

Bridgeton Landfill, LLC

Monthly Data Submittals

March 2017

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

April 20, 2017

Commentary on Data

April 20, 2017

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 186 SCFM from the North Quarry and 1,532 SCFM from the South Quarry, for a total site flow of 1,718 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 41 GEW wells that are experiencing low or restricted flows, and seven (7) GIW wells that have low gas flow due to the cooling loops that are installed within these wells. By the end of the month, 26 of the GEW wells and 6 of the GIW 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. With the exception of GEW-1A, all of 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-1 notes that GEW-1A has an oxygen concentration greater than 5% at one (1) or more weekly monitoring events during the reporting period. This has been the case since it's installation in December 2015. Bridgeton has made MDNR and St Louis County's Air Pollution Control Program aware of this. The area in which GEW-1A is installed is very saturated. Bridgeton has installed a sump in the vicinity of GEW-1A and will be increasing the force main capacity during the North Quarry capping projects in an effort to lower the potentiometric surface in the area to improve gas quality and reduce ambient air intrusion at the well.
- Attachment E-2 contains gas temperatures as measured at the wellheads. Six (6) vertical wells (excluding GIW wells) increased by 30°F during this reporting period. Additionally, 13 vertical wells (excluding GIW wells) decreased 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.
- 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 147.7°F which is consistent with historic readings.

Carbon monoxide (CO) results showed non-detect (ND) for North Quarry wells, with the exception of GEW-053 (110 ppm) and GEW-054 (34 ppm).

- Review of weekly gas quality in Attachment E reveals that all of the active North Quarry gas wells, with the exception of GEW-1A, continue to have low, if any, oxygen and healthy methane and carbon dioxide levels. These levels indicate normal wellfield conditions for aged waste and are consistent with GCCS wellfield conditions observed in the North Quarry for some time. As mentioned previously, the area in which GEW-1A is installed is very saturated. Bridgeton has installed a sump near GEW-1A and will be increasing the force main capacity during the North Quarry capping projects in an effort to lower the potentiometric surface in the area to improve gas quality and reduce ambient air intrusion at the well.

Settlement

- The South Quarry exhibited monthly maximum settlement up to 0.72 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.
Note: The elevation change color scheme on the Settlement Map has been modified to use lighter colors to enhance readability. However, the settlement range depths, the contouring of the settlement (major and minor contours) and the settlement front contour development are all consistent with previous monthly settlement calculation and presentation procedures.

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. An increase in waterfowl was noticed from mid to late March due to spring migration, consistent with observations in the surrounding areas. These birds were dispersed using pyrotechnics, a cap gun and vehicles. A remote-control boat was also utilized to disperse birds on the retention basin adjacent to St. Charles Rock Road. The Bridgeton Landfill submitted an updated Bird Hazard Monitoring and Mitigation Plan to the airport on 12/2/16.

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 4 of this approval is satisfied via the text below and the accompanying figure in Attachment I-1.
- No low fill maintenance activities occurred in March.

ATTACHMENT A

WORK COMPLETED AND PLANNED

Bridgeton Landfill, LLC
Monthly Summary of Work Completed and Planned

Work Completed in March 2017

Gas Collection and Control System (GCCS)

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

Heat Extraction System (HES)

- Continued operation and maintenance of the HES (pilot and barrier wells).

Leachate Management System

- Continued routine operation of previously installed and upgraded features.
- Installed force main connection, pump, level transducer, and flow meter on LCS-5B.
- Brought LCS-5B online, which replaced LCS-5A as a compliance point.

Pre-Treatment Facility

- Continued ongoing operation of facility.
- Continued to optimize operation efficiency of pre-treatment facility.
- Permeate continued to be discharged directly to St. Louis Metropolitan Sewer District (MSD) – Bissell Point Facility or other approved disposal facilities as determined by MSD.
- Completed testing of new polymer to improve flocculation.

Other Projects

- Continued acceptance of clean fill.
- Resumed construction for the North Quarry EVOH capping project.
- Performed clean out and permeability testing of Interception Trench Sumps ITS-1 through ITS-7. This will continue on a monthly basis for the near future, but frequency may reduce based on results.

Work Planned for April 2017

Gas Collection and Control System (GCCS)

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

Heat Extraction System (HES)

- Continue operation and maintenance of the HES.
- Continue upgrades to the HES as necessary.

Leachate Management System

- Continue 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 will continue to be discharged directly to St. Louis Metropolitan Sewer District (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.
- Continue construction for the North Quarry EVOH capping project contingent upon weather.
- Perform clean out and permeability testing of Interception Trench Sumps ITS-1 through ITS-7. This will continue on a monthly basis for the near future, but frequency may reduce based on results.

ATTACHMENT B

DAILY FLARE MONITORING DATA

ATTACHMENT B-1

FLOW DATA TABLE

Daily Flare Monitoring Data - Bridgeton Landfill
March 2017

Date	Average Device Flow* (scfm)				Total Avg. Flow** (scfm)
	Utility Flare (FL-100)	Utility Flare (FL-120)	Utility Flare (FL-140)	EP14 NQ Utility Flare***	
3/1/2017	0	0	1,559	178	1,737
3/2/2017	0	0	1,543	181	1,724
3/3/2017	0	428	925	187	1,539
3/4/2017	0	934	646	188	1,768
3/5/2017	0	0	1,574	186	1,760
3/6/2017	0	0	1,491	203	1,694
3/7/2017	0	0	1,557	182	1,739
3/8/2017	0	0	1,583	184	1,767
3/9/2017	0	0	1,561	191	1,752
3/10/2017	0	0	1,568	177	1,745
3/11/2017	0	0	1,559	164	1,723
3/12/2017	0	0	1,560	183	1,743
3/13/2017	0	0	1,546	181	1,727
3/14/2017	0	0	1,507	188	1,695
3/15/2017	0	0	1,523	177	1,700
3/16/2017	0	0	1,558	171	1,729
3/17/2017	0	0	1,630	174	1,803
3/18/2017	0	0	1,612	163	1,775
3/19/2017	0	0	1,607	165	1,772
3/20/2017	0	0	1,630	176	1,806
3/21/2017	0	0	1,599	193	1,792
3/22/2017	0	0	1,561	195	1,756
3/23/2017	0	0	1,493	195	1,688
3/24/2017	0	0	1,522	207	1,729
3/25/2017	0	0	1,463	218	1,681
3/26/2017	0	0	1,454	215	1,670
3/27/2017	0	0	1,451	214	1,666
3/28/2017	0	0	1,454	203	1,657
3/29/2017	0	0	1,468	181	1,649
3/30/2017	0	0	1,480	178	1,658
3/31/2017	0	0	1,455	170	1,625
Average	0	44	1,488	186	1,718

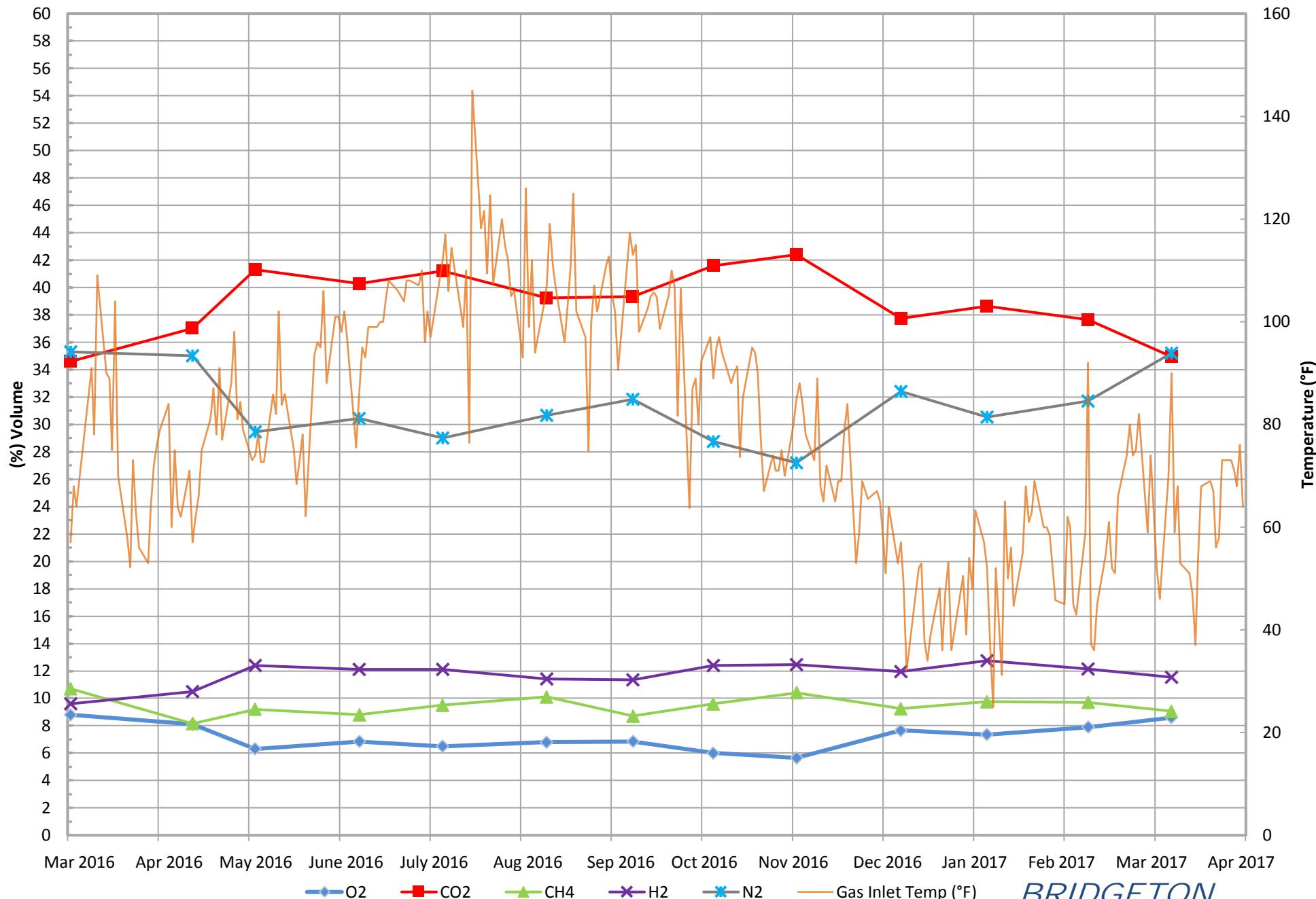
* Flows normalized to **Blower Outlet Flowmeter - EPA Method 2 measurement verified

*** On 3/18/2016, the Bridgeton Landfill began separating the North Quarry gas to the Auxiliary Flare

ATTACHMENT B-2

FLOW DATA GRAPHS

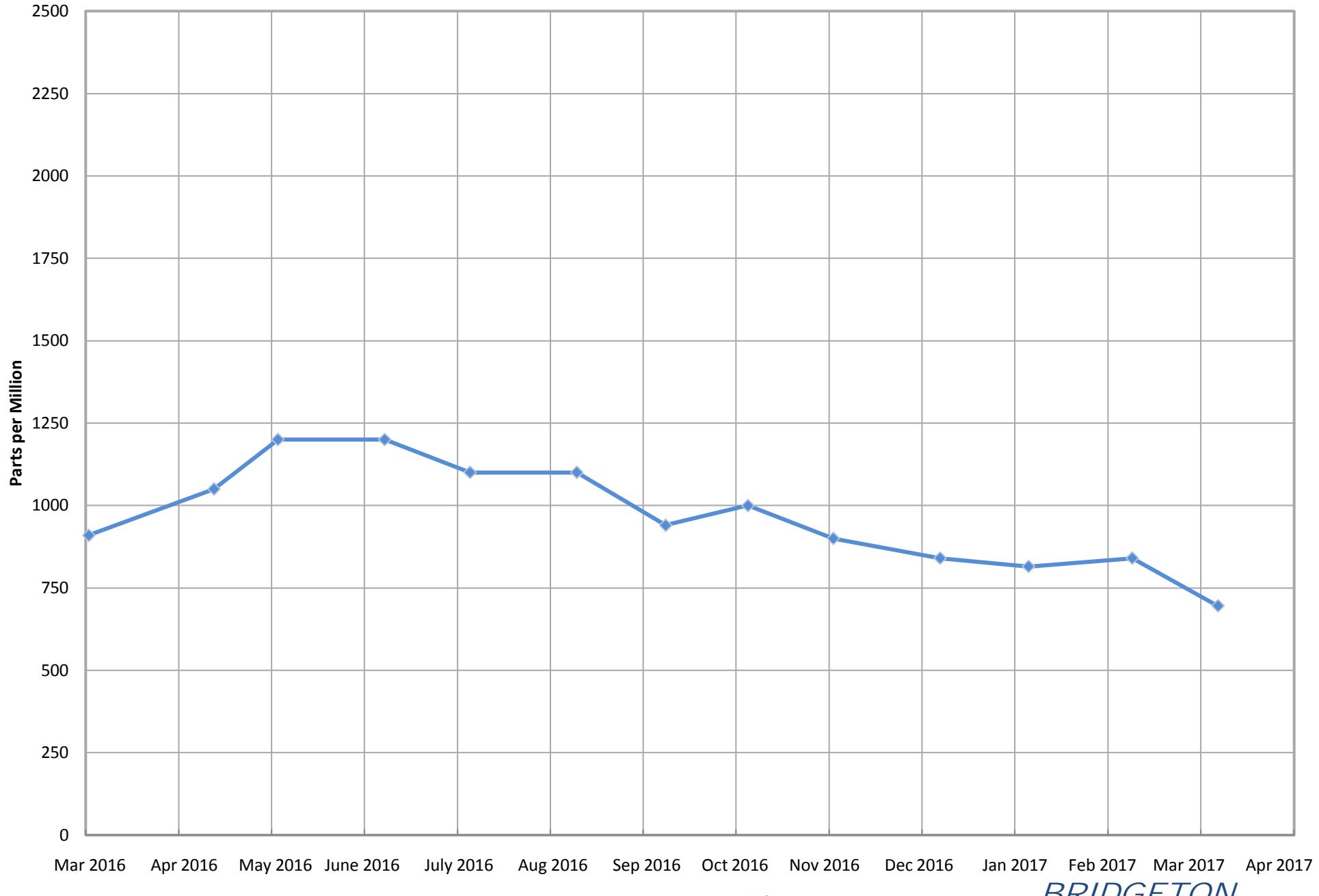
South Quarry Inlet Gas and Temperature*



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

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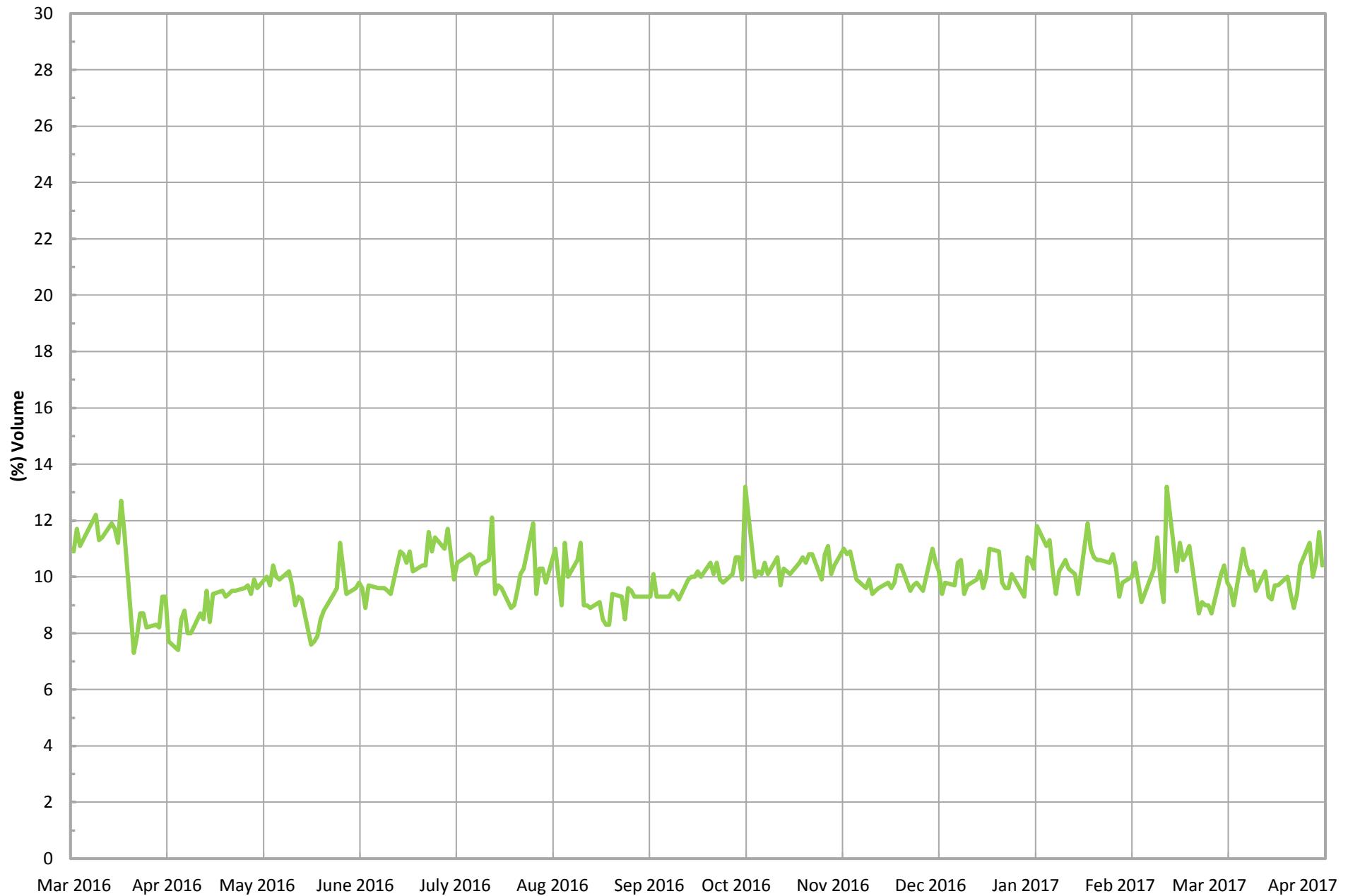
South Quarry Inlet Carbon Monoxide*



*Data collected from Laboratory Reports for the South Quarry.

*BRIDGETON
LANDFILL*

South Quarry Inlet Methane (Field Data)*

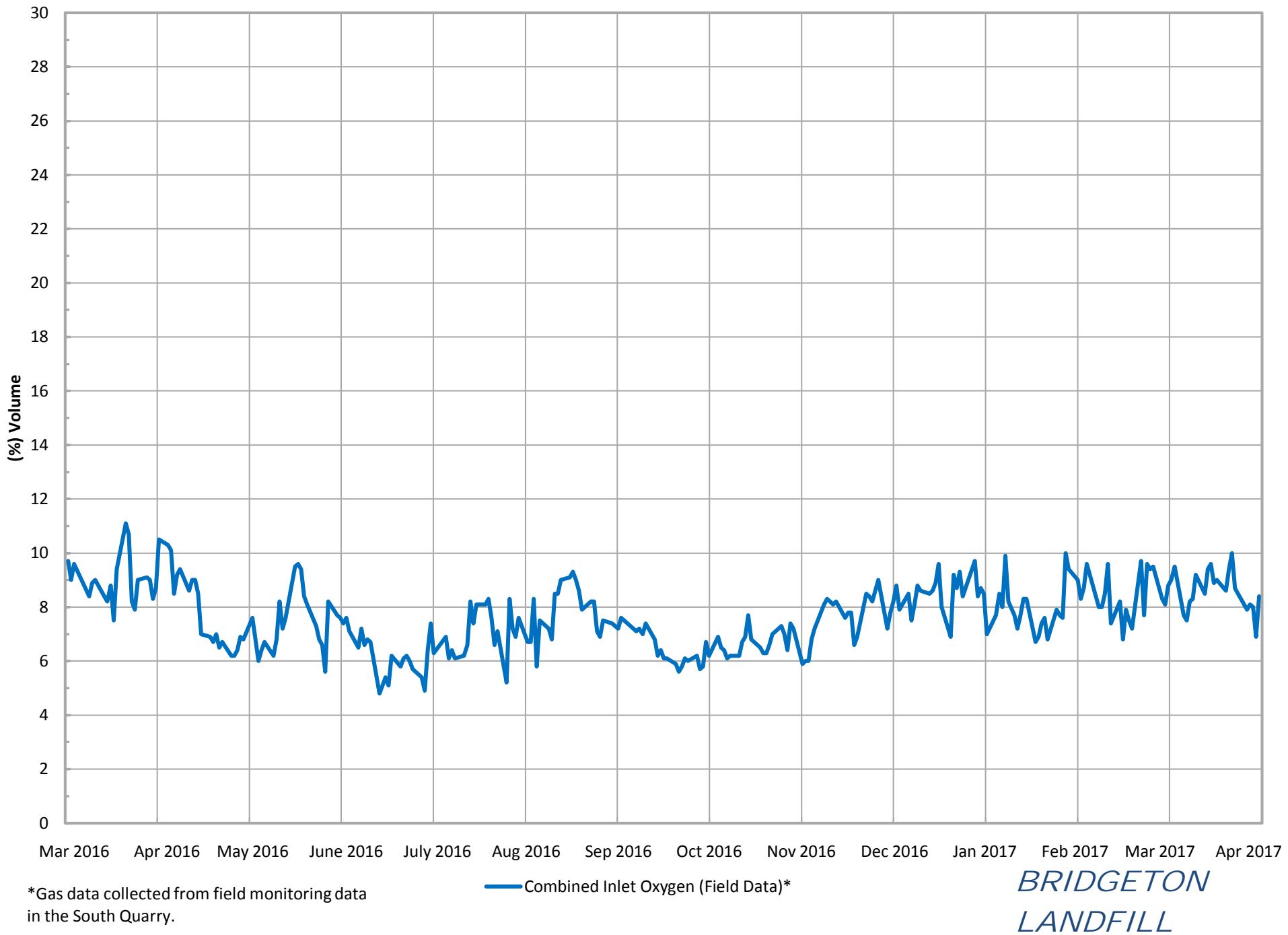


*Gas data collected from field monitoring data in the South Quarry.

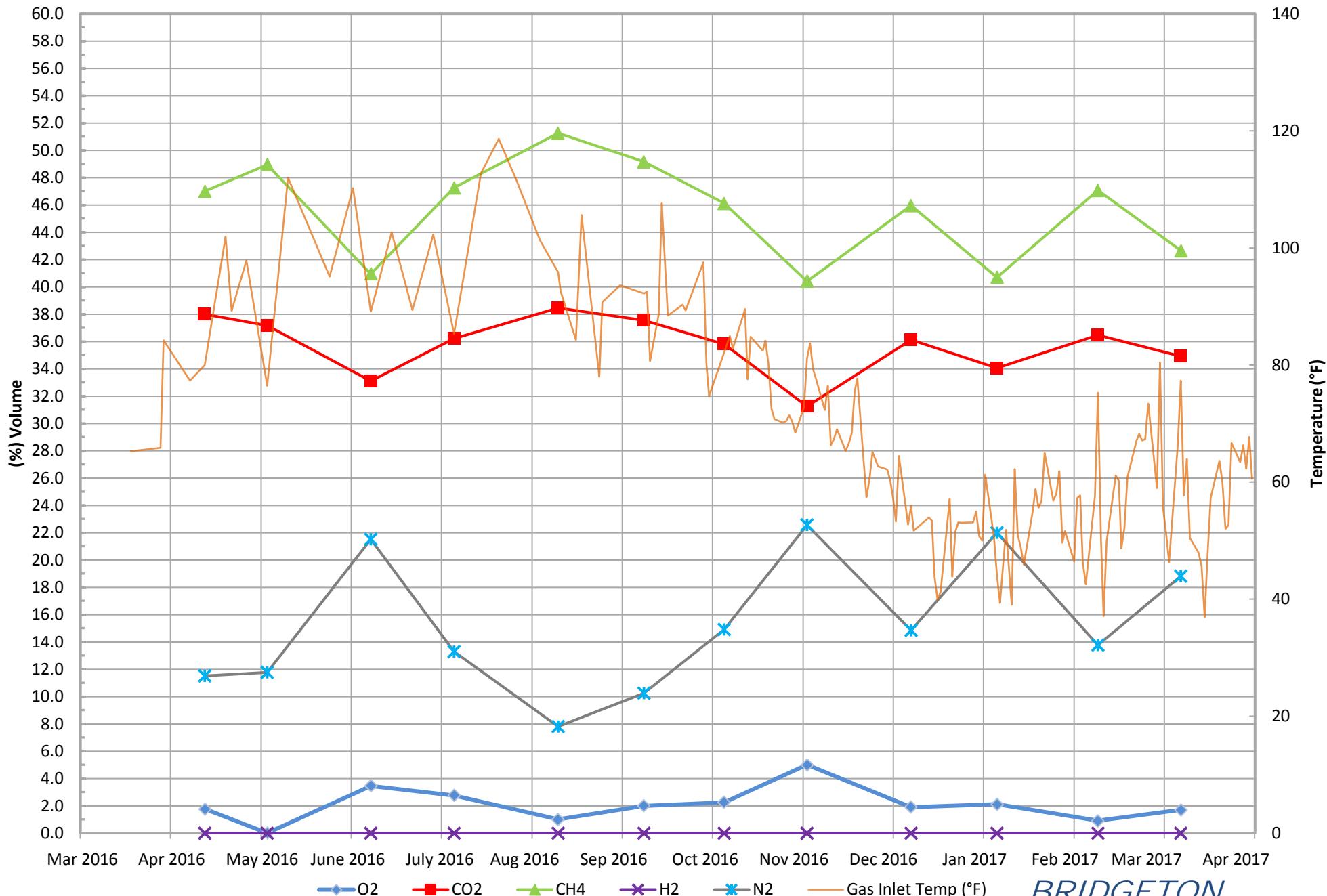
Combined Inlet Methane (Field Data)*

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South Quarry Inlet Oxygen (Field Data)*



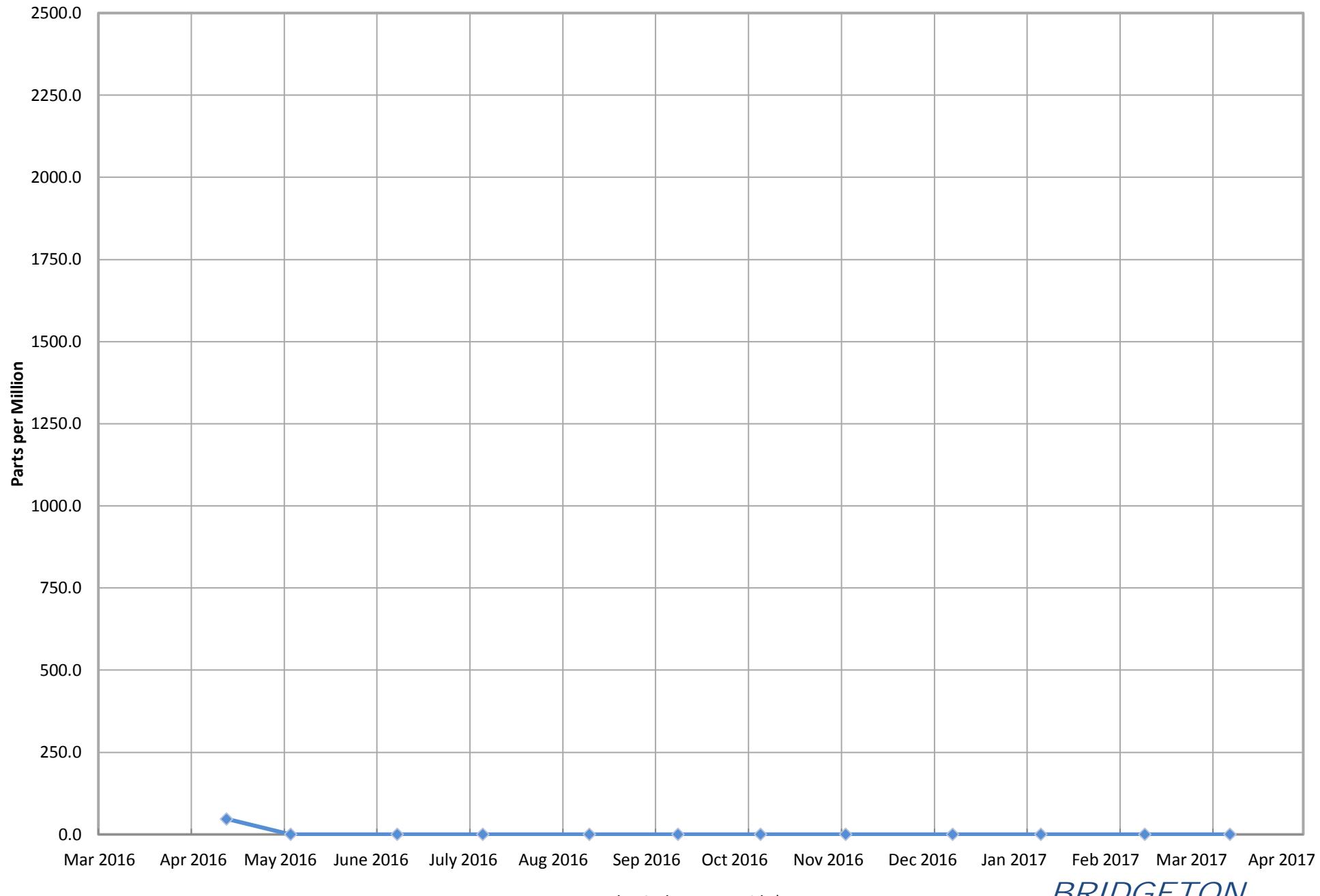
North Quarry Inlet Gas and Temperature*



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

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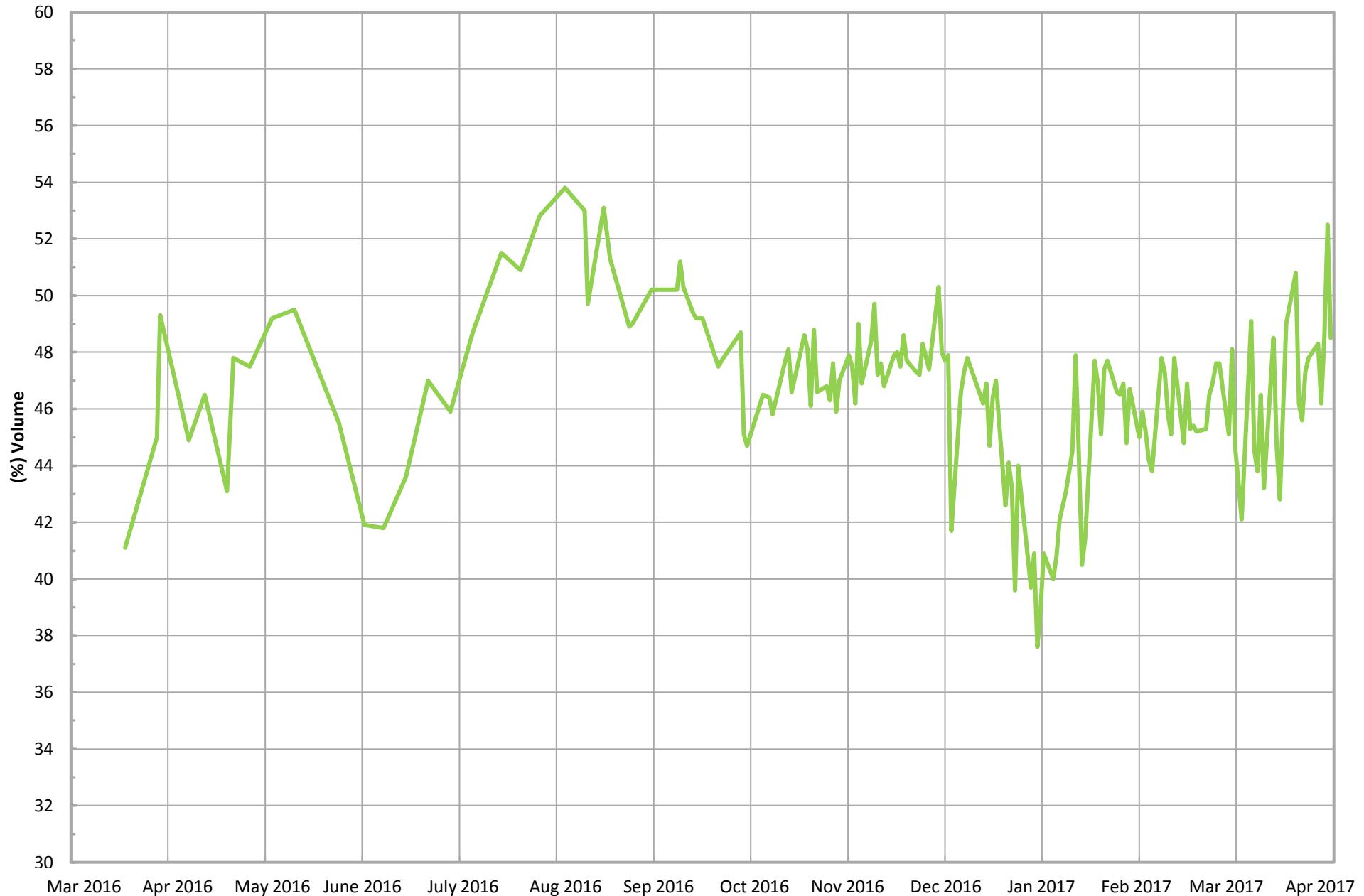
North Quarry Inlet Carbon Monoxide*



*Data collected from Laboratory Reports for the North Quarry.

*BRIDGETON
LANDFILL*

North Quarry Inlet Methane (Field Data)*

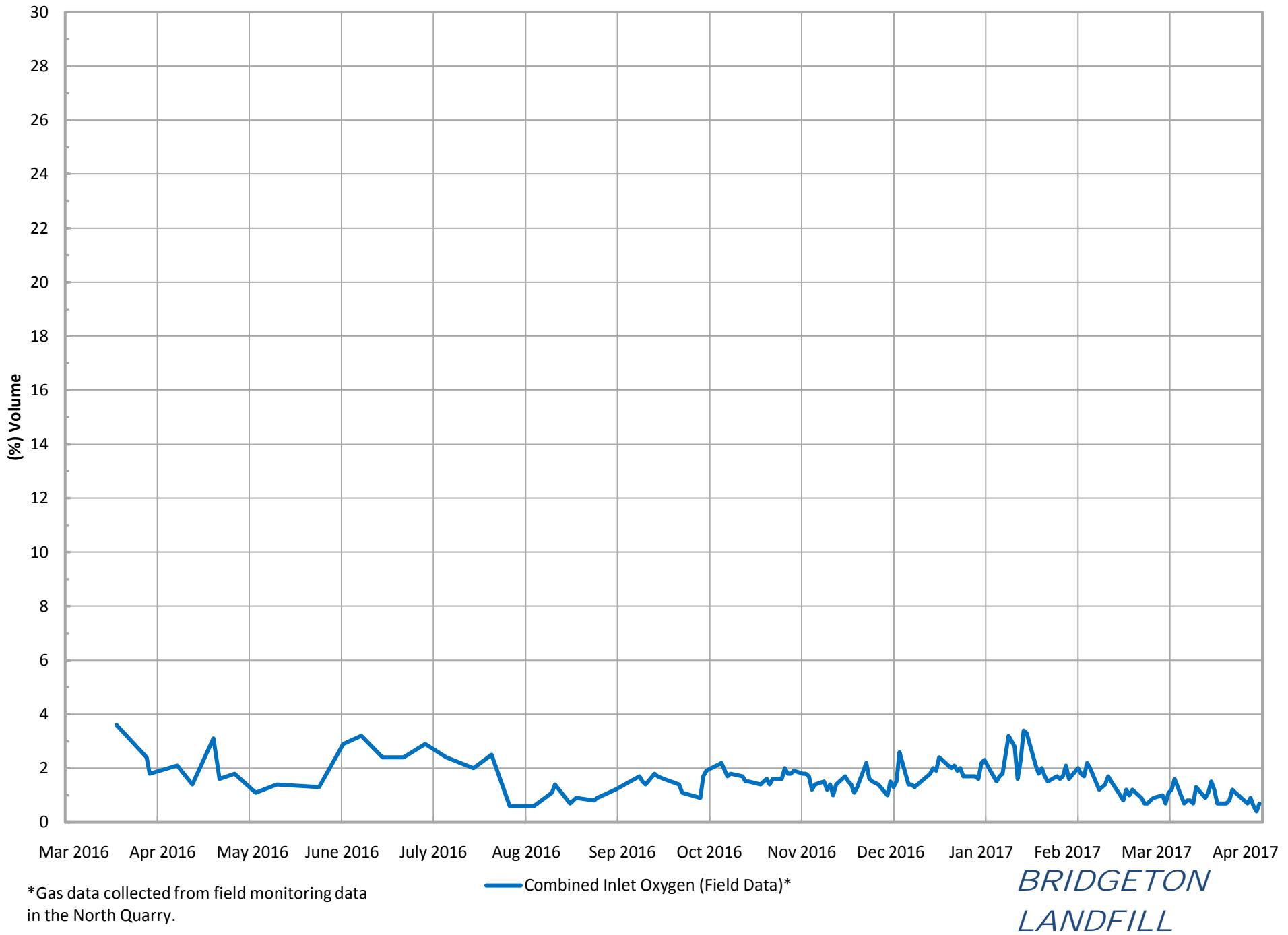


*Gas data collected from field monitoring data in the North Quarry.

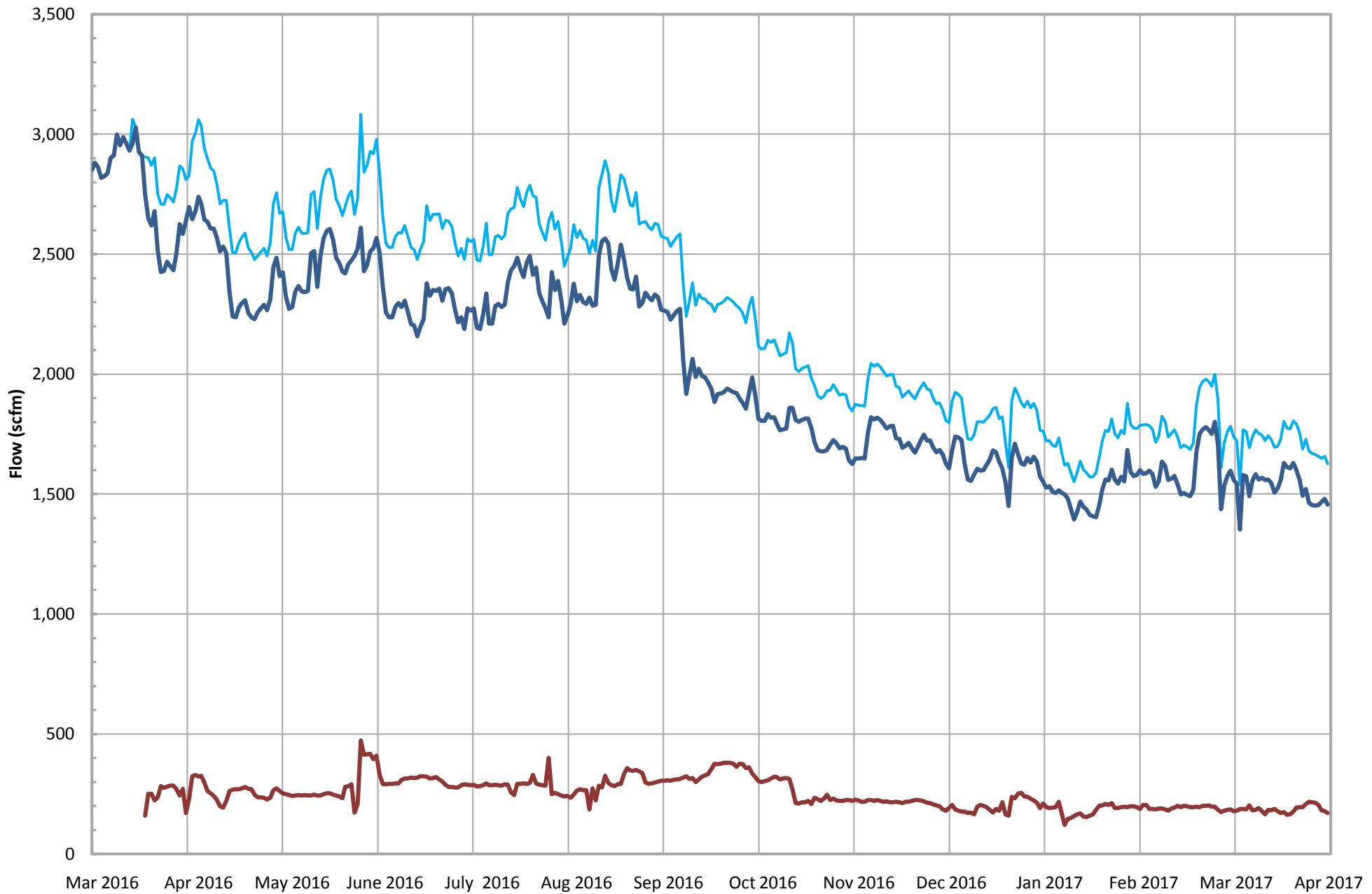
Combined Inlet Methane (Field Data)*

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North Quarry Inlet Oxygen (Field Data)*



Total Combined Flow (scfm)*



*Combined flow is based on tabulated flow data collected daily from FL-100, FL-120, FL-140, and the Auxiliary Candlestick Flare.

— Total Combined Flow (scfm)*
— SQ Flare Station Total Utility Flare Flow
— NQ Utility Flare

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ATTACHMENT B-3

FLARE TRS / FLARE STATION FLOW

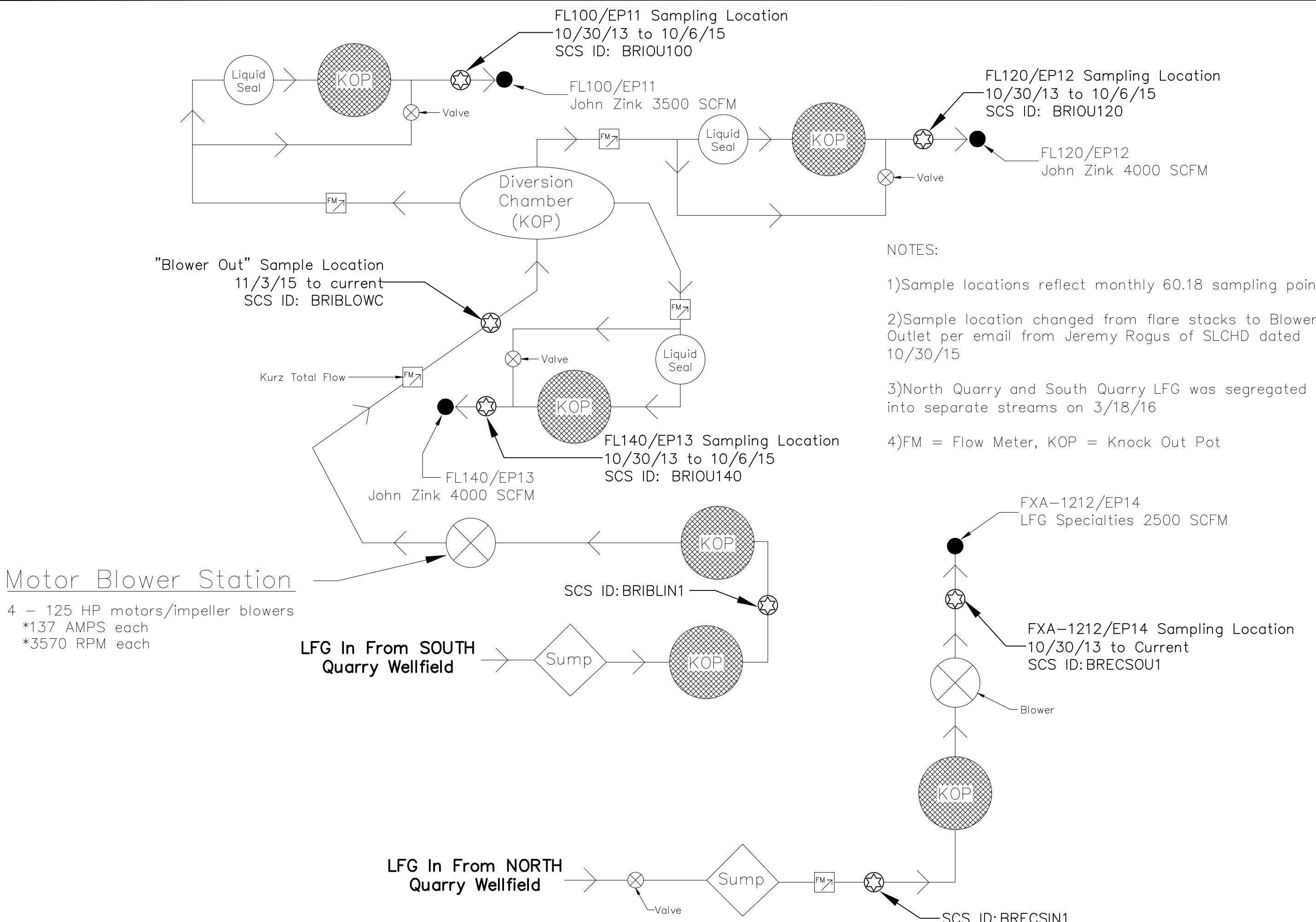
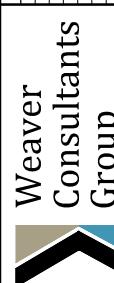


FIGURE 1 - NORTH & SOUTH QUARRY FLARE COMPOUND
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI

PREPARED FOR:
BRIDGETON LANDFILL,
LLC

No.	Date	REVISION DESCRIPTION
1	9/19/2016	EP-98 Removed, shown only to represent SQ IFC flow



WEAVER CONSULTANTS GROUP
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DRAWN BY: DT
REVIEWED BY: MC
DATE: 10/7/2016
FILE: 0120-131-10
CAD: Figure 1 - Flow Diagram.dwg

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

Bridgeton Landfill, LLC.
 March 7, 2017 to April 4, 2017

SAMPLE EVENT #	DATE	VELOCITY ft/sec	FLOW dscfm	TRS ppm _{vd}
109-14 ¹	4/4/2017	17.50	1386	1600
				1700
108-13 ²	3/28/2017	16.12	1306	1300
				1500
107-12 ²	3/21/2017	18.42	1492	1200
				1300
106-11 ²	3/14/2017	15.84	1283	1300
				1400
105-10 ¹	3/7/2017	16.15	1337	1600
				1600

Notes:

¹Indicates velocity/flow determined by EPA Method 2

²Indicates velocity/flow recorded by Blower Outlet's KURZ Flow Meter

PARAMETER		Blower Out
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL140)		
Date	Test Date	4/4/17
Start	Run Start Time	9:21
	Run Finish Time	11:00
	Net Traversing Points	8 (2 x 4)
⌚	Net Run Time, minutes	1:39:51
C _p	Pitot Tube Coeficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.42
% H ₂ O	Moisture Content of LFG, %	1.94
% RH	Relative Humidity, %	65.80
M _{fd}	Dry Mole Fraction	0.981
%CH ₄	Methane, %	9.25
%CO ₂	Carbon Dioxide, %	35.55
%O ₂	Oxygen, %	8.50
%Balance	Assumed as Nitrogen, %	34.50
%H ₂	Hydrogen, %	11.50
%CO	Carbon Monoxide, %	0.07
M _d	Dry Molecular Weight, lb/lb-Mole	29.76
M _s	Wet Molecular weight, lb/lb-Mole	29.54
P _g	Flue Gas Static Pressure, inches of H ₂ O	12.24
P _s	Absolute Flue Gas Pressure, inches of Mercury	30.32
t _s	Average Stack Gas Temperature, °F	78
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.071
v _s	Average LFG Velocity, feet/second	17.50
A _s	Stack Crossectional Area, square feet	1.35
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	1,386
Q _s	Standard Volumetric Flow Rate, scfm	1,412
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	1,421
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	6,422
NHV	Net Heating Value, Btu/scf	132.3
LFG _{CH4}	Methane, lb/hr	320.3
	Methane, grains/dscf	26.97
LFG _{CO2}	Carbon Dioxide, lb/hr	3,376.6
	Carbon Dioxide, grains/dscf	284.33
LFG _{O2}	Oxygen, lb/hr	587.0
	Oxygen, grains/dscf	49.43
LFG _{N2}	Balance gas as Nitrogen, lb/hr	2,085.8
	Balance gas as Nitrogen, grains/dscf	175.64
LFG _{H2}	Hydrogen, lb/hr	50.0
	Hydrogen, grains/dscf	4.21
LFG _{CO}	Carbon Monoxide, lb/hr	4.1
	Carbon Monoxide, grains/dscf	0.35

	Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	15
	Hydrogen Sulfide Rate, lb/hr	0.11
	Hydrogen Sulfide Rate, grains/dscf	0.009
COS	Carbonyl Sulfide Concentration, ppmd	0.59
	Carboynl Sulfide Rate, lb/hr	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	200
	Methyl Mercaptan Rate, lb/hr	2.08
	Methyl Mercaptan Rate, grains/dscf	0.175
C ₂ H ₆ S	E hyl Mercaptan Concentration, ppmd	1.9
	E hyl Mercaptan Rate, lb/hr	0.03
	E hyl Mercaptan Rate, grains/dscf	0.002
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmd	1,200
	Dimethyl Sulfide Rate, lb/hr	16.09
	Dimethyl Sulfide Rate, grains/dscf	1.355
CS ₂	Carbon Disulfide Concentra ion, ppmd	0.66
	Carbon Disulfide Rate, lb/hr	0.01
	Carbon Disulfide Rate, grains/dscf	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmd	95
	Dimethyl Disulfide Rate, lb/hr	1.93
	Dimethyl Disulfide Rate, grains/dscf	0.163
①E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	1,600
	TRS-->SO ₂ Emission Rate, lb/hr	22.12
	TRS-->SO ₂ Emission Rate, grains/dscf	1.863

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

Tuesday, April 04, 2017

LOCATION	TIME	FLOW -SCFM			Method 2 vs. Fleetzoom	Method 2 vs Kurz	Kurz vs Fleetzoom
		Method 2	FleetZoom	Kurz FM			
BLOWER OUT	9:21	1,412	1,474	1,484	-4.4%	-5.1%	0.6%

PARAMETER		Blower Out
EP14 NORTH QUARRY LFG ONLY		
Date	Test Date	4/4/17
Start	Run Start Time	7:30
	Run Finish Time	9:04
	Net Traversing Points	8 (2 x 4)
⌚	Net Run Time, minutes	1:34:00
C _p	Pitot Tube Coeficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.37
% H ₂ O	Moisture Content of LFG, %	1.90
% RH	Relative Humidity, %	74.20
M _{fd}	Dry Mole Fraction	0.981
%CH ₄	Methane, %	46.50
%CO ₂	Carbon Dioxide, %	37.90
%O ₂	Oxygen, %	1.55
%Balance	Assumed as Nitrogen, %	11.70
%H ₂	Hydrogen, % (* reported at the laboratory detection limit)	3.10
%CO	Carbon Monoxide, % (* reported at the laboratory detection limit)	0.00310
M _d	Dry Molecular Weight, lb/lb-Mole	27.98
M _s	Wet Molecular weight, lb/lb-Mole	27.79
P _g	Flue Gas Static Pressure, inches of H ₂ O	1.26
P _s	Absolute Flue Gas Pressure, inches of Mercury	29.46
t _s	Average Stack Gas Temperature, °F	70
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.007
V _s	Average LFG Velocity, feet/second	5.80
A _s	Stack Crossectional Area, square feet	0.51
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	172
Q _s	Standard Volumetric Flow Rate, scfm	175
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	178
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	748
NHV	Net Heating Value, Btu/scf	423.3
LFG _{CH4}	Methane, lb/hr	199.5
	Methane, grains/dscf	135.57
LFG _{CO2}	Carbon Dioxide, lb/hr	446.1
	Carbon Dioxide, grains/dscf	303.13
LFG _{O2}	Oxygen, lb/hr	13.3
	Oxygen, grains/dscf	9.01
LFG _{N2}	Balance gas as Nitrogen, lb/hr	87.7
	Balance gas as Nitrogen, grains/dscf	59.56
LFG _{H4}	Hydrogen, lb/hr	1.7
	Hydrogen, grains/dscf	1.14
LFG _{CO}	Carbon Monoxide, lb/hr	0.0
	Carbon Monoxide, grains/dscf	0.02

	Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmd 0.06 Hydrogen Sulfide Rate, lb/hr 0.038	61 54 0.05 0.033
COS	Carbonyl Sulfide Concentration, ppmd 0.00 Carboynl Sulfide Rate, lb/hr 0.001	0.59 0.63 0.00 0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd 0.01 Methyl Mercaptan Rate, lb/hr 0.006	6.4 6.2 0.01 0.005
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd 0.00 Ethyl Mercaptan Rate, grains/dscf 0.001	0.59 0.63 0.00 0.001
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmd 0.06 Dimethyl Sulfide Rate, lb/hr 0.043	38.0 42.0 0.07 0.047
CS ₂	Carbon Disulfide Concentration, ppmd 0.00 Carbon Disulfide Rate, grains/dscf 0.001	0.59 0.63 0.00 0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmd 0.00 Dimethyl Disulfide Rate, grains/dscf 0.001	0.59 0.63 0.00 0.001
①E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd 0.19 TRS-->SO ₂ Emission Rate, lb/hr 0.128	110 100 0.17 0.116

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

April 6, 2017

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: I040503-01/04

Enclosed are results for sample(s) received 4/05/17 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 and Mike Lambrich; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, and Jan Feezor, Feezor Engineering on 4/06/17.

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

AUTHORIZATION TO PERFORM WORK:	Dave Penoyer	COMPANY:	Republic Services	DATE/TIME:	
SAMPLED BY:	DAR/JH	COMPANY:	Weaver Consultants Group	DATE/TIME:	
RELINQUISHED BY	<i>Dave Penoyer</i> 04/04/2017 1000	DATE	RECEIVED BY	04/04/2017 0700-1300 DATE/TIME	
RELINQUISHED BY	<i>VMS</i>	DATE	RECEIVED BY	<i>J.D. Agg</i> 4/5/17 0938 DATE/TIME	
RELINQUISHED BY		DATE	RECEIVED BY		
METHOD OF TRANSPORT (circle one): Walk-In FedEx <input checked="" type="radio"/> 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: 04/05/17
 Matrix: Air
 Reporting Units: ppmv

Page 2 of 6
I040503

EPA Methods 15/16

Lab No.:	I040503-01	I040503-02		I040503-03		I040503-04		
Client Sample I.D.:	Blower Outlet A		Blower Outlet B		NQ EP14 A		NQ EP14 B	
Date/Time Sampled:	4/4/17 9:48		4/4/17 10:10		4/4/17 7:47		4/4/17 8:18	
Date/Time Analyzed:	4/5/17 10:33		4/5/17 10:46		4/5/17 10:58		4/5/17 11:11	
QC Batch No.:	170405GC3A1		170405GC3A1		170405GC3A1		170405GC3A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.2		3.0		3.2	
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	15	0.59	9.7	0.63	61 d	5.9	54 d	6.3
Carbonyl Sulfide	ND	0.59	ND	0.63	ND	0.59	ND	0.63
Methyl Mercaptan	200 d	5.9	200 d	6.3	6.4	0.59	6.2	0.63
Ethyl Mercaptan	1.9	0.59	2.1	0.63	ND	0.59	ND	0.63
Dimethyl Sulfide	1,200 d	59	1,300 d	63	38 d	5.9	42 d	6.3
Carbon Disulfide	0.66	0.59	0.71	0.63	ND	0.59	ND	0.63
Dimethyl Disulfide	95 d	5.9	100 d	6.3	ND	0.59	ND	0.63
Total Reduced Sulfur	1,600	0.59	1,700	0.63	110	0.59	100	0.63

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: _____

M.J. /
Mark Johnson
Operations Manager

Date 4/6/17

The cover letter is an integral part of this analytical report



Air TECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No.: 170405GC3A1
Matrix: Air
Units: ppmv

Page 3 of 6
I040503

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	4/5/17 10:21		4/5/17 9:00		4/5/17 9:12			
Analyst Initials:	AS		AS		AS			
Datafile:	05apr003		05apr001		05apr002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	118	70-130%	118	70-130%	0.2	<30
Carbonyl Sulfide	ND	0.20	110	70-130%	110	70-130%	0.1	<30
Methyl Mercaptan	ND	0.20	129	70-130%	129	70-130%	0.3	<30
Ethyl Mercaptan	ND	0.20	118	70-130%	116	70-130%	1.3	<30
Dimethyl Sulfide	ND	0.20	102	70-130%	100	70-130%	1.8	<30
Carbon Disulfide	ND	0.20	103	70-130%	102	70-130%	0.6	<30
Dimethyl Disulfide	ND	0.20	89	70-130%	88	70-130%	0.2	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark J. Johnson
Operations Manager

Date: 4/6/17

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: 04/05/17
Matrix: Air
Reporting Units: % v/v

Page 4 of 6
I040503

ASTM D1946

Lab No.:	1040503-01	1040503-02		
Client Sample I.D.:	Blower Outlet A	Blower Outlet B		
Date/Time Sampled:	4/4/17 9:48	4/4/17 10:10		
Date/Time Analyzed:	4/6/17 8:30	4/6/17 8:45		
QC Batch No.:	170405GC8A2	170405GC8A2		
Analyst Initials:	AS	AS		
Dilution Factor:	3.0	3.2		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	10.9	3.0	12.1	3.2
Carbon Dioxide	34.5	0.030	36.6	0.032
Oxygen/Argon	9.0	1.5	8.0	1.6
Nitrogen	36.0	3.0	33.0	3.2
Methane	9.0	0.0030	9.5	0.0032
Carbon Monoxide	0.067	0.0030	0.069	0.0032
Net Heating Value (BTU/ft3)	127.2	3.0	137.3	3.2
Gross Heating Value (BTU/ft3)	145.0	3.0	156.7	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

Mark Johnson

Operations Manager

Date 4/6/17

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: 04/05/17
Matrix: Air
Reporting Units: % v/v

Page 5 of 6
I040503

ASTM D1946

Lab No.:	I040503-03	I040503-04		
Client Sample I.D.:	NQ EP14 A	NQ EP14 B		
Date/Time Sampled:	4/4/17 7:47	4/4/17 8:18		
Date/Time Analyzed:	4/6/17 8:59	4/6/17 9:14		
QC Batch No.:	170405GC8A2	170405GC8A2		
Analyst Initials:	AS	AS		
Dilution Factor:	3.0	3.2		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND	3.0	ND	3.2
Carbon Dioxide	38.2	0.030	37.6	0.032
Oxygen/Argon	ND	1.5	ND	1.6
Nitrogen	11.8	3.0	11.6	3.2
Methane	46.2	0.0030	46.8	0.0032
Carbon Monoxide	ND	0.0030	ND	0.0032
Net Heating Value (BTU/ft3) methane only	420.6	3.0	425.9	3.2
Gross Heating Value (BTU/ft3) methane only	467.1	3.0	473.0	3.2

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

Mark Johnson
Operations Manager

Date 4/6/17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No: 170405GC8A2
Matrix: Air
Reporting Units: % v/v

Page 6 of 6
I040503

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS		LCSD			Limits			
Date Analyzed:	4/5/17 14:14		4/5/17 12:57		4/5/17 13:11						
Analyst Initials:	AS		AS		AS						
Dilution Factor:	1.0		1.0		1.0						
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	5.65	113	5.84	117	3.4	70	130	30
Carbon Dioxide	ND	0.010	10	9.91	99	10.1	100	1.6	70	130	30
Oxygen/Argon	ND	0.50	15	15.9	107	15.9	107	0.2	70	130	30
Nitrogen	ND	1.0	70	71.5	102	71.5	102	0.0	70	130	30
Methane	ND	0.0010	0.10	0.108	108	0.106	106	1.0	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.106	106	0.105	105	1.0	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark Johnson
Mark Johnson
Operations Manager

Date 4/6/17

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 108-13
03/28/2017

Kurz FM =	1,416	scfm
Fleetzoom Total =	1,375	scfm

$\Delta = -3.0\%$

PARAMETER		Blower Outlet A	Blower Outlet B
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL140)			
Date	Test Date	3/28/17	3/28/17
Time	Start	9:20	9:37
*%CH ₄	Methane, %	11.20	11.00
*%CO ₂	Carbon Dioxide, %	37.80	40.30
*%O ₂	Oxygen, %	7.80	7.70
*%Balance	Assumed as Nitrogen, %	41.90	41.00
P _g	Flue Gas Static Pressure, inches of H ₂ O	14.30	14.30
t _s	Blower Outlet LFG Temperature, °F	72	71
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	1,306	
Q _s	Fleetzoom FM, Standard Volumetric Flow Rate, scfm		1,375
LFG _{CH4}	Methane, b/hr	365.5	359.0
	Methane, grains/dscf	32.65	32.07
LFG _{CO2}	Carbon Dioxide, lb/hr	3,384.3	3,608.2
	Carbon Dioxide, grains/dscf	302.33	322.32
LFG _{O2}	Oxygen, lb/hr	507.8	501.3
	Oxygen, grains/dscf	45.36	44.78
LFG _{N2}	Balance gas as Nitrogen, lb/hr	2,387.9	2,336.6
	Balance gas as Nitrogen, grains/dscf	213.31	208.73
* Fixed gas results based on field parameter data collection at the time of sampling, via Envision Landfill Gas Analyzer			
		Blower Outlet A	Blower Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	0.56	21
	Hydrogen Sulfide Rate, b/hr	0.00	0.15
	Hydrogen Sulfide Rate, grains/dscf	0.000	0.013
COS	Carbonyl Sulfide Concentration, ppmd	0.56	0.56
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	130	190
	Methyl Mercaptan Rate, b/hr	1.27	1.86
	Methyl Mercaptan Rate, grains/dscf	0.114	0.166
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	1.2	2.0
	Ethyl Mercaptan Rate, lb/hr	0.02	0.03
	Ethyl Mercaptan Rate, grains/dscf	0.001	0.002
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmd	1,000	1,100
	Dimethyl Sulfide Rate, lb/hr	12.64	13.90
	Dimethyl Sulfide Rate, grains/dscf	1.129	1.242
CS ₂	Carbon Disulfide Concentration, ppmd	0.56	0.64
	Carbon Disulfide Rate, lb/hr	0.01	0.01
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmd	75	75
	Dimethyl Disulfide Rate, lb/hr	1.44	1.44
	Dimethyl Disulfide Rate, grains/dscf	0.128	0.128
①E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	1,300	1,500
	TRS-->SO ₂ Emission Rate, b/hr	16.94	19.55
	TRS-->SO ₂ Emission Rate, grains/dscf	1.514	1.746
TPY =		74.21	85.63

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

Bridgeton Landfill, LLC.
 Weekly TRS Sampling Summary
 Event 54-13
 03/28/2017

Fleetzoom Total = 218 scfm

PARAMETER		EP14 NQ A	EP14 NQ B
EP14 NORTH QUARRY LFG ONLY			
Date	Test Date	3/28/17	3/28/17
Time	Start	8:22	8:44
*%CH ₄	Methane, %	47.00	45.60
*%CO ₂	Carbon Dioxide, %	36.50	38.50
**%O ₂	Oxygen, %	1.30	1.00
*%Balance	Assumed as Nitrogen, %	15.30	14.90
P _g	Flue Gas Static Pressure, inches of H ₂ O	1.25	1.27
t _s	Blower Outlet LFG Temperature, °F	66.00	65.30
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	207	
Q _s	Fleetzoom Standard Volumetric Flow Rate, scfm	218	
LFG _{CH4}	Methane, lb/hr	243.2	236.0
	Methane, grains/dscf	137.03	132.94
LFG _{CO2}	Carbon Dioxide, lb/hr	518.2	546.6
	Carbon Dioxide, grains/dscf	291.93	307.92
LFG _{O2}	Oxygen, lb/hr	13.4	10.3
	Oxygen, grains/dscf	7.56	5.82
LFG _{N2}	Balance gas as Nitrogen, lb/hr	138.3	134.6
	Balance gas as Nitrogen, grains/dscf	77.89	75.86

* Fixed gas results based on field parameter data collection at the time of sampling, via Envision Landfill Gas Analyzer

		EP14 NQ A	EP14 NQ B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	53	48
	Hydrogen Sulfide Rate, lb/hr	0.06	0.05
	Hydrogen Sulfide Rate, grains/dscf	0.033	0.030
COS	Carbonyl Sulfide Concentration, ppmd	0.56	0.56
	Carboynl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	5.2	5.0
	Methyl Mercaptan Rate, lb/hr	0.01	0.01
	Methyl Mercaptan Rate, grains/dscf	0.005	0.004
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	0.56	0.56
	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, ppmd	27	27
	Dimethyl Sulfide Rate, lb/hr	0.05	0.05
	Dimethyl Sulfide Rate, grains/dscf	0.030	0.030
CS ₂	Carbon Disulfide Concentration, ppmd	0.56	0.56
	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, ppmd	0.56	0.56
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	86	82
	TRS-->SO ₂ Emission Rate, lb/hr	0.18	0.17
	TRS-->SO ₂ Emission Rate, grains/dscf	0.100	0.095
TPY =		0.78	0.74

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

April 5, 2017

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



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

nelac
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: I032901-01/04

Enclosed are results for sample(s) received 3/29/17 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 and Mike Lambrich; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, and Jan Feezor, Feezor Engineering on 4/05/17.

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: 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

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	COMMENTS
SAMPLED BY: DAR	COMPANY: Weaver Consultants Group	DATE/TIME	
RELINQUISHED BY	DATE RECEIVED BY <i>Dave L. Penoyer 03/28/2016 1600 Sampling</i>	DATE/TIME 03/28/2016 0730	
RELINQUISHED BY	DATE RECEIVED BY	DATE/TIME	
RELINQUISHED BY	DATE RECEIVED BY	DATE/TIME	
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other			

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

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

* Sample date misprinted on Chain of Custody, actual sample date is 3/28/2017 *

Client: Republic Services
 Attn: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 03/29/17
 Matrix: Air
 Reporting Units: ppmv

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1032901

EPA Methods 15/16

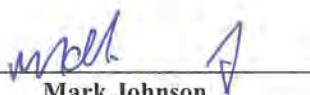
Lab No.:	I032901-01	I032901-02		I032901-03		I032901-04		
Client Sample I.D.:	Blower Outlet A		Blower Outlet B		NQ EP14 A		NQ EP14 B	
Date/Time Sampled:	3/28/17 9:20		3/28/17 9:37		3/28/17 8:22		3/28/17 8:44	
Date/Time Analyzed:	3/30/17 13:31		3/30/17 13:43		3/30/17 13:55		3/30/17 14:08	
QC Batch No.:	170330GC3A1		170330GC3A1		170330GC3A1		170330GC3A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.8		2.8		2.8		2.8	
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	ND	0.56	21	0.56	53 d	5.6	48 d	5.6
Carbonyl Sulfide	ND	0.56	ND	0.56	ND	0.56	ND	0.56
Methyl Mercaptan	130 d	5.6	190 d	5.6	5.2	0.56	5.0	0.56
Ethyl Mercaptan	1.2	0.56	2.0	0.56	ND	0.56	ND	0.56
Dimethyl Sulfide	1,000 d	56	1,100 d	56	27	0.56	27	0.56
Carbon Disulfide	ND	0.56	0.64	0.56	ND	0.56	ND	0.56
Dimethyl Disulfide	75 d	5.6	75 d	5.6	ND	0.56	ND	0.56
Total Reduced Sulfur	1,300	0.56	1,500	0.56	86	0.56	82	0.56

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: _____


Mark Johnson
Operations Manager

Date 4/5/17

The cover letter is an integral part of this analytical report



Air TECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No.: 170330GC3A1
Matrix: Air
Units: ppmv

Page 3 of 3
I032901

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	3/30/17 8:50		3/30/17 8:26		3/30/17 8:38			
Analyst Initials:	AS		AS		AS			
Datafile:	30mar003		30mar001		30mar002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	% RPD	Criteria
Hydrogen Sulfide	ND	0.20	109	70-130%	108	70-130%	0.9	<30
Carbonyl Sulfide	ND	0.20	110	70-130%	109	70-130%	0.4	<30
Methyl Mercaptan	ND	0.20	121	70-130%	121	70-130%	0.0	<30
Ethyl Mercaptan	ND	0.20	111	70-130%	109	70-130%	1.8	<30
Dimethyl Sulfide	ND	0.20	99	70-130%	97	70-130%	2.1	<30
Carbon Disulfide	ND	0.20	98	70-130%	97	70-130%	1.1	<30
Dimethyl Disulfide	ND	0.20	83	70-130%	82	70-130%	0.4	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark J. Johnson
Operations Manager

Date:

4/5/17

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 107-12
03/21/2017

Kurz FM =	1,609	scfm
Fleetzoom Total =	1,570	scfm

$\Delta = -2.5\%$

PARAMETER		Blower Outlet A	Blower Outlet B
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL140)			
Date	Test Date	3/21/17	3/21/17
Time	Start	9:30	9:58
*%CH ₄	Methane, %	9.90	9.90
*%CO ₂	Carbon Dioxide, %	35.20	36.90
*%O ₂	Oxygen, %	9.40	9.00
*%Balance	Assumed as Nitrogen, %	45.10	44.10
P _g	Flue Gas Static Pressure, inches of H ₂ O	14.70	14.60
t _s	Blower Outlet LFG Temperature, °F	68	68
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	1,492	
Q _s	Fleetzoom FM, Standard Volumetric Flow Rate, scfm		1,570
LFG _{CH4}	Methane, b/hr	369.0	369.0
	Methane, grains/dscf	28.86	28.86
LFG _{CO2}	Carbon Dioxide, lb/hr	3,599.6	3,773.4
	Carbon Dioxide, grains/dscf	281.53	295.13
LFG _{O2}	Oxygen, lb/hr	698.9	669.2
	Oxygen, grains/dscf	54.66	52.34
LFG _{N2}	Balance gas as Nitrogen, lb/hr	2,935.7	2,870.6
	Balance gas as Nitrogen, grains/dscf	229.60	224.51

* Fixed gas results based on field parameter data collection at the time of sampling, via Envision Landfill Gas Analyzer

		Blower Outlet A	Blower Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	14	17
	Hydrogen Sulfide Rate, b/hr	0.11	0.13
	Hydrogen Sulfide Rate, grains/dscf	0.009	0.011
COS	Carbonyl Sulfide Concentration, ppmd	0.53	0.56
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	160	160
	Methyl Mercaptan Rate, b/hr	1.79	1.79
	Methyl Mercaptan Rate, grains/dscf	0.140	0.140
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	1.7	1.7
	Ethyl Mercaptan Rate, lb/hr	0.02	0.02
	Ethyl Mercaptan Rate, grains/dscf	0.002	0.002
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmd	930	1,000
	Dimethyl Sulfide Rate, lb/hr	13.43	14.44
	Dimethyl Sulfide Rate, grains/dscf	1.050	1.129
CS ₂	Carbon Disulfide Concentration, ppmd	0.58	0.56
	Carbon Disulfide Rate, lb/hr	0.01	0.01
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmd	67	74
	Dimethyl Disulfide Rate, lb/hr	1.47	1.62
	Dimethyl Disulfide Rate, grains/dscf	0.115	0.127
E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	1,200	1,300
	TRS-->SO ₂ Emission Rate, b/hr	17.86	19.35
	TRS-->SO ₂ Emission Rate, grains/dscf	1.397	1.514
TPY =		78.24	84.76

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

Bridgeton Landfill, LLC.
 Weekly TRS Sampling Summary
 Event 53-12
 03/21/2017

Fleetzoom Total = **190** scfm

PARAMETER		EP14 NQ A	EP14 NQ B
EP14 NORTH QUARRY LFG ONLY			
Date	Test Date	3/21/17	3/21/17
Time	Start	8:10	8:28
*%CH ₄	Methane, %	47.20	45.20
*%CO ₂	Carbon Dioxide, %	34.40	38.30
**%O ₂	Oxygen, %	1.20	1.10
*%Balance	Assumed as Nitrogen, %	17.40	15.40
P _g	Flue Gas Static Pressure, inches of H ₂ O	0.91	0.90
t _s	Blower Outlet LFG Temperature, °F	61.30	62.00
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	180	
Q _s	Fleetzoom Standard Volumetric Flow Rate, scfm	190	
LFG _{CH4}	Methane, lb/hr	212.4	203.4
	Methane, grains/dscf	137.61	131.78
LFG _{CO2}	Carbon Dioxide, lb/hr	424.7	472.8
	Carbon Dioxide, grains/dscf	275.13	306.32
LFG _{O2}	Oxygen, lb/hr	10.8	9.9
	Oxygen, grains/dscf	6.98	6.40
LFG _{N2}	Balance gas as Nitrogen, lb/hr	136.7	121.0
	Balance gas as Nitrogen, grains/dscf	88.58	78.40

* Fixed gas results based on field parameter data collection at the time of sampling, via Envision Landfill Gas Analyzer

		EP14 NQ A	EP14 NQ B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	2.70	0.56
	Hydrogen Sulfide Rate, lb/hr	0.00	0.00
	Hydrogen Sulfide Rate, grains/dscf	0.002	0.000
COS	Carbonyl Sulfide Concentration, ppmd	0.55	0.56
	Carboynl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	3.20	0.56
	Methyl Mercaptan Rate, lb/hr	0.00	0.00
	Methyl Mercaptan Rate, grains/dscf	0.003	0.000
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	0.55	0.56
	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, ppmd	16	5.80
	Dimethyl Sulfide Rate, lb/hr	0.03	0.01
	Dimethyl Sulfide Rate, grains/dscf	0.018	0.007
CS ₂	Carbon Disulfide Concentration, ppmd	0.55	0.56
	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, ppmd	0.55	0.56
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	23.00	6.90
	TRS-->SO ₂ Emission Rate, lb/hr	0.04	0.01
	TRS-->SO ₂ Emission Rate, grains/dscf	0.027	0.008
TPY =		0.18	0.05

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

March 28, 2017

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



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

nelac
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: I032202-01/04

Enclosed are results for sample(s) received 3/22/17 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 and Mike Lambrich; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group; and Jan Feezor, Feezor Engineering on 3/28/17.

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
Ex: 626-964-5832

AUTHORIZATION TO PERFORM WORK:	Dave Penoyer	COMPANY:	Republic Services	DATE/TIME:	
SAMPLED BY:	DAR	COMPANY:	Weaver Consultants Group	DATE/TIME:	
RELINQUISHED BY	<i>Dave H Randall</i>	DATE:	RECEIVED BY	03/21/2017 0730-	
RELINQUISHED BY	<i>FED EX</i>	DATE:	RECEIVED BY	DATE/TIME	
RELINQUISHED BY		DATE:	RECEIVED BY	DATE/TIME	
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other					

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

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

Client: Republic Services
 Attn: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 03/22/17
 Matrix: Air
 Reporting Units: ppmv

Page 2 of 3
I032202

EPA Methods 15/16

Lab No.:	I032202-01	I032202-02		I032202-03		I032202-04		
Client Sample I.D.:	Blower Outlet A		Blower Outlet B		NQ EP14 A	NQ EP14 B		
Date/Time Sampled:	3/21/17 9:30		3/21/17 9:58		3/21/17 8:10	3/21/17 8:28		
Date/Time Analyzed:	3/23/17 9:11		3/23/17 9:23		3/23/17 9:36	3/23/17 9:59		
QC Batch No.:	170323GC3A1		170323GC3A1		170323GC3A1	170323GC3A1		
Analyst Initials:	AS		AS		AS	AS		
Dilution Factor:	2.7		2.8		2.7	2.8		
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	14	0.53	17	0.56	2.7	0.55	ND	0.56
Carbonyl Sulfide	ND	0.53	ND	0.56	ND	0.55	ND	0.56
Methyl Mercaptan	160	d	5.3	160	d	5.6	3.2	0.55
Ethyl Mercaptan	1.7	0.53	1.7	0.56	ND	0.55	ND	0.56
Dimethyl Sulfide	930	d	53	1,000	d	56	16	0.55
Carbon Disulfide	0.58	0.53	ND	0.56	ND	0.55	ND	0.56
Dimethyl Disulfide	67	d	5.3	74	d	5.6	ND	0.55
Total Reduced Sulfur	1,200	0.53	1,300	0.56	23	0.55	6.9	0.56

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By: Mark Johnson
Mark Johnson
Operations Manager

Date 3/28/17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No.: 170323GC3A1
Matrix: Air
Units: ppmv

Page 3 of 3
I032202

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank	LCS		LCSD				
Date/Time Analyzed:	3/23/17 8:58	3/23/17 8:33		3/23/17 8:46				
Analyst Initials:	AS	AS		AS				
Datafile:	23mar003	23mar001		23mar002				
Dilution Factor:	1.0	1.0		1.0				
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	% RPD	Criteria
Hydrogen Sulfide	ND	0.20	80	70-130%	81	70-130%	1.4	<30
Carbonyl Sulfide	ND	0.20	97	70-130%	97	70-130%	0.2	<30
Methyl Mercaptan	ND	0.20	99	70-130%	100	70-130%	0.9	<30
Ethyl Mercaptan	ND	0.20	96	70-130%	98	70-130%	1.4	<30
Dimethyl Sulfide	ND	0.20	89	70-130%	89	70-130%	0.1	<30
Carbon Disulfide	ND	0.20	80	70-130%	80	70-130%	0.4	<30
Dimethyl Disulfide	ND	0.20	74	70-130%	75	70-130%	1.9	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark J. Johnson
Mark J. Johnson
Operations Manager

Date: *3/28/17*

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 106-11
03/14/2017

Kurz FM =	1,483	scfm
Fleetzoom Total =	1,350	scfm

$\Delta = -9.8\%$

PARAMETER		Outlet A	Outlet B
SOUTH QUARRY LFG ONLY - MAIN FLARE COMPOUND BLOWER OUTLET (FL140)			
Date	Test Date	3/14/17	3/14/17
Time	Start	10:38	10:55
*%CH ₄	Methane, %	10.10	10.30
*%CO ₂	Carbon Dioxide, %	36.70	37.70
**%O ₂	Oxygen, %	8.30	8.70
*%Balance	Assumed as Nitrogen, %	44.70	43.20
P _g	Flue Gas Static Pressure, inches of H ₂ O	13.70	14.30
t _s	Blower Outlet LFG Temperature, °F	47	48
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	1,283	
Q _s	Fleetzoom FM, Standard Volumetric Flow Rate, scfm		1,350
LFG _{CH4}	Methane, b/hr	323.7	330.1
	Methane, grains/dscf	29.45	30.03
LFG _{CO2}	Carbon Dioxide, lb/hr	3,227.0	3,314.9
	Carbon Dioxide, grains/dscf	293.53	301.53
LFG _{O2}	Oxygen, lb/hr	530.6	556.2
	Oxygen, grains/dscf	48.27	50.59
LFG _{N2}	Balance gas as Nitrogen, lb/hr	2,501.9	2,417.9
	Balance gas as Nitrogen, grains/dscf	227.57	219.93

* Fixed gas results based on field parameter data collection at the time of sampling, via Envision Landfill Gas Analyzer

		Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	21.00	23.00
	Hydrogen Sulfide Rate, b/hr	0.14	0.16
	Hydrogen Sulfide Rate, grains/dscf	0.013	0.014
COS	Carbonyl Sulfide Concentration, ppmd	0.48	0.48
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	200.00	210.00
	Methyl Mercaptan Rate, b/hr	1.92	2.02
	Methyl Mercaptan Rate, grains/dscf	0.175	0.184
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	1.90	2.00
	Ethyl Mercaptan Rate, lb/hr	0.02	0.02
	Ethyl Mercaptan Rate, grains/dscf	0.002	0.002
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmd	990.00	1,000.00
	Dimethyl Sulfide Rate, lb/hr	12.29	12.41
	Dimethyl Sulfide Rate, grains/dscf	1.118	1.129
CS ₂	Carbon Disulfide Concentration, ppmd	0.52	0.54
	Carbon Disulfide Rate, lb/hr	0.01	0.01
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmd	55.00	48.00
	Dimethyl Disulfide Rate, lb/hr	1.04	0.90
	Dimethyl Disulfide Rate, grains/dscf	0.094	0.082
①E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	1,300.00	1,400.00
	TRS-->SO ₂ Emission Rate, b/hr	16.64	17.92
	TRS-->SO ₂ Emission Rate, grains/dscf	1.514	1.630
TPY =		72.88	78.49

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

Bridgeton Landfill, LLC.
 Weekly TRS Sampling Summary
 Event 52-11
 03/14/2017

Fleetzoom Total = **191** scfm

PARAMETER		EP14 NQ	EP14 NQ-2
EP14 NORTH QUARRY LFG ONLY			
Date	Test Date	3/14/17	3/14/17
Time	Start	9:26	9:52
*%CH ₄	Methane, %	45.90	44.80
*%CO ₂	Carbon Dioxide, %	38.00	39.00
**%O ₂	Oxygen, %	1.10	1.10
*%Balance	Assumed as Nitrogen, %	15.20	15.10
P _g	Flue Gas Static Pressure, inches of H ₂ O	0.99	1.01
t _s	Blower Outlet LFG Temperature, °F	45.80	44.30
Q _{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 5%H ₂ O)	181	
Q _s	Fleetzoom Standard Volumetric Flow Rate, scfm	191	
LFG _{CH4}	Methane, lb/hr	207.8	202.8
	Methane, grains/dscf	133.82	130.61
LFG _{CO2}	Carbon Dioxide, lb/hr	471.8	484.3
	Carbon Dioxide, grains/dscf	303.92	311.92
LFG _{O2}	Oxygen, lb/hr	9.9	9.9
	Oxygen, grains/dscf	6.40	6.40
LFG _{N2}	Balance gas as Nitrogen, lb/hr	120.1	119.3
	Balance gas as Nitrogen, grains/dscf	77.38	76.87

* Fixed gas results based on field parameter data collection at the time of sampling, via Envision Landfill Gas Analyzer

		EP14 NQ	EP14 NQ-2
H ₂ S	Hydrogen Sulfide Concentration, ppmd	1.00	25.00
	Hydrogen Sulfide Rate, lb/hr	0.00	0.02
	Hydrogen Sulfide Rate, grains/dscf	0.001	0.015
COS	Carbonyl Sulfide Concentration, ppmd	0.48	0.48
	Carboynl Sulfide Rate, lb/hr	0.00	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	3.00	5.50
	Methyl Mercaptan Rate, lb/hr	0.00	0.01
	Methyl Mercaptan Rate, grains/dscf	0.003	0.005
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	0.48	0.48
	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, ppmd	25.00	27.00
	Dimethyl Sulfide Rate, lb/hr	0.04	0.05
	Dimethyl Sulfide Rate, grains/dscf	0.028	0.030
CS ₂	Carbon Disulfide Concentration, ppmd	0.48	0.48
	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, ppmd	0.48	0.48
	Dimethyl Disulfide Rate, lb/hr	0.00	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001	0.001
①E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	30.00	59.00
	TRS-->SO ₂ Emission Rate, lb/hr	0.05	0.11
	TRS-->SO ₂ Emission Rate, grains/dscf	0.035	0.069
TPY =		0.24	0.47

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

March 22, 2017

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: I031501-01/04

Enclosed are results for sample(s) received 3/15/17 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 and Mike Lambrich; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group; and Jan Feezor, Feezor Engineering on 3/22/17.

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: 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	1
Standard	48 hours	EDD		Condition upon receipt:	
Same Day	72 hours	EDF		Sealed	Yes
24 hours	96 hours	Level 3		Intact	Yes
Other:	✓ 5 day	Level 4		Chilled	deg C

BILLING

ANALYSIS REQUEST

EDUCATIONAL

AUTHORIZATION TO PERFORM WORK:	Dave Penoyer	COMPANY:	Republic Services	DATE/TIME:	
SAMPLED BY:	DAR	COMPANY:	Weaver Consultants Group	DATE/TIME:	
RELINQUISHED BY	<i>Dave Penoyer</i> DPS	DATE RECEIVED BY		03/14/2017 0730	DATE/TIME
RELINQUISHED BY		DATE RECEIVED BY			
RELINQUISHED BY		DATE RECEIVED BY			
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier AT&T 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: 03/15/17
 Matrix: Air
 Reporting Units: ppmv

Page 2 of 3
I031501

EPA Methods 15/16

Lab No.:	I031501-01		I031501-02		I031501-03		I031501-04	
Client Sample I.D.:	Blower Outlet A		Blower Outlet B		NQ EP14 A		NQ EP14 B	
Date/Time Sampled:	3/14/17 10:38		3/14/17 10:55		3/14/17 9:26		3/14/17 9:52	
Date/Time Analyzed:	3/17/17 9:42		3/17/17 9:55		3/17/17 10:07		3/17/17 10:20	
QC Batch No.:	170317GC3A1		170317GC3A1		170317GC3A1		170317GC3A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.4		2.3		2.4		2.4	
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	21	0.48	23	0.46	1.0	0.48	25 d	4.8
Carbonyl Sulfide	ND	0.48	ND	0.46	ND	0.48	ND	0.48
Methyl Mercaptan	200 d	4.8	210 d	4.6	3.0	0.48	5.5	0.48
Ethyl Mercaptan	1.9	0.48	2.0	0.46	ND	0.48	ND	0.48
Dimethyl Sulfide	990 d	48	1,000 d	46	25 d	4.8	27 d	4.8
Carbon Disulfide	0.52	0.48	0.54	0.46	ND	0.48	ND	0.48
Dimethyl Disulfide	55 d	4.8	48 d	4.8	ND	0.48	ND	0.48
Total Reduced Sulfur	1,300	0.48	1,400	0.46	30	0.48	59	0.48

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date 3-22-17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No.: 170317GC3A1
Matrix: Air
Units: ppmv

Page 3 of 3
I031501

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	3/17/17 9:04		3/17/17 8:39		3/17/17 8:52			
Analyst Initials:	AS		AS		AS			
Datafile:	17mar003		17mar001		17mar002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	% RPD	Criteria
Hydrogen Sulfide	ND	0.20	104	70-130%	104	70-130%	0.2	<30
Carbonyl Sulfide	ND	0.20	105	70-130%	105	70-130%	0.5	<30
Methyl Mercaptan	ND	0.20	115	70-130%	115	70-130%	0.2	<30
Ethyl Mercaptan	ND	0.20	106	70-130%	105	70-130%	0.8	<30
Dimethyl Sulfide	ND	0.20	95	70-130%	94	70-130%	1.2	<30
Carbon Disulfide	ND	0.20	94	70-130%	93	70-130%	1.2	<30
Dimethyl Disulfide	ND	0.20	81	70-130%	82	70-130%	1.0	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:


Mark J. Johnson
Operations Manager

Date: 3-22-17

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	3/7/17
Start	Run Start Time	8:11
	Run Finish Time	10:20
	Net Traversing Points	8 (2 x 4)
⌚	Net Run Time, minutes	2:09:00
C _p	Pitot Tube Coeficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.54
% H ₂ O	Moisture Content of LFG, %	1.28
% RH	Relative Humidity, %	60.00
M _{fd}	Dry Mole Fraction	0.987
%CH ₄	Methane, %	9.05
%CO ₂	Carbon Dioxide, %	34.95
%O ₂	Oxygen, %	8.60
%Balance	Assumed as Nitrogen, %	35.20
%H ₂	Hydrogen, %	11.55
%CO	Carbon Monoxide, %	0.07
M _d	Dry Molecular Weight, lb/lb-Mole	29.70
M _s	Wet Molecular weight, lb/lb-Mole	29.55
P _g	Flue Gas Static Pressure, inches of H ₂ O	15.50
P _s	Absolute Flue Gas Pressure, inches of Mercury	30.68
t _s	Average Stack Gas Temperature, °F	64
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.063
v _s	Average LFG Velocity, feet/second	16.15
A _s	Stack Crossectional Area, square feet	1.35
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	1,337
Q _s	Standard Volumetric Flow Rate, scfm	1,354
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	1,311
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	6,185
NHV	Net Heating Value, Btu/scf	128.3
LFG _{CH4}	Methane, lb/hr	302.4
	Methane, grains/dscf	26.38
LFG _{CO2}	Carbon Dioxide, lb/hr	3,204.2
	Carbon Dioxide, grains/dscf	279.53
LFG _{O2}	Oxygen, lb/hr	573.3
	Oxygen, grains/dscf	50.01
LFG _{N2}	Balance gas as Nitrogen, lb/hr	2,054.2
	Balance gas as Nitrogen, grains/dscf	179.20
LFG _{H2}	Hydrogen, lb/hr	48.5
	Hydrogen, grains/dscf	4.23
LFG _{CO}	Carbon Monoxide, lb/hr	4.1
	Carbon Monoxide, grains/dscf	0.35

	Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	16
	Hydrogen Sulfide Rate, lb/hr	0.11
	Hydrogen Sulfide Rate, grains/dscf	0.010
COS	Carbonyl Sulfide Concentration, ppmd	0.53
	Carboynl Sulfide Rate, lb/hr	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	210
	Methyl Mercaptan Rate, lb/hr	2.10
	Methyl Mercaptan Rate, grains/dscf	0.184
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	2.0
	Ethyl Mercaptan Rate, lb/hr	0.03
	Ethyl Mercaptan Rate, grains/dscf	0.002
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmd	1,200
	Dimethyl Sulfide Rate, lb/hr	15.53
	Dimethyl Sulfide Rate, grains/dscf	1.355
CS ₂	Carbon Disulfide Concentration, ppmd	0.66
	Carbon Disulfide Rate, lb/hr	0.01
	Carbon Disulfide Rate, grains/dscf	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmd	87
	Dimethyl Disulfide Rate, lb/hr	1.71
	Dimethyl Disulfide Rate, grains/dscf	0.149
E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	1,600
	TRS-->SO ₂ Emission Rate, lb/hr	21.35
	TRS-->SO ₂ Emission Rate, grains/dscf	1.863

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

Tuesday, March 07, 2017

LOCATION	TIME	FLOW -SCFM			Method 2 vs. Fleetzoom	Method 2 vs Kurz	Kurz vs Fleetzoom
		Method 2	FleetZoom	Kurz FM			
BLOWER OUT	8:11	1,354	1,444	1,500	-6.6%	-10.7%	3.7%

Bridgeton Landfill, LLC
 Weekly TRS
 Monthly Method 2C
 Event 51-10
 03/07/2017

PARAMETER		Blower Out
EP14 NORTH QUARRY LFG ONLY		
Date	Test Date	3/7/17
Start	Run Start Time	8:35
	Run Finish Time	10:15
	Net Traversing Points	8 (2 x 4)
④	Net Run Time, minutes	1:40:00
C _p	Pitot Tube Coeficient	0.99
P _{Br}	Barometric Pressure, inches of Mercury	29.64
% H ₂ O	Moisture Content of LFG, %	2.03
% RH	Relative Humidity, %	93.10
M _{fd}	Dry Mole Fraction	0.980
%CH ₄	Methane, %	42.65
%CO ₂	Carbon Dioxide, %	34.90
%O ₂	Oxygen, %	1.70
%Balance	Assumed as Nitrogen, %	18.80
%H ₂	Hydrogen, % (* reported at the laboratory detection limit)	2.75
%CO	Carbon Monoxide, % (* reported at the laboratory detection limit)	0.00275
M _d	Dry Molecular Weight, lb/lb-Mole	28.07
M _s	Wet Molecular weight, lb/lb-Mole	27.86
P _g	Flue Gas Static Pressure, inches of H ₂ O	1.77
P _s	Absolute Flue Gas Pressure, inches of Mercury	29.77
t _s	Average Stack Gas Temperature, °F	69
ΔP _{avg}	Average Velocity Head, inches of H ₂ O	0.017
V _s	Average LFG Velocity, feet/second	8.69
A _s	Stack Crossectional Area, square feet	0.51
Q _{sd}	Dry Volumetric Flow Rate, dry scfm	260
Q _s	Standard Volumetric Flow Rate, scfm	265
Q _{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm	267
Q _{lb/hr}	Dry Air Flow Rate at Standard Conditions, lb/hr	1,136
NHV	Net Heating Value, Btu/scf	387.7
LFG _{CH4}	Methane, lb/hr	277.1
	Methane, grains/dscf	124.34
LFG _{CO2}	Carbon Dioxide, lb/hr	622.0
	Carbon Dioxide, grains/dscf	279.13
LFG _{O2}	Oxygen, lb/hr	22.0
	Oxygen, grains/dscf	9.89
LFG _{N2}	Balance gas as Nitrogen, lb/hr	213.3
	Balance gas as Nitrogen, grains/dscf	95.71
LFG _{H4}	Hydrogen, lb/hr	2.2
	Hydrogen, grains/dscf	1.01
LFG _{CO}	Carbon Monoxide, lb/hr	0.0
	Carbon Monoxide, grains/dscf	0.01

	Outlet A	Outlet B
H ₂ S	Hydrogen Sulfide Concentration, ppmd	41
	Hydrogen Sulfide Rate, lb/hr	0.06
	Hydrogen Sulfide Rate, grains/dscf	0.025
COS	Carbonyl Sulfide Concentration, ppmd	0.53
	Carboynl Sulfide Rate, lb/hr	0.00
	Carbonyl Sulfide Rate, grains/dscf	0.001
CH ₄ S	Methyl Mercaptan Concentration, ppmd	3.4
	Methyl Mercaptan Rate, lb/hr	0.01
	Methyl Mercaptan Rate, grains/dscf	0.003
C ₂ H ₆ S	Ethyl Mercaptan Concentration, ppmd	0.53
	Ethyl Mercaptan Rate, lb/hr	0.00
	Ethyl Mercaptan Rate, grains/dscf	0.001
(CH ₃) ₂ S	Dimethyl Sulfide Concentration, ppmd	12.0
	Dimethyl Sulfide Rate, lb/hr	0.03
	Dimethyl Sulfide Rate, grains/dscf	0.014
CS ₂	Carbon Disulfide Concentration, ppmd	0.53
	Carbon Disulfide Rate, lb/hr	0.00
	Carbon Disulfide Rate, grains/dscf	0.001
C ₂ H ₆ S ₂	Dimethyl Disulfide Concentration, ppmd	0.53
	Dimethyl Disulfide Rate, lb/hr	0.00
	Dimethyl Disulfide Rate, grains/dscf	0.001
④E _{TRS-SO2}	TRS-->SO ₂ Emission Concentration, ppmd	58
	TRS-->SO ₂ Emission Rate, lb/hr	0.15
	TRS-->SO ₂ Emission Rate, grains/dscf	0.068

④ TRS assumed moelcular mass = SO₂, 64.06 gram/mole, i.e. 1 TRS in LFG assumed to = 1 SO₂ emitted from the stack

March 13, 2017

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: I030803-01/04

Enclosed are results for sample(s) received 3/08/17 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 and Mike Lambrich; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 3/09/17.

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

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	COMMENTS
SAMPLED BY: DAR/JH	COMPANY: Weaver Consultants Group	DATE/TIME 03/07/2017	
RELINQUISHED BY: <i>Dave J. H. Penoyer</i>	DATE RECEIVED BY: 1000	DATE/TIME	
RELINQUISHED BY: <i>WPS</i>	DATE RECEIVED BY: <i>3/8/17</i>	DATE/TIME <i>1015</i>	
RELINQUISHED BY:	DATE RECEIVED BY:	DATE/TIME	
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____			

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

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

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 03/08/17
Matrix: Air
Reporting Units: ppmv

Page 2 of 6
I030803

EPA Methods 15/16

Lab No.:	I030803-01	I030803-02		I030803-03		I030803-04		
Client Sample I.D.:	Blower Outlet A		Blower Outlet B		NQ EP14 A		NQ EP14 B	
Date/Time Sampled:	3/7/17 8:17		3/7/17 8:45		3/7/17 8:39		3/7/17 9:12	
Date/Time Analyzed:	3/8/17 11:41		3/8/17 11:53		3/8/17 12:06		3/8/17 12:18	
QC Batch No.:	170308GC3A1		170308GC3A1		170308GC3A1		170308GC3A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.7		2.7		2.7		2.8	
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	16	0.53	23	0.53	41 d	5.3	27	0.56
Carbonyl Sulfide	ND	0.53	ND	0.53	ND	0.53	ND	0.56
Methyl Mercaptan	210 d	5.3	210 d	5.3	3.4	0.53	2.9	0.56
Ethyl Mercaptan	2.0	0.53	2.2	0.53	ND	0.53	ND	0.56
Dimethyl Sulfide	1,200 d	53	1,200 d	53	12	0.53	13	0.56
Carbon Disulfide	0.66	0.53	0.65	0.53	ND	0.53	ND	0.56
Dimethyl Disulfide	87 d	5.3	87 d	5.3	ND	0.53	ND	0.56
Total Reduced Sulfur	1,600	0.53	1,600	0.53	58	0.53	44	0.56

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary dilution

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date 3-9-17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No.: 170308GC3A1
Matrix: Air
Units: ppmv

Page 3 of 6
I030803

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	3/8/17 10:05		3/8/17 9:40		3/8/17 9:52			
Analyst Initials:	AS		AS		AS			
Datafile:	08mar003		08mar001		08mar002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	% RPD	Criteria
Hydrogen Sulfide	ND	0.20	102	70-130%	103	70-130%	0.6	<30
Carbonyl Sulfide	ND	0.20	104	70-130%	104	70-130%	0.1	<30
Methyl Mercaptan	ND	0.20	116	70-130%	116	70-130%	0.1	<30
Ethyl Mercaptan	ND	0.20	110	70-130%	110	70-130%	0.2	<30
Dimethyl Sulfide	ND	0.20	93	70-130%	91	70-130%	1.3	<30
Carbon Disulfide	ND	0.20	91	70-130%	91	70-130%	0.5	<30
Dimethyl Disulfide	ND	0.20	75	70-130%	75	70-130%	0.3	<30

ND = Not Detected (Below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark J. Johnson
Operations Manager

Date: 3-9-17

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: 03/08/17
Matrix: Air
Reporting Units: % v/v

Page 4 of 6
I030803

ASTM D1946

Lab No.:	I030803-01	I030803-02		
Client Sample I.D.:	Blower Outlet A	Blower Outlet B		
Date/Time Sampled:	3/7/17 8:17	3/7/17 8:45		
Date/Time Analyzed:	3/8/17 18:06	3/8/17 18:21		
QC Batch No.:	170308GC8A1	170308GC8A1		
Analyst Initials:	AS	AS		
Dilution Factor:	2.7	2.7		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	11.4	2.7	11.7	2.7
Carbon Dioxide	34.7	0.027	35.2	0.027
Oxygen/Argon	8.7	1.3	8.5	1.3
Nitrogen	35.6	2.7	34.8	2.7
Methane	9.0	0.0027	9.1	0.0027
Carbon Monoxide	0.069	0.0027	0.070	0.0027
Net Heating Value (BTU/ft3)	126.7	2.7	129.8	2.7
Gross Heating Value (BTU/ft3)	144.7	2.7	148.2	2.7

Results normalized including non-methane hydrocarbons

BTU values based on D1946 analysis and non-methane analysis assumed as propane

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: Mark Johnson - 1
Mark Johnson
Operations Manager

Date 3/9/17

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: 03/08/17
Matrix: Air
Reporting Units: % v/v

Page 5 of 6
I030803

ASTM D1946

Lab No.:	I030803-03	I030803-04		
Client Sample I.D.:	NQ EP14 A	NQ EP14 B		
Date/Time Sampled:	3/7/17 8:39	3/7/17 9:12		
Date/Time Analyzed:	3/8/17 18:35	3/8/17 18:50		
QC Batch No.:	170308GC8A1	170308GC8A1		
Analyst Initials:	AS	AS		
Dilution Factor:	2.7	2.8		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND	2.7	ND	2.8
Carbon Dioxide	34.7	0.027	35.1	0.028
Oxygen/Argon	1.8	1.3	1.6	1.4
Nitrogen	19.0	2.7	18.6	2.8
Methane	42.6	0.0027	42.7	0.0028
Carbon Monoxide	ND	0.0027	ND	0.0028
Net Heating Value (BTU/ft ³) methane only	387.0	2.7	388.3	2.8
Gross Heating Value (BTU/ft ³) methane only	429.8	2.7	431.2	2.8

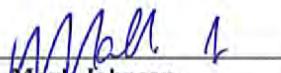
Results normalized including non-methane hydrocarbons

BTU values based on D1946 analysis methane only

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:


Mark Johnson
Operations Manager

Date 3/9/17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No: 170308GC8A1
Matrix: Air
Reporting Units: % v/v

Page 6 of 6
I030803

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS	LCSD							
Date Analyzed:	3/8/17 14:41		3/8/17 16:24	3/8/17 16:39							
Analyst Initials:	AS		AS	AS							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	6.12	122	5.96	119	2.7	70	130	30
Carbon Dioxide	ND	0.010	10	10.1	101	9.74	97	3.4	70	130	30
Oxygen/Argon	ND	0.50	15	15.7	106	15.3	103	2.8	70	130	30
Nitrogen	ND	1.0	70	71.2	102	69.4	99	2.6	70	130	30
Methane	ND	0.0010	0.10	0.109	109	0.109	109	0.0	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.108	108	0.108	108	0.1	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: Mark J.

Date 3/9/17

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

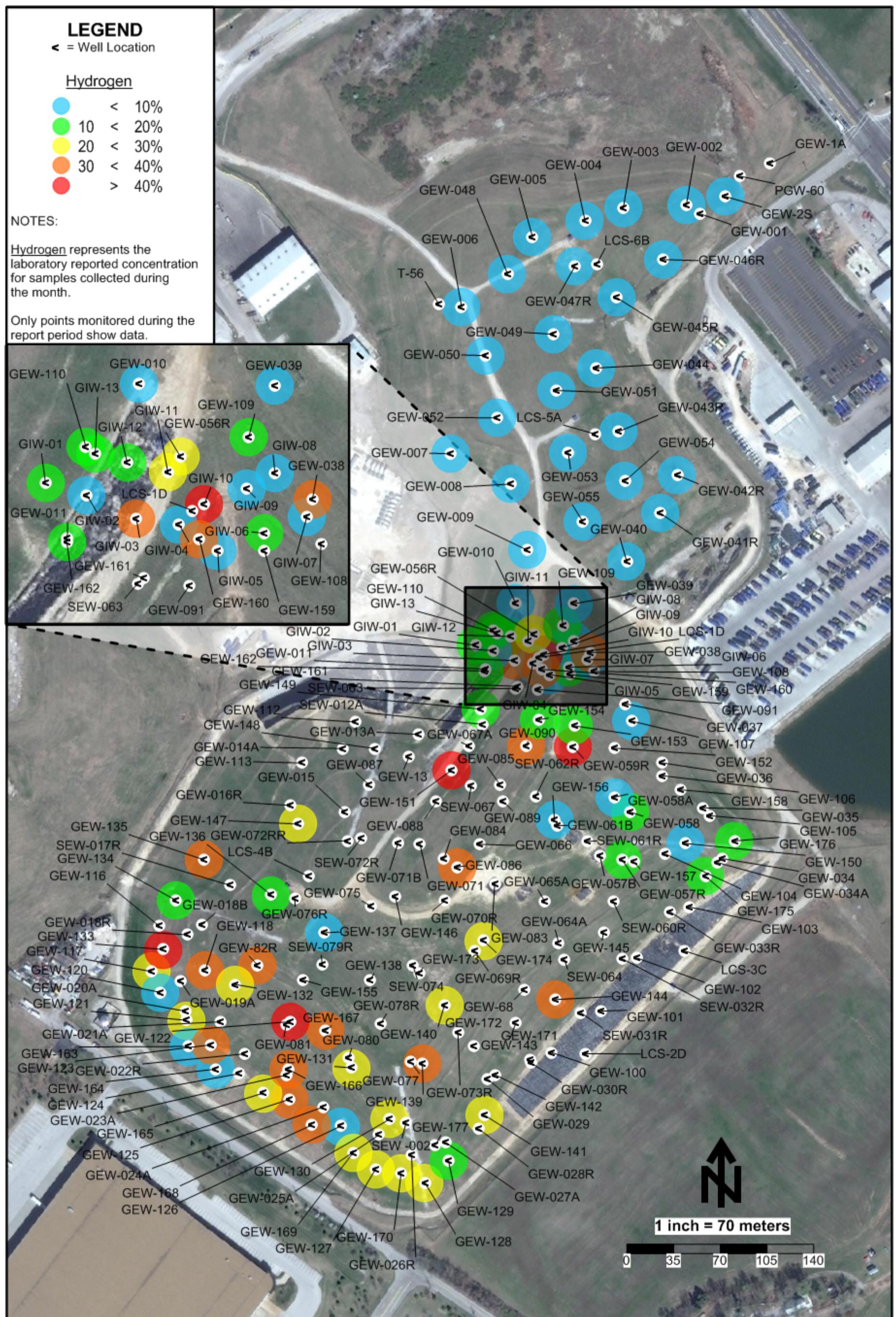


AirTECHNOLOGY Laboratories, Inc.

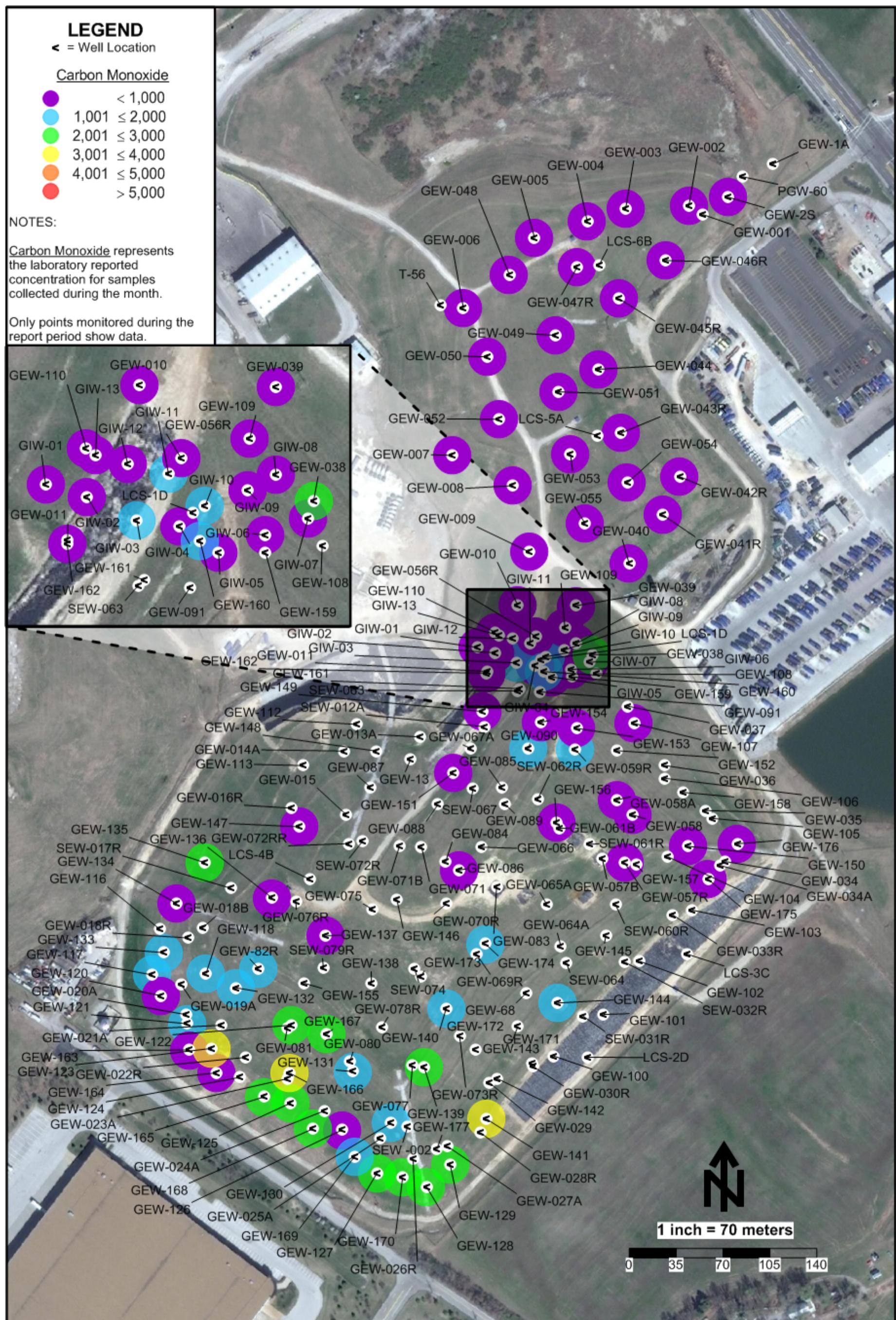
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

ATTACHMENT C

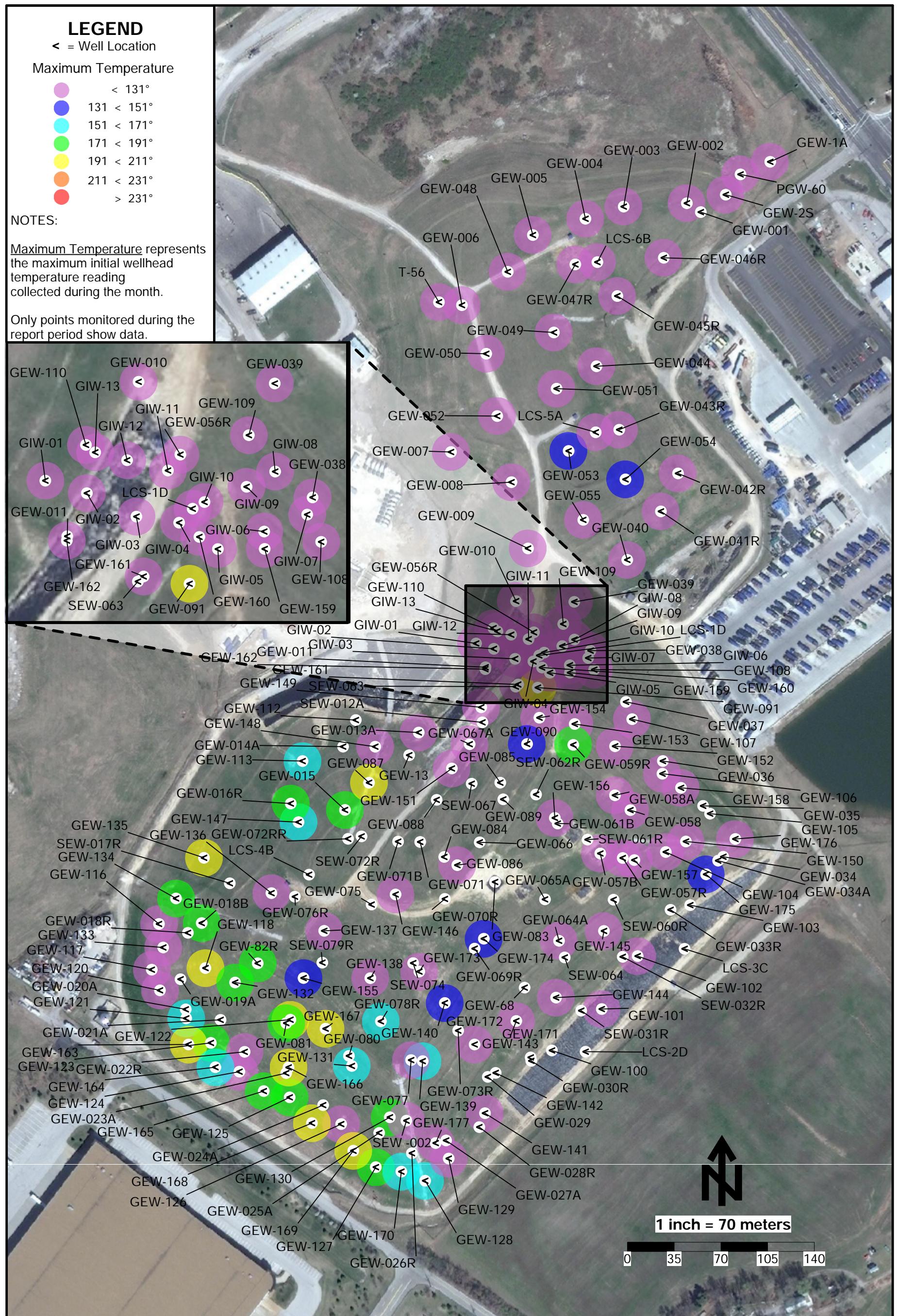
GAS WELL ANALYSIS MAPS



Hydrogen Data Map - March 2017 - Bridgeton Landfill



Carbon Monoxide Data Map - March 2017 - Bridgeton Landfill



ATTACHMENT D

LABORATORY DATA

ATTACHMENT D-1

LAB ANALYSIS SUMMARY

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)				(ppm)		
North Quarry								
GEW-002	11/7/2016	55	41	ND	3.2	ND	ND	
GEW-002	12/7/2016	51	42	1.7	5.8	ND	ND	See Note 3
GEW-002	1/9/2017	54	40	ND	5.6	ND	ND	
GEW-002	2/15/2017	56	41	ND	ND	ND	ND	
GEW-002	3/9/2017	56	42	ND	ND	ND	ND	
GEW-02S	11/7/2016	55	42	ND	ND	ND	ND	
GEW-02S	1/9/2017	50	34	3.5	12	ND	ND	See Note 3
GEW-02S	3/9/2017	59	38	ND	ND	ND	ND	
GEW-003	11/7/2016	50	38	ND	10	0.1	ND	
GEW-003	12/7/2016	54	40	ND	5.7	0.1	ND	
GEW-003	1/9/2017	49	37	ND	12	0.1	ND	
GEW-003	2/15/2017	50	39	ND	11	0.1	ND	
GEW-003	3/9/2017	49	39	ND	11	0.1	ND	
GEW-004	11/7/2016	51	40	ND	7.9	0.1	ND	
GEW-004	12/7/2016	51	38	ND	9.7	0.1	ND	
GEW-004	1/9/2017	54	41	ND	4.5	0.1	ND	
GEW-004	2/15/2017							See Note 7
GEW-004	3/9/2017	47	38	ND	14	0.1	ND	
GEW-005	11/7/2016	47	37	ND	15	0.04	ND	
GEW-005	12/7/2016	48	36	ND	15	ND	ND	
GEW-005	1/10/2017	50	37	ND	11	0.1	ND	
GEW-005	2/15/2017	38	33	ND	28	ND	ND	
GEW-005	3/9/2017	34	29	2.9	34	ND	ND	See Note 3
GEW-006	11/7/2016	45	35	2.3	18	ND	ND	See Note 3
GEW-006	1/10/2017	52	37	ND	11	ND	ND	
GEW-006	3/9/2017	44	34	ND	21	ND	ND	
GEW-007	11/7/2016	56	40	ND	ND	ND	ND	
GEW-007	1/10/2017	56	40	ND	ND	ND	ND	
GEW-007	3/8/2017	57	40	ND	ND	ND	ND	
GEW-008	11/7/2016	53	43	ND	ND	1.1	ND	
GEW-008	12/7/2016	53	42	ND	3	0.8	ND	
GEW-008	1/10/2017	50	41	1.9	6.8	0.4	ND	See Note 3
GEW-008	2/15/2017	54	43	ND	ND	0.8	ND	
GEW-008	3/8/2017	54	43	ND	ND	1.0	ND	
GEW-009	11/7/2016	48	41	ND	8.6	0.6	ND	
GEW-009	12/7/2016	47	39	ND	12	0.5	ND	
GEW-009	1/10/2017	44	37	ND	17	0.5	ND	
GEW-009	2/15/2017	48	41	ND	9.8	0.6	ND	
GEW-009	3/8/2017	49	41	ND	8.4	0.5	ND	
GEW-040	11/7/2016	57	40	ND	ND	ND	ND	
GEW-040	12/7/2016	56	39	ND	4	ND	ND	
GEW-040	1/9/2017	58	40	ND	ND	ND	ND	
GEW-040	2/15/2017	55	37	1.7	5.7	ND	ND	See Note 3
GEW-040	3/8/2017	57	41	ND	ND	ND	ND	
GEW-041R	11/7/2016	52	37	1.6	9.7	ND	ND	See Note 4
GEW-041R	1/9/2017	56	40	ND	3.0	ND	ND	
GEW-041R	3/8/2017	56	37	ND	5.9	ND	ND	
GEW-042R	11/7/2016	50	38	2.7	9.6	ND	ND	See Note 3
GEW-042R	12/7/2016	55	39	ND	5.1	ND	ND	
GEW-042R	1/9/2017	57	39	ND	3	ND	ND	
GEW-042R	2/15/2017	48	36	3.6	13	ND	ND	See Note 3
GEW-042R	3/8/2017	56	42	ND	ND	ND	ND	
GEW-043R	11/7/2016	53	42	ND	4.7	0.2	ND	
GEW-043R	1/9/2017	55	42	ND	ND	0.1	ND	
GEW-043R	3/8/2017	55	42	ND	ND	0.1	ND	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)	(ppm)					
GEW-044	11/7/2016	55	39	ND	5	ND	ND	
GEW-044	1/9/2017	56	41	ND	ND	ND	ND	
GEW-044	3/8/2017	51	37	ND	11	ND	ND	
GEW-045R	11/7/2016	55	42	ND	ND	ND	ND	
GEW-045R	12/7/2016	42	31	6	21	ND	ND	See Note 3
GEW-045R	1/9/2017	57	37	ND	5.6	ND	ND	
GEW-045R	2/15/2017	56	37	ND	5.4	ND	ND	
GEW-045R	3/8/2017	60	38	ND	ND	ND	ND	
GEW-046R	11/7/2016	55	41	ND	ND	0.1	ND	
GEW-046R	12/7/2016	53	39	1.7	6.3	0.1	ND	See Note 3
GEW-046R	1/9/2017	54	41	ND	4.5	0.1	ND	
GEW-046R	2/15/2017	47	36	2.5	15	0.1	ND	See Note 3
GEW-046R	3/15/2017	51	39	ND	9.9	0.1	ND	
GEW-047R	11/7/2016	48	38	ND	12	ND	ND	
GEW-047R	12/7/2016	48	39	ND	12	ND	ND	
GEW-047R	1/9/2017	54	41	ND	4.4	0.1	ND	
GEW-047R	2/15/2017	44	35	ND	21	ND	ND	
GEW-047R	3/9/2017	42	34	ND	22	ND	ND	
GEW-048	11/7/2016	53	40	ND	6.2	0.04	ND	
GEW-048	12/7/2016	53	39	ND	7.5	ND	ND	
GEW-048	1/10/2017	55	39	ND	5	ND	ND	
GEW-048	2/15/2017	45	34	3.1	19	ND	ND	See Note 3
GEW-048	3/9/2017	50	38	ND	11	ND	ND	
GEW-049	11/7/2016	51	38	ND	9.9	0.1	ND	
GEW-049	12/7/2016	45	35	ND	18	0.03	ND	
GEW-049	1/9/2017	54	39	ND	6.2	0.1	ND	
GEW-049	2/14/2017	54	38	ND	6.8	0.1	ND	
GEW-049	3/8/2017	37	31	ND	31	ND	ND	
GEW-050	11/7/2016	53	39	ND	6.6	0.1	ND	
GEW-050	1/10/2017	51	37	ND	12	0.04	ND	
GEW-050	3/9/2017	41	31	3	25	0.05	ND	See Note 3
GEW-051	11/7/2016	53	40	ND	4.6	1.2	ND	
GEW-051	1/9/2017	55	42	ND	ND	1.5	ND	
GEW-051	3/8/2017	49	38	ND	10	0.9	ND	
GEW-052	11/7/2016	52	40	ND	7.4	0.1	ND	
GEW-052	1/10/2017	52	38	ND	9.1	ND	ND	
GEW-052	3/8/2017	34	28	1.9	35	ND	ND	See Note 3
GEW-053	11/7/2016	49	40	ND	5.9	4.2	59	
GEW-053	12/7/2016	48	39	ND	9.9	2.1	34	
GEW-053	1/9/2017	40	34	3.4	2.1	1.8	ND	See Note 3
GEW-053	2/14/2017	44	37	ND	16	2.2	95	
GEW-053	3/8/2017	44	37	ND	14	4.6	110	
GEW-054	11/7/2016	46	38	2.8	12	2	ND	See Note 3
GEW-054	12/7/2016	50	40	ND	6.9	1.8	43	
GEW-054	1/9/2017	55	41	ND	ND	1.2	ND	
GEW-054	2/14/2017	50	40	ND	4.1	4.9	ND	
GEW-054	3/8/2017	46	38	2.3	9.4	4.7	34	See Note 3
GEW-055	11/7/2016	51	42	ND	3.8	2	ND	
GEW-055	12/7/2016	50	40	1.6	5.7	2.2	33	See Note 3
GEW-055	1/9/2017	47	37	3	11	1.5	ND	See Note 3
GEW-055	2/14/2017	53	43	ND	ND	1.7	ND	
GEW-055	3/8/2017	51	40	1.9	6.3	1.4	ND	See Note 3
Flare Station ²	11/1/2016	40.4	31.3	5	22.6	ND	ND	See Note 5
Flare Station ²	12/6/2016	46.0	36.1	1.9	14.9	ND	ND	See Note 5
Flare Station ²	1/4/2017	40.7	34.1	2.1	22.0	ND	ND	See Note 5
Flare Station ²	2/7/2017	47.1	36.5	0.9	13.8	ND	ND	See Note 5

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)	(ppm)					
Flare Station ²	3/7/2017	42.7	34.9	1.7	18.8	ND	ND	See Note 5
Flare Station ²	4/4/2017	46.5	37.9	ND	11.7	ND	ND	See Note 5

Notes: (1) Based on the comparison of field to laboratory readings, oxygen to balance gas ratios, and historical concentrations, the sample was determined to be suspect due to oxygen introduction which likely occurred during sample collection or laboratory analytical methods. (2) MDNR also collected duplicate LFG samples at these locations during this sampling period. (3) Based on the oxygen verification readings taken with an Envision meter, it was determined there is a sample train leak. (4) Based on the oxygen verification readings taken with an Envision meter, it was determined that the readings are accurate. (5) Flare station gas concentration data is an average of NQ EP14 A (or 1) and NQ EP14 B (or 2), located in the North Quarry. (6) Flare station gas concentration data is an average of Outlets 1 and 2 (A & B) or SQ OU 1 and OU 2, located in the South Quarry. (7) Sample not reported by lab due to canister leak.

ND = Analyte not detected in sample.

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

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)				(ppm)		
South Quarry								
GEW-010	11/9/2016	43	48	ND	7.3	0.1	ND	
GEW-010	12/9/2016	42	49	1.7	7.7	0.1	ND	See Note 4
GEW-010	1/11/2017	51	46	ND	ND	0.1	ND	
GEW-010	2/14/2017	47	42	2.5	8.5	0.1	ND	See Note 3
GEW-010	3/7/2017	47	45	1.8	6	0.1	ND	
GEW-022R	11/11/2016	1.2	66	ND	ND	30	3,300	
GEW-038	11/9/2016	8.1	40	6.3	23	22	1,000	See Note 4
GEW-038	12/9/2016	8.8	45	4.4	18	23	1,100	See Note 4
GEW-038	1/11/2017	7.2	42	6.3	22	22	1,500	See Note 4
GEW-038	2/14/2017	12	50	2.9	11	24	1,300	See Note 4
GEW-038	3/7/2017	1.3	56	ND	3.4	37	2,800	
GEW-039	11/8/2016	44	53	ND	ND	0.1	ND	
GEW-039	12/8/2016	11	12	17	60	ND	ND	See Note 3
GEW-039	1/11/2017	45	53	ND	ND	0.1	ND	
GEW-039	2/14/2017	45	52	ND	ND	0.1	ND	
GEW-039	3/7/2017	44	53	ND	ND	0.04	ND	
GEW-056R	11/9/2016	10	51	ND	7.2	30	1,200	
GEW-056R	12/9/2016	13	49	ND	12	25	990	
GEW-056R	1/11/2017	13	57	ND	ND	27	1,000	
GEW-056R	2/14/2017	15	52	ND	4.9	27	1,000	
GEW-056R	3/7/2017	16	51	ND	5.2	27	970	
GEW-057R	1/12/2017	8.6	39	4.6	29	19	840	See Note 4
GEW-057R	3/3/2017	12	42	1.6	29	16	600	
GEW-058	11/11/2016	0.4	39	6.2	22	32	1,700	See Note 4
GEW-058	1/12/2017	8.5	32	6.8	38	14	610	See Note 4
GEW-058	3/3/2017	12	40	2.1	34	13	500	
GEW-058A	11/11/2016	24	37	4.7	18	16	880	See Note 4
GEW-058A	3/3/2017	8.6	31	2.7	50	6.7	300	
GEW-059R	11/10/2016	5.5	43	2.8	9.7	38	1,300	See Note 4
GEW-059R	1/12/2017	4.1	49	ND	ND	44	1,800	
GEW-059R	3/3/2017	6.8	47	ND	ND	43	1,600	
GEW-082R	11/11/2016	4.9	53	ND	ND	39	1,700	
GEW-082R	1/12/2017	3.2	50	ND	ND	43	1,900	
GEW-082R	3/10/2017	7.2	47	1.7	5.8	38	1,500	See Note 3
GEW-086	11/11/2016	10	28	7.3	53	2	160	See Note 4
GEW-086	3/10/2017	4.2	55	ND	3.1	36	960	
GEW-090	11/11/2016	11	45	ND	4.3	38	1,700	
GEW-090	1/12/2017	11	46	ND	ND	40	1,800	
GEW-090	3/10/2017	12	44	ND	3.6	39	1,600	
GEW-102	11/10/2016	3.9	55	ND	3.9	35	760	
GEW-102	1/12/2017	2	53	ND	3	40	830	
GEW-107	1/12/2017	24	47	2	7	20	1,200	See Note 4
GEW-107	3/3/2017	37	40	4	14	5.1	230	
GEW-109	11/8/2016	20	48	ND	14	17	720	
GEW-109	12/8/2016	13	28	9.6	38	12	420	See Note 3
GEW-109	1/11/2017	21	51	ND	6.5	20	790	
GEW-109	2/14/2017	19	49	ND	8.3	22	910	
GEW-109	3/7/2017	27	47	ND	9.1	16	510	
GEW-110	11/9/2016	1.9	31	9.3	38	20	1,100	See Note 4
GEW-110	12/9/2016	2.5	24	11	46	16	870	See Note 4
GEW-110	1/11/2017	13	48	ND	13	25	1,300	
GEW-110	2/14/2017	10	34	5.2	35	15	800	See Note 4
GEW-110	3/7/2017	12	35	6.7	35	11	570	See Note 4
GEW-116	1/12/2017	1.8	59	ND	4.8	33	2,100	
GEW-117	11/11/2016	7.3	63	ND	4.5	23	1,800	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide (ppm)	Comments
		(%)						
GEW-117	1/12/2017	7.4	61	1.7	5.9	23	1,900	See Note 4
GEW-117	3/9/2017	7	65	ND	ND	25	1,600	
GEW-118	11/11/2016	2	47	3.7	18	29	1,200	See Note 4
GEW-118	1/12/2017	1.3	53	2.1	7.6	35	1,500	See Note 3
GEW-118	3/9/2017	1.5	56	ND	ND	38	1,500	
GEW-120	11/10/2016	22	52	4.1	16	5.2	250	See Note 3
GEW-120	3/9/2017	38	58	ND	ND	1.8	43	
GEW-121	11/11/2016	8.7	58	ND	5	27	1,600	
GEW-121	1/11/2017	9.2	56	ND	6.3	27	1,500	
GEW-121	3/9/2017	10	56	ND	7.7	25	1,200	
GEW-122	1/11/2017	18	50	ND	5.7	25	1,400	
GEW-122	3/9/2017	0.3	56	ND	ND	41	2,800	
GEW-123	11/11/2016	8.9	56	2.5	11	21	1,800	See Note 4
GEW-123	3/7/2017	0.4	60	ND	ND	36	3,100	
GEW-124	1/11/2017	35	49	2.9	10	2.4	280	See Note 4
GEW-125	11/11/2016	2.9	44	3.5	18	31	2,200	See Note 3
GEW-125	1/11/2017	2.4	55	ND	ND	38	2,600	
GEW-125	3/6/2017	3.4	56	ND	ND	37	2,500	
GEW-126	11/11/2016	22	53	ND	4.4	19	1,800	
GEW-126	1/11/2017	24	52	ND	5.4	18	1,600	
GEW-126	3/6/2017	23	51	ND	18	6.4	460	
GEW-127	11/11/2016	3.3	65	ND	4.2	26	3,300	
GEW-127	1/11/2017	2.9	46	7	25	18	2,200	See Note 4
GEW-127	3/2/2017	3.9	58	2.6	12	23	2,700	
GEW-128	11/11/2016	5.6	64	ND	3.3	26	2,800	
GEW-128	1/12/2017	6.4	64	ND	ND	26	2,900	
GEW-128	3/2/2017	5.7	61	ND	5.1	27	3,000	
GEW-129	11/11/2016	1.9	66	2.2	7.7	22	3,000	See Note 3
GEW-129	1/12/2017	1.4	69	1.7	5.9	22	3,300	See Note 4
GEW-129	3/2/2017	3.4	70	ND	4.6	19	2,400	
GEW-130	11/11/2016	3.4	43	5.9	23	23	2,400	See Note 4
GEW-130	1/11/2017	0.4	55	ND	ND	41	3,600	
GEW-130	3/2/2017	1.1	36	8.3	30	24	1,900	See Note 4
GEW-131	11/11/2016	5.4	47	ND	ND	45	2,700	
GEW-131	1/11/2017	0.8	61	ND	ND	36	2,000	
GEW-131	3/6/2017	19	46	ND	11	22	1,200	
GEW-132	11/10/2016	11	46	1.7	24	16	920	See Note 4
GEW-132	1/9/2017	4.8	53	ND	ND	39	2,000	
GEW-132	3/9/2017	7.5	46	2.1	18	26	1,300	
GEW-133	1/9/2017	0.6	18	15	53	14	1,000	See Note 3
GEW-133	3/9/2017	1.0	55	ND	ND	41	1,600	
GEW-134	11/10/2016	7.1	32	6.6	51	2.8	300	See Note 4
GEW-134	1/9/2017	18	52	ND	ND	26	1,300	
GEW-134	3/15/2017	15	47	2.1	18	18	900	
GEW-135	11/10/2016	5.1	41	5.1	31	18	900	See Note 4
GEW-135	1/9/2017	0.2	6.6	19	68	6.4	190	See Note 4
GEW-135	3/9/2017	0.6	62	ND	ND	34	2,600	
GEW-136	11/10/2016	3.7	22	12	54	8.9	380	See Note 4
GEW-136	1/9/2017	7.5	41	ND	39	11	410	
GEW-136	3/15/2017	3.4	19	13	55	10	320	See Note 4
GEW-137	11/10/2016	0.5	59	ND	ND	38	2,700	
GEW-137	1/9/2017	0.6	57	ND	ND	39	2,600	
GEW-137	3/9/2017	9.9	23	3.9	63	0.06	ND	
GEW-138	11/10/2016	3.7	26	6.8	53	10	680	See Note 4
GEW-139	11/11/2016	3.8	44	4.3	17	30	2,400	See Note 4
GEW-139	1/12/2017	3.0	40	6	23	27	2,100	See Note 4

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Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide (ppm)	Comments
		(%)						
GEW-139	3/2/2017	3.1	48	2.8	11	34	2,700	
GEW-140	11/11/2016	8.6	51	1.9	8.4	30	1,600	See Note 4
GEW-140	1/12/2017	5.7	37	7.9	30	19	1,100	See Note 4
GEW-140	3/3/2017	3.6	38	6.3	25	28	1,400	See Note 4
GEW-141	11/11/2016	0.3	48	4.3	15	31	3,400	See Note 4
GEW-141	1/12/2017	0.3	54	2.1	7.3	36	4,100	See Note 4
GEW-141	3/3/2017	1.9	43	5.6	20	29	3,200	See Note 4
GEW-142	1/12/2017	2.3	58	3.5	12	23	2,100	See Note 4
GEW-144	1/12/2017	4.7	55	ND	4.7	33	1,600	
GEW-144	3/3/2017	0.8	45	4.8	17	32	1,800	See Note 4
GEW-145	11/10/2016	1.0	51	2.2	7.8	36	2,100	See Note 4
GEW-146	1/9/2017	2.8	9	13	75	0.9	120	See Note 4
GEW-147	11/11/2016	4.8	48	1.7	5.7	39	2,000	See Note 3
GEW-147	1/9/2017	12	50	ND	9.8	27	1,200	
GEW-147	3/7/2017	13	46	ND	18	22	920	
GEW-148	1/9/2017	0.2	1.9	21	76	0.6	31	See Note 4
GEW-149	11/10/2016	11	52	2	17	17	1,000	See Note 4
GEW-149	1/9/2017	17	48	1.5	16	17	750	See Note 4
GEW-149	3/10/2017	11	43	3.4	30	13	580	
GEW-150	11/10/2016	1.9	55	3.3	12	27	1,800	See Note 3
GEW-150	1/11/2017	5.4	50	3.5	18	22	1,400	See Note 4
GEW-150	3/3/2017	11	38	5.1	38	7.8	420	See Note 4
GEW-151	11/10/2016	2.5	54	1.6	5.8	35	1,600	See Note 4
GEW-151	1/9/2017	1.4	45	ND	ND	51	1,000	
GEW-151	3/10/2017	1.0	41	1.9	6.5	49	900	See Note 3
GEW-152	11/9/2016	18	48	ND	3	29	1,800	
GEW-153	11/9/2016	28	40	ND	20	11	360	
GEW-153	1/11/2017	31	43	2.4	8.4	14	530	See Note 4
GEW-153	3/3/2017	37	44	ND	ND	16	430	
GEW-154	1/9/2017	1.7	4.3	20	72	1.3	89	See Note 4
GEW-154	3/10/2017	33	42	2.3	8	15	700	
GEW-155	11/10/2016	0.5	58	ND	ND	38	2,800	
GEW-155	1/9/2017	5.4	52	ND	8.2	33	1,200	
GEW-156	3/3/2017	16	32	5.3	44	2	95	See Note 4
GEW-158	3/10/2017	26	33	4.4	25	11	490	
GEW-159	11/8/2016	5.6	35	7.6	27	25	1,500	See Note 4
GEW-160	11/10/2016	3.8	57	ND	ND	36	2,000	
GEW-160	1/9/2017	5.5	54	ND	ND	37	2,100	
GEW-160	3/10/2017	11	52	ND	3.6	32	2,000	
GEW-161	1/9/2017	2.8	54	ND	ND	40	2,200	
GEW-162	11/10/2016	7.0	62	ND	ND	27	1,800	
GEW-162	3/10/2017	6.8	31	11	38	13	690	See Note 4
GEW-163	11/11/2016	4.8	30	9.5	47	7.9	580	See Note 4
GEW-163	1/11/2017	1	16	16	59	7.8	490	See Note 4
GEW-163	3/7/2017	4.8	30	8.8	46	9.3	590	See Note 4
GEW-164	11/11/2016	8.7	69	ND	ND	18	1,900	
GEW-164	1/11/2017	5	25	13	49	7	540	See Note 4
GEW-164	3/7/2017	10	41	7.1	32	8.6	660	See Note 4
GEW-165	11/11/2016	1.7	63	ND	3.3	30	2,900	
GEW-165	1/11/2017	3.2	63	ND	ND	30	2,800	
GEW-165	3/6/2017	5.6	62	ND	ND	29	2,400	
GEW-166	11/11/2016	2.1	36	9.2	32	20	1,700	See Note 3
GEW-166	1/11/2017	5.6	32	8.2	36	18	1,400	See Note 4
GEW-166	3/6/2017	0.3	54	1.7	5.7	38	3,200	
GEW-167	11/11/2016	1.4	58	ND	ND	38	2,600	
GEW-167	1/11/2017	3.6	39	5.1	23	29	1,900	See Note 4

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide (ppm)	Comments
		(%)						
GEW-167	3/6/2017	1.5	46	3.5	14	34	2,400	
GEW-168	11/11/2016	0.6	57	ND	ND	39	3,400	
GEW-168	1/11/2017	4.2	59	ND	ND	32	2,600	
GEW-168	3/6/2017	3.4	53	2.2	7.5	33	2,600	
GEW-169	11/11/2016	1.8	40	8.1	29	20	2,100	See Note 4
GEW-169	1/11/2017	3.3	53	4.5	16	22	2,300	See Note 4
GEW-169	3/6/2017	2.1	36	9	32	20	1,700	See Note 4
GEW-170	11/11/2016	3.2	57	3.5	13	22	2,900	See Note 4
GEW-170	1/11/2017	4.2	50	5.8	22	17	2,400	See Note 4
GEW-170	3/2/2017	3.3	57	4	16	20	2,700	
GEW-172	1/12/2017	0.7	57	ND	ND	40	3,200	
GEW-173	1/12/2017	4.3	16	15	62	2.6	260	See Note 4
GEW-174	11/10/2016	4.5	31	7.5	42	15	1,000	See Note 4
GEW-174	1/12/2017	4.6	39	4.9	29	21	1,500	See Note 4
GEW-174	3/3/2017	5.5	34	6.6	34	20	1,200	See Note 4
GEW-175	11/10/2016	10	33	7.9	43	6.1	420	See Note 4
GEW-175	1/11/2017	18	52	3.2	16	11	610	See Note 4
GEW-175	3/3/2017	16	45	4.5	23	11	510	
GEW-176	11/10/2016	11	49	4.1	20	16	970	See Note 4
GEW-176	1/11/2017	23	53	1.9	8.9	13	590	See Note 4
GEW-176	3/3/2017	18	40	6	25	10	400	
GEW-177	1/12/2017	0.2	55	3.8	13	27	4,300	See Note 4
GIW-01	11/9/2016	3.1	69	ND	ND	24	2,100	
GIW-01	12/8/2016	3.5	51	5.8	21	18	1,400	See Note 3
GIW-01	1/11/2017	4.5	67	ND	3.8	23	2,100	
GIW-01	2/14/2017	3.5	66	ND	4.7	25	1,900	
GIW-01	3/7/2017	12	58	3.6	16	10	720	
GIW-02	11/9/2016	2.7	64	ND	5.6	26	1,900	
GIW-02	12/8/2016	3.1	65	1.7	5.6	24	1,700	See Note 3
GIW-02	1/11/2017	12	67	ND	ND	19	970	
GIW-02	2/14/2017	1.8	60	1.7	5.8	30	1,800	See Note 4
GIW-02	3/7/2017	4.7	32	9.9	44	9.1	460	See Note 4
GIW-03	11/9/2016	0.7	64	ND	5	27	2,200	
GIW-03	12/8/2016	1	53	5.1	18	22	1,600	See Note 4
GIW-03	1/11/2017	1	66	ND	ND	29	2,000	
GIW-03	2/14/2017	7.1	42	6.4	33	11	490	See Note 3
GIW-03	3/7/2017	1	57	2.3	8	31	1,900	
GIW-04	11/9/2016	1.1	51	2.4	8.2	37	2,200	See Note 4
GIW-04	12/8/2016	0.8	42	5	18	34	2,000	See Note 3
GIW-04	1/11/2017	1.1	53	ND	ND	43	2,400	
GIW-04	2/14/2017	0.5	37	6.5	23	33	1,800	See Note 4
GIW-04	3/7/2017	0.1	8.1	19	66	7.2	400	See Note 4
GIW-05	11/9/2016	0.01	1	22	77	ND	ND	See Note 4
GIW-05	12/8/2016	0.03	0.5	22	77	ND	ND	See Note 4
GIW-05	1/11/2017	0.2	1.6	22	77	ND	ND	See Note 4
GIW-05	2/14/2017	0.05	2.1	22	76	ND	ND	See Note 4
GIW-05	3/7/2017	0.07	1.6	22	77	0.04	ND	See Note 4
GIW-06	11/8/2016	17	54	ND	6.3	20	700	
GIW-06	12/9/2016	26	48	ND	4.1	20	550	
GIW-06	1/11/2017	3.1	36	ND	37	21	1,200	
GIW-06	2/14/2017	22	45	2.1	7.2	22	550	See Note 3
GIW-06	3/7/2017	24	39	4.2	14	18	480	See Note 3
GIW-07	11/8/2016	12	58	2.1	7.3	20	1,000	See Note 4
GIW-07	12/9/2016	26	50	1.7	6.1	16	720	See Note 4
GIW-07	1/11/2017	37	49	ND	6.4	6	410	
GIW-07	2/14/2017	32	50	2.4	8	7.4	430	See Note 4

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)	(%)	(%)	(%)	(%)	(ppm)	
GIW-07	3/7/2017	35	49	1.8	5.9	8.4	540	
GIW-08	11/8/2016	23	60	ND	16	0.8	130	
GIW-08	12/9/2016	31	52	2.8	14	0.3	77	See Note 3
GIW-08	1/11/2017	35	46	ND	18	0.3	88	
GIW-08	2/14/2017	42	55	ND	ND	0.7	140	
GIW-08	3/7/2017	36	59	ND	4.1	0.7	160	
GIW-09	11/9/2016	0.8	8.5	18	71	1.8	110	See Note 4
GIW-09	12/9/2016	ND	16	13	65	1.5	92	See Note 4
GIW-09	1/11/2017	24	36	3.9	31	4.4	150	See Note 4
GIW-09	2/14/2017	29	41	2.3	19	8.3	280	See Note 4
GIW-09	3/7/2017	6.2	25	7	56	5.4	320	
GIW-10	11/9/2016	4.1	49	ND	11	34	1,700	
GIW-10	12/8/2016	6.9	41	4.8	23	24	1,000	See Note 3
GIW-10	1/11/2017	6.7	53	ND	ND	37	1,400	
GIW-10	2/14/2017	8.3	49	ND	4.4	36	1,200	
GIW-10	3/7/2017	6.4	51	ND	ND	40	1,300	
GIW-11	11/9/2016	0.9	63	ND	ND	33	2,700	
GIW-11	12/9/2016	2	62	ND	6.2	28	2,100	
GIW-11	1/11/2017	1.8	64	ND	ND	31	2,100	
GIW-11	2/14/2017	5.5	60	ND	7.2	27	1,500	
GIW-11	3/7/2017	5.3	56	ND	11	26	1,400	
GIW-12	11/9/2016	7.7	35	7.5	42	7.9	460	See Note 4
GIW-12	12/9/2016	7.6	31	9.3	45	6.3	320	See Note 4
GIW-12	1/11/2017	3.5	64	ND	ND	31	1500	
GIW-12	2/14/2017	10	40	5.9	31	13	590	See Note 4
GIW-12	3/7/2017	9.1	33	8.1	39	10	490	See Note 4
GIW-13	11/9/2016	10	65	ND	ND	20	1,300	
GIW-13	12/9/2016	12	65	ND	3.5	19	1,100	
GIW-13	1/11/2017	9.9	69	ND	ND	18	890	
GIW-13	2/14/2017	12	68	ND	ND	17	660	
GIW-13	3/7/2017	13	66	ND	ND	18	760	
Flare Station ²	11/1/2016	10.4	42.4	5.7	27.2	12.5	900	See Note 6
Flare Station ²	12/6/2016	9.3	37.8	7.7	32.4	12.0	840	See Note 6
Flare Station ²	1/4/2017	9.8	38.7	7.4	30.6	12.8	815	See Note 6
Flare Station ²	2/7/2017	9.7	37.7	7.9	31.7	12.2	840	See Note 6
Flare Station ²	3/7/2017	9.1	35.0	8.6	35.2	11.6	695	See Note 6
Flare Station ²	4/4/2017	9.3	35.6	8.5	34.5	11.5	680	See Note 6

Notes: (1) Based on the comparison of field to laboratory readings, oxygen to balance gas ratios, and historical concentrations, the sample was determined to be suspect due to oxygen introduction which likely occurred during sample collection or laboratory analytical methods. (2) MDNR also collected duplicate LFG samples at these locations during this sampling period. (3) Based on the oxygen verification readings taken with an Envision meter, it was determined there is a sample train leak. (4) Based on the oxygen verification readings taken with an Envision meter, it was determined that the readings are accurate. (5) Flare station gas concentration data is an average of NQ EP14 A (or 1) and NQ EP14 B (or 2), located in the North Quarry. (6) Flare station gas concentration data is an average of Outlets 1 and 2 (A & B) or SQ OU 1 and OU 2, located in the South Quarry. (7) Sample not reported by lab due to canister leak.

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

March 21, 2017

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: I031405-01/94

Enclosed are results for sample(s) received 3/14/17 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 3/21/17.

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 10			
Standard	<input checked="" 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	<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:	<i>5 days 3/14/17 part #2</i>			Level 4	<input type="checkbox"/>	Chilled _____ deg C			
BILLING				ANALYSIS REQUEST					
Project No.:	4337								
Project Name:	Bridgeton Landfill								
Report To:	Nick Bauer								
Company:	Republic Services			P.O. No.:	PO6312552				
Street:	13570 St. Charles Rock Rd.			Bill to:	Republic Services				
City/State/Zip:	Bridgeton, MO 63044			Attn:	Nick Bauer				
Phone & Fax:	618-420-5209			13570 St. Charles Rock Rd.					
e-mail:	Nbauer@republicservices.com			Bridgeton, MO 63044					
LAB USE ONLY	SAMPLE IDENTIFICATION			SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H2
I031405 - 01	GEW 128			3/2/17	1322	C	LFG	NA	X
- 02	GEW 129			3/2/17	1336	C	LFG	NA	X
- 03	GEW 127			3/2/17	1356	C	LFG	NA	X
- 04	GEW 170			3/2/17	1411	C	LFG	NA	X
- 05	GEW 139			3/2/17	1441	C	LFG	NA	X
- 06	GEW 130			3/2/17	1548	C	LFG	NA	X
- 07	GEW 153			3/3/17	809	C	LFG	NA	X
- 08	GEW 107			3/3/17	824	C	LFG	NA	X
- 09	GEW 59R			3/3/17	842	C	LFG	NA	X
- 10	GEW 176			3/3/17	901	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services			COMMENTS		
SAMPLED BY: Ronald Baker COMPANY: Republic Services DATE/TIME					
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME		
Ronald Baker	3/13/17				
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME		
FedEx		Dnj - 3/14/17 0858			
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME		
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____					

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



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		CHAIN OF CUSTODY RECORD						
		TURNAROUND TIME			DELIVERABLES		PAGE: 2 OF 1b	
Project No.:		Standard <input checked="" type="checkbox"/>	48 hours <input type="checkbox"/>	EDD <input checked="" type="checkbox"/>	Condition upon receipt:			
Project Name:	Bridgeton Landfill	Same Day <input type="checkbox"/>	72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>			
Report To:	Nick Bauer	24 hours <input type="checkbox"/>	96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>			
Company:	Republic Services	Other: 5 DAY <i>03/16/17</i>		Level 4 <input type="checkbox"/>	Chilled _____ deg C			
Street:	13570 St. Charles Rock Rd.	BILLING			ANALYSIS REQUEST			
City/State/Zip:	Bridgeton, MO 63044							
Phone & Fax:	618-420-5209							
e-mail:	Nbauer@publicservices.com							
LAB USE ONLY	SAMPLE IDENTIFICATION		SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	
I031405-11	GEW 175		3/3/17	920	C	LFG	NA	X
-12	GEW 150		3/3/17	941	C	LFG	NA	X
-13	GEW 57R		3/3/17	1033	C	LFG	NA	X
-14	GEW 58		3/3/17	1046	C	LFG	NA	X
-15	GEW 58A		3/3/17	1056	C	LFG	NA	X
-16	GEW 156		3/3/17	1112	C	LFG	NA	X
-17	GEW 174		3/3/17	1144	C	LFG	NA	X
—	GEW 173 No Sample		N/A	N/A	C	LFG	NA	X — na
↓ -18	GEW 140		3/3/17	1408	C	LFG	NA	X
↓ -19	GEW 144		3/3/17	1437	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services			COMMENTS				
SAMPLED BY: Ronald Baker COMPANY: Republic Services DATE/TIME							
RELINQUISHED BY	Ronald Baker	DATE/TIME				RECEIVED BY	DATE/TIME
RELINQUISHED BY	FedEx	DATE/TIME				Jingg-	DATE/TIME
RELINQUISHED BY		DATE/TIME				RECEIVED BY	DATE/TIME
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____							

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Laboratories, Inc.

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Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

Project No.: 4337
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: 618-420-5209
e-mail: Nbauer@publicservices.com

TURNAROUND TIME

Standard 48 hours
Same Day 72 hours
24 hours 96 hours
Other: 5 DAY 03/14/17

DELIVERABLES

EDD
EDF
Level 3
Level 4

PAGE: 3 OF 10

Condition upon receipt:

Sealed Yes No

Intact Yes No

Chilled _____ deg C

BILLING

ANALYSIS REQUEST

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2
1031405-20	GEW 141	3/3/17	1501	C	LFG	NA	X
-21	GEW 169	3/6/17	1229	C	LFG	NA	X
-22	GEW 126	3/6/17	1243	C	LFG	NA	X
-23	GEW 131	3/6/17	1257	C	LFG	NA	X
-24	GEW 168	3/6/17	1314	C	LFG	NA	X
-25	GEW 125	3/6/17	1327	C	LFG	NA	X
-26	GEW 165	3/6/17	1342	C	LFG	NA	X
-27	GEW 166	3/6/17	1355	C	LFG	NA	X
-28	GEW 167	3/6/17	1411	C	LFG	NA	X
-29	GEW 122	3/6/17	1530	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services

SAMPLED BY: Ronald Baker

COMPANY: Republic Services

DATE/TIME

RELINQUISHED BY: Ronald Baker

DATE/TIME

3/13/17

RECEIVED BY

DATE/TIME

RELINQUISHED BY: FedEx

DATE/TIME

3/14/17

RECEIVED BY

DATE/TIME

3/14/17 0858

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

COMMENTS

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		CHAIN OF CUSTODY RECORD					
		TURNAROUND TIME			DELIVERABLES		PAGE: 4 OF 10
Project No.:	4337	Standard	<input checked="" type="checkbox"/> 48 hours	<input type="checkbox"/>	EDD	<input checked="" type="checkbox"/>	Condition upon receipt:
Project Name:	Bridgeton Landfill	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:	5 DAY 3/14/17			Level 4	Chilled _____ deg C
Report To:	Nick Bauer	BILLING			ANALYSIS REQUEST		
Company:	Republic Services	P.O. No.: PO6312552					
Street:	13570 St. Charles Rock Rd.	Bill to: Republic Services					
City/State/Zip:	Bridgeton, MO 63044	Attn: Nick Bauer					
Phone & Fax:	618-420-5209	13570 St. Charles Rock Rd.					
e-mail:	Nbauer@publicservices.com	Bridgeton, MO 63044					
LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2
I031405-30	G1W1	3/7/17	844	C	LFG	NA	X
-31	G1W2	3/7/17	856	C	LFG	NA	X
-32	G1W11	3/7/17	1046	C	LFG	NA	X
-33	G1W10	3/7/17	1059	C	LFG	NA	X
-34	G1W5	3/7/17	1112	C	LFG	NA	X
-35	G1W39	3/7/17	1124	C	LFG	NA	X
-36	G1W109	3/7/17	1134	C	LFG	NA	X
-37	G1W6	3/7/17	1259	C	LFG	NA	X
-38	G1W7	3/7/17	1319	C	LFG	NA	X
-39	G1W8	3/7/17	1330	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services			COMMENTS		
SAMPLED BY: Ronald Baker COMPANY: Republic Services DATE/TIME					
RELINQUISHED BY	Ronald Baker	DATE/TIME	RECEIVED BY	DATE/TIME	
RELINQUISHED BY	FED EX	DATE/TIME	RECEIVED BY	DATE/TIME	
RELINQUISHED BY		DATE/TIME	RECEIVED BY	DATE/TIME	
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____					

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CHAIN OF CUSTODY RECORD

		TURNAROUND TIME	DELIVERABLES	PAGE: 5 OF 10
Project No.:	4337	Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	EDD <input checked="" type="checkbox"/>	Condition upon receipt:
Project Name:	Bridgeton Landfill	Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
Report To:	Nick Bauer	24 hours <input type="checkbox"/> 96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>
Company:	Republic Services	Other: 5 DAY SD 3/14/17	Level 4 <input type="checkbox"/>	Chilled _____ deg C
Street:	13570 St. Charles Rock Rd.			
City/State/Zip:	Bridgeton, MO 63044			
Phone & Fax:	618-420-5209			
e-mail:	Nbauer@publicservices.com			

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO ₂ , H ₂
I031405-40	GEV 38	3/7/17	1339	C	LFG	NA	X
-41	GEV 9	3/7/17	1347	C	LFG	NA	X
-42	GEV 164	3/7/17	1409	C	LFG	NA	X
-43	GEV 163	3/7/17	1424	C	LFG	NA	X
-44	GEV 123	3/7/17	1439	C	LFG	NA	X
-45	GEV 49	3/8/17	758	C	LFG	NA	X
-46	GEV 51	3/8/17	1017	C	LFG	NA	X
-47	GEV 52	3/8/17	1029	C	LFG	NA	X
-48	GEV 7	3/8/17	1043	C	LFG	NA	X
-49	GEV 8	3/8/17	1054	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	COMMENTS
SAMPLED BY: Ronald Baker	COMPANY: Republic Services	DATE/TIME
RELINQUISHED BY: Ronald Baker	DATE/TIME: 3/13/17	RECEIVED BY _____ DATE/TIME _____
RELINQUISHED BY: FedEx	DATE/TIME	RECEIVED BY: <i>Dave Pj</i> DATE/TIME: 3/14/17 0858
RELINQUISHED BY	DATE/TIME	RECEIVED BY _____ DATE/TIME _____
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____		

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CHAIN OF CUSTODY RECORD

		TURNAROUND TIME		DELIVERABLES		PAGE: 6 OF 1D	
Project No.:	4337	Standard <input checked="" type="checkbox"/>	48 hours <input type="checkbox"/>	EDD <input checked="" type="checkbox"/>	Condition upon receipt:		
Project Name:	Bridgeton Landfill	Same Day <input type="checkbox"/>	72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>		
Report To:	Nick Bauer	24 hours <input type="checkbox"/>	96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>		
Company:	Republic Services	Other: 5 DAY <i>to 3/14/11</i>		Level 4 <input type="checkbox"/>	Chilled _____ deg C		
Street:	13570 St. Charles Rock Rd.	BILLING		ANALYSIS REQUEST			
City/State/Zip:	Bridgeton, MO 63044	P.O. No.: PO6312552					
Phone & Fax:	618-420-5209	Bill to: Republic Services					
e-mail:	Nbauer@publicservices.com	Attn: Nick Bauer					
13570 St. Charles Rock Rd.		Bridgeton, MO 63044					

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2
I031405-50	GEW9	3/8/17	1104	C	LFG	NA	X
-51	GEW53	3/8/17	1137	C	LFG	NA	X
-52	GEW54	3/8/17	1146	C	LFG	NA	X
-53	GEW55	3/8/17	1308	C	LFG	NA	X
-54	GEW40	3/8/17	1318	C	LFG	NA	X
-55	GEW41R	3/8/17	1343	C	LFG	NA	X
-56	GEW42R	3/8/17	1420	C	LFG	NA	X
-57	GEW43R	3/8/17	1431	C	LFG	NA	X
-58	GEW44	3/8/17	1440	C	LFG	NA	X
-59	GEW45R	3/8/17	1463	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer			COMPANY: Republic Services			COMMENTS		
SAMPLED BY: Ronald Baker			COMPANY: Republic Services			DATE/TIME		
RELINQUISHED BY <i>Ronald Baker</i>		DATE/TIME <i>3/13/17</i>	RECEIVED BY		DATE/TIME			
RELINQUISHED BY <i>FED EX</i>		DATE/TIME	RECEIVED BY <i>DmR</i>		DATE/TIME <i>3/14/17 0858</i>			
RELINQUISHED BY			DATE/TIME	RECEIVED BY		DATE/TIME		
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other								

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Air TECHNOLOGY
Laboratories, Inc.

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City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

		TURNAROUND TIME		DELIVERABLES		PAGE: 7 OF 10			
Project No.:	4337	Standard	<input checked="" type="checkbox"/> 48 hours	<input type="checkbox"/>	EDD <input checked="" type="checkbox"/>	Condition upon receipt:			
Project Name:	Bridgeton Landfill	Same Day	<input type="checkbox"/>	72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Report To:	Nick Bauer	24 hours	<input type="checkbox"/>	96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Company:	Republic Services	Other: 5DAY 303/14/17 AT NB			Level 4 <input type="checkbox"/>	Chilled _____	deg C		
Street:	13570 St. Charles Rock Rd.	BILLING				ANALYSIS REQUEST			
City/State/Zip:	Bridgeton, MO 63044	P.O. No.: PO6312552							
Phone & Fax:	618-420-5209	Bill to: Republic Services							
e-mail:	Nbauer@publicservices.com	Attn: Nick Bauer							
13570 St. Charles Rock Rd.		13570 St. Charles Rock Rd.							
LAB USE ONLY		SAMPLE IDENTIFICATION		SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO ₂ , H ₂
ID31405 - 60		GEW 46R		3/8/17	1504	C	LFG	NA	-X - cancel, low initial req'd from B3/15/17
-61		GEW 25 2		3/9/17	812	C	LFG	NA	X
-62		GEW 25		3/9/17	757	C	LFG	NA	X
-63		GEW 3		3/9/17	824	C	LFG	NA	X
-64		GEW 4		3/9/17	835	C	LFG	NA	X
-65		GEW 47R		3/9/17	857	C	LFG	NA	X
-66		GEW 5		3/9/17	920	C	LFG	NA	X
-67		GEW 48		3/9/17	934	C	LFG	NA	X
-68		GEV 6		3/9/17	946	C	LFG	NA	X
-69		GEW 50		3/9/17	1005	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services

SAMPLED BY: Ronald Baker

COMPANY: Republic Services

DATE/TIME

COMMENTS

RELINQUISHED BY:

DATE/TIME

RECEIVED BY

DATE/TIME

Ronald Baker

3/13/17

RELINQUISHED BY:

DATE/TIME

RECEIVED BY

DATE/TIME

FED EX

DNT

3/14/17 0858

METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____

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



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CHAIN OF CUSTODY RECORD

		TURNAROUND TIME		DELIVERABLES		PAGE: 8 OF 10	
Project No.:	4337	Standard	<input checked="" type="checkbox"/> 48 hours	<input type="checkbox"/>	EDD <input checked="" type="checkbox"/>	Condition upon receipt:	
Project Name:	Bridgeton Landfill	Same Day	<input type="checkbox"/>	72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/>	No <input type="checkbox"/>
Report To:	Nick Bauer	24 hours	<input type="checkbox"/>	96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/>	No <input type="checkbox"/>
Company:	Republic Services	Other:	5 DAY 30 3/14/17		Level 4 <input type="checkbox"/>	Chilled _____ deg C	
Street:	13570 St. Charles Rock Rd.	BILLING				ANALYSIS REQUEST	
City/State/Zip:	Bridgeton, MO 63044	P.O. No.: PO6312552					
Phone & Fax:	618-420-5209	Bill to: Republic Services					
e-mail:	Nbauer@publicservices.com	Attn: Nick Bauer					
		13570 St. Charles Rock Rd.					
		Bridgeton, MO 63044					

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H2
I031405-70	GEW121	3/9/17	1023	C	LFG	NA	X
-71	GEW132	3/9/17	1048	C	LFG	NA	X
-72	GEW118	3/9/17	1107	C	LFG	NA	X
-73	GEW120	3/9/17	1132	C	LFG	NA	X
-74	GEW117	3/9/17	1144	C	LFG	NA	X
-75	GEW133	3/9/17	1329	C	LFG	NA	X
-76	GEW135	3/9/17	1358	C	LFG	NA	X
-77	GEW137	3/9/17	1451	C	LFG	NA	X
-78	GEW82R	3/10/17	900	C	LFG	NA	X
-79	GEW86	3/10/17	816	C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	COMMENTS	
SAMPLED BY: Ronald Baker	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY: <i>Ronald Baker</i>	DATE/TIME: 3/13/17		RECEIVED BY
RELINQUISHED BY: <i>Pen</i> <i>EX</i>	DATE/TIME		RECEIVED BY: <i>Dave</i> <i>3/14/17 0858</i>
RELINQUISHED BY	DATE/TIME		RECEIVED BY
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____			

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Ph: 626-964-4032
Fx: 626-964-5832

Project No.: 4337
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: 618-420-5209
e-mail: Nbauer@republicservices.com

CHAIN OF CUSTODY RECORD						
TURNAROUND TIME			DELIVERABLES		PAGE: 9 OF 10	
Standard <input checked="" 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 <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: 5DAY 90314/17			Level 4 <input type="checkbox"/>		Chilled _____ deg C	

BILLING		ANALYSIS REQUEST				
P.O. No.:	PO6312552					
Bill to:	Republic Services					
Attn:	Nick Bauer					
13570 St. Charles Rock Rd.	Bridgeton, MO 63044					

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO ₂ , H ₂
I031405 - 80	GEW 151	3/10/17	832	C	LFG	NA	X
-81	GEW 154	3/10/17	857	C	LFG	NA	X
-82	GEW 90	3/10/17	910	C	LFG	NA	X
-83	GEW 149	3/10/17	926	C	LFG	NA	X
-84	GEW 162	3/10/17	940	C	LFG	NA	X
-85	GEW 160	3/10/17	957	C	LFG	NA	X
-86	GEW 158	3/10/17	1050	C	LFG	NA	X
-87	GEW 147	3/10/17	1110	C	LFG	NA	X
3/14/17	88			C	LFG	NA	X
	87			C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	COMMENTS
SAMPLED BY: Ronald Baker	COMPANY: Republic Services	DATE/TIME
RELINQUISHED BY: Ronald Baker	DATE/TIME: 3/13/17	RECEIVED BY: DATE/TIME
RELINQUISHED BY: FedEx	DATE/TIME	RECEIVED BY: 1097 - 3/14/17 0858
RELINQUISHED BY	DATE/TIME	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



Air TECHNOLOGY
Laboratories, Inc.

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City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD								
TURNAROUND TIME			DELIVERABLES		PAGE: 1 <input checked="" type="checkbox"/> OF 1 <input checked="" type="checkbox"/>			
Project No.:	4337		Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	EDD <input checked="" type="checkbox"/>	Condition upon receipt:			
Project Name:	Bridgeton Landfill		Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>			
Report To:	Nick Bauer		24 hours <input type="checkbox"/> 96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>			
Company:	Republic Services		Other: 5DPAN-2031417	Level 4 <input type="checkbox"/>	Chilled _____ deg C			
Street:	13570 St. Charles Rock Rd.		BILLING			ANALYSIS REQUEST		
City/State/Zip:	Bridgeton, MO 63044		P.O. No.: PO6312552					
Phone & Fax:	618-420-5209		Bill to: Republic Services					
e-mail:	Nbauer@publicservices.com		Attn: Nick Bauer					
		13570 St. Charles Rock Rd.		Bridgeton, MO 63044				
LAB USE ONLY	SAMPLE IDENTIFICATION		SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2
I031405-88	G1W3		3/7/17	901	C	LFG	NA	X
-89	G1W4		3/7/17	921	C	LFG	NA	X
-90	GEW10		3/7/17	935	C	LFG	NA	X
-91	GEW110		3/7/17	948	C	LFG	NA	X
-92	G1W13		3/7/17	1007	C	LFG	NA	X
-93	G1W12		3/7/17	1020	C	LFG	NA	X
-94	GEW56R		3/7/17	1034	C	LFG	NA	X
					C	LFG	NA	X
					C	LFG	NA	X
					C	LFG	NA	X

AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services			COMMENTS		
SAMPLED BY: Anthony Kimutis COMPANY: Republic Services DATE/TIME					
RELINQUISHED BY: Ronald Baker	DATE/TIME: 3/13/17	RECEIVED BY	DATE/TIME		
RELINQUISHED BY: <i>FedEx</i>	DATE/TIME	RECEIVED BY: <i>D. P. J.</i>	DATE/TIME: 3/14/17 0858		
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME		
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other					

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

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

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 2 of 32
I031405

ASTM D1946								
Lab No.:	I031405-01	I031405-02		I031405-03		I031405-04		
Client Sample I.D.:	GEW 128		GEW 129		GEW 127		GEW 170	
Date/Time Sampled:	3/2/17 13:22		3/2/17 13:36		3/2/17 13:56		3/2/17 14:11	
Date/Time Analyzed:	3/16/17 8:53		3/16/17 9:08		3/16/17 9:22		3/16/17 9:37	
QC Batch No.:	170316GC8A1		170316GC8A1		170316GC8A1		170316GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.1		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	27	3.0	19	3.1	23	3.2	20	3.2
Carbon Dioxide	61	0.030	70	0.031	58	0.032	57	0.032
Oxygen/Argon	ND	1.5	ND	1.5	2.6	1.6	4.0	1.6
Nitrogen	5.1	3.0	4.6	3.1	12	3.2	16	3.2
Methane	5.7	0.0030	3.4	0.0031	3.9	0.0032	3.3	0.0032
Carbon Monoxide	0.30	0.0030	0.24	0.0031	0.27	0.0032	0.27	0.0032

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date 3-21-17

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: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 3 of 32
I031405

ASTM D1946

Lab No.:	I031405-05	I031405-06	I031405-07	I031405-08
Client Sample I.D.:	GEW 139	GEW 130	GEW 153	GEW 107
Date/Time Sampled:	3/2/17 14:41	3/2/17 15:48	3/3/17 8:09	3/3/17 8:24
Date/Time Analyzed:	3/16/17 9:51	3/16/17 10:06	3/16/17 10:20	3/16/17 10:35
QC Batch No.:	170316GC8A1	170316GC8A1	170316GC8A1	170316GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.1	3.0	2.8	2.8
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	34	3.1	24	3.0
Carbon Dioxide	48	0.031	36	0.030
Oxygen/Argon	2.8	1.5	8.3	1.5
Nitrogen	11	3.1	30	3.0
Methane	3.1	0.0031	1.1	0.0030
Carbon Monoxide	0.27	0.0031	0.19	0.0030
			0.043	0.0028
				0.023
				0.0028

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By:

Mark Johnson
Operations Manager

Date 3-21-17

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 4 of 32
I031405

ASTM D1946								
Lab No.:	I031405-09		I031405-10		I031405-11		I031405-12	
Client Sample I.D.:	GEW 59R		GEW 176		GEW 175		GEW 150	
Date/Time Sampled:	3/3/17 8:42		3/3/17 9:01		3/3/17 9:20		3/3/17 9:41	
Date/Time Analyzed:	3/16/17 10:50		3/16/17 11:04		3/16/17 11:19		3/16/17 11:33	
QC Batch No.:	170316GC8A1		170316GC8A1		170316GC8A1		170316GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.8		2.8		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	43	2.8	10	2.8	11	3.0	7.8	3.0
Carbon Dioxide	47	0.028	40	0.028	45	0.030	38	0.030
Oxygen/Argon	ND	1.4	6.0	1.4	4.5	1.5	5.1	1.5
Nitrogen	ND	2.8	25	2.8	23	3.0	38	3.0
Methane	6.8	0.0028	18	0.0028	16	0.0030	11	0.0030
Carbon Monoxide	0.16	0.0028	0.040	0.0028	0.051	0.0030	0.042	0.0030

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: 
Mark Johnson
Operations Manager

Date 3-21-17

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
 Attn: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 03/14/17
 Matrix: Air
 Reporting Units: % v/v

Page 5 of 32
I031405

ASTM D1946

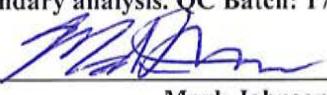
Lab No.:	I031405-13	I031405-14		I031405-15		I031405-16		
Client Sample I.D.:	GEW 57R		GEW 58		GEW 58A		GEW 156	
Date/Time Sampled:	3/3/17 10:33		3/3/17 10:46		3/3/17 10:56		3/3/17 11:12	
Date/Time Analyzed:	3/16/17 11:48		3/16/17 12:02		3/16/17 12:17		3/16/17 12:31	
QC Batch No.:	170316GC8A1		170316GC8A1		170316GC8A1		170316GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.9		3.0		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	16	2.9	13	3.0	6.7	3.0	2.0	d 0.030
Carbon Dioxide	42	0.029	40	0.030	31	0.030	32	0.030
Oxygen/Argon	1.6	1.4	2.1	1.5	2.7	1.5	5.3	1.5
Nitrogen	29	2.9	34	3.0	50	3.0	44	3.0
Methane	12	0.0029	12	0.0030	8.6	0.0030	16	0.0030
Carbon Monoxide	0.060	0.0029	0.050	0.0030	0.030	0.0030	0.0095	0.0030

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analysis. QC Batch: 170321GC8A1

Reviewed/Approved By: 

Date 3-21-17

Mark Johnson
Operations Manager

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 6 of 32
I031405

ASTM D1946

Lab No.:	I031405-17	I031405-18	I031405-19	I031405-20
Client Sample I.D.:	GEW 174	GEW 140	GEW 144	GEW 141
Date/Time Sampled:	3/3/17 11:44	3/3/17 14:08	3/3/17 14:37	3/3/17 15:01
Date/Time Analyzed:	3/16/17 12:46	3/16/17 13:01	3/16/17 13:15	3/16/17 13:30
QC Batch No.:	170316GC8A1	170316GC8A1	170316GC8A1	170316GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.0	3.0	3.0	3.0
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	20	3.0	28	3.0
Carbon Dioxide	34	0.030	38	0.030
Oxygen/Argon	6.6	1.5	6.3	1.5
Nitrogen	34	3.0	25	3.0
Methane	5.5	0.0030	3.6	0.0030
Carbon Monoxide	0.12	0.0030	0.14	0.0030

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-27-17

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
 Attn: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 03/14/17
 Matrix: Air
 Reporting Units: % v/v

Page 7 of 32
I031405

ASTM D1946								
Lab No.:	I031405-21		I031405-22		I031405-23		I031405-24	
Client Sample I.D.:	GEW 169		GEW 126		GEW 131		GEW 168	
Date/Time Sampled:	3/6/17 12:29		3/6/17 12:43		3/6/17 12:57		3/6/17 13:14	
Date/Time Analyzed:	3/16/17 15:19		3/16/17 15:33		3/16/17 15:48		3/16/17 16:03	
QC Batch No.:	170316GC8A2		170316GC8A2		170316GC8A2		170316GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.4		3.4		3.4	
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	20	3.2	6.4	3.4	22	3.4	33	3.4
Carbon Dioxide	36	0.032	51	0.034	46	0.034	53	0.034
Oxygen/Argon	9.0	1.6	ND	1.7	ND	1.7	2.2	1.7
Nitrogen	32	3.2	18	3.4	11	3.4	7.5	3.4
Methane	2.1	0.0032	23	0.0034	19	0.0034	3.4	0.0034
Carbon Monoxide	0.17	0.0032	0.046	0.0034	0.12	0.0034	0.26	0.0034

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date 3-21-17

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Air TECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Nick Bauer
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 8 of 32
I031405

ASTM D1946								
Lab No.:	I031405-25		I031405-26		I031405-27		I031405-28	
Client Sample I.D.:	GEW 125		GEW 165		GEW 166		GEW 167	
Date/Time Sampled:	3/6/17 13:27		3/6/17 13:42		3/6/17 13:55		3/6/17 14:11	
Date/Time Analyzed:	3/16/17 16:17		3/16/17 16:32		3/16/17 16:46		3/16/17 17:01	
QC Batch No.:	170316GC8A2		170316GC8A2		170316GC8A2		170316GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.4		3.4		3.4		3.4	
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	37	3.4	29	3.4	38	3.4	34	3.4
Carbon Dioxide	56	0.034	62	0.034	54	0.034	46	0.034
Oxygen/Argon	ND	1.7	ND	1.7	1.7	1.7	3.5	1.7
Nitrogen	ND	3.4	ND	3.4	5.7	3.4	14	3.4
Methane	3.4	0.0034	5.6	0.0034	0.32	0.0034	1.5	0.0034
Carbon Monoxide	0.25	0.0034	0.24	0.0034	0.32	0.0034	0.24	0.0034

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: 

Mark Johnson
Operations Manager

Date 3-21-17

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: 03/14/17
Matrix: Air
Reporting Units: % v/v

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I031405

ASTM D1946								
Lab No.:	I031405-29		I031405-30		I031405-31		I031405-32	
Client Sample I.D.:	GEW 122		GIW 1		GIW 2		GIW 11	
Date/Time Sampled:	3/6/17 15:30		3/7/17 8:44		3/7/17 8:56		3/7/17 10:46	
Date/Time Analyzed:	3/16/17 17:15		3/16/17 17:30		3/16/17 17:44		3/16/17 17:59	
QC Batch No.:	170316GC8A2		170316GC8A2		170316GC8A2		170316GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.4		3.2		3.1		3.2	
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	41	3.4	10	3.2	9.1	3.1	26	3.2
Carbon Dioxide	56	0.034	58	0.032	32	0.031	56	0.032
Oxygen/Argon	ND	1.7	3.6	1.6	9.9	1.5	ND	1.6
Nitrogen	ND	3.4	16	3.2	44	3.1	11	3.2
Methane	0.32	0.0034	12	0.0032	4.7	0.0031	5.3	0.0032
Carbon Monoxide	0.28	0.0034	0.072	0.0032	0.046	0.0031	0.14	0.0032

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
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 Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-33	I031405-34		I031405-35		I031405-36		
Client Sample I.D.:	GIW 10	GIW 5		GEW 39		GEW 109		
Date/Time Sampled:	3/7/17 10:59	3/7/17 11:12		3/7/17 11:24		3/7/17 11:34		
Date/Time Analyzed:	3/16/17 18:14	3/16/17 18:28		3/16/17 18:43		3/16/17 18:57		
QC Batch No.:	170316GC8A2	170316GC8A2		170316GC8A2		170316GC8A2		
Analyst Initials:	AS	AS		AS		AS		
Dilution Factor:	3.2	3.2		3.0		3.2		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	40	3.2	0.038 d	0.032	0.037 d	0.030	16	3.2
Carbon Dioxide	51	0.032	1.6	0.032	53	0.030	47	0.032
Oxygen/Argon	ND	1.6	22	1.6	ND	1.5	ND	1.6
Nitrogen	ND	3.2	77	3.2	ND	3.0	9.1	3.2
Methane	6.4	0.0032	0.068	0.0032	44	0.0030	27	0.0032
Carbon Monoxide	0.13	0.0032	ND	0.0032	ND	0.0030	0.051	0.0032

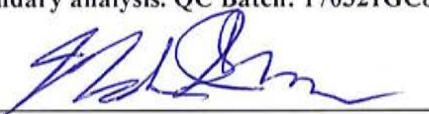
Results normalized including non-methane hydrocarbons

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AirTECHNOLOGY Laboratories, Inc.

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Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-37	I031405-38	I031405-39	I031405-40
Client Sample I.D.:	GIW 6	GIW 7	GIW 8	GEW 38
Date/Time Sampled:	3/7/17 12:59	3/7/17 13:18	3/7/17 13:30	3/7/17 13:38
Date/Time Analyzed:	3/16/17 19:12	3/16/17 19:26	3/16/17 19:41	3/16/17 19:55
QC Batch No.:	170316GC8A2	170316GC8A2	170316GC8A2	170316GC8A2
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.0	3.2	3.2	3.2
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	18	3.0	8.4	3.2
Carbon Dioxide	39	0.030	49	0.032
Oxygen/Argon	4.2	1.5	1.8	1.6
Nitrogen	14	3.0	5.9	3.2
Methane	24	0.0030	35	0.0032
Carbon Monoxide	0.048	0.0030	0.054	0.0032

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page 1 of 1

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Project No.: NA
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Reporting Units: % v/v

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I031405

ASTM D1946								
Lab No.:	I031405-41		I031405-42		I031405-43		I031405-44	
Client Sample I.D.:	GIW 9		GEW 164		GEW 163		GEW 123	
Date/Time Sampled:	3/7/17 13:47		3/7/17 14:09		3/7/17 14:24		3/7/17 14:39	
Date/Time Analyzed:	3/17/17 14:22		3/17/17 14:36		3/17/17 14:51		3/17/17 15:05	
QC Batch No.:	170317GC8A1		170317GC8A1		170317GC8A1		170317GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	5.4	3.2	8.6	3.2	9.3	3.2	36	3.2
Carbon Dioxide	25	0.032	41	0.032	30	0.032	60	0.032
Oxygen/Argon	7.0	1.6	7.1	1.6	8.8	1.6	ND	1.6
Nitrogen	56	3.2	32	3.2	46	3.2	ND	3.2
Methane	6.2	0.0032	10	0.0032	4.8	0.0032	0.44	0.0032
Carbon Monoxide	0.032	0.0032	0.066	0.0032	0.059	0.0032	0.31	0.0032

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Client: Republic Services
 Attn: Nick Bauer
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 Project No.: NA
 Date Received: 03/14/17
 Matrix: Air
 Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-45	I031405-46		I031405-47		I031405-48			
Client Sample I.D.:	GEW 49		GEW 51		GEW 52		GEW 7		
Date/Time Sampled:	3/8/17 7:58		3/8/17 10:17		3/8/17 10:29		3/8/17 10:43		
Date/Time Analyzed:	3/17/17 15:35		3/17/17 15:50		3/17/17 16:04		3/17/17 16:19		
QC Batch No.:	170317GC8A1		170317GC8A1		170317GC8A1		170317GC8A1		
Analyst Initials:	AS		AS		AS		AS		
Dilution Factor:	3.1		3.2		3.2		3.2		
ANALYTE	Result % v/v	RL % v/v							
Hydrogen	ND	d	0.031	0.93	d	0.032	ND	d	0.032
Carbon Dioxide	31		0.031	38		0.032	28		0.032
Oxygen/Argon	ND		1.5	ND		1.6	1.9		1.6
Nitrogen	31		3.1	10		3.2	35		3.2
Methane	37		0.0031	49		0.0032	34		0.0032
Carbon Monoxide	ND		0.0031	ND		0.0032	ND		0.0032

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 Attn: Nick Bauer
 Project Name: Bridgeton Landfill
 Project No.: NA
 Date Received: 03/14/17
 Matrix: Air
 Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-49	I031405-50	I031405-51	I031405-52
Client Sample I.D.:	GEW 8	GEW 9	GEW 53	GEW 54
Date/Time Sampled:	3/8/17 10:54	3/8/17 11:04	3/8/17 11:37	3/8/17 11:46
Date/Time Analyzed:	3/17/17 16:34	3/17/17 16:48	3/17/17 17:03	3/17/17 17:17
QC Batch No.:	170317GC8A1	170317GC8A1	170317GC8A1	170317GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.3	3.2	3.3	3.3
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	0.98 d	0.033	0.48 d	0.032
Carbon Dioxide	43	0.033	41	0.032
Oxygen/Argon	ND	1.6	ND	1.6
Nitrogen	ND	3.3	8.4	3.2
Methane	54	0.0033	49	0.0032
Carbon Monoxide	ND	0.0033	ND	0.0032
			0.011	0.0033
			0.0034	0.0033

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Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-53	I031405-54	I031405-55	I031405-56
Client Sample I.D.:	GEW 55	GEW 40	GEW 41R	GEW 42R
Date/Time Sampled:	3/8/17 13:08	3/8/17 13:18	3/8/17 13:43	3/8/17 14:20
Date/Time Analyzed:	3/17/17 17:32	3/20/17 10:12	3/20/17 10:26	3/20/17 10:41
QC Batch No.:	170317GC8A1	170320GC8A1	170320GC8A1	170320GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.4	3.2	3.4	3.4
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	1.4	d	0.034	ND
Carbon Dioxide	40		0.034	41
Oxygen/Argon	1.9		1.7	ND
Nitrogen	6.3		3.4	ND
Methane	51		0.0034	57
Carbon Monoxide	ND		0.0034	ND

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Client: Republic Services
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Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-57	I031405-58	I031405-59	I031405-61
Client Sample I.D.:	GEW 43R	GEW 44	GEW 45R	GEW 2
Date/Time Sampled:	3/8/17 14:31	3/8/17 14:40	3/8/17 14:53	3/9/17 8:12
Date/Time Analyzed:	3/20/17 10:56	3/20/17 11:10	3/20/17 11:25	3/20/17 11:39
QC Batch No.:	170320GC8A1	170320GC8A1	170320GC8A1	170320GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.4	3.4	3.4	3.4
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	0.11 d	0.034	ND d	0.034
Carbon Dioxide	42	0.034	37	0.034
Oxygen/Argon	ND	1.7	ND	1.7
Nitrogen	ND	3.4	11	3.4
Methane	55	0.0034	51	0.0034
Carbon Monoxide	ND	0.0034	ND	0.0034

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Project No.: NA
Date Received: 03/14/17
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Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-62	I031405-63	I031405-64	I031405-65
Client Sample I.D.:	GEW 2S	GEW 3	GEW 4	GEW 47R
Date/Time Sampled:	3/9/17 7:57	3/9/17 8:24	3/9/17 8:35	3/9/17 8:57
Date/Time Analyzed:	3/20/17 11:54	3/20/17 12:08	3/20/17 12:23	3/20/17 12:37
QC Batch No.:	170320GC8A1	170320GC8A1	170320GC8A1	170320GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.3	3.2	3.2	3.4
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.033	0.085 d	0.032
Carbon Dioxide	38	0.033	39	0.032
Oxygen/Argon	ND	1.6	ND	1.6
Nitrogen	ND	3.3	11	3.2
Methane	59	0.0033	49	0.0032
Carbon Monoxide	ND	0.0033	ND	0.0032

Results normalized including non-methane hydrocarbons

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Client: Republic Services
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Project No.: NA
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Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	I031405-66	I031405-67	I031405-68	I031405-69
Client Sample I.D.:	GEW 5	GEW 48	GEW 6	GEW 50
Date/Time Sampled:	3/9/17 9:20	3/9/17 9:34	3/9/17 9:46	3/9/17 10:05
Date/Time Analyzed:	3/20/17 12:52	3/20/17 13:07	3/20/17 13:21	3/20/17 13:36
QC Batch No.:	170320GC8A1	170320GC8A1	170320GC8A1	170320GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.3	3.4	3.4	3.4
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.033	ND d	0.034
Carbon Dioxide	29	0.033	38	0.034
Oxygen/Argon	2.9	1.6	ND	1.7
Nitrogen	34	3.3	11	3.4
Methane	34	0.0033	50	0.0034
Carbon Monoxide	ND	0.0033	ND	0.0034
			ND	ND

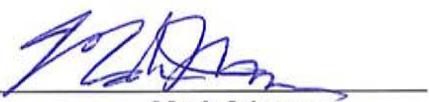
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**AirTECHNOLOGY Laboratories, Inc.**

page 1 of 1

Client: Republic Services
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Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-70	I031405-71	I031405-72	I031405-73
Client Sample I.D.:	GEW 121	GEW 132	GEW 118	GEW 120
Date/Time Sampled:	3/9/17 10:23	3/9/17 10:48	3/9/17 11:07	3/9/17 11:32
Date/Time Analyzed:	3/20/17 13:50	3/20/17 14:05	3/20/17 14:19	3/20/17 14:34
QC Batch No.:	170320GC8A1	170320GC8A1	170320GC8A1	170320GC8A1
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.4	3.4	3.4	3.4
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	25	3.4	26	3.4
Carbon Dioxide	56	0.034	46	0.034
Oxygen/Argon	ND	1.7	2.1	1.7
Nitrogen	7.7	3.4	18	3.4
Methane	10	0.0034	7.5	0.0034
Carbon Monoxide	0.12	0.0034	0.13	0.0034
			0.15	0.0034
			0.0043	0.0034

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Project No.: NA
Date Received: 03/14/17
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Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-74	I031405-75	I031405-76	I031405-77
Client Sample I.D.:	GEW 117	GEW 133	GEW 135	GEW 137
Date/Time Sampled:	3/9/17 11:44	3/9/17 13:29	3/9/17 13:58	3/9/17 14:51
Date/Time Analyzed:	3/20/17 14:49	3/20/17 16:40	3/20/17 17:09	3/20/17 16:55
QC Batch No.:	170320GC8A1	170320GC8A2	170320GC8A2	170320GC8A2
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.4	3.5	3.4	3.4
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	25	3.4	41	3.5
Carbon Dioxide	65	0.034	55	0.035
Oxygen/Argon	ND	1.7	ND	1.7
Nitrogen	ND	3.4	ND	3.5
Methane	7.0	0.0034	0.98	0.0035
Carbon Monoxide	0.16	0.0034	0.16	0.0035

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Client: Republic Services
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Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

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I031405

ASTM D1946

Lab No.:	I031405-78	I031405-79	I031405-80	I031405-81
Client Sample I.D.:	GEW 82R	GEW 86	GEW 151	GEW 154
Date/Time Sampled:	3/10/17 8:00	3/10/17 8:16	3/10/17 8:32	3/10/17 8:57
Date/Time Analyzed:	3/20/17 17:24	3/20/17 17:38	3/20/17 17:53	3/20/17 18:08
QC Batch No.:	170320GC8A2	170320GC8A2	170320GC8A2	170320GC8A2
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	2.8	2.9	3.0	3.0
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	38	2.8	36	2.9
Carbon Dioxide	47	0.028	55	0.029
Oxygen/Argon	1.7	1.4	ND	1.4
Nitrogen	5.8	2.8	3.1	2.9
Methane	7.2	0.0028	4.2	0.0029
Carbon Monoxide	0.15	0.0028	0.096	0.0029
			0.090	0.0030
				0.070
				0.0030

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Client: Republic Services
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Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 03/14/17
Matrix: Air
Reporting Units: % v/v

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I031405

ASTM D1946								
Lab No.:	I031405-82		I031405-83		I031405-84		I031405-85	
Client Sample I.D.:	GEW 90		GEW 149		GEW 162		GEW 160	
Date/Time Sampled:	3/10/17 9:10		3/10/17 9:26		3/10/17 9:40		3/10/17 9:57	
Date/Time Analyzed:	3/20/17 18:22		3/20/17 18:37		3/20/17 18:51		3/20/17 19:06	
QC Batch No.:	170320GC8A2		170320GC8A2		170320GC8A2		170320GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.0		3.0		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	39	3.0	13	3.0	13	3.0	32	3.0
Carbon Dioxide	44	0.030	43	0.030	31	0.030	52	0.030
Oxygen/Argon	ND	1.5	3.4	1.5	11	1.5	ND	1.5
Nitrogen	3.6	3.0	30	3.0	38	3.0	3.6	3.0
Methane	12	0.0030	11	0.0030	6.8	0.0030	11	0.0030
Carbon Monoxide	0.16	0.0030	0.058	0.0030	0.069	0.0030	0.20	0.0030

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-21-17

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: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 23 of 32
I031405

ASTM D1946

Lab No.:	I031405-86	I031405-87	I031405-88	I031405-89
Client Sample I.D.:	GEW 158	GEW 147	GIW 3	GIW 4
Date/Time Sampled:	3/10/17 10:50	3/7/17 11:10	3/7/17 9:07	3/7/17 9:21
Date/Time Analyzed:	3/20/17 19:20	3/20/17 19:35	3/20/17 19:50	3/20/17 20:04
QC Batch No.:	170320GC8A2	170320GC8A2	170320GC8A2	170320GC8A2
Analyst Initials:	AS	AS	AS	AS
Dilution Factor:	3.0	3.0	3.2	3.2
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	11	3.0	22	3.0
Carbon Dioxide	33	0.030	46	0.030
Oxygen/Argon	4.4	1.5	ND	1.5
Nitrogen	25	3.0	18	3.0
Methane	26	0.0030	13	0.0030
Carbon Monoxide	0.049	0.0030	0.092	0.0030

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date 3-21-17

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: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 24 of 32
I031405

ASTM D1946

Lab No.:	I031405-90	I031405-91	I031405-92	I031405-93
Client Sample I.D.:	GEW 10	GEW 110	GIW 13	GIW 12
Date/Time Sampled:	3/7/17 9:35	3/7/17 9:48	3/7/17 10:07	3/7/17 10:20
Date/Time Analyzed:	3/21/17 6:24	3/21/17 6:39	3/21/17 6:54	3/21/17 7:08
QC Batch No.:	170320GC8A2	170320GC8A2	170320GC8A2	170320GC8A2
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
Hydrogen	0.050	d	0.032	11
Carbon Dioxide	45	0.032	35	0.032
Oxygen/Argon	1.8	1.6	6.7	1.6
Nitrogen	6.0	3.2	35	3.2
Methane	47	0.0032	12	0.0032
Carbon Monoxide	ND	0.0032	0.057	0.0032

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analysis. QC Batch: 170321GC8A2

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-21-17

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: 03/14/17
Matrix: Air
Reporting Units: % v/v

Page 25 of 32
I031405

ASTM D1946						
Lab No.:	I031405-94					
Client Sample I.D.:	GEW 56R					
Date/Time Sampled:	3/7/17 10:34					
Date/Time Analyzed:	3/21/17 7:23					
QC Batch No.:	170320GC8A2					
Analyst Initials:	AS					
Dilution Factor:	3.2					
ANALYTE	Result % v/v	RL % v/v				
Hydrogen	27	3.2				
Carbon Dioxide	51	0.032				
Oxygen/Argon	ND	1.6				
Nitrogen	5.2	3.2				
Methane	16	0.0032				
Carbon Monoxide	0.097	0.0032				

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-21-17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No: 170316GC8A1

Matrix: Air

Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS		LCSD						
Date Analyzed:	3/16/17 8:29		3/15/17 19:23		3/15/17 19:38						
Analyst Initials:	AS		AS		AS						
Dilution Factor:	1.0		1.0		1.0						
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	4.76	95	4.90	98	3.0	70	130	30
Carbon Dioxide	ND	0.010	10	8.75	87	8.89	89	1.5	70	130	30
Oxygen/Argon	ND	0.50	15	15.5	104	15.6	105	0.8	70	130	30
Nitrogen	ND	1.0	70	69.3	99	69.6	99	0.3	70	130	30
Methane	ND	0.0010	0.10	0.106	106	0.106	106	0.0	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.105	105	0.106	106	0.2	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-21-17

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: 170316GC8A2

Matrix: Air

Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS		LCSD						
Date Analyzed:	3/16/17 14:35		3/16/17 14:50		3/16/17 15:04						
Analyst Initials:	AS		AS		AS						
Dilution Factor:	1.0		1.0		1.0						
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	4.72	94	4.54	91	3.8	70	130	30
Carbon Dioxide	ND	0.010	10	8.92	89	8.55	85	4.2	70	130	30
Oxygen/Argon	ND	0.50	15	15.7	106	15.4	104	2.2	70	130	30
Nitrogen	ND	1.0	70	69.8	100	68.8	98	1.4	70	130	30
Methane	ND	0.0010	0.10	0.106	106	0.106	106	0.2	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.106	106	0.106	106	0.3	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-21-17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

QC Batch No: 170317GC8A1

Matrix: Air

Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS		LCSD									
Date Analyzed:	3/17/17 10:13		3/17/17 9:13		3/17/17 9:28									
Analyst Initials:	AS		AS		AS									
Dilution Factor:	1.0		1.0		1.0									
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD			
Hydrogen	ND	1.0	5.0	4.33	87	4.38	88	1.2	70	130	30			
Carbon Dioxide	ND	0.010	10	8.40	84	8.42	84	0.3	70	130	30			
Oxygen/Argon	ND	0.50	15	15.5	105	15.5	105	0.0	70	130	30			
Nitrogen	ND	1.0	70	69.1	99	69.2	99	0.1	70	130	30			
Methane	ND	0.0010	0.10	0.107	107	0.106	106	0.5	70	130	30			
Carbon Monoxide	ND	0.0010	0.10	0.106	106	0.105	105	0.6	70	130	30			

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Date 3-21-17

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

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

QC Batch No: 170320GC8A1

Matrix: Air

Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS		LCSD						
Date Analyzed:	3/20/17 9:54		3/20/17 9:11		3/20/17 9:25						
Analyst Initials:	AS		AS		AS						
Dilution Factor:	1.0		1.0		1.0						
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	6.03	121	6.13	123	1.7	70	130	30
Carbon Dioxide	ND	0.010	10	9.83	98	9.92	99	0.9	70	130	30
Oxygen/Argon	ND	0.50	15	15.3	103	15.1	102	1.1	70	130	30
Nitrogen	ND	1.0	70	69.2	99	68.1	97	1.6	70	130	30
Methane	ND	0.0010	0.10	0.108	108	0.107	107	0.4	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.105	105	0.105	105	0.3	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-21-17

The cover letter is an integral part of this analytical report



Air**TECHNOLOGY** Laboratories, Inc.

QC Batch No: 170320GC8A2

Matrix: Air

Reporting Units: % v/v

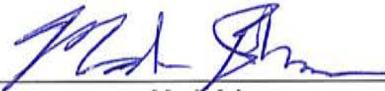
ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS		LCSD									
Date Analyzed:	3/20/17 15:57		3/20/17 16:11		3/20/17 16:26									
Analyst Initials:	AS		AS		AS									
Dilution Factor:	1.0		1.0		1.0									
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD			
Hydrogen	ND	1.0	5.0	5.78	116	5.52	110	4.6	70	130	30			
Carbon Dioxide	ND	0.010	10	9.55	95	9.14	91	4.4	70	130	30			
Oxygen/Argon	ND	0.50	15	15.0	101	14.3	97	4.4	70	130	30			
Nitrogen	ND	1.0	70	68.0	97	65.0	93	4.6	70	130	30			
Methane	ND	0.0010	0.10	0.103	103	0.101	101	1.9	70	130	30			
Carbon Monoxide	ND	0.0010	0.10	0.103	103	0.101	101	2.3	70	130	30			

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:



Mark Johnson
Operations Manager

Date 3-21-17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

QC Batch # 170321GC8A1
 Matrix: Air
 Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	3/21/2017 8:59		3/21/2017 8:50		3/21/2017 8:54			
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	90	70-130	95	70-130	4.5	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date: 3-21-17

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



AirTECHNOLOGY Laboratories, Inc.

QC Batch #: 170321GC8A2
Matrix: Air
Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	3/21/2017 11:11		3/21/2017 11:01		3/21/2017 11:06			
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	95	70-130	91	70-130	4.2	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By:

Date: 3.21-17

Mark Johnson
Operations Manager

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



AirTECHNOLOGY Laboratories, Inc.

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

March 21, 2017

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: I031603-01/03

Enclosed are results for sample(s) received 3/16/17 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 and Mike Lambrich; David Randall, Dustin Thoenen and Don Murphy, Weaver Consultants Group, on 3/21/17.

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

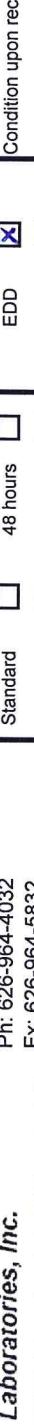
Note: The cover letter is an integral part of this analytical report.



TECHNOLOGY

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

CHAIN OF CUSTODY RECORD

 <p>AATI TECHNOLOGY Laboratories, Inc.</p> <p>1005 E. San Ave., Suite 130 City of Industry, CA 91748 Ph: 626-964-4032 Fx: 626-964-5932</p>		Project No.: 4337 Project Name: Bridgeton Landfill Report To: Nick Bauer		TURNAROUND TIME <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Standard</td> <td><input type="checkbox"/></td> <td>48 hours</td> <td><input type="checkbox"/></td> <td>EDD</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Same Day</td> <td><input type="checkbox"/></td> <td>72 hours</td> <td><input checked="" type="checkbox"/></td> <td>EDF</td> <td><input type="checkbox"/></td> </tr> <tr> <td>24 hours</td> <td><input type="checkbox"/></td> <td>96 hours</td> <td><input type="checkbox"/></td> <td>Level 3</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Other:</td> <td></td> <td></td> <td></td> <td>Level 4</td> <td><input type="checkbox"/></td> </tr> </table>		Standard	<input type="checkbox"/>	48 hours	<input type="checkbox"/>	EDD	<input checked="" type="checkbox"/>	Same Day	<input type="checkbox"/>	72 hours	<input checked="" type="checkbox"/>	EDF	<input type="checkbox"/>	24 hours	<input type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>	Other:				Level 4	<input type="checkbox"/>	DELIVERABLES <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>BILLING</td> <td colspan="5">ANALYSIS REQUEST</td> </tr> <tr> <td>P.O. No.: PO6312552</td> <td colspan="5"></td> </tr> <tr> <td>Bill to: Bridgeton Landfill</td> <td colspan="5"></td> </tr> <tr> <td>Attn: Nick Bauer</td> <td colspan="5"></td> </tr> <tr> <td>13570 St. Charles Rock Rd.</td> <td colspan="5"></td> </tr> <tr> <td>Bridgeton, MO 63044</td> <td colspan="5"></td> </tr> <tr> <td>618-420-5209</td> <td colspan="5"></td> </tr> <tr> <td>nbauer@republicanservices.com</td> <td colspan="5"></td> </tr> </table>		BILLING	ANALYSIS REQUEST					P.O. No.: PO6312552						Bill to: Bridgeton Landfill						Attn: Nick Bauer						13570 St. Charles Rock Rd.						Bridgeton, MO 63044						618-420-5209						nbauer@republicanservices.com					
Standard	<input type="checkbox"/>	48 hours	<input type="checkbox"/>	EDD	<input checked="" type="checkbox"/>																																																																										
Same Day	<input type="checkbox"/>	72 hours	<input checked="" type="checkbox"/>	EDF	<input type="checkbox"/>																																																																										
24 hours	<input type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>																																																																										
Other:				Level 4	<input type="checkbox"/>																																																																										
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						Condition upon receipt: <input type="checkbox"/> Sealed Yes <input type="checkbox"/> No <input type="checkbox"/> Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Chilled _____ deg C																																																																									

NOTIFICATION OF AUTHORIZATION TO PERFORM WORK		METHOD OF TRANSPORT (circle one):		METHOD OF TRANSPORT (circle one):	
RELINQUISHED BY	RELINQUISHED BY	COMPANY	COMPANY	Walk-In	FedEx
Ronald Baker	Ronald Baker	Bridgeton Landfill		UPS	Courier
<i>Ronald Baker</i>	<i>Ronald Baker</i>	<i>3/15/2017</i>	<i>3/15/2017</i>	<i>3/15/2017</i>	<i>3/15/2017</i>
RELINQUISHED BY <i>FED EX</i>	RELINQUISHED BY <i>FED EX</i>	RECEIVED BY <i>DJK</i>	RECEIVED BY <i>DJK</i>	RECEIVED BY <i>DJK</i>	RECEIVED BY <i>DJK</i>
RELINQUISHED BY	RELINQUISHED BY	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
		<i>3/15/2017</i>	<i>3/15/2017</i>	<i>3/15/2017</i>	<i>3/15/2017</i>
COMMENTS					

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy **Preservation:** H=HC | 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.: 4337
Date Received: 03/16/17
Matrix: Air
Reporting Units: % v/v

Page 2 of 4
I031603

ASTM D1946

Lab No.:	I031603-01	I031603-02	I031603-03					
Client Sample I.D.:	GEW-136	GEW-134	GEW-46R					
Date/Time Sampled:	3/15/17 8:13	3/15/17 8:49	3/15/17 13:27					
Date/Time Analyzed:	3/17/17 13:37	3/17/17 13:52	3/17/17 14:06					
QC Batch No.:	170317GC8A1	170317GC8A1	170317GC8A1					
Analyst Initials:	AS	AS	AS					
Dilution Factor:	2.8	2.8	2.9					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v		
Hydrogen	10.0	2.8	18	2.8	0.080	d	0.029	
Carbon Dioxide	19	0.028	47	0.028	39		0.029	
Oxygen/Argon	13	1.4	2.1	1.4	ND		1.4	
Nitrogen	55	2.8	18	2.8	9.9		2.9	
Methane	3.4	0.0028	15	0.0028	51		0.0029	
Carbon Monoxide	0.032	0.0028	0.090	0.0028	ND		0.0029	

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Reported from a secondary analysis. QC Batch: 170321GC8A1

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date 3-21-17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No: 170317GC8A1
Matrix: Air
Reporting Units: % v/v

Page 3 of 4
I031603

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS		LCSD						
Date Analyzed:	3/17/17 10:13		3/17/17 9:13		3/17/17 9:28						
Analyst Initials:	AS		AS		AS						
Dilution Factor:	1.0		1.0		1.0						
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	4.33	87	4.38	88	1.2	70	130	30
Carbon Dioxide	ND	0.010	10	8.40	84	8.42	84	0.3	70	130	30
Oxygen/Argon	ND	0.50	15	15.5	105	15.5	105	0.0	70	130	30
Nitrogen	ND	1.0	70	69.1	99	69.2	99	0.1	70	130	30
Methane	ND	0.0010	0.10	0.107	107	0.106	106	0.5	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.106	106	0.105	105	0.6	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: Mark Johnson
Mark Johnson
Operations Manager

Date 3-21-17

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

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QC Batch # 170321GC8A1
Matrix: Air
Units: % v/v

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I031603

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	3/21/2017 8:59		3/21/2017 8:50		3/21/2017 8:54			
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	90	70-130	95	70-130	4.5	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By:

Mark Johnson
Operations Manager

Date: 3-21-17

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



ATTACHMENT E

GAS WELLFIELD DATA

ATTACHMENT E-1

WELLFIELD DATA TABLE

March 2017 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	3/9/2017 8:07	55.7	41.4	0.0	2.9	109.2	108.5	17	17	-0.1	-0.1	-13.3
GEW-002	3/9/2017 8:14	57.3	41.0	0.0	1.7	110.2	110.4	0	0	-0.1	-0.1	-13.2
GEW-002	3/16/2017 9:26	56.4	41.6	0.0	2.0	108.8	108.7	5	0	0.1	0.1	-14.8
GEW-002	3/16/2017 9:28	56.1	41.9	0.0	2.0	105.7	105.2	17	18	-0.1	0.0	-14.8
GEW-002	3/20/2017 13:23	55.8	40.7	0.0	3.5	112.0	111.7	38	39	-0.6	-0.7	-13.0
GEW-002	3/28/2017 15:53	56.0	42.2	0.0	1.8	109.9	109.7	14	15	-0.4	-0.4	-13.4
GEW-003	3/9/2017 8:20	50.4	38.4	0.0	11.2	113.5	113.5	10	12	-0.7	-0.8	-13.3
GEW-003	3/9/2017 8:26	50.2	38.3	0.0	11.5	113.2	113.5	31	31	-0.7	-0.7	-12.8
GEW-003	3/9/2017 8:43	50.0	38.5	0.0	11.5	113.7	113.5	13	18	-0.7	-0.7	-13.0
GEW-003	3/16/2017 9:32	51.1	39.3	0.0	9.6	112.6	112.7	27	28	-0.4	-0.4	-14.8
GEW-003	3/16/2017 9:34	51.3	38.6	0.0	10.1	112.4	112.2	16	16	-0.4	-0.4	-14.7
GEW-003	3/20/2017 13:26	51.2	39.6	0.0	9.2	114.2	114.1	12	13	-0.2	-0.2	-12.9
GEW-003	3/28/2017 15:39	46.6	36.9	0.0	16.5	115.0	115.0	70	72	-5.2	-5.2	-12.2
GEW-003	3/28/2017 15:40	47.2	38.6	0.0	14.2	111.0	110.7	4	7	-2.8	-2.8	-13.7
GEW-004	3/9/2017 8:30	48.3	36.6	0.0	15.1	118.2	117.9	12	12	-0.7	-0.7	-13.3
GEW-004	3/9/2017 8:37	47.9	38.5	0.0	13.6	118.3	118.1	31	31	-0.6	-0.6	-13.1
GEW-004	3/16/2017 9:39	49.1	38.1	0.0	12.8	116.6	116.4	15	14	-0.4	-0.4	-14.8
GEW-004	3/16/2017 9:41	48.8	38.7	0.0	12.5	115.8	115.0	13	8	-0.4	-0.4	-14.8
GEW-004	3/20/2017 13:30	50.0	38.8	0.0	11.2	118.4	118.6	12	9	-0.1	-0.1	-12.9
GEW-004	3/28/2017 15:59	34.7	33.9	0.0	31.4	117.1	117.3	13	15	-1.4	-1.4	-13.5
GEW-004	3/28/2017 16:05	35.0	32.6	0.0	32.4	110.2	107.8	0	0	-1.1	-1.1	-13.8
GEW-005	3/9/2017 9:16	37.8	32.0	0.0	30.2	89.8	89.8	0	0	-0.3	-0.3	-12.9
GEW-005	3/9/2017 9:22	38.3	31.6	0.0	30.1	87.2	87.1	34	34	-0.2	-0.2	-12.9
GEW-005	3/16/2017 9:56	41.7	35.1	0.0	23.2	78.5	77.9	0	0	-0.1	-0.1	-14.8
GEW-005	3/20/2017 13:44	46.6	36.9	0.0	16.5	86.5	86.6	12	11	0.2	0.2	-12.7
GEW-005	3/20/2017 13:46	46.4	37.1	0.0	16.5	86.6	86.6	0	0	0.2	0.2	-12.7
GEW-005	3/28/2017 16:15	24.0	29.9	0.0	46.1	77.8	77.9	34	34	-0.1	-0.1	-13.4
GEW-005	3/28/2017 16:17	24.2	29.8	0.0	46.0	73.7	77.1	35	35	-0.1	-0.1	-13.5
GEW-006	3/9/2017 9:41	44.1	34.0	0.0	21.9	87.0	87.2	20	26	-0.5	-0.5	-12.4
GEW-006	3/9/2017 9:48	45.3	34.0	0.0	20.7	87.2	87.0	22	23	-0.4	-0.4	-12.6
GEW-006	3/16/2017 10:08	44.5	34.8	0.0	20.7	85.6	85.6	15	15	-0.4	-0.4	-14.4
GEW-006	3/16/2017 10:10	45.0	34.8	0.0	20.2	84.0	84.0	17	18	-0.3	-0.3	-14.6
GEW-006	3/20/2017 13:55	50.1	37.6	0.0	12.3	91.3	91.2	10	10	0.1	0.1	-13.0
GEW-006	3/20/2017 13:57	50.4	37.2	0.0	12.4	91.7	91.7	13	11	0.1	0.1	-12.7
GEW-006	3/28/2017 16:21	50.1	36.1	0.0	13.8	88.3	88.2	0	0	-0.3	-0.3	-13.2
GEW-007	3/8/2017 10:38	57.8	39.9	0.0	2.3	88.6	88.4	7	5	-1.4	-1.4	-13.5
GEW-007	3/8/2017 10:45	58.5	39.4	0.0	2.1	86.5	86.3	7	6	-0.2	-0.2	-12.2
GEW-007	3/16/2017 7:48	59.0	39.2	0.0	1.8	65.2	65.4	7	7	0.9	0.9	-15.1
GEW-007	3/16/2017 7:52	57.8	39.9	0.0	2.3	70.9	70.9	21	20	0.0	0.0	-15.2
GEW-007	3/20/2017 14:47	55.8	41.2	0.0	3.0	91.8	91.9	22	19	0.4	0.4	-12.9
GEW-007	3/20/2017 14:50	56.4	40.7	0.0	2.9	93.0	93.2	9	9	-0.4	-0.4	-12.7
GEW-007	3/28/2017 14:50	59.1	38.4	0.0	2.5	89.8	89.8	9	9	-1.5	-1.5	-13.1
GEW-007	3/28/2017 14:52	58.0	40.2	0.0	1.8	89.6	89.6	8	8	-1.5	-1.5	-13.1

March 2017 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-008	3/8/2017 10:49	53.7	41.2	0.0	5.1	110.0	110.2	11	10	-0.6	-0.5	-13.3
GEW-008	3/8/2017 10:55	53.8	43.0	0.0	3.2	110.5	110.7	12	12	-0.5	-0.5	-13.0
GEW-008	3/16/2017 7:57	54.0	41.6	0.0	4.4	107.7	108.0	13	13	-0.6	-0.6	-14.8
GEW-008	3/20/2017 14:43	53.0	42.5	0.0	4.5	112.7	112.7	18	18	-0.2	-0.2	-12.8
GEW-008	3/28/2017 14:53	53.7	40.7	0.0	5.6	111.0	110.5	15	7	-0.3	-0.4	-13.1
GEW-009	3/8/2017 10:59	48.9	40.5	0.0	10.6	121.6	121.1	8	4	-0.2	-0.2	-13.1
GEW-009	3/8/2017 11:05	49.7	41.0	0.0	9.3	120.5	120.5	40	40	-0.3	-0.3	-13.0
GEW-009	3/16/2017 8:02	50.1	40.5	0.0	9.4	119.7	120.5	25	22	-0.2	-0.2	-15.1
GEW-009	3/20/2017 14:39	51.6	39.9	0.0	8.5	124.2	124.0	13	11	-0.1	-0.1	-12.9
GEW-009	3/28/2017 14:58	51.0	40.7	0.0	8.3	120.5	119.9	11	12	-0.2	-0.2	-13.3
GEW-010	3/7/2017 9:30	51.4	44.1	0.5	4.0	56.5	56.5	7	6	-3.8	-3.8	-17.9
GEW-010	3/7/2017 9:39	50.8	44.3	0.5	4.4	55.7	55.7	5	5	-3.1	-3.1	-18.1
GEW-010	3/16/2017 11:21	53.8	41.9	0.4	3.9	59.2	58.7	4	4	-1.7	-1.7	-18.5
GEW-010	3/16/2017 11:23	52.5	42.1	0.2	5.2	56.6	56.5	3	3	-1.0	-1.0	-18.5
GEW-010	3/21/2017 8:15	56.3	40.5	0.0	3.2	48.5	48.5	6	5	-0.6	-0.6	-19.7
GEW-010	3/27/2017 14:12	57.3	42.3	0.0	0.4	58.4	58.5	5	5	-0.3	-0.3	-19.6
GEW-013A	3/14/2017 14:21	11.8	47.3	4.3	36.6	130.7	130.3	53	56	-12.2	-12.6	-17.2
GEW-013A	3/23/2017 9:27	10.3	49.3	3.5	36.9	129.2	129.4	56	58	-13.2	-12.1	-19.3
GEW-015	3/1/2017 13:31	3.5	33.8	8.7	54.0	171.6	171.1	NFD		-4.1	-4.1	-14.3
GEW-015	3/1/2017 13:32	3.6	32.8	8.7	54.9	171.2	171.1	NFD		-4.0	-4.1	-14.2
GEW-015	3/23/2017 9:06	3.1	38.2	8.2	50.5	173.6	173.6	NFD		-3.3	-3.3	-13.8
GEW-015	3/23/2017 9:07	3.1	38.4	8.2	50.3	173.5	173.5	NFD		-3.3	-3.3	-13.8
GEW-016R	3/1/2017 13:12	1.5	42.1	3.6	52.8	154.0	154.8	NFD		-19.6	-19.6	-19.2
GEW-016R	3/1/2017 13:15	1.5	43.1	3.6	51.8	183.9	183.9	NFD		-19.2	-19.0	-19.0
GEW-016R	3/23/2017 8:52	1.7	45.5	3.9	48.9	183.3	183.3	NFD		-19.9	-19.9	-19.1
GEW-016R	3/23/2017 8:54	1.5	46.3	4.0	48.2	183.3	183.3	NFD		-19.9	-19.6	-19.1
GEW-018B	3/14/2017 13:03	4.7	51.0	0.5	43.8	180.5	180.3	4	5	-16.4	-16.4	-16.1
GEW-018B	3/14/2017 13:05	4.2	52.9	0.4	42.5	180.9	180.9	8	10	-16.5	-16.3	-15.7
GEW-018B	3/23/2017 8:08	1.2	55.0	0.0	43.8	182.1	182.1	1	2	-2.0	-2.0	-2.0
GEW-018B	3/23/2017 8:10	1.1	55.9	0.0	43.0	182.7	182.7	10	7	-2.1	-2.2	-2.4
GEW-022R	3/14/2017 11:16	0.1	17.7	18.4	63.8	100.5	100.7	23	34	-14.3	-14.3	-17.2
GEW-022R	3/14/2017 11:18	0.1	10.2	19.7	70.0	100.8	100.8	11	13	-15.7	-15.7	-17.4
GEW-022R	3/22/2017 14:10	0.1	15.8	17.9	66.2	130.1	130.0	12	12	-14.0	-14.0	-15.7
GEW-022R	3/22/2017 14:14	0.9	49.2	5.7	44.2	119.9	120.2	8	8	-0.2	-0.2	-15.2
GEW-038	3/7/2017 13:33	4.1	51.7	0.5	43.7	66.8	66.9	7	3	-6.9	-6.9	-7.5
GEW-038	3/7/2017 13:39	1.1	53.6	0.5	44.8	67.2	67.2	3	4	-6.9	-6.9	-7.5
GEW-038	3/16/2017 13:24	1.3	55.0	0.4	43.3	47.6	47.6	2	4	-9.4	-9.5	-9.8
GEW-038	3/21/2017 9:32	1.6	53.8	1.4	43.2	60.1	60.2	3	4	-9.4	-9.4	-9.8
GEW-038	3/27/2017 14:59	2.8	55.7	0.1	41.4	59.0	59.0	3	4	-17.9	-17.8	-17.3
GEW-039	3/7/2017 11:19	47.8	48.2	0.0	4.0	107.0	107.0	8	5	-0.2	-0.1	-16.7
GEW-039	3/7/2017 11:26	46.5	49.5	0.0	4.0	107.0	107.0	5	2	-0.1	-0.1	-18.0
GEW-039	3/16/2017 13:34	43.7	50.9	0.0	5.4	100.4	100.2	12	11	-0.1	-0.1	-18.0
GEW-039	3/21/2017 10:01	45.0	50.3	0.0	4.7	113.2	113.0	12	10	-0.2	-0.2	-19.4

March 2017 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	3/27/2017 15:12	45.9	50.7	0.0	3.4	107.5	107.5	9	12	-0.2	-0.2	-19.8
GEW-040	3/8/2017 13:13	57.3	40.3	0.0	2.4	84.2	84.2	11	11	-0.4	-0.4	-13.1
GEW-040	3/8/2017 13:18	58.7	39.1	0.0	2.2	83.7	83.8	0	0	-0.4	-0.3	-13.2
GEW-040	3/16/2017 8:28	57.6	41.6	0.0	0.8	74.1	74.3	0	0	-0.2	-0.2	-15.2
GEW-040	3/20/2017 11:25	58.5	39.9	0.0	1.6	85.8	85.9	9	10	-0.3	-0.3	-13.3
GEW-040	3/28/2017 15:16	57.1	41.3	0.0	1.6	82.8	82.8	9	8	-0.3	-0.3	-12.9
GEW-041R	3/8/2017 13:39	56.5	37.1	0.0	6.4	96.0	95.8	14	14	-0.2	-0.2	-12.5
GEW-041R	3/8/2017 13:47	55.9	38.6	0.0	5.5	95.8	95.8	0	0	-0.2	-0.2	-12.6
GEW-041R	3/16/2017 15:00	55.3	40.2	0.0	4.5	84.4	84.2	0	0	0.5	0.5	-13.5
GEW-041R	3/16/2017 15:03	55.7	39.2	0.0	5.1	85.4	85.4	0	0	0.4	0.4	-13.3
GEW-041R	3/20/2017 11:29	57.5	37.8	0.0	4.7	97.1	97.1	0	0	0.1	0.0	-13.2
GEW-041R	3/20/2017 11:31	57.0	39.2	0.0	3.8	97.9	97.7	32	32	0.0	0.0	-13.3
GEW-041R	3/28/2017 15:10	54.9	38.1	0.3	6.7	92.3	92.4	0	0	-0.2	-0.2	-12.6
GEW-041R	3/28/2017 15:12	54.9	38.1	0.2	6.8	91.7	91.9	0	0	-0.2	-0.2	-12.6
GEW-042R	3/8/2017 14:15	55.3	41.2	0.0	3.5	98.7	98.9	8	9	-0.4	-0.4	-12.9
GEW-042R	3/8/2017 14:21	56.0	41.1	0.0	2.9	98.7	98.4	33	33	-0.3	-0.3	-12.9
GEW-042R	3/16/2017 8:33	57.6	40.3	0.0	2.1	34.9	35.0	0	0	1.1	1.1	-15.2
GEW-042R	3/16/2017 8:36	57.4	41.2	0.0	1.4	50.3	50.5	10	9	0.0	-0.1	-15.1
GEW-042R	3/20/2017 11:35	55.4	41.1	0.0	3.5	100.8	100.7	7	5	-0.1	-0.1	-13.2
GEW-042R	3/28/2017 15:23	57.7	39.8	0.0	2.5	95.8	95.9	12	10	-0.5	-0.5	-12.9
GEW-043R	3/8/2017 14:25	54.4	41.8	0.0	3.8	130.2	130.3	18	18	-0.5	-0.5	-13.3
GEW-043R	3/8/2017 14:31	55.4	41.3	0.0	3.3	130.0	130.0	17	18	-0.4	-0.4	-12.8
GEW-043R	3/16/2017 8:41	55.5	40.7	0.0	3.8	121.8	123.4	34	39	-1.5	-1.3	-15.4
GEW-043R	3/16/2017 8:43	55.5	41.5	0.0	3.0	119.2	118.6	43	42	-0.6	-0.6	-15.1
GEW-043R	3/20/2017 11:40	55.4	41.6	0.0	3.0	120.2	120.5	0	0	0.1	0.1	-13.2
GEW-043R	3/20/2017 11:42	55.4	41.4	0.0	3.2	120.5	120.7	6	6	0.1	0.1	-13.3
GEW-043R	3/28/2017 15:16	54.4	42.2	0.0	3.4	126.4	126.1	0	0	0.2	0.2	-13.1
GEW-043R	3/28/2017 15:18	53.9	42.7	0.0	3.4	127.5	127.5	28	29	0.1	0.2	-13.2
GEW-044	3/8/2017 14:35	52.0	38.5	0.0	9.5	79.6	79.6	8	7	-0.3	-0.3	-12.9
GEW-044	3/8/2017 14:41	53.0	37.4	0.0	9.6	79.4	79.4	9	10	-0.3	-0.3	-12.9
GEW-044	3/16/2017 8:49	51.5	38.3	0.0	10.2	42.7	42.8	5	0	-0.1	-0.1	-15.2
GEW-044	3/20/2017 14:14	55.3	38.4	0.0	6.3	78.8	78.9	12	12	-0.7	-0.6	-12.7
GEW-044	3/20/2017 14:17	54.9	39.7	0.0	5.4	79.1	79.2	13	11	-0.6	-0.6	-12.7
GEW-044	3/28/2017 15:29	56.2	38.5	0.0	5.3	86.3	86.5	18	18	-0.8	-0.8	-13.2
GEW-045R	3/8/2017 14:49	59.0	38.1	0.0	2.9	71.1	71.1	8	8	-0.9	-0.9	-12.8
GEW-045R	3/8/2017 14:53	59.3	38.4	0.0	2.3	70.9	70.9	9	9	-0.9	-0.9	-12.9
GEW-045R	3/16/2017 8:55	63.6	36.1	0.0	0.3	40.2	40.3	7	7	0.1	0.1	-15.1
GEW-045R	3/16/2017 8:57	63.9	35.5	0.0	0.6	40.3	40.5	7	7	-0.8	-0.8	-14.9
GEW-045R	3/20/2017 12:57	59.9	37.0	0.0	3.1	79.9	79.7	9	9	-2.7	-2.7	-13.0
GEW-045R	3/28/2017 15:24	57.7	38.7	0.0	3.6	63.0	63.0	9	14	-0.4	-0.5	-13.1
GEW-046R	3/8/2017 14:59	51.0	38.2	0.0	10.8	96.0	96.0	13	12	-0.1	-0.1	-12.8
GEW-046R	3/8/2017 15:05	52.0	38.2	0.0	9.8	95.8	95.8	13	14	-0.2	-0.2	-12.9
GEW-046R	3/15/2017 13:22	53.1	36.5	0.0	10.4	93.1	93.1	13	14	-0.1	-0.1	-13.8

March 2017 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-046R	3/15/2017 13:30	52.1	37.4	0.0	10.5	93.4	93.1	0	0	-0.1	-0.1	-13.8
GEW-046R	3/16/2017 9:03	51.3	38.5	0.0	10.2	92.0	92.2	0	0	-0.3	-0.3	-14.8
GEW-046R	3/20/2017 13:01	51.6	38.4	0.0	10.0	97.7	97.7	9	8	-0.2	-0.2	-13.3
GEW-046R	3/28/2017 15:40	49.8	36.9	0.0	13.3	89.5	89.1	10	10	-0.8	-0.8	-13.0
GEW-047R	3/9/2017 8:52	43.0	36.4	0.0	20.6	108.7	109.0	6	11	-0.4	-0.4	-13.2
GEW-047R	3/9/2017 8:58	43.9	35.1	0.0	21.0	108.7	109.0	11	12	-0.4	-0.4	-13.0
GEW-047R	3/16/2017 9:50	43.5	36.8	0.0	19.7	107.7	107.6	7	12	-0.2	-0.3	-14.8
GEW-047R	3/16/2017 9:51	43.6	36.7	0.0	19.7	106.2	106.3	13	12	-0.2	-0.2	-14.8
GEW-047R	3/20/2017 13:38	47.1	38.0	0.0	14.9	111.0	111.0	0	0	0.1	0.1	-12.9
GEW-047R	3/20/2017 13:39	47.2	37.8	0.0	15.0	111.2	111.2	11	14	0.1	0.1	-12.9
GEW-047R	3/29/2017 7:45	41.9	36.2	0.0	21.9	62.1	62.1	7	7	0.0	0.0	-13.8
GEW-047R	3/29/2017 7:47	42.1	35.3	0.0	22.6	62.3	62.3	10	10	0.0	0.0	-14.1
GEW-048	3/9/2017 9:30	50.9	36.4	0.0	12.7	102.0	102.0	0	0	-0.5	-0.5	-10.2
GEW-048	3/9/2017 9:35	51.4	35.6	0.0	13.0	101.9	102.1	38	37	-0.5	-0.5	-9.2
GEW-048	3/16/2017 10:01	50.9	37.2	0.0	11.9	100.4	100.3	29	25	-0.6	-0.5	-14.0
GEW-048	3/16/2017 10:03	50.5	37.9	0.0	11.6	99.9	99.7	26	28	-0.5	-0.5	-10.3
GEW-048	3/20/2017 13:49	52.3	37.6	0.0	10.1	103.3	103.1	33	32	0.0	0.0	-8.1
GEW-048	3/20/2017 13:51	51.8	39.0	0.0	9.2	103.5	103.4	15	14	-0.1	0.0	-10.5
GEW-048	3/28/2017 16:20	45.8	35.1	0.0	19.1	100.8	100.9	25	25	-0.4	-0.4	-10.5
GEW-048	3/28/2017 16:23	45.8	35.4	0.0	18.8	100.6	100.5	17	10	-0.4	-0.4	-11.4
GEW-049	3/8/2017 7:53	36.3	33.9	0.0	29.8	94.8	95.3	39	39	-0.3	-0.3	-13.8
GEW-049	3/8/2017 8:00	37.2	32.4	0.0	30.4	95.5	95.5	0	0	-0.3	-0.3	-13.7
GEW-049	3/16/2017 7:32	46.3	36.7	0.0	17.0	93.8	93.8	0	0	-0.1	-0.1	-15.1
GEW-049	3/20/2017 14:09	54.2	38.5	0.0	7.3	118.5	118.4	85	89	-4.9	-5.0	-9.9
GEW-049	3/20/2017 14:11	53.8	39.0	0.0	7.2	111.2	110.2	7	7	-0.4	-0.4	-12.8
GEW-049	3/28/2017 14:21	50.1	34.8	0.0	15.1	79.8	79.8	14	14	0.2	0.2	-13.2
GEW-049	3/28/2017 14:22	49.8	37.1	0.0	13.1	86.5	87.2	6	6	0.2	0.2	-13.0
GEW-050	3/9/2017 10:00	45.8	34.1	0.0	20.1	106.7	107.0	17	18	-0.5	-0.5	-9.1
GEW-050	3/9/2017 10:08	46.3	34.9	0.0	18.8	106.7	106.7	18	14	-0.5	-0.4	-10.0
GEW-050	3/16/2017 10:22	47.4	35.6	0.0	17.0	105.8	105.7	38	36	-0.4	-0.4	-10.2
GEW-050	3/16/2017 10:25	47.1	36.4	0.0	16.5	105.5	105.3	31	31	-0.3	-0.3	-8.1
GEW-050	3/20/2017 14:04	52.3	35.2	0.0	12.5	108.0	107.9	13	13	0.0	0.1	-9.8
GEW-050	3/20/2017 14:06	51.0	38.2	0.0	10.8	108.2	108.2	18	18	0.0	0.0	-8.3
GEW-050	3/28/2017 16:24	50.9	37.5	0.0	11.6	106.3	106.3	10	18	-0.4	-0.4	-8.4
GEW-051	3/8/2017 10:13	51.4	37.7	0.0	10.9	122.1	122.9	14	14	-0.7	-0.7	-13.5
GEW-051	3/8/2017 10:19	51.2	39.2	0.0	9.6	122.3	122.6	16	17	-0.7	-0.7	-13.0
GEW-051	3/16/2017 7:37	51.8	38.5	0.0	9.7	122.0	121.8	8	7	-0.5	-0.5	-14.8
GEW-051	3/16/2017 7:38	51.7	38.9	0.0	9.4	122.1	122.5	24	24	-0.5	-0.5	-14.4
GEW-051	3/20/2017 14:21	51.8	39.3	0.0	8.9	125.6	125.6	16	14	0.1	0.2	-12.7
GEW-051	3/20/2017 14:23	51.6	40.3	0.0	8.1	125.6	125.6	37	38	0.2	0.2	-12.6
GEW-051	3/28/2017 14:42	54.3	38.8	0.0	6.9	120.4	120.5	21	23	-0.3	-0.3	-13.0
GEW-052	3/8/2017 10:25	35.6	31.3	0.0	33.1	110.8	110.7	23	21	-0.5	-0.5	-13.5
GEW-052	3/8/2017 10:31	37.0	30.9	0.0	32.1	107.7	108.0	0	0	-0.2	-0.2	-13.0

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		(% vol)				°F		scfm		H ₂ O		
GEW-052	3/16/2017 7:43	45.7	36.3	0.0	18.0	105.7	105.7	6	6	-0.1	-0.1	-15.0
GEW-052	3/20/2017 14:27	52.8	39.6	0.0	7.6	113.0	113.0	0	0	0.2	0.2	-12.7
GEW-052	3/20/2017 14:30	53.0	39.8	0.0	7.2	113.2	113.0	0	0	0.2	0.2	-12.6
GEW-052	3/28/2017 14:27	46.9	35.3	0.0	17.8	109.1	109.2	9	10	0.0	0.0	-12.9
GEW-052	3/28/2017 14:29	46.6	36.3	0.0	17.1	109.2	110.2	14	14	0.0	0.0	-13.1
GEW-053	3/8/2017 11:33	44.7	36.1	0.0	19.2	130.9	130.9	26	26	-1.2	-1.3	-13.3
GEW-053	3/8/2017 11:38	44.7	36.5	0.0	18.8	130.9	130.9	16	18	-1.2	-1.2	-13.8
GEW-053	3/16/2017 8:10	44.4	37.3	0.0	18.3	133.2	133.2	25	22	-1.5	-1.5	-15.3
GEW-053	3/16/2017 8:13	44.5	37.5	0.0	18.0	132.9	132.9	22	21	-1.4	-1.4	-14.9
GEW-053	3/20/2017 15:03	46.9	37.2	0.0	15.9	133.5	133.5	21	20	-0.8	-0.8	-12.7
GEW-053	3/28/2017 14:57	46.1	39.0	0.0	14.9	132.3	132.1	20	23	-1.2	-1.2	-13.6
GEW-053	3/28/2017 14:58	45.5	39.0	0.0	15.5	130.9	130.6	11	12	-0.9	-0.9	-13.7
GEW-054	3/8/2017 11:42	51.0	41.2	0.0	7.8	143.9	143.6	49	49	-4.3	-4.2	-14.4
GEW-054	3/8/2017 11:47	51.3	40.3	0.0	8.4	143.9	143.9	61	51	-5.0	-5.4	-14.1
GEW-054	3/16/2017 14:49	52.3	44.2	0.0	3.5	56.1	56.3	19	18	2.9	2.9	-13.6
GEW-054	3/16/2017 14:55	51.9	42.1	0.0	6.0	145.9	145.9	46	42	-1.4	-1.4	-14.6
GEW-054	3/20/2017 15:11	50.0	42.3	0.0	7.7	147.7	147.7	42	42	-1.9	-1.9	-13.1
GEW-054	3/20/2017 15:14	49.8	42.2	0.0	8.0	147.6	147.5	76	76	-6.2	-6.2	-10.9
GEW-054	3/21/2017 7:41	51.4	42.2	0.0	6.4	145.2	145.2	67	57	-7.9	-8.0	-12.7
GEW-054	3/21/2017 7:43	51.2	41.6	0.0	7.2	145.5	145.5	67	68	-7.5	-7.6	-13.7
GEW-054	3/28/2017 15:05	51.6	40.5	0.0	7.9	143.5	143.5	63	63	-7.2	-7.0	-11.8
GEW-054	3/28/2017 15:06	51.0	41.6	0.0	7.4	143.5	143.5	57	63	-6.9	-6.6	-11.5
GEW-055	3/8/2017 13:02	54.8	40.7	0.0	4.5	108.2	107.9	0	0	-0.2	-0.2	-6.2
GEW-055	3/8/2017 13:08	55.0	41.4	0.0	3.6	107.0	106.8	12	13	-0.1	-0.1	-6.0
GEW-055	3/16/2017 8:22	55.4	40.0	0.0	4.6	100.4	99.7	4	9	0.1	0.1	-8.1
GEW-055	3/16/2017 8:23	53.4	42.7	0.0	3.9	100.9	101.1	8	8	0.0	0.0	-8.0
GEW-055	3/20/2017 15:22	50.9	42.7	0.0	6.4	117.3	117.1	6	9	0.3	0.3	-5.1
GEW-055	3/20/2017 15:24	50.9	43.3	0.0	5.8	117.8	117.9	10	12	0.2	0.2	-5.0
GEW-055	3/28/2017 15:04	52.5	41.5	0.0	6.0	108.2	108.2	7	7	-0.1	-0.1	-5.5
GEW-056R	3/7/2017 10:29	18.1	51.9	0.0	30.0	96.5	96.5	3	4	-0.4	-0.4	-18.4
GEW-056R	3/7/2017 10:37	18.2	51.8	0.0	30.0	96.2	96.0	3	4	-0.4	-0.4	-18.3
GEW-056R	3/16/2017 11:38	15.8	53.1	0.0	31.1	95.6	95.7	2	2	-0.4	-0.3	-18.5
GEW-056R	3/21/2017 8:37	19.5	51.6	0.0	28.9	103.9	104.0	5	3	-0.5	-0.5	-19.7
GEW-056R	3/27/2017 14:30	19.0	53.3	0.0	27.7	104.5	104.5	3	3	-0.4	-0.4	-19.7
GEW-057B	3/14/2017 13:48	5.0	49.9	1.2	43.9	33.8	33.8	4	4	-17.0	-16.9	-16.6
GEW-057B	3/21/2017 11:39	5.1	49.1	0.2	45.6	71.8	71.8	7	9	-12.8	-12.6	-12.8
GEW-057R	3/3/2017 10:29	13.4	41.2	0.3	45.1	73.0	72.7	13	13	-0.5	-0.3	-13.0
GEW-057R	3/3/2017 10:36	13.3	42.4	0.1	44.2	74.1	74.1	16	14	-0.4	-0.4	-12.6
GEW-057R	3/21/2017 11:42	15.7	44.4	0.0	39.9	81.2	81.2	4	7	-0.2	-0.2	-12.6
GEW-058	3/3/2017 10:41	13.0	41.8	0.7	44.5	99.6	99.6	6	6	-18.1	-18.1	-18.4
GEW-058	3/3/2017 10:48	12.4	40.9	1.0	45.7	96.5	96.2	8	10	-17.6	-17.7	-17.8
GEW-058	3/21/2017 10:59	15.7	43.1	0.2	41.0	102.1	102.5	4	6	-18.4	-18.3	-18.7
GEW-058A	3/3/2017 10:52	9.4	33.7	1.5	55.4	113.5	113.5	5	5	-8.8	-8.8	-18.4

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		(% vol)				°F		scfm		H ₂ O		
GEW-058A	3/3/2017 10:59	9.3	32.4	1.5	56.8	113.5	113.4	7	9	-8.8	-8.8	-18.1
GEW-058A	3/21/2017 10:56	8.9	33.6	1.0	56.5	104.5	104.4	8	9	-7.0	-7.0	-18.9
GEW-059R	3/3/2017 8:38	7.7	47.6	0.3	44.4	173.1	173.6	8	10	-14.2	-13.8	-14.1
GEW-059R	3/3/2017 8:45	7.6	48.0	0.3	44.1	174.7	174.7	15	11	-14.2	-14.3	-14.4
GEW-059R	3/21/2017 10:47	5.5	49.2	0.2	45.1	175.7	176.4	11	12	-12.7	-12.5	-12.9
GEW-059R	3/21/2017 10:50	5.7	46.6	1.2	46.5	174.7	173.6	7	7	-11.8	-11.8	-11.9
GEW-064A	3/23/2017 10:20	4.0	61.3	0.6	34.1	41.9	41.9	6	5	-18.3	-18.3	-18.5
GEW-067A	3/14/2017 14:11	4.5	54.9	0.0	40.6	35.9	35.9	5	4	0.6	0.6	0.4
GEW-067A	3/14/2017 14:13	4.9	60.5	0.0	34.6	35.3	35.3	8	10	0.5	0.5	0.5
GEW-067A	3/23/2017 10:31	5.0	59.9	0.0	35.1	43.8	43.7	6	5	0.5	0.5	0.3
GEW-067A	3/23/2017 10:33	4.7	61.3	0.0	34.0	43.6	43.7	7	4	0.5	0.5	0.1
GEW-077	3/14/2017 10:56	0.5	57.3	0.9	41.3	36.8	36.8	9	4	-18.3	-18.2	-18.9
GEW-077	3/21/2017 14:44	0.7	54.4	0.2	44.7	105.8	106.5	12	4	-17.3	-17.0	-17.2
GEW-078R	3/14/2017 11:01	9.2	46.8	0.0	44.0	168.5	168.5	27	21	-19.7	-19.2	-18.8
GEW-078R	3/14/2017 11:03	9.4	49.3	0.0	41.3	169.0	168.6	23	20	-19.2	-19.2	-18.6
GEW-078R	3/23/2017 8:26	7.7	49.2	0.0	43.1	170.5	170.5	23	26	-19.4	-19.6	-18.8
GEW-078R	3/23/2017 8:27	7.5	49.6	0.0	42.9	170.5	170.5	27	20	-19.9	-19.4	-18.8
GEW-081	3/14/2017 11:09	1.2	58.7	0.0	40.1	185.1	185.1	NFD		-17.2	-16.3	-17.6
GEW-081	3/14/2017 11:11	1.0	61.0	0.0	38.0	185.1	185.1	NFD		-17.2	-17.2	-17.5
GEW-081	3/22/2017 14:34	1.9	55.3	0.0	42.8	187.6	187.6	NFD		-15.9	-15.9	-15.8
GEW-081	3/22/2017 14:36	1.0	58.4	0.0	40.6	187.6	187.6	NFD		-15.5	-15.9	-15.7
GEW-082R	3/10/2017 7:55	9.6	49.5	0.0	40.9	183.3	183.3	3	3	-9.3	-9.3	-9.6
GEW-082R	3/10/2017 8:04	9.2	52.9	0.0	37.9	183.9	183.9	6	5	-9.3	-9.3	-9.5
GEW-082R	3/23/2017 8:14	0.6	55.6	0.0	43.8	41.8	41.9	3	3	6.1	6.1	6.0
GEW-082R	3/23/2017 8:15	0.5	55.9	0.0	43.6	41.6	41.5	2	3	5.8	5.8	6.0
GEW-086	3/10/2017 8:11	4.8	57.8	0.0	37.4	45.7	45.8	3	2	0.7	0.7	0.6
GEW-086	3/10/2017 8:20	4.5	59.3	0.0	36.2	44.9	45.0	2	2	0.6	0.6	0.6
GEW-086	3/23/2017 9:36	4.5	59.9	0.0	35.6	41.2	41.2	3	3	0.5	0.5	0.3
GEW-086	3/23/2017 9:38	4.5	59.9	0.0	35.6	40.8	40.8	2	1	0.5	0.5	0.3
GEW-087	3/23/2017 9:21	3.1	51.7	2.2	43.0	193.6	193.6	NFD		-18.9	-18.9	-19.1
GEW-087	3/23/2017 9:23	2.8	57.9	0.3	39.0	193.6	193.6	NFD		-18.9	-20.6	-19.2
GEW-090	3/10/2017 9:04	13.8	48.3	0.0	37.9	142.9	135.3	9	12	-17.8	-17.7	-18.3
GEW-090	3/10/2017 9:13	13.4	48.3	0.0	38.3	131.7	131.4	9	9	-18.6	-18.6	-7.4
GEW-090	3/23/2017 9:45	10.6	51.6	0.0	37.8	147.3	149.5	12	11	-18.9	-19.2	-18.4
GEW-090	3/23/2017 9:47	11.9	50.1	0.0	38.0	147.4	147.3	7	11	-18.9	-19.0	-18.5
GEW-091	3/14/2017 14:01	4.3	54.8	0.0	40.9	193.6	193.6	9	10	-3.1	-3.4	-3.4
GEW-091	3/14/2017 14:03	3.8	59.3	0.0	36.9	193.6	193.0	11	9	-5.8	-6.3	-5.4
GEW-091	3/23/2017 9:57	3.4	59.1	0.1	37.4	191.6	191.6	3	9	-5.8	-5.1	-6.0
GEW-091	3/23/2017 9:59	3.2	60.2	0.0	36.6	191.6	191.6	9	3	-6.4	-6.4	-6.3
GEW-101	3/14/2017 14:31	12.6	51.2	5.0	31.2	68.4	68.4	61	63	-2.6	-2.5	-19.0
GEW-101	3/14/2017 14:33	12.3	51.9	5.0	30.8	68.5	68.6	44	62	-1.6	-2.4	-7.8
GEW-101	3/21/2017 13:53	12.7	50.3	3.9	33.1	80.0	80.1	52	59	-1.9	-2.6	-14.3
GEW-102	3/3/2017 11:29	4.5	38.9	5.8	50.8	54.0	53.9	NR	NR	-17.6	-17.7	-17.5

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		(% vol)				°F		scfm		H ₂ O		
GEW-102	3/3/2017 11:31	5.2	40.1	5.8	48.9	53.7	53.7	NR	NR	-17.9	-17.6	-17.5
GEW-102	3/21/2017 13:21	7.4	51.1	0.6	40.9	68.6	68.6	NR	NR	-17.5	-17.5	-17.4
GEW-104	3/14/2017 13:42	0.5	34.6	7.9	57.0	32.6	32.6	3	4	-14.6	-14.5	-14.1
GEW-104	3/14/2017 13:43	0.5	36.8	7.6	55.1	32.7	32.7	2	3	-14.5	-14.1	-14.0
GEW-104	3/21/2017 11:28	0.6	28.9	9.9	60.6	68.6	68.8	1	4	-14.5	-14.3	-14.3
GEW-104	3/21/2017 11:29	0.5	30.2	10.0	59.3	70.5	70.5	2	2	-14.1	-14.3	-14.1
GEW-106	3/14/2017 13:32	6.5	57.7	1.8	34.0	67.8	67.9	20	23	-18.2	-18.6	-18.6
GEW-106	3/21/2017 11:05	6.4	54.1	1.8	37.7	83.4	83.5	19	20	-18.2	-18.3	-18.9
GEW-107	3/3/2017 8:18	39.0	39.8	3.3	17.9	43.9	44.0	20	17	-19.0	-19.0	-18.6
GEW-107	3/3/2017 8:27	38.9	40.2	3.3	17.6	45.5	45.5	38	35	-19.4	-19.0	-19.0
GEW-107	3/21/2017 10:33	32.9	46.7	1.8	18.6	98.7	98.4	3	4	-18.4	-18.7	-18.6
GEW-108	3/14/2017 13:56	38.2	50.1	0.0	11.7	39.9	39.9	3	2	-13.0	-13.0	-12.4
GEW-108	3/21/2017 10:28	35.6	46.8	0.0	17.6	71.6	71.4	3	2	-11.8	-11.8	-11.8
GEW-109	3/7/2017 11:30	30.1	44.6	0.0	25.3	70.7	70.7	1	1	-13.5	-13.5	-17.9
GEW-109	3/7/2017 11:37	29.3	45.4	0.0	25.3	70.5	70.5	4	4	-13.5	-13.5	-18.1
GEW-109	3/16/2017 13:31	27.1	45.5	0.0	27.4	56.2	56.2	3	3	-14.3	-14.3	-18.2
GEW-109	3/21/2017 9:57	26.3	46.4	0.0	27.3	81.0	81.0	4	3	-14.8	-14.8	-19.2
GEW-109	3/27/2017 15:09	28.1	47.4	0.0	24.5	85.8	86.1	3	4	-13.3	-13.3	-19.4
GEW-110	3/7/2017 9:44	13.1	35.0	6.0	45.9	59.2	59.2	3	3	-0.1	-0.1	-18.2
GEW-110	3/7/2017 9:50	13.2	37.0	6.0	43.8	59.5	59.5	2	2	-0.1	-0.1	-18.1
GEW-110	3/16/2017 11:28	13.6	43.7	2.0	40.7	67.0	67.0	2	2	-0.1	-0.1	-18.8
GEW-110	3/21/2017 8:21	6.1	31.6	8.8	53.5	65.9	65.8	2	2	-0.1	-0.1	-19.7
GEW-110	3/21/2017 8:24	5.6	33.3	9.1	52.0	66.4	66.3	1	1	-0.1	-0.1	-19.6
GEW-110	3/27/2017 14:16	7.0	29.8	9.0	54.2	70.1	70.0	3	2	-0.1	-0.1	-19.7
GEW-110	3/27/2017 14:18	6.6	31.8	8.9	52.7	70.0	70.0	2	2	-0.1	-0.1	-19.6
GEW-113	3/1/2017 13:20	8.8	47.7	1.1	42.4	156.0	156.1	23	23	-12.4	-12.4	-19.1
GEW-113	3/1/2017 13:24	8.8	47.5	1.0	42.7	156.5	156.5	26	28	-13.2	-13.3	-19.5
GEW-113	3/23/2017 8:59	4.9	40.4	5.0	49.7	154.9	155.0	24	24	-13.9	-13.5	-19.0
GEW-113	3/23/2017 9:02	4.6	37.9	6.0	51.5	144.5	144.5	7	9	-3.9	-3.9	-19.7
GEW-116	3/9/2017 13:34	0.5	27.3	13.7	58.5	117.2	117.3	16	14	-13.0	-12.8	-18.1
GEW-116	3/9/2017 13:35	0.7	24.1	14.0	61.2	117.4	117.5	16	13	-13.1	-12.9	-17.6
GEW-116	3/22/2017 15:10	0.3	18.8	16.8	64.1	105.4	105.3	36	16	-12.2	-12.0	-16.2
GEW-116	3/22/2017 15:12	0.4	14.0	16.7	68.9	90.2	89.9	13	8	-0.4	-0.4	-10.8
GEW-117	3/9/2017 11:39	8.6	57.0	0.0	34.4	90.1	90.2	NR	NR	-17.2	-16.9	-17.3
GEW-117	3/9/2017 11:46	7.3	60.6	0.2	31.9	91.3	91.3	NR	NR	-16.8	-16.8	-17.1
GEW-117	3/22/2017 14:58	5.7	65.6	0.0	28.7	70.2	70.2	NR	NR	-18.9	-18.7	-18.7
GEW-118	3/9/2017 10:55	1.5	54.3	0.0	44.2	195.0	195.0	71	72	-6.3	-5.7	-13.3
GEW-118	3/9/2017 11:08	1.3	53.7	0.0	45.0	195.7	195.7	85	76	-6.7	-6.3	-16.9
GEW-118	3/22/2017 14:47	1.7	56.1	0.0	42.2	195.0	195.0	77	87	-6.1	-6.2	-14.2
GEW-118	3/22/2017 14:48	1.5	61.0	0.0	37.5	195.7	195.7	76	76	-7.5	-7.3	-15.4
GEW-120	3/9/2017 11:18	35.8	55.5	0.0	8.7	92.2	92.5	19	20	-10.0	-9.9	-10.5
GEW-120	3/9/2017 11:34	38.7	53.0	0.0	8.3	105.5	105.7	38	21	-10.9	-9.8	-16.5
GEW-120	3/22/2017 14:53	14.2	46.7	0.0	39.1	107.0	107.0	14	18	-17.0	-17.0	-18.5

March 2017 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-121	3/9/2017 10:18	11.9	52.3	0.0	35.8	170.0	170.0	32	31	-15.7	-15.8	-16.5
GEW-121	3/9/2017 10:24	10.1	53.8	0.0	36.1	170.1	170.0	23	33	-15.2	-15.9	-15.7
GEW-121	3/22/2017 14:29	11.0	51.0	0.0	38.0	164.3	164.7	24	29	-16.5	-17.2	-17.4
GEW-121	3/22/2017 14:30	10.6	52.4	0.0	37.0	164.7	164.7	35	30	-17.4	-17.5	-18.1
GEW-122	3/6/2017 15:25	0.3	57.8	0.0	41.9	187.0	188.9	14	12	-2.3	-2.3	-15.8
GEW-122	3/6/2017 15:33	0.3	55.9	0.0	43.8	195.0	195.0	14	15	-2.4	-1.7	-17.7
GEW-122	3/22/2017 13:36	22.0	47.1	0.0	30.9	168.5	169.0	13	10	-8.6	-8.6	-14.0
GEW-122	3/22/2017 13:38	21.8	49.8	0.0	28.4	169.0	169.2	7	11	-8.7	-8.6	-13.7
GEW-123	3/7/2017 14:34	0.3	59.6	0.0	40.1	74.3	74.3	2	3	5.9	5.9	-17.8
GEW-123	3/7/2017 14:44	1.5	60.7	0.5	37.3	167.1	168.1	9	2	-14.8	-14.8	-18.5
GEW-123	3/22/2017 14:17	9.7	52.6	0.0	37.7	171.0	171.0	12	11	-14.5	-14.5	-18.6
GEW-123	3/22/2017 14:18	9.9	53.9	0.0	36.2	170.5	170.5	10	9	-14.6	-14.5	-19.1
GEW-124	3/7/2017 13:58	1.3	14.9	16.9	66.9	66.5	66.8	2	4	-13.2	-12.7	-13.4
GEW-124	3/7/2017 14:00	1.0	10.0	17.6	71.4	67.2	67.3	5	4	-12.7	-13.0	-13.3
GEW-124	3/22/2017 13:57	1.5	24.3	14.5	59.7	60.9	60.9	4	4	-12.1	-12.0	-11.9
GEW-124	3/22/2017 14:01	1.6	29.6	11.6	57.2	61.0	61.2	3	2	-11.6	-11.5	-11.8
GEW-125	3/6/2017 13:22	3.5	60.0	0.0	36.5	187.0	187.0	29	33	-18.6	-18.1	-19.0
GEW-125	3/6/2017 13:29	3.4	57.2	0.0	39.4	187.3	187.4	22	26	-18.1	-18.1	-18.7
GEW-125	3/22/2017 13:21	3.5	58.5	0.0	38.0	178.0	178.0	17	14	-17.4	-17.4	-17.3
GEW-125	3/22/2017 13:23	3.7	58.1	0.0	38.2	178.2	178.4	16	15	-17.5	-17.5	-17.7
GEW-126	3/6/2017 12:38	24.2	50.9	0.1	24.8	76.1	76.0	16	0	-17.5	-17.2	-17.4
GEW-126	3/6/2017 12:46	24.5	50.7	0.1	24.7	76.4	76.3	8	14	-17.2	-17.2	-17.1
GEW-126	3/22/2017 13:01	21.0	47.7	0.0	31.3	67.5	67.5	12	15	-12.4	-12.5	-12.2
GEW-127	3/2/2017 13:51	4.6	59.8	0.4	35.2	177.0	177.5	25	28	-16.3	-15.4	-16.8
GEW-127	3/2/2017 14:01	4.6	58.9	0.5	36.0	176.4	176.4	30	35	-17.3	-17.0	-17.9
GEW-127	3/22/2017 11:22	5.3	58.6	0.5	35.6	178.6	178.6	21	25	-17.3	-16.7	-17.5
GEW-127	3/22/2017 11:24	5.1	60.6	0.4	33.9	179.2	179.2	30	26	-17.3	-16.3	-17.8
GEW-128	3/2/2017 13:17	6.4	58.3	0.0	35.3	162.0	161.6	19	24	-15.9	-15.9	-16.8
GEW-128	3/2/2017 13:25	6.2	60.7	0.0	33.1	163.8	163.8	23	24	-16.0	-16.3	-16.8
GEW-128	3/22/2017 11:10	6.4	61.7	0.0	31.9	164.7	164.7	21	15	-17.3	-17.3	-18.4
GEW-128	3/22/2017 11:12	6.8	61.9	0.0	31.3	165.2	165.2	16	17	-16.8	-17.3	-16.3
GEW-129	3/2/2017 13:31	3.8	62.2	1.1	32.9	59.4	59.4	3	8	-13.9	-14.4	-17.2
GEW-129	3/2/2017 13:38	3.9	64.9	0.4	30.8	58.1	58.0	6	6	-12.1	-13.4	-17.2
GEW-129	3/22/2017 11:07	2.2	66.5	0.0	31.3	58.4	58.5	6	14	-4.4	-4.3	-18.2
GEW-130	3/2/2017 15:43	1.4	40.1	7.5	51.0	171.0	171.0	2	8	-1.4	-1.4	-18.4
GEW-130	3/2/2017 15:56	0.9	48.5	4.1	46.5	171.4	170.5	28	38	-0.5	-0.7	-17.9
GEW-130	3/22/2017 11:29	0.6	57.0	0.0	42.4	183.3	183.3	15	26	0.2	0.2	-15.9
GEW-130	3/22/2017 11:31	0.3	58.1	0.0	41.6	185.2	185.1	27	24	-0.5	-0.6	-15.4
GEW-131	3/6/2017 12:51	20.9	49.3	0.0	29.8	166.6	166.6	NFD		-14.2	-14.2	-15.2
GEW-131	3/6/2017 13:00	20.4	49.7	0.0	29.9	168.5	168.5	NFD		-14.8	-14.8	-15.7
GEW-131	3/22/2017 12:54	21.5	37.7	0.0	40.8	138.0	136.5	NFD		-14.0	-13.7	-13.8

March 2017 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-131	3/22/2017 12:56	20.6	40.6	0.0	38.8	137.4	137.7	NFD		-14.0	-14.0	-14.3
GEW-132	3/9/2017 10:42	8.5	46.0	1.1	44.4	169.7	169.5	6	6	-0.4	-0.4	-14.1
GEW-132	3/9/2017 10:50	9.3	45.2	1.4	44.1	174.7	174.7	13	13	-1.6	-1.6	-17.2
GEW-132	3/22/2017 14:41	5.0	35.6	7.3	52.1	154.7	154.2	11	11	-2.2	-2.2	-19.6
GEW-132	3/22/2017 14:43	5.1	33.7	7.2	54.0	146.6	146.3	7	6	-0.5	-0.5	-16.1
GEW-133	3/9/2017 13:23	0.9	57.4	0.3	41.4	86.3	86.3	7	6	-17.9	-17.9	-18.1
GEW-133	3/9/2017 13:30	0.4	59.6	0.0	40.0	85.7	85.8	4	7	-17.6	-17.6	-18.1
GEW-133	3/22/2017 15:02	0.1	35.3	8.4	56.2	60.1	60.0	7	5	-18.9	-18.9	-18.7
GEW-133	3/22/2017 15:06	1.1	59.9	1.1	37.9	60.4	60.4	5	3	-18.9	-18.9	-18.7
GEW-134	3/9/2017 13:46	5.4	29.2	10.7	54.7	162.9	163.3	3	2	0.0	0.0	-18.2
GEW-134	3/9/2017 13:48	5.2	28.6	10.7	55.5	163.3	162.0	4	2	0.0	0.0	-18.1
GEW-134	3/15/2017 8:44	10.0	50.9	0.4	38.7	163.8	165.6	5	5	-0.8	-0.8	-18.0
GEW-134	3/15/2017 8:53	19.5	40.4	3.6	36.5	187.0	187.0	38	39	-9.5	-9.5	-18.7
GEW-134	3/23/2017 7:54	7.1	30.0	8.1	54.8	130.9	130.6	36	36	-13.9	-13.9	-19.5
GEW-134	3/23/2017 7:57	6.5	28.8	8.5	56.2	124.1	123.9	12	17	-4.6	-4.6	-19.3
GEW-135	3/9/2017 13:53	1.2	56.9	0.0	41.9	146.6	148.1	2	2	0.3	0.3	-17.6
GEW-135	3/9/2017 14:31	1.1	53.8	0.6	44.5	195.7	195.7	9	17	-10.0	-12.2	-17.5
GEW-135	3/23/2017 8:02	3.8	47.5	1.7	47.0	168.1	168.1	20	14	-7.8	-7.8	-19.2
GEW-135	3/23/2017 8:03	3.7	47.8	1.7	46.8	168.2	168.1	16	16	-7.8	-7.8	-20.3
GEW-136	3/9/2017 14:38	4.0	24.2	12.5	59.3	109.7	109.9	8	7	-0.9	-0.9	-14.4
GEW-136	3/9/2017 14:40	4.3	21.6	12.8	61.3	110.0	109.5	7	9	-0.8	-0.9	-15.1
GEW-136	3/15/2017 8:07	3.7	21.9	12.7	61.7	64.0	64.0	3	7	-0.5	-0.5	-9.6
GEW-136	3/15/2017 8:18	3.8	20.6	13.2	62.4	115.0	116.6	43	47	-8.0	-9.4	-10.5
GEW-136	3/15/2017 8:22	2.8	15.9	15.1	66.2	85.4	84.4	4	2	-0.2	-0.2	-14.0
GEW-136	3/23/2017 8:40	3.8	28.1	11.8	56.3	51.6	51.6	4	2	-0.2	-0.2	-13.7
GEW-136	3/23/2017 8:42	3.5	27.9	12.1	56.5	51.8	51.8	3	4	-0.3	-0.2	-13.8
GEW-137	3/9/2017 14:46	11.1	23.8	2.3	62.8	81.2	81.4	8	3	-15.6	-15.1	-15.2
GEW-137	3/9/2017 14:53	11.2	22.7	2.4	63.7	80.3	80.1	10	8	-15.7	-16.0	-16.0
GEW-137	3/23/2017 8:36	9.6	31.6	3.0	55.8	46.3	46.3	5	5	-14.6	-14.6	-14.4
GEW-138	3/9/2017 15:04	0.7	41.8	6.7	50.8	71.0	71.0	2	4	-17.9	-17.8	-18.0
GEW-138	3/9/2017 15:06	0.3	29.7	11.8	58.2	70.9	70.9	5	4	-17.8	-17.5	-18.1
GEW-138	3/23/2017 8:31	8.3	51.0	0.0	40.7	77.6	77.4	1	2	-0.5	-0.5	-18.8
GEW-139	3/2/2017 14:35	3.6	50.6	1.9	43.9	143.9	143.5	13	11	-4.8	-4.7	-18.0
GEW-139	3/2/2017 14:44	3.4	50.6	1.9	44.1	143.5	143.6	19	10	-4.8	-4.8	-18.6
GEW-139	3/22/2017 10:47	2.2	45.5	3.8	48.5	165.5	165.5	13	20	-3.8	-3.7	-19.1
GEW-139	3/22/2017 10:48	2.1	48.0	3.7	46.2	165.7	165.7	19	16	-3.8	-3.8	-18.9
GEW-140	3/3/2017 14:03	4.6	37.6	5.8	52.0	130.8	130.9	4	4	-0.2	-0.1	-17.4
GEW-140	3/3/2017 14:10	3.7	38.7	6.0	51.6	131.7	131.4	7	7	-0.2	-0.2	-17.8
GEW-140	3/21/2017 14:22	10.1	54.2	0.8	34.9	112.0	112.0	9	8	-0.3	-0.3	-17.4
GEW-140	3/21/2017 14:27	12.2	52.5	1.3	34.0	139.9	139.9	40	39	-8.6	-8.8	-18.5
GEW-141	3/3/2017 14:53	2.3	45.1	5.0	47.6	65.1	65.1	7	8	-7.0	-6.6	-6.6
GEW-141	3/3/2017 15:04	1.0	44.8	5.3	48.9	60.4	60.4	5	4	-6.2	-6.2	-6.1
GEW-141	3/22/2017 11:00	8.1	45.2	5.8	40.9	57.8	58.0	4	5	-4.8	-4.5	-4.8

March 2017 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-141	3/22/2017 11:02	7.8	44.7	5.5	42.0	58.5	58.4	0	7	-5.1	-5.5	-5.3
GEW-143	3/3/2017 14:22	0.0	8.8	18.5	72.7	58.5	58.5	1	1	-12.1	-12.1	-17.8
GEW-143	3/3/2017 14:24	0.0	6.0	19.1	74.9	57.8	57.8	3	1	-12.6	-12.6	-17.8
GEW-143	3/21/2017 14:08	0.1	9.6	18.5	71.8	67.0	67.1	1	3	-17.1	-17.0	-17.8
GEW-143	3/21/2017 14:10	0.0	7.6	18.5	73.9	67.5	67.5	2	2	-17.9	-17.9	-17.8
GEW-144	3/3/2017 14:32	0.2	53.9	1.8	44.1	59.5	58.5	7	10	-2.7	-3.1	-2.6
GEW-144	3/3/2017 14:41	0.0	52.6	2.8	44.6	54.3	53.9	1	3	-3.4	-3.9	-3.4
GEW-144	3/21/2017 14:03	1.4	35.9	8.4	54.3	69.1	69.3	0	6	-1.4	-1.5	-1.5
GEW-144	3/21/2017 14:05	2.0	39.5	6.3	52.2	69.8	69.8	3	4	-1.7	-1.8	-1.5
GEW-145	3/3/2017 11:22	1.8	11.6	17.7	68.9	53.9	54.1	2	2	-17.6	-17.6	-17.6
GEW-145	3/3/2017 11:24	1.5	7.6	18.4	72.5	54.2	54.2	4	4	-17.6	-17.6	-17.6
GEW-145	3/21/2017 13:16	0.3	0.0	20.9	78.8	65.6	65.8	5	4	-17.5	-17.5	-17.3
GEW-145	3/21/2017 13:18	0.2	1.0	20.7	78.1	66.3	66.3	2	2	-17.5	-17.5	-17.7
GEW-146	3/9/2017 15:13	2.5	5.3	18.1	74.1	86.8	86.8	11	11	-0.3	-0.3	-18.4
GEW-146	3/9/2017 15:14	2.8	4.1	18.3	74.8	86.8	86.8	14	12	-0.3	-0.3	-18.6
GEW-146	3/23/2017 9:13	1.7	10.2	18.5	69.6	68.9	68.8	16	16	-0.2	-0.2	-19.3
GEW-146	3/23/2017 9:14	1.8	7.2	18.8	72.2	69.0	69.0	17	8	-0.3	-0.2	-19.6
GEW-147	3/10/2017 11:06	14.2	47.6	0.0	38.2	158.5	159.0	17	17	-16.2	-16.2	-17.9
GEW-147	3/10/2017 11:15	14.5	47.2	0.0	38.3	148.0	148.3	17	15	-17.2	-17.2	-18.4
GEW-147	3/23/2017 8:47	12.9	48.5	0.1	38.5	149.9	149.9	16	16	-18.6	-18.3	-19.1
GEW-147	3/23/2017 8:49	12.6	49.0	0.0	38.4	150.2	150.1	17	16	-18.6	-18.6	-19.2
GEW-148	3/10/2017 8:41	0.1	26.5	17.5	55.9	47.4	47.7	16	16	-17.5	-17.5	-18.1
GEW-148	3/10/2017 8:43	0.0	8.2	20.5	71.3	50.5	50.7	7	7	-17.8	-17.8	-18.0
GEW-148	3/28/2017 9:25	0.1	2.2	21.7	76.0	56.6	56.7	6	4	-18.3	-18.2	-18.2
GEW-148	3/28/2017 9:27	0.0	0.4	21.1	78.5	57.2	57.2	5	5	-18.2	-18.1	-18.1
GEW-149	3/10/2017 9:20	12.7	43.7	2.6	41.0	105.3	105.5	26	26	-0.7	-0.7	-17.7
GEW-149	3/10/2017 9:28	12.7	43.5	2.8	41.0	107.7	107.8	25	25	-0.7	-0.7	-17.4
GEW-149	3/23/2017 10:27	12.8	47.8	1.9	37.5	95.7	95.6	24	29	-1.0	-0.7	-18.4
GEW-150	3/3/2017 9:35	12.3	40.2	4.1	43.4	100.8	101.1	5	4	-1.4	-1.4	-17.6
GEW-150	3/3/2017 9:44	12.3	39.0	4.4	44.3	107.7	106.5	3	2	-1.0	-1.0	-17.6
GEW-150	3/21/2017 11:24	15.9	39.5	4.6	40.0	90.0	90.1	3	3	-0.4	-0.4	-16.8
GEW-151	3/10/2017 8:28	1.2	51.0	0.0	47.8	47.0	47.0	45	45	2.4	2.4	4.2
GEW-151	3/10/2017 8:35	1.3	49.9	0.0	48.8	48.8	48.9	5	5	4.4	4.4	4.3
GEW-151	3/23/2017 9:31	1.3	50.4	0.0	48.3	42.7	42.7	5	1	0.8	0.9	0.4
GEW-151	3/23/2017 9:32	1.1	51.4	0.0	47.5	42.7	42.7	4	1	0.8	0.9	0.7
GEW-152	3/3/2017 7:46	0.1	2.5	21.5	75.9	40.5	40.5	4	3	-9.3	-9.3	-18.2
GEW-152	3/3/2017 7:49	0.0	0.2	21.0	78.8	39.1	39.2	3	3	-10.2	-10.2	-18.4
GEW-152	3/21/2017 10:36	0.3	5.3	21.0	73.4	63.4	63.5	2	1	-18.9	-18.7	-18.7
GEW-152	3/21/2017 10:38	0.1	1.2	21.7	77.0	64.0	64.0	2	2	-18.9	-18.9	-18.7
GEW-153	3/3/2017 7:55	2.2	6.5	17.0	74.3	44.6	44.6	6	1	-13.7	-13.7	-13.6
GEW-153	3/3/2017 8:02	39.0	40.5	0.0	20.5	44.6	45.4	12	19	-14.2	-13.6	-14.0
GEW-153	3/3/2017 8:12	39.9	43.8	0.0	16.3	43.4	43.4	13	10	-13.2	-13.5	-13.0
GEW-153	3/21/2017 10:42	38.2	41.9	0.0	19.9	120.7	120.7	15	15	-11.8	-11.8	-12.3

March 2017 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-153	3/21/2017 10:44	37.6	45.6	0.0	16.8	120.6	121.3	14	14	-11.9	-11.9	-12.3
GEW-154	3/10/2017 8:52	34.6	40.5	2.2	22.7	44.9	45.4	9	5	-5.0	-5.5	-4.2
GEW-154	3/10/2017 9:00	36.7	42.5	1.5	19.3	42.5	42.5	7	7	-5.9	-5.9	-6.9
GEW-154	3/23/2017 9:50	14.9	28.0	10.5	46.6	42.1	42.1	11	4	-3.0	-3.1	-5.7
GEW-154	3/23/2017 9:53	15.3	26.9	10.7	47.1	41.9	41.8	4	5	-3.1	-3.1	-6.7
GEW-155	3/9/2017 10:31	2.8	11.4	15.1	70.7	77.5	78.0	2	4	-15.2	-15.4	-15.1
GEW-155	3/9/2017 10:32	3.3	9.4	14.5	72.8	79.3	79.3	7	4	-14.7	-15.2	-14.6
GEW-155	3/23/2017 8:19	2.3	31.2	5.8	60.7	139.0	139.0	12	11	-0.5	-0.5	-15.8
GEW-155	3/23/2017 8:21	2.5	28.0	6.0	63.5	139.3	139.3	12	11	-0.5	-0.5	-16.1
GEW-156	3/3/2017 11:06	16.0	32.9	3.9	47.2	90.5	90.3	6	10	-0.6	-0.5	-18.1
GEW-156	3/3/2017 11:14	16.3	32.2	4.4	47.1	89.1	89.3	9	9	-0.5	-0.4	-18.1
GEW-156	3/21/2017 11:48	16.8	35.7	4.4	43.1	90.3	90.3	5	4	-0.3	-0.3	-18.2
GEW-157	3/3/2017 10:22	0.6	9.2	18.9	71.3	52.8	52.8	6	5	-9.5	-10.2	-9.6
GEW-157	3/3/2017 10:23	0.4	2.7	20.2	76.7	53.4	53.5	8	7	-10.4	-9.9	-10.5
GEW-157	3/21/2017 11:34	0.0	3.9	20.7	75.4	67.7	67.9	2	2	-9.3	-9.3	-9.4
GEW-157	3/21/2017 11:36	0.0	2.8	20.8	76.4	68.7	68.6	4	4	-10.3	-10.4	-10.4
GEW-158	3/10/2017 10:46	33.8	40.4	0.0	25.8	54.2	54.6	5	2	-1.3	-1.2	-16.8
GEW-158	3/10/2017 10:54	28.4	34.3	3.7	33.6	56.5	56.5	7	2	-7.2	-7.4	-17.0
GEW-158	3/21/2017 11:10	0.5	48.0	1.0	50.5	71.6	71.4	10	5	-0.6	-0.9	-16.8
GEW-159	3/3/2017 7:39	0.8	11.1	19.7	68.4	40.8	40.8	7	6	-10.2	-10.2	-10.2
GEW-159	3/3/2017 7:40	0.1	3.4	21.4	75.1	39.9	39.8	1	3	-9.7	-9.7	-9.7
GEW-159	3/21/2017 10:24	37.9	44.0	0.0	18.1	83.5	83.5	3	3	-8.6	-8.6	-9.4
GEW-160	3/10/2017 9:51	12.0	50.1	0.8	37.1	54.2	54.6	10	10	-9.1	-9.1	-9.3
GEW-160	3/10/2017 10:00	12.1	50.9	0.8	36.2	56.0	55.7	7	7	-9.3	-9.3	-9.4
GEW-160	3/23/2017 10:03	9.2	53.9	0.5	36.4	43.4	43.4	9	9	-6.1	-6.4	-6.0
GEW-161	3/10/2017 10:03	0.6	29.8	12.2	57.4	51.0	51.3	2	2	-9.3	-9.3	-9.1
GEW-161	3/10/2017 10:05	0.4	28.0	12.2	59.4	52.4	52.4	12	12	-8.9	-8.9	-9.3
GEW-161	3/23/2017 10:07	0.3	41.8	7.6	50.3	41.8	41.8	4	3	-6.4	-6.4	-6.4
GEW-161	3/23/2017 10:09	0.3	42.6	7.1	50.0	41.8	41.8	2	4	-6.4	-6.4	-6.4
GEW-162	3/10/2017 9:33	5.0	30.7	13.4	50.9	45.0	45.2	8	8	-17.9	-17.9	-18.2
GEW-162	3/10/2017 9:43	4.5	27.0	14.9	53.6	45.2	45.2	4	4	-18.0	-18.0	-18.2
GEW-163	3/1/2017 9:20	5.2	28.6	9.9	56.3	149.1	149.1	26	26	-0.6	-0.6	-8.9
GEW-163	3/1/2017 9:22	5.1	29.3	9.7	55.9	148.8	148.9	26	29	-0.7	-0.7	-8.5
GEW-163	3/7/2017 14:18	5.4	34.4	7.7	52.5	150.9	151.0	20	36	-0.6	-0.6	-7.0
GEW-163	3/7/2017 14:27	5.2	32.0	8.1	54.7	150.6	151.3	34	20	-0.6	-0.7	-6.6
GEW-163	3/14/2017 7:42	4.6	29.9	10.0	55.5	143.2	143.4	32	28	-0.6	-0.6	-5.9
GEW-163	3/14/2017 7:44	4.6	30.2	10.0	55.2	142.9	143.6	19	32	-0.6	-0.6	-5.9
GEW-163	3/22/2017 14:22	0.6	14.4	16.9	68.1	144.5	144.2	40	41	-0.7	-0.7	-6.0
GEW-163	3/22/2017 14:25	0.5	12.7	17.1	69.7	142.5	142.2	15	31	-0.2	-0.2	-6.4
GEW-163	3/29/2017 8:08	3.1	29.2	9.3	58.4	166.2	166.1	10	8	-0.2	-0.2	-5.1
GEW-163	3/29/2017 8:10	2.5	32.2	9.3	56.0	165.7	165.8	25	17	-0.2	-0.2	-5.0
GEW-163	3/31/2017 10:52	2.0	57.9	0.4	39.7	197.9	197.9	23	20	-0.5	-0.5	-6.4
GEW-163	3/31/2017 10:54	1.7	62.1	0.0	36.2	197.2	197.2	36	32	-1.2	-1.0	-6.0

March 2017 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-164	3/1/2017 9:28	9.1	35.3	9.4	46.2	141.0	141.1	55	50	-3.7	-3.7	-18.2
GEW-164	3/1/2017 9:30	8.8	35.2	9.5	46.5	140.9	140.9	50	46	-3.7	-3.6	-18.1
GEW-164	3/7/2017 14:04	11.8	41.1	6.5	40.6	138.7	138.9	55	41	-2.5	-2.5	-15.7
GEW-164	3/7/2017 14:14	11.5	42.1	5.9	40.5	136.5	136.8	53	30	-0.7	-0.6	-16.5
GEW-164	3/14/2017 7:48	7.9	60.4	1.0	30.7	31.5	31.4	18	27	-14.8	-14.7	-14.9
GEW-164	3/22/2017 14:05	7.9	61.9	0.1	30.1	65.9	65.7	24	34	-15.6	-15.4	-15.5
GEW-164	3/29/2017 8:14	7.9	60.3	0.0	31.8	54.0	54.0	24	22	-13.8	-13.7	-14.1
GEW-164	3/31/2017 10:59	11.2	66.0	0.0	22.8	156.9	156.9	14	29	-12.7	-12.8	-14.2
GEW-164	3/31/2017 11:00	12.0	66.3	0.0	21.7	157.3	156.9	20	31	-12.7	-12.8	-14.1
GEW-165	3/1/2017 9:36	9.1	59.2	0.2	31.5	187.0	187.0	13	29	-18.3	-18.2	-18.9
GEW-165	3/1/2017 9:39	8.2	63.2	0.0	28.6	187.0	187.0	26	15	-18.4	-18.6	-18.9
GEW-165	3/6/2017 13:37	5.9	62.1	0.0	32.0	187.0	187.1	22	24	-18.2	-18.2	-18.6
GEW-165	3/6/2017 13:45	6.0	62.0	0.0	32.0	186.8	187.0	23	27	-18.1	-18.3	-18.4
GEW-165	3/14/2017 7:53	5.8	63.2	1.5	29.5	187.6	186.4	26	21	-16.2	-16.2	-17.6
GEW-165	3/14/2017 7:56	5.9	58.2	1.6	34.3	186.4	187.2	19	14	-17.2	-17.2	-17.4
GEW-165	3/22/2017 13:50	5.9	54.5	1.6	38.0	187.0	187.0	24	24	-17.9	-17.9	-18.1
GEW-165	3/22/2017 13:52	6.1	58.6	1.4	33.9	187.0	187.0	31	27	-17.9	-17.9	-18.1
GEW-165	3/29/2017 8:20	6.6	57.0	1.4	35.0	187.6	186.4	18	26	-18.6	-18.6	-18.9
GEW-165	3/29/2017 8:21	5.9	57.9	1.3	34.9	186.4	186.4	24	20	-18.6	-18.6	-19.0
GEW-165	3/31/2017 11:05	5.7	57.5	1.7	35.1	185.7	185.7	5	33	-18.3	-18.3	-18.7
GEW-165	3/31/2017 11:07	5.8	58.7	1.5	34.0	185.1	186.4	16	24	-18.4	-18.5	-18.7
GEW-166	3/1/2017 9:46	0.4	59.1	0.0	40.5	190.9	190.9	39	41	-0.8	-0.9	-19.2
GEW-166	3/1/2017 9:49	0.4	59.6	0.0	40.0	190.6	190.9	71	73	-1.6	-1.7	-19.2
GEW-166	3/6/2017 13:50	0.3	60.5	0.0	39.2	192.9	192.5	17	18	2.7	2.7	-19.2
GEW-166	3/6/2017 14:00	0.3	54.4	0.0	45.3	192.9	192.9	27	34	-0.4	-0.6	-19.2
GEW-166	3/14/2017 8:00	0.8	46.9	5.4	46.9	184.6	184.5	8	9	-1.6	-1.6	-18.1
GEW-166	3/14/2017 8:03	0.8	48.9	3.8	46.5	184.5	184.5	24	23	-0.6	-0.6	-18.0
GEW-166	3/22/2017 13:41	2.7	33.1	11.4	52.8	169.8	170.0	14	24	-13.4	-13.2	-18.9
GEW-166	3/22/2017 13:45	1.5	33.0	9.6	55.9	163.1	163.8	5	13	-0.2	-0.3	-18.3
GEW-166	3/23/2017 11:15	1.6	44.8	6.6	47.0	182.1	182.1	17	18	-16.9	-16.9	-19.5
GEW-166	3/23/2017 11:18	1.1	47.3	5.7	45.9	177.0	177.5	11	9	-1.6	-1.5	-19.3
GEW-166	3/29/2017 8:25	0.6	56.6	0.0	42.8	191.8	191.6	12	3	0.9	0.9	-19.7
GEW-166	3/29/2017 8:28	0.3	58.2	0.0	41.5	192.3	191.6	39	31	-0.9	-0.7	-19.4
GEW-166	3/31/2017 11:54	0.9	56.8	0.0	42.3	195.0	195.4	7	8	3.4	3.4	-19.3
GEW-166	3/31/2017 11:57	0.4	59.3	0.4	39.9	195.4	195.7	23	13	-2.7	-2.8	-19.2
GEW-167	3/1/2017 9:54	3.3	45.3	5.2	46.2	173.2	173.5	43	43	-0.4	-0.4	-16.8
GEW-167	3/1/2017 9:56	3.3	44.6	5.1	47.0	173.1	173.1	22	19	-0.5	-0.6	-16.7
GEW-167	3/6/2017 14:06	2.4	44.7	5.1	47.8	175.8	176.4	61	61	-0.3	-0.3	-15.7
GEW-167	3/6/2017 15:17	0.3	56.5	0.0	43.2	184.5	184.5	47	47	-0.8	-0.6	-17.5
GEW-167	3/14/2017 8:07	0.4	53.1	0.0	46.5	185.7	185.7	67	67	-1.7	-1.7	-17.7
GEW-167	3/14/2017 8:13	0.2	55.0	0.0	44.8	187.0	187.6	56	55	-0.1	-0.1	-18.0
GEW-167	3/22/2017 13:28	3.0	29.5	11.8	55.7	130.0	129.4	109	107	-7.6	-7.6	-17.1

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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-167	3/22/2017 13:33	3.3	25.6	11.9	59.2	122.4	122.3	20	20	-0.4	-0.4	-18.4
GEW-167	3/30/2017 8:05	2.5	53.3	0.0	44.2	195.7	195.7	8	3	2.3	2.3	-18.9
GEW-167	3/30/2017 8:08	0.3	57.3	0.0	42.4	196.4	196.4	8	9	-0.6	-0.6	-19.0
GEW-167	3/31/2017 12:00	2.2	48.1	5.0	44.7	192.3	192.3	48	47	-1.7	-1.7	-19.3
GEW-167	3/31/2017 12:02	2.4	46.3	4.8	46.5	192.3	192.3	46	46	-1.5	-1.5	-19.2
GEW-168	3/1/2017 10:01	4.0	36.7	10.4	48.9	146.3	146.6	174	174	-10.0	-10.0	-19.3
GEW-168	3/1/2017 10:08	4.6	38.3	9.0	48.1	137.5	137.4	104	105	-2.3	-2.3	-19.0
GEW-168	3/6/2017 13:09	3.4	55.6	1.6	39.4	159.0	159.4	100	100	-0.2	-0.2	-18.6
GEW-168	3/6/2017 13:18	3.5	58.9	1.4	36.2	159.8	159.4	97	97	-0.1	-0.1	-17.8
GEW-168	3/14/2017 8:24	4.4	36.1	10.4	49.1	143.9	142.9	180	180	-8.4	-8.4	-17.5
GEW-168	3/14/2017 8:28	4.7	36.9	9.6	48.8	132.0	131.7	90	90	-1.3	-1.2	-17.6
GEW-168	3/22/2017 13:14	2.3	56.6	0.0	41.1	193.6	193.6	191	192	0.3	0.3	-17.9
GEW-168	3/22/2017 13:17	2.1	60.9	0.0	37.0	192.9	192.9	201	202	-0.5	-0.5	-17.8
GEW-168	3/29/2017 8:34	3.2	59.0	0.0	37.8	191.6	191.5	213	213	-0.3	-0.4	-19.5
GEW-168	3/29/2017 8:36	3.2	61.4	0.0	35.4	191.6	191.6	199	199	-1.8	-1.9	-19.4
GEW-168	3/31/2017 12:07	3.6	52.9	2.9	40.6	185.1	185.0	194	188	-3.0	-2.6	-18.8
GEW-168	3/31/2017 12:08	4.1	54.1	2.8	39.0	184.3	183.9	186	187	-2.7	-2.8	-18.9
GEW-169	3/1/2017 10:12	2.0	38.3	8.7	51.0	162.9	160.7	8	7	-1.2	-1.2	-19.6
GEW-169	3/1/2017 10:16	1.8	40.8	8.4	49.0	160.2	159.8	26	26	-1.0	-0.9	-19.2
GEW-169	3/6/2017 12:24	2.3	38.4	8.5	50.8	167.1	168.1	8	9	-1.3	-1.3	-18.4
GEW-169	3/6/2017 12:34	2.3	40.7	8.1	48.9	163.8	163.3	9	6	-0.4	-0.4	-17.7
GEW-169	3/14/2017 8:32	3.0	41.8	8.5	46.7	188.3	188.9	38	36	-4.2	-4.1	-18.6
GEW-169	3/14/2017 8:34	3.7	54.3	3.8	38.2	193.6	193.0	28	42	-0.8	-1.0	-18.5
GEW-169	3/22/2017 13:05	2.7	31.5	11.6	54.2	172.1	172.1	71	67	-14.2	-14.2	-18.2
GEW-169	3/22/2017 13:10	2.5	36.1	8.9	52.5	175.3	175.3	11	11	-0.8	-0.8	-18.2
GEW-169	3/29/2017 8:40	1.5	63.0	0.0	35.5	197.2	196.8	6	15	1.3	1.4	-19.7
GEW-169	3/29/2017 8:43	1.3	63.9	0.0	34.8	197.2	197.2	35	34	-0.8	-0.8	-19.4
GEW-169	3/31/2017 12:11	5.2	61.8	0.0	33.0	197.9	197.9	31	27	1.9	1.8	-20.0
GEW-169	3/31/2017 12:13	4.1	64.8	0.0	31.1	197.9	197.9	25	34	-2.0	-2.2	-20.1
GEW-170	3/2/2017 14:07	3.7	56.4	3.5	36.4	158.1	158.1	11	10	-0.8	-0.8	-13.7
GEW-170	3/2/2017 14:16	3.7	55.1	3.5	37.7	157.7	157.3	15	10	-0.8	-0.8	-14.8
GEW-170	3/22/2017 11:16	4.1	52.7	4.4	38.8	164.7	165.0	10	14	-1.0	-1.0	-14.1
GEW-170	3/22/2017 11:19	4.1	55.0	4.2	36.7	161.6	161.6	13	11	-0.2	-0.2	-16.1
GEW-172	3/21/2017 14:14	0.4	53.6	0.0	46.0	83.1	82.1	13	11	8.9	9.0	8.9
GEW-172	3/21/2017 14:16	0.3	56.1	0.0	43.6	80.1	79.2	15	21	8.0	8.0	8.2
GEW-173	3/3/2017 13:53	8.6	21.4	9.6	60.4	90.8	90.8	32	31	-0.7	-0.7	-17.6
GEW-173	3/3/2017 13:57	8.6	22.3	9.4	59.7	91.0	91.1	26	28	-0.5	-0.5	-17.6
GEW-173	3/21/2017 14:31	11.0	37.4	6.1	45.5	93.9	94.6	22	34	-0.4	-0.4	-16.7
GEW-173	3/21/2017 14:39	11.1	34.7	6.0	48.2	92.5	92.7	11	11	-0.1	-0.1	-17.6
GEW-174	3/3/2017 11:39	6.0	36.2	6.1	51.7	143.5	143.3	47	20	-0.3	-0.3	-11.0
GEW-174	3/3/2017 11:46	5.9	34.9	6.1	53.1	144.2	144.1	26	26	-0.3	-0.3	-11.1
GEW-174	3/22/2017 10:37	5.7	33.2	7.2	53.9	140.2	140.2	29	29	-0.3	-0.3	-11.8
GEW-174	3/22/2017 10:39	5.4	35.6	7.2	51.8	140.6	140.6	22	31	-0.3	-0.3	-11.9

March 2017 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-175	3/3/2017 9:14	17.8	46.1	3.6	32.5	123.1	122.9	59	59	-1.0	-1.0	-18.9
GEW-175	3/3/2017 9:28	17.4	45.6	3.8	33.2	125.8	125.6	61	54	-0.9	-0.9	-19.5
GEW-175	3/21/2017 11:21	20.1	47.1	3.2	29.6	131.2	131.1	61	55	-0.9	-0.9	-19.1
GEW-175	3/22/2017 10:21	19.6	48.4	2.9	29.1	129.7	129.7	48	58	-0.8	-0.8	-20.4
GEW-176	3/3/2017 8:56	18.9	40.7	5.4	35.0	105.9	106.0	25	18	-0.9	-1.3	-20.2
GEW-176	3/3/2017 9:06	20.0	41.6	5.1	33.3	104.8	104.8	16	16	-0.3	-0.4	-20.2
GEW-176	3/21/2017 11:17	20.7	43.6	3.6	32.1	110.1	110.0	10	10	-0.2	-0.2	-19.0
GEW-177	3/2/2017 13:43	0.1	44.0	8.5	47.4	61.8	61.7	13	19	-17.8	-17.3	-17.6
GEW-177	3/2/2017 13:45	0.1	43.9	8.4	47.6	61.7	61.7	12	5	-17.8	-17.3	-17.6
GEW-177	3/22/2017 10:53	0.1	43.8	8.0	48.1	55.7	55.8	15	32	-18.3	-18.3	-18.3
GEW-177	3/22/2017 10:56	0.1	49.4	6.2	44.3	56.0	56.0	12	15	-18.3	-18.3	-18.4
GEW-1A	3/9/2017 7:42	0.2	6.6	20.4	72.8	58.2	58.2	2	4	-11.3	-11.3	-13.7
GEW-1A	3/9/2017 7:44	0.4	2.2	21.2	76.2	58.7	58.7	3	3	-12.3	-12.3	-13.8
GEW-1A	3/16/2017 9:09	0.7	7.6	21.0	70.7	42.7	42.7	4	4	-12.2	-12.3	-15.2
GEW-1A	3/16/2017 9:13	0.2	0.9	21.1	77.8	43.1	43.1	2	2	-13.7	-13.7	-14.9
GEW-1A	3/20/2017 13:06	0.3	1.4	20.8	77.5	92.3	92.4	2	2	-9.8	-9.8	-12.8
GEW-1A	3/20/2017 13:08	0.1	0.2	21.1	78.6	93.1	93.2	2	2	-11.6	-11.6	-12.9
GEW-1A	3/28/2017 15:30	0.7	6.0	20.2	73.1	61.4	61.4	5	5	-10.9	-10.9	-13.3
GEW-1A	3/28/2017 15:31	0.4	0.6	20.7	78.3	62.1	62.1	3	3	-12.9	-12.8	-13.3
GEW-2S	3/9/2017 7:53	59.9	37.4	0.0	2.7	67.9	68.2	4	3	-9.3	-9.3	-10.2
GEW-2S	3/9/2017 7:59	59.7	37.9	0.0	2.4	70.7	70.8	8	11	-8.4	-8.4	-9.3
GEW-2S	3/16/2017 9:21	60.4	37.6	0.0	2.0	48.9	48.8	13	7	-10.0	-10.2	-11.1
GEW-2S	3/20/2017 13:16	59.4	38.5	0.0	2.1	92.7	93.1	6	6	-7.8	-7.8	-9.0
GEW-2S	3/28/2017 15:35	59.5	35.9	0.4	4.2	62.8	62.8	1	4	-5.5	-5.8	-11.0
GIW-01	3/7/2017 8:39	14.1	56.4	2.4	27.1	62.6	62.3	2	3	-17.7	-17.5	-18.2
GIW-01	3/7/2017 8:46	13.9	56.3	2.1	27.7	63.3	62.9	3	2	-17.5	-17.6	-17.8
GIW-01	3/16/2017 10:55	18.2	48.0	1.6	32.2	65.6	65.4	3	3	-18.1	-18.1	-19.1
GIW-01	3/21/2017 7:50	15.6	34.2	5.1	45.1	61.5	61.5	2	5	-19.1	-19.2	-19.7
GIW-01	3/21/2017 7:52	15.0	35.7	5.0	44.3	61.8	61.8	1	5	-19.2	-19.0	-19.7
GIW-01	3/27/2017 13:50	17.2	60.1	0.6	22.1	69.1	69.1	2	2	-18.9	-18.7	-19.7
GIW-02	3/7/2017 8:50	5.0	35.3	9.6	50.1	58.0	58.0	4	4	-0.3	-0.2	-18.2
GIW-02	3/7/2017 8:57	5.3	32.3	9.6	52.8	58.5	58.5	5	2	-0.2	-0.3	-18.2
GIW-02	3/16/2017 11:00	10.6	45.0	3.2	41.2	56.9	57.0	2	3	-0.2	-0.2	-19.1
GIW-02	3/21/2017 7:56	4.2	28.7	10.5	56.6	51.3	51.3	5	3	-0.3	-0.3	-19.7
GIW-02	3/21/2017 7:58	4.0	28.5	10.5	57.0	51.4	51.4	4	2	-0.3	-0.3	-19.7
GIW-02	3/27/2017 13:54	4.5	35.6	6.7	53.2	58.0	58.0	6	4	-0.3	-0.3	-19.7
GIW-02	3/27/2017 13:56	4.6	33.2	6.8	55.4	58.0	58.0	4	1	-0.3	-0.3	-19.6
GIW-03	3/7/2017 9:02	1.4	56.5	0.4	41.7	54.8	54.8	6	5	-0.2	-0.1	-8.5
GIW-03	3/7/2017 9:11	1.2	61.1	0.5	37.2	56.3	56.3	4	3	-0.1	-0.1	-8.5
GIW-03	3/16/2017 11:05	1.8	46.1	4.6	47.5	55.7	55.7	3	3	-4.9	-4.9	-10.2
GIW-03	3/16/2017 11:09	1.8	49.7	4.0	44.5	57.8	57.7	3	2	-1.1	-1.1	-10.3
GIW-03	3/21/2017 8:01	1.1	43.9	6.1	48.9	49.4	49.3	4	4	-6.9	-6.9	-9.9
GIW-03	3/21/2017 8:03	1.0	46.7	5.8	46.5	49.6	49.6	2	4	-6.9	-7.0	-9.9

March 2017 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-03	3/27/2017 13:59	2.0	41.9	6.3	49.8	58.5	58.5	4	2	-13.2	-13.3	-17.4
GIW-03	3/27/2017 14:01	2.3	43.2	6.3	48.2	58.5	58.5	2	3	-13.1	-13.2	-17.9
GIW-04	3/7/2017 9:16	0.1	15.2	17.7	67.0	57.8	57.7	3	3	-7.8	-7.8	-8.4
GIW-04	3/7/2017 9:23	0.1	9.9	18.6	71.4	54.7	54.5	3	1	-7.9	-7.8	-8.3
GIW-04	3/16/2017 11:13	0.1	10.9	17.6	71.4	58.7	58.7	2	2	-9.7	-9.7	-10.2
GIW-04	3/16/2017 11:15	0.1	8.0	18.0	73.9	59.2	59.1	1	0	-9.7	-9.7	-10.2
GIW-04	3/21/2017 8:07	0.2	15.9	17.2	66.7	53.1	53.2	4	4	-9.6	-9.6	-9.9
GIW-04	3/21/2017 8:09	0.2	11.2	17.9	70.7	53.7	53.7	3	2	-9.8	-9.7	-9.9
GIW-04	3/27/2017 14:05	0.4	25.6	13.2	60.8	59.0	59.0	5	4	-18.1	-18.3	-19.7
GIW-04	3/27/2017 14:07	0.5	23.4	12.8	63.3	59.3	59.3	2	3	-18.1	-18.4	-18.9
GIW-05	3/7/2017 11:07	0.1	8.6	20.1	71.2	57.1	57.1	0	0	-0.3	-0.2	-8.0
GIW-05	3/7/2017 11:13	0.0	3.1	21.1	75.8	57.8	57.8	0	0	-0.3	-0.3	-7.8
GIW-05	3/16/2017 11:51	0.0	3.0	20.2	76.8	53.9	53.9	0	0	-13.7	-13.7	-9.9
GIW-05	3/16/2017 11:53	0.0	1.6	20.5	77.9	54.1	54.2	171	171	-20.1	-20.1	-10.2
GIW-05	3/21/2017 8:50	0.1	13.3	18.8	67.8	54.4	54.5	50	49	-8.5	-8.4	-9.9
GIW-05	3/21/2017 8:52	0.0	10.5	19.3	70.2	54.7	54.8	29	29	-16.7	-16.7	-9.9
GIW-05	3/27/2017 14:43	0.1	12.5	19.1	68.3	58.3	58.4	0	0	-8.8	-8.8	-17.6
GIW-05	3/27/2017 14:45	0.0	7.7	20.0	72.3	58.5	58.5	0	0	-16.2	-16.2	-19.0
GIW-06	3/7/2017 12:54	31.5	45.9	0.4	22.2	64.0	64.1	5	5	-6.9	-6.9	-7.6
GIW-06	3/7/2017 12:59	30.9	46.1	0.3	22.7	64.1	64.1	4	5	-6.9	-6.9	-7.5
GIW-06	3/16/2017 13:14	32.2	44.3	0.3	23.2	48.1	48.0	5	5	-9.4	-9.4	-9.6
GIW-06	3/21/2017 8:56	14.3	47.3	0.4	38.0	57.5	57.5	4	2	-9.9	-9.9	-9.9
GIW-06	3/27/2017 14:49	10.3	46.2	0.0	43.5	59.1	59.1	1	4	-19.1	-19.1	-19.4
GIW-07	3/7/2017 13:13	37.6	46.2	1.0	15.2	66.1	66.1	3	4	-1.9	-1.9	-7.5
GIW-07	3/7/2017 13:20	37.7	47.9	1.0	13.4	67.1	67.1	4	4	-1.7	-1.7	-7.5
GIW-07	3/16/2017 13:18	43.3	44.1	0.8	11.8	47.5	47.6	4	4	-2.2	-2.2	-9.4
GIW-07	3/21/2017 9:24	28.3	50.6	2.7	18.4	56.8	56.9	3	4	-4.8	-4.8	-10.0
GIW-07	3/27/2017 14:53	25.9	56.0	1.4	16.7	58.4	58.4	3	1	-8.0	-8.1	-18.2
GIW-08	3/7/2017 13:25	36.7	52.9	0.0	10.4	64.7	64.7	5	4	-3.1	-3.1	-7.5
GIW-08	3/7/2017 13:31	37.1	53.1	0.0	9.8	64.9	64.9	5	4	-3.1	-3.0	-7.5
GIW-08	3/16/2017 13:21	43.4	49.7	0.0	6.9	48.5	48.5	4	4	-4.0	-4.0	-9.4
GIW-08	3/23/2017 11:09	24.2	57.4	0.0	18.4	41.7	41.6	2	5	-5.1	-5.1	-10.6
GIW-08	3/27/2017 14:56	24.7	56.5	0.0	18.8	59.9	59.9	4	3	-7.8	-7.9	-18.2
GIW-09	3/7/2017 13:42	5.8	31.4	5.8	57.0	65.0	65.0	5	3	-0.1	-0.1	-7.5
GIW-09	3/7/2017 13:48	6.7	25.0	6.0	62.3	65.4	65.4	4	3	-0.1	-0.1	-7.5
GIW-09	3/16/2017 13:28	26.7	38.9	2.3	32.1	48.3	48.4	2	3	-0.2	-0.2	-9.8
GIW-09	3/21/2017 9:35	4.6	24.1	8.6	62.7	65.2	65.4	2	3	-0.5	-0.5	-9.4
GIW-09	3/21/2017 9:37	4.9	21.6	8.8	64.7	65.8	65.8	3	3	-0.5	-0.5	-9.4
GIW-09	3/27/2017 15:03	8.6	29.1	6.2	56.1	59.9	59.9	3	4	-0.7	-0.7	-19.2
GIW-09	3/27/2017 15:05	9.3	25.6	6.4	58.7	59.7	59.7	2	2	-0.7	-0.7	-17.9
GIW-10	3/7/2017 10:54	7.2	54.5	0.0	38.3	59.8	59.9	2	2	-1.2	-1.2	-8.3
GIW-10	3/7/2017 11:02	7.2	53.3	0.0	39.5	60.1	60.2	3	3	-1.2	-1.2	-7.9
GIW-10	3/16/2017 11:46	6.7	55.6	0.0	37.7	54.9	54.9	3	2	-1.1	-1.1	-10.0

March 2017 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-10	3/21/2017 8:45	3.6	53.7	0.0	42.7	54.4	54.5	3	3	-2.0	-2.0	-9.9
GIW-10	3/27/2017 14:38	3.7	56.3	0.0	40.0	59.2	59.2	1	2	-3.1	-3.1	-18.3
GIW-11	3/7/2017 10:42	6.9	53.4	0.2	39.5	61.8	61.8	4	5	-1.8	-1.8	-18.3
GIW-11	3/7/2017 10:51	6.6	56.8	0.2	36.4	60.0	60.0	3	1	-0.4	-0.4	-18.1
GIW-11	3/16/2017 11:41	1.8	59.3	0.0	38.9	55.4	55.5	2	2	0.1	0.1	-18.7
GIW-11	3/16/2017 11:43	1.6	61.9	0.0	36.5	55.7	55.7	4	2	-0.1	-0.1	-18.3
GIW-11	3/21/2017 8:41	2.6	60.1	0.0	37.3	57.7	57.7	3	3	-0.6	-0.6	-19.6
GIW-11	3/27/2017 14:34	3.3	59.3	0.0	37.4	58.7	58.7	2	2	-0.5	-0.5	-19.8
GIW-12	3/7/2017 10:15	9.8	37.4	7.5	45.3	58.8	58.8	6	3	-0.3	-0.3	-16.6
GIW-12	3/7/2017 10:23	10.3	34.4	7.8	47.5	58.8	58.9	17	22	-0.6	-0.7	-16.2
GIW-12	3/16/2017 11:35	10.1	46.7	3.3	39.9	51.6	51.8	2	2	-0.2	-0.2	-16.6
GIW-12	3/21/2017 8:32	9.6	35.7	8.1	46.6	52.3	52.3	2	2	-0.3	-0.3	-18.7
GIW-12	3/21/2017 8:34	9.7	34.4	8.3	47.6	53.1	53.1	4	2	-0.3	-0.3	-17.6
GIW-12	3/27/2017 14:25	11.2	38.3	7.1	43.4	58.2	58.2	3	2	-0.3	-0.3	-18.7
GIW-12	3/27/2017 14:27	11.4	36.8	7.2	44.6	58.2	58.2	2	2	-0.2	-0.3	-17.8
GIW-13	3/7/2017 10:02	14.2	63.5	0.0	22.3	58.2	58.2	3	4	-1.6	-1.6	-14.2
GIW-13	3/7/2017 10:11	14.1	63.4	0.0	22.5	59.4	59.4	4	4	-1.7	-1.7	-13.2
GIW-13	3/16/2017 11:31	14.1	60.7	0.0	25.2	52.1	52.0	3	3	-1.4	-1.4	-14.3
GIW-13	3/21/2017 8:29	11.9	61.5	0.0	26.6	51.8	51.8	5	5	-0.9	-0.9	-8.0
GIW-13	3/27/2017 14:21	11.8	63.0	0.0	25.2	58.1	58.0	4	3	-0.8	-0.8	-8.3
LCS-1D	3/1/2017 14:50	53.2	46.8	0.0	0.0	56.3	55.6	3	2	-18.7	-18.7	-19.7
LCS-3D	3/1/2017 15:00	2.4	62.5	0.0	35.1	52.6	52.7	3	7	-16.8	-16.3	-18.1
LCS-5A	3/10/2017 11:21	55.8	44.2	0.0	0.0	67.2	67.2	NFD		-13.8	-13.8	-14.1
LCS-5A	3/16/2017 8:16	57.2	39.9	0.0	2.9	70.5	70.3	NFD		-13.2	-13.6	-13.3
LCS-5A	3/20/2017 15:07	55.8	39.7	0.0	4.5	94.1	94.1	NFD		-12.3	-12.3	-12.6
LCS-5A	3/28/2017 15:02	55.9	39.9	0.2	4.0	75.5	75.5	NFD		-12.9	-13.1	-13.0
LCS-6B	3/9/2017 8:48	50.3	39.7	0.0	10.0	96.3	96.7	6	4	-2.6	-2.6	-13.2
LCS-6B	3/16/2017 9:46	51.0	39.3	0.0	9.7	80.8	80.5	11	10	-2.7	-2.7	-14.8
LCS-6B	3/20/2017 13:34	52.9	40.4	0.0	6.7	109.2	109.4	6	5	-2.1	-2.1	-12.9
LCS-6B	3/28/2017 15:47	41.7	36.6	0.1	21.6	89.6	89.8	0	4	-2.4	-2.4	-13.3
PGW-60	3/9/2017 7:49	59.3	38.5	0.0	2.2	81.7	81.7	4	17	-8.4	-8.3	-9.2
PGW-60	3/20/2017 13:13	58.2	38.7	0.0	3.1	85.2	85.1	11	12	-7.9	-7.3	-9.2
PGW-60	3/28/2017 15:47	57.1	39.7	0.0	3.2	82.4	81.9	25	19	-9.2	-8.9	-10.3
SEW-002	3/28/2017 9:42	1.9	69.5	0.0	28.6	57.8	57.8	16	15	0.4	0.4	-18.1
SEW-002	3/28/2017 9:45	1.9	71.3	0.0	26.8	58.0	58.0	14	13	0.4	0.4	-18.1
T-56	3/9/2017 9:52	41.1	31.8	0.4	26.7	55.7	55.6	24	24	-0.2	-0.2	-12.7
T-56	3/16/2017 10:14	38.6	31.9	0.8	28.7	51.2	51.2	24	25	-0.2	-0.2	-14.6
T-56	3/16/2017 10:17	39.2	30.5	0.8	29.5	51.3	51.3	27	21	-0.2	-0.1	-15.1
T-56	3/20/2017 14:00	52.1	35.4	0.0	12.5	56.0	56.1	21	21	-0.1	-0.1	-12.7
T-56	3/28/2017 16:28	42.3	32.3	0.2	25.2	56.0	56.0	21	22	-0.2	-0.2	-13.0

Notes: NFD = No flow device installed

NR = Flow information was not recorded due to data collection error

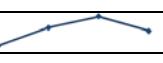
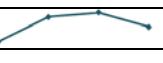
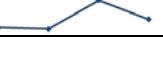
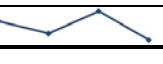
ATTACHMENT E-2

MAXIMUM WELLHEAD TEMPERATURE TABLE

Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend ><30°F	Comments
	December 2016	January 2017	February 2017	March 2017		
GEW-001	--	--	--	--		
GEW-002	124.7	121.8	122.7	112.0		
GEW-003	116	113.3	114.5	115		
GEW-004	116.6	113.7	118.4	118.4		
GEW-005	91.9	91.1	92.2	89.8		
GEW-006	88.8	90.4	91.7	91.7		
GEW-007	89.7	88.7	90.5	93.0		
GEW-008	110.7	109.9	112.0	113		
GEW-009	122.6	123.2	122.9	124.2		
GEW-010	63.6	52.1	79.8	59.2		
GEW-011	--	--	--	--		
GEW-013A	118	182.4	136.5	130.7		
GEW-014A	--	--	--	--		
GEW-015	181.7	178.6	184.5	173.6		
GEW-016R	188.3	187.6	185.1	183.9		
GEW-018B	190.2	177.1	189	182.7		
GEW-018R	--	--	--	--		
GEW-019A	--	--	--	--		
GEW-020A	--	--	--	--		
GEW-021A	--	--	--	--		
GEW-022R	--	113.5	137.4	130.1		
GEW-023A	--	--	--	--		
GEW-024A	--	--	--	--		
GEW-025A	--	--	--	--		
GEW-026R	--	--	--	--		
GEW-027A	--	--	--	--		
GEW-028R	--	--	--	--		
GEW-029	--	--	--	--		
GEW-030R	--	--	--	--		
GEW-033R	--	--	--	--		
GEW-034	--	--	--	--		
GEW-034A	--	--	--	--		
GEW-035	--	--	--	--		
GEW-036	--	--	--	--		
GEW-037	--	--	--	--		
GEW-038	58.5	48.6	74.1	67.2		
GEW-039	105.2	103.2	113.4	113.2		
GEW-040	79.6	82.5	85.4	85.8		
GEW-041R	87.3	98.9	97.9	97.9		
GEW-042R	82.1	94.2	100.6	100.8		
GEW-043R	118.1	128.1	131.1	130.2		

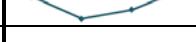
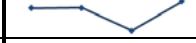
Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend ><30°F	Comments
	December 2016	January 2017	February 2017	March 2017		
GEW-044	78	76.9	77.3	86.3		
GEW-045R	75.2	59.3	71.6	79.9		
GEW-046R	94	100.4	95.6	97.7		
GEW-047R	114	110	111.2	111.2		
GEW-048	100.8	100.8	102.3	103.5		
GEW-049	105.1	107.2	98.0	118.5		
GEW-050	106.7	105.9	107.4	108.2		
GEW-051	128.6	124	124.2	125.6		
GEW-052	110.7	112.1	113.1	113.2		
GEW-053	133.8	132.7	133.5	133.5		
GEW-054	148	145.5	147.0	147.7		
GEW-055	124.5	121.5	111.5	117.8		
GEW-056R	101.8	92.5	118.1	104.5		
GEW-057B	39.6	53.7	65.8	71.8		
GEW-057R	40	63.3	78.3	81.2		
GEW-058	65.4	78.9	107.5	102.1		
GEW-058A	94.6	104.2	113.0	113.5		
GEW-059R	173.1	174.1	177.5	175.7		
GEW-061B	--	--	--	--		
GEW-064A	--	51.3	83	41.9		
GEW-065A	--	--	--	--		
GEW-066	--	--	--	--		
GEW-067A	--	73.4	87.0	43.8		
GEW-068A	--	--	--	--		
GEW-069R	--	--	--	--		
GEW-070R	--	--	--	--		
GEW-071	--	--	--	--		
GEW-071B	--	--	--	--		
GEW-072RR	--	--	--	--		
GEW-073R	--	--	--	--		
GEW-075	--	--	--	--		
GEW-076R	--	--	--	--		
GEW-077	83.4	79.8	158.7	105.8		
GEW-078R	178.6	172.6	176.4	170.5		
GEW-080	--	--	--	--		
GEW-081	193	188.9	188.9	187.6		
GEW-082R	187.7	186.4	189.6	183.9		
GEW-083	--	--	--	--		
GEW-084	--	--	--	--		
GEW-085	--	--	--	--		
GEW-086	71.4	54.7	85.4	45.7		

Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend ><30°F	Comments
	December 2016	January 2017	February 2017	March 2017		
GEW-087	191.2	195	194.3	193.6		
GEW-088	110.6	61	--	--		
GEW-089	--	--	--	--		
GEW-090	154.5	160.1	178.6	147.4		
GEW-091	193.2	192.1	194.3	193.6		
GEW-100	--	--	--	--		
GEW-101	69.1	71.4	91.3	80		
GEW-102	192.9	141.8	66.5	68.6		
GEW-103	--	--	--	--		
GEW-104	--	--	76.4	70.5		
GEW-105	141.8	177.5	143.2	--		
GEW-106	88	83.8	88.0	83.4		
GEW-107	46.9	59.4	75.4	98.7		
GEW-108	44.5	102.3	91.9	71.6		
GEW-109	78.5	78.8	110.0	85.8		
GEW-110	74.6	59.4	86.8	70.1		
GEW-112	--	--	--	--		
GEW-113	155.2	175.3	161.1	156.5		
GEW-116	--	94.1	93.4	117.4		
GEW-117	42.7	57.9	74.2	91.3		
GEW-118	173.6	195.7	195	195.7		
GEW-120	45.2	48.2	81.7	107		
GEW-121	174.2	171	167.6	170.1		
GEW-122	177.5	179.7	81.1	195		
GEW-123	56.5	45.5	78	171		
GEW-124	35.5	47	80	67.2		
GEW-125	191.6	182.7	178.0	187.3		
GEW-126	164.7	134.7	91.5	76.4		
GEW-127	179.2	178.6	179.7	179.2		
GEW-128	174.2	172.3	173.1	165.2		
GEW-129	170.6	47.5	67.5	59.4		
GEW-130	190.2	195	175.7	185.2		
GEW-131	55.9	180.3	171	168.5		
GEW-132	158.3	174.6	176.9	174.7		
GEW-133	46	44.6	87.2	86.3		
GEW-134	120.5	148.7	163.8	187		
GEW-135	47.3	49	76	195.7		
GEW-136	104.5	100.6	107.1	115		
GEW-137	55.2	50.3	91.2	81.2		
GEW-138	149.8	47.9	77.3	77.6		
GEW-139	164.3	149.7	137.4	165.7		

Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend ><30°F	Comments
	December 2016	January 2017	February 2017	March 2017		
GEW-140	135.3	101.3	117.3	139.9		
GEW-141	176	35	73	65.1		
GEW-142	36.8	37.2	93.6	--		
GEW-143	48.5	34.6	70.2	67.5		
GEW-144	62.1	38.5	75.7	69.8		
GEW-145	149.9	32.5	66.6	66.3		
GEW-146	73.6	69.3	91.9	86.8		
GEW-147	169.5	178.1	158.5	158.5		
GEW-148	52.1	36.8	78.9	57.2		
GEW-149	153.7	152.5	132.9	107.7		
GEW-150	171	155.7	170.6	107.7		
GEW-151	52.4	35.5	91.9	48.8		
GEW-152	45.6	77.7	76.2	64		
GEW-153	60	124	72.7	120.7		
GEW-154	43	51.8	83.5	44.9		
GEW-155	116.4	45	74	139.3		
GEW-156	87	76.4	95.1	90.5		
GEW-157	47.3	38.3	65.8	68.7		
GEW-158	39.8	76.5	74.9	71.6		
GEW-159	49.1	74.9	74.8	83.5		
GEW-160	49.6	40.6	89.8	56		
GEW-161	44.6	39.5	80.5	52.4		
GEW-162	112.7	44.6	81.6	45.2		
GEW-163	187	187.3	151.3	197.9		
GEW-164	163.3	171.2	161.1	157.3		
GEW-165	195	194.4	191.6	187.6		
GEW-166	170	179.3	172.7	195.4		
GEW-167	180.3	176.7	181.5	196.4		
GEW-168	177.5	179.8	170.0	193.6		
GEW-169	185	193.6	176.9	197.9		
GEW-170	165.5	176.4	182.7	164.7		
GEW-171	129.9	--	--	--		
GEW-172	52.1	195.6	195.7	83.1		
GEW-173	98.3	101.5	117.1	93.9		
GEW-174	159.4	178.7	177.2	144.2		
GEW-175	143.2	137.1	136.4	131.2		
GEW-176	123.7	117.8	124.7	110.1		
GEW-177	54.7	45.9	72.7	61.8		
GEW-1A	49.1	55.5	78.0	93.1		
GEW-2S	48.2	55.2	76.4	92.7		
GIW-01	174.7	179.3	178.6	69.1		

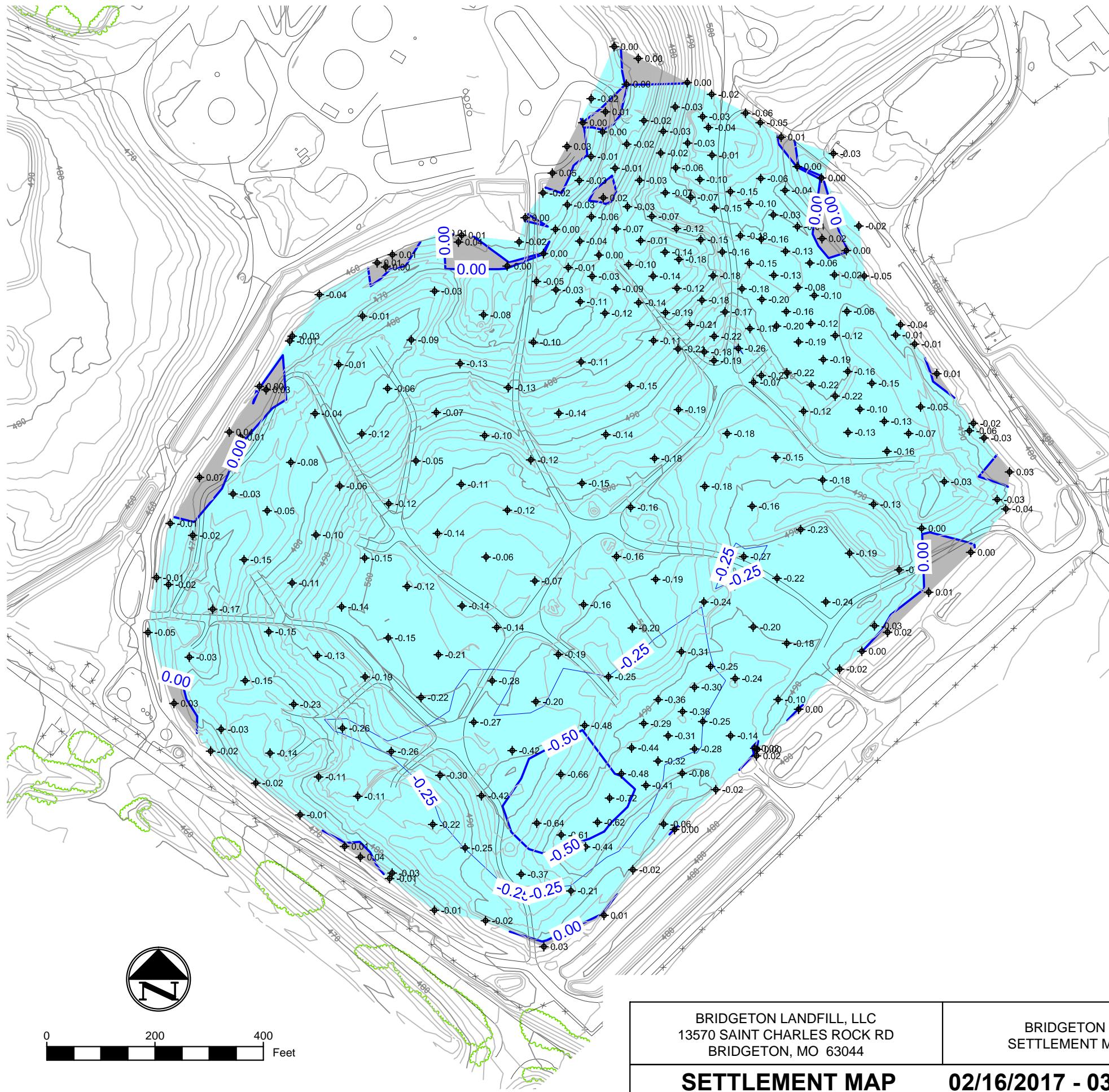
Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend ><30°F	Comments
	December 2016	January 2017	February 2017	March 2017		
GIW-02	59.1	55.2	78.9	58.5		
GIW-03	61.1	57.7	76.8	58.5		
GIW-04	63.4	61.8	76.1	59.3		
GIW-05	57.5	48.4	75.5	58.5		
GIW-06	58.7	49.4	75.6	64.1		
GIW-07	59	49.6	75.1	67.1		
GIW-08	59.2	51.5	76.8	64.9		
GIW-09	60.2	48.9	75.7	65.8		
GIW-10	59	48.9	76.6	60.1		
GIW-11	59.6	73.2	77.7	61.8		
GIW-12	60.8	74.1	77.5	58.8		
GIW-13	61.4	71.4	78.2	59.4		
LCS-1D	49.9	98.7	87.5	56.3		
LCS-2D	--	--	--	--		
LCS-3C	--	--	67.7	--		
LCS-4B	--	--	--	--		
LCS-5A	89.8	85.9	85.6	94.1		
LCS-6B	94.1	82.8	97.4	109.2		
PGW-60	50.1	55	82	85.2		
SEW-002	49.4	57.4	81.3	58.0		
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	52.7	49	56	56.0		

-- = Indicates no data available.

ATTACHMENT F

SETTLEMENT FRONT MAP



ATTACHMENT G

SUMMARY OF ODOR COMPLAINTS

March 1, 2017 – March 31, 2017 / MDNR ODOR COMPLAINTS

Name: N/A

Message: Odor logged March 8, 2017, at 7:00 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor from another known odor source with frequent off-site odor emissions was observed at the location cited in this concern over an hour after the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor. At the time of this concern winds were of a west southwestern origin placing this location directly downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: Linda Eaker

Message: Odor logged March 9, 2017, at 10:30 am strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor from another known odor source with frequent off-site odor emissions was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points between this location and the Bridgeton Landfill. At the time of this concern winds were of a west northwestern origin placing this location directly downwind of another known odor source with frequent off-site odor emissions. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged March 9, 2017, at 2:45 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. An odor patrol performed within an hour of the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points between this location and the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Michael Dailey

Message: Odor logged March 9, 2017, at 2:45 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. An odor patrol performed within an hour of the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points between this location and the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Karen Nickel

Message: Odor logged March 9, 2017, at 25:55 pm strength of 8

Follow-up: The following concern provided an invalid time and therefore could not be investigated.

Name: Karen Nickel

Message: Odor logged March 9, 2017, at 25:55 pm strength of 8

Follow-up: The following concern provided an invalid time and therefore could not be investigated.

Name: N/A

Message: Odor logged March 9, 2017, at 2:00 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The following concern was reported approximately 2 hours after the observation time so real time follow-up was not possible. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points between this location and the Bridgeton Landfill. At the time cited in this concern winds were of a northwestern origin placing this location outside the downwind pathway of the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Kirbi Pemberton

Message: Odor logged March 9, 2017, at 10:15 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. An odor patrol performed within an hour before the time cited in this concern did not observe Bridgeton Landfill odor. At the time cited in this concern winds were of a northern origin placing this location directly downwind of another known odor source with frequent off-site odor emissions. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Susan Rohde

Message: Odor logged March 8, 2017, at 7:36 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The following concern was reported over 2 days after the observation time so real time follow-up was not possible. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor. At the time cited in this concern winds were calm. This location is in close proximity to another known odor source with frequent off-site odor emissions. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Susan Rohde

Message: Odor logged March 10, 2017, at 7:43 am strength of 8

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

Name: Kirbi Pemberton

Message: Odor logged March 15, 2017, at 12:56 am strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor. At the time cited in this concern winds were of a northern origin placing this location directly downwind of another known odor source with frequent off-site odor emissions. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: N/A

Message: Odor logged March 15, 2017, at 7:00 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was reported over 2 hours after the observation time so real time follow-up was not possible. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor. At the time cited in this concern winds were of an eastern origin placing this location directly downwind of another known odor source with frequent off-site odor emissions. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: N/A

Message: Odor logged March 17, 2017, at 8:06 am strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Faint odor from another odor source was detected at this location within an hour of the time cited in this concern. An odor patrol performed within an hour of the time cited in this concern did not observe Bridgeton Landfill odor. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged March 21, 2017, at 2:00 pm strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points between this location and the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Susan Rohde

Message: Odor logged March 27, 2017, at 8:35 am strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor. At the time cited in this concern winds were of a north northeastern origin placing this location directly downwind of another known odor source with frequent off-site odor emissions. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged March 27, 2017, at 4:06 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Michael Dailey

Message: Odor logged March 27, 2017, at 4:07 pm strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Christen Commuso

Message: Odor logged March 29, 2017, at 6:45 pm strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill odor at multiple observation points between this location and the Bridgeton Landfill. There is no evidence to suggest that this was a Bridgeton Landfill odor.

Name: Kirbi Pemberton

Message: Odor logged March 30, 2017, at 7:40 pm strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Odor from another known odor source with frequent off-site odor emissions was observed at this location within an hour of the time cited in this concern. Odor patrols performed before and after the time cited in this concern did not observe Bridgeton Landfill. At the time cited in this concern winds were of a southeastern origin placing this location upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

ATTACHMENT H

LIQUID CHARACTERIZATION DATA AND DISCHARGE LOG

Bridgeton Landfill - Leachate PreTreatment Plant

March 2017

Liquid Characterization Data

Liquid characterization data is made available to MDNR on an ongoing basis. No additional leachate characterization data, beyond that produced for MSD, was collected during the prior month.

Hauled Disposal to MSD – Bissell Point

Date	Waste	Source	Transporter	Quantity
3/1/2017	LPTP Activated Sludge/ Permeate	Tank 1 (T1)	MBI	0
3/2/2017				0
3/3/2017				0
3/4/2017				0
3/5/2017				0
3/6/2017				0
3/7/2017				0
3/8/2017				0
3/9/2017				0
3/10/2017				0
3/11/2017				0
3/12/2017				0
3/13/2017				0
3/14/2017				0
3/15/2017				0
3/16/2017				0
3/17/2017				0
3/18/2017				0
3/19/2017				0
3/20/2017				0
3/21/2017				0
3/22/2017				0
3/23/2017				0
3/24/2017				0
3/25/2017				0
3/26/2017				0
3/27/2017				0
3/28/2017				0
3/29/2017				0
3/30/2017				0
3/31/2017				0
	Total			0

Direct Discharge to MSD

Date	Waste	Source	Quantity (gal)
3/1/2017	LPTP Permeate	Through Tank AST 97K (MSD Sampling Point 013)	89,196
3/2/2017			90,256
3/3/2017			91,392
3/4/2017			93,328
3/5/2017			84,432
3/6/2017			82,296
3/7/2017			82,220
3/8/2017			80,596
3/9/2017			85,088
3/10/2017			100,092
3/11/2017			96,040
3/12/2017			99,460
3/13/2017			118,400
3/14/2017			117,000
3/15/2017			120,956
3/16/2017			122,240
3/17/2017			125,836
3/18/2017			128,308
3/19/2017			135,456
3/20/2017			135,060
3/21/2017			130,972
3/22/2017			122,276
3/23/2017			126,812
3/24/2017			130,668
3/25/2017			131,640
3/26/2017			99,052
3/27/2017			36,853
3/28/2017			160,764
3/29/2017			158,920
3/30/2017			159,492
3/31/2017			157,696
	Total		3,492,797

ATTACHMENT I

LOW FILL PROJECT AREA

ATTACHMENT I-1

LOW FILL AREA BOUNDARY



LEGEND

— BOUNDARY OF FILL AREA FOR 2-16-17 THROUGH 3-15-17

— BOUNDARY OF STOCKPILE AREA FOR 2-16-17 THROUGH 3-15-17

NOTES

1. SITE AERIAL TOPOGRAPHIC SURVEY BY COOPER AERIAL SURVEYS CO. ON DECEMBER 2, 2016.
 2. FOR CLARITY, NOT ALL SITE FEATURES MAY BE SHOWN.
 3. SURVEY POINTS WERE PERFORMED USING GPS METHODS.
 4. NO FILL ADDED BETWEEN SURVEY DATES 2-16-17 AND 3-15-17



BRIDGETON LANDFILL, LLC 13570 SAINT CHARLES ROCK RD BRIDGETON, MO 63044	BRIDGETON LANDFILL SETTLEMENT MONITORING			APRIL 2017	DRAWING NO.:
				DESIGNED BY: PML	
				APPROVED BY: DRF	