	10.7	34.6	8.8	35.3	9.6	910	See Note 7
Flare Station ²	4/12/2016	8.2	37	8.1	35.0	10.5	1,050	See Note 6
Flare Station ²	5/3/2016	9.2	41.3	6.3	29.5	12.4	1,200	See Note 6
Flare Station ²	6/7/2016	8.8	40.3	6.9	30.5	12.1	1,200	See Note 6

Notes: (3) Based on the oxygen verification readings taken with an Envirovision meter, it was determined there is a sample train leak. (4) Based on the oxygen verification readings taken with an Envirovision 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. (7) Flare station gas concentration based on data from Outlet B.

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

May 24, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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 CA013332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H051904-01/11

Enclosed are results for sample(s) received 5/19/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

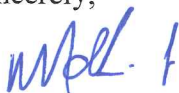
Report Narrative:

- 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 Nick Bauer, Mike Lambrich and Ryan Ayers; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 5/23/16.

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.



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

Project No.:

Project Name:

Report To: Bridgeton Landfill

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME	DELIVERABLES	PAGE: 1 OF 1
Standard <input type="checkbox"/> 48 hours	EDD <input type="checkbox"/>	Condition upon receipt: Sealed Yes <input type="checkbox"/> No <input type="checkbox"/> Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Chilled _____ deg C
Same Day <input type="checkbox"/> 72 hours	EDF <input type="checkbox"/>	
24 hours <input type="checkbox"/> 96 hours	Level 3 <input type="checkbox"/>	
Other: <input type="checkbox"/> 5 day	Level 4 <input type="checkbox"/>	

BILLING		ANALYSIS REQUEST	
P.O. No.:	PO4862452		
Bill to:	Republic Services		
	Attn: Nick Bauer		
	13570 St. Charles Rock Rd.		
	Bridgeton, MO 63044		

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION				PRESERVA-TION	D1946 + CO, H2
	Canister ID	Sample Start	Sample End	Lab Receive		SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TPE	MATRIX	
1051904-01	A7643	-20.6	-5	-4	GEW-152	5/18/2016	915	C	LFG	X
1051904-02	58396	-20.5	-5	-4	GEW-158	5/18/2016	929	C	LFG	X
1051904-03	A8096	-20.2	-5	-5	GEW-175	5/18/2016	943	C	LFG	X
1051904-04	3826	-20.6	-5	-4	GEW-176	5/18/2016	953	C	LFG	X
1051904-05	A7819	-20.5	-5	-4	GEW-145	5/18/2016	1008	C	LFG	X
1051904-06	6130	-20.5	-5	-5	GEW-172	5/18/2016	1022	C	LFG	X
1051904-07	A7744	-20.5	-5	-4.5	GEW-171	5/18/2016	1038	C	LFG	X
1051904-08	A7778	-20.4	-5	-4.5	GEW-143	5/18/2016	1052	C	LFG	X
1051904-09	A7767	-20.6	-5	-4.5	GEW-144	5/18/2016	1101	C	LFG	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		DATE/TIME:	
SAMPLED BY: Ryan Ayers		DATE/TIME:	
RELINQUISHED BY: [Signature]		DATE/RECEIVED BY: 5-18-16 1300	
RELINQUISHED BY: [Signature]		DATE/RECEIVED BY: 5/19/16 0851	
RELINQUISHED BY: [Signature]		DATE/RECEIVED BY: [Signature]	
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



AIR TECHNOLOGY

Laboratories, Inc.

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

Project No.:

Project Name:

Report To:

Company:

Street:

City/State/Zip:

Phone & Fax:

e-mail:

Bridgeton Landfill

Nick Bauer

Republic Services

13570 St. Charles Rock Rd.

Bridgeton, MO 63044

314-683-3921

Nbauer@republicservices.com

LAB USE ONLY

Canister Pressures ("hg)

Canister ID	Sample Start	Sample End	Lab Receive
-------------	--------------	------------	-------------

5927 -20.3 -5 -5

A7774 -20.6 -5 -4.9

SAMPLE IDENTIFICATION

GEW-155

GEW-42R

SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION
-------------	-------------	--------------------	--------	--------------

5/18/2016

1116

C

LFG

NA

5/18/2016

1205

C

LFG

NA

D1946 + CO₂ H₂

CHAIN OF CUSTODY RECORD

TURNAROUND TIME	DELIVERABLES	PAGE: 1 OF 1
Standard <input type="checkbox"/> 48 hours	EDD <input type="checkbox"/>	Condition upon receipt:
Same Day <input type="checkbox"/> 72 hours	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
24 hours <input type="checkbox"/> 96 hours	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>
Other: <input type="checkbox"/> 5 day	Level 4 <input type="checkbox"/>	Chilled <input type="checkbox"/> deg C

ANALYSIS REQUEST

BILLING

P.O. No.: PO4862452

Bill to: Republic Services

Attn: Nick Bauer

13570 St. Charles Rock Rd.

Bridgeton, MO 63044

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/RECEIVED BY: 5-18-16 1:00

DATE/TIME:

RELINQUISHED BY: Ryan Ayers

DATE/RECEIVED BY: 5/19/16 0851

DATE/TIME:

RELINQUISHED BY: Ryan Ayers

DATE/RECEIVED BY: 5/19/16 0851

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: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/19/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051904-01	H051904-02	H051904-03	H051904-04					
Client Sample I.D.:	GEW-152	GEW-158	GEW-175	GEW-176					
Date/Time Sampled:	5/18/16 9:15	5/18/16 9:29	5/18/16 9:43	5/18/16 9:53					
Date/Time Analyzed:	5/20/16 13:14	5/20/16 13:28	5/20/16 13:43	5/20/16 13:57					
QC Batch No.:	160520GC8A1	160520GC8A1	160520GC8A1	160520GC8A1					
Analyst Initials:	AS	AS	AS	AS					
Dilution Factor:	3.0	3.0	3.2	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	30	3.0	11	3.2	30	3.0
	Carbon Dioxide	50	0.030	45	0.030	50	0.032	61	0.030
	Oxygen/Argon	ND	1.5	4.9	1.5	4.2	1.6	ND	1.5
	Nitrogen	5.0	3.0	19	3.0	19	3.2	ND	3.0
	Methane	7.4	0.0030	0.81	0.0030	16	0.0032	6.5	0.0030
	Carbon Monoxide	0.31	0.0030	0.19	0.0030	0.098	0.0032	0.27	0.0030

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark Johnson
Mark Johnson

Operations Manager

Date _____

5/23/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/19/16
Matrix: Air
Reporting Units: % v/v

Page 3 of 6
 H051904

ASTM D1946								
Lab No.:	H051904-05		H051904-06		H051904-07		H051904-08	
Client Sample I.D.:	GEW-145		GEW-172		GEW-171		GEW-143	
Date/Time Sampled:	5/18/16 10:08		5/18/16 10:22		5/18/16 10:38		5/18/16 10:52	
Date/Time Analyzed:	5/20/16 14:12		5/20/16 14:27		5/20/16 14:41		5/20/16 14:56	
QC Batch No.:	160520GC8A1		160520GC8A1		160520GC8A1		160520GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.2		3.1		3.1	
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	37	3.0	41	3.2	27	3.1	28	3.1
Carbon Dioxide	54	0.030	47	0.032	47	0.031	37	0.031
Oxygen/Argon	ND	1.5	2.3	1.6	5.2	1.5	7.3	1.5
Nitrogen	4.6	3.0	8.0	3.2	19	3.1	27	3.1
Methane	1.3	0.0030	0.18	0.0032	1.3	0.0031	0.19	0.0031
Carbon Monoxide	0.29	0.0030	0.35	0.0032	0.28	0.0031	0.28	0.0031

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date 5/23/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/19/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051904-09	H051904-10	H051904-11						
Client Sample I.D.:	GEW-144	GEW-155	GEW-42R						
Date/Time Sampled:	5/18/16 11:01	5/18/16 11:16	5/18/16 12:05						
Date/Time Analyzed:	5/20/16 15:10	5/20/16 15:25	5/20/16 15:40						
QC Batch No.:	160520GC8A1	160520GC8A1	160520GC8A1						
Analyst Initials:	AS	AS	AS						
Dilution Factor:	3.1	3.2	3.1						
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v			
	Hydrogen	31	3.1	27	3.2	ND d	0.031		
	Carbon Dioxide	51	0.031	48	0.032	42	0.031		
	Oxygen/Argon	3.3	1.5	ND	1.6	ND	1.5		
	Nitrogen	12	3.1	19	3.2	ND	3.1		
	Methane	0.68	0.0031	4.4	0.0032	55	0.0031		
	Carbon Monoxide	0.29	0.0031	0.13	0.0032	ND	0.0031		

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analysis. QC batch 160521GC8A1

Reviewed/Approved By: _____


Mark Johnson
Operations Manager

Date _____

5/23/16

The cover letter is an integral part of this analytical report



QC Batch No.: 160520GC8A1

Matrix: Air


Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/20/16 12:56		5/20/16 12:12		5/20/16 12:26			
Analyst Initials:	AS		AS		AS			
Datafile:	20may006		20may003		20may004			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	74	70-130%	73	70-130%	0.6	<30
Carbon Dioxide	ND	0.010	88	70-130%	89	70-130%	0.2	<30
Oxygen/Argon	ND	0.50	103	70-130%	103	70-130%	0.2	<30
Nitrogen	ND	1.0	99	70-130%	99	70-130%	0.2	<30
Methane	ND	0.0010	105	70-130%	103	70-130%	1.9	<30
Carbon Monoxide	ND	0.0010	115	70-130%	114	70-130%	1.1	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:


Mark J. Johnson
Operations Manager

Date:

5/23/16

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 # 160521GC8A1
Matrix: Air
Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	5/21/2016 15:56		5/22/201615:36		5/22/2016 15:51			
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	97	70-130	86	70-130	12.0	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date:

5/23/16

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



May 24, 2016

Republic Services
ATTN: Nick Bauer
13570 St. Charles Rock Rd.
Bridgeton, MO 63044



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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: H051601-01/105

Enclosed are results for sample(s) received 5/16/16 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 Nick Bauer, Mike Lambrich and Ryan Ayers; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 5/23/16.

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,

A handwritten signature in blue ink, appearing to read "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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



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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone & Fax: 314-683-3921

e-mail: Nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME		DELIVERABLES		PAGE: 1 OF 12	
Standard	<input type="checkbox"/> 48 hours	<input type="checkbox"/> EDD	<input checked="" type="checkbox"/> Condition upon receipt:		
Same Day	<input type="checkbox"/> 72 hours	<input type="checkbox"/> EDF	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>		
24 hours	<input type="checkbox"/> 96 hours	<input type="checkbox"/> Level 3	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>		
Other:	<input type="checkbox"/> 5 day	<input type="checkbox"/> Level 4	Chilled Yes <input type="checkbox"/> No <input type="checkbox"/>		

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg)			SAMPLE IDENTIFICATION				PRESERVA-TION
	Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYP	
4051601-01	5932	-19.2	-5	-5.5	5/13/2016	858	C LFG	NA
-02	3836	-19.6	-5	-5.5	5/13/2016	917	C LFG	NA
-03	A8102	-19.6	-5	-5.5	5/13/2016	932	C LFG	NA
-04	5814	-20.1	-5	-5.5	5/13/2016	944	C LFG	NA
-05	5930	-19.4	-5	-3	5/13/2016	958	C LFG	NA
-06	3828	-18.3	-5	-5.5	5/13/2016	1013	C LFG	NA
-07	A7770	-19.6	-5	-5.5	5/13/2016	828	C LFG	NA
-08	A7818	-19.7	-5	-5.5	5/13/2016	842	C LFG	NA
-09	A7759	-20.3	-5	-5.5	5/13/2016	854	C LFG	NA

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		COMPANY: Republic Services		DATE/TIME:	
SAMPLED BY: Corey McMillen		COMPANY: Republic Services		DATE/TIME:	
RELINQUISHED BY: Corey McMillen		DATE/RECEIVED BY: 5/13/16		DATE/TIME: 5-16-16 8:33	
RELINQUISHED BY: FedEx		DATE/RECEIVED BY: 5-16-16 8:33		DATE/TIME: 5-16-16 8:33	
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



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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: Nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

PAGE: 2 OF 12

TURNAROUND TIME

DELIVERABLES

Condition upon receipt:

Sealed Yes ☐ No ☐

Intact Yes ☐ No ☐

Chilled ☐ deg C ☐

ANALYSIS REQUEST

BILLING

P.O. No.: PO4862452

Bill to: Republic Services

Attn: Nick Bauer

13570 St. Charles Rock Rd.

Bridgeton, MO 63044

SAMPLE IDENTIFICATION

Canister Pressures ("hg)

LAB USE ONLY

Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYP	MATRIX	PRESERVATION
5908	-20.2	-5	-5	5/13/2016	906	C	LFG	NA
6132	-20.2	-5	-5	5/13/2016	916	C	LFG	NA
6145	-20.3	-5	-5	5/13/2016	926	C	LFG	NA
5839	-19.4	-5	-5	5/13/2016	948	C	LFG	NA
6155	-19.9	-5	-5	5/13/2016	958	C	LFG	NA
A7655	-19.6	-5	-5	5/13/2016	1013	C	LFG	NA
A8068	-19.5	-5	-0.5	5/12/2016	800	C	LFG	NA
5833	-19.5	-5	-5	5/12/2016	812	C	LFG	NA
3827	-19.5	-5	-5	5/12/2016	825	C	LFG	NA

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		DATE/TIME:	
COMPANY: Republic Services		DATE/TIME:	
COMPANY: Republic Services		DATE/TIME:	
DATE/RECEIVED BY: 5/13/16		DATE/TIME:	
DATE/RECEIVED BY: 5-16-16 8:33		DATE/TIME: 5-16-16 8:33	
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



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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME	PAGE: 3 OF 12
Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	Condition upon receipt:
Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
24 hours <input type="checkbox"/> 96 hours <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>
Other: <input type="checkbox"/> 5 day <input type="checkbox"/>	Chilled <input type="checkbox"/> deg C

BILLING		ANALYSIS REQUEST	
P.O. No.:	PO4862452		
Bill to:	Republic Services		
	Attn: Nick Bauer		
	13570 St. Charles Rock Rd.		
	Bridgeton, MO 63044		

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION				PRESERVATION
	Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TPE	MATRIX	
H051601-19	6146	-19.7	-5	-5	5/12/2016	837	C	LFG	NA
-20	A7792	-19.8	-5	-5	5/12/2016	848	C	LFG	NA
-21	5818	-19.6	-5	-5	5/12/2016	914	C	LFG	NA
-22	A8065	-19.6	-5	-5	5/12/2016	926	C	LFG	NA
-23	A7816	-20	-5	-5	5/12/2016	937	C	LFG	NA
-24	A8097	-19.7	-5	-5	5/12/2016	950	C	LFG	NA
-25	A7807	-19.9	-5	-5	5/12/2016	1003	C	LFG	NA
-26	A7802	-19.7	-5	-3	5/12/2016	1030	C	LFG	NA
-27	61380	-19.7	-5	-5	5/12/2016	1043	C	LFG	NA

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		DATE/TIME:	
SAMPLED BY: Corey McMillen	COMPANY: Republic Services	DATE/TIME:	
RELINQUISHED BY: <i>Corey McMillen</i>	DATE/RECEIVED BY: 5/13/16	DATE/TIME:	
RELINQUISHED BY: <i>FedEx</i>	DATE/RECEIVED BY: 5-16-16	DATE/TIME: 8:33	
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



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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

PAGE: 4 OF 12

TURNAROUND TIME

Standard	<input type="checkbox"/>	48 hours	<input type="checkbox"/>	EDD	<input type="checkbox"/>	Condition upon receipt:
Same Day	<input type="checkbox"/>	72 hours	<input type="checkbox"/>	EDF	<input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
24 hours	<input type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>
Other:	<input type="checkbox"/>	5 day	<input checked="" type="checkbox"/>	Level 4	<input type="checkbox"/>	Chilled _____ deg C

ANALYSIS REQUEST

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

SAMPLE IDENTIFICATION

Canister Pressures ("hg)

LAB USE ONLY	Canister ID	Canister Pressures ("hg)			SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYP	MATRIX	PRESERVATION	D1946 + CO ₂ H ₂									
		Sample Start	Sample End	Lab Receive															
H057601-28	A7809	-19.5	-5	-5	5/12/2016	1054	C	LFG	NA	X									
-29	A7764	-19.7	-5	-5	5/12/2016	1104	C	LFG	NA	X									
-30	A7761	-19.6	-5	-5	5/12/2016	1116	C	LFG	NA	X									
-31	A7810	-19.8	-5	-5	5/12/2016	1125	C	LFG	NA	X									
-32	5829	-19.2	-5	-5	5/12/2016	1313	C	LFG	NA	X									
-33	A7765	-19.9	-5	-5	5/12/2016	1341	C	LFG	NA	X									
-34	A7670	-19.7	-5	-5	5/12/2016	1353	C	LFG	NA	X									
-35	A8090	-19.6	-5	-5	5/12/2016	1407	C	LFG	NA	X									
-36	6160	-19.5	-5	-5	5/12/2016	1425	C	LFG	NA	X									

COMMENTS

COMPANY: Republic Services

DATE/TIME:

DATE/TIME:

COMPANY: Republic Services

DATE/TIME:

DATE/TIME:

DATE/TIME:

DATE/TIME:

DATE/TIME:

DATE/TIME:

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



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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone & Fax: 314-683-3921

e-mail: Nbauer@republicservices.com

CHAIN OF CUSTODY RECORD			
TURNAROUND TIME		DELIVERABLES	PAGE: 5 OF 12
Standard	<input type="checkbox"/> 48 hours	EDD <input type="checkbox"/>	Condition upon receipt: Sealed Yes <input type="checkbox"/> No <input type="checkbox"/> Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Chilled _____ deg C
Same Day	<input type="checkbox"/> 72 hours	EDF <input type="checkbox"/>	
24 hours	<input type="checkbox"/> 96 hours	Level 3 <input type="checkbox"/>	
Other:	5 day <input checked="" type="checkbox"/>	Level 4 <input type="checkbox"/>	

BILLING		ANALYSIS REQUEST	
P.O. No.:	PO4862452		
Bill to:	Republic Services		
	Attn: Nick Bauer		
	13570 St. Charles Rock Rd.		
	Bridgeton, MO 63044		

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION				PRESERVATION
	Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYP	MATRIX	
H0516 01-37	5834	-19.6	-5.2	-5	5/12/2016	849	C	LFG	NA
-38	6137	-19.3	-5	-5	5/12/2016	902	C	LFG	NA
-39	5520	-19.6	-5	-5	5/12/2016	923	C	LFG	NA
-40	5832	-19.6	-5	-5	5/12/2016	933	C	LFG	NA
-41	A7815	-19.7	-4.7	-5	5/12/2016	1017	C	LFG	NA
-42	A7805	-19.8	-4.75	-5	5/12/2016	1027	C	LFG	NA
-43	A8059	-19.5	-5	-5	5/12/2016	1036	C	LFG	NA
-44	5268	-19.6	-5	-5	5/12/2016	913	C	LFG	NA
-45	5906	-19.4	-5	-5	5/12/2016	956	C	LFG	NA

AUTHORIZATION TO PERFORM WORK:		COMMENTS	
Dave Penoyer			
SAMPLED BY: Corey McMillen	DATE/TIME: 5/13/16	COMPANY: Republic Services	
RELINQUISHED BY: Corey McMillen	DATE/TIME: 5/13/16	COMPANY: Republic Services	
RELINQUISHED BY: FedEx	DATE/TIME: 5-16-16 8:33	DATE/TIME: 5-16-16 8:33	
RELINQUISHED BY:	DATE/TIME:	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



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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: Nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME		DELIVERABLES		PAGE: 6 OF 12	
Standard	<input type="checkbox"/> 48 hours	EDD	<input type="checkbox"/>	Condition upon receipt:	
Same Day	<input type="checkbox"/> 72 hours	EDF	<input type="checkbox"/>	Sealed	Yes <input type="checkbox"/> No <input type="checkbox"/>
24 hours	<input type="checkbox"/> 96 hours	Level 3	<input type="checkbox"/>	Intact	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other:	5 day <input checked="" type="checkbox"/>	Level 4	<input type="checkbox"/>	Chilled	deg C

BILLING		ANALYSIS REQUEST	
P.O. No.:	PO4862452		
Bill to:	Republic Services		
	Attn: Nick Bauer		
	13570 St. Charles Rock Rd.		
	Bridgeton, MO 63044		

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION				PRESERVATION
	Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYP	MATRIX	
H051601-46	5305	-19.4	-5	-5	5/12/2016	1007	C	LFG	NA
-47	5816	-19.8	-3	-3	5/12/2016	1045	C	LFG	NA
-48	A7793	-19.6	-5	-5	5/12/2016	1108	C	LFG	NA
-49	A8060	-20	-4	-4	5/12/2016	1657	C	LFG	NA
-50	A8072	-19.4	-5	-5	5/12/2016	1152	C	LFG	NA
-51	A656	-19.7	-5	-5	5/12/2016	1138	C	LFG	NA
-52	5306	-19.5	-5	-5	5/12/2016	1127	C	LFG	NA
-53	A8098	-19.6	-5	-5	5/12/2016	1117	C	LFG	NA
-54	3130	-19.8	-5	-5	5/12/2016	1636	C	LFG	NA

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		DATE/TIME:	
SAMPLED BY: Corey McMillen		DATE/TIME:	
RELINQUISHED BY: Corey McMillen		DATE/TIME: 5/13/16	
RELINQUISHED BY: Fed Ex		DATE/TIME: 5-16-16 8:33	
RELINQUISHED 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

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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: Nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME		DELIVERABLES		PAGE: 8 OF 12	
Standard	<input type="checkbox"/> 48 hours	<input type="checkbox"/> EDD	Condition upon receipt:		
Same Day	<input type="checkbox"/> 72 hours	<input type="checkbox"/> EDF	Sealed	Yes <input type="checkbox"/> No <input type="checkbox"/>	
24 hours	<input type="checkbox"/> 96 hours	<input type="checkbox"/> Level 3	Intact	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Other:	<input checked="" type="checkbox"/> 5 day	<input type="checkbox"/> Level 4	Chilled	_____ deg C	

BILLING		ANALYSIS REQUEST	
P.O. No.:	PO4862452		
Bill to:	Republic Services		
	Attn: Nick Bauer		
	13570 St. Charles Rock Rd.		
	Bridgeton, MO 63044		

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION				PRESERVATION
	Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	
4051601-64	5929	-19.7	-5	-5.5	5/11/2016	952	C	LFG	NA
-65	6143	-19.7	-5	-5	5/11/2016	1020	C	LFG	NA
-66	A8057	-19.6	-5	-5	5/11/2016	1033	C	LFG	NA
-67	A7776	-19.5	-5	-6	5/11/2016	1046	C	LFG	NA
-68	4648	-19.2	-5	-5.5	5/11/2016	1114	C	LFG	NA
-69	5821	-19.2	-5	-5	5/11/2016	1125	C	LFG	NA
-70	3834	-19.6	-5	-5	5/11/2016	1138	C	LFG	NA
-71	5304	-18.9	-4.8	-5	5/11/2016	1317	C	LFG	NA
-72	A7649	-19.15	-5	-5	5/10/2016	1159	C	LFG	NA

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		DATE/TIME:	
SAMPLED BY: Corey McMillen		DATE/TIME:	
RELINQUISHED BY: <i>Corey McMillen</i>		DATE/TIME: 5/13/16	
RELINQUISHED BY: <i>FedEx</i>		DATE/TIME: 5-16-16 8:33	
RELINQUISHED 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

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

Project No.:

Project Name: Bridgeton Landfill

Report To: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone & Fax: 314-683-3921

e-mail: nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME	DELIVERABLES	PAGE: 9 OF 12
Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	EDD <input type="checkbox"/>	Condition upon receipt:
Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
24 hours <input type="checkbox"/> 96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>
Other: <input type="checkbox"/> 5 day <input type="checkbox"/>	Level 4 <input type="checkbox"/>	Chilled <input type="checkbox"/> deg C

BILLING		ANALYSIS REQUEST	
P.O. No.:	PO4862452		
Bill to:	Republic Services		
	Attn: Nick Bauer		
	13570 St. Charles Rock Rd.		
	Bridgeton, MO 63044		

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION				PRESERVATION
	Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	
H051601-73	3131	-19.15	-5.1	-5	GIW-1	5/10/2016	1121	C LFG	NA
-74	A8066	-19.4	-4.7	-5	GIW-2	5/10/2016	1130	C LFG	NA
-75	A7795	-19.25	-4.5	-5	GIW-3	5/10/2016	1137	C LFG	NA
-76	A8071	-19.2	-4.8	-5	GIW-4	5/10/2016	1148	C LFG	NA
-77	A8076	-19.5	-5	-5	GEW-90	5/10/2016	804	C LFG	NA
-78	A7814	-19.4	-5	-5	GEW-86	5/10/2016	819	C LFG	NA
-79	A7766	-19.5	-5	-5	GEW-82R	5/10/2016	831	C LFG	NA
-80	A7760	-19.4	-5	-5	GEW-118	5/10/2016	954	C LFG	NA
-81	5910	-19.4	-5	-5	GEW-116	5/10/2016	1008	C LFG	NA

AUTHORIZATION TO PERFORM WORK:	DATE/TIME:	COMMENTS
SAMPLED BY: Corey McMillen	DATE/TIME:	
RELINQUISHED BY: <i>Corey McMillen</i>	DATE/TIME: 5/13/16	
RELINQUISHED BY: <i>Fed Ex</i>	DATE/TIME: 5-16-16 8:33	
RELINQUISHED 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

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

Project No.:

Project Name:

Report To: Bridgeton Landfill

Company: Nick Bauer

Company: Republic Services

Street: 13570 St. Charles Rock Rd.

City/State/Zip: Bridgeton, MO 63044

Phone& Fax: 314-683-3921

e-mail: nbauer@republicservices.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME	DELIVERABLES	PAGE: 10 OF 12
Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	EDD <input type="checkbox"/>	Condition upon receipt:
Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
24 hours <input type="checkbox"/> 96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>
Other: <input checked="" type="checkbox"/> 5 day	Level 4 <input type="checkbox"/>	Chilled <input type="checkbox"/> deg C


BILLING		ANALYSIS REQUEST	
P.O. No.:	PO4862452		
Bill to:	Republic Services		
	Attn: Nick Bauer		
	13570 St. Charles Rock Rd.		
	Bridgeton, MO 63044		

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION				PRESERVATION	MATRIX	CONTAINER QTY/TYPE	SAMPLE TIME	SAMPLE DATE
	Canister ID	Sample Start	Sample End	Lab Receive									
H051601-82	4655	-19.4	-5	-5	GEW-117	5/10/2016	1020	C	LFG	NA	X		
-83	3839	-19.3	-5	-5	GEW-107	5/10/2016	1050	C	LFG	NA	X		
-84	5936	-19.4	-5	-5	GEW-22R	5/10/2016	1104	C	LFG	NA	X		
-85	5912	-19.3	-5	-5	GEW-28R	5/10/2016	1115	C	LFG	NA	X		
-86	A7771	-19.3	-5	-5	GEW-141	5/10/2016	1126	C	LFG	NA	X		
-87	5928	-19.4	-5	-5	GEW-129	5/10/2016	1139	C	LFG	NA	X		
-88	5831	-19.9	-5	-5	GEW-128	5/10/2016	1313	C	LFG	NA	X		
-89	A7648	-19.3	-5	-5	GEW-127	5/10/2016	1325	C	LFG	NA	X		
-90	5815	-19.2	-5	-5	GEW-170	5/10/2016	1340	C	LFG	NA	X		

AUTHORIZATION TO PERFORM WORK:	DATE/TIME:	COMMENTS
SAMPLED BY: Corey McMillen	DATE/TIME:	
RELINQUISHED BY: Corey McMillen	DATE/TIME:	
RELINQUISHED BY: Corey McMillen	DATE/TIME:	
RELINQUISHED BY: Corey McMillen	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



AIR TECHNOLOGY
 Laboratories, Inc.

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

Project No.:
 Project Name:
 Report To:
 Company:
 Street:
 City/State/Zip:
 Phone& Fax:
 e-mail:

Bridgeton Landfill
 Nick Bauer
 Republic Services
 13570 St. Charles Rock Rd.
 Bridgeton, MO 63044
 314-683-3921
 Nbauer@republicservices.com

CHAIN OF CUSTODY RECORD
 TURNAROUND TIME
 DELIVERABLES
 PAGE: 11 OF 12

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

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

ANALYSIS REQUEST

SAMPLE IDENTIFICATION		Canister Pressures ("hg)			PRESERVATION			
LAB USE ONLY	Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX
H051601-91	5907	-19.4	-5	-5	5/10/2016	1354	C	LFG NA
-92	A7775	-19.7	-5	-5	5/10/2016	1409	C	LFG NA
-93	A8075	-19.6	-5	-5	5/10/2016	1419	C	LFG NA
-94	A7666	-19.3	-5	-5	5/9/2016	1031	C	LFG NA
-95	A7747	-19.2	-5	-5	5/9/2016	1047	C	LFG NA
-96	A8055	-19.5	-5	-5	5/9/2016	1058	C	LFG NA
-97	A8099	-19.2	-5	-5	5/9/2016	1111	C	LFG NA
-98	5819	-19.4	-5	-5	5/9/2016	1136	C	LFG NA
-99	A7651	-19.3	-5	-5	5/9/2016	1148	C	LFG NA

AUTHORIZATION TO PERFORM WORK: Dave Penoyer
 SAMPLED BY: Corey McMillen
 RELINQUISHED BY: Corey McMillen
 RELINQUISHED BY: Fed Ex
 RELINQUISHED BY:

COMPANY: Republic Services
 DATE/TIME: 5/13/16 8:33
 DATE/TIME: 5-16-16 8:33
 DATE/TIME:

METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other
 DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

COMMENTS

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.
 1000 F.L. Gate Ave., Suite 100
 City of Industry, CA 91748
 Ph: 626-964-4032
 Fx: 626-964-5832

Report To:	Nick Bauer
Company:	Republic Services
Street:	13570 St. Charles Rock Rd.
City/State/Zip:	Bridgeton , MO 63044
Phone& Fax:	314-683-3921
e-mail:	Nbauer@republicservices.com

[illegible]

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		COMPANY: Republic Services		DATE/TIME:
SAMPLED BY: Corey McMillen		COMPANY: Republic Services		DATE/TIME
RELINQUISHED BY: Corey McMillen		DATE/RECEIVED BY		DATE/TIME
		DATE/RECEIVED BY: [Signature]		DATE/TIME: 5-16-16 8:33
RELINQUISHED BY: FedEx		DATE/RECEIVED BY		DATE/TIME
		DATE/RECEIVED BY		DATE/TIME
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____				

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

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

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

Page 2 of 35
 H051601

ASTM D1946

Lab No.:	H051601-01	H051601-02	H051601-03	H051601-04				
Client Sample I.D.:	GEW-2S	GEW-2	GEW-3	GEW-4				
Date/Time Sampled:	5/13/16 8:58	5/13/16 9:17	5/13/16 9:32	5/13/16 9:44				
Date/Time Analyzed:	5/17/16 11:18	5/17/16 11:32	5/17/16 11:47	5/17/16 12:22				
QC Batch No.:	160517GC8A1	160517GC8A1	160517GC8A1	160517GC8A1				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.3	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 0.033	ND d 0.032	0.11 d 0.032	0.091 d 0.032			
	Carbon Dioxide	37 0.033	39 0.032	39 0.032	39 0.032			
	Oxygen/Argon	ND 1.6	2.0 1.6	ND 1.6	ND 1.6			
	Nitrogen	ND 3.3	6.8 3.2	8.2 3.2	11 3.2			
	Methane	60 0.0033	52 0.0032	52 0.0032	50 0.0032			
	Carbon Monoxide	ND 0.0033	ND 0.0032	ND 0.0032	ND 0.0032			

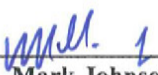
Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analysis. QC Batch 160520GC8A2

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 5/23/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-05		H051601-06		H051601-07		H051601-08	
Client Sample I.D.:	GEW-5		GEW-47R		GEW-153		GEW-159	
Date/Time Sampled:	5/13/16 9:58		5/13/16 10:13		5/13/16 8:28		5/13/16 8:42	
Date/Time Analyzed:	5/17/16 12:37		5/17/16 12:51		5/17/16 13:06		5/17/16 13:21	
QC Batch No.:	160517GC8A1		160517GC8A1		160517GC8A1		160517GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.8		3.2		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
	Hydrogen	0.033 d 0.028	0.078 d 0.032	23 3.2	8.2 3.2			
	Carbon Dioxide	27 0.028	33 0.032	47 0.032	51 0.032			
	Oxygen/Argon	4.0 1.4	3.1 1.6	ND 1.6	ND 1.6			
	Nitrogen	38 2.8	23 3.2	7.7 3.2	22 3.2			
	Methane	31 0.0028	41 0.0032	21 0.0032	16 0.0032			
	Carbon Monoxide	ND 0.0028	ND 0.0032	0.11 0.0032	0.059 0.0032			

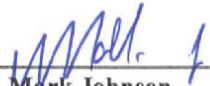
Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analysis. QC Batch 160520GC8A2

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 5/23/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-09	H051601-10	H051601-11	H051601-12					
Client Sample I.D.:	GEW-55	GEW-54	GEW-53	GEW-51					
Date/Time Sampled:	5/13/16 8:54	5/13/16 9:06	5/13/16 9:16	5/13/16 9:26					
Date/Time Analyzed:	5/17/16 13:35	5/17/16 16:30	5/17/16 16:45	5/17/16 16:59					
QC Batch No.:	160517GC8A1	160517GC8A1	160517GC8A1	160517GC8A1					
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	1.4 d	0.032	5.0	3.2	4.7	3.2	1.1 d	0.032
	Carbon Dioxide	43	0.032	42	0.032	42	0.032	41	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	53	0.0032	49	0.0032	50	0.0032	55	0.0032
	Carbon Monoxide	ND	0.0032	0.0042	0.0032	0.0066	0.0032	ND	0.0032

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Reviewed/Approved By: _____

Mark Johnson
Operations Manager

Date: 5/23/16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

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 H051601

ASTM D1946

Lab No.:	H051601-13		H051601-14		H051601-15		H051601-16	
Client Sample I.D.:	GEW-49		GEW-48		GEW-46R		GEW-155	
Date/Time Sampled:	5/13/16 9:48		5/13/16 9:58		5/13/16 10:13		5/12/16 8:00	
Date/Time Analyzed:	5/17/16 14:33		5/17/16 14:48		5/17/16 15:03		5/17/16 15:17	
QC Batch No.:	160517GC8A1		160517GC8A1		160517GC8A1		160517GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		2.5	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	0.048 d	0.032	0.036 d	0.032	0.093 d	0.032	14	2.5
Carbon Dioxide	36	0.032	39	0.032	39	0.032	34	0.025
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.6	6.1	1.2
Nitrogen	15	3.2	7.3	3.2	7.9	3.2	41	2.5
Methane	48	0.0032	53	0.0032	52	0.0032	4.3	0.0025
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0032	0.070	0.0025

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date _____

5/23/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

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 H051601

ASTM D1946

Lab No.:	H051601-17		H051601-18		H051601-19		H051601-20	
Client Sample I.D.:	GEW-138		GEW-139		GEW-137		GEW-136	
Date/Time Sampled:	5/12/16 8:12		5/12/16 8:25		5/12/16 8:37		5/12/16 8:48	
Date/Time Analyzed:	5/17/16 15:32		5/17/16 15:46		5/17/16 16:01		5/17/16 16:16	
QC Batch No.:	160517GC8A1		160517GC8A1		160517GC8A1		160517GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	2.5 d	0.032	25	3.2	0.072 d	0.032	5.9	3.2
Carbon Dioxide	29	0.032	41	0.032	31	0.032	23	0.032
Oxygen/Argon	5.0	1.6	6.7	1.6	2.2	1.6	12	1.6
Nitrogen	58	3.2	26	3.2	56	3.2	55	3.2
Methane	5.1	0.0032	1.1	0.0032	11	0.0032	3.8	0.0032
Carbon Monoxide	0.032	0.0032	0.27	0.0032	ND	0.0032	0.036	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: _____

Mark Johnson

Mark Johnson
Operations Manager

Date _____

5/23/16

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

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

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

Page 7 of 35
 H051601

ASTM D1946								
Lab No.:	H051601-21		H051601-22		H051601-23		H051601-24	
Client Sample I.D.:	GEW-147		GEW-135		GEW-134		GEW-146	
Date/Time Sampled:	5/12/16 9:14		5/12/16 9:26		5/12/16 9:37		5/12/16 9:50	
Date/Time Analyzed:	5/17/16 18:43		5/17/16 18:57		5/17/16 19:12		5/17/16 19:26	
QC Batch No.:	160517GC8A2		160517GC8A2		160517GC8A2		160517GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	30	3.2	15	3.2	4.8	3.2	0.64 d	0.032
Carbon Dioxide	50	0.032	31	0.032	25	0.032	14	0.032
Oxygen/Argon	1.9	1.6	9.0	1.6	13	1.6	13	1.6
Nitrogen	8.7	3.2	40	3.2	52	3.2	69	3.2
Methane	8.9	0.0032	4.1	0.0032	5.7	0.0032	2.8	0.0032
Carbon Monoxide	0.17	0.0032	0.091	0.0032	0.040	0.0032	0.0097	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date 5/23/16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-25	H051601-26	H051601-27	H051601-28				
Client Sample I.D.:	GEW-151	GEW-148	GEW-149	GEW-162				
Date/Time Sampled:	5/12/16 10:03	5/12/16 10:30	5/12/16 10:43	5/12/16 10:54				
Date/Time Analyzed:	5/17/16 19:41	5/17/16 19:56	5/17/16 20:10	5/18/16 8:24				
QC Batch No.:	160517GC8A2	160517GC8A2	160517GC8A2	160517GC8A2				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.2	2.8	3.2	3.2				
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	6.3	3.2	29	2.8	15	3.2	11	3.2
Carbon Dioxide	6.9	0.032	46	0.028	43	0.032	56	0.032
Oxygen/Argon	19	1.6	4.4	1.4	5.6	1.6	3.6	1.6
Nitrogen	68	3.2	16	2.8	27	3.2	13	3.2
Methane	0.16	0.0032	3.5	0.0028	8.0	0.0032	15	0.0032
Carbon Monoxide	0.057	0.0032	0.24	0.0028	0.14	0.0032	0.094	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: Mark Johnson
Operations Manager

Date 5/23/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

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 H051601

ASTM D1946

Lab No.:	H051601-29	H051601-30	H051601-31	H051601-32					
Client Sample I.D.:	GEW-154	GEW-161	GEW-160	GEW-173					
Date/Time Sampled:	5/12/16 11:04	5/12/16 11:16	5/12/16 11:25	5/12/16 13:13					
Date/Time Analyzed:	5/18/16 8:38	5/17/16 20:54	5/17/16 21:09	5/17/16 21:23					
QC Batch No.:	160517GC8A2	160517GC8A2	160517GC8A2	160517GC8A2					
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	12	3.2	40	3.2	33	3.2	15	3.2
	Carbon Dioxide	27	0.032	28	0.032	54	0.032	47	0.032
	Oxygen/Argon	9.9	1.6	4.3	1.6	1.8	1.6	2.9	1.6
	Nitrogen	40	3.2	25	3.2	6.6	3.2	22	3.2
	Methane	11	0.0032	1.3	0.0032	3.0	0.0032	12	0.0032
	Carbon Monoxide	0.084	0.0032	0.30	0.0032	0.28	0.0032	0.18	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date 5/23/16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-33	H051601-34	H051601-35	H051601-36					
Client Sample I.D.:	GEW-140	GEW-174	GEW-156	GEW-150					
Date/Time Sampled:	5/12/16 13:41	5/12/16 13:53	5/12/16 14:07	5/12/16 14:25					
Date/Time Analyzed:	5/17/16 21:38	5/18/16 8:53	5/18/16 9:07	5/17/16 22:22					
QC Batch No.:	160517GC8A2	160517GC8A2	160517GC8A2	160517GC8A2					
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	17	3.2	21	3.2	1.5 d	0.032	19	3.2
	Carbon Dioxide	39	0.032	50	0.032	20	0.032	55	0.032
	Oxygen/Argon	6.8	1.6	ND	1.6	12	1.6	2.9	1.6
	Nitrogen	29	3.2	17	3.2	60	3.2	12	3.2
	Methane	7.6	0.0032	10.0	0.0032	6.3	0.0032	10	0.0032
	Carbon Monoxide	0.16	0.0032	0.17	0.0032	0.023	0.0032	0.18	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: Mark Johnson
Mark Johnson
Operations Manager

Date 5/23/16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-37	H051601-38	H051601-39	H051601-40					
Client Sample I.D.:	GIW-7	GIW-8	GIW-9	GIW-10					
Date/Time Sampled:	5/12/16 8:49	5/12/16 9:02	5/12/16 9:23	5/12/16 9:33					
Date/Time Analyzed:	5/18/16 7:01	5/18/16 7:16	5/18/16 7:30	5/18/16 7:45					
QC Batch No.:	160517GC8A2	160517GC8A2	160517GC8A2	160517GC8A2					
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	7.5	3.2	6.3	3.2	5.9	3.2	35	3.2
	Carbon Dioxide	37	0.032	70	0.032	25	0.032	50	0.032
	Oxygen/Argon	9.8	1.6	ND	1.6	11	1.6	ND	1.6
	Nitrogen	36	3.2	6.7	3.2	56	3.2	11	3.2
	Methane	9.0	0.0032	16	0.0032	1.5	0.0032	3.1	0.0032
	Carbon Monoxide	0.089	0.0032	0.069	0.0032	0.048	0.0032	0.21	0.0032

Results normalized including non-methane hydrocarbons

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Mark Johnson
Operations Manager

Date 5/23/16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-41	H051601-42	H051601-43	H051601-44					
Client Sample I.D.:	GIW-11	GIW-12	GIW-13	GEW-38					
Date/Time Sampled:	5/12/16 10:17	5/12/16 10:27	5/12/16 10:36	5/12/16 9:13					
Date/Time Analyzed:	5/18/16 11:15	5/18/16 11:30	5/18/16 11:44	5/18/16 11:59					
QC Batch No.:	160518GC8A1	160518GC8A1	160518GC8A1	160518GC8A1					
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	17	3.2	16	3.2	21	3.2	27	3.2
	Carbon Dioxide	48	0.032	38	0.032	64	0.032	49	0.032
	Oxygen/Argon	4.3	1.6	9.5	1.6	ND	1.6	4.6	1.6
	Nitrogen	24	3.2	35	3.2	4.6	3.2	17	3.2
	Methane	5.5	0.0032	0.74	0.0032	9.5	0.0032	0.48	0.0032
	Carbon Monoxide	0.19	0.0032	0.18	0.0032	0.15	0.0032	0.31	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: Mark Johnson
Mark Johnson
Operations Manager

Date 5/23/16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-45		H051601-46		H051601-47		H051601-48	
Client Sample I.D.:	GEW-39		GEW-109		GEW-110		GEW-56R	
Date/Time Sampled:	5/12/16 9:56		5/12/16 10:07		5/12/16 10:45		5/12/16 11:08	
Date/Time Analyzed:	5/18/16 12:13		5/18/16 12:28		5/18/16 12:43		5/18/16 15:10	
QC Batch No.:	160518GC8A1		160518GC8A1		160518GC8A1		160518GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		2.8		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
	Hydrogen	1.3 d 0.032	22	3.2	4.6	2.8	11	3.2
	Carbon Dioxide	52 0.032	53	0.032	12	0.028	39	0.032
	Oxygen/Argon	ND 1.6	ND	1.6	16	1.4	ND	1.6
	Nitrogen	10 3.2	13	3.2	67	2.8	36	3.2
	Methane	35 0.0032	11	0.0032	1.0	0.0028	12	0.0032
	Carbon Monoxide	0.012 0.0032	0.11	0.0032	0.034	0.0028	0.064	0.0032

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analyst. QC Batch 160520GC8A2

Reviewed/Approved By: 

Mark Johnson
Operations Manager

Date 5-23-16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-49		H051601-50		H051601-51		H051601-52	
Client Sample I.D.:	GEW-6		GEW-7		GEW-8		GEW-9	
Date/Time Sampled:	5/12/16 16:57		5/12/16 11:52		5/12/16 11:38		5/12/16 11:27	
Date/Time Analyzed:	5/18/16 13:13		5/18/16 13:27		5/18/16 13:42		5/18/16 13:56	
QC Batch No.:	160518GC8A1		160518GC8A1		160518GC8A1		160518GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.2		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
	Hydrogen	ND d 0.030	ND d 0.032	1.0 d 0.032	0.70 d 0.032			
	Carbon Dioxide	37 0.030	39 0.032	47 0.032	42 0.032			
	Oxygen/Argon	ND 1.5	ND 1.6	ND 1.6	ND 1.6			
	Nitrogen	13 3.0	4.5 3.2	ND 3.2	ND 3.2			
	Methane	50 0.0030	55 0.0032	50 0.0032	54 0.0032			
	Carbon Monoxide	ND 0.0030	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 analyst. QC Batch 160521GC8A1

Reviewed/Approved By: Mark Johnson
Mark Johnson
Operations Manager

Date 5/24/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-53		H051601-54		H051601-55		H051601-56	
Client Sample I.D.:	GEW-10		GEW-52		GEW-50		GEW-168	
Date/Time Sampled:	5/12/16 11:17		5/12/16 16:36		5/12/16 16:47		5/11/16 8:04	
Date/Time Analyzed:	5/18/16 14:26		5/18/16 14:41		5/18/16 14:56		5/19/16 8:59	
QC Batch No.:	160518GC8A1		160518GC8A1		160518GC8A1		160518GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
	Hydrogen	0.61 d 0.032	0.043 d 0.032	ND d 0.032	27 3.2			
	Carbon Dioxide	49 0.032	38 0.032	37 0.032	67 0.032			
	Oxygen/Argon	ND 1.6	ND 1.6	ND 1.6	ND 1.6			
	Nitrogen	5.1 3.2	7.0 3.2	7.5 3.2	ND 3.2			
	Methane	44 0.0032	54 0.0032	54 0.0032	0.36 0.0032			
	Carbon Monoxide	0.0076 0.0032	ND 0.0032	ND 0.0032	0.44 0.0032			

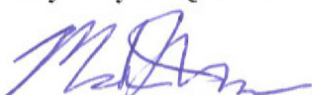
Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analyst. QC Batch 160521GC8A1

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date

5-23-16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-57	H051601-58	H051601-59	H051601-60				
Client Sample I.D.:	GEW-125	GEW-131	GEW-167	GEW-122				
Date/Time Sampled:	5/11/16 8:17	5/11/16 8:31	5/11/16 8:43	5/11/16 8:56				
Date/Time Analyzed:	5/19/16 9:14	5/18/16 18:06	5/18/16 18:21	5/18/16 18:35				
QC Batch No.:	160518GC8A2	160518GC8A2	160518GC8A2	160518GC8A2				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.2	3.2	3.2	3.2				
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	36	3.2	28	3.2	18	3.2	23	3.2
Carbon Dioxide	60	0.032	49	0.032	35	0.032	53	0.032
Oxygen/Argon	ND	1.6	ND	1.6	7.9	1.6	ND	1.6
Nitrogen	ND	3.2	ND	3.2	34	3.2	8.7	3.2
Methane	0.49	0.0032	20	0.0032	4.2	0.0032	14	0.0032
Carbon Monoxide	0.33	0.0032	0.23	0.0032	0.16	0.0032	0.21	0.0032

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date

5.23.16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-61	H051601-62	H051601-63	H051601-64					
Client Sample I.D.:	GEW-166	GEW-165	GEW-124	GEW-164					
Date/Time Sampled:	5/11/16 9:09	5/11/16 9:21	5/11/16 9:37	5/11/16 9:52					
Date/Time Analyzed:	5/18/16 18:50	5/18/16 19:05	5/18/16 19:19	5/18/16 19:34					
QC Batch No.:	160518GC8A2	160518GC8A2	160518GC8A2	160518GC8A2					
Analyst Initials:	AS	AS	AS	AS					
Dilution Factor:	3.2	3.3	3.2	3.3					
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	31	3.2	22	3.3	2.1 d	0.032	11	3.3
	Carbon Dioxide	56	0.032	69	0.033	5.9	0.032	73	0.033
	Oxygen/Argon	1.8	1.6	ND	1.6	20	1.6	1.8	1.6
	Nitrogen	7.0	3.2	3.9	3.3	71	3.2	6.6	3.3
	Methane	1.4	0.0032	1.0	0.0033	0.14	0.0032	6.3	0.0033
	Carbon Monoxide	0.38	0.0032	0.44	0.0033	0.022	0.0032	0.18	0.0033

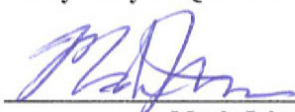
Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analysis. QC Batch 160521GC8A1

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date

5-23-16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-65	H051601-66	H051601-67	H051601-68					
Client Sample I.D.:	GEW-123	GEW-163	GEW-121	GEW-132					
Date/Time Sampled:	5/11/16 10:20	5/11/16 10:33	5/11/16 10:46	5/11/16 11:14					
Date/Time Analyzed:	5/18/16 19:48	5/18/16 20:03	5/19/16 7:45	5/19/16 7:59					
QC Batch No.:	160518GC8A2	160518GC8A2	160518GC8A2	160518GC8A2					
Analyst Initials:	AS	AS	AS	AS					
Dilution Factor:	3.2	3.2	3.4	3.3					
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	31	3.2	11	3.2	30	3.4	12	3.3
	Carbon Dioxide	59	0.032	47	0.032	56	0.034	45	0.033
	Oxygen/Argon	ND	1.6	6.2	1.6	ND	1.7	4.3	1.6
	Nitrogen	ND	3.2	27	3.2	4.6	3.4	29	3.3
	Methane	4.4	0.0032	6.8	0.0032	6.6	0.0034	8.7	0.0033
	Carbon Monoxide	0.34	0.0032	0.13	0.0032	0.22	0.0034	0.088	0.0033

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: _____

Mark Johnson
Operations Manager

Date

5-23-16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-69	H051601-70	H051601-71	H051601-72				
Client Sample I.D.:	GEW-120	GEW-133	GIW-6	GIW-5				
Date/Time Sampled:	5/11/16 11:25	5/11/16 11:38	5/11/16 13:17	5/10/16 11:59				
Date/Time Analyzed:	5/19/16 8:15	5/19/16 8:29	5/19/16 8:44	5/19/16 9:43				
QC Batch No.:	160518GC8A2	160518GC8A2	160518GC8A2	160518GC8A2				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.2	3.2	3.2	3.2				
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	7.7	3.2	8.6	3.2	32	3.2	36	3.2
Carbon Dioxide	59	0.032	12	0.032	49	0.032	59	0.032
Oxygen/Argon	1.9	1.6	17	1.6	3.6	1.6	ND	1.6
Nitrogen	14	3.2	62	3.2	13	3.2	ND	3.2
Methane	16	0.0032	0.24	0.0032	1.0	0.0032	1.6	0.0032
Carbon Monoxide	0.047	0.0032	0.075	0.0032	0.12	0.0032	0.17	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: 

Mark Johnson
Operations Manager

Date

5-23-16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-73	H051601-74	H051601-75	H051601-76				
Client Sample I.D.:	GIW-1	GIW-2	GIW-3	GIW-4				
Date/Time Sampled:	5/10/16 11:21	5/10/16 11:30	5/10/16 11:37	5/10/16 11:48				
Date/Time Analyzed:	5/19/16 9:58	5/19/16 10:12	5/19/16 15:56	5/19/16 16:30				
QC Batch No.:	160518GC8A2	160518GC8A2	160519GC8A1	160519GC8A1				
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	26	3.2	14	3.2	26	3.2	33	3.2
Carbon Dioxide	67	0.032	42	0.032	58	0.032	36	0.032
Oxygen/Argon	ND	1.6	6.7	1.6	3.1	1.6	6.2	1.6
Nitrogen	ND	3.2	31	3.2	11	3.2	23	3.2
Methane	2.2	0.0032	5.1	0.0032	0.53	0.0032	0.59	0.0032
Carbon Monoxide	0.27	0.0032	0.12	0.0032	0.33	0.0032	0.19	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: 

Mark Johnson
Operations Manager

Date

5-23-16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-77	H051601-78	H051601-79	H051601-80				
Client Sample I.D.:	GEW-90	GEW-86	GEW-82R	GEW-118				
Date/Time Sampled:	5/10/16 8:04	5/10/16 8:19	5/10/16 8:31	5/10/16 9:54				
Date/Time Analyzed:	5/19/16 16:44	5/19/16 16:59	5/19/16 17:14	5/19/16 17:28				
QC Batch No.:	160519GC8A1	160519GC8A1	160519GC8A1	160519GC8A1				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.2	3.2	3.2	3.2				
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	36	3.2	41	3.2	33	3.2	40	3.2
Carbon Dioxide	56	0.032	48	0.032	49	0.032	49	0.032
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.6	1.8	1.6
Nitrogen	4.1	3.2	3.7	3.2	ND	3.2	6.2	3.2
Methane	0.94	0.0032	5.7	0.0032	14	0.0032	1.6	0.0032
Carbon Monoxide	0.21	0.0032	0.23	0.0032	0.13	0.0032	0.22	0.0032

Results normalized including non-methane hydrocarbons

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Mark Johnson
Operations Manager

Date

5-23-16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-81	H051601-82	H051601-83	H051601-84					
Client Sample I.D.:	GEW-116	GEW-117	GEW-107	GEW-22R					
Date/Time Sampled:	5/10/16 10:08	5/10/16 10:20	5/10/16 10:50	5/10/16 11:04					
Date/Time Analyzed:	5/19/16 17:43	5/19/16 17:57	5/19/16 18:12	5/19/16 18:27					
QC Batch No.:	160519GC8A1	160519GC8A1	160519GC8A1	160519GC8A1					
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	24	3.2	22	3.2	33	3.2	26	3.2
	Carbon Dioxide	61	0.032	63	0.032	60	0.032	56	0.032
	Oxygen/Argon	2.3	1.6	ND	1.6	ND	1.6	3.4	1.6
	Nitrogen	8.4	3.2	4.8	3.2	3.8	3.2	12	3.2
	Methane	3.3	0.0032	7.5	0.0032	0.40	0.0032	0.44	0.0032
	Carbon Monoxide	0.22	0.0032	0.23	0.0032	0.30	0.0032	0.40	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: 

Mark Johnson
Operations Manager

Date

5-23-16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

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 H051601

ASTM D1946

Lab No.:	H051601-85		H051601-86		H051601-87		H051601-88	
Client Sample I.D.:	GEW-28R		GEW-141		GEW-129		GEW-128	
Date/Time Sampled:	5/10/16 11:15		5/10/16 11:26		5/10/16 11:39		5/10/16 13:13	
Date/Time Analyzed:	5/19/16 18:41		5/19/16 19:11		5/19/16 19:26		5/19/16 21:37	
QC Batch No.:	160519GC8A1		160519GC8A1		160519GC8A1		160519GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.3		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	31	3.2	34	3.3	31	3.2	32	3.2
Carbon Dioxide	45	0.032	59	0.033	58	0.032	61	0.032
Oxygen/Argon	4.6	1.6	ND	1.6	ND	1.6	ND	1.6
Nitrogen	17	3.2	ND	3.3	5.8	3.2	ND	3.2
Methane	0.13	0.0032	0.35	0.0033	1.8	0.0032	3.4	0.0032
Carbon Monoxide	0.38	0.0032	0.38	0.0033	0.34	0.0032	0.34	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date _____

5-23-16

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Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

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 H051601

ASTM D1946								
Lab No.:	H051601-89		H051601-90		H051601-91		H051601-92	
Client Sample I.D.:	GEW-127		GEW-170		GEW-130		GEW-169	
Date/Time Sampled:	5/10/16 13:25		5/10/16 13:40		5/10/16 13:54		5/10/16 14:09	
Date/Time Analyzed:	5/20/16 10:00		5/20/16 10:14		5/20/16 10:29		5/20/16 10:43	
QC Batch No.:	160519GC8A2		160519GC8A2		160519GC8A2		160519GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.3		3.3		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	30	3.3	30	3.3	38	3.2	30	3.2
Carbon Dioxide	65	0.033	65	0.033	58	0.032	63	0.032
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.6	ND	1.6
Nitrogen	ND	3.3	ND	3.3	ND	3.2	3.9	3.2
Methane	0.77	0.0033	0.82	0.0033	0.28	0.0032	0.23	0.0032
Carbon Monoxide	0.51	0.0033	0.45	0.0033	0.44	0.0032	0.50	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date

5-23-16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

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 H051601

ASTM D1946

Lab No.:	H051601-93	H051601-94	H051601-95	H051601-96				
Client Sample I.D.:	GEW-126	GEW-59R	GEW-58A	GEW-58				
Date/Time Sampled:	5/10/16 14:19	5/9/16 10:31	5/9/16 10:47	5/9/16 10:58				
Date/Time Analyzed:	5/19/16 22:51	5/19/16 23:06	5/19/16 23:21	5/19/16 23:35				
QC Batch No.:	160519GC8A2	160519GC8A2	160519GC8A2	160519GC8A2				
Analyst Initials:	AS	AS	AS	AS				
Dilution Factor:	3.2	3.2	3.2	3.2				
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	28	3.2	45	3.2	32	3.2	34	3.2
Carbon Dioxide	54	0.032	50	0.032	38	0.032	51	0.032
Oxygen/Argon	ND	1.6	ND	1.6	6.3	1.6	1.7	1.6
Nitrogen	4.3	3.2	ND	3.2	23	3.2	6.9	3.2
Methane	11	0.0032	0.91	0.0032	0.35	0.0032	5.0	0.0032
Carbon Monoxide	0.32	0.0032	0.26	0.0032	0.20	0.0032	0.22	0.0032

Results normalized including non-methane hydrocarbons

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RL = Reporting Limit

Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date

5-23-16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	H051601-97		H051601-98		H051601-99		H051601-100	
Client Sample I.D.:	GEW-57R		GEW-65A		GEW-102		GEW-40	
Date/Time Sampled:	5/9/16 11:11		5/9/16 11:36		5/9/16 11:48		5/9/16 14:37	
Date/Time Analyzed:	5/20/16 7:33		5/20/16 7:47		5/20/16 8:02		5/20/16 10:58	
QC Batch No.:	160519GC8A2		160519GC8A2		160519GC8A2		160519GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
Hydrogen	13	3.2	9.9	3.2	33	3.2	ND	d 0.032
Carbon Dioxide	48	0.032	17	0.032	54	0.032	40	0.032
Oxygen/Argon	3.9	1.6	14	1.6	1.7	1.6	ND	1.6
Nitrogen	24	3.2	57	3.2	6.0	3.2	ND	3.2
Methane	10	0.0032	1.1	0.0032	2.4	0.0032	58	0.0032
Carbon Monoxide	0.14	0.0032	0.076	0.0032	0.13	0.0032	ND	0.0032

Results normalized including non-methane hydrocarbons

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d = Reported from a secondary analysis. QC Batch 160521GC8A1

Reviewed/Approved By: _____

Mark Johnson
Operations Manager

Date _____

5/24/16

The cover letter is an integral part of this analytical report



Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 05/16/16
Matrix: Air
Reporting Units: % v/v

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 H051601

ASTM D1946

Lab No.:	H051601-101		H051601-103		H051601-104		H051601-105	
Client Sample I.D.:	GEW-41R		GEW-43R		GEW-44		GEW-45R	
Date/Time Sampled:	5/9/16 14:49		5/9/16 15:13		5/9/16 15:25		5/9/16 15:37	
Date/Time Analyzed:	5/20/16 8:38		5/20/16 9:08		5/20/16 9:23		5/20/16 9:37	
QC Batch No.:	160519GC8A2		160519GC8A2		160519GC8A2		160519GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result	RL	Result	RL	Result	RL	Result	RL
	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v	% v/v
	Hydrogen	ND d 0.032	0.24 d 0.032	ND d 0.032	ND d 0.032	ND d 0.032	ND d 0.032	
	Carbon Dioxide	40 0.032	41 0.032	35 0.032	40 0.032			
	Oxygen/Argon	ND 1.6	ND 1.6	2.8 1.6	ND 1.6			
	Nitrogen	ND 3.2	3.3 3.2	11 3.2	5.5 3.2			
	Methane	57 0.0032	55 0.0032	51 0.0032	53 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 160521GC8A1

Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date _____

5-23-16

The cover letter is an integral part of this analytical report



QC Batch No.: 160517GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/17/16 10:27		5/17/16 9:43		5/17/16 9:57			
Analyst Initials:	AS		AS		AS			
Datafile:	17may010		17may007		17may008			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	105	70-130%	103	70-130%	1.7	<30
Carbon Dioxide	ND	0.010	98	70-130%	96	70-130%	1.6	<30
Oxygen/Argon	ND	0.50	96	70-130%	95	70-130%	1.7	<30
Nitrogen	ND	1.0	98	70-130%	96	70-130%	1.7	<30
Methane	ND	0.0010	94	70-130%	94	70-130%	0.9	<30
Carbon Monoxide	ND	0.0010	118	70-130%	117	70-130%	0.7	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:



Mark J. Johnson
Operations Manager

Date:

5-23-16

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.: 160517GC8A2

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/17/16 18:28		5/17/16 17:58		5/17/16 18:12			
Analyst Initials:	AS		AS		AS			
Datafile:	17may038		17may036		17may037			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	100	70-130%	100	70-130%	0.5	<30
Carbon Dioxide	ND	0.010	95	70-130%	95	70-130%	0.3	<30
Oxygen/Argon	ND	0.50	96	70-130%	95	70-130%	0.3	<30
Nitrogen	ND	1.0	96	70-130%	96	70-130%	0.4	<30
Methane	ND	0.0010	102	70-130%	100	70-130%	1.9	<30
Carbon Monoxide	ND	0.0010	119	70-130%	118	70-130%	0.8	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:



Mark J. Johnson
Operations Manager

Date:

5-23-16

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.: 160518GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank	LCS	LCS	LCS	LCS	LCS	LCS	LCS
Date/Time Analyzed:	5/18/16 10:59	5/18/16 10:14	5/18/16 10:29					
Analyst Initials:	AS	AS	AS					
Datafile:	18may006	18may003	18may004					
Dilution Factor:	1.0	1.0	1.0					
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	88	70-130%	89	70-130%	0.8	<30
Carbon Dioxide	ND	0.010	93	70-130%	93	70-130%	0.8	<30
Oxygen/Argon	ND	0.50	98	70-130%	99	70-130%	0.6	<30
Nitrogen	ND	1.0	97	70-130%	98	70-130%	0.6	<30
Methane	ND	0.0010	107	70-130%	102	70-130%	4.0	<30
Carbon Monoxide	ND	0.0010	117	70-130%	115	70-130%	1.4	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:



Mark J. Johnson
Operations Manager

Date:

5-23-16

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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.: 160518GC8A2

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/18/16 16:24		5/18/16 17:08		5/18/16 17:22			
Analyst Initials:	AS		AS		AS			
Datafile:	18may028		18may031		18may032			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	82	70-130%	82	70-130%	0.3	<30
Carbon Dioxide	ND	0.010	91	70-130%	91	70-130%	0.4	<30
Oxygen/Argon	ND	0.50	100	70-130%	100	70-130%	0.4	<30
Nitrogen	ND	1.0	98	70-130%	99	70-130%	0.4	<30
Methane	ND	0.0010	113	70-130%	112	70-130%	0.9	<30
Carbon Monoxide	ND	0.0010	115	70-130%	114	70-130%	0.8	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:



Mark J. Johnson
Operations Manager

Date:

5-23-16

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.: 160519GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/19/16 12:28		5/19/16 14:39		5/19/16 14:53			
Analyst Initials:	AS		AS		AS			
Datafile:	19may006		19may015		19may016			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	102	70-130%	101	70-130%	1.5	<30
Carbon Dioxide	ND	0.010	97	70-130%	95	70-130%	1.6	<30
Oxygen/Argon	ND	0.50	96	70-130%	95	70-130%	1.6	<30
Nitrogen	ND	1.0	97	70-130%	96	70-130%	1.5	<30
Methane	ND	0.0010	103	70-130%	97	70-130%	6.1	<30
Carbon Monoxide	ND	0.0010	123	70-130%	121	70-130%	1.0	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:



Mark J. Johnson
Operations Manager

Date:

5-23-16

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.: 160519GC8A2

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	5/19/16 21:23		5/19/16 20:24		5/19/16 20:39			
Analyst Initials:	AS		AS		AS			
Datafile:	19may040		19may036		19may037			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	94	70-130%	92	70-130%	1.5	<30
Carbon Dioxide	ND	0.010	94	70-130%	93	70-130%	1.4	<30
Oxygen/Argon	ND	0.50	97	70-130%	96	70-130%	0.8	<30
Nitrogen	ND	1.0	97	70-130%	96	70-130%	0.9	<30
Methane	ND	0.0010	97	70-130%	95	70-130%	1.8	<30
Carbon Monoxide	ND	0.0010	122	70-130%	120	70-130%	1.4	<30

ND = Not Detected (Below RL)

Reviewed/Approved By:



Mark J. Johnson
Operations Manager

Date:

5-23-16

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 # 160520GC8A2
Matrix: Air
Units: % v/v


QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	5/20/2016 17:23		5/20/2016 17:14		5/20/2016 17:18			
Analyst Initials:	MJ		MJ		MJ			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	%Rec	Criteria	%Rec	Criteria	RPD	Criteria
Hydrogen	ND	0.01	91	70-130	91	70-130	0.3	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By:


Mark Johnson
Operations Manager

Date:

5/24/16

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



QC Batch # 160521GC8A1
Matrix: Air
Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	5/21/2016 15:56		5/21/2016 15:36		5/21/2016 15:51			
Analyst Initials:	MJ		MJ		MJ			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	%Rec	Criteria	%Rec	Criteria	RPD	Criteria
Hydrogen	ND	0.01	97	70-130	86	70-130	12.0	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date:

5-23-16

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

ATTACHMENT E

GAS WELLFIELD DATA

ATTACHMENT E-1
WELLFIELD DATA TABLE

May 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 ₂ O		
GEW-002	5/2/2016 14:56	53.6	42.1	1.1	3.2	120.0		52.79	52.79	-0.97	-0.97	-10.76
GEW-002	5/13/2016 9:10	55.5	41.0	0.3	3.2	120.2		188.22	186.07	-7.15	-7.06	-10.11
GEW-002	5/13/2016 9:22	55.1	41.1	0.1	3.7	121.4		91.37	92.41	-2.41	-2.44	-10.11
GEW-002	5/23/2016 9:50	53.3	42.6	0.0	4.1	128.0		56.73	61.19	-0.10	-0.11	2.18
GEW-002	5/23/2016 11:06	52.4	43.5	0.0	4.1	128.1		32.36	32.21	-0.17	-0.14	-9.23
GEW-003	5/2/2016 15:02	49.7	38.7	0.1	11.5	117.0		29.69	24.14	-1.57	-1.61	-10.34
GEW-003	5/2/2016 15:04	50.2	38.8	0.1	10.9	117.0		26.13	24.63	-1.38	-1.39	-10.09
GEW-003	5/13/2016 9:29	51.8	39.3	0.0	8.9	117.1		15.67	17.40	-0.83	-0.84	-9.35
GEW-003	5/13/2016 9:36	51.8	39.1	0.0	9.1	117.3		15.93	17.86	-0.80	-0.80	-8.85
GEW-003	5/16/2016 9:12	54.2	37.2	0.0	8.6	114.3		37.09	37.74	-0.92	-0.91	-10.16
GEW-003	5/23/2016 11:25	51.5	40.5	0.0	8.0	117.3		35.81	35.01	-0.58	-0.57	-8.10
GEW-003	5/23/2016 11:27	51.3	39.9	0.0	8.8	116.3		0.00	10.16	-0.44	-0.45	-8.64
GEW-003	5/31/2016 9:19	40.5	35.9	1.3	22.3	115.0		57.70	48.92	-6.26	-6.05	-9.69
GEW-003	5/31/2016 9:20	40.0	36.0	1.3	22.7	115.0		50.38	59.10	-6.00	-6.05	-9.61
GEW-004	5/2/2016 15:10	50.5	37.8	0.1	11.6	122.0		30.99	30.99	-1.18	-1.18	-10.40
GEW-004	5/2/2016 15:13	50.1	39.0	0.1	10.8	119.0		12.68	12.67	-1.11	-1.10	-11.01
GEW-004	5/13/2016 9:41	49.2	38.3	0.0	12.5	119.7		13.11	16.19	-0.62	-0.61	-9.69
GEW-004	5/13/2016 9:47	49.8	38.6	0.0	11.6	119.4		15.67	14.59	-0.61	-0.62	-9.56
GEW-004	5/16/2016 9:16	50.8	37.4	0.0	11.8	116.7		15.44	16.34	-0.67	-0.70	-10.34
GEW-004	5/23/2016 11:30	50.2	39.6	0.0	10.2	120.3		0.00	10.94	-0.34	-0.34	-8.52
GEW-004	5/31/2016 9:24	38.0	34.9	1.3	25.8	118.2		0.00	0.00	-2.11	-2.09	-11.33
GEW-005	5/2/2016 15:27	37.8	34.0	0.0	28.2			24.68	29.36	-0.89	-0.92	-11.38
GEW-005	5/2/2016 15:29	37.9	34.1	0.0	28.0			32.81	32.08	-0.79	-0.78	-10.64
GEW-005	5/13/2016 9:54	35.8	35.3	0.0	28.9	94.5		24.95	25.11	-0.58	-0.57	-9.23
GEW-005	5/13/2016 10:02	35.9	34.8	0.0	29.3	94.6		25.11	24.78	-0.62	-0.61	-9.02
GEW-005	5/16/2016 9:28	35.8	33.1	0.0	31.1	93.6		37.80	35.86	-0.70	-0.70	-10.28
GEW-005	5/23/2016 11:41	36.8	36.2	0.0	27.0	95.0		19.45	19.78	-0.37	-0.35	-8.14
GEW-005	5/31/2016 9:34	23.1	30.1	0.0	46.8	92.1		20.14	14.88	-1.20	-1.18	-10.49
GEW-006	5/2/2016 15:40	51.3	37.5	0.0	11.2	89.0		26.55	30.13	-0.74	-0.70	-10.40
GEW-006	5/12/2016 16:54	50.2	36.8	0.0	13.0	89.6		18.07	24.26	-0.71	-0.68	-9.19
GEW-006	5/12/2016 17:01	50.3	36.4	0.0	13.3	89.6		15.91	22.33	-0.66	-0.67	-9.35
GEW-006	5/16/2016 9:58	49.6	36.2	0.0	14.2	88.0		26.87	23.23	-0.62	-0.57	-9.91
GEW-006	5/23/2016 11:48	49.5	38.8	0.0	11.7	90.8		20.96	21.92	-0.40	-0.44	-8.05
GEW-006	5/23/2016 11:50	49.8	39.2	0.0	11.0	90.8		13.00	8.87	-0.34	-0.34	-8.35
GEW-006	5/31/2016 9:40	45.7	37.0	0.0	17.3	89.0		11.56	16.80	-0.93	-0.95	-11.24
GEW-007	5/2/2016 16:45	58.2	40.8	0.0	1.0	87.0		0.00	0.00	0.37	0.37	-10.64
GEW-007	5/2/2016 16:48	57.7	40.8	0.1	1.4	88.0		37.86	37.86	-0.45	-0.45	-10.64
GEW-007	5/12/2016 11:46	57.7	41.4	0.0	0.9	91.7		6.39	8.57	-1.26	-1.27	-10.40
GEW-007	5/12/2016 11:54	58.7	40.3	0.0	1.0	92.5		5.71	4.95	-1.30	-1.29	-10.40
GEW-007	5/16/2016 10:09	59.0	38.4	0.0	2.6	91.7		10.98	11.11	-1.04	-1.05	-10.65
GEW-007	5/23/2016 12:52	55.1	41.8	0.0	3.1	96.8		30.80	31.33	-0.20	-0.20	-7.55
GEW-007	5/31/2016 10:24	56.7	41.1	0.0	2.2	96.7		0.00	8.28	-1.37	-1.69	-11.12

May 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 ₂ O		
GEW-007	5/31/2016 10:25	57.0	40.8	0.0	2.2	97.1		19.02	20.75	-1.87	-1.87	-11.20
GEW-008	5/2/2016 16:37	50.5	46.4	0.0	3.1	112.0		12.61	15.68	0.13	0.14	-10.46
GEW-008	5/2/2016 16:39	50.6	46.4	0.0	3.0	112.0		17.62	16.57	-0.05	-0.09	-10.64
GEW-008	5/12/2016 11:35	51.3	45.3	0.0	3.4	112.0		17.18	15.94	-0.44	-0.44	-10.74
GEW-008	5/12/2016 11:41	51.3	45.7	0.0	3.0	112.5		12.48	16.94	-0.39	-0.39	-10.74
GEW-008	5/16/2016 10:13	50.7	43.5	0.0	5.8	109.9		15.00	14.98	-0.26	-0.28	-10.47
GEW-008	5/23/2016 12:47	50.6	43.8	0.0	5.6	113.8		0.00	0.00	0.14	0.14	-7.30
GEW-008	5/23/2016 12:48	48.6	45.7	0.0	5.7	114.3		7.36	5.44	-0.11	-0.11	-7.80
GEW-008	5/31/2016 10:20	50.6	42.6	0.0	6.8	112.8		14.36	11.92	-1.22	-1.22	-11.20
GEW-009	5/2/2016 16:32	54.0	42.9	0.0	3.1	126.0		0.00	0.00	-0.04	-0.04	-18.65
GEW-009	5/12/2016 11:23	54.3	42.7	0.0	3.0	123.2		4.96	11.46	-0.18	-0.18	-18.62
GEW-009	5/12/2016 11:29	54.6	41.9	0.0	3.5	123.7		32.29	31.77	-0.16	-0.16	-18.41
GEW-009	5/16/2016 10:17	53.8	42.8	0.0	3.4	123.2		8.46	9.27	-0.09	-0.10	-16.89
GEW-009	5/23/2016 12:55	53.6	41.8	0.0	4.6	127.5		0.00	0.00	0.07	0.07	-16.82
GEW-009	5/23/2016 12:57	52.0	43.4	0.0	4.6	128.6		2.22	0.00	-0.06	-0.05	-16.69
GEW-009	5/31/2016 10:18	49.9	41.0	0.0	9.1	121.2		33.65	32.91	-0.46	-0.47	-17.16
GEW-010	5/3/2016 10:05	46.5	47.1	0.1	6.3	81.4		4.24	4.18	-11.02	-10.90	-17.56
GEW-010	5/12/2016 11:14	44.7	47.1	0.6	7.6	74.7		0.00	1.14	-11.16	-11.16	-17.87
GEW-010	5/12/2016 11:18	45.7	46.8	0.6	6.9	75.2		2.80	1.14	-11.16	-11.16	-18.54
GEW-010	5/16/2016 11:19	46.3	45.6	1.1	7.0	68.7		4.78	3.96	-10.36	-10.40	-16.86
GEW-010	5/16/2016 11:20	46.7	46.1	1.1	6.1	67.4		3.08	4.51	-9.13	-9.18	-16.82
GEW-010	5/23/2016 13:01	43.4	44.8	1.2	10.6	98.4		2.33	2.33	-6.13	-6.22	-16.57
GEW-010	5/30/2016 11:23	55.4	44.0	0.6	0.0	98.9		1.59	1.94	-4.93	-4.93	-16.77
GEW-010	5/30/2016 11:25	55.4	44.0	0.6	0.0	98.5		1.59	2.98	-3.82	-3.80	-17.14
GEW-013A	5/5/2016 14:07	8.3	37.2	7.5	47.0	156.6				-2.85		-9.91
GEW-22R	5/10/2016 11:00	0.4	57.6	2.7	39.3	190.2				-15.68	-15.19	-15.85
GEW-22R	5/10/2016 11:07	0.4	59.2	2.6	37.8	190.2				-15.25	-16.11	-15.73
GEW-028R	5/10/2016 11:12	0.2	48.3	4.3	47.2	80.8		5.17	1.13	-15.62	-15.62	-15.36
GEW-028R	5/10/2016 11:18	0.1	48.3	4.3	47.3	83.4		1.13	5.51	-14.64	-15.25	-14.81
GEW-038	5/3/2016 10:32	0.6	53.5	2.9	43.0	78.2		11.09		-1.96		-14.87
GEW-038	5/12/2016 9:09	0.5	56.3	3.5	39.7	65.4		7.14	5.95	-2.41	-2.45	-15.44
GEW-038	5/12/2016 9:16	0.3	54.4	4.2	41.1	66.0		5.57	7.13	-2.40	-2.44	-16.11
GEW-038	5/16/2016 9:58	0.6	54.1	4.4	40.9	62.6		13.53	4.16	-0.94	-0.89	-13.13
GEW-038	5/16/2016 10:01	0.6	54.6	3.7	41.1	63.9		7.49	7.86	-0.21	-0.30	-13.80
GEW-038	5/23/2016 13:12	0.4	52.1	4.7	42.8	100.4		5.41	8.18	-1.64	-1.52	-13.55
GEW-038	5/30/2016 10:47	1.1	48.5	4.9	45.5	103.8		4.47	4.47	-2.74	-2.70	-11.38
GEW-038	5/30/2016 10:51	1.3	50.7	3.9	44.1	105.2		3.27	3.68	-1.14	-0.96	-10.71
GEW-039	5/3/2016 10:27	38.1	52.1	0.0	9.8	131.8				-0.68		-18.12
GEW-039	5/12/2016 9:52	35.6	51.3	0.0	13.1	132.1				-0.76	-0.76	-17.91
GEW-039	5/12/2016 9:59	36.6	51.3	0.0	12.1	132.1				-0.74	-0.74	-18.20
GEW-039	5/16/2016 10:18	39.8	48.6	0.0	11.6	130.8				-0.74	-0.74	-16.90
GEW-039	5/16/2016 10:18	39.9	48.9	0.0	11.2	130.9				-0.74	-0.74	-16.86
GEW-039	5/23/2016 13:18	37.1	52.3	0.1	10.5	133.2				-0.58	-0.58	-17.62

May 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 ₂ O		
GEW-039	5/23/2016 13:19	37.6	51.2	0.0	11.2	133.2				-0.58	-0.58	-17.20
GEW-039	5/30/2016 11:15	41.9	49.2	0.3	8.6	134.4				-0.69	-0.67	-16.77
GEW-039	5/30/2016 11:19	43.6	47.1	0.3	9.0	133.1				-0.04	-0.03	-16.71
GEW-040	5/2/2016 14:01	60.9	37.4	0.1	1.6	87.0		0.00	0.00	-0.41	-0.40	-10.64
GEW-040	5/9/2016 9:01	57.8	42.0	0.2	0.0	89.9		33.31	33.31	-0.50	-0.50	-10.34
GEW-040	5/9/2016 14:31	59.5	39.4	0.1	1.0	89.9		15.24	15.00	-0.50	-0.53	-10.21
GEW-040	5/9/2016 14:41	58.2	41.2	0.0	0.6	90.3		12.84	11.28	-0.51	-0.50	-10.28
GEW-040	5/16/2016 8:28	60.6	37.2	0.0	2.2	86.6		15.38	16.11	-0.20	-0.21	-6.61
GEW-040	5/23/2016 8:09	57.6	40.5	0.0	1.9	91.0		36.78	37.01	-0.34	-0.35	-10.19
GEW-040	5/31/2016 8:50	58.4	38.5	0.0	3.1	91.7		10.68	12.59	-0.53	-0.53	-10.95
GEW-041R	5/2/2016 14:06	57.6	40.3	0.1	2.0	107.0		16.18	6.61	-0.33	-0.34	-10.28
GEW-041R	5/9/2016 14:46	56.9	41.0	0.2	1.9	105.4		0.00	0.00	-0.37	-0.37	-10.52
GEW-041R	5/9/2016 14:54	57.3	41.1	0.2	1.4	105.4		19.85	20.21	-0.39	-0.39	-10.34
GEW-041R	5/16/2016 8:33	58.3	38.4	0.0	3.3	103.9		14.77	15.33	-0.27	-0.27	-7.04
GEW-041R	5/23/2016 8:19	56.9	40.2	0.1	2.8	107.1		15.43	15.95	-0.17	-0.17	-8.98
GEW-041R	5/31/2016 8:55	54.2	37.9	0.3	7.6	105.8		39.00	39.76	-0.43	-0.38	-7.47
GEW-042R	5/2/2016 14:12	55.7	42.8	0.0	1.5	89.0		9.51	8.24	0.45	0.42	0.49
GEW-042R	5/2/2016 14:14	55.5	42.9	0.0	1.6	89.0		9.11	8.69	0.53	0.52	0.37
GEW-042R	5/9/2016 14:57	55.3	43.0	0.1	1.6	91.3		10.62	10.26	0.53	0.53	0.49
GEW-042R	5/9/2016 15:05	56.6	42.2	0.1	1.1	91.1		14.51	13.15	0.51	0.53	0.49
GEW-042R	5/16/2016 8:40	55.9	41.6	0.0	2.5	75.4		9.44		0.56		0.61
GEW-042R	5/16/2016 8:41	56.3	41.0	0.0	2.7	83.8		10.00	6.20	0.39	0.41	0.43
GEW-042R	5/18/2016 12:02	57.3	42.7	0.0	0.0	83.2		0.00	0.00	0.92	0.96	1.10
GEW-042R	5/18/2016 12:07	58.0	41.9	0.1	0.0	82.3		0.00	0.00	1.07	1.07	1.29
GEW-042R	5/23/2016 8:22	56.2	40.8	0.0	3.0	91.0		6.43	0.00	1.09	1.09	0.59
GEW-042R	5/23/2016 8:29	55.8	40.9	0.0	3.3	92.7		0.00	0.00	1.10	1.11	0.67
GEW-042R	5/31/2016 8:59	55.4	39.0	0.0	5.6	113.7		17.16	20.51	-3.73	-3.67	-3.98
GEW-043R	5/2/2016 14:18	55.2	41.8	0.1	2.9	131.0		30.53	26.63	-1.10	-1.13	-11.01
GEW-043R	5/2/2016 14:20	55.0	42.7	0.1	2.2	130.0		21.25	25.49	-0.61	-0.61	-10.70
GEW-043R	5/9/2016 15:08	55.5	42.4	0.2	1.9	129.3		20.83	22.60	-0.48	-0.49	-10.40
GEW-043R	5/9/2016 15:17	56.1	42.3	0.2	1.4	129.6		28.24	28.24	-0.32	-0.32	-10.89
GEW-043R	5/16/2016 8:44	56.7	39.5	0.0	3.8	125.1		21.34	18.09	-0.72	-0.71	-10.65
GEW-043R	5/23/2016 8:34	55.1	41.1	0.0	3.8	124.5		27.73	29.17	-0.79	-0.80	-10.19
GEW-043R	5/23/2016 8:38	55.8	40.6	0.0	3.6	123.1		16.20	13.43	-0.31	-0.29	-10.40
GEW-043R	5/31/2016 9:02	54.4	40.0	0.0	5.6	121.5		4.59	6.49	-0.60	-0.58	-10.99
GEW-044	5/2/2016 14:24	56.5	40.6	0.1	2.8	78.0		44.67	44.18	-0.72	-0.71	-2.75
GEW-044	5/9/2016 15:22	57.5	40.5	0.1	1.9	82.3		0.00	0.00	-0.57	-0.57	-2.45
GEW-044	5/9/2016 15:27	57.8	40.4	0.1	1.7	82.8		0.00	0.00	-0.53	-0.52	-2.02
GEW-044	5/16/2016 8:51	57.8	39.8	0.0	2.4	75.5		0.00	0.00	-0.68	-0.70	-2.45
GEW-044	5/23/2016 8:42	54.2	39.9	0.0	5.9	82.9		8.73	7.24	-0.48	-0.45	-2.35
GEW-044	5/31/2016 9:06	54.3	39.4	0.0	6.3	90.4		9.01	5.26	-1.63	-1.64	-4.70
GEW-045R	5/2/2016 14:28	55.4	41.5	0.3	2.8	86.0		7.27	6.14	-0.76	-0.79	-10.34
GEW-045R	5/9/2016 15:33	54.6	42.4	0.4	2.6	89.9		6.70	9.87	-0.61	-0.59	-10.28

May 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 ₂ O		
GEW-045R	5/9/2016 15:40	56.1	41.5	0.3	2.1	90.3		10.60	11.93	-0.56	-0.56	-10.52
GEW-045R	5/16/2016 8:55	55.6	40.1	0.2	4.1	86.0		6.90	7.51	-0.64	-0.64	-10.47
GEW-045R	5/23/2016 8:47	55.3	41.2	0.0	3.5	91.0		10.32	11.80	-0.47	-0.47	-10.32
GEW-045R	5/31/2016 9:10	55.5	40.4	0.2	3.9	91.3		0.00		-1.21		-11.16
GEW-046R	5/2/2016 14:34	50.9	39.7	0.0	9.4	94.0		31.60	31.60	-0.51	-0.51	-10.89
GEW-046R	5/13/2016 10:10	53.3	37.5	0.0	9.2	97.5		0.00	0.00	-0.37	-0.38	-9.91
GEW-046R	5/13/2016 10:17	53.8	37.7	0.0	8.5	97.5		36.69	36.69	-0.39	-0.38	-9.85
GEW-046R	5/16/2016 9:00	52.7	39.9	0.0	7.4	95.0		8.56	8.56	-0.33	-0.33	-10.77
GEW-046R	5/23/2016 8:52	53.4	40.3	0.0	6.3	100.4		11.10	11.10	-0.07	-0.08	-10.36
GEW-046R	5/31/2016 9:14	48.3	38.3	0.7	12.7	92.8		0.00	0.00	-0.96	-0.95	-11.07
GEW-047R	5/2/2016 15:21	46.7	37.7	0.1	15.5	112.0		12.29	16.75	-0.87	-0.87	-10.64
GEW-047R	5/2/2016 15:24	47.0	37.7	0.1	15.2	111.0		26.17	25.89	-0.76	-0.76	-10.83
GEW-047R	5/13/2016 10:10	46.0	37.6	0.1	16.3	113.7		14.31	14.31	-0.57	-0.57	-9.35
GEW-047R	5/13/2016 10:16	45.9	38.3	0.0	15.8	113.7		11.45	11.09	-0.55	-0.56	-9.73
GEW-047R	5/16/2016 9:24	46.0	37.4	0.0	16.6	110.9		11.82	11.91	-0.63	-0.63	-10.65
GEW-047R	5/23/2016 11:37	47.7	40.4	0.0	11.9	114.8		0.00	0.00	-0.16	-0.17	-8.85
GEW-047R	5/31/2016 9:30	33.6	33.9	2.0	30.5	108.9		0.00	0.00	-0.95	-0.95	-10.91
GEW-048	5/2/2016 15:34	54.0	39.0	0.0	7.0	104.0		35.52	35.52	-0.90	-0.90	-9.42
GEW-048	5/2/2016 15:36	54.0	39.1	0.0	6.9	104.0		30.92	31.04	-0.74	-0.79	-7.28
GEW-048	5/13/2016 9:56	54.2	36.7	0.0	9.1	103.6		0.00	0.00	-0.63	-0.62	-7.41
GEW-048	5/13/2016 10:02	54.4	34.8	0.0	10.8	103.6		10.53	16.98	-0.62	-0.63	-4.90
GEW-048	5/16/2016 9:53	53.0	36.9	0.0	10.1	102.8		18.35	17.79	-0.68	-0.69	-9.36
GEW-048	5/23/2016 11:44	52.5	40.3	0.0	7.2	105.5		12.90	14.87	-0.33	-0.33	-4.49
GEW-048	5/31/2016 9:37	49.0	37.9	0.0	13.1	104.1		12.89	12.89	-1.10	-1.10	-9.52
GEW-049	5/2/2016 15:56	53.1	38.1	0.0	8.8	105.0		12.09	0.00	-0.02	-0.01	-3.06
GEW-049	5/13/2016 9:45	48.4	35.9	0.0	15.7	104.7		0.00	0.00	-0.10	-0.09	-2.08
GEW-049	5/13/2016 9:51	49.1	34.1	0.0	16.8	105.0		0.00	0.00	-0.10	-0.10	-1.71
GEW-049	5/16/2016 10:41	48.3	37.3	0.0	14.4	101.9		11.53	13.35	-0.13	-0.12	-2.33
GEW-049	5/23/2016 12:12	55.5	40.4	0.0	4.1	105.6		0.00	0.00	0.16	0.14	-0.67
GEW-049	5/23/2016 12:16	56.1	39.6	0.0	4.3	113.8		35.75	35.75	-0.06	-0.06	-0.50
GEW-049	5/31/2016 9:52	43.5	36.3	0.7	19.5	107.6		15.38		-1.44		-4.78
GEW-049	5/31/2016 9:53	43.8	36.8	0.7	18.7	107.2		11.37	13.40	-1.12	-1.12	-5.58
GEW-050	5/2/2016 15:48	55.6	37.5	0.0	6.9	102.0		11.18	12.72	-0.04	-0.04	-3.79
GEW-050	5/12/2016 16:43	56.4	38.2	0.0	5.4	103.1		38.86	40.00	-0.07	-0.11	-3.40
GEW-050	5/12/2016 16:49	56.3	38.2	0.0	5.5	103.0		0.00	0.00	-0.14	-0.14	-3.23
GEW-050	5/16/2016 10:02	56.9	37.0	0.0	6.1	100.8		13.08	13.64	-0.17	-0.16	-4.77
GEW-050	5/23/2016 11:58	55.0	40.3	0.0	4.7	104.8		26.83	27.29	0.11	0.10	-1.80
GEW-050	5/23/2016 12:02	54.4	40.7	0.0	4.9	107.3		0.00	0.00	-0.08	-0.05	-2.81
GEW-050	5/31/2016 9:43	49.3	37.5	0.0	13.2	107.0		31.84	31.04	-0.99	-0.98	-8.85
GEW-051	5/2/2016 16:01	54.5	42.2	0.0	3.3	119.0		0.00	0.00	0.43	0.43	-10.70
GEW-051	5/2/2016 16:03	54.6	42.2	0.0	3.2	119.0		22.90	18.19	-0.01	-0.04	-10.03
GEW-051	5/13/2016 9:23	55.5	40.0	0.0	4.5	125.0		0.00	0.00	-0.28	-0.28	-9.85

May 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 ₂ O		
GEW-051	5/13/2016 9:29	55.6	38.1	0.0	6.3	125.1		0.00	0.00	-0.26	-0.26	-9.79
GEW-051	5/16/2016 10:37	56.8	40.1	0.0	3.1	124.0		25.85	25.73	-0.22	-0.20	-10.77
GEW-051	5/23/2016 12:20	53.4	42.1	0.0	4.5	127.6		29.47	31.88	0.24	0.24	-8.52
GEW-051	5/23/2016 12:22	53.7	42.0	0.0	4.3	129.8		13.62	23.39	-0.07	-0.06	-7.76
GEW-051	5/31/2016 9:56	55.6	40.4	0.0	4.0	126.0		14.43	20.13	-1.39	-1.37	-10.57
GEW-052	5/2/2016 15:51	54.0	38.7	0.0	7.3	115.0		30.45	32.17	-0.03	-0.03	-11.07
GEW-052	5/12/2016 16:33	55.4	37.1	0.0	7.5	114.7		0.00	0.00	-0.15	-0.14	-10.28
GEW-052	5/12/2016 16:39	55.2	37.4	0.0	7.4	114.5		0.00	0.00	-0.13	-0.14	-9.94
GEW-052	5/16/2016 10:06	55.3	37.1	0.0	7.6	111.6		39.16	39.08	-0.19	-0.18	-10.40
GEW-052	5/23/2016 12:06	53.6	39.7	0.0	6.7	116.6		33.77	34.65	0.00	0.00	-8.39
GEW-052	5/23/2016 12:07	53.5	39.9	0.0	6.6	117.1		0.00	0.00	-0.10	-0.08	-8.18
GEW-052	5/31/2016 9:46	52.1	38.3	0.0	9.6	112.9		29.13	30.57	-0.52	-0.54	-11.12
GEW-053	5/2/2016 16:07	50.6	42.8	0.0	6.6	138.0		7.44	14.41	0.43	0.43	-11.01
GEW-053	5/2/2016 16:09	50.3	43.3	0.0	6.4	142.0		18.96	18.95	-0.03	-0.05	-10.58
GEW-053	5/13/2016 9:13	51.4	41.8	0.0	6.8	139.0		11.80	13.96	-0.33	-0.33	-10.04
GEW-053	5/13/2016 9:19	51.7	40.8	0.0	7.5	138.7		15.39	6.46	-0.33	-0.33	-9.79
GEW-053	5/16/2016 10:29	51.2	42.2	0.0	6.6	138.7		11.51	13.97	-0.23	-0.22	-10.34
GEW-053	5/16/2016 11:05	54.8	39.0	0.0	6.2	138.7		14.72	14.87	-0.29	-0.30	-10.47
GEW-053	5/23/2016 12:25	49.8	43.2	0.0	7.0	138.0		6.79	3.63	0.20	0.21	-8.18
GEW-053	5/23/2016 12:27	49.5	43.7	0.0	6.8	139.3		13.92	16.11	-0.12	-0.10	-8.05
GEW-053	5/31/2016 10:05	54.4	39.0	0.0	6.6	137.6		14.29	16.08	-1.40	-1.40	-10.99
GEW-053	5/31/2016 10:06	52.1	42.2	0.0	5.7	138.0		10.43	10.43	-1.41	-1.41	-11.28
GEW-054	5/2/2016 16:18	49.8	43.9	0.0	6.3	154.0		31.13	26.20	0.02	0.02	-9.66
GEW-054	5/2/2016 16:19	49.7	44.1	0.0	6.2	155.0		28.75	28.98	-0.04	-0.04	-10.40
GEW-054	5/13/2016 9:03	51.4	41.1	0.0	7.5	152.1		21.20	23.49	-0.40	-0.39	-9.55
GEW-054	5/13/2016 9:09	50.6	41.3	0.0	8.1	152.1		24.62	23.78	-0.40	-0.40	-9.24
GEW-054	5/16/2016 10:25	50.9	41.9	0.0	7.2	151.7		26.37	26.37	-0.35	-0.35	-9.79
GEW-054	5/23/2016 12:34	49.5	43.5	0.0	7.0	152.5		23.42	17.12	0.59	0.55	-7.01
GEW-054	5/23/2016 12:36	48.7	43.6	0.0	7.7	152.7		33.96	35.03	-0.24	-0.25	-6.38
GEW-054	5/31/2016 10:09	51.1	42.2	0.0	6.7	151.7		15.70	12.64	-1.13	-1.14	-8.52
GEW-054	5/31/2016 10:10	50.5	43.0	0.0	6.5	151.7		29.54	26.82	-1.12	-1.16	-7.51
GEW-055	5/2/2016 16:25	53.6	43.1	0.0	3.3	122.0		0.00	0.00	0.27	0.26	-10.70
GEW-055	5/2/2016 16:26	53.5	43.2	0.0	3.3	124.0		0.00	0.00	-0.02	-0.02	-10.28
GEW-055	5/13/2016 8:51	54.1	43.4	0.0	2.5	124.5		28.65	28.65	-0.29	-0.29	-9.42
GEW-055	5/13/2016 8:58	54.9	40.6	0.0	4.5	123.8		0.00	0.00	-0.27	-0.27	-9.42
GEW-055	5/16/2016 10:22	53.8	41.6	0.0	4.6	123.4		21.59	23.16	-0.29	-0.30	-10.77
GEW-055	5/23/2016 12:39	51.5	43.4	0.0	5.1	126.7		0.00	0.00	0.18	0.18	-7.51
GEW-055	5/23/2016 12:43	51.4	43.2	0.0	5.4	130.0		22.30	24.41	-0.16	-0.16	-7.84
GEW-055	5/31/2016 10:13	51.9	42.2	0.0	5.9	126.0		25.14	28.76	-1.26	-1.24	-11.12
GEW-056R	5/3/2016 10:18	13.3	41.5	0.0	45.2	154.5				-4.00		-12.12
GEW-056R	5/12/2016 11:04	12.5	42.3	0.3	44.9	153.9				-4.10	-4.09	-11.24
GEW-056R	5/12/2016 11:10	12.6	43.0	0.3	44.1	153.7				-4.11	-4.13	-13.51

May 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 ₂ O		
GEW-056R	5/16/2016 10:32	13.3	44.4	0.2	42.1	152.5				-3.84	-3.78	-10.44
GEW-056R	5/16/2016 10:34	13.3	44.0	0.1	42.6	152.5				-3.73	-3.74	-11.37
GEW-056R	5/23/2016 13:08	13.3	46.8	0.0	39.9	154.8				-3.37	-3.36	-10.32
GEW-056R	5/23/2016 13:08	13.3	47.2	0.1	39.4	154.5				-3.46	-3.38	-9.56
GEW-056R	5/30/2016 9:47	12.7	47.7	0.3	39.3	156.4				-3.35	-3.37	-10.53
GEW-056R	5/30/2016 9:48	12.7	46.8	0.4	40.1	156.5				-3.49	-3.43	-13.34
GEW-057B	5/5/2016 11:21	0.6	52.0	0.7	46.7	89.3				-7.78		-8.32
GEW-057R	5/9/2016 11:08	11.8	52.5	1.7	34.0	133.7				-10.72	-10.72	-11.14
GEW-057R	5/9/2016 11:14	11.9	50.6	1.7	35.8	133.3				-11.27	-11.21	-11.26
GEW-058	5/9/2016 10:54	5.4	51.0	0.8	42.8	179.8				-15.74	-15.43	-17.56
GEW-058	5/9/2016 11:02	6.2	50.5	0.8	42.5	179.8				-15.86	-15.62	-17.50
GEW-058A	5/9/2016 10:43	0.2	38.7	5.6	55.5	79.1				-7.16	-7.41	-8.38
GEW-058A	5/9/2016 10:50	0.2	41.9	6.6	51.3	79.2				-7.59	-7.35	-9.18
GEW-059R	5/9/2016 10:23	1.5	52.7	0.0	45.8	189.6				-3.25	-3.17	-3.24
GEW-059R	5/9/2016 10:36	1.0	53.9	0.0	45.1	189.6				-1.64	-1.79	-1.90
GEW-065A	5/9/2016 11:32	1.5	19.9	13.9	64.7	81.7				-10.41	-9.92	-10.65
GEW-065A	5/9/2016 11:40	1.8	18.3	14.8	65.1	81.9				-10.84	-10.96	-11.02
GEW-067A	5/5/2016 13:59	3.7	58.6	0.1	37.6	176.2		8.61		-8.70		-17.75
GEW-067A	5/13/2016 11:04	4.6	54.6	1.6	39.2	179.7				-2.69	-3.58	-15.60
GEW-067A	5/13/2016 11:07	3.6	59.5	0.3	36.6	171.1				-0.84	-0.44	-15.56
GEW-077	5/26/2016 11:28	0.5	62.3	0.0	37.2	111.6		283.36	275.26	-16.29	-15.31	-15.85
GEW-077	5/26/2016 11:31	0.6	62.6	0.1	36.7	111.2		276.61	278.81	-15.31	-15.62	-15.24
GEW-078R	5/26/2016 13:35	6.9	56.0	0.1	37.0	191.2				-10.53	-11.64	-10.47
GEW-078R	5/26/2016 13:36	7.4	53.9	0.1	38.6	191.6				-12.25	-11.70	-11.93
GEW-080	5/26/2016 13:50	0.3	3.4	2.2	94.1	92.9				-6.92	-6.86	-6.55
GEW-080	5/26/2016 13:53	0.4	2.5	2.9	94.2	95.0				-12.74	-13.23	-12.91
GEW-081	5/26/2016 14:07	1.5	60.1	0.0	38.4	125.8				48.99	48.99	49.33
GEW-081	5/26/2016 14:09	1.5	61.9	0.0	36.6	119.7				50.46	50.46	51.04
GEW-082R	5/10/2016 8:28	2.1	52.7	0.0	45.2	191.9				-12.92	-14.82	-13.16
GEW-082R	5/10/2016 8:34	2.0	53.7	0.1	44.2	192.1				-13.41	-13.84	-13.10
GEW-086	5/10/2016 8:16	15.3	52.3	0.0	32.4	64.6		2.82	3.72	-0.22	-0.23	-17.99
GEW-086	5/10/2016 8:22	15.7	49.4	0.1	34.8	64.1		3.52	3.91	-0.23	-0.23	-17.99
GEW-089	5/5/2016 11:12	3.7	15.1	16.8	64.4	71.7		2.31		-2.39		-17.26
GEW-090	5/10/2016 8:00	7.8	49.6	0.0	42.6	182.4		10.95	2.66	-6.00	-6.06	-18.85
GEW-090	5/10/2016 8:07	6.0	48.9	0.0	45.1	183.0		2.83	3.16	-5.70	-5.63	-18.73
GEW-102	5/9/2016 11:45	3.0	56.7	0.0	40.3	192.5				-14.88	-14.70	-15.12
GEW-102	5/9/2016 11:51	3.0	55.9	0.0	41.1	192.5				-14.08	-14.33	-14.75
GEW-104	5/27/2016 10:25	0.9	56.2	0.1	42.8	109.2				13.35	13.29	13.95
GEW-104	5/27/2016 10:26	0.8	57.6	0.0	41.6	110.0				15.31	15.25	15.97
GEW-105	5/27/2016 9:38	2.9	20.3	15.2	61.6	69.3				-18.06	-18.00	-17.69
GEW-105	5/27/2016 9:40	3.3	20.8	14.3	61.6	69.6				-18.06	-18.13	-17.75
GEW-107	5/10/2016 10:46	0.6	59.2	0.2	40.0	76.6				-17.33	-17.51	-17.50

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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 ₂ O		
GEW-107	5/10/2016 10:53	0.8	58.4	0.2	40.6	77.8		4.38	6.87	-17.33	-17.45	-17.56
GEW-108	5/5/2016 13:39	0.3	1.5	20.3	77.9	78.5		10.95		-17.76		-17.93
GEW-109	5/3/2016 10:23	8.3	55.8	0.0	35.9	87.1		2.63		-2.64		-18.05
GEW-109	5/12/2016 10:04	11.8	54.2	0.0	34.0	73.1		2.33	2.33	-5.75	-5.75	-17.99
GEW-109	5/12/2016 10:10	11.6	54.5	0.0	33.9	74.1		5.91	2.32	-6.00	-5.92	-18.41
GEW-109	5/16/2016 10:11	12.1	52.1	0.4	35.4	65.4		4.57	1.67	-5.79	-5.75	-16.99
GEW-109	5/16/2016 10:15	12.4	52.1	0.1	35.4	63.3		2.68	3.97	-1.18	-1.17	-17.07
GEW-109	5/23/2016 13:14	7.3	62.6	0.0	30.1	93.9		4.46	4.16	0.20	0.22	-16.57
GEW-109	5/23/2016 13:16	7.6	63.0	0.0	29.4	93.9		0.88	1.83	-0.28	-0.30	-16.90
GEW-109	5/30/2016 11:12	13.9	55.4	0.4	30.3	103.8		3.18	7.63	-0.48	-0.51	-17.20
GEW-110	5/3/2016 10:13	5.5	37.1	7.5	49.9	92.5		4.90	4.28	-0.06	-0.07	-17.63
GEW-110	5/12/2016 10:41	0.9	23.6	14.9	60.6	86.8		8.91	3.98	-0.09	-0.08	-18.25
GEW-110	5/12/2016 10:48	1.4	14.1	16.0	68.5	93.6		10.95	12.84	-0.24	-0.25	-19.38
GEW-110	5/16/2016 11:14	2.0	17.3	16.3	64.4	86.3		10.85	11.21	-0.18	-0.17	-17.03
GEW-110	5/16/2016 11:15	1.8	16.6	15.9	65.7	86.5		8.91	9.69	-0.17	-0.18	-16.95
GEW-110	5/23/2016 13:05	11.1	34.4	3.6	50.9	108.2		4.05	12.04	-0.16	-0.15	-17.45
GEW-110	5/30/2016 9:31	2.2	16.8	13.9	67.1	102.5		12.26	9.30	-0.13	-0.14	-16.89
GEW-110	5/30/2016 9:33	2.4	17.3	13.5	66.8	102.8		9.16	11.72	-0.11	-0.11	-17.20
GEW-112	5/27/2016 10:41	1.8	50.7	2.1	45.4	75.5				-10.23	-10.23	-10.77
GEW-113	5/27/2016 10:47	5.4	51.7	1.4	41.5	184.7				-11.15	-11.21	-15.79
GEW-113	5/27/2016 10:49	6.2	51.8	1.4	40.6	183.9				-11.70	-11.70	-16.46
GEW-116	5/10/2016 10:04	4.2	61.4	2.0	32.4	71.4		2.76	9.48	-8.02	-8.02	-16.46
GEW-116	5/10/2016 10:11	4.1	59.9	1.8	34.2	71.2		13.94	4.63	-6.74	-7.04	-16.03
GEW-117	5/10/2016 10:16	9.1	61.0	0.4	29.5	85.2				-15.68	-15.74	-15.85
GEW-117	5/10/2016 10:25	9.1	64.0	0.2	26.7	87.0				-16.17	-16.17	-16.34
GEW-118	5/10/2016 9:50	1.2	58.4	0.2	40.2	194.2				-15.31	-14.82	-15.18
GEW-118	5/10/2016 9:57	1.3	56.8	0.2	41.7	194.8				-14.39	-14.88	-14.87
GEW-120	5/2/2016 8:26	18.4	55.9	1.5	24.2	157.9				-16.66	-16.66	-16.83
GEW-120	5/11/2016 11:22	17.2	54.4	1.6	26.8	158.0				-15.68	-15.62	-15.79
GEW-120	5/11/2016 11:28	16.7	52.7	1.4	29.2	160.6				-15.49	-15.62	-15.54
GEW-120	5/24/2016 9:07	21.3	54.3	2.0	22.4	144.9				-14.45	-13.90	-14.26
GEW-120	5/24/2016 9:08	21.2	54.9	2.4	21.5	145.6				-12.86	-12.43	-12.79
GEW-121	5/2/2016 8:45	18.3	55.4	0.9	25.4	161.8				-16.66	-16.72	-16.71
GEW-121	5/2/2016 8:51	6.5	59.0	0.1	34.4	182.4				-15.25	-15.25	-16.71
GEW-121	5/2/2016 8:56	6.4	60.8	0.0	32.8	182.4				-15.31	-15.31	-16.65
GEW-121	5/11/2016 10:43	8.0	56.7	0.1	35.2	183.0		26.70	27.76	-14.76	-15.06	-15.85
GEW-121	5/11/2016 10:49	7.0	53.6	0.1	39.3	183.0		25.54	26.05	-14.70	-14.94	-15.85
GEW-121	5/24/2016 8:47	0.7	59.5	0.0	39.8	197.9		27.60	29.45	-13.04	-13.04	-14.26
GEW-121	5/24/2016 8:48	0.6	60.9	0.1	38.4	197.9		21.01	22.82	-13.90	-13.78	-14.01
GEW-122	5/2/2016 10:25	13.3	54.9	0.1	31.7	168.5				-17.15	-17.15	-17.56
GEW-122	5/2/2016 10:31	12.8	56.5	0.0	30.7	168.8				-17.39		-17.32
GEW-122	5/11/2016 8:52	15.3	52.5	0.0	32.2	167.1				-15.92	-15.86	-16.10

May 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 ₂ O		
GEW-122	5/11/2016 8:59	14.2	50.6	0.1	35.1	167.3				-16.29	-16.29	-16.40
GEW-122	5/24/2016 8:09	20.4	47.5	0.0	32.1	160.9				-15.92	-15.55	-15.73
GEW-122	5/24/2016 8:10	21.2	48.6	0.0	30.2	161.1				-15.92	-15.86	-15.79
GEW-123	5/2/2016 9:03	4.9	60.2	0.1	34.8	186.3				-16.29	-16.17	-16.34
GEW-123	5/2/2016 9:05	4.7	61.0	0.0	34.3	186.3				-16.47		-16.95
GEW-123	5/11/2016 10:16	5.6	56.5	0.1	37.8	187.9				-15.62	-15.68	-14.26
GEW-123	5/11/2016 10:25	4.6	57.3	0.1	38.0	187.9				-15.62	-15.49	-14.75
GEW-123	5/24/2016 8:35	20.7	57.0	0.0	22.3	84.4		13.45	9.99	-14.51	-14.88	-14.32
GEW-124	5/2/2016 9:36	0.0	4.8	21.6	73.6	63.0				-16.72	-17.21	-17.14
GEW-124	5/2/2016 9:40	0.0	2.7	21.9	75.4	64.0				-16.66		-17.56
GEW-124	5/11/2016 9:32	0.5	7.1	19.4	73.0	85.5		5.72	1.94	-14.70	-14.64	-14.87
GEW-124	5/11/2016 9:43	0.1	5.0	19.8	75.1	88.1		4.17	2.95	-15.13	-15.06	-14.75
GEW-124	5/24/2016 8:26	10.7	56.9	1.3	31.1	80.3		3.77	2.60	-13.53	-13.35	-14.75
GEW-125	5/2/2016 11:35	0.5	60.2	0.1	39.2	189.1				-16.78	-16.90	-17.63
GEW-125	5/2/2016 11:39	0.4	60.1	0.1	39.4	189.6				-12.31	-11.27	-17.56
GEW-125	5/11/2016 8:14	0.5	59.9	0.0	39.6	190.5				-9.55	-9.49	-15.73
GEW-125	5/11/2016 8:21	0.2	60.1	0.0	39.7	190.3				-7.96	-8.94	-15.42
GEW-125	5/23/2016 14:02	0.6	62.2	0.1	37.1	190.3		26.97	29.33	-4.67	-4.93	-14.50
GEW-126	5/2/2016 12:01	12.2	53.8	0.3	33.7	183.5				-16.41	-16.23	-17.63
GEW-126	5/2/2016 12:04	12.5	55.2	0.3	32.0	183.7				-17.15	-16.78	-17.38
GEW-126	5/10/2016 14:15	12.0	58.9	0.2	28.9	185.8		0.00	6.01	-13.47	-13.66	-13.89
GEW-126	5/10/2016 14:23	12.6	55.0	0.2	32.2	186.7		8.05	7.71	-13.72	-13.53	-14.08
GEW-126	5/23/2016 13:46	1.9	57.0	0.4	40.7	98.3		9.67	8.46	-12.74	-12.80	-12.48
GEW-127	5/2/2016 13:54	0.2	62.7	0.0	37.1	175.7				-17.70	-17.70	-18.12
GEW-127	5/2/2016 13:59	0.2	62.9	0.0	36.9	175.2				-17.76	-17.27	-18.05
GEW-127	5/10/2016 13:22	0.9	63.5	0.1	35.5	183.5		9.22	11.27	-14.64	-14.21	-14.63
GEW-127	5/10/2016 13:29	0.7	61.1	0.1	38.1	184.1		13.70	12.32	-13.90	-15.62	-13.83
GEW-127	5/23/2016 13:23	0.4	63.1	0.2	36.3	184.1		11.09	15.63	-12.80	-13.41	-13.04
GEW-128	5/2/2016 14:30	4.2	61.1	0.0	34.7	177.2				-17.27	-17.70	-18.05
GEW-128	5/2/2016 14:32	4.3	58.0	0.0	37.7	177.2				-16.72	-17.21	-17.07
GEW-128	5/10/2016 13:09	4.4	57.2	0.0	38.4	176.7				-15.25	-15.62	-15.48
GEW-128	5/10/2016 13:16	4.0	57.9	0.0	38.1	176.7				-15.68	-15.31	-15.48
GEW-128	5/23/2016 13:16	5.9	62.9	0.1	31.1	169.2				-13.78	-13.78	-14.08
GEW-129	5/2/2016 14:35	2.6	61.1	0.0	36.3	176.2				-17.39	-17.27	-17.81
GEW-129	5/2/2016 14:36	2.6	61.2	0.0	36.2	175.8				-17.70	-17.70	-18.12
GEW-129	5/10/2016 11:35	2.5	60.6	0.0	36.9	176.7				-14.39	-15.49	-13.95
GEW-129	5/10/2016 11:42	1.9	58.0	0.0	40.1	176.7				-15.13	-15.13	-15.12
GEW-129	5/23/2016 13:12	10.0	73.9	0.3	15.8	94.8		7.44	7.01	-7.90	-7.84	-14.20
GEW-130	5/2/2016 14:42	4.3	49.8	4.4	41.5	183.5		79.11	82.10	-2.49	-2.51	-18.73
GEW-130	5/2/2016 14:44	4.3	49.8	4.4	41.5	183.6		79.33	82.02	-2.37	-2.39	-18.73
GEW-130	5/10/2016 13:50	0.1	61.5	0.0	38.4	193.7		54.50	54.32	-0.20	-0.20	-15.06
GEW-130	5/10/2016 13:57	0.3	56.4	0.0	43.3	193.7		52.52	52.32	-0.24	-0.17	-15.67

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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 ₂ O		
GEW-130	5/23/2016 13:29	4.3	51.9	3.6	40.2	184.7		82.25	72.72	-7.41	-5.45	-13.95
GEW-130	5/23/2016 13:30	4.1	51.9	3.2	40.8	185.7		70.94	68.31	-5.45	-5.45	-14.08
GEW-131	5/2/2016 14:50	26.3	49.2	0.0	24.5	177.4				-8.51	-8.57	-9.24
GEW-131	5/2/2016 14:53	26.2	50.2	0.0	23.6	177.7				-8.02	-7.96	-8.57
GEW-131	5/11/2016 8:28	20.7	54.1	0.0	25.2	181.9				-4.34	-4.39	-4.77
GEW-131	5/11/2016 8:34	20.7	49.2	0.0	30.1	181.6				-4.34	-4.35	-4.53
GEW-131	5/23/2016 13:35	4.0	51.5	0.0	44.5	96.7				1.72	1.72	1.90
GEW-131	5/23/2016 13:36	3.7	51.0	0.0	45.3	98.9				1.72	1.73	1.90
GEW-132	5/2/2016 10:52	8.5	43.5	5.0	43.0	169.7				-6.37	-6.43	-17.56
GEW-132	5/2/2016 11:01	8.3	45.1	4.8	41.8	169.7				-4.85		-17.01
GEW-132	5/11/2016 11:11	9.8	45.0	3.8	41.4	163.6				-12.80	-14.45	-13.89
GEW-132	5/11/2016 11:17	9.3	42.8	3.7	44.2	163.6				-14.08	-14.21	-14.81
GEW-132	5/24/2016 9:00	9.7	52.6	2.7	35.0	162.1				-13.90	-9.25	-14.14
GEW-132	5/24/2016 9:02	10.7	49.1	2.8	37.4	161.6				-8.33		-13.77
GEW-133	5/2/2016 10:39	0.0	5.6	21.2	73.2	60.3		1.65	3.32	-17.39	-17.64	-17.56
GEW-133	5/2/2016 10:43	0.1	4.7	21.1	74.1	61.0		2.33		-17.21		-17.63
GEW-133	5/11/2016 11:34	0.2	13.0	17.3	69.5	95.8		110.13	110.11	-15.13	-15.19	-15.24
GEW-133	5/11/2016 11:41	0.2	12.0	16.9	70.9	98.3		110.01	110.16	-15.19	-15.13	-15.30
GEW-133	5/24/2016 9:13	0.7	20.1	17.1	62.1	87.0		3.17	4.20	-13.72	-13.84	-13.28
GEW-133	5/24/2016 9:14	0.2	12.6	18.0	69.2	89.2		2.95	3.16	-13.84	-13.90	-14.26
GEW-134	5/4/2016 9:56	8.2	32.8	10.6	48.4	118.9				-16.23		-16.71
GEW-134	5/12/2016 9:33	6.7	28.4	12.5	52.4	119.6				-17.27	-17.33	-17.07
GEW-134	5/12/2016 9:41	6.9	26.0	12.7	54.4	126.4				-16.78	-16.84	-16.95
GEW-134	5/24/2016 9:18	6.9	31.9	8.5	52.7	131.5				-11.64	-12.06	-11.87
GEW-134	5/24/2016 9:20	7.0	33.1	8.6	51.3	135.6				-12.00	-12.25	-12.79
GEW-135	5/4/2016 9:50	4.3	32.6	9.2	53.9	164.1				-12.80		-12.30
GEW-135	5/12/2016 9:23	4.9	35.5	8.5	51.1	164.1				-14.33	-13.35	-15.06
GEW-135	5/12/2016 9:29	5.1	33.0	8.6	53.3	166.4				-13.90	-14.33	-14.75
GEW-135	5/24/2016 9:23	4.8	31.5	8.9	54.8	151.0				-13.47	-7.65	-13.28
GEW-135	5/24/2016 9:26	4.6	31.2	9.8	54.4	150.7				-6.61	-6.61	-14.93
GEW-136	5/4/2016 9:45	3.6	26.5	11.0	58.9	117.5				-10.41		-10.47
GEW-136	5/12/2016 8:45	4.4	25.5	12.0	58.1	117.1				-10.47	-13.47	-10.77
GEW-136	5/12/2016 8:51	4.5	23.0	12.1	60.4	120.2				-13.84	-12.92	-13.77
GEW-136	5/24/2016 9:50	4.9	27.4	10.5	57.2	119.7				-14.21	-12.12	-14.32
GEW-136	5/24/2016 9:53	5.0	26.9	10.5	57.6	119.8				-10.96	-9.55	-10.34
GEW-137	5/4/2016 10:01	11.8	34.3	0.4	53.5	96.2				-11.21		-11.81
GEW-137	5/12/2016 8:33	11.2	35.2	0.2	53.4	94.8				-12.86	-13.41	-13.71
GEW-137	5/12/2016 8:40	12.0	31.5	0.2	56.3	94.8				-12.92	-13.47	-13.28
GEW-137	5/24/2016 9:42	11.3	33.5	0.1	55.1	103.3				-10.90	-9.55	-10.28
GEW-138	5/4/2016 10:07	12.5	48.2	1.2	38.1	137.3				-9.80		-10.28
GEW-138	5/12/2016 8:09	5.3	33.1	3.4	58.2	136.1				-9.37	-9.12	-9.36
GEW-138	5/12/2016 8:15	5.7	29.7	3.6	61.0	136.3				-8.02	-8.51	-8.14

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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 ₂ O		
GEW-138	5/24/2016 9:37	6.5	33.3	3.7	56.5	136.0				-9.06	-4.03	-9.36
GEW-138	5/24/2016 9:38	6.5	34.4	3.5	55.6	135.9				-4.44	-4.10	-9.67
GEW-139	5/2/2016 14:59	3.0	50.6	3.8	42.6	177.8				-11.76	-11.82	-16.59
GEW-139	5/2/2016 15:05	3.0	51.0	3.7	42.3	178.7				-9.92	-9.92	-16.16
GEW-139	5/10/2016 14:04	0.2	53.6	3.9	42.3	171.7		9.48	6.84	-15.13	-15.13	-15.12
GEW-139	5/10/2016 14:12	0.2	61.0	0.6	38.2	185.2		11.27	8.12	-14.51	-14.70	-14.63
GEW-139	5/12/2016 8:22	1.3	43.6	6.7	48.4	179.3		190.07	188.76	-10.47	-10.41	-15.73
GEW-139	5/12/2016 8:29	1.3	44.0	6.3	48.4	179.3		189.67	189.60	-10.47	-10.47	-15.42
GEW-139	5/23/2016 13:04	2.5	51.9	2.6	43.0	179.8				-7.78	-7.35	-12.85
GEW-139	5/23/2016 13:06	2.2	53.7	2.4	41.7	179.8				-7.53	-7.41	-12.12
GEW-140	5/4/2016 7:38	9.9	44.2	5.8	40.1	147.4				-16.23		-16.71
GEW-140	5/12/2016 13:37	9.3	40.9	6.1	43.7	160.1				-15.49	-15.49	-15.24
GEW-140	5/12/2016 13:44	8.7	40.3	6.3	44.7	163.6				-15.43	-15.06	-14.75
GEW-140	5/23/2016 9:37	8.9	46.9	5.0	39.2	156.1				-14.02	-11.76	-13.83
GEW-140	5/23/2016 9:39	8.9	46.4	5.1	39.6	156.2				-11.64	-11.57	-12.42
GEW-141	5/2/2016 15:13	0.5	59.9	0.0	39.6	71.2				-17.21	-17.21	-17.63
GEW-141	5/2/2016 15:16	0.5	60.0	0.0	39.5	72.4				-17.45	-17.27	-17.63
GEW-141	5/10/2016 11:22	0.3	59.7	0.0	40.0	101.9		10.99	3.77	-15.13	-15.13	-15.24
GEW-141	5/10/2016 11:30	0.4	60.7	0.0	38.9	103.2		13.49	9.01	-14.57	-15.19	-14.75
GEW-141	5/23/2016 10:06	0.5	55.4	0.0	44.1	104.3		9.92	8.73	-14.88	-14.33	-14.57
GEW-142	5/2/2016 15:20	0.1	5.0	21.4	73.5	61.1				-17.27	-17.21	-17.56
GEW-142	5/2/2016 15:23	0.0	2.8	21.8	75.4	61.6				-9.37	-9.37	-17.81
GEW-142	5/18/2016 10:29	0.2	26.6	12.8	60.4	72.6				-12.25	-11.88	-12.42
GEW-142	5/18/2016 10:31	0.1	33.5	11.0	55.4	73.6				-12.19	-12.25	-12.36
GEW-142	5/23/2016 10:02	0.2	34.5	10.0	55.3	94.6		2.53	2.44	-14.08	-13.90	-13.83
GEW-142	5/23/2016 10:03	0.2	36.7	9.4	53.7	94.5		4.79	0.55	-13.78	-13.17	-13.34
GEW-143	5/2/2016 15:42	0.5	47.4	4.4	47.7	61.9				-17.21	-17.21	-17.63
GEW-143	5/12/2016 17:37	0.3	47.3	3.9	48.5	82.1		3.12	6.39	-17.08	-17.21	-16.65
GEW-143	5/12/2016 17:38	0.3	52.1	2.8	44.8	82.6		6.38	6.94	-17.21	-17.25	-16.69
GEW-143	5/18/2016 10:48	0.6	44.8	6.9	47.7	71.7		7.58	6.54	-12.98	-12.68	-13.40
GEW-143	5/18/2016 10:54	0.1	22.2	11.6	66.1	71.6		11.79	5.92	-11.27	-11.33	-11.87
GEW-143	5/23/2016 9:50	0.7	44.1	6.7	48.5	91.1		6.92	1.76	-14.39	-13.29	-13.89
GEW-143	5/23/2016 9:52	0.7	47.6	4.0	47.7	91.1		2.43	3.82	-13.10	-13.04	-12.91
GEW-144	5/4/2016 7:45	0.6	54.4	2.3	42.7	73.8				-17.15		-17.56
GEW-144	5/12/2016 17:42	2.0	58.8	0.5	38.7	78.2		1.91	1.91	-17.21	-16.87	-16.74
GEW-144	5/18/2016 10:58	0.8	47.7	4.6	46.9	75.8		6.41	7.89	-11.64	-11.64	-11.75
GEW-144	5/18/2016 11:03	0.6	47.9	4.9	46.6	76.1		6.36	1.98	-14.15	-14.21	-14.32
GEW-144	5/23/2016 9:45	4.8	37.1	4.7	53.4	102.8		5.89	3.96	-13.84	-13.53	-13.77
GEW-144	5/23/2016 9:46	5.5	40.2	3.1	51.2	101.3		5.86	13.65	-13.53	-13.35	-13.34
GEW-145	5/4/2016 7:50	1.4	56.9	0.0	41.7	144.5				-17.15		-17.50
GEW-145	5/18/2016 10:05	1.7	56.8	0.0	41.5	154.9				-16.66	-16.66	-17.01
GEW-145	5/18/2016 10:12	1.8	58.5	0.0	39.7	150.9				-16.23	-16.23	-16.52

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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 ₂ O		
GEW-145	5/23/2016 9:25	1.8	56.6	0.0	41.6	163.6				-15.55	-15.98	-15.30
GEW-146	5/4/2016 10:29	4.9	23.9	9.9	61.3	85.3				-11.76		-13.22
GEW-146	5/12/2016 9:47	3.2	16.0	12.7	68.1	89.3				-12.37	-12.37	-13.22
GEW-146	5/12/2016 9:53	3.2	14.0	12.9	69.9	89.7				-11.45	-11.64	-12.42
GEW-146	5/24/2016 10:06	4.7	26.9	8.5	59.9	93.6				-12.55	-3.69	-13.95
GEW-146	5/24/2016 10:07	4.9	24.2	8.8	62.1	94.1				-3.50	-3.34	-16.83
GEW-147	5/4/2016 9:40	10.7	52.7	0.1	36.5	189.6		97.94		-16.35		-17.01
GEW-147	5/12/2016 9:11	11.1	53.0	0.0	35.9	189.1		100.13	100.75	-17.76	-17.76	-17.44
GEW-147	5/12/2016 9:17	11.4	52.0	0.0	36.6	189.3		96.16	99.73	-16.29	-17.45	-16.34
GEW-147	5/24/2016 9:57	13.8	50.3	0.0	35.9	174.2				-16.29	-16.29	-16.22
GEW-147	5/24/2016 10:00	13.5	53.2	0.0	33.3	174.2				-15.80	-15.98	-15.30
GEW-148	5/4/2016 9:31	0.0	1.2	22.2	76.6	75.0		5.91		-17.15		-17.63
GEW-148	5/12/2016 10:26	4.8	53.5	0.4	41.3	70.3		5.85		-17.33		-17.50
GEW-148	5/12/2016 10:32	4.2	53.3	0.3	42.2	70.5		8.02	4.43	-17.39	-17.76	-17.69
GEW-148	5/24/2016 10:19	0.2	3.9	21.1	74.8	91.5		6.43	7.08	-17.33	-16.11	-17.20
GEW-148	5/24/2016 10:20	0.2	1.2	21.5	77.1	92.5		6.44	6.05	-15.92	-15.74	-16.22
GEW-149	5/4/2016 9:04	10.4	50.9	3.5	35.2	167.4		12.86		-0.58		-18.42
GEW-149	5/12/2016 10:39	8.7	43.6	5.6	42.1	149.3		22.17	18.04	-0.63	-0.79	-19.71
GEW-149	5/12/2016 10:46	10.4	43.0	5.1	41.5	150.1		16.33	21.27	-0.67	-0.69	-17.81
GEW-149	5/24/2016 10:26	6.7	30.5	10.1	52.7	139.0		22.47	16.71	-0.74	-0.46	-17.93
GEW-149	5/24/2016 10:28	6.5	32.6	9.7	51.2	137.7		16.91	16.23	-0.51	-0.51	-17.99
GEW-150	5/4/2016 8:04	14.7	56.8	0.8	27.7	159.2				-16.72		-17.75
GEW-150	5/12/2016 14:21	11.8	54.8	2.1	31.3	145.5				-9.37	-9.37	-14.50
GEW-150	5/12/2016 14:30	11.2	54.5	2.0	32.3	143.6				-10.04	-10.17	-14.69
GEW-150	5/23/2016 8:42	15.6	47.8	4.0	32.6	142.2				-11.08	-10.90	-14.75
GEW-150	5/23/2016 8:43	15.4	48.0	3.9	32.7	146.6				-10.96	-10.96	-14.63
GEW-151	5/4/2016 9:21	5.6	26.9	10.6	56.9	73.8		3.53	0.57	-17.70	-17.21	-18.12
GEW-151	5/12/2016 10:00	0.3	6.7	19.7	73.3	69.4		3.04	11.60	-17.27	-17.27	-17.14
GEW-151	5/12/2016 10:06	0.1	5.1	20.4	74.4	70.0		4.29	7.52	-17.33	-17.27	-17.14
GEW-151	5/24/2016 10:13	2.3	9.1	18.0	70.6	92.7		4.66	4.66	-17.64	-17.64	-17.69
GEW-151	5/24/2016 10:15	2.2	10.0	17.2	70.6	93.1		5.28	5.27	-16.96	-17.39	-16.71
GEW-152	5/4/2016 8:31	11.9	14.3	11.3	62.5	68.3		1.00	2.20	-17.21	-17.64	-17.69
GEW-152	5/4/2016 8:33	12.1	13.6	11.3	63.0	68.5		7.63		-17.15		-17.63
GEW-152	5/18/2016 9:12	9.9	55.2	0.0	34.9	132.6		11.05	10.16	-17.27	-17.21	-18.30
GEW-152	5/18/2016 9:17	10.6	53.9	0.1	35.4	130.8		11.09	8.49	-17.15	-17.15	-18.30
GEW-152	5/23/2016 8:30	12.3	49.2	0.0	38.5	167.3		10.62	11.73	-15.98	-16.53	-17.32
GEW-152	5/23/2016 8:31	10.5	53.5	0.0	36.0	167.8		13.03	13.13	-16.53	-16.53	-17.69
GEW-153	5/4/2016 8:39	21.9	46.6	0.0	31.5	133.0		21.03		-15.55		-17.93
GEW-153	5/13/2016 8:25	22.6	47.8	0.0	29.6	157.9		20.80	11.07	-8.76	-8.39	-16.52
GEW-153	5/13/2016 8:32	22.2	47.9	0.0	29.9	157.5		12.08	20.56	-8.63	-8.88	-16.71
GEW-153	5/23/2016 8:25	25.9	44.7	0.0	29.4	156.2		22.32	20.98	-9.55	-10.17	-17.38
GEW-153	5/23/2016 8:26	25.7	49.1	0.0	25.2	156.6		26.73	27.35	-10.53	-10.53	-17.69

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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 ₂ O		
GEW-154	5/4/2016 9:10	8.1	21.6	13.9	56.4	130.2		28.30	1.89	-14.21	-4.23	-17.44
GEW-154	5/4/2016 9:12	5.8	18.3	13.8	62.1	111.3		2.72	2.59	-3.32	-3.32	-17.56
GEW-154	5/12/2016 11:01	12.0	31.7	10.1	46.2	150.1		4.52	3.88	-1.15	-1.17	-16.89
GEW-154	5/12/2016 11:07	12.6	29.0	10.3	48.1	151.0		4.86	3.88	-1.17	-1.20	-15.97
GEW-154	5/24/2016 10:36	11.0	22.0	12.9	54.1	128.0		7.05	5.36	-1.73	-1.04	-16.95
GEW-154	5/24/2016 10:37	11.7	19.7	13.0	55.6	121.8		1.09	3.27	-0.77	-0.77	-17.20
GEW-155	5/2/2016 11:07	7.7	44.4	0.3	47.6	162.1				-0.44	-0.45	-6.55
GEW-155	5/2/2016 11:10	8.1	44.6	0.2	47.1	162.3				-0.48	-0.46	-7.83
GEW-155	5/11/2016 13:14	7.9	46.8	0.1	45.2	175.2				-0.60	-0.61	-6.79
GEW-155	5/12/2016 7:57	6.7	41.9	0.2	51.2	171.7				-0.73	-0.74	-2.63
GEW-155	5/12/2016 8:03	6.5	45.0	0.2	48.3	172.2				-0.74	-0.73	-5.94
GEW-155	5/18/2016 11:13	4.6	51.3	0.4	43.7	163.6				-0.42	-0.43	-0.86
GEW-155	5/18/2016 11:18	4.6	49.9	0.3	45.2	165.5				-0.40	-0.41	-0.55
GEW-155	5/24/2016 8:54	2.1	51.2	0.0	46.7	185.1				-0.34	-0.33	-1.04
GEW-155	5/24/2016 8:55	1.9	54.5	0.0	43.6	185.1				-0.45	-0.46	-1.22
GEW-156	5/4/2016 10:40	9.5	32.5	9.4	48.6	91.4				-17.02		-17.50
GEW-156	5/12/2016 14:03	6.8	25.9	10.5	56.8	119.1				-16.47	-16.41	-16.65
GEW-156	5/12/2016 14:09	6.5	19.4	11.5	62.6	120.4				-15.98	-16.41	-16.10
GEW-156	5/24/2016 11:16	8.7	20.0	10.3	61.0	119.4				-16.72	-4.72	-17.32
GEW-156	5/24/2016 11:18	7.4	19.8	10.6	62.2	122.1				-3.39	-3.36	-17.87
GEW-157	5/4/2016 7:59	0.1	36.2	9.6	54.1	74.5		0.59		-2.25		-2.45
GEW-157	5/23/2016 8:36	0.2	24.3	14.6	60.9	92.3		7.23	1.94	-3.76	-3.38	-3.55
GEW-157	5/23/2016 8:37	0.2	23.3	14.5	62.0	93.6		2.73	8.35	-2.93	-2.65	-2.94
GEW-158	5/4/2016 8:21	3.8	19.6	15.4	61.2	71.7		6.03	2.55	-18.62	-18.62	-19.09
GEW-158	5/4/2016 8:23	3.6	15.5	16.5	64.4	72.4		11.51	10.07	-18.13	-17.70	-18.12
GEW-158	5/18/2016 9:24	1.1	42.6	6.1	50.2	69.9		6.77	5.25	-18.06	-18.13	-16.34
GEW-158	5/18/2016 9:32	0.9	48.0	3.6	47.5	73.4		2.54	3.41	-18.13	-18.13	-18.30
GEW-158	5/23/2016 8:47	0.8	53.7	0.0	45.5	88.6		8.77	6.85	-17.64	-17.51	-17.50
GEW-159	5/4/2016 8:44	20.2	55.3	0.0	24.5	138.7		13.54		-15.19		-15.73
GEW-159	5/13/2016 8:38	17.9	50.8	0.0	31.3	154.1		20.21	8.93	-14.64	-13.96	-15.18
GEW-159	5/13/2016 8:45	18.4	47.8	0.0	33.8	153.5		10.71	12.07	-14.27	-14.21	-14.38
GEW-159	5/23/2016 8:21	3.2	21.2	12.7	62.9	90.7		5.63	3.20	-15.49	-15.49	-15.24
GEW-159	5/23/2016 8:22	3.7	26.3	11.0	59.0	91.5		4.46	3.46	-15.55	-15.49	-15.24
GEW-160	5/4/2016 8:51	2.8	58.1	0.0	39.1	186.3		9.89		-14.45		-15.30
GEW-160	5/12/2016 11:22	3.4	56.9	0.0	39.7	151.7		8.57	20.57	-14.57	-14.82	-14.63
GEW-160	5/12/2016 11:28	3.7	56.9	0.0	39.4	158.3		11.76	11.52	-14.39	-14.39	-14.38
GEW-160	5/24/2016 10:41	6.4	53.0	0.8	39.8	98.4		20.97	24.28	-17.94	-16.96	-18.24
GEW-161	5/4/2016 8:55	3.2	41.2	3.6	52.0	86.9		2.75		-15.19		-15.67
GEW-161	5/12/2016 11:13	1.9	33.8	4.2	60.1	70.3		4.62	4.32	-14.51	-14.45	-14.26
GEW-161	5/12/2016 11:19	3.6	38.4	5.3	52.7	71.5		3.65	4.47	-15.00	-15.00	-14.75
GEW-161	5/24/2016 10:43	1.5	16.0	15.9	66.6	96.2		3.94	3.45	-17.21	-17.58	-17.20
GEW-161	5/24/2016 10:45	2.8	20.1	12.9	64.2	96.7		2.89	3.09	-16.96	-17.15	-16.95
GEW-162	5/4/2016 9:00	13.5	59.9	1.0	25.6	80.6		11.80		-17.21		-17.63

May 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 ₂ O		
GEW-162	5/12/2016 10:50	18.8	60.2	0.6	20.4	72.2		23.93	15.60	-17.76	-17.88	-17.87
GEW-162	5/12/2016 10:56	17.8	58.3	0.6	23.3	72.0		14.39	9.88	-17.82	-17.82	-17.44
GEW-162	5/24/2016 10:31	19.3	56.6	0.7	23.4	94.8		11.29	14.75	-17.09	-17.09	-16.77
GEW-163	5/2/2016 9:21	8.8	47.6	6.2	37.4	167.3		19.44	19.43	-15.06	-15.19	-17.50
GEW-163	5/2/2016 9:30	8.2	48.4	6.0	37.4	168.1		17.89	17.36	-12.25	-12.25	-18.05
GEW-163	5/11/2016 10:30	7.1	47.3	6.0	39.6	167.3		52.44	47.72	-9.49	-9.43	-16.52
GEW-163	5/11/2016 10:36	7.4	45.0	5.9	41.7	168.3		46.94	45.15	-9.43	-9.43	-16.71
GEW-163	5/24/2016 8:39	6.8	50.1	4.5	38.6	170.0		45.42	44.75	-8.14	-7.59	-14.69
GEW-163	5/24/2016 8:40	6.7	50.7	4.4	38.2	170.0		43.12	37.81	-7.53	-7.53	-15.36
GEW-164	5/2/2016 9:14	36.9	46.4	1.2	15.5	59.1		4.69	7.77	-17.15	-17.21	-17.32
GEW-164	5/11/2016 9:48	7.2	63.4	2.0	27.4	126.6		13.10	16.23	-15.13	-15.13	-14.93
GEW-164	5/11/2016 9:55	6.7	64.6	1.0	27.7	125.8		6.07	12.13	-15.19	-15.37	-15.18
GEW-164	5/24/2016 8:30	7.8	68.9	0.0	23.3	170.6		4.62	32.56	-14.08	-14.08	-13.83
GEW-164	5/24/2016 8:31	7.8	67.8	0.0	24.4	171.6		13.62	18.13	-14.45	-14.39	-14.32
GEW-165	5/2/2016 9:52	1.6	66.9	0.5	31.0	181.4		4.02	14.83	-17.02	-17.39	-17.50
GEW-165	5/2/2016 9:56	1.6	65.5	0.5	32.4	181.9		13.81		-17.70		-17.44
GEW-165	5/11/2016 9:17	1.5	64.4	0.5	33.6	186.3		7.46	10.31	-14.64	-14.64	-14.87
GEW-165	5/11/2016 9:24	1.3	65.1	0.5	33.1	185.9		9.28	13.12	-14.70	-14.70	-14.93
GEW-165	5/24/2016 8:19	1.3	63.9	0.0	34.8	191.6		22.98	20.70	-14.39	-14.39	-14.69
GEW-165	5/24/2016 8:21	1.2	65.8	0.0	33.0	191.6		19.61	25.87	-13.96	-13.90	-14.26
GEW-166	5/2/2016 10:01	2.5	58.1	0.9	38.5	166.9		83.83		-11.27		-18.05
GEW-166	5/2/2016 10:05	2.5	59.7	0.9	36.9	166.9		72.70	73.01	-12.43	-12.74	-17.75
GEW-166	5/11/2016 9:05	2.1	57.1	1.1	39.7	181.4		85.47	85.55	-7.96	-8.02	-14.63
GEW-166	5/11/2016 9:12	1.4	57.1	1.2	40.3	181.4		92.29	75.31	-7.96	-7.90	-15.79
GEW-166	5/24/2016 8:14	3.8	55.4	0.9	39.9	174.7		62.67	66.84	-10.47	-10.47	-15.18
GEW-166	5/24/2016 8:16	3.6	56.5	0.8	39.1	174.7		61.76	64.85	-10.47	-10.23	-14.99
GEW-167	5/2/2016 11:19	4.7	44.1	5.9	45.3	174.6		41.47	39.26	-4.70	-4.67	-18.97
GEW-167	5/2/2016 11:27	4.5	45.0	5.7	44.8	176.2		38.21	41.27	-3.54	-3.49	-18.12
GEW-167	5/11/2016 8:40	4.9	37.3	7.8	50.0	179.6		74.37	82.26	-2.85	-2.91	-16.34
GEW-167	5/11/2016 8:47	5.1	36.6	7.9	50.4	179.8		81.23	77.03	-3.05	-3.01	-16.03
GEW-167	5/24/2016 8:04	4.6	40.7	5.6	49.1	178.6		73.05	69.17	-2.72	-2.54	-16.40
GEW-167	5/24/2016 8:05	4.5	43.2	5.4	46.9	179.7		75.02	72.44	-2.20	-2.25	-14.32
GEW-168	5/2/2016 12:09	0.5	63.0	0.3	36.2	157.0		1.71	2.03	-17.27	-17.15	-17.38
GEW-168	5/2/2016 12:13	0.5	62.2	0.3	37.0	147.0		1.00		-16.23		-16.16
GEW-168	5/11/2016 7:56	0.5	66.4	0.0	33.1	103.6		11.22	9.62	-14.39	-14.39	-14.63
GEW-168	5/11/2016 8:07	0.4	60.6	0.2	38.8	105.0		2.70	11.77	-14.33	-14.33	-14.14
GEW-168	5/23/2016 13:55	0.0	40.0	6.6	53.4	120.6		16.12	18.68	-12.49	-12.37	-12.67
GEW-168	5/23/2016 13:56	0.8	60.1	2.4	36.7	121.8		5.61	20.55	-12.86	-12.80	-12.73
GEW-169	5/2/2016 12:18	0.2	63.7	0.1	36.0	190.8		4.49	2.62	-16.41	-16.35	-16.65
GEW-169	5/2/2016 12:22	0.2	64.4	0.1	35.3	191.3		7.43	6.06	-16.72	-16.84	-17.01
GEW-169	5/23/2016 13:50	0.3	63.0	0.2	36.5	191.4		14.74	14.74	-11.76	-11.76	-11.81

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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 ₂ O		
GEW-170	5/2/2016 14:08	7.2	61.8	0.5	30.5	183.5		41.11	41.79	-13.84	-13.78	-17.69
GEW-170	5/2/2016 14:17	7.1	60.8	0.5	31.6	183.9		41.80	40.81	-13.78	-13.78	-17.69
GEW-170	5/10/2016 13:36	0.9	63.0	0.1	36.0	185.7		23.97	26.59	-12.25	-12.49	-12.73
GEW-170	5/10/2016 13:43	1.1	63.9	0.1	34.9	185.8		18.28	3.93	-11.76	-11.94	-12.18
GEW-170	5/23/2016 13:19	5.7	61.2	0.6	32.5	181.4		95.81	109.97	-4.83	-5.45	-11.32
GEW-171	5/2/2016 15:36	1.6	52.9	2.4	43.1	63.0		6.37	3.68	-17.21	-17.21	-17.63
GEW-171	5/18/2016 10:35	1.5	47.2	7.3	44.0	83.0		24.39	18.27	-12.25	-12.12	-12.61
GEW-171	5/18/2016 10:42	0.9	31.4	10.0	57.7	83.8		24.47	19.01	-12.68	-12.37	-13.22
GEW-171	5/23/2016 9:55	2.3	45.2	6.3	46.2	97.9		7.27	9.99	-13.72	-12.61	-13.34
GEW-171	5/23/2016 9:56	2.2	51.1	2.5	44.2	100.4		16.40	20.11	-13.59	-13.53	-13.28
GEW-172	5/4/2016 10:20	0.1	52.4	0.3	47.2	80.2		2.68		-15.74		-16.22
GEW-172	5/18/2016 10:18	0.1	41.0	6.1	52.8	79.3		8.92	11.10	-15.31	-15.19	-15.36
GEW-172	5/18/2016 10:24	0.2	32.0	10.2	57.6	79.7		5.39	7.13	-14.33	-14.64	-14.75
GEW-172	5/23/2016 10:11	0.0	38.5	2.8	58.7	119.9		23.37	13.46	-14.33	-14.08	-14.01
GEW-172	5/23/2016 10:12	0.3	51.1	2.8	45.8	116.5		10.49	19.21	-14.02	-13.59	-13.83
GEW-173	5/4/2016 10:12	15.2	51.2	2.6	31.0	117.4		14.66		-15.19		-17.14
GEW-173	5/12/2016 13:09	13.2	45.3	2.3	39.2	102.4		42.21	44.27	-9.61	-9.61	-16.40
GEW-173	5/12/2016 13:16	12.2	46.2	2.2	39.4	102.6		31.94	44.79	-9.61	-9.61	-16.34
GEW-173	5/23/2016 9:34	15.0	55.3	1.1	28.6	101.1		47.81	46.81	-6.74	-7.04	-16.10
GEW-174	5/4/2016 10:35	12.0	50.5	0.0	37.5	174.6		47.65		-6.37		-7.96
GEW-174	5/12/2016 13:50	11.2	50.3	0.0	38.5	173.6		57.06	55.61	-7.59	-7.59	-8.81
GEW-174	5/12/2016 13:58	10.6	49.7	0.1	39.6	173.9		53.79	51.51	-7.59	-7.59	-8.69
GEW-174	5/23/2016 9:29	10.8	52.7	0.0	36.5	173.1		63.53	52.72	-7.16	-6.98	-8.63
GEW-175	5/4/2016 8:09	17.4	59.8	0.2	22.6	125.5		75.78		-16.17		-17.32
GEW-175	5/18/2016 9:39	18.1	50.8	3.5	27.6	125.0		107.11	101.94	-14.64	-14.64	-16.10
GEW-175	5/18/2016 9:45	18.6	49.3	3.4	28.7	125.1		103.10	105.46	-14.64	-14.64	-16.40
GEW-175	5/23/2016 8:51	19.0	55.7	1.5	23.8	127.8		95.93	95.21	-14.33	-14.51	-15.36
GEW-176	5/4/2016 8:14	5.3	58.3	0.0	36.4	68.8		4.74		-17.64		-18.12
GEW-176	5/18/2016 9:49	7.7	59.2	0.0	33.1	71.7		1.20	1.20	1.27	1.27	-17.26
GEW-176	5/18/2016 9:55	6.9	58.1	0.0	35.0	71.0		2.68	2.08	1.27	1.27	-17.75
GEW-176	5/23/2016 8:56	7.1	57.9	0.0	35.0	87.8		8.01	7.89	-2.80	-2.84	-16.40
GEW-176	5/23/2016 8:57	6.7	60.5	0.0	32.8	89.5		7.35	8.27	-4.13	-4.13	-16.71
GEW-1A	5/2/2016 14:41	0.1	1.8	20.9	77.2	61.0		9.13	12.27	-1.10	-1.15	-10.83
GEW-1A	5/2/2016 14:42	0.2	1.2	21.0	77.6	61.0		4.01	3.82	-0.71	-1.28	-10.40
GEW-1A	5/13/2016 10:37	0.1	1.8	21.3	76.8	75.5		9.83	5.88	0.46	0.40	-9.31
GEW-1A	5/13/2016 10:40	0.4	1.0	21.2	77.4	75.7		11.11	6.20	-0.86	-0.75	-9.65
GEW-1A	5/16/2016 10:53	2.0	7.3	21.5	69.2	59.6		4.83	4.54	-10.35	-10.35	-10.40
GEW-1A	5/16/2016 10:56	2.2	4.4	20.7	72.7	61.0		4.60	3.14	-10.35	-10.35	-10.71
GEW-1A	5/23/2016 9:14	0.1	2.2	21.6	76.1	88.4		11.12	8.11	-0.02	-0.03	-0.38
GEW-1A	5/23/2016 9:15	0.2	1.9	20.4	77.5	88.7		17.38	12.50	-0.02	-0.03	-0.08
GEW-1A	5/23/2016 11:18	0.2	1.9	21.6	76.3	95.9		15.48	5.70	-0.12	-0.13	-8.77
GEW-1A	5/31/2016 10:11	0.0	2.0	21.7	76.3	80.5		9.16	9.14	-0.44	-1.30	-11.02

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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 ₂ O		
GEW-1A	5/31/2016 10:16	0.1	1.8	21.5	76.6	81.7		18.70	7.32	-0.22	-0.39	-11.26
GEW-2S	5/2/2016 14:51	60.2	38.5	0.0	1.3	60.0		5.69	2.97	-0.09	-0.07	-8.44
GEW-2S	5/13/2016 8:53	59.6	38.5	0.0	1.9	92.1		1.61	4.54	-1.28	-1.56	-6.46
GEW-2S	5/13/2016 9:02	59.8	38.2	0.0	2.0	94.1		2.53	4.08	-1.43	-1.45	-9.52
GEW-2S	5/16/2016 10:49	60.7	37.6	0.0	1.7	62.8		4.18	4.34	-2.93	-3.18	-7.89
GEW-2S	5/23/2016 11:09	56.2	40.6	0.0	3.2	99.9		0.71	1.73	-1.44	-1.39	-7.13
GEW-2S	5/23/2016 11:11	57.2	39.8	0.0	3.0	99.6		3.38	3.61	-0.26	-0.28	-6.84
GEW-2S	5/31/2016 10:27	60.4	36.5	0.0	3.1	80.9		1.23	4.08	-0.62	-0.61	-7.34
GIW-01	5/3/2016 11:15	2.6	63.9	0.1	33.4	184.6		0.00		-17.02		-17.20
GIW-01	5/10/2016 9:58	2.7	66.7	0.3	30.3	182.4		32.93	4.73	-17.28	-17.52	-17.37
GIW-01	5/10/2016 10:05	2.5	67.9	0.3	29.3	183.0		0.00	0.00	-17.46	-17.52	-17.43
GIW-01	5/10/2016 11:18	2.6	65.6	0.3	31.5	183.5		29.67	18.07	-17.16	-17.03	-17.98
GIW-01	5/10/2016 11:24	2.2	66.2	0.4	31.2	184.1		27.82	25.95	-17.03	-17.09	-17.49
GIW-01	5/16/2016 8:38	1.9	64.9	0.9	32.3	119.2		0.00	15.64	-13.19	-13.19	-12.88
GIW-01	5/16/2016 8:45	1.8	64.2	1.4	32.6	123.5		27.40	23.52	-15.98	-16.24	-15.48
GIW-01	5/23/2016 14:19	1.6	60.7	2.0	35.7	132.3		25.03	21.51	-18.35	-17.89	-17.41
GIW-01	5/23/2016 14:21	1.6	62.0	1.9	34.5	131.4		7.05	25.47	-17.29	-18.39	-16.65
GIW-01	5/30/2016 9:13	2.0	62.1	1.1	34.8	172.1		0.00	0.00	-16.90	-16.90	-16.65
GIW-01	5/30/2016 9:19	2.0	63.0	1.0	34.0	172.1		24.97	34.55	-16.96	-16.84	-16.83
GIW-02	5/3/2016 11:10	6.1	43.9	7.0	43.0	83.6		5.40		-0.18		-17.56
GIW-02	5/10/2016 10:09	4.8	41.7	7.6	45.9	70.3		0.80	0.38	-0.18	-0.18	-17.61
GIW-02	5/10/2016 10:16	4.9	42.0	7.5	45.6	71.7		1.30	3.10	-0.16	-0.16	-17.37
GIW-02	5/10/2016 11:27	5.5	45.7	6.7	42.1	83.0		3.55	2.76	-0.16	-0.15	-17.55
GIW-02	5/10/2016 11:33	5.4	44.3	6.7	43.6	85.7		0.93	1.34	-0.14	-0.14	-17.43
GIW-02	5/16/2016 8:49	5.4	56.5	2.8	35.3	58.7		0.00	2.87	-0.10	-0.10	-16.48
GIW-02	5/23/2016 14:23	6.9	57.3	1.9	33.9	92.2		0.00	2.22	-0.06	-0.06	-16.90
GIW-02	5/30/2016 9:23	9.3	54.9	1.9	33.9	98.4		0.00	0.00	-0.09	-0.09	-16.95
GIW-03	5/3/2016 11:05	0.5	56.3	3.4	39.8	81.9		2.48		-0.17		-14.14
GIW-03	5/10/2016 10:19	0.3	38.1	10.6	51.0	71.9		8.49	10.86	-1.93	-1.81	-15.17
GIW-03	5/10/2016 10:27	0.4	47.5	7.3	44.8	74.3		4.20	4.20	-0.37	-0.32	-16.02
GIW-03	5/10/2016 11:35	0.7	59.7	3.1	36.5	86.1		4.72	14.91	-0.16	-0.10	-15.47
GIW-03	5/10/2016 11:41	0.6	56.5	3.0	39.9	88.4		0.68	6.84	-0.18	-0.28	-14.92
GIW-03	5/16/2016 8:52	0.2	40.8	11.3	47.7	59.4		0.00	20.23	-0.78	-0.76	-13.97
GIW-03	5/16/2016 8:53	0.2	40.1	11.6	48.1	59.5		10.33	2.86	-0.24	-0.23	-13.46
GIW-03	5/23/2016 14:26	0.1	22.6	16.7	60.6	94.5		0.00	0.00	-1.27	-1.28	-17.20
GIW-03	5/23/2016 14:28	0.1	21.8	16.8	61.3	95.3		0.00	0.00	-0.85	-0.83	-16.90
GIW-03	5/30/2016 9:59	0.6	54.8	4.5	40.1	94.6		0.00	0.00	-0.09	-0.11	-11.81
GIW-04	5/3/2016 11:01	0.5	30.8	9.9	58.8	83.4		3.44	0.00	-14.15	-13.78	-14.63
GIW-04	5/10/2016 10:31	0.7	42.6	5.5	51.2	74.8		3.08	1.32	-15.14	-15.08	-15.60
GIW-04	5/10/2016 10:39	0.6	38.7	6.5	54.2	75.4		2.17	4.99	-15.57	-15.57	-15.17
GIW-04	5/10/2016 11:45	0.9	39.5	6.2	53.4	83.8		1.82	2.14	-14.10	-14.10	-15.90
GIW-04	5/10/2016 11:52	1.0	37.0	6.9	55.1	84.0		0.90	1.72	-14.65	-14.59	-14.25

May 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 ₂ O		
GIW-04	5/16/2016 8:57	0.5	38.7	8.0	52.8	59.9		2.78	0.00	-12.98	-13.02	-12.79
GIW-04	5/16/2016 9:00	0.5	38.2	8.6	52.7	60.4		0.00	0.00	-12.43	-12.52	-13.13
GIW-04	5/23/2016 14:32	0.3	28.1	12.0	59.6	93.4		0.00	0.00	-14.63	-14.59	-16.95
GIW-04	5/23/2016 14:33	0.3	28.2	11.7	59.8	93.9		2.13	0.00	-15.90	-15.90	-16.90
GIW-04	5/30/2016 10:03	0.5	33.1	9.5	56.9	98.1		0.00	0.00	-9.68	-9.68	-11.75
GIW-04	5/30/2016 10:05	0.5	33.9	9.2	56.4	99.1		0.00	2.82	-9.98	-10.04	-11.38
GIW-05	5/3/2016 10:54	1.9	59.1	0.1	38.9	76.4		3.74		-0.54		-14.20
GIW-05	5/10/2016 10:43	2.0	60.8	0.4	36.8	73.6		5.79	5.08	-1.07	-1.06	-15.60
GIW-05	5/10/2016 10:51	2.0	61.2	0.4	36.4	75.0		31.04	29.65	-0.98	-0.96	-15.17
GIW-05	5/10/2016 11:55	2.8	60.4	0.3	36.5	81.9		7.47	6.38	-0.64	-0.64	-14.13
GIW-05	5/10/2016 12:02	2.9	61.6	0.3	35.2	82.8		5.74	7.96	-0.78	-0.76	-14.68
GIW-05	5/16/2016 9:35	1.9	60.9	0.0	37.2	61.8		0.00	0.00	-0.30	-0.29	-13.09
GIW-05	5/23/2016 14:36	2.0	61.1	0.1	36.8	90.9		0.00	0.00	1.79	1.80	-17.24
GIW-05	5/23/2016 14:39	1.9	60.5	0.0	37.6	92.2		0.00	0.00	-0.93	-0.94	-16.90
GIW-05	5/30/2016 10:14	1.8	57.8	0.2	40.2	95.8		6.50	2.91	1.82	1.84	-11.32
GIW-05	5/30/2016 10:18	2.1	58.2	0.2	39.5	96.0		0.00	0.00	-0.73	-0.73	-10.95
GIW-06	5/3/2016 10:45	2.0	54.6	1.4	42.0	77.4		264.39		-14.70		-14.99
GIW-06	5/10/2016 10:56	1.1	48.8	4.9	45.2	74.8				-15.14	-15.08	-15.17
GIW-06	5/10/2016 11:04	1.2	53.2	3.1	42.5	76.9				-14.65	-14.59	-14.68
GIW-06	5/11/2016 13:16	1.5	49.7	4.1	44.7	86.8				-13.49	-0.33	-14.09
GIW-06	5/11/2016 13:21	1.7	50.3	3.3	44.7	87.4				-13.53	-13.87	-14.05
GIW-06	5/16/2016 9:39	1.3	52.9	3.5	42.3	61.9		268.37	265.93	-14.21	-14.21	-13.46
GIW-06	5/16/2016 9:47	1.6	60.1	0.8	37.5	63.9		105.59	105.71	-2.07	-2.05	-13.13
GIW-06	5/23/2016 14:42	1.5	60.0	0.0	38.5	93.9		0.00	0.00	10.95	11.12	-16.57
GIW-06	5/23/2016 14:46	1.6	61.4	0.0	37.0	99.0		92.27	91.74	-1.59	-1.58	-16.19
GIW-06	5/30/2016 10:21	1.0	61.7	0.3	37.0	94.0		0.00	0.00	18.13	18.13	-12.24
GIW-06	5/30/2016 10:28	1.8	59.1	0.3	38.8	99.7		107.68	104.23	-2.15	-2.04	-11.38
GIW-07	5/3/2016 10:41	6.3	34.2	11.7	47.8	76.6		0.00		-1.46		-14.63
GIW-07	5/12/2016 8:46	9.2	39.6	9.9	41.3	65.0		0.00	4.04	-1.56	-1.57	-16.44
GIW-07	5/12/2016 8:54	9.3	40.0	9.8	40.9	64.4		0.00	0.00	-1.62	-1.62	-14.77
GIW-07	5/16/2016 9:52	12.8	45.3	7.7	34.2	63.8		4.04	7.56	-1.03	-1.02	-13.46
GIW-07	5/16/2016 9:54	12.9	45.8	7.5	33.8	63.9		8.58	11.08	-0.78	-0.75	-13.46
GIW-07	5/23/2016 14:49	7.8	67.3	0.0	24.9	96.5		0.00	0.00	0.12	0.12	-16.95
GIW-07	5/23/2016 14:50	8.0	67.9	0.4	23.7	97.6		0.00	0.00	-0.41	-0.41	-16.57
GIW-07	5/30/2016 10:37	9.7	69.7	0.4	20.2	95.3		9.60	10.83	0.02	0.02	-10.89
GIW-07	5/30/2016 10:39	9.6	70.6	0.7	19.1	97.9		7.65	8.18	-0.19	-0.19	-11.38
GIW-08	5/3/2016 10:37	16.7	65.5	0.0	17.8	80.5				-2.62		-14.57
GIW-08	5/12/2016 8:59	17.2	65.4	0.3	17.1	64.2				-2.84	-2.82	-15.35
GIW-08	5/12/2016 9:05	16.8	66.2	0.0	17.0	64.7				-2.77	-2.78	-16.23
GIW-08	5/16/2016 10:06	18.0	60.8	0.2	21.0	64.0				-1.96	-1.96	-13.84
GIW-08	5/23/2016 14:53	24.8	62.0	0.0	13.2	97.4				-0.44	-0.44	-16.57
GIW-08	5/30/2016 10:42	14.7	63.7	0.6	21.0	101.8				-1.50	-1.50	-12.30

May 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 ₂ O		
GIW-08	5/30/2016 10:45	12.2	58.4	4.1	25.3	101.6				-0.76	-0.77	-10.83
GIW-09	5/3/2016 10:49	9.4	58.9	1.5	30.2	82.5				-1.03		-15.06
GIW-09	5/12/2016 9:20	1.5	29.9	11.3	57.3	65.9				-1.07	-1.07	-16.07
GIW-09	5/12/2016 9:27	1.6	29.8	11.3	57.3	66.1				-1.08	-1.09	-15.02
GIW-09	5/23/2016 14:55	13.3	45.3	4.5	36.9	96.0				-0.32	-0.33	-16.95
GIW-09	5/30/2016 10:54	1.9	22.2	13.7	62.2	106.6				-0.71	-0.72	-11.08
GIW-09	5/30/2016 10:56	2.1	20.4	13.7	63.8	105.2				-0.26	-0.26	-11.44
GIW-10	5/3/2016 10:58	4.3	54.6	0.0	41.1	79.9		0.00		-4.96		-14.63
GIW-10	5/12/2016 9:30	3.3	54.2	0.0	42.5	65.6		0.00	0.00	-5.33	-5.33	-16.11
GIW-10	5/12/2016 9:35	3.0	54.5	0.0	42.5	65.8		0.00	6.32	-5.33	-5.37	-15.10
GIW-10	5/16/2016 10:28	3.9	53.3	0.0	42.8	61.6		11.31	11.43	-4.34	-4.33	-13.97
GIW-10	5/16/2016 10:29	3.7	53.5	0.0	42.8	61.9		8.52	10.62	-3.82	-3.82	-13.80
GIW-10	5/23/2016 14:58	5.6	55.4	0.0	39.0	95.5		0.00	0.00	-3.30	-3.30	-16.95
GIW-10	5/23/2016 15:01	5.3	55.2	0.0	39.5	95.5		0.00	0.00	-2.64	-2.64	-16.57
GIW-10	5/30/2016 10:07	2.5	53.1	0.2	44.2	99.5		4.98	0.00	-2.42	-2.42	-11.93
GIW-10	5/30/2016 10:11	2.8	54.5	0.2	42.5	101.3		0.00	0.00	-0.88	-0.87	-11.81
GIW-11	5/3/2016 11:28	6.6	47.4	4.0	42.0	80.2				-2.05		-17.38
GIW-11	5/12/2016 10:13	5.9	50.8	4.0	39.3	69.8				-2.16	-2.16	-18.37
GIW-11	5/12/2016 10:18	5.6	50.8	4.0	39.6	69.3				-2.19	-2.18	-18.67
GIW-11	5/16/2016 10:23	6.5	50.2	3.7	39.6	62.8				-1.97	-1.97	-16.48
GIW-11	5/16/2016 10:25	6.4	51.2	3.7	38.7	62.3				-0.83	-0.85	-16.82
GIW-11	5/23/2016 15:02	3.3	63.4	0.0	33.3	94.7				-0.23	-0.22	-16.57
GIW-11	5/30/2016 9:51	3.6	57.4	0.5	38.5	105.5				-0.32	-0.31	-16.83
GIW-11	5/30/2016 9:54	3.7	61.2	0.6	34.5	107.7				-0.19	-0.19	-16.77
GIW-12	5/3/2016 11:24	0.0	4.0	21.6	74.4	77.6				-0.15		-16.65
GIW-12	5/12/2016 10:23	0.5	38.2	11.1	50.2	67.0				-0.19	0.00	-17.79
GIW-12	5/12/2016 10:29	0.7	41.8	9.2	48.3	67.4				-0.21	-0.20	-18.20
GIW-12	5/16/2016 10:36	0.2	11.2	19.9	68.7	59.7				-0.20	-0.17	-15.81
GIW-12	5/16/2016 10:37	0.3	11.4	19.4	68.9	59.4				-0.22	-0.21	-15.81
GIW-12	5/23/2016 15:07	0.5	34.7	11.4	53.4	91.7				-0.07	-0.08	-15.90
GIW-12	5/23/2016 15:08	0.5	35.1	11.4	53.0	91.9				-0.04	-0.05	-15.90
GIW-12	5/30/2016 9:42	1.1	41.7	5.7	51.5	94.8				0.02	0.01	-16.10
GIW-12	5/30/2016 9:44	1.1	42.8	4.4	51.7	99.4				-0.04	-0.04	-15.36
GIW-13	5/3/2016 11:19	10.2	60.8	0.1	28.9	79.6				-6.74		-13.65
GIW-13	5/12/2016 10:32	10.1	63.9	0.0	26.0	67.9				-7.44	-7.40	-13.09
GIW-13	5/12/2016 10:37	11.0	61.3	0.0	27.7	67.5				-7.44	-7.44	-13.17
GIW-13	5/16/2016 11:09	13.0	62.4	0.0	24.6	60.1				-7.10	-6.77	-13.46
GIW-13	5/16/2016 11:10	12.6	61.8	0.0	25.6	60.1				-3.94	-3.95	-12.96
GIW-13	5/23/2016 15:10	8.5	63.4	0.1	28.0	94.3				-2.42	-2.44	-13.13
GIW-13	5/23/2016 15:12	8.5	65.6	0.1	25.8	94.1				-0.90	-0.88	-11.87
GIW-13	5/30/2016 9:36	4.6	62.9	0.2	32.3	96.7				0.44	0.45	-12.36
GIW-13	5/30/2016 9:39	4.6	63.3	0.2	31.9	96.6				-0.18	-0.18	-13.40
LCS-5A	5/2/2016 16:13	58.3	40.4	0.0	1.3	95.0				-10.32	-10.26	-10.46


May 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 ₂ O		
LCS-5A	5/13/2016 10:58	57.5	39.1	0.0	3.4	95.0				-9.13	-8.46	-8.93
LCS-5A	5/16/2016 10:34	57.9	41.1	0.0	1.0	92.7				-9.92	-9.80	-9.49
LCS-5A	5/23/2016 12:30	55.9	41.5	0.0	2.6	95.8				-8.29	-8.08	-7.21
LCS-5A	5/31/2016 10:02	58.2	40.1	0.0	1.7	94.8				-11.42		-11.03
LCS-6B	5/2/2016 15:18	51.7	41.4	1.0	5.9			9.74	9.32	-1.16	-1.15	-10.76
LCS-6B	5/13/2016 10:31	52.6	41.8	0.5	5.1	87.1		11.08	12.14	-0.60	-0.60	-9.31
LCS-6B	5/16/2016 9:20	54.7	39.2	0.4	5.7	74.3		8.83	9.21	-0.77	-0.77	-10.34
LCS-6B	5/23/2016 11:33	52.3	43.1	0.2	4.4	96.7		0.00	0.00	-0.16	-0.17	-8.52
LCS-6B	5/31/2016 9:27	45.7	36.5	3.4	14.4	82.8		0.00	0.00	-1.61	-1.61	-11.16
PGW-60	5/2/2016 14:47	56.4	40.1	0.3	3.2	66.0		20.39	12.60	-7.81	-7.81	-9.24
PGW-60	5/2/2016 15:10	60.1	38.7	0.0	1.2	67.9		30.27	19.25	-7.99	-8.33	-10.74
PGW-60	5/13/2016 10:51	57.9	38.8	0.2	3.1	75.9		14.71	21.39	-5.07	-4.69	-5.45
PGW-60	5/16/2016 11:00	61.3	36.5	0.0	2.2	67.7		14.67	14.93	-6.43	-6.00	-7.47
PGW-60	5/23/2016 11:13	56.0	39.7	0.0	4.3	88.6		0.00	0.00	-6.00	-6.26	-6.21
PGW-60	5/31/2016 10:21	58.3	37.6	0.2	3.9	75.2		17.53	15.84	-7.72	-7.53	-7.83
SEW-002	5/4/2016 14:17	0.1	10.3	19.0	70.6	74.3		6.94		-6.86		-16.46
T-56	5/2/2016 15:44	44.0	32.9	0.7	22.4	63.0		19.27	20.27	-0.08	-0.07	-11.19
T-56	5/23/2016 11:54	46.5	37.5	0.4	15.6	70.0		6.78	16.61	-0.05	-0.04	-8.52


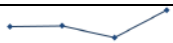
ATTACHMENT E-2

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
	February 2016	March 2016	April 2016	May 2016		
GEW-001	--	--	--	--		
GEW-002	120.2	124.2	125.4	128.1		
GEW-003	110.9	115.2	121.5	117.3		
GEW-004	112.5	116.5	119.1	122.0		
GEW-005	96.2	94.0	97.6	95.0		
GEW-006	90.1	91.1	93.1	90.8		
GEW-007	94.0	92.1	94.0	97.1		
GEW-008	112.9	113.2	112.5	114.3		
GEW-009	121.5	126.4	124.9	128.6		
GEW-010	69.2	94.6	103.0	98.9		
GEW-011	--	--	--	--		
GEW-013A	186.8	152.2	160.1	156.6		
GEW-014A	--	--	--	--		
GEW-015	--	--	--	--		
GEW-016R	--	--	--	--		
GEW-018B	--	--	--	--		
GEW-018R	--	--	--	--		
GEW-019A	--	--	--	--		
GEW-020A	--	--	--	--		
GEW-021A	--	--	--	--		
GEW-022R	194.8	193.1	192.5	190.2		
GEW-023A	--	--	--	--		
GEW-024A	--	--	--	--		
GEW-025A	--	--	--	--		
GEW-026R	--	--	--	--		
GEW-027A	--	--	--	--		
GEW-028R	193.7	192.1	189.1	83.4		
GEW-029	--	--	--	--		
GEW-030R	--	--	--	--		
GEW-033R	--	--	--	--		
GEW-034	--	--	--	--		
GEW-034A	--	--	--	--		
GEW-035	--	--	--	--		
GEW-036	--	--	--	--		
GEW-037	--	--	--	--		
GEW-038	56.1	79.5	102.2	105.2		
GEW-039	132.7	133.4	134.7	134.4		
GEW-040	85.5	87.3	92.7	91.7		
GEW-041R	103.2	109.0	105.8	107.1		
GEW-042R	112.7	110.0	110.6	113.7		
GEW-043R	133.3	134.3	137.6	131.0		
GEW-044	81.3	85.3	90.4	90.4		
GEW-045R	82.9	84.7	98.5	91.3		

Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	February 2016	March 2016	April 2016	May 2016		
GEW-046R	95.0	99.6	98.0	100.4		
GEW-047R	124.3	115.2	116.5	114.8		
GEW-048	102.2	106.0	105.1	105.5		
GEW-049	109.9	116.4	110.9	113.8		
GEW-050	106.4	108.5	108.4	107.3		
GEW-051	124.1	128.9	124.3	129.8		
GEW-052	115.0	117.4	113.5	117.1		
GEW-053	138.7	140.0	142.2	142.0		
GEW-054	147.1	147.7	154.9	155.0		
GEW-055	121.8	125.8	128.1	130.0		
GEW-056R	175.2	158.8	157.0	156.5		
GEW-057B	98.7	113.0	127.8	89.3		
GEW-057R	143.2	148.9	146.6	133.7		
GEW-058	177.7	177.2	183.5	179.8		
GEW-058A	170.7	154.5	89.9	79.2		
GEW-059R	187.4	189.1	191.3	189.6		
GEW-061B	--	--	--	--		
GEW-064A	--	--	--	--		
GEW-065A	99.4	96.1	92.9	81.9		
GEW-066	--	--	--	--		
GEW-067A	122.3	125.0	84.9	179.7		
GEW-068A	--	--	--	--		
GEW-069R	--	--	--	--		
GEW-070R	--	--	--	--		
GEW-071	--	--	--	--		
GEW-071B	--	--	--	--		
GEW-072RR	--	--	--	--		
GEW-073R	--	--	--	--		
GEW-075	--	--	--	--		
GEW-076R	--	--	--	--		
GEW-077	--	--	--	111.6		
GEW-078R	--	--	--	191.6		
GEW-080	--	--	--	95.0		
GEW-081	--	--	--	125.8		
GEW-082R	197.9	196.5	194.2	192.1		
GEW-083	--	--	--	--		
GEW-084	--	--	--	--		
GEW-085	--	--	--	--		
GEW-086	84.7	84.1	81.7	64.6		
GEW-087	--	--	--	--		
GEW-088	--	--	--	--		
GEW-089	94.6	74.8	72.4	71.7		
GEW-090	185.2	183.5	185.2	183.0		

Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	February 2016	March 2016	April 2016	May 2016		
GEW-091	--	--	--	--		
GEW-100	--	--	--	--		
GEW-101	--	--	--	--		
GEW-102	189.1	184.1	193.7	192.5		
GEW-103	--	--	--	--		
GEW-104	--	--	--	110.0		
GEW-105	--	--	--	69.6		
GEW-106	--	--	--	--		
GEW-107	55.6	69.5	92.1	77.8		
GEW-108	--	--	76.9	78.5		
GEW-109	113.1	117.0	139.7	103.8		
GEW-110	71.3	101.1	113.5	108.2		
GEW-112	--	--	--	75.5		
GEW-113	--	--	--	184.7		
GEW-116	51.2	71.0	70.4	71.4		
GEW-117	83.3	105.0	102.1	87.0		
GEW-118	--	--	194.3	194.8		
GEW-120	184.1	175.2	165.5	160.6		
GEW-121	187.9	189.6	175.7	197.9		
GEW-122	190.8	181.9	188.5	168.8		
GEW-123	193.1	190.8	114.2	187.9		
GEW-124	119.0	129.3	67.8	88.1		
GEW-125	193.1	52.3	190.1	190.5		
GEW-126	191.3	190.8	95.6	186.7		
GEW-127	186.8	189.8	178.2	184.1		
GEW-128	182.4	179.9	174.6	177.2		
GEW-129	159.6	167.9	176.2	176.7		
GEW-130	--	--	182.7	193.7		
GEW-131	179.8	173.1	175.2	181.9		
GEW-132	173.6	169.2	172.7	169.7		
GEW-133	56.5	51.8	60.5	98.3		
GEW-134	155.6	118.6	118.3	135.6		
GEW-135	147.0	172.7	144.4	166.4		
GEW-136	110.9	109.9	112.3	120.2		
GEW-137	91.9	104.7	89.6	103.3		
GEW-138	147.4	145.1	151.7	137.3		
GEW-139	180.3	187.9	190.2	185.2		
GEW-140	191.3	174.1	161.4	163.6		
GEW-141	155.0	116.0	69.7	104.3		
GEW-142	92.9	38.8	67.1	94.6		
GEW-143	113.7	54.9	64.8	91.1		
GEW-144	64.9	92.7	64.0	102.8		
GEW-145	150.9	179.8	173.1	163.6		

Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	February 2016	March 2016	April 2016	May 2016		
GEW-146	69.5	78.0	79.9	94.1		
GEW-147	178.2	169.7	191.6	189.6		
GEW-148	64.9	66.4	55.5	92.5		
GEW-149	171.2	116.3	131.5	167.4		
GEW-150	188.5	152.5	150.1	159.2		
GEW-151	57.9	135.7	165.9	93.1		
GEW-152	71.9	168.1	175.7	167.8		
GEW-153	52.4	160.1	151.4	157.9		
GEW-154	113.8	147.5	130.2	151.0		
GEW-155	113.3	117.0	112.5	185.1		
GEW-156	93.6	95.4	88.9	122.1		
GEW-157	37.9	191.3	66.0	93.6		
GEW-158	54.1	71.2	65.7	88.6		
GEW-159	27.5	161.4	154.1	154.1		
GEW-160	162.8	72.4	60.0	186.3		
GEW-161	37.9	73.2	59.0	96.7		
GEW-162	56.1	78.0	178.2	94.8		
GEW-163	--	--	--	170.0		
GEW-164	--	--	--	171.6		
GEW-165	--	--	--	191.6		
GEW-166	--	--	--	174.7		
GEW-167	--	--	--	179.8		
GEW-168	--	--	--	157.0		
GEW-169	--	--	--	191.4		
GEW-170	--	--	--	185.8		
GEW-171	--	--	--	100.4		
GEW-172	--	--	--	119.9		
GEW-173	--	--	--	102.6		
GEW-174	--	--	--	174.6		
GEW-175	--	--	--	127.8		
GEW-176	--	--	--	89.5		
GEW-1A	--	--	--	95.9		
GEW-2S	--	--	--	99.9		
GIW-01	186.3	186.8	183.5	184.6		
GIW-02	73.8	73.7	84.0	98.4		
GIW-03	64.1	75.5	86.0	94.6		
GIW-04	62.0	77.5	88.4	99.1		
GIW-05	62.4	83.0	86.9	96.0		
GIW-06	57.3	81.0	88.0	99.7		
GIW-07	55.5	78.0	90.1	97.9		
GIW-08	57.9	77.9	92.9	101.8		
GIW-09	65.4	79.0	72.2	106.6		
GIW-10	60.5	81.9	90.3	101.3		

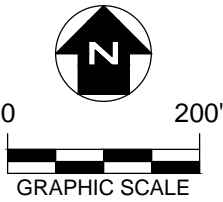
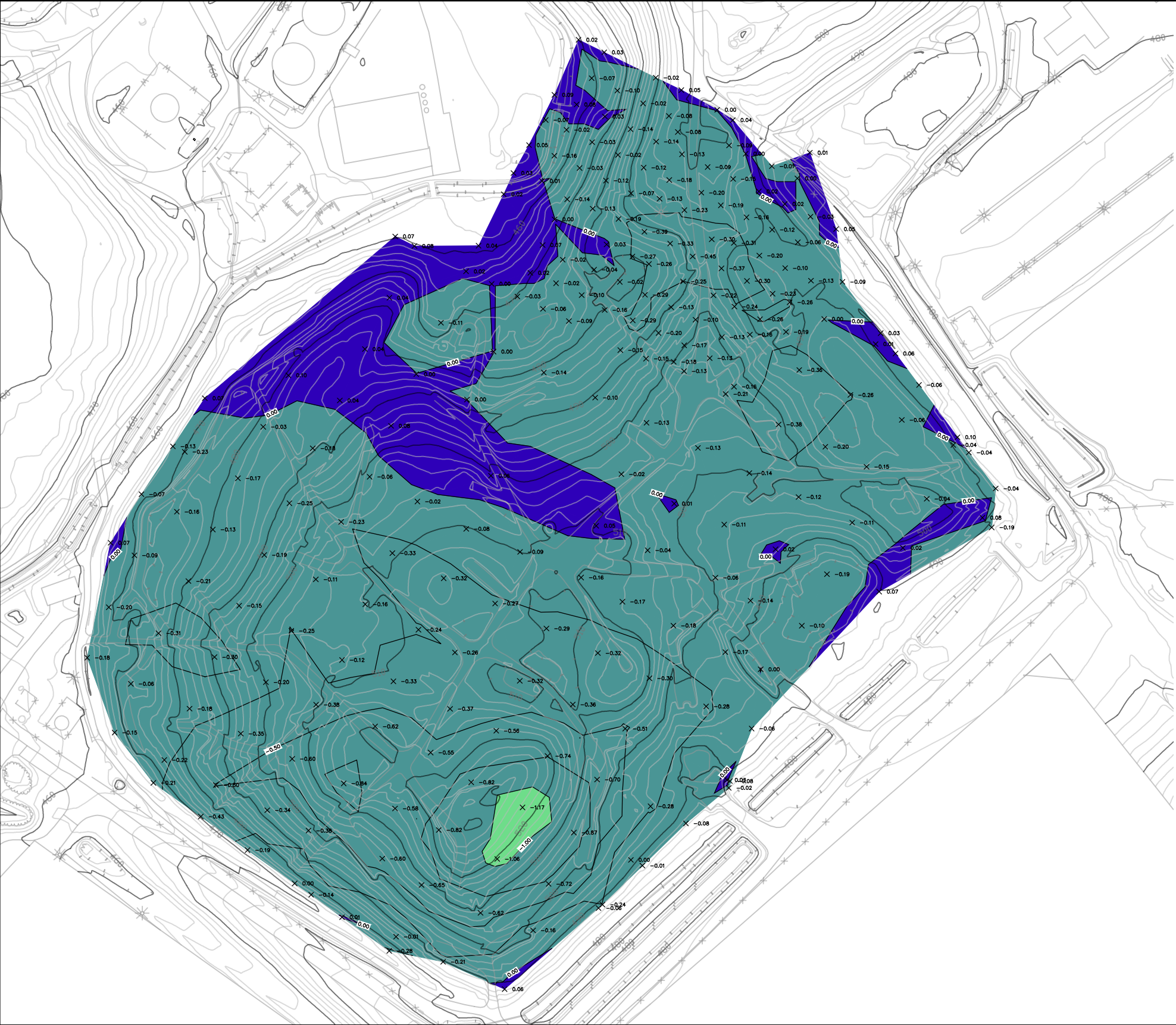
Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	February 2016	March 2016	April 2016	May 2016		
GIW-11	76.5	86.9	96.0	107.7		
GIW-12	79.4	87.1	91.9	99.4		
GIW-13	66.1	78.4	99.4	96.7		
LCS-1D	--	--	--	--		
LCS-2D	--	--	--	--		
LCS-3C	--	--	--	--		
LCS-4B	--	--	--	--		
LCS-5A	93.3	93.6	95.9	95.8		
LCS-6B	125.1	93.9	88.6	96.7		
PGW-60	65.7	76.4	77.5	88.6		
SEW-002	64.6	69.8	85.2	74.3		
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	47.3	47.1	60.8	70.0		

-- = Indicates no data available.

ATTACHMENT F

SETTLEMENT FRONT MAP



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 4-19-16 FROM SPOT ELEVATIONS SURVEYED ON 5-16-16.
- 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

- X -0.42 SPOT ELEVATION DIFFERENCE (5-16-16 TO 4-19-16)
- MINOR ELEVATION CHANGE CONTOUR (0.25 FEET)
- 0.50 MAJOR ELEVATION CHANGE CONTOUR (0.50 FEET)
- 5-16 SETTLEMENT FRONT CONTOUR FOR AREA WITH 1.35' PER 30 DAYS FOR CURRENT PERIOD OF DAYS (AREA REPRESENTS 1.215' OVER 27 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	10275.80	
5	-1.00	0.00	1282376.56	
6	0.00	1.00	199615.17	

REV. NO.	DATE	DESCRIPTION

BRIDGETON LANDFILL

CB&I Environmental & Infrastructure, Inc.
STATE OF ILLINOIS LICENSED DESIGN FIRM #184004093

BRIDGETON LANDFILL
BRIDGETON, MO

SETTLEMENT MAP
APRIL 19, 2016 THROUGH MAY 16, 2016

DRAWN BY: ORC

APPROVED BY: DJD

PROJ. NO.: 155162

DATE: JUNE 2016

ATTACHMENT G

SUMMARY OF ODOR COMPLAINTS

May 1, 2015 – May 31, 2016 / MDNR ODOR COMPLAINTS

Name: NA

Message: Odor logged May 1, 2016, at 7:45 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location referenced is directly downwind of another known odor source with frequent off-site odor emissions. These odor emissions have been observed at this concern location. This is not believed to have been a Bridgeton Landfill odor.

Name: Emily

Message: Odor logged May 2, 2016, at 6:56 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location referenced is of substantial distance from the Bridgeton Landfill and far closer to another known site with frequent off-site odor emissions. A Bridgeton Landfill odor patrol was performed immediately after the time cited in this concern and did not detect an odor with potential to be observed at this remote location. This was not a Bridgeton Landfill odor.

Name: Kathy Baumann

Message: Odor logged May 2, 2016, at 11:30 am strength of 7

Follow-up: The following concern references a time approximately four and a half hours forward in time from the time of submittal. This concern is therefore invalid.

Name: NA

Message: Odor logged May 2, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location referenced is of substantial distance from the Bridgeton Landfill and far closer to another known site with frequent off-site odor emissions. A Bridgeton Landfill odor patrol was performed immediately after the time cited in this concern and did not detect an odor with potential to be observed at this remote location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 2, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location referenced is of substantial distance from the Bridgeton Landfill and far closer

to another known site with frequent off-site odor emissions. A Bridgeton Landfill odor patrol was performed immediately after the time cited in this concern and did not detect an odor with potential to be observed at this remote location. This was not a Bridgeton Landfill odor.

Name: Gail Schafluetzel

Message: Odor logged May 2, 2016, at 12:33 pm strength of 1

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location referenced is of such distance as to be well in excess of the maximum historical distance of Bridgeton Landfill odor observation. An odor patrol as performed shortly after the time cited in this concern and no odor related to the Bridgeton Landfill was observed at multiple points aligned between the Bridgeton Landfill and this location. This was not a Bridgeton Landfill odor.

Name: Raymond Schafluetzel

Message: Odor logged May 2, 2016, at 12:35 pm strength of 2

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location referenced is of such distance as to be well in excess of the maximum historical distance of Bridgeton Landfill odor observation. An odor patrol as performed shortly after the time cited in this concern and no odor related to the Bridgeton Landfill was observed at multiple points aligned between the Bridgeton Landfill and this location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 2, 2016, at 3:35 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill and in close proximity to another known odor source with frequent off-site odor emissions including emissions observed in close proximity to this concern location. An odor patrol as performed shortly following the time cited in this concern did not observe odor related to the Bridgeton Landfill at multiple points between the Bridgeton Landfill and this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 2, 2016, at 8:38 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol as

performed shortly following the time cited in this concern did not observe odor related to the Bridgeton Landfill at multiple points between the Bridgeton Landfill and this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 2, 2016, at 8:44 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol as performed shortly following the time cited in this concern did not observe odor related to the Bridgeton Landfill at multiple points between the Bridgeton Landfill and this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 3, 2016, at 7:20 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions including odor observed at this location shortly before the time of this concern. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 3, 2016, at 7:30 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions including odor observed at this location shortly before the time of this concern. This was not a Bridgeton Landfill odor.

Name: Rhonda Steelman

Message: Odor logged May 3, 2016, at 1:31 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is of substantial distance from the Bridgeton Landfill and of closer proximity to another known odor source with frequent off-site odor emissions. An odor unassociated with the Bridgeton Landfill was observed by Bridgeton Landfill staff on this date throughout the area. This was not a Bridgeton Landfill odor.

Name: Rhonda Steelman

Message: Odor logged May 3, 2016, at 6:33 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is of substantial distance from the Bridgeton Landfill and of closer proximity to another known odor source with frequent off-site odor emissions. An odor unassociated with the Bridgeton Landfill was observed by Bridgeton Landfill staff on this date throughout the area. This was not a Bridgeton Landfill odor.

Name: Amanda Cooper

Message: Odor logged May 3, 2016, at 9:40 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is of substantial distance from the Bridgeton Landfill and of closer proximity to another known odor source with frequent off-site odor emissions. An odor unassociated with the Bridgeton Landfill was observed throughout the area on this date. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 3, 2016, at 7:15 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is of substantial distance from the Bridgeton Landfill and of closer proximity to another known odor source with frequent off-site odor emissions. An odor unassociated with the Bridgeton Landfill was observed throughout the area on this date. This was not a Bridgeton Landfill odor.

Name: Liz spector

Message: Odor logged May 3, 2016, at 2:00 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is of substantial distance from the Bridgeton Landfill and of closer proximity to another known odor source with frequent off-site odor emissions. An odor unassociated with the Bridgeton Landfill was observed throughout the area on this date. This was not a Bridgeton Landfill odor.

Name: Briann mccormick

Message: Odor logged May 3, 2016, at 8:00 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time given in this concern winds were of a southwestern origin, placing this location upwind of

the Bridgeton Landfill and downwind of another known odor source with off-site odor emissions observed on this date. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 4, 2016, at 7:17 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions. An odor patrol was performed by Bridgeton Landfill staff shortly after the time cited in this concern, no odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 4, 2016, at 7:18 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions. An odor patrol was performed by Bridgeton Landfill staff shortly after the time cited in this concern, no odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 4, 2016, at 7:18 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions. An odor patrol was performed by Bridgeton Landfill staff shortly after the time cited in this concern, no odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 3, 2016, at 5:19 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions. An odor unrelated to the Bridgeton Landfill was observed on this morning by Bridgeton Landfill staff. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 4, 2016, at 7:19 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions. An odor patrol was performed by Bridgeton Landfill staff shortly after the time cited in this concern, no odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 4, 2016, at 7:23 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions. An odor patrol was performed by Bridgeton Landfill staff shortly after the time cited in this concern, no odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged May 4, 2016, at 10:45 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. As this concern was submitted over an hour after the stated time of observation this concern could not be investigated by Bridgeton Landfill staff, however, observations at this location by Bridgeton Landfill staff at multiple points throughout the day did not observe Bridgeton Landfill odor. There is no evidence to indicate that this was a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged May 4, 2016, at 11:52 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Observations at this location by Bridgeton Landfill staff at multiple points throughout the day did not observe Bridgeton Landfill odor. There is no evidence to indicate that this was a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged May 4, 2016, at 12:00 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Observations in close proximity to this location by Bridgeton Landfill staff at multiple points

throughout the day did not observe Bridgeton Landfill odor. There is no evidence to indicate that this was a Bridgeton Landfill odor.

Name: Michael Dailey

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

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Observations in close proximity to this location by Bridgeton Landfill staff at multiple points throughout the day did not observe Bridgeton Landfill odor. There is no evidence to indicate that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 4, 2016, at 6:55 pm strength of 7

Follow-up: The following concern lacks a complete address and therefore cannot be investigated.

Name: Liz spector

Message: Odor logged May 4, 2016, at 2:00 pm strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: Katie Keeven

Message: Odor logged May 4, 2016, at 10:02 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 6:56 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another

known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 6:56 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 6:57 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 6:57 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 6:57 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 6:57 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 6:58 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 7:05 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 7:05 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 5, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location provided is in close proximity to and immediately downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 6, 2016, at 6:00 am strength of 10

Follow-up: The following concern cites a location on a highway of such distance from the Bridgeton Landfill for this to clearly not be a Bridgeton Landfill odor.

Name: Kelly young

Message: Odor logged May 6, 2016, at 8:09 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited is of significant distance from the Bridgeton Landfill. An odor patrol performed on the evening of this concern did not observe any odor related to the Bridgeton Landfill. This is not a Bridgeton Landfill odor.

Name: Branden Strange

Message: Odor logged May 7, 2016, at 7:07 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited is in close proximity to another known odor source with frequent off-site odor emissions. At the time and date cited in this concern the location of this concern was directly downwind from that other source and well outside the downwind pathway of the Bridgeton Landfill. Odor patrols performed before and after the time specified in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Samantha compton

Message: Odor logged May 8, 2016, at 12:02 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited is of substantial distance outside the general vicinity of Bridgeton. Odor patrols performed before and after the time specified in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Rhonda Steelman

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

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

Name: Rhonda Steelman

Message: Odor logged May 9, 2016, at 1:10 pm strength of 8

Follow-up: The following concern provides insufficient location data for investigation.

Name: NA

Message: Odor logged May 10, 2016, at 7:35 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway of significant distance from the Bridgeton Landfill. An odor patrol performed concurrent with the time cited in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 10, 2016, at 7:35 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway of significant distance from the Bridgeton Landfill. An odor patrol performed concurrent with the time cited in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 10, 2016, at 7:38 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway of significant distance from the Bridgeton Landfill. An odor patrol performed concurrent with the time cited in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 10, 2016, at 7:38 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source

with frequent off-site odor emissions. An odor patrol performed concurrent with the time cited in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 11, 2016, at 7:30 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway of significant distance from the Bridgeton Landfill. An odor patrol performed concurrent with the time cited in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 11, 2016, at 7:30 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway of significant distance from the Bridgeton Landfill. An odor patrol performed concurrent with the time cited in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 11, 2016, at 7:32 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is on a highway immediately adjacent to another known odor source with frequent off-site odor emissions. An odor patrol performed concurrent with the time cited in this concern did not observe any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Kathy Baumann

Message: Odor logged May 12, 2016, at 10:00 pm strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location given is of substantial distance from the Bridgeton Landfill. Odor patrols performed on this date did not observe odor related to the Bridgeton Landfill at multiple points between this location and the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 13, 2016, at 6:40 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed on the morning of this concern observed odor in close proximity to this concern location. Upon further investigation this odor was determined to originate from another known odor source and not the Bridgeton Landfill.

Name: Kathy Luther

Message: Odor logged May 13, 2016, at 9:30 am strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed on the morning of this concern observed odor at several locations. Upon further investigation this odor was determined to originate from another known odor source and not the Bridgeton Landfill.

Name: Kathy Luther

Message: Odor logged May 13, 2016, at 10:05 pm strength of 4

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols around the perimeter of the Bridgeton Landfill did not observe odor at multiple points between this location and the Bridgeton Landfill either before or after the time cited in this concern. There is no evidence to indicate that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 15, 2016, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols around the perimeter of the Bridgeton Landfill did not observe odor at multiple points between this location and the Bridgeton Landfill shortly after the time cited in this concern. There is no evidence to indicate that this was a Bridgeton Landfill odor.

Name: Jill Kaucher

Message: Odor logged May 17, 2016, at 12:27 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols around the perimeter of the Bridgeton Landfill did not observe odor at multiple points between this location and the Bridgeton Landfill shortly before the time cited in this concern. Winds were of an east northeast origin placing this location downwind from another known odor source and outside the downwind pathway of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 17, 2016, at 12:27 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols around the perimeter of the Bridgeton Landfill did not observe odor at multiple points between this location and the Bridgeton Landfill shortly before the time cited in this concern. Winds were of an east northeast origin placing this location downwind from another known odor source and outside the downwind pathway of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 17, 2016, at 12:39 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols around the perimeter of the Bridgeton Landfill did not observe odor at multiple points between this location and the Bridgeton Landfill shortly before the time cited in this concern. Winds were of an east northeast origin placing this location downwind from another known odor source and outside the downwind pathway of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged May 18, 2016, at 3:30 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed shortly before the time cited in this concern did not observe Bridgeton Landfill related odor at observation points in the vicinity of this concern location.

Name: Michael Dailey

Message: Odor logged May 18, 2016, at 3:30 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed shortly before the time cited in this concern did not observe Bridgeton Landfill related odor at observation points in the vicinity of this concern location.

Name: Kevin R. Toal

Message: Odor logged May 18, 2016, at 9:30 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited is of substantially greater distance from the Bridgeton Landfill than any documented Bridgeton Landfill odor observations. Odor patrols did not observe Bridgeton Landfill odor during patrols prior to and after the time cited in this concern.

Name: Meagan beckermann

Message: Odor logged May 19, 2016, at 6:35 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols performed approximately one hour before the time cited in this concern and approximately two hours after the time cited in this concern did not observe any related to the Bridgeton Landfill at multiple points between this location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 19, 2016, at 4:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed approximately one and a half hours after the time cited in this concern did not observe any odor related to the Bridgeton Landfill at an observation point in close proximity to this location or in traversal of roads directly adjacent to this location.

Name: Martina Sandheinrich

Message: Odor logged May 18, 2016, at 2:03 pm strength of 4

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed immediately before the time cited in this concern. Points of observation on this patrol between the Bridgeton Landfill and this concern, no odor related to the Bridgeton Landfill was observed.

Name: Erin Hoel

Message: Odor logged May 19, 2016, at 6:30 am strength of 10

Follow-up: The following concern lacks a complete location and did not provide accurate latitude and longitude. Odor patrols performed on the morning of this concern do not indicate any potential for a Bridgeton Landfill odor to have been observed along the indicated street.

Name: NA

Message: Odor logged May 19, 2016, at 6:30 am strength of 10

Follow-up: The following concern lacks a complete location and did not provide accurate latitude and longitude. Odor patrols performed on the morning of this concern do not indicate any potential for a Bridgeton Landfill odor to have been observed along the indicated street.

Name: NA

Message: Odor logged May 18, 2016, at 6:00 am strength of 10

Follow-up: The following concern is of such distance as to not be a potential Bridgeton Landfill odor.

Name: Angela Hurst

Message: Odor logged May 19, 2016, at 7:00 am strength of 9

Follow-up: The following concern is of such distance as to not be a potential Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 18, 2016, at 7:30 am strength of 10

Follow-up: The following concern is of such distance as to not be a potential Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:30 am strength of 10

Follow-up: The following concern is of such distance as to not be a potential Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:30 am strength of 10

Follow-up: The following concern is of such distance as to not be a potential Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:30 am strength of 10

Follow-up: The following concern is of such distance as to not be a potential Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:31 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited is between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:32 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern cites a time between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:32 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern cites a time between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:33 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern cites a time between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:40 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited is between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:40 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern cites a time between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:45 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited is between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:45 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited is between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 7:30 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern cites a time between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Tammy

Message: Odor logged May 19, 2016, at 8:14 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time cited in this concern, no off-site odor was observed from the Bridgeton Landfill at that time. This concern is of substantial distance from the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Sharon Bishop

Message: Odor logged May 19, 2016, at 8:19 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time cited in this concern, no off-site odor was observed from the Bridgeton Landfill at that time.

Name: Sharon Bishop

Message: Odor logged May 19, 2016, at 8:21 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time cited in this concern, no off-site odor was observed from the Bridgeton Landfill at that time.

Name: Rebecca

Message: Odor logged May 19, 2016, at 8:26 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time cited in this concern, no off-site odor was observed from the Bridgeton Landfill at that time.

Name: NA

Message: Odor logged May 19, 2016, at 7:40 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. While this concern was submitted approximately two hours after the time cited in this concern an odor patrol was performed approximately one hour after the time cited in this concern, no off-site odor was observed from the Bridgeton Landfill at that time.

Name: NA

Message: Odor logged May 19, 2016, at 8:15 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. While this concern was submitted approximately two hours after the time cited in this concern an odor patrol was performed within the hour of the time cited in this concern, no off-site odor was observed from the Bridgeton Landfill at that time.

Name: NA

Message: Odor logged May 19, 2016, at 8:43 am strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. While this concern was submitted approximately one hour after the time cited in this concern an odor patrol was performed shortly after the time cited in this concern, no off-site odor was observed from the Bridgeton Landfill at that time.

Name: Kischa Pulliam

Message: Odor logged May 19, 2016, at 8:50 am strength of 10

Follow-up: The following concern lacks essential location data and is therefore invalid.

Name: NA

Message: Odor logged May 18, 2016, at 11:30 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately 11 hours after the stated time of observation. Odor patrols by Bridgeton Landfill staff prior to and after the time cited in this concern did not observe odor related to the Bridgeton Landfill at an observation point in close proximity to this concern.

Name: NA

Message: Odor logged May 19, 2016, at 3:15 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately 7 hours after the stated time of observation. Odor patrols by Bridgeton Landfill staff prior to and after the time cited in this concern did not observe odor related to the Bridgeton Landfill at an observation point in close proximity to this concern.

Name: Tammy Dunn

Message: Odor logged May 19, 2016, at 9:15 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed immediately before the time cited in this concern. No odor related to the Bridgeton Landfill was observed.

Name: Kevin R. Toal

Message: Odor logged May 19, 2016, at 7:30 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited is between two odor patrols performed by Bridgeton Landfill staff, neither observing off-site odor from the Bridgeton Landfill with any potential to have been detected at this location. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Ruwanganie Weltig

Message: Odor logged May 19, 2016, at 8:45 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited coincides with a Bridgeton Landfill odor patrol. No off-site odor from the Bridgeton Landfill with any potential to have been detected at this location was observed. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: NA

Message: Odor logged May 19, 2016, at 9:24 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited is directly following a Bridgeton Landfill odor patrol. No off-site odor from the Bridgeton Landfill with any potential to have been detected at this location was observed. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Desiree Friedrich

Message: Odor logged May 19, 2016, at 9:32 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern is located of significant distance from the Bridgeton Landfill and the time cited is directly following a Bridgeton Landfill odor patrol. No off-site odor from the Bridgeton Landfill

with any potential to have been detected at this location was observed. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Monica Brady

Message: Odor logged May 19, 2016, at 1:18 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The address given and the latitude/longitude given are different locations. Bridgeton Landfill odor patrols before and after the time cited in this concern did not observe any odor related to the Bridgeton Landfill.

Name: Christina Slaughter

Message: Odor logged May 19, 2016, at 9:37 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The following concern is of substantial distance from the Bridgeton Landfill. An odor patrol was performed shortly before the time cited in this concern, no odor related to the Bridgeton Landfill was observed at multiple points between this location and the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Rhonda Riggs

Message: Odor logged May 19, 2016, at 9:39 am strength of 10

Follow-up: The following concern lacks essential location data and is therefore invalid.

Name: NA

Message: Odor logged May 19, 2016, at 8:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern gives a non-specific location of substantial distance from the Bridgeton Landfill. An odor patrol performed within the hour cited within this concern did not observe Bridgeton Landfill related odor at multiple points between this location and the Bridgeton Landfill. There is no evidence to suggest this was a Bridgeton Landfill odor.

Name: Jackie Cantwell

Message: Odor logged May 18, 2016, at 7:02 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern was submitted approximately 15 hours after the time cited in the concern. Odor

patrols prior to and following this concern did not observe Bridgeton Landfill odor in the proximity of this concern.

Name: Kami McKinney

Message: Odor logged May 19, 2016, at 7:45 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern cites a location of substantial distance from the Bridgeton Landfill. Odor patrols performed before and after the time cited in this concern on this morning did not detect odor related to the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: mray bunton

Message: Odor logged May 19, 2016, at 7:21 am strength of 8

Follow-up: The following concern cites a location of substantial distance from the Bridgeton Landfill and any odor observed here would not be associated with the Bridgeton Landfill.

Name: Lisa

Message: Odor logged May 19, 2016, at 7:40 am strength of 7

Follow-up: The following concern lacks essential location data and is therefore invalid.

Name: Stacy

Message: Odor logged May 19, 2016, at 6:45 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. While the concern was submitted approximately 8 hours after the time cited in the concern Bridgeton Landfill staff performed odor patrols on approximately one hour before and one hour after the time cited in this concern. No odor related to the Bridgeton Landfill was observed in the proximity of this concern. There is no evidence to suggest this was a Bridgeton Landfill odor.

Name: Amanda Spiller

Message: Odor logged May 19, 2016, at 6:45 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. While the concern was submitted approximately 8 hours after the time cited in the concern Bridgeton Landfill staff performed odor patrols on approximately one hour before and one hour after the

time cited in this concern. No odor related to the Bridgeton Landfill was observed in the proximity of this concern. There is no evidence to suggest this was a Bridgeton Landfill odor.

Name: Jenina Kenessey

Message: Odor logged May 19, 2016, at 8:54 am strength of 6

Follow-up: The following concern cites an address that could not be located and did not provide latitude and longitude information and is therefore invalid.

Name: Jenina Kenessey

Message: Odor logged May 15, 2016, at 8:56 am strength of 10

Follow-up: The following concern cites an address that could not be located and did not provide latitude and longitude information and is therefore invalid.

Name: Jenina Kenessey

Message: Odor logged May 18, 2016, at 8:58 am strength of 4

Follow-up: The following concern cites an address that could not be located and did not provide latitude and longitude information and is therefore invalid.

Name: AT&T

Message: Odor logged May 19, 2016, at 8:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within an hour of the time cited in this concern, no odor related to the Bridgeton Landfill was observed in the proximity of this concern location.

Name: NA

Message: Odor logged May 19, 2016, at 3:15 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points in close proximity to this concern.

Name: NA

Message: Odor logged May 19, 2016, at 1:24 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points in close proximity to this concern.

Name: NA

Message: Odor logged May 19, 2016, at 8:07 am strength of 10

Follow-up: The following concern lacks essential location data and is therefore invalid.

Name: NA

Message: Odor logged May 20, 2016, at 7:30 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. These concerns were not of a Bridgeton Landfill origin.

Name: NA

Message: Odor logged May 20, 2016, at 7:30 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. These concerns were not of a Bridgeton Landfill origin.

Name: NA

Message: Odor logged May 20, 2016, at 7:32 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. These concerns were not of a Bridgeton Landfill origin.

Name: NA

Message: Odor logged May 20, 2016, at 7:33 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. These concerns were not of a Bridgeton Landfill origin.

Name: NA

Message: Odor logged May 20, 2016, at 7:30 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. These concerns were not of a Bridgeton Landfill origin.

Name: NA

Message: Odor logged May 20, 2016, at 7:35 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. These concerns were not of a Bridgeton Landfill origin.

Name: Kirbi

Message: Odor logged May 20, 2016, at 8:58 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol was performed concurrent with the time cited in this concern. No odor related to the Bridgeton Landfill was observed with the potential to have been the cause of this concern. This was not a Bridgeton Landfill odor.

Name: Tammy Dunn

Message: Odor logged May 20, 2016, at 9:07 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol was performed concurrent with the time cited in this concern. No odor related to the Bridgeton Landfill was observed with the potential to have been the cause of this concern. This was not a Bridgeton Landfill odor.

Name: Rebecca

Message: Odor logged May 20, 2016, at 12:00 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol was performed concurrent with the time cited in this concern. No odor related to the Bridgeton Landfill was observed with the potential to have been the cause of this concern. This was not a Bridgeton Landfill odor.

Name: tramaine harris

Message: Odor logged May 20, 2016, at 3:21 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol was performed immediately prior to the time cited in this concern. No odor related to the Bridgeton Landfill was observed with the potential to have been the cause of this concern. This was not a Bridgeton Landfill odor.

Name: Ashley hamilton

Message: Odor logged May 20, 2016, at 3:23 pm strength of 5

Follow-up: The following concern lacks essential location data and is therefore invalid.

Name: Kathy Luther

Message: Odor logged May 19, 2016, at 8:00 am strength of 4

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol was performed within the hour of the time cited in this concern. No odor related to the Bridgeton Landfill was observed with the potential to have been the cause of this concern. This was not a Bridgeton Landfill odor.

Name: Kaci Gill

Message: Odor logged May 21, 2016, at 6:34 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols performed in the evening prior to and the morning shortly after the time cited in this concern did not observe Bridgeton Landfill related odor.

Name: Tammy Dunn

Message: Odor logged May 21, 2016, at 7:50 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location is of substantial distance from the Bridgeton Landfill. An odor patrol was performed approximately one hour from time cited in this concern. No odor related to the Bridgeton Landfill was observed with the potential to have been the cause of this concern. This was not a Bridgeton Landfill odor.

Name: bob Labeaume

Message: Odor logged May 21, 2016, at 6:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols on the morning of this concern did not detect odor related to the Bridgeton Landfill at observation points between this location and the Bridgeton Landfill.

Name: Rhonda Steelman

Message: Odor logged May 21, 2016, at 5:15 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern location cited is of close proximity to a point of observed Bridgeton Landfill related odor during the previous and following odor observation patrols. This odor was determined by trained staff to be of <7 dilution factor by the Nasal Ranger classification system.

Name: NA

Message: Odor logged May 21, 2016, at 8:17 pm strength of 10

Follow-up: The following concern does not provide a valid location for investigation and is therefore invalid.

Name: NA

Message: Odor logged May 21, 2016, at 8:58 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed immediately following the time cited in this concern did not observe odor related to the Bridgeton Landfill at points between this concern location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 21, 2016, at 5:30 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor patrols on the morning of this concern did not detect odor related to the Bridgeton Landfill at observation points between this location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 21, 2016, at 9:00 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed immediately following the time cited in this concern did not observe odor related to the Bridgeton Landfill at points between this concern location and the Bridgeton Landfill.

Name: Amy

Message: Odor logged May 22, 2016, at 12:28 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed the evening prior to this concern did not observe odor related to the Bridgeton Landfill at observation points between this concern location and the Bridgeton Landfill.

Name: Brady Nelson

Message: Odor logged May 22, 2016, at 1:05 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed the evening prior to this concern did not observe odor related to the Bridgeton Landfill at observation points between this concern location and the Bridgeton Landfill.

Name: Bob LaBeaume

Message: Odor logged May 22, 2016, at 6:39 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed the morning of this concern did not observe odor related to the Bridgeton Landfill at observation points between this concern location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 22, 2016, at 7:52 am strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed shortly following the time cited in this concern did not observe odor related to the Bridgeton Landfill at observation points between this concern location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 22, 2016, at 7:00 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed approximately one hour following the time cited in this concern did not observe odor related to the Bridgeton Landfill at observation points between this concern location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 22, 2016, at 8:00 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol performed concurrent with the time cited in this concern did not observe odor related to the Bridgeton Landfill at observation points between this concern location and the Bridgeton Landfill.

Name: Kristen gray

Message: Odor logged May 23, 2016, at 10:11 am strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An investigation performed shortly after the time cited in this concern did not observe any Bridgeton Landfill related odor in the immediate vicinity of this concern.

Name: Brieann mccormick

Message: Odor logged May 24, 2016, at 8:20 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed shortly before the time cited in this concern, no odor related to the Bridgeton Landfill was observed in the proximity of this concern.

Name: Brieann mccormick

Message: Odor logged May 24, 2016, at 8:20 am strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed shortly after the time cited in this concern, no odor related to the Bridgeton Landfill was observed in the proximity of this concern.

Name: David Blackwell

Message: Odor logged May 19, 2016, at 11:30 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within the hour prior to the time cited in this concern; no odor related to the Bridgeton Landfill was observed in the proximity of this concern.

Name: David Blackwell

Message: Odor logged May 25, 2016, at 7:15 am strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was in progress at the time cited in this concern; no odor related to the Bridgeton Landfill was observed in the proximity of this concern.

Name: NA

Message: Odor logged May 25, 2016, at 8:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed shortly before the time cited in this concern; no odor related to the Bridgeton Landfill was observed in the proximity of this concern.

Name: NA

Message: Odor logged May 26, 2016, at 7:39 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor

patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. There is no evidence to suggest that these concerns were related to the Bridgeton Landfill.

Name: NA

Message: Odor logged May 26, 2016, at 7:40 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. There is no evidence to suggest that these concerns were related to the Bridgeton Landfill.

Name: NA

Message: Odor logged May 26, 2016, at 7:41 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. There is no evidence to suggest that these concerns were related to the Bridgeton Landfill.

Name: NA

Message: Odor logged May 26, 2016, at 7:45 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed approximately one hour after the time cited in this concern. No odor associated with the Bridgeton Landfill was observed at observation points between this location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 26, 2016, at 7:46 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill

at observation points between this highway and the Bridgeton Landfill. There is no evidence to suggest that these concerns were related to the Bridgeton Landfill.

Name: NA

Message: Odor logged May 26, 2016, at 7:35 am strength of 10

Follow-up: The following concern is one of a series of concerns submitted from a location on a highway, ranging from considerable distance from the Bridgeton Landfill to a closer proximity immediately adjacent from another known odor source. Bridgeton Landfill odor patrols on the morning of these concerns did not observe odor related to the Bridgeton Landfill at observation points between this highway and the Bridgeton Landfill. There is no evidence to suggest that these concerns were related to the Bridgeton Landfill.

Name: NA

Message: Odor logged May 26, 2016, at 9:30 am strength of 6

Follow-up: The following concern has been investigated by the Bridgeton Landfill. An odor patrol was performed concurrent with the time referenced in this concern; no odor associated with the Bridgeton Landfill was observed at points between this location and the Bridgeton Landfill.

Name: NA

Message: Odor logged May 26, 2016, at 9:42 am strength of 8

Follow-up: The following concern was investigated by Bridgeton Landfill staff shortly after receipt. No odor related to the Bridgeton Landfill was observed.

Name: NA

Message: Odor logged May 29, 2016, at 8:17 pm strength of 10

Follow-up: The following concern was investigated by Bridgeton Landfill staff shortly after receipt. No odor related to the Bridgeton Landfill was observed.

Name: Dawn Chapman

Message: Odor logged May 29, 2016, at 8:17 pm strength of 10

Follow-up: The following odor concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time stated in this concern. No odor related

to the Bridgeton Landfill was observed at points between the Bridgeton Landfill and this concern location.

Name: NA

Message: Odor logged May 29, 2016, at 8:33 pm strength of 10

Follow-up: The following concern lacks essential location data and as such cannot be investigated.

Name: Tami bieler

Message: Odor logged May 29, 2016, at 8:45 pm strength of 10

Follow-up: The following odor concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time stated in this concern. No odor related to the Bridgeton Landfill was observed at points between the Bridgeton Landfill and this concern location.

Name: Kathleen Kapayou

Message: Odor logged May 29, 2016, at 9:00 pm strength of 7

Follow-up: The following odor concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time stated in this concern. No odor related to the Bridgeton Landfill was observed at points between the Bridgeton Landfill and this concern location.

Name: Sheila gray

Message: Odor logged May 29, 2016, at 10:21 pm strength of 7

Follow-up: The following odor concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within one hour of the time stated in this concern. No odor related to the Bridgeton Landfill was observed at points between the Bridgeton Landfill and this concern location.

Name: NA

Message: Odor logged May 29, 2016, at 2:00 pm strength of 10

Follow-up: The following odor concern has been investigated by Bridgeton Landfill staff. Odor patrols performed before and after the time cited in this concern did not observe odor related to the Bridgeton Landfill with potential to be related to this concern.

Name: NA

Message: Odor logged May 29, 2016, at 11:34 pm strength of 10

Follow-up: The following odor concern has been investigated by Bridgeton Landfill staff. An odor patrol performed approximately an hour prior to this concern did not observe odor related to the Bridgeton Landfill at multiple points between this location and the Bridgeton Landfill. This concern is of significant distance from the Bridgeton Landfill. There is no evidence to suggest that this concern is related to the Bridgeton Landfill.

Name: NA

Message: Odor logged May 29, 2016, at 11:34 pm strength of 10

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

Name: NA

Message: Odor logged May 30, 2016, at 12:42 pm strength of 3

Follow-up: The following concern has been investigated by the Bridgeton Landfill. This location is of substantial distance from the Bridgeton Landfill. An odor patrol was performed within the hour prior to this concern and did not observe odor related to the Bridgeton Landfill at multiple points between the Bridgeton Landfill and this concern location.

Name: NA

Message: Odor logged May 30, 2016, at 12:42 pm strength of 4

Follow-up: The following concern has been investigated by the Bridgeton Landfill. This location is of substantial distance from the Bridgeton Landfill. Odor patrols performed prior to and following this concern did not observe odor related to the Bridgeton Landfill at multiple points between the Bridgeton Landfill and this concern location.

Name: NA

Message: Odor logged May 30, 2016, at 12:21 am strength of 8

Follow-up: The following concern has been investigated by the Bridgeton Landfill. Odor patrols performed prior to and following this concern did not observe odor related to the Bridgeton Landfill at multiple points between the Bridgeton Landfill and this concern location.

Name: NA

Message: Odor logged May 31, 2016, at 7:13 am strength of 9

Follow-up: The following concern has been investigated by the Bridgeton Landfill. An odor patrol was performed within the hour of this concern, no odor related to the Bridgeton Landfill was observed at points in close proximity to this concern.

Name: NA

Message: Odor logged May 31, 2016, at 8:02 am strength of 10

Follow-up: The following concern has been investigated by the Bridgeton Landfill. An odor patrol was performed within the hour of this concern, no odor related to the Bridgeton Landfill was observed at points in close proximity to this concern.

ATTACHMENT H

LIQUID CHARACTERIZATION DATA AND DISCHARGE LOG

Bridgeton Landfill - Leachate PreTreatment Plant

May 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

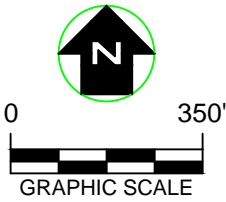
Date	Waste	Source	Transporter	Quantity
5/1/2016	LPTP Activated Sludge/ Permeate	Tank 1 (T1)	MBI	0
5/2/2016				0
5/3/2016				0
5/4/2016				0
5/5/2016				0
5/6/2016				0
5/7/2016				0
5/8/2016				0
5/9/2016				0
5/10/2016				0
5/11/2016				0
5/12/2016				0
5/13/2016				0
5/14/2016				0
5/15/2016				0
5/16/2016				0
5/17/2016				0
5/18/2016				0
5/19/2016				0
5/20/2016				0
5/21/2016				0
5/22/2016				0
5/23/2016				0
5/24/2016				0
5/25/2016				0
5/26/2016				0
5/27/2016				0
5/28/2016				0
5/29/2016				0
5/30/2016				0
5/31/2016				0
Total=				0

Direct Discharge to MSD

Date	Waste	Source	Quantity (gal)
5/1/2016	LPTP Permeate	Through Tank AST 97k (MSD Sampling Point 013)	287,138
5/2/2016			285,880
5/3/2016			282,590
5/4/2016			199,996
5/5/2016			167,346
5/6/2016			159,164
5/7/2016			160,746
5/8/2016			158,764
5/9/2016			156,832
5/10/2016			142,200
5/11/2016			147,850
5/12/2016			216,690
5/13/2016			283,444
5/14/2016			276,576
5/15/2016			272,028
5/16/2016			271,716
5/17/2016			271,388
5/18/2016			236,336
5/19/2016			231,866
5/20/2016			275,350
5/21/2016			207,906
5/22/2016			144,794
5/23/2016			274,176
5/24/2016			292,142
5/25/2016			205,248
5/26/2016			151,222
5/27/2016			150,032
5/28/2016			254,262
5/29/2016			300,624
5/30/2016			280,752
5/31/2016			308,384
Total =			7,053,442

ATTACHMENT I

LOW FILL PROJECT AREA



NOTES

- 1. SITE AERIAL TOPOGRAPHIC SURVEY BY COOPER AERIAL SURVEYS, CO. ON AUGUST 1, 2015.
- 2. FOR CLARITY, NOT ALL SITE FEATURES MAY BE SHOWN.
- 3. SURVEY POINTS WERE PERFORMED USING GPS METHODS.

LEGEND

- BOUNDARY OF FILL AREA FOR 4-19-16 THROUGH 5-16-16
- BOUNDARY OF STOCKPILE AREA FOR 4-19-16 THROUGH 5-16-16

			BRIDGETON LANDFILL	 CB&I Environmental & Infrastructure, Inc. STATE OF ILLINOIS LICENSED DESIGN FIRM #184004093	BRIDGETON LANDFILL BRIDGETON, MO								
					LOW FILL AREA BOUNDARY MAY 2016								
REV. NO.	DATE	DESCRIPTION				DRAWN BY:	ORC	APPROVED BY:	DJD	PROJ. NO.:	155162	DATE:	JUNE 2016