Bridgeton Landfill, LLC

Monthly Data Submittals

October, 2015

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

Contents:

Provided Separately:

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

November 20, 2015

Commentary on Data

November 20, 2015

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

Gas Volume

- As seen in Attachment B-1, gas collection volumetric rate in for this month averaged 3,522 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 contains gas temperature as measured at the wellheads. Six (6) vertical wells (excluding GIW wells) decreased by 30°F during this reporting period. Additionally, three (3) vertical wells (excluding GIW wells) increased by 30°F or more. Wellhead temperatures at GEW-148 increased from 89.7^{O}F to 172.3^{O}F and GEW-154 increased from 93.7^{O}F to 191.9^{O}F, but are within the range of temperature of nearby vertical landfill gas wells. All remaining wells that exhibited changes greater than 30 degrees are all within the historical gas temperature norms for these wells.

- Attachment E-1 details vertical wells which had oxygen levels over 5% at one or more weekly monitoring events during this reporting period. These consisted of 11 older GEW wells (<#-120) that are experiencing low flows; 16 new GEW wells (>#-120) that are experiencing restricted flows; 8 GIW wells that have low gas flow. By the end of the month, the majority of these wells still exhibited oxygen at the wellhead at or greater than 5%. All these wells, except the new GEWs are low-flow/vacuum sensitive wells with valves only slightly open. On-going tuning, maintenance and pump operation is being performed to manage the oxygen content. These wells are in the south quarry area where the flexible membrane liner cap is in place to prevent atmospheric intrusion into the waste mass.

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

- All wells in the North Quarry continue to exhibit a maximum wellhead temperature under 145° F during this reporting period with the exception of GEW-054. The only North Quarry wells that had detections of carbon monoxide during this reporting period

were GEW-053 (64 ppm) and GEW-055 (30 ppm) which are within historic levels. Carbon monoxide (CO) results showed non-detect (ND) for all other North quarry wells.

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

Settlement

- The South Quarry exhibited monthly maximum settlement up to **1.75 feet (see Attachment F)** for this reporting period; which is comparable to last month's rate. The rate of settlement directly south of the neck continues to be small and stable compared to previous months.

Bird Monitoring and Mitigation

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

ATTACHMENT A

WORK COMPLETED AND PLANNED

Bridgeton Landfill, LLC
Monthly Summary of Work Completed and Planned

Work Completed in October 2015

Gas Collection and Control System

- Continued operation and maintenance of GCCS System and GIW wells.
- Continued additional GCCS System enhancements.
- Completed above ground 18 inch header line from CT-1 to CT-2.
- Installed two liquid collection sumps in the South gas interceptor trench.
- Installed above grade LFG header between CT-1 and CT-2.

Alternative Heat Extraction System

- Continued operation and maintenance of the HES.

Leachate Management System

- Continued routine operation of previously installed and upgraded features.

Pre-Treatment Facility

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

Work Planned for November 2015

Gas Collection and Control System

- Continue operation and maintenance of GCCS system.
- Continue upgrades to GCCS system as required.
- Plan and Initiate winterization processes.
- Installation of above grade LFG header between CT-3 and CT-30.
- Regrade header from CT-8 to GEW-148.
- Regrade header from CT-30 to ES-3b.

Alternative Heat Extraction System

- Continued operation and maintenance of the HES.

Leachate Management System

- Continued routine operation of previously installed and upgraded features.

Pre-Treatment Facility

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

Other Projects:

- Prep fill projects for north slope of south quarry and low area on east slope
- Begin acceptance of clean fill materials for future fill projects.
- Complete north quarry cap enhancement project.

ATTACHMENT B

DAILY FLARE MONITORING DATA

ATTACHMENT B-1

FLOW DATA TABLE

Daily Flare Monitoring Data - Bridgeton Landfill
October 2015

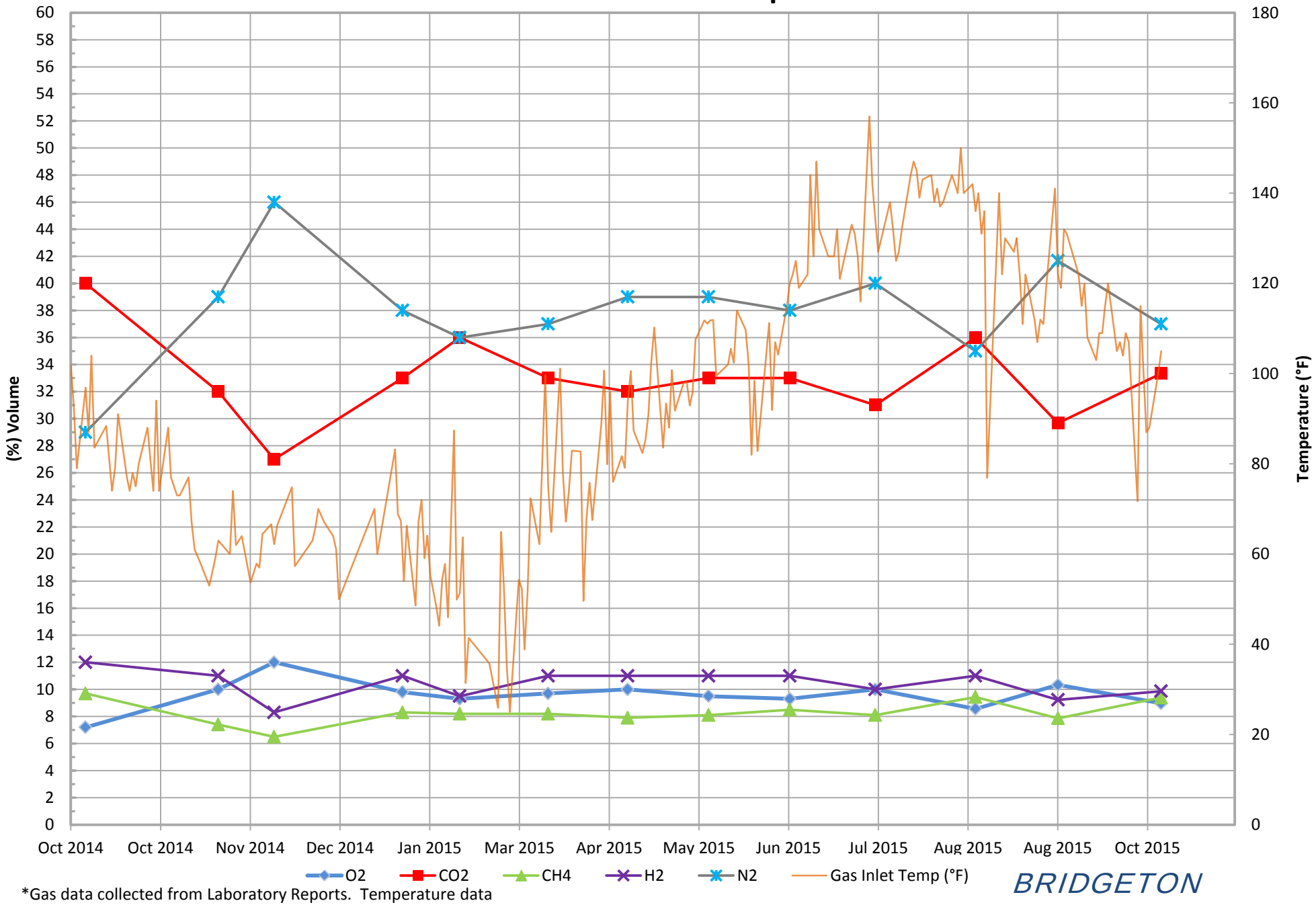
Date	Average Device Flow* (scfm)				Total Avg. Flow** (scfm)
	Utility Flare (FL-100)	Utility Flare (FL-120)	Utility Flare (FL-140)	Aux. Utility Flare	
10/1/2015	1,187	1,162	1,382	0	3,731
10/2/2015	969	1,121	1,421	208	3,720
10/3/2015	1,306	1,132	1,294	0	3,732
10/4/2015	1,338	1,338	1,269	0	3,945
10/5/2015	1,436	1,193	1,245	0	3,874
10/6/2015	1,458	1,079	1,184	572	4,293
10/7/2015	1,334	1,067	1,213	0	3,614
10/8/2015	323	1,412	1,684	0	3,418
10/9/2015	0	1,694	1,759	0	3,453
10/10/2015	0	1,692	1,775	0	3,467
10/11/2015	0	1,672	1,776	0	3,448
10/12/2015	0	1,624	1,764	0	3,388
10/13/2015	0	1,551	1,713	0	3,264
10/14/2015	0	1,531	1,711	0	3,242
10/15/2015	0	1,561	1,656	0	3,217
10/16/2015	0	1,600	1,610	0	3,209
10/17/2015	0	1,626	1,576	0	3,202
10/18/2015	0	1,613	1,606	0	3,218
10/19/2015	0	1,585	1,667	0	3,251
10/20/2015	78	742	2,246	0	3,065
10/21/2015	0	1,827	1,927	0	3,754
10/22/2015	0	1,949	1,830	0	3,779
10/23/2015	0	1,985	1,728	0	3,713
10/24/2015	0	2,047	1,614	0	3,660
10/25/2015	0	2,160	1,479	0	3,639
10/26/2015	0	1,983	1,637	0	3,620
10/27/2015	0	2,207	1,214	0	3,420
10/28/2015	0	1,744	1,560	0	3,304
10/29/2015	0	1,824	1,617	0	3,441
10/30/2015	0	1,875	1,706	0	3,581
10/31/2015	0	1,865	1,649	0	3,514
				Average	**3,522**

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

ATTACHMENT B-2

FLOW DATA GRAPHS

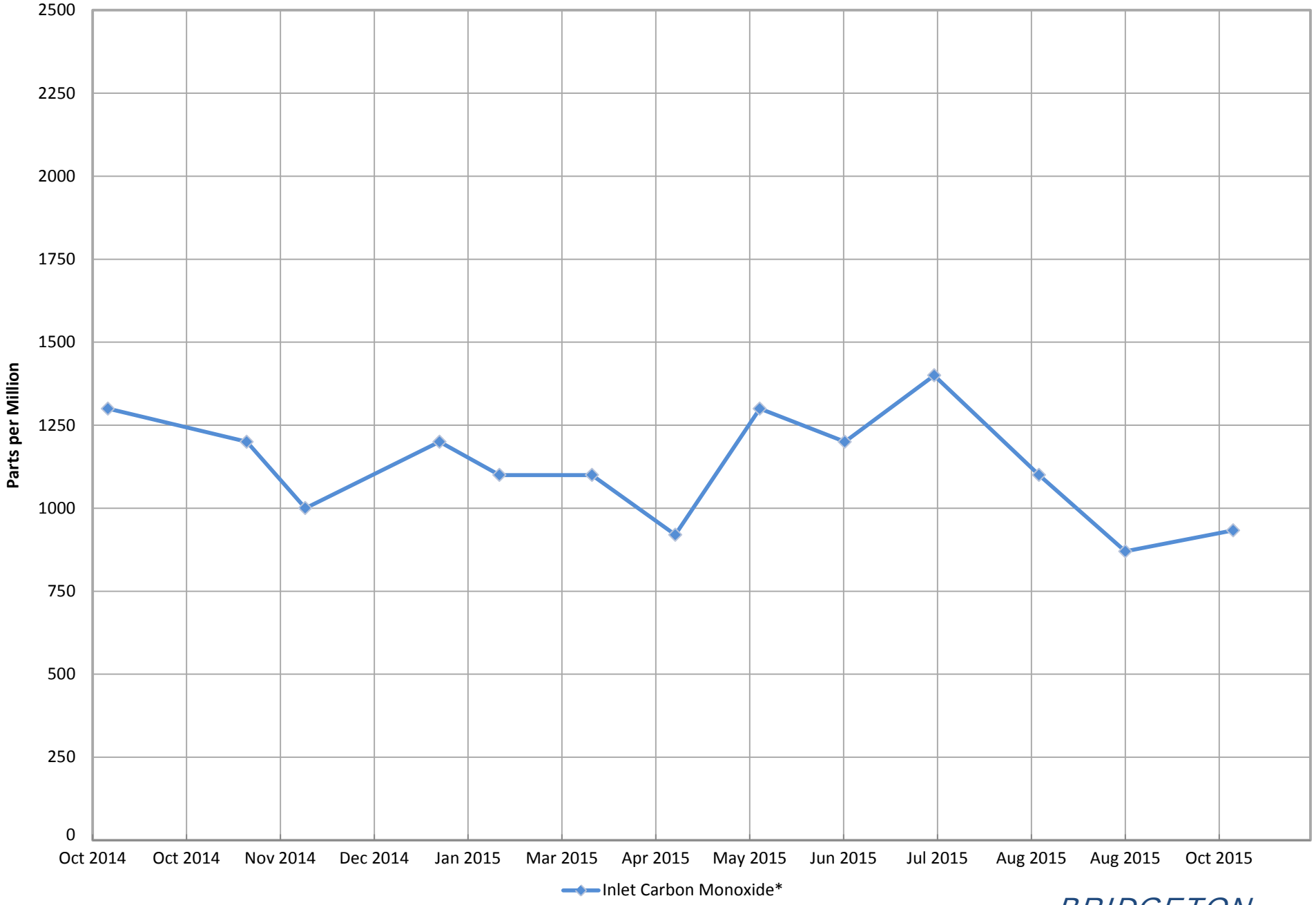
Inlet Gas and Temperature*



*Gas data collected from Laboratory Reports. Temperature data collected from GEM 2000 field readings.

BRIDGETON LANDFILL

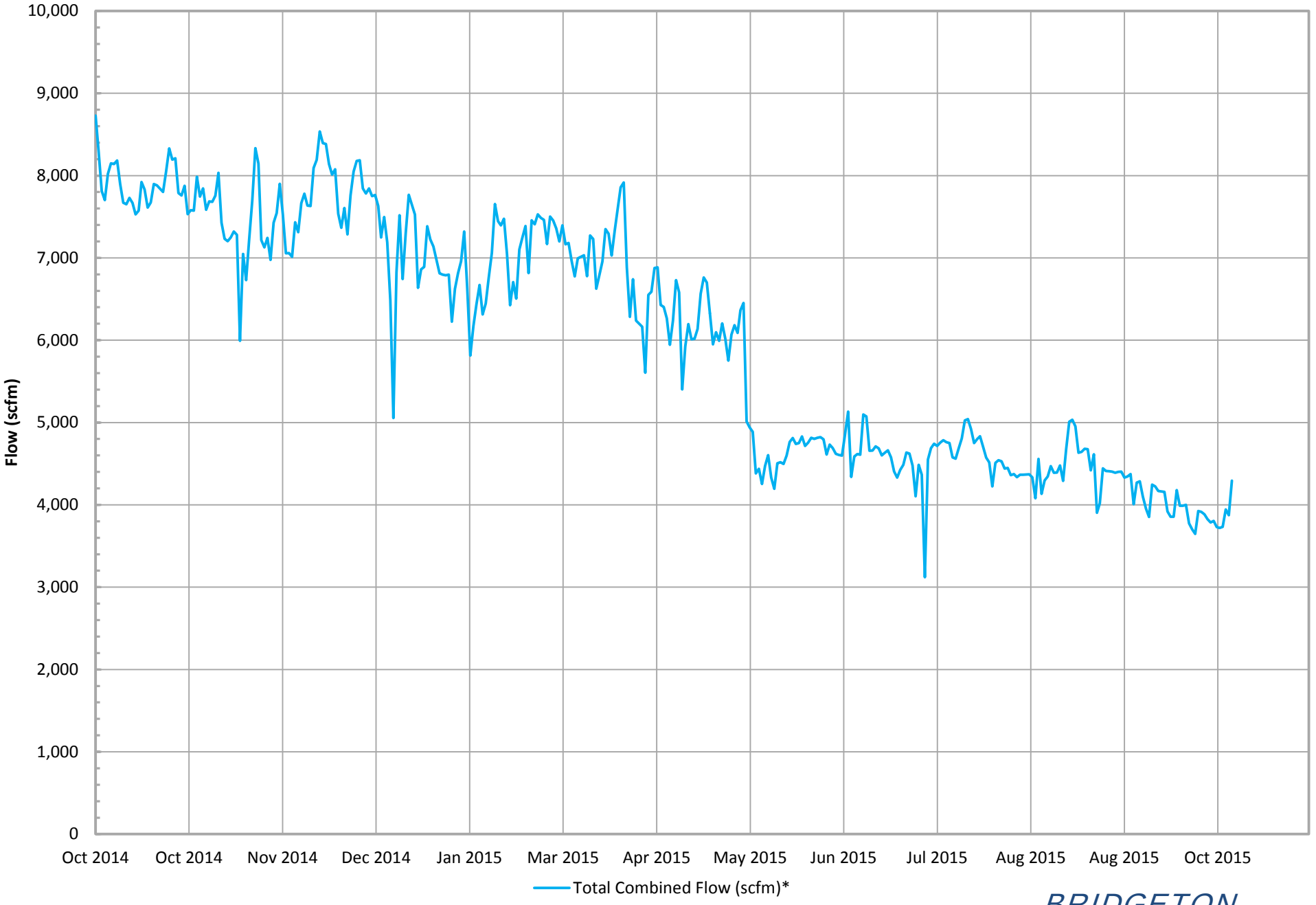
Inlet Carbon Monoxide*



*Data collected from Laboratory Reports.

BRIDGETON LANDFILL

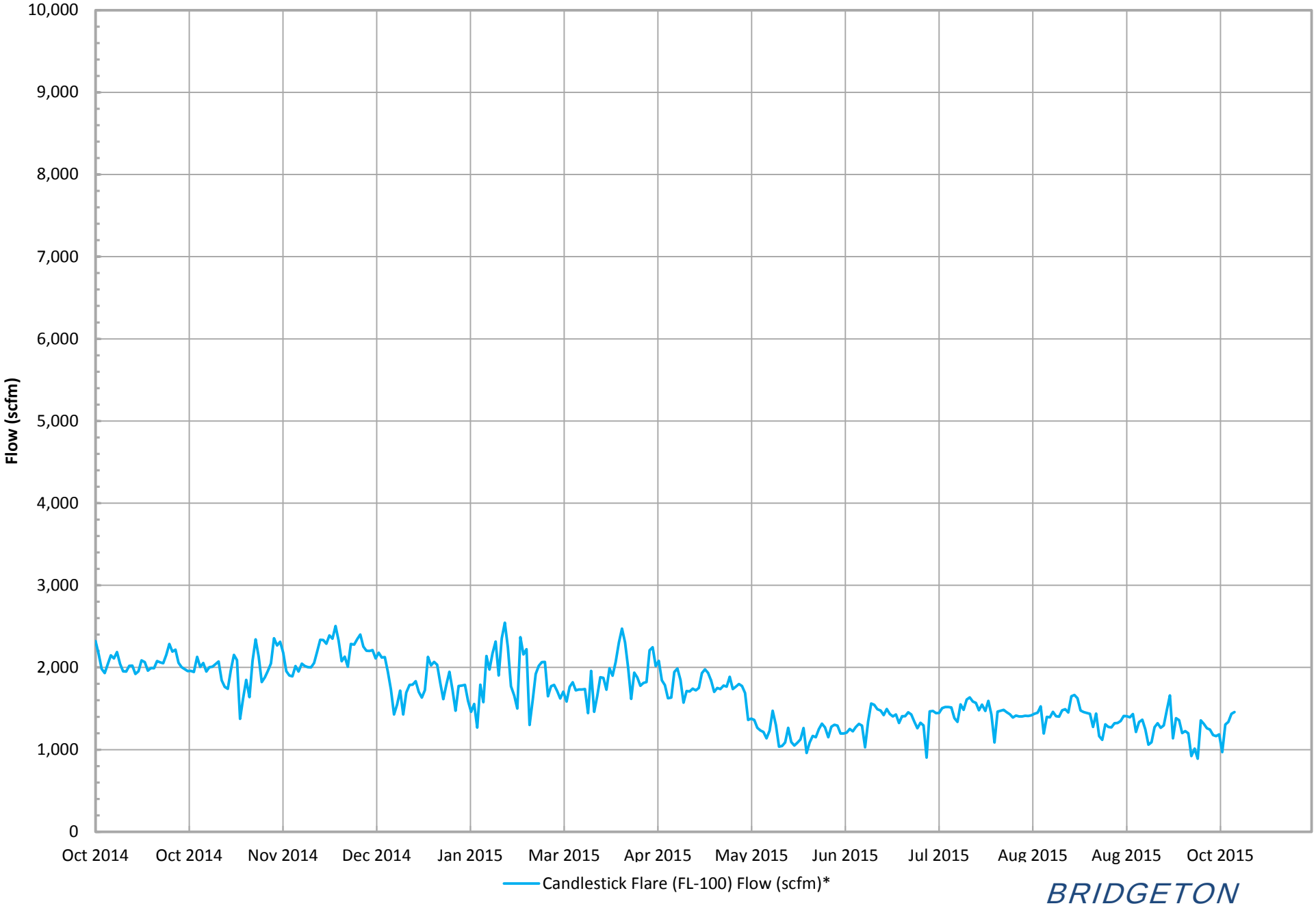
Total Combined Flow (scfm)*



*Combined flow is based on tabulated flow data

BRIDGETON LANDFILL

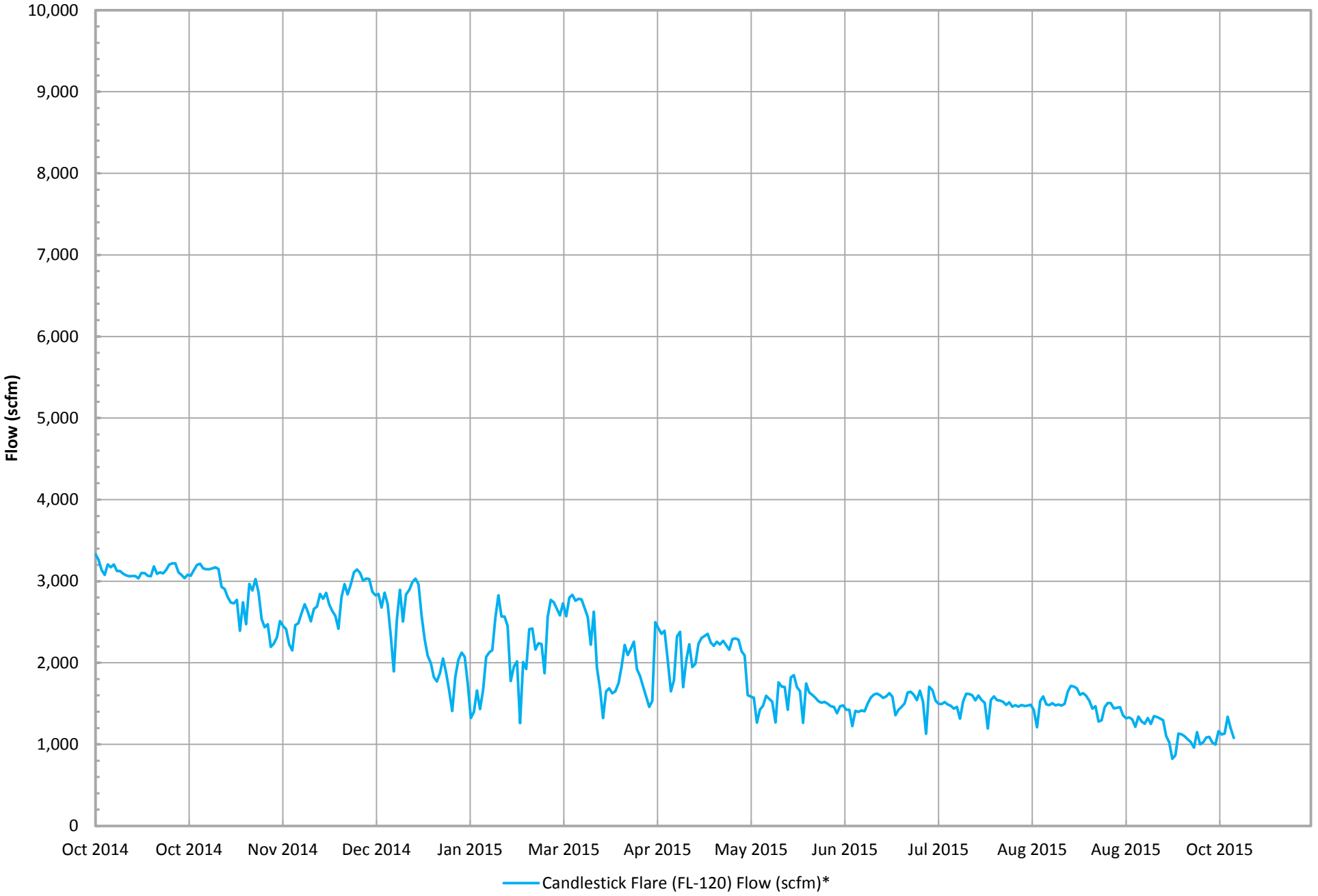
Candlestick Flare (FL-100) Flow (scfm)*



*Flow is based on tabulated flow data collected

BRIDGETON LANDFILL

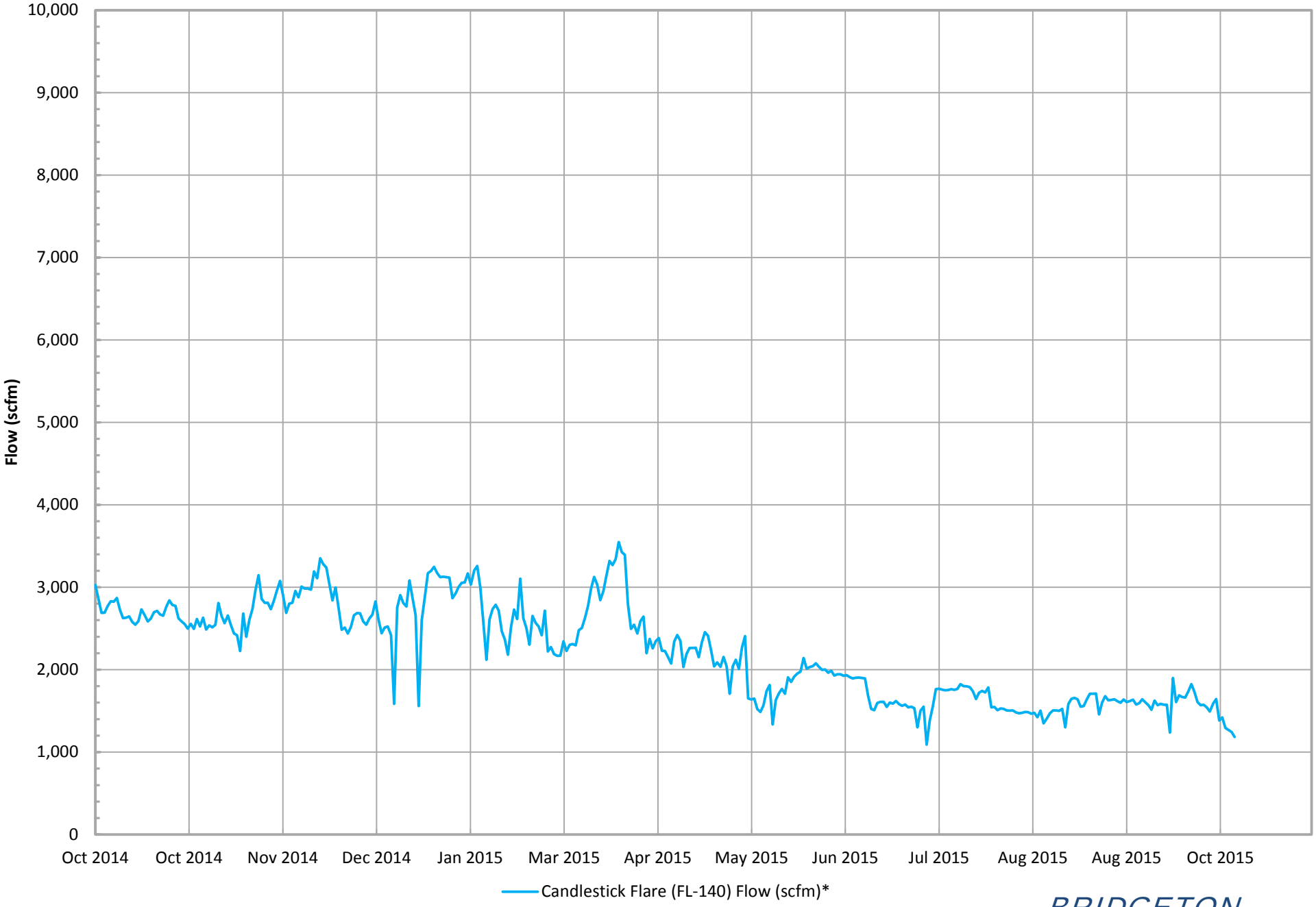
Candlestick Flare (FL-120) Flow (scfm)*



*Flow is based on tabulated flow data collected

BRIDGETON LANDFILL

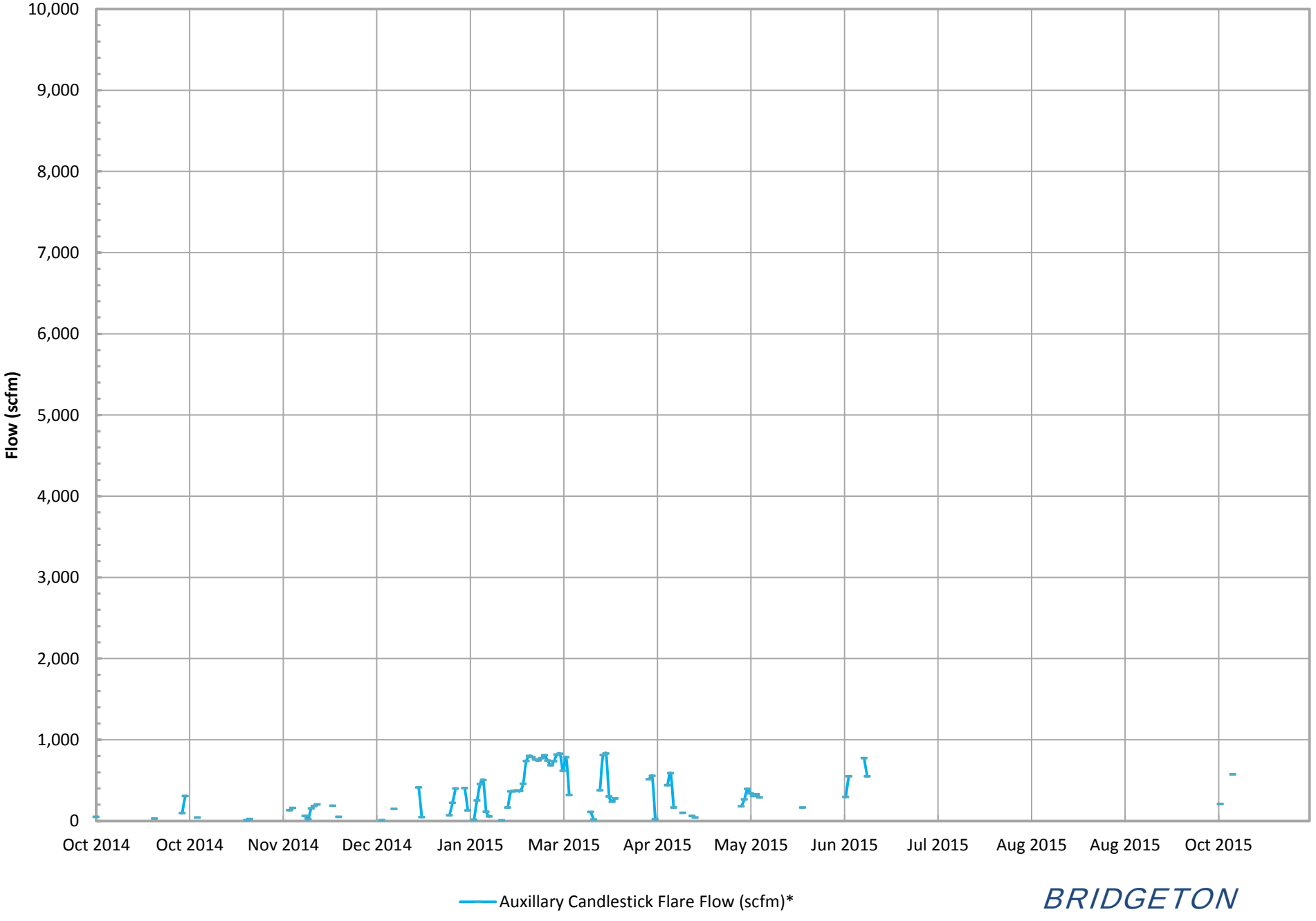
Candlestick Flare (FL-140) Flow (scfm)*



*Flow is based on tabulated flow data collected

BRIDGETON LANDFILL

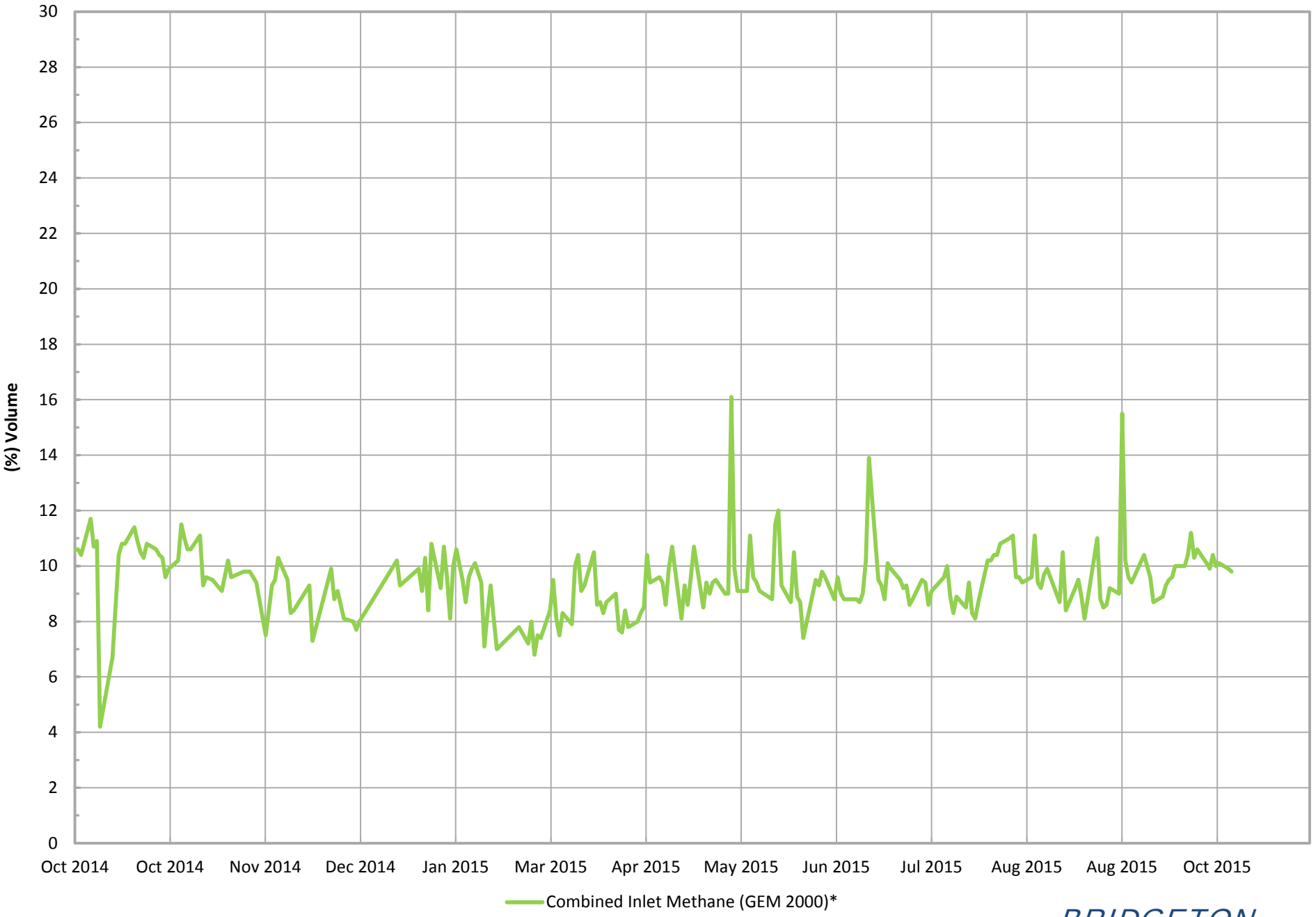
Auxillary Candlestick Flare Flow (scfm)*



*Flow is based on tabulated flow data collected

BRIDGETON LANDFILL

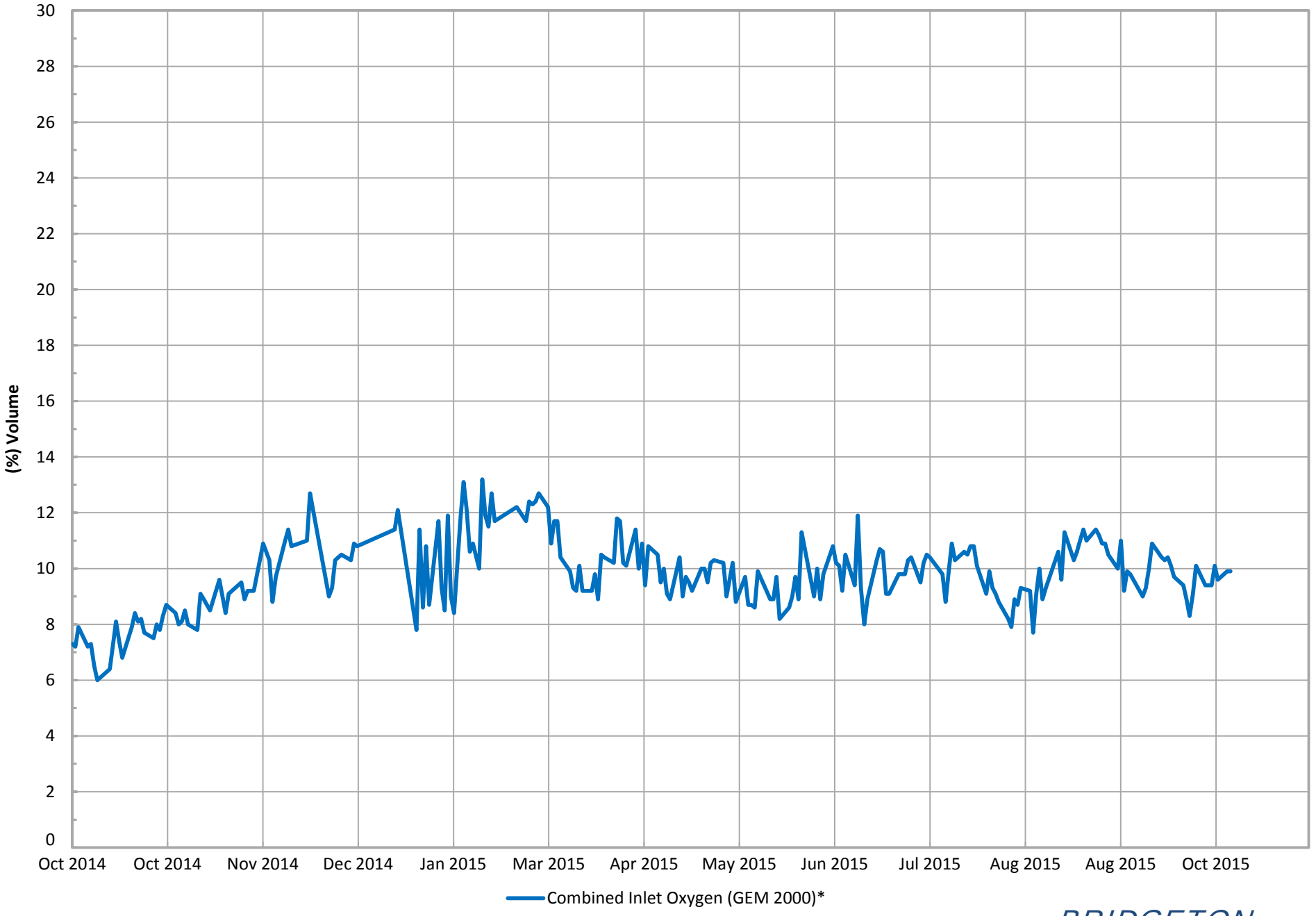
Combined Inlet Methane (GEM 2000)*



*Gas data collected from GEM 2000

BRIDGETON LANDFILL

Combined Inlet Oxygen (GEM 2000)*



*Gas data collected from GEM 2000

BRIDGETON LANDFILL

ATTACHMENT B-3

FLARE TRS / FLARE STATION FLOW

TABLE 1 **Bridgeton Landfill, LLC.**

Summary of Key LFG Tested Parameters **October 06 to November 03, 2015**

Flare Compound: *Blower Outlet*

SAMPLE EVENT #	DATE	VELOCITY ft/sec	FLOW dscfm	TRS[2] ppm_{vd}
35[1]	11/3/2015	39.22	3197	1300
				1400
34	10/27/2015	39.54	3203	1200
				1400
33	10/21/2015	Sample results void due to cross contamination of sample train prep rinse (acetone) prior to sampling		
32	10/13/2015	35.83	2902	1400
				1500
31[1]	10/6/2015	47.73	3491	1400
				1500

Notes:

[1] Flow based on EPA Method 2C data collection from "Blower Outlet"

[2] TRS analyzed per EPA method 15/16 from samples collected from the collected from "Blower Outlet"

	PARAMETER				Blower Out
Date	Test Date				11/3/15
Start	Run Start Time				10:27
	Run Finish Time				11:52
	Net Traversing Points				16 (2 x 8)
Θ	Net Run Time, minutes				1:25:00
C_p	Pitot Tube Coeficient				0.99
P_{Br}	Barometric Pressure, inches of Mercury				29.72
% H_2O	Moisture Content of LFG, %				2.24
% RH	Relative Humidity, %				52.20
M_{fd}	Dry Mole Fraction				0.978
%CH_4	Methane, %				10.00
%CO_2	Carbon Dioxide, %				36.00
%O_2	Oxygen, %				8.25
%Balance	Assumed as Nitorgen, %				34.50
%H_2	Hydrogen, %				10.50
M_d	Dry Molecular Weight, lb/lb-Mole				29.96
M_s	Wet Molecular weight, lb/lb-Mole				29.70
P_g	Flue Gas Static Pressure, inches of H_2O				23.63
P_s	Absolute Flue Gas Pressure, inches of Mercury				31.46
t_s	Average Stack Gas Temperature, °F				81
ΔP_{avg}	Average Velocity Head, inches of H_2O				0.371
v_s	Average LFG Velocity, feet/second				39.22
A_s	Stack Crossectional Area, square feet				1.35
Q_{sd}	Dry Volumetric Flow Rate, dry scfm				3,197
Q_s	Standard Volumetric Flow Rate, scfm				3,269
Q_{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm				3,184
$Q_{lb/hr}$	Dry Air Flow Rate at Standard Conditions, lb/hr				14,916
LFG_{CH4}	Methane, lb/hr				798.9
	Methane, grains/dscf				29.15
LFG_{CO2}	Carbon Dioxide, lb/hr				7,889.5
	Carbon Dioxide, grains/dscf				287.93
LFG_{O2}	Oxygen, lb/hr				1314.6
	Oxygen, grains/dscf				47.98
LFG_{N2}	Balance gas as Nitrogen, lb/hr				4,812.6
	Balance gas as Nitrogen, grains/dscf				175.64
LFG_{H4}	Hydrogen, lb/hr				105.4
	Hydrogen, grains/dscf				3.85

				Blower Out Sample #1	Blower Out Sample #2
H_2S	Hydrogen Sulfide Concentration, ppmd			51.00	38.00
	Hydrogen Sulfide Rate, lb/hr			0.87	0.64
	Hydrogen Sulfide Rate, grains/dscf			0.032	0.024
COS	Carbonyl Sulfide Concentration, ppmd			0.56	0.56
	Carboynl Sulfide Rate, lb/hr			0.02	0.02
	Carbonyl Sulfide Rate, grains/dscf			0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd			190.00	180.00
	Methyl Mercaptan Rate, lb/hr			4.55	4.31
	Methyl Mercaptan Rate, grains/dscf			0.166	0.157
C_2H_6S	Ethyl Mercaptan Concentration, ppmd			2.40	2.60
	Ethyl Mercaptan Rate, lb/hr			0.07	0.08
	Ethyl Mercaptan Rate, grains/dscf			0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd			840.00	980.00
	Dimethyl Sulfide Rate, lb/hr			25.99	30.32
	Dimethyl Sulfide Rate, grains/dscf			0.949	1.107
CS_2	Carbon Disulfide Concentration, ppmd			0.56	0.56
	Carbon Disulfide Rate, lb/hr			0.02	0.02
	Carbon Disulfide Rate, grains/dscf			0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd			93.00	85.00
	Dimethyl Disulfide Rate, lb/hr			4.36	3.22
	Dimethyl Disulfide Rate, grains/dscf			0.159	0.118

❶$E_{TRS-SO2}$	TRS-->SO2 Emission Concentration, ppmd			1,300.00	1,400.00
	TRS-->SO2 Emission Rate, lb/hr			41.47	44.66
	TRS-->SO2 Emission Rate, grains/dscf			1.514	1.630

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

Tuesday, November 03, 2015

LOCATION	TIME	Q -SCFM		Δ	KURZ	Method 2 vs KURZ
		METHOD 2	FLEETZOOM			
BLOWER OUT	10:27	3,269	3,158	-3.5%	3,253	-0.5%
FL100						
FL120						
FL 140						

Air TECHNOLOGY Laboratories, Inc.

November 10, 2015

ADE-1461
EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946

LA Cert 04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450—14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: G110503-01/02

Enclosed are results for sample(s) received 11/05/15 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

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

Preliminary results were e-mailed to Jim Getting, Mike Lambrich and Ryan Ayers on 11/09/15.

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

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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

CHAIN OF CUSTODY RECORD

AirTECHNOLOGY Laboratories, Inc.

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

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

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

BILLING

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

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST: EPA 15/16 + TRS & ASTM1946 + H2					
	Canister ID	Sample Start	Sample End	Lab Receive												
G110903-01	J1721	-20.2	-3.5	-3	Outlet A	11/3/2015	1056	C	LFG	NA	X					
↓ -02	1613	-20.4	-3.5	-3	Outlet B	11/3/2015	1107	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	COMMENTS
SAMPLED BY: Ryan Ayers	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY: [signature] 11-3-15 1300	DATE/ RECEIVED BY	DATE/TIME	
RELINQUISHED BY: FedEx	DATE/ RECEIVED BY [signature]	DATE/TIME 11/5/15 0845	
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, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 11/05/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G110503-01		G110503-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	11/3/15 10:56		11/3/15 11:07					
Date/Time Analyzed:	11/9/15 10:40		11/9/15 10:54					
QC Batch No.:	151109GC8A1		151109GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.8		2.8					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	10	2.8	11	2.8				
Carbon Dioxide	36	0.028	36	0.028				
Oxygen/Argon	8.5	1.4	8.0	1.4				
Nitrogen	35	2.8	34	2.8				
Methane	10	0.0028	10	0.0028				

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

Reviewed/Approved By: _____ Date 11/9/15
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

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

QC Batch No.: 151109GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	11/9/15 10:21		11/9/15 9:36		11/9/15 9:51			
Analyst Initials:	AS		AS		AS			
Datafile:	09nov008		09nov005		09nov006			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	112	70-130%	112	70-130%	0.2	<30
Carbon Dioxide	ND	0.010	100	70-130%	101	70-130%	0.2	<30
Oxygen/Argon	ND	0.50	100	70-130%	99	70-130%	0.6	<30
Nitrogen	ND	1.0	100	70-130%	100	70-130%	0.4	<30
Methane	ND	0.0010	96	70-130%	96	70-130%	0.6	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 11/9/15

Mark J. Johnson
Operations Manager

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

Client: Republic Services, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 11/05/15
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	G110503-01		G110503-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	11/3/15 10:56		11/3/15 11:07					
Date/Time Analyzed:	11/5/15 13:52		11/5/15 14:27					
QC Batch No.:	151105GC3A1		151105GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.8		2.8					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv				
Hydrogen Sulfide	51 d	5.6	38 d	5.6				
Carbonyl Sulfide	ND	0.56	ND	0.56				
Methyl Mercaptan	190 d	5.6	180 d	5.6				
Ethyl Mercaptan	2.4	0.56	2.6	0.56				
Dimethyl Sulfide	840 d	56	980 d	56				
Carbon Disulfide	ND	0.56	ND	0.56				
Dimethyl Disulfide	93 d	5.6	85 d	5.6				
Total Reduced Sulfur	1,300	0.56	1,400	0.56				

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

Reviewed/Approved By: _____ Date 11/9/15
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 151105GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	11/5/15 9:45		11/5/15 9:23		11/5/15 9:34			
Analyst Initials:	AS		AS		AS			
Datafile:	05nov003		05nov001		05nov002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	94	70-130%	94	70-130%	0.3	<30
Carbonyl Sulfide	ND	0.20	104	70-130%	103	70-130%	0.5	<30
Methyl Mercaptan	ND	0.20	101	70-130%	101	70-130%	0.4	<30
Ethyl Mercaptan	ND	0.20	125	70-130%	122	70-130%	2.9	<30
Dimethyl Sulfide	ND	0.20	103	70-130%	100	70-130%	3.4	<30
Carbon Disulfide	ND	0.20	91	70-130%	89	70-130%	1.6	<30
Dimethyl Disulfide	ND	0.20	109	70-130%	103	70-130%	5.1	<30

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

Reviewed/Approved By: _____ Date: 11/9/15
Mark J. Johnson
Operations Manager

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

Bridgeton Landfill, LLC.
Weeklty TRS Sampling Summary

Kurz FM =	**3,559**	**scfm**
Fleetzoom Total =	**3,342**	**scfm**

$\Delta =$ **-6.5%**

	PARAMETER	Blower Out #1	Blower Out #2
Date	Test Date		10/27/15
Time	Start - Finish	8:33	8:44
%CH_4	Methane, %	9.90	9.60
%CO_2	Carbon Dioxide, %	34.00	32.00
%O_2	Oxygen, %	9.10	9.50
%Balance	Assumed as Nitorgen, %	37.00	38.00
%H_2	Hydrogen, %	9.30	9.20
P_g	Flue Gas Static Pressure, inches of H_2O	23.40	23.40
t_s	Blower Outlet LFG Temperature, °F	87	87
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 10%H2O)	3,203	
Q_s	Kurz FM, Standard Volumetric Flow Rate, scfm	3,559	
LFG_{CH4}	Methane, lb/hr	792.4	768.3
	Methane, grains/dscf	28.86	27.99
LFG_{CO2}	Carbon Dioxide, lb/hr	7,465.2	7,026.0
	Carbon Dioxide, grains/dscf	271.93	255.94
LFG_{O2}	Oxygen, lb/hr	1,452.7	1,516.6
	Oxygen, grains/dscf	52.92	55.25
LFG_{N2}	Balance gas as Nitrogen, lb/hr	5,171.1	5,310.8
	Balance gas as Nitrogen, grains/dscf	188.37	193.46
LFG_{H4}	Hydrogen, lb/hr	93.5	92.5
	Hydrogen, grains/dscf	3.41	3.37

		Blower Out #1	Blower Out #2
H_2S	Hydrogen Sulfide Concentration, ppmd	65.00	59.00
	Hydrogen Sulfide Rate, lb/hr	1.11	1.00
	Hydrogen Sulfide Rate, grains/dscf	0.040	0.037
COS	Carbonyl Sulfide Concentration, ppmd	0.55	0.55
	Carboynl Sulfide Rate, lb/hr	0.02	0.02
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd	190.00	160.00
	Methyl Mercaptan Rate, lb/hr	4.56	3.84
	Methyl Mercaptan Rate, grains/dscf	0.166	0.140
C_2H_6S	Ethyl Mercaptan Concentration, ppmd	2.30	2.30
	Ethyl Mercaptan Rate, lb/hr	0.07	0.07
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd	800.00	1,000.00
	Dimethyl Sulfide Rate, lb/hr	24.80	31.00
	Dimethyl Sulfide Rate, grains/dscf	0.903	1.129
CS_2	Carbon Disulfide Concentration, ppmd	0.55	0.55
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd	76.00	71.00
	Dimethyl Disulfide Rate, lb/hr	3.57	3.34
	Dimethyl Disulfide Rate, grains/dscf	0.130	0.122

❶**$E_{TRS-SO2}$**	TRS-->SO2 Emission Concentration, ppmd	1,200.00	1,400.00
	TRS-->SO2 Emission Rate, lb/hr	38.35	44.75
	TRS-->SO2 Emission Rate, grains/dscf	1.397	1.630

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

AirTECHNOLOGY
Laboratories, Inc.

October 30, 2015

ADE-1461
EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946

LA Cert 04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450—14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: G102803-01/02

Enclosed are results for sample(s) received 10/28/15 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

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

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Ryan Ayers, Brian Powers and David Randall, Weaver Consultants, on 10/29/15.

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

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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

AirTECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

- Standard ☐
- Same Day ☐
- 24 hours ☒
- 48 hours ■ (10/28/15)
- 72 hours ☐
- 96 hours ☐
- 5 day ☐
- Other:

DELIVERABLES

- EDD ☐
- EDF ☐
- Level 3 ☐
- Level 4 ☐

PAGE: 1 OF 1

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	EPA 15/16 + TRS & ASTM1946 + H2, CO, BTU (10/28/15)					
G102803-01	J1725	-20.4	-3.5	-2.5	Outlet A	10/27/2015	833	C	LFG	NA	X					
↓ -02	J1720	-19.5	-3.5	-2.5	Outlet B	10/27/2015	844	C	LFG	NA	X					

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

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

RELINQUISHED BY: Ryan Ayers — DATE: 10-27-15 1000 — RECEIVED BY — DATE/TIME

RELINQUISHED BY: FED EX — DATE — RECEIVED BY: JRJ — DATE/TIME: 10/28/15 0895

RELINQUISHED BY — DATE — RECEIVED BY — DATE/TIME

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

COMMENTS

Incl CO, BTU on 24hr TAT

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

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

Rev. 03 - 5/7/09

Client:	**Republic Services**
Attn:	**Jim Getting**
Project Name:	**Bridgeton Landfill**
Project No.:	**NA**
Date Received:	**10/28/15**
Matrix:	**Air**
Reporting Units:	**% v/v**

ASTM D1946

Lab No.:	G102803-01		G102803-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/27/15 8:33		10/27/15 8:44					
Date/Time Analyzed:	10/29/15 14:15		10/29/15 14:30					
QC Batch No.:	151029GC8A1		151029GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	9.3	2.7	9.2	2.7				
Carbon Dioxide	34	0.027	32	0.027				
Oxygen/Argon	9.1	1.4	9.5	1.4				
Nitrogen	37	2.7	38	2.7				
Methane	9.9	0.0027	9.6	0.0027				
Carbon Monoxide	0.100	0.0027	0.099	0.0027				
Net Heating Value (BTU/ft3)	133	2.7	132	2.7				
Gross Heating Value (BTU/ft3)	151	2.7	149	2.7				

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

Reviewed/Approved By: _____ Date 10/29/15

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.: 151029GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/29/15 10:33		10/29/15 9:33		10/29/15 9:47			
Analyst Initials:	AS		AS		AS			
Datafile:	29oct009		29oct006		29oct007			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	91	70-130%	89	70-130%	2.4	<30
Carbon Dioxide	ND	0.010	89	70-130%	88	70-130%	0.8	<30
Oxygen/Argon	ND	0.50	97	70-130%	97	70-130%	0.5	<30
Nitrogen	ND	1.0	96	70-130%	96	70-130%	0.5	<30
Methane	ND	0.0010	97	70-130%	96	70-130%	0.8	<30
Carbon Monoxide	ND	0.0010	114	70-130%	113	70-130%	1.0	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 10/29/15

Mark J. Johnson
Operations Manager

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

Client:	**Republic Services**
Attn:	**Jim Getting**
Project Name:	**Bridgeton Landfill**
Project No.:	**NA**
Date Received:	**10/28/15**
Matrix:	**Air**
Reporting Units:	**ppmv**

EPA 15/16

Lab No.:	G102803-01		G102803-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/27/15 8:33		10/27/15 8:44					
Date/Time Analyzed:	10/29/15 10:27		10/29/15 11:02					
QC Batch No.:	151029GC3A1		151029GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	**Result ppmv**	**RL ppmv**	**Result ppmv**	**RL ppmv**				
Hydrogen Sulfide	65 d	5.5	59 d	5.5				
Carbonyl Sulfide	ND	0.55	ND	0.55				
Methyl Mercaptan	190 d	5.5	160 d	5.5				
Ethyl Mercaptan	2.3	0.55	2.3	0.55				
Dimethyl Sulfide	800 d	55	1,000 d	55				
Carbon Disulfide	ND	0.55	ND	0.55				
Dimethyl Disulfide	76 d	5.5	71 d	5.5				
Total Reduced Sulfur	1,200	0.55	1,400	0.55				

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

Reviewed/Approved By: _____ **Date** 10/29/15

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 151029GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/29/15 9:19		10/29/15 8:55		10/29/15 9:07			
Analyst Initials:	AS		AS		AS			
Datafile:	29oct004		29oct002		29oct003			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	107	70-130%	105	70-130%	1.8	<30
Carbonyl Sulfide	ND	0.20	107	70-130%	107	70-130%	0.4	<30
Methyl Mercaptan	ND	0.20	110	70-130%	111	70-130%	0.9	<30
Ethyl Mercaptan	ND	0.20	128	70-130%	127	70-130%	0.9	<30
Dimethyl Sulfide	ND	0.20	105	70-130%	103	70-130%	2.2	<30
Carbon Disulfide	ND	0.20	103	70-130%	103	70-130%	0.5	<30
Dimethyl Disulfide	ND	0.20	115	70-130%	117	70-130%	1.8	<30

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

Reviewed/Approved By: _____ Date: 10/29/15
Mark J. Johnson
Operations Manager

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

Air TECHNOLOGY Laboratories, Inc.

November 5, 2015

ADE-1461
EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946

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

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

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

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: G102203-01/02

Enclosed are results for sample(s) received 10/22/15 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:

- According to the client, results were inconsistent (lower) compared to historical data, which prompted a re-evaluation of the data. It was observed that the NMOC (Non-methane organic compounds) of the samples was at least an order of magnitude higher than historical data. NMOC is not reported for this project, but it is part of the data that is generated. The high amount of NMOC caused a dilution of the other analytes. A GCMS analysis was performed to identify the NMOC. Acetone was the primary component.
- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, and Ryan Ayers on 10/26/15.

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

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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

CHAIN OF CUSTODY RECORD

Air TECHNOLOGY Laboratories, Inc.

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

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg)				SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	EPA 15/16 + TRS & ASTM1946 + H2					
	Canister ID	Sample Start	Sample End	Lab Receive												
G102203-01	J1717	-20.5	-3.5	-2.5	Outlet A	10/21/2015	807	C	LFG	NA	X					
↓ -02	1539	-20.3	-3.5	-2.5	Outlet B	10/21/2015	821	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	**COMMENTS**
SAMPLED BY: Ryan Ayers	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY: Ryan Ayers 10-21-15 0900	DATE/RECEIVED BY	DATE/TIME	
RELINQUISHED BY: FEDEX	DATE/RECEIVED BY: D-Ty - 10/22/15	DATE/TIME: 0905	
RELINQUISHED BY	DATE/RECEIVED BY	DATE/TIME	

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

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

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

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/22/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G102203-01		G102203-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/21/15 8:07		10/21/15 8:21					
Date/Time Analyzed:	10/23/15 12:30		10/23/15 12:45					
QC Batch No.:	151023GC8A1		151023GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	7.8	2.7	8.0	2.7				
Carbon Dioxide	28	0.027	30	0.027				
Oxygen/Argon	7.6	1.4	7.7	1.4				
Nitrogen	30	2.7	31	2.7				
Methane	9.2	0.0027	9.9	0.0027				
Carbon Monoxide	0.076	0.0027	0.081	0.0027				
Net Heating Value (BTU/ft3)	514	2.7	426	2.7				
Gross Heating Value (BTU/ft3)	564	2.7	469	2.7				

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

Reviewed/Approved By: _____ Date 10/29/15
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

It was observed that the NMOC (Non-methane organic compounds) ofthe samples was at least an order of magnitude higher than historical data. NMOC is not reported for this project, but it is part of the data that is generated. The high amount ofNMOC caused a dilution of the other analytes. A GCMS analysis was performed to identify the NMOC. Acetone was the primary component.

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.: 151023GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/23/15 11:30		10/23/15 10:46		10/23/15 11:01			
Analyst Initials:	AS		AS		AS			
Datafile:	23oct011		23oct008		23oct009			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	82	70-130%	83	70-130%	1.2	<30
Carbon Dioxide	ND	0.010	89	70-130%	91	70-130%	2.0	<30
Oxygen/Argon	ND	0.50	106	70-130%	106	70-130%	0.8	<30
Nitrogen	ND	1.0	104	70-130%	104	70-130%	0.1	<30
Methane	ND	0.0010	100	70-130%	101	70-130%	0.4	<30
Carbon Monoxide	ND	0.0010	115	70-130%	114	70-130%	0.4	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ **Date:** 10/29/15

Mark J. Johnson
Operations Manager

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

QC Batch No.: 151029GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/29/15 10:33		10/29/15 9:33		10/29/15 9:47			
Analyst Initials:	AS		AS		AS			
Datafile:	29oct009		29oct006		29oct007			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	91	70-130%	89	70-130%	2.4	<30
Carbon Dioxide	ND	0.010	89	70-130%	88	70-130%	0.8	<30
Oxygen/Argon	ND	0.50	97	70-130%	97	70-130%	0.5	<30
Nitrogen	ND	1.0	96	70-130%	96	70-130%	0.5	<30
Methane	ND	0.0010	97	70-130%	96	70-130%	0.8	<30
Carbon Monoxide	ND	0.0010	114	70-130%	113	70-130%	1.0	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ **Date:** 10/29/15

Mark J. Johnson
Operations Manager

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

Client:	**Republic Services**
Attn:	**Jim Getting**
Project Name:	**Bridgeton Landfill**
Project No.:	**NA**
Date Received:	**10/22/15**
Matrix:	**Air**
Reporting Units:	**ppmv**

EPA 15/16

Lab No.:	G102203-01		G102203-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/21/15 8:07		10/21/15 8:21					
Date/Time Analyzed:	10/26/15 9:59		10/26/15 10:33					
QC Batch No.:	151026GC3A1		151026GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	**Result ppmv**	**RL ppmv**	**Result ppmv**	**RL ppmv**				
Hydrogen Sulfide	29 d	5.5	ND	0.55				
Carbonyl Sulfide	ND	0.55	ND	0.55				
Methyl Mercaptan	140 d	5.5	2.6	0.55				
Ethyl Mercaptan	1.9	0.55	ND	0.55				
Dimethyl Sulfide	830 d	55.0	1,000 d	55.0				
Carbon Disulfide	ND	0.55	ND	0.55				
Dimethyl Disulfide	23 d	5.5	370 d	55.0				
Total Reduced Sulfur	1,000	0.55	1,700	0.55				

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

Reviewed/Approved By: _____ Date 10/26/15

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

It was observed that the NMOC (Non-methane organic compounds) ofthe samples was at least an order of magnitude higher than historical data. NMOC is not reported for this project, but it is part of the data that is generated. The high amount ofNMOC caused a dilution of the other analytes. A GCMS analysis was performed to identify the NMOC. Acetone was the primary component.

QC Batch No.: 151026GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/26/15 9:48		10/26/15 9:23		10/26/15 9:37			
Analyst Initials:	AS		AS		AS			
Datafile:	26oct003		26oct001		26oct002			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	85	70-130%	85	70-130%	0.4	<30
Carbonyl Sulfide	ND	0.20	93	70-130%	93	70-130%	0.5	<30
Methyl Mercaptan	ND	0.20	92	70-130%	90	70-130%	1.9	<30
Ethyl Mercaptan	ND	0.20	110	70-130%	111	70-130%	0.9	<30
Dimethyl Sulfide	ND	0.20	92	70-130%	91	70-130%	0.4	<30
Carbon Disulfide	ND	0.20	84	70-130%	84	70-130%	0.3	<30
Dimethyl Disulfide	ND	0.20	95	70-130%	97	70-130%	1.6	<30

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

Reviewed/Approved By: _____ Date: 10/26/15
Mark J. Johnson
Operations Manager

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

Bridgeton Landfill, LLC.
Weeklty TRS Sampling Summary

Kurz FM =	**3,224**	**scfm**
Fleetzoom Total =	**3,138**	**scfm**

$\Delta =$ **-2.7%**

	PARAMETER	Blower Out #1	Blower Out #2
Date	Test Date		10/13/15
Time	Start - Finish	7:51	8:01
%CH_4	Methane, %	9.80	10.00
%CO_2	Carbon Dioxide, %	36.00	37.00
%O_2	Oxygen, %	8.40	7.80
%Balance	Assumed as Nitorgen, %	35.00	33.00
%H_2	Hydrogen, %	10.00	11.00
P_g	Flue Gas Static Pressure, inches of H_2O	24.91	24.91
t_s	Blower Outlet LFG Temperature, °F	86	86
Q_{sd}	Dry Volumetric Flow Rate, dry scfm (assumes 10%H2O)	2,902	
Q_s	Kurz FM, Standard Volumetric Flow Rate, scfm	3,224	
LFG_{CH4}	Methane, lb/hr	710.6	725.1
	Methane, grains/dscf	28.57	29.15
LFG_{CO2}	Carbon Dioxide, lb/hr	7,161.0	7,359.9
	Carbon Dioxide, grains/dscf	287.93	295.93
LFG_{O2}	Oxygen, lb/hr	1,214.9	1,128.1
	Oxygen, grains/dscf	48.85	45.36
LFG_{N2}	Balance gas as Nitrogen, lb/hr	4,431.6	4,178.4
	Balance gas as Nitrogen, grains/dscf	178.18	168.00
LFG_{H4}	Hydrogen, lb/hr	91.1	100.2
	Hydrogen, grains/dscf	3.66	4.03

		Blower Out #1	Blower Out #2
H_2S	Hydrogen Sulfide Concentration, ppmd	54.00	49.00
	Hydrogen Sulfide Rate, lb/hr	0.83	0.75
	Hydrogen Sulfide Rate, grains/dscf	0.033	0.030
COS	Carbonyl Sulfide Concentration, ppmd	0.53	0.53
	Carboynl Sulfide Rate, lb/hr	0.01	0.01
	Carbonyl Sulfide Rate, grains/dscf	0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd	200.00	220.00
	Methyl Mercaptan Rate, lb/hr	4.35	4.78
	Methyl Mercaptan Rate, grains/dscf	0.175	0.192
C_2H_6S	Ethyl Mercaptan Concentration, ppmd	2.40	2.60
	Ethyl Mercaptan Rate, lb/hr	0.07	0.07
	Ethyl Mercaptan Rate, grains/dscf	0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd	1,000.00	1,000.00
	Dimethyl Sulfide Rate, lb/hr	28.08	28.08
	Dimethyl Sulfide Rate, grains/dscf	1.129	1.129
CS_2	Carbon Disulfide Concentration, ppmd	0.53	0.56
	Carbon Disulfide Rate, lb/hr	0.02	0.02
	Carbon Disulfide Rate, grains/dscf	0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd	67.00	90.00
	Dimethyl Disulfide Rate, lb/hr	2.85	3.83
	Dimethyl Disulfide Rate, grains/dscf	0.115	0.154

❶ **$E_{TRS-SO2}$**	TRS-->SO2 Emission Concentration, ppmd	1,400.00	1,500.00
	TRS-->SO2 Emission Rate, lb/hr	40.54	43.43
	TRS-->SO2 Emission Rate, grains/dscf	1.630	1.746

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

Air TECHNOLOGY Laboratories, Inc.

October 20, 2015

ADE-1461
EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946

LA Cert 04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450—14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: G101504-01/02

Enclosed are results for sample(s) received 10/15/15 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

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

Preliminary results were e-mailed to Jim Getting, Mike Lambrich and Ryan Ayers on 10/19/15.

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

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

AirTECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

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

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

PAGE: 1 OF 1

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	EPA 15/16 + TRS & ASTM1946 + H2					
G101504-01	J1718	-19.9	-3.5	-2	Outlet A	10/13/2015	751	C	LFG	NA	X					
↓ -02	1619	-20.7	-3.5	-2	Outlet B	10/13/2015	801	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		COMPANY: Republic Services	DATE/TIME:
SAMPLED BY: Ryan Ayers		COMPANY: Republic Services	DATE/TIME
RELINQUISHED BY: Ryan Ayers	DATE/TIME: 10-13-15 830	RECEIVED BY	DATE/TIME
RELINQUISHED BY: FedEx	DATE/TIME:	RECEIVED BY: [illegible]	DATE/TIME: 10/15/15 915
RELINQUISHED BY	DATE/TIME:	RECEIVED BY	DATE/TIME

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

COMMENTS

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

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

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/15/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101504-01		G101504-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/13/15 7:51		10/13/15 8:01					
Date/Time Analyzed:	10/15/15 14:40		10/15/15 14:54					
QC Batch No.:	151015GC8A2		151015GC8A2					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	10	2.7	11	2.7				
Carbon Dioxide	36	0.027	37	0.027				
Oxygen/Argon	8.4	1.3	7.8	1.3				
Nitrogen	35	2.7	33	2.7				
Methane	9.8	0.0027	10	0.0027				

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

Reviewed/Approved By: _____ Date 10-19-15

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.: 151015GC8A2
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/15/15 14:11		10/15/15 13:27		10/15/15 13:41			
Analyst Initials:	AS		AS		AS			
Datafile:	15oct020		15oct017		15oct018			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	107	70-130%	108	70-130%	1.0	<30
Carbon Dioxide	ND	0.010	99	70-130%	100	70-130%	0.7	<30
Oxygen/Argon	ND	0.50	97	70-130%	97	70-130%	0.4	<30
Nitrogen	ND	1.0	98	70-130%	98	70-130%	0.2	<30
Methane	ND	0.0010	90	70-130%	90	70-130%	0.3	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 10-19-15

Mark J. Johnson
Operations Manager

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

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/15/15
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	G101504-01		G101504-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/13/15 7:51		10/13/15 8:01					
Date/Time Analyzed:	10/15/15 13:22		10/15/15 13:56					
QC Batch No.:	151015GC3A1		151015GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.7		2.7					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv				
Hydrogen Sulfide	54 d	5.3	49 d	5.3				
Carbonyl Sulfide	ND	0.53	ND	0.53				
Methyl Mercaptan	200 d	5.3	220 d	5.3				
Ethyl Mercaptan	2.4	0.53	2.6	0.53				
Dimethyl Sulfide	1,000 d	53.0	1,000 d	53.0				
Carbon Disulfide	ND	0.53	0.56	0.53				
Dimethyl Disulfide	67 d	5.3	90 d	5.3				
Total Reduced Sulfur	1,400	0.53	1,500	0.53				

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

Reviewed/Approved By: _____ Date 10-19-15

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 151015GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/15/15 11:25		10/15/15 11:00		10/15/15 11:11			
Analyst Initials:	AS		AS		AS			
Datafile:	15oct007		15oct005		15oct006			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	83	70-130%	83	70-130%	0.2	<30
Carbonyl Sulfide	ND	0.20	104	70-130%	106	70-130%	1.8	<30
Methyl Mercaptan	ND	0.20	101	70-130%	100	70-130%	1.3	<30
Ethyl Mercaptan	ND	0.20	115	70-130%	118	70-130%	2.3	<30
Dimethyl Sulfide	ND	0.20	99	70-130%	102	70-130%	2.5	<30
Carbon Disulfide	ND	0.20	99	70-130%	101	70-130%	1.7	<30
Dimethyl Disulfide	ND	0.20	110	70-130%	112	70-130%	1.4	<30

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

Reviewed/Approved By: _____ Date: 10-19-15
Mark J. Johnson
Operations Manager

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

	PARAMETER				Blower Out
Date	Test Date				10/6/15
Start	Run Start Time				12:44
	Run Finish Time				14:04
	Net Traversing Points				16 (2 x 8)
Θ	Net Run Time, minutes				1:20:35
C_p	Pitot Tube Coeficient				0.99
P_{Br}	Barometric Pressure, inches of Mercury				29.56
% H_2O	Moisture Content of LFG, %				5.53
% RH	Relative Humidity, %				52.20
M_{fd}	Dry Mole Fraction				0.945
%CH_4	Methane, %				9.40
%CO_2	Carbon Dioxide, %				33.50
%O_2	Oxygen, %				8.95
%Balance	Assumed as Nitorgen, %				37.00
%H_2	Hydrogen, %				10.00
M_d	Dry Molecular Weight, lb/lb-Mole				29.68
M_s	Wet Molecular weight, lb/lb-Mole				29.04
P_g	Flue Gas Static Pressure, inches of H_2O				23.00
P_s	Absolute Flue Gas Pressure, inches of Mercury				31.25
t_s	Average Stack Gas Temperature, °F				118
ΔP_{avg}	Average Velocity Head, inches of H_2O				0.499
v_s	Average LFG Velocity, feet/second				47.73
A_s	Stack Crossectional Area, square feet				1.35
Q_{sd}	Dry Volumetric Flow Rate, dry scfm				3,491
Q_s	Standard Volumetric Flow Rate, scfm				3,684
Q_{aw}	Actual Wet Volumetric Flue Gas Flow Rate, acfm				3,875
$Q_{lb/hr}$	Dry Air Flow Rate at Standard Conditions, lb/hr				16,134
LFG_{CH4}	Methane, lb/hr				820.0
	Methane, grains/dscf				27.41
LFG_{CO2}	Carbon Dioxide, lb/hr				8,016.5
	Carbon Dioxide, grains/dscf				267.93
LFG_{O2}	Oxygen, lb/hr				1557.2
	Oxygen, grains/dscf				52.05
LFG_{N2}	Balance gas as Nitrogen, lb/hr				5,635.9
	Balance gas as Nitrogen, grains/dscf				188.37
LFG_{H4}	Hydrogen, lb/hr				109.6
	Hydrogen, grains/dscf				3.66

				Blower Out Sample #1	Blower Out Sample #2
H_2S	Hydrogen Sulfide Concentration, ppmd			18.00	54.00
	Hydrogen Sulfide Rate, lb/hr			0.33	1.00
	Hydrogen Sulfide Rate, grains/dscf			0.011	0.033
COS	Carbonyl Sulfide Concentration, ppmd			0.58	0.59
	Carboynl Sulfide Rate, lb/hr			0.02	0.02
	Carbonyl Sulfide Rate, grains/dscf			0.001	0.001
CH_4S	Methyl Mercaptan Concentration, ppmd			180.00	200.00
	Methyl Mercaptan Rate, lb/hr			4.71	5.23
	Methyl Mercaptan Rate, grains/dscf			0.157	0.175
C_2H_6S	Ethyl Mercaptan Concentration, ppmd			2.30	2.50
	Ethyl Mercaptan Rate, lb/hr			0.08	0.08
	Ethyl Mercaptan Rate, grains/dscf			0.003	0.003
$(CH_3)_2S$	Dimethyl Sulfide Concentration, ppmd			1,000.00	1,000.00
	Dimethyl Sulfide Rate, lb/hr			33.78	33.78
	Dimethyl Sulfide Rate, grains/dscf			1.129	1.129
CS_2	Carbon Disulfide Concentration, ppmd			0.61	0.61
	Carbon Disulfide Rate, lb/hr			0.03	0.03
	Carbon Disulfide Rate, grains/dscf			0.001	0.001
$C_2H_6S_2$	Dimethyl Disulfide Concentration, ppmd			110.00	110.00
	Dimethyl Disulfide Rate, lb/hr			5.63	4.55
	Dimethyl Disulfide Rate, grains/dscf			0.188	0.152

❶$E_{TRS-SO2}$	TRS-->SO2 Emission Concentration, ppmd			1,400.00	1,500.00
	TRS-->SO2 Emission Rate, lb/hr			48.77	52.25
	TRS-->SO2 Emission Rate, grains/dscf			1.630	1.746

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

Tuesday, October 06, 2015

LOCATION	TIME	Q -SCFM		Δ	KURZ	Method 2 vs KURZ
		METHOD 2	FLEETZOOM			
BLOWER OUT	12:44	3,684	3,730	1.2%	3,673	-0.3%
FL100						
FL120						
FL 140						

Air TECHNOLOGY Laboratories, Inc.

October 9, 2015

ADE-1461
EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946

LA Cert 04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450—14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: G100710-01/02

Enclosed are results for sample(s) received 10/07/15 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

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

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, Brian Power, Ryan Ayers, David Penoyer, Niki Wuestenberg, Mike Beaudoin, David Randall and Jesse Varsho on 10/09/15.

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

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

CHAIN OF CUSTODY RECORD

Air TECHNOLOGY Laboratories, Inc.

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

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY 10 of 8	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	EPA 15/16 + TRS & ASTM1946 + H2					
G100782-01	1612	-19.56	-3.5	3.5	Outlet A	10/6/2015	1250	C	LFG	NA	X					
V -02	J1723	-19.81	-3.5	4	Outlet B	10/6/2015	1300	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer	COMPANY: Republic Services	DATE/TIME:	**COMMENTS**
SAMPLED BY: Ryan Ayers	COMPANY: Republic Services	DATE/TIME	
RELINQUISHED BY [signature] 10-6-15 1500	DATE/ RECEIVED BY	DATE/TIME	
RELINQUISHED BY FedEx	DATE/ RECEIVED BY [signature]	DATE/TIME 10/7/15 931	
RELINQUISHED BY	DATE/ RECEIVED BY	DATE/TIME	

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

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

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

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/07/15
Matrix: Air
Reporting Units: ppmv

EPA 15/16

Lab No.:	G100710-01		G100710-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/6/15 12:50		10/6/15 13:00					
Date/Time Analyzed:	10/7/15 10:54		10/7/15 11:32					
QC Batch No.:	151007GC3A1		151007GC3A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.9		3.0					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv				
Hydrogen Sulfide	18 d	5.8	54 d	5.9				
Carbonyl Sulfide	ND	0.58	ND	0.59				
Methyl Mercaptan	180 d	5.8	200 d	5.9				
Ethyl Mercaptan	2.3	0.58	2.5	0.59				
Dimethyl Sulfide	1,000 d	58.0	1,000 d	59.0				
Carbon Disulfide	0.61	0.58	0.61	0.59				
Dimethyl Disulfide	110 d	5.8	110 d	5.9				
Total Reduced Sulfur	1,400	0.58	1,500	0.59				

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

Reviewed/Approved By: _____ Date 10/9/15
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No.: 151007GC3A1
Matrix: Air
Units: ppmv

QC for Sulfur Compounds by EPA 15/16

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/7/15 10:01		10/7/15 9:34		10/7/15 9:48			
Analyst Initials:	AS		AS		AS			
Datafile:	07oct006		07oct004		07oct005			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen Sulfide	ND	0.20	103	70-130%	97	70-130%	5.8	<30
Carbonyl Sulfide	ND	0.20	106	70-130%	104	70-130%	1.6	<30
Methyl Mercaptan	ND	0.20	111	70-130%	109	70-130%	1.7	<30
Ethyl Mercaptan	ND	0.20	128	70-130%	130	70-130%	1.3	<30
Dimethyl Sulfide	ND	0.20	106	70-130%	104	70-130%	2.0	<30
Carbon Disulfide	ND	0.20	104	70-130%	103	70-130%	1.3	<30
Dimethyl Disulfide	ND	0.20	124	70-130%	122	70-130%	1.9	<30

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

Reviewed/Approved By: _____ for _____ Date: 10/9/15
Mark J. Johnson
Operations Manager

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

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/07/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G100710-01		G100710-02					
Client Sample I.D.:	Outlet A		Outlet B					
Date/Time Sampled:	10/6/15 12:50		10/6/15 13:00					
Date/Time Analyzed:	10/7/15 15:49		10/7/15 16:03					
QC Batch No.:	151007GC8A1		151007GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	2.9		3.0					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	10	2.9	10	3.0				
Carbon Dioxide	34	0.029	33	0.030				
Oxygen/Argon	9.0	1.4	8.9	1.5				
Nitrogen	37	2.9	37	3.0				
Methane	9.4	0.0029	9.4	0.0030				

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

Reviewed/Approved By: _____ Date 10/9/15
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.: 151007GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/7/15 10:19		10/7/15 9:35		10/7/15 9:50			
Analyst Initials:	AS		AS		AS			
Datafile:	07oct009		07oct006		07oct007			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	111	70-130%	111	70-130%	0.3	<30
Carbon Dioxide	ND	0.010	100	70-130%	100	70-130%	0.3	<30
Oxygen/Argon	ND	0.50	99	70-130%	99	70-130%	0.3	<30
Nitrogen	ND	1.0	100	70-130%	99	70-130%	0.2	<30
Methane	ND	0.0010	90	70-130%	90	70-130%	0.2	<30

ND = Not Detected (Below RL)

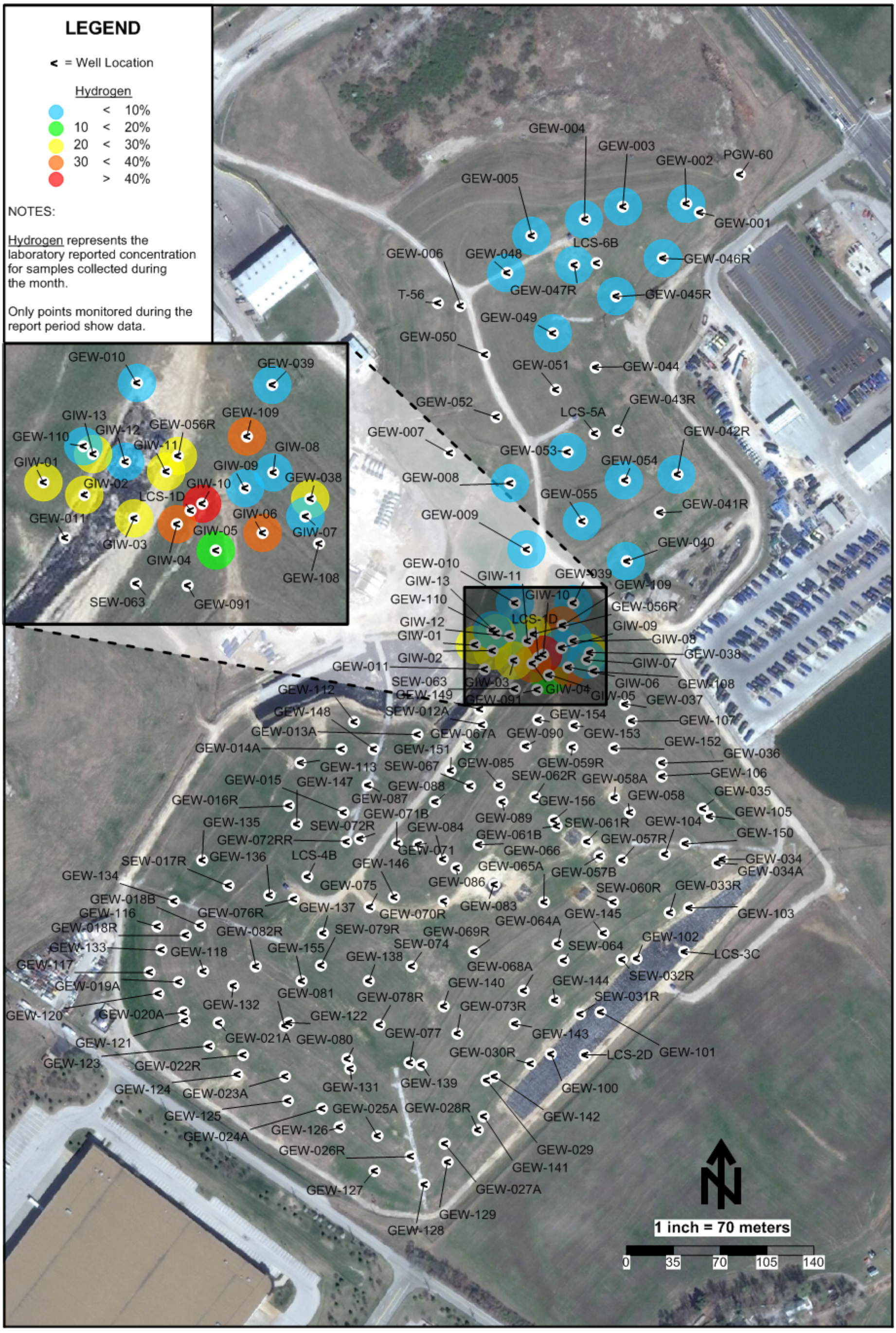
Reviewed/Approved By: _____ Date: 10/9/15

Mark J. Johnson
Operations Manager

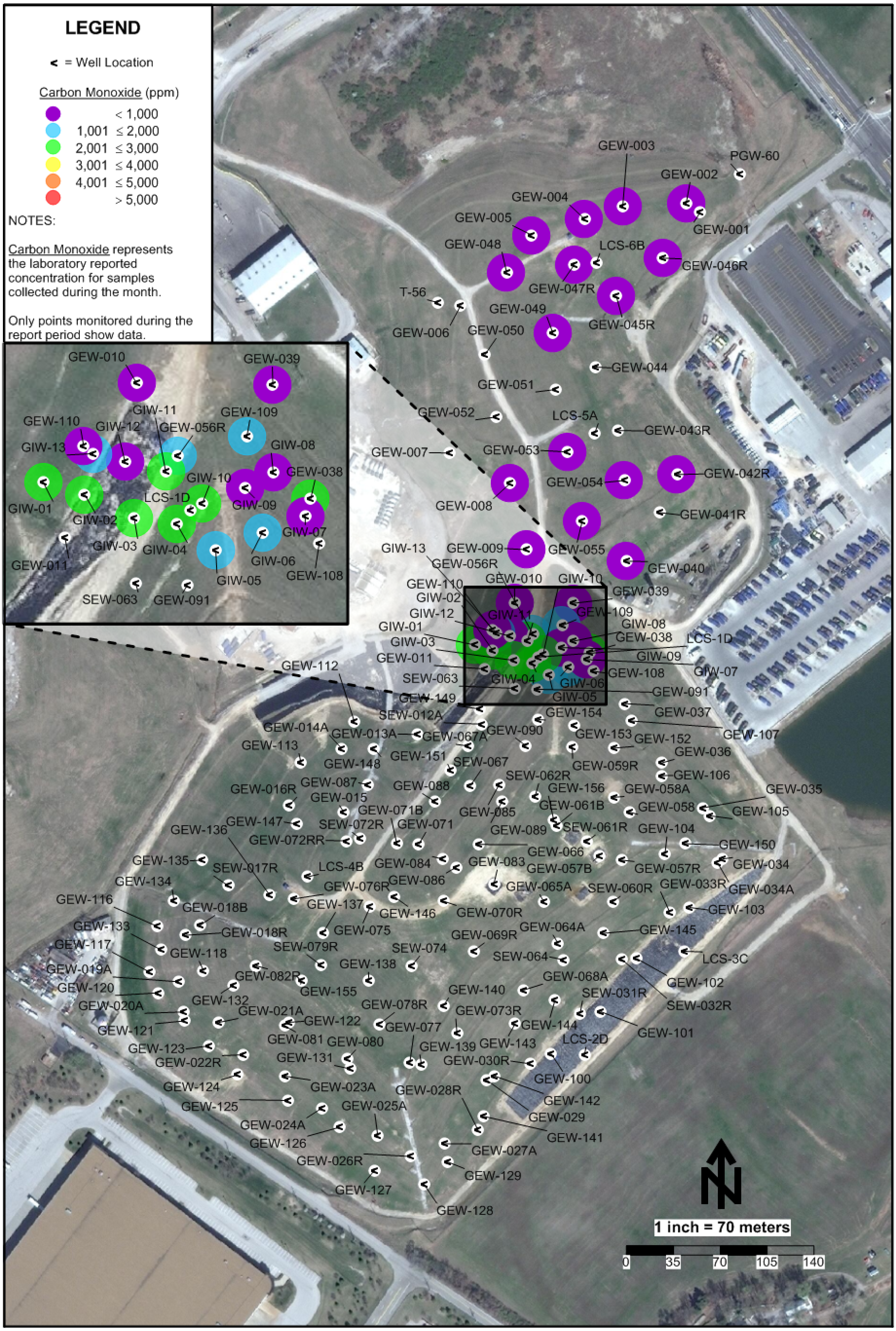
The cover letter is an integral part of this analytical report.

ATTACHMENT C

GAS WELL ANALYSIS MAPS



Hydrogen Data Map - October 2015 - Bridgeton Landfill



Carbon Monoxide Data Map - October 2015 - Bridgeton Landfill

LEGEND

< = Well Location

Maximum Temperature

- < 131°
- 131 < 151°
- 151 < 171°
- 171 < 191°
- 191 < 211°
- 211 < 231°
- > 231°

NOTES:

Maximum Temperature represents the maximum initial wellhead temperature reading collected during the month.

Only points monitored during the report period show data.

GEW-010 GEW-039 GEW-056R GIW-08 GIW-13 GIW-12 GIW-11 GEW-109 GEW-038 GEW-110 GIW-01 GIW-09 GIW-07 GIW-10 LCS-1D GIW-02 GIW-03 GIW-04 GIW-06 GEW-011 GIW-05 GEW-108 SEW-063 GEW-091

GEW-003 PGW-60 GEW-002 GEW-005 GEW-004 GEW-001 GEW-048 LCS-6B GEW-006 GEW-046R T-56 GEW-047R GEW-045R GEW-044 GEW-049 GEW-050 GEW-052 GEW-051 LCS-5A GEW-007 GEW-043R GEW-053 GEW-008 GEW-054 GEW-042R GEW-009 GEW-041R GEW-055 GEW-040 GEW-039 GEW-109 GEW-011 GEW-149 GEW-112 GEW-013A SEW-012A GEW-153 GEW-037 GEW-154 GEW-107 GEW-151 GEW-014A GEW-067A GEW-152 GEW-113 GEW-090 GEW-059R GEW-036 GEW-148 GEW-088 GEW-085 GEW-106 GEW-087 SEW-062R GEW-058A GEW-147 GEW-015 SEW-072R SEW-067 GEW-156 GEW-035 GEW-016R GEW-089 SEW-061R GEW-104 SEW-017R GEW-071 GEW-058 GEW-105 GEW-072RR GEW-084 GEW-066 GEW-135 LCS-4B GEW-071B GEW-061B GEW-150 GEW-034 GEW-136 GEW-146 GEW-083 GEW-134 GEW-057B SEW-060R GEW-034A GEW-116 GEW-076R GEW-018B GEW-086 GEW-103 GEW-132 GEW-133 GEW-137 GEW-145 GEW-082R GEW-075 GEW-070R GEW-065A GEW-057R GEW-018R SEW-032R GEW-118 GEW-155 SEW-079R SEW-074 GEW-069R SEW-064 GEW-033R GEW-117 GEW-064A GEW-120 GEW-068A GEW-144 LCS-3C GEW-122 GEW-138 GEW-140 SEW-031R GEW-102 GEW-020A GEW-021A GEW-078R GEW-077 GEW-019A GEW-080 GEW-073R GEW-101 GEW-081 GEW-143 GEW-123 GEW-131 GEW-142 GEW-121 GEW-139 GEW-100 LCS-2D GEW-022R GEW-029 GEW-030R GEW-124 GEW-023A GEW-126 GEW-141 GEW-125 GEW-129 GEW-028R GEW-025A GEW-024A GEW-026R GEW-027A GEW-127 GEW-128

1 inch = 70 meters

0 35 70 105 140

Initial Temperature Maximums - October 2015 - 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	6/2/2015	55	39	ND	4.2	ND	ND	
GEW-002	7/9/2015	46	36	4.1	15	ND	ND	See Note 1
GEW-002	7/22/2015	56	41	ND	ND	ND	ND	See Note 2
GEW-002	8/13/2015	57	40	ND	ND	ND	ND	
GEW-002	9/10/2015	55	41	ND	ND	ND	ND	
GEW-002	10/12/2015	56	41	ND	ND	ND	ND	
GEW-003	6/2/2015	53	38	ND	6.8	0.1	ND	
GEW-003	7/9/2015	51	39	ND	9.1	0.1	ND	
GEW-003	7/22/2015	54	40	ND	5.8	0.1	ND	See Note 2
GEW-003	8/13/2015	53	38	1.6	8.1	0.1	ND	
GEW-003	9/10/2015	49	36	2.8	13	0.1	ND	See Note 1
GEW-003	10/12/2015	47	35	2.9	15	0.1	ND	See Note 1 and 3
GEW-004	6/2/2015	54	39	ND	5.3	ND	ND	
GEW-004	7/9/2015	53	40	ND	6.8	0.1	ND	
GEW-004	8/13/2015	53	39	ND	7.9	0.1	ND	
GEW-004	9/10/2015	53	40	ND	6.3	0.1	ND	
GEW-004	10/12/2015	54	40	ND	5.8	0.1	ND	
GEW-005	6/3/2015	48	34	ND	16	ND	ND	
GEW-005	7/10/2015	24	21	9.5	46	ND	ND	See Note 1
GEW-005	8/13/2015	43	35	ND	21	ND	ND	
GEW-005	9/10/2015	52	38	ND	10	0.1	ND	
GEW-005	10/12/2015	47	35	1.7	16	ND	ND	See Note 3
GEW-006	9/10/2015	55	38	ND	6.5	ND	ND	
GEW-007	7/9/2015	54	38	ND	6	ND	ND	
GEW-007	9/11/2015	57	40	ND	ND	ND	ND	
GEW-008	6/4/2015	52	43	ND	ND	1.7	32	
GEW-008	7/9/2015	46	41	2.4	8.4	1.8	ND	
GEW-008	8/13/2015	51	44	ND	ND	1.5	ND	
GEW-008	9/11/2015	49	47	ND	ND	0.7	ND	
GEW-008	10/12/2015	50	46	ND	ND	1.3	ND	
GEW-009	6/4/2015	53	40	ND	5	0.6	ND	
GEW-009	7/9/2015	50	41	ND	6.6	0.6	ND	
GEW-009	8/13/2015	53	41	ND	4.3	0.5	ND	
GEW-009	9/11/2015	51	40	1.5	7	0.8	ND	See Note 1
GEW-009	10/12/2015	52	41	ND	5.1	0.8	ND	
GEW-040	6/3/2015	48	34	3.8	14	ND	ND	
GEW-040	7/9/2015	56	40	ND	ND	ND	ND	
GEW-040	8/13/2015	57	38	ND	3.4	ND	ND	
GEW-040	9/8/2015	56	40	ND	ND	ND	ND	
GEW-040	10/12/2015	57	40	ND	ND	ND	ND	
GEW-041R	7/9/2015	48	34	3.7	14	ND	ND	See Note 1
GEW-041R	9/8/2015	56	40	ND	3.6	ND	ND	
GEW-042R	6/3/2015	49	34	3.1	13	ND	ND	
GEW-042R	7/9/2015	49	35	3.3	12	ND	ND	
GEW-042R	8/13/2015	57	39	ND	3.2	ND	ND	
GEW-042R	9/8/2015	55	41	ND	ND	ND	ND	
GEW-042R	10/12/2015	56	41	ND	ND	ND	ND	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-043R	7/9/2015	56	42	ND	ND	0.2	ND	
GEW-043R	9/8/2015	54	41	ND	ND	0.2	ND	
GEW-044	7/9/2015	43	31	4	22	ND	ND	See Note 1
GEW-044	9/10/2015	55	38	ND	5.9	ND	ND	
GEW-045R	6/4/2015	57	39	ND	ND	ND	ND	
GEW-045R	7/9/2015	57	38	ND	3	ND	ND	
GEW-045R	8/13/2015	57	37	ND	4.4	ND	ND	
GEW-045R	9/10/2015	58	39	ND	ND	ND	ND	
GEW-045R	10/12/2015	58	38	ND	ND	ND	ND	
GEW-046R	6/4/2015	54	37	ND	6.9	ND	ND	
GEW-046R	7/9/2015	52	38	ND	8.2	0.1	ND	
GEW-046R	8/13/2015	54	39	ND	5.9	0.1	ND	
GEW-046R	9/10/2015	53	40	ND	5	0.1	ND	
GEW-046R	10/12/2015	56	41	ND	ND	0.1	ND	
GEW-047R	7/9/2015	43	35	2	20	ND	ND	
GEW-047R	8/13/2015	41	35	ND	22	0.1	ND	
GEW-047R	9/10/2015	49	38	ND	12	0.1	ND	
GEW-047R	10/12/2015	47	37	ND	15	ND	ND	
GEW-048	6/3/2015	52	36	ND	11	ND	ND	
GEW-048	8/13/2015	54	38	ND	7.6	ND	ND	
GEW-048	9/10/2015	53	39	ND	7.5	ND	ND	
GEW-048	10/12/2015	55	39	ND	4.9	ND	ND	
GEW-049	6/4/2015	43	32	2	22	ND	ND	
GEW-049	7/10/2015	33	27	6	34	ND	ND	See Note 1
GEW-049	8/13/2015	42	34	ND	23	ND	ND	
GEW-049	9/10/2015	50	35	2.9	12	0.1	ND	See Note 1
GEW-049	10/12/2015	54	39	ND	6.2	0.1	ND	
GEW-050	9/10/2015	56	39	ND	4.4	0.1	ND	
GEW-051	7/10/2015	55	41	ND	ND	1	ND	
GEW-051	9/10/2015	54	41	ND	ND	1	ND	
GEW-052	7/10/2015	49	39	ND	11	ND	ND	
GEW-052	9/10/2015	52	39	ND	8.1	0.1	ND	
GEW-053	6/4/2015	51	41	ND	ND	5.8	71	
GEW-053	7/10/2015	49	40	2	6	3.3	41	
GEW-053	8/13/2015	51	41	ND	ND	5.2	59	
GEW-053	9/11/2015	49	41	ND	ND	5.7	63	
GEW-053	10/12/2015	50	41	ND	ND	5.7	64	
GEW-054	6/4/2015	53	41	ND	ND	2.9	35	
GEW-054	7/10/2015	50	43	ND	ND	4.2	ND	
GEW-054	8/13/2015	54	41	ND	ND	3	33	
GEW-054	9/11/2015	51	41	ND	ND	4.3	34	
GEW-054	10/28/2015	52	41	ND	3.5	2.2	ND	
GEW-055	6/3/2015	49	37	3	9	1.2	ND	
GEW-055	7/10/2015	51	40	1.8	6.4	1.5	39	
GEW-055	8/13/2015	54	41	ND	ND	1.5	ND	
GEW-055	9/10/2015	48	39	2.6	9.4	1.4	ND	
GEW-055	10/12/2015	50	40	2	7.3	1.4	30	See Note 3

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

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
South Quarry								
GEW-010	6/1/2015	50	36	2.5	9.9	ND	32	
GEW-010	7/9/2015	52	43	ND	3.3	0.2	ND	
GEW-010	8/6/2015	49	36	2.9	11	0.2	ND	See Note 1
GEW-010	9/11/2015	40	39	4.3	16	0.6	78	
GEW-010	10/14/2015	42	44	2.9	11	0.6	79	See Note 4
GEW-011	7/22/2015	3	61	ND	ND	32	2,300	See Note 2
GEW-022R	9/21/2015	0.9	65	ND	ND	29	4,100	
GEW-028R	7/9/2015	0.4	40	8.1	29	22	2,700	
GEW-028R	7/22/2015	19	45	6.4	23	23	2,700	See Note 2
GEW-038	7/9/2015	0.4	45	5.8	21	27	2,400	
GEW-038	8/6/2015	0.2	47	4.5	16	31	3,100	
GEW-038	9/11/2015	0.3	46	5.4	19	28	3,000	
GEW-038	10/14/2015	0.3	45	5.6	20	28	3,000	See Note 4
GEW-039	6/1/2015	37	53	ND	4.3	5.3	240	
GEW-039	7/9/2015	36	51	ND	7.2	4.2	280	
GEW-039	7/22/2015	37	51	ND	6.9	3.4	280	See Note 2
GEW-039	8/6/2015	40	52	ND	ND	4.2	200	
GEW-039	9/11/2015	39	52	ND	4.8	2.3	190	
GEW-039	10/14/2015	39	53	ND	3.9	2.4	170	
GEW-056R	6/16/2015	17	44	ND	23	15	890	
GEW-056R	7/9/2015	7.1	31	5.6	44	12	1,100	
GEW-056R	8/6/2015	2.2	52	ND	4.9	38	2,100	
GEW-056R	9/11/2015	0.6	56	ND	ND	39	2,400	
GEW-056R	10/14/2015	12	42	ND	23	22	1,300	
GEW-057R	7/9/2015	0.5	55	ND	ND	40	2,500	
GEW-057R	9/18/2015	0.4	52	ND	5.4	38	2,400	
GEW-058	7/9/2015	4	55	ND	ND	37	2,200	
GEW-058	9/18/2015	0.3	46	4	14	33	2,400	
GEW-058A	7/9/2015	0.4	49	2.3	8.2	39	2,700	
GEW-058A	9/18/2015	5.1	55	ND	3.6	34	2,400	
GEW-059R	7/9/2015	0.4	52	ND	ND	43	1,900	
GEW-059R	9/18/2015	1.5	51	ND	ND	41	1,700	
GEW-065A	7/9/2015	0.4	45	5.5	20	28	2,800	
GEW-065A	7/22/2015	0.5	58	ND	ND	37	2,900	See Note 2
GEW-065A	9/21/2015	0.4	57	ND	3.7	36	3,100	
GEW-082R	7/9/2015	1	55	ND	ND	40	2,100	
GEW-082R	9/21/2015	0.8	53	ND	3.7	40	2,200	
GEW-086	7/9/2015	13	46	3.2	17	20	1,200	
GEW-086	9/18/2015	12	36	5.3	40	5.6	520	
GEW-090	7/9/2015	4.1	50	ND	3.4	41	2,100	
GEW-090	9/18/2015	5	51	ND	ND	40	2,200	
GEW-109	6/1/2015	2.8	55	ND	ND	38	2,400	
GEW-109	7/9/2015	4	52	ND	10	32	1,700	
GEW-109	7/22/2015	4.2	52	ND	10	31	1,900	See Note 2
GEW-109	8/6/2015	2.7	50	ND	11	33	2,200	
GEW-109	9/11/2015	4.8	49	2.5	14	28	2,000	See Note 1
GEW-109	10/14/2015	5.3	50	ND	12	30	2,000	
GEW-110	6/1/2015	12	37	4.7	32	14	1,200	
GEW-110	8/6/2015	1.4	8.8	18	69	2.6	320	
GEW-110	9/11/2015	7.7	23	11	52	6.6	570	
GEW-110	10/15/2015	3.8	15.0	14	62	5.2	380	See Note 4
GEW-117	7/9/2015	10	65	ND	ND	20	1,900	
GEW-117	9/18/2015	4	69	ND	ND	22	2,700	
GEW-120	7/15/2015	26	68	ND	ND	2.2	230	
GEW-120	9/15/2015	11	65	ND	5.1	17	1,600	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-121	7/14/2015	2.4	58	ND	3.3	17	2,200	
GEW-121	9/15/2015	2.2	53	2.7	9.5	31	2,800	
GEW-122	9/15/2015	5.2	50	2.3	8.3	32	2,500	
GEW-123	7/15/2015	5.6	61	ND	3.6	28	2,700	
GEW-123	7/22/2015	ND	64	ND	ND	25	2,800	See Note 2
GEW-123	9/15/2015	6.6	55	3.1	11	23	3,500	
GEW-124	7/13/2015	16	61	ND	4.2	17	1,400	
GEW-124	7/22/2015	19	63	ND	ND	14	1,600	See Note 2
GEW-124	9/15/2015	8.3	56	2.7	9.8	22	2,000	
GEW-125	9/18/2015	1.7	57	ND	ND	36	3,200	
GEW-126	9/15/2015	5.5	54	ND	ND	36	3,700	
GEW-127	7/14/2015	0.7	63	ND	ND	31	3,800	
GEW-128	7/14/2015	1.3	62	ND	ND	30	3,200	
GEW-129	7/14/2015	1.3	52	3.0	11	31	2,700	
GEW-129	9/15/2015	1.8	58	ND	3.4	34	3,500	
GEW-131	7/14/2015	16	51	ND	3.6	27	1,700	
GEW-131	9/15/2015	20	44	2.4	8.8	23	1,500	
GEW-132	7/15/2015	13	52	1.9	9.3	23	1,200	
GEW-134	7/14/2015	10	55	ND	9.7	22	1,700	
GEW-134	9/18/2015	17	57	ND	10	15	990	
GEW-135	7/14/2015	3.9	57	ND	ND	33	1,900	
GEW-135	9/14/2015	3.8	51	2.7	9.8	31	1,900	
GEW-135	9/18/2015	4.7	56	ND	4.9	32	2,000	See Note 2
GEW-138	7/14/2015	4.9	42	3	28	20	2,000	
GEW-138	9/14/2015	11	49	1.7	21	16	1,400	
GEW-138	9/18/2015	11	43	2.4	31	11	960	See Note 2
GEW-139	7/14/2015	0.5	60	ND	ND	35	4,200	
GEW-139	9/14/2015	14	49	3.5	19	14	1,000	
GEW-139	9/15/2015	0.5	59	ND	4.1	34	4,600	See Note 2
GEW-140	7/14/2015	10	57	ND	ND	29	2,500	
GEW-140	7/22/2015	10	56	ND	ND	28	2,400	See Note 2
GEW-141	7/15/2015	4.2	64	ND	3.5	26	2,900	
GEW-141	9/15/2015	2	61	ND	ND	32	3,700	
GEW-143	7/14/2015	0.2	53	ND	ND	40	3,300	
GEW-143	9/15/2015	0.3	46	2.5	9.1	41	3,500	
GEW-147	7/14/2015	3	53	ND	5	36	2,200	
GEW-147	9/15/2015	4.9	52	ND	3.6	37	2,200	
GEW-151	9/15/2015	5.7	50	3.4	14	26	1,800	
GEW-152	7/15/2015	5.8	52	ND	ND	37	2,900	
GEW-152	9/15/2015	5.9	51	ND	3.4	38	3,000	
GEW-153	7/15/2015	20	47	2	15	15	920	
GEW-153	9/15/2015	20	38	ND	31	9.3	340	
GEW-155	7/15/2015	5.8	49	2.5	21	21	1,100	
GIW-01	6/5/2015	3.6	65	ND	ND	27	2,800	
GIW-01	7/15/2015	1.6	67	ND	ND	28	3,000	
GIW-01	8/6/2015	1.6	66	ND	ND	28	3,300	
GIW-01	9/11/2015	2.7	67	ND	ND	25	2,600	
GIW-01	10/14/2015	1.4	56	3.7	13	24	2,800	See Note 1 and 3
GIW-02	6/5/2015	4.9	50	3.3	14	27	1,900	
GIW-02	7/15/2015	0.6	65	ND	ND	31	3,400	
GIW-02	8/6/2015	0.4	59	3.4	12	24	2,900	
GIW-02	9/11/2015	5.2	63	ND	3.1	27	2,500	
GIW-02	10/14/2015	7.8	63	ND	ND	25	2,300	
GIW-03	6/5/2015	0.4	49	4.2	15	30	2,800	
GIW-03	7/15/2015	0.3	37	9.5	34	19	2,200	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GIW-03	8/6/2015	0.3	50	4.5	16	28	2,900	
GIW-03	9/11/2015	0.4	60	ND	ND	36	3,400	
GIW-03	10/14/2015	0.3	41	7.5	27	24	2,300	See Note 4
GIW-04	6/5/2015	0.5	51	ND	4.8	42	3,200	
GIW-04	7/15/2015	0.5	52	2	7.2	38	2,800	
GIW-04	8/6/2015	0.7	54	ND	ND	42	2,800	
GIW-04	9/11/2015	0.6	43	4.2	15	36	2,100	
GIW-04	10/14/2015	0.5	43	4.4	16.0	36	2,200	See Note 4
GIW-05	6/5/2015	1.8	34	7.8	28	28	1,700	
GIW-05	7/15/2015	1.6	41	6.6	24	26	1,800	
GIW-05	8/6/2015	2.5	58	ND	ND	35	2,200	
GIW-05	9/11/2015	2.4	48	4.4	16	28	1,900	
GIW-05	10/14/2015	1.9	32	10.0	37	18	1,100	See Note 4
GIW-06	6/5/2015	0.6	40	7	25	27	1,600	
GIW-06	7/15/2015	0.8	63	ND	ND	33	1,800	
GIW-06	8/6/2015	0.8	61	ND	ND	34	2,100	
GIW-06	9/11/2015	0.9	59	ND	3.9	34	2,000	
GIW-06	10/14/2015	0.9	57	1.7	6.1	34	1,700	See Note 4
GIW-07	6/5/2015	26	61	ND	ND	11	1,200	
GIW-07	7/15/2015	21	65	ND	ND	11	990	
GIW-07	8/6/2015	23	60	ND	3.7	12	1,200	
GIW-07	9/11/2015	25	56	2.5	8.8	7.5	730	
GIW-07	10/14/2015	31	54	1.7	5.8	7.1	700	See Note 4
GIW-08	6/5/2015	22	66	ND	ND	8.7	1,500	
GIW-08	7/15/2015	17	53	5.5	23	2	460	
GIW-08	8/6/2015	18	48	6.9	25	2.4	590	
GIW-08	9/11/2015	13	45	3.6	37	1.1	300	
GIW-08	10/14/2015	19	62	2.8	12	5.0	740	See Note 4
GIW-09	6/5/2015	0.8	64	1.6	5.7	26	3,200	
GIW-09	7/15/2015	12	44	3.3	30	10	850	
GIW-09	8/6/2015	15	36	6.7	35	6.8	590	
GIW-09	9/11/2015	2.5	17	12	64	4.2	400	
GIW-09	10/14/2015	3	13	15	66	2.2	260	See Note 4
GIW-10	6/5/2015	3.8	54	ND	ND	39	2,700	
GIW-10	7/15/2015	0.3	35	7.2	26	31	3,500	
GIW-10	8/6/2015	0.4	38	5.6	21	35	3,500	
GIW-10	9/11/2015	0.3	54	ND	ND	43	3,300	
GIW-10	10/14/2015	3.6	51	ND	ND	42	2,900	
GIW-11	6/5/2015	2.3	44	5	21	27	2,200	
GIW-11	7/15/2015	34	3.1	8	37	18	1,600	
GIW-11	8/6/2015	1.7	52	3.1	13	30	3,000	
GIW-11	9/11/2015	2.9	44	5.4	24	23	2,200	
GIW-11	10/14/2015	2.9	47	4.8	19	26	2,500	See Note 4
GIW-12	6/5/2015	4.3	46	4.8	23	21	1,900	
GIW-12	7/15/2015	5.1	20	11	60	4.1	490	
GIW-12	8/6/2015	6.7	24	8.9	54	5.3	470	
GIW-12	9/11/2015	7.1	23	9.4	55	5.2	440	
GIW-12	10/14/2015	5.2	20	11	57	5.9	510	See Note 4

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2/Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GIW-13	6/5/2015	6.1	56	1.5	7.3	28	2,300	
GIW-13	7/15/2015	1.4	60	ND	ND	34	2,800	
GIW-13	8/6/2015	2.9	62	ND	ND	31	2,800	
GIW-13	9/11/2015	10	62	ND	5.6	20	1,600	
GIW-13	10/14/2015	8.5	57	ND	7	25	2,000	
Flare Station[2]	6/2/2015	8.3	31	9.9	40	11	1,100	
Flare Station[2]	7/1/2015	8.1	31	10	40	10	1,400	
Flare Station[2]	8/11/2015	9.5	32	9.1	38	10	1,500	
Flare Station[2]	9/1/2015	7.9	29.7	10.3	41.7	9.2	870	See Note 5
Flare Station[2]	10/6/2015	9.4	33.3	9.0	37.0	9.9	933	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 FL-100, FL-120, and FL-140.

ND = Analyte not detected in sample.

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

ATTACHMENT D-2

LAB ANALYSIS REPORTS

Air TECHNOLOGY Laboratories, Inc.

October 9, 2015

ADE-1461
EPA Methods TO-3, 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

Weaver Consultants Group
ATTN: David Randall
6301 East Highway AB
Columbia, MO 65201

LABORATORY TEST RESULTS

Project Name: Bridgeton Monthly Permit Flare LFG Testing
Project Number: 0120-131-10-27
Lab Number: G100703-01/04

Enclosed are results for sample(s) received 10/07/15 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 for were e-mailed to David Randall on 10/09/15.

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

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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

AirTECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

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

Project No.:	0120-131-10-27
Project Name:	Bridgeton Monthly Permit Flare LFG Testing
Report To:	David A. Randall
Company:	Weaver Consultants Group
Street:	6301 East Highway AB
City/State/Zip:	Columbia, MO 65201
Phone& Fax:	888-660-0346
e-mail:	drandall@weaverboos.com

BILLING

P.O. No.:	
Bill to:	Ms. Michele Clark
	<--Same

ANALYSIS REQUEST

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ASTM 1946 + CO, H2, and Btu					
G100703-01	FL100 (EP11): Can # = 1354	10/6/2015	1301	C	LFG		X					
-02	FL120 (EP12): Can # = 3140	10/6/2015	1312	C	LFG		X					
-03	FL140 (EP13) Can # = ~~5967~~ 57 KC	10/6/2015	1343	C	LFG		X					
-04	LFG CSU (EP-14) Can # = 5418	[redacted]0/6/2015	1430	C	LFG		X					

AUTHORIZATION TO PERFORM WORK	COMPANY	DATE/TIME
David A. Ranall	Weaver Boos Eng	10/11/2013
SAMPLED BY	COMPANY	DATE/TIME
J Holt, D Randall, & D	Weaver Consultants Group	10/06/15 0800-1000

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
UPS		Kathy C	10/7/15 1005
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME

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

COMMENTS

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

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

Rev. 03 - 5/7/09

Client: Weaver Consultants Group
Attn: David Randall
Project Name: Bridgeton Monthly Permit Flare LFG Testing
Project No.: 0120-131-10-27
Date Received: 10/07/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G100703-01		G100703-02		G100703-03		G100703-04	
Client Sample I.D.:	FL100 (EP11) Can #1354		FL120 (EP12) Can #3140		FL140 (EP13) Can #5957		LFG CSU (EP-14) Can #5418	
Date/Time Sampled:	10/6/15 13:01		10/6/15 13:12		10/6/15 13:43		10/6/15 14:30	
Date/Time Analyzed:	10/7/15 16:47		10/7/15 17:02		10/7/15 17:17		10/7/15 17:31	
QC Batch No.:	151007GC8A1		151007GC8A1		151007GC8A1		151007GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.1		3.0		3.1		3.1	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	10	3.1	10	3.0	9.6	3.1	10	3.1
Carbon Dioxide	33	0.031	35	0.030	32	0.031	29	0.031
Oxygen/Argon	9.0	1.5	8.3	1.5	9.6	1.5	10	1.5
Nitrogen	37	3.1	35	3.0	39	3.1	43	3.1
Methane	9.4	0.0031	9.8	0.0030	9.0	0.0031	5.4	0.0031
Carbon Monoxide	0.092	0.0031	0.097	0.0030	0.091	0.0031	0.082	0.0031
Net Heating Value (BTU/ft3)	138	3.1	149	3.0	131	3.1	105	3.1
Gross Heating Value (BTU/ft3)	156	3.1	169	3.0	148	3.1	120	3.1

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

Reviewed/Approved By: _____ Date 10/9/15
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

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

QC Batch No.: 151007GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/7/15 10:19		10/7/15 9:35		10/7/15 9:50			
Analyst Initials:	AS		AS		AS			
Datafile:	07oct009		07oct006		07oct007			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	111	70-130%	111	70-130%	0.3	<30
Carbon Dioxide	ND	0.010	100	70-130%	100	70-130%	0.3	<30
Oxygen/Argon	ND	0.50	99	70-130%	99	70-130%	0.3	<30
Nitrogen	ND	1.0	100	70-130%	99	70-130%	0.2	<30
Methane	ND	0.0010	90	70-130%	90	70-130%	0.2	<30
Carbon Monoxide	ND	0.0010	109	70-130%	109	70-130%	0.0	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 10/9/15

Mark J. Johnson
Operations Manager

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

AirTECHNOLOGY
Laboratories, Inc.

October 27, 2015

ADE-1461
EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946

LA Cert 04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450—14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: G101902-01/34

Enclosed are results for sample(s) received 10/19/15 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

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

Preliminary results were e-mailed to Jim Getting, Mike Lambrich, and Ryan Ayers on 10/26/15.

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

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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

AirTECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

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

DELIVERABLES

EDD ☐
EDF ☐
Level 3 ☐
Level 4 ☐

PAGE: 1 OF 4

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
G101902-01	5307	-20.1	-5	-5	GEW-40	10/12/2015	832	C	LFG	NA	X					
-02	A7671	-20	-5.2	-5	GEW-42R	10/12/2015	942	C	LFG	NA	X					
-03	A8092	-19.75	-5.1	-6	GEW-45R	10/12/2015	1012	C	LFG	NA	X					
-04	A8095	-20.35	-5.2	-5.5	GEW-46R	10/12/2015	1027	C	LFG	NA	X					
-05	5920	-20	-4.75	-5	GEW-2	10/12/2015	1042	C	LFG	NA	X					
-06	3829	-18.85	-5.15	-5	GEW-3	10/12/2015	1100	C	LFG	NA	X					
-07	5924	-20	-5	-5	GEW-4	10/12/2015	1113	C	LFG	NA	X					
-08	6138	-20.1	-4.7	-5	GEW-47R	10/12/2015	1133	C	LFG	NA	X					
-09	A8054	-19.25	-5.2	-5.5	GEW-5	10/12/2015	1152	C	LFG	NA	X					

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

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

RELINQUISHED BY: Ryan Ayers	10-16-15 12:00	RECEIVED BY	DATE/TIME
RELINQUISHED BY: FED EX		RECEIVED BY	DATE/TIME: 10/19/15 1104
RELINQUISHED BY		RECEIVED BY	DATE/TIME

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

COMMENTS

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

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

Air TECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

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

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

PAGE: 2 OF 4

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
GB1902-10	A7642	-20.1	-5.1	-5	GEW-48	10/12/2015	1205	C	LFG	NA	X					
-11	A7758	-20	-4.9	-5	GEW-49	10/12/2015	1418	C	LFG	NA	X					
-12	A7646	-19.8	-5	-5	GEW-53	10/12/2015	1453	C	LFG	NA	X					
-13	A7759	-19.35	-3	-3.5	GEW-55	10/12/2015	1517	C	LFG	NA	X					
-14	5811	-20.35	-5.25	-6	GEW-8	10/12/2015	1651	C	LFG	NA	X					
-15	A7765	-19.9	-5.15	-5.5	GEW-9	10/12/2015	1708	C	LFG	NA	X					
-16	5816	-20.55	-5.45	-5	GEW-38	10/14/2015	904	C	LFG	NA	X					
-17	5323	-20.25	-5.05	-5	GEW-39	10/14/2015	918	C	LFG	NA	X					
-18	6143	-20.15	-5.1	-5	GEW-109	10/14/2015	939	C	LFG	NA	X					

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

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

RELINQUISHED BY: [signature] 10-16-15 1200 — DATE/RECEIVED BY — DATE/TIME

RELINQUISHED BY: FED EX — DATE/RECEIVED BY: [signature] 10/19/15 1154 — DATE/TIME

RELINQUISHED BY — DATE/RECEIVED BY — DATE/TIME

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

COMMENTS

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

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

AirTECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

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

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

PAGE: 3 OF 4

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
G101902-19	A7810	-20.35	-4.85	-4.5	GEW-56R	10/14/2015	1009	C	LFG	NA	X					
-20	5821	-20.35	-4.95	-4.5	GEW-10	10/14/2015	1026	C	LFG	NA	X					
-21	5819	-20.35	-5	-5	GIW-11	10/14/2015	1100	C	LFG	NA	X					
-22	A8088	-20.5	-4.9	-5	GIW-12	10/14/2015	1111	C	LFG	NA	X					
-23	A8065	-20.4	-5.2	-5	GIW-13	10/14/2015	1124	C	LFG	NA	X					
-24	A7775	-20.45	-5.1	-5	GIW-8	10/14/2015	1140	C	LFG	NA	X					
-25	A7778	-20.35	-4.9	-5	GIW-5	10/14/2015	1152	C	LFG	NA	X					
-26	5304	-20.3	-4.95	-5	GIW-6	10/14/2015	1345	C	LFG	NA	X					
-27	3827	-20.25	-5	-5	GIW-7	10/14/2015	1402	C	LFG	NA	X					

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

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

RELINQUISHED BY: [signature] 10-16-15 1200 — DATE/TIME — RECEIVED BY — DATE/TIME

RELINQUISHED BY: Fed Ex — DATE/TIME — RECEIVED BY: [signature] 10/19/15 1644 — DATE/TIME

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

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

COMMENTS

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

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

AirTECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

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

DELIVERABLES

EDD	☐
EDF	☐
Level 3	☐
Level 4	☐

PAGE: 4 OF 4

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
G101902-28	6146	-20.7	-4.95	-5	GIW-9	10/14/2015	1416	C	LFG	NA	X					
-29	5318	-20.65	-5	-5	GIW-10	10/14/2015	1435	C	LFG	NA	X					
-30	5835	-20.5	-5	-5	GIW-4	10/14/2015	1450	C	LFG	NA	X					
-31	4645	-20.8	-5.1	-5	GIW-3	10/14/2015	1509	C	LFG	NA	X					
-32	A7762	-20.4	-5	-5	GIW-2	10/14/2015	1524	C	LFG	NA	X					
-33	A7776	-18.95	-4.5	-4.5	GIW-1	10/14/2015	1539	C	LFG	NA	X					
-34	3129	-21	-4.95	-4	GEW-110	10/15/2015	1017	C	LFG	NA	X					

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

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

RELINQUISHED BY: [signature] 10-16-15 1200 — DATE/TIME — RECEIVED BY — DATE/TIME

RELINQUISHED BY: FED EX — DATE/TIME — RECEIVED BY: [signature] 10/19/15 1104 — DATE/TIME

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

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

COMMENTS

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

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

Client: Republic Services, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-01		G101902-02		G101902-03		G101902-04	
Client Sample I.D.:	GEW-40		GEW-42R		GEW-45R		GEW-46R	
Date/Time Sampled:	10/12/15 8:32		10/12/15 9:42		10/12/15 10:12		10/12/15 10:27	
Date/Time Analyzed:	10/20/15 10:58		10/20/15 11:12		10/20/15 11:27		10/20/15 11:41	
QC Batch No.:	151020GC8A1		151020GC8A1		151020GC8A1		151020GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.4		3.3	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.032	ND d	0.032	ND d	0.034	0.11 d	0.033
Carbon Dioxide	40	0.032	41	0.032	38	0.034	41	0.033
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.7	ND	1.6
Nitrogen	ND	3.2	ND	3.2	ND	3.4	ND	3.3
Methane	57	0.0032	56	0.0032	58	0.0034	56	0.0033
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0034	ND	0.0033

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis QC Batch:151022GC8A1

Reviewed/Approved By: _____ Date 10/26/15
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

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

Client: Republic Services, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-05		G101902-06		G101902-07		G101902-08	
Client Sample I.D.:	GEW-2		GEW-3		GEW-4		GEW-47R	
Date/Time Sampled:	10/12/15 10:42		10/12/15 11:00		10/12/15 11:13		10/12/15 11:33	
Date/Time Analyzed:	10/20/15 11:56		10/20/15 12:10		10/20/15 12:25		10/20/15 12:39	
QC Batch No.:	151020GC8A1		151020GC8A1		151020GC8A1		151020GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.032	0.076 d	0.032	0.11 d	0.032	ND d	0.032
Carbon Dioxide	41	0.032	35	0.032	40	0.032	37	0.032
Oxygen/Argon	ND	1.6	2.9	1.6	ND	1.6	ND	1.6
Nitrogen	ND	3.2	15	3.2	5.8	3.2	15	3.2
Methane	56	0.0032	47	0.0032	54	0.0032	47	0.0032
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0032	ND	0.0032

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
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Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-09		G101902-10		G101902-11		G101902-12	
Client Sample I.D.:	GEW-5		GEW-48		GEW-49		GEW-53	
Date/Time Sampled:	10/12/15 11:52		10/12/15 12:05		10/12/15 14:18		10/12/15 14:53	
Date/Time Analyzed:	10/20/15 12:54		10/20/15 13:09		10/20/15 13:54		10/20/15 14:09	
QC Batch No.:	151020GC8A1		151020GC8A1		151020GC8A1		151020GC8A1	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.3		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	ND d	0.033	ND d	0.032	0.078 d	0.032	5.7	3.2
Carbon Dioxide	35	0.033	39	0.032	39	0.032	41	0.032
Oxygen/Argon	1.7	1.6	ND	1.6	ND	1.6	ND	1.6
Nitrogen	16	3.3	4.9	3.2	6.2	3.2	ND	3.2
Methane	47	0.0033	55	0.0032	54	0.0032	50	0.0032
Carbon Monoxide	ND	0.0033	ND	0.0032	ND	0.0032	0.0064	0.0032

Results normalized including non-methane hydrocarbons
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Reviewed/Approved By: _____ **Date** 10/26/15
Mark Johnson
Operations Manager

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Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-13		G101902-14		G101902-15		G101902-16	
Client Sample I.D.:	GEW-55		GEW-8		GEW-9		GEW-38	
Date/Time Sampled:	10/12/15 15:17		10/12/15 16:51		10/12/15 17:08		10/14/15 9:04	
Date/Time Analyzed:	10/20/15 14:24		10/20/15 14:38		10/20/15 16:37		10/20/15 16:51	
QC Batch No.:	151020GC8A1		151020GC8A1		151020GC8A2		151020GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	2.9		3.4		3.3		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	1.4 d	0.029	1.3 d	0.034	0.76 d	0.033	28	3.2
Carbon Dioxide	40	0.029	46	0.034	41	0.033	45	0.032
Oxygen/Argon	2.0	1.4	ND	1.7	ND	1.6	5.6	1.6
Nitrogen	7.3	2.9	ND	3.4	5.1	3.3	20	3.2
Methane	50	0.0029	50	0.0034	52	0.0033	0.25	0.0032
Carbon Monoxide	0.0030	0.0029	ND	0.0034	ND	0.0033	0.30	0.0032

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Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-17		G101902-18		G101902-19		G101902-20	
Client Sample I.D.:	GEW-39		GEW-109		GEW-56R		GEW-10	
Date/Time Sampled:	10/14/15 9:18		10/14/15 9:39		10/14/15 10:09		10/14/15 10:26	
Date/Time Analyzed:	10/20/15 17:06		10/20/15 17:21		10/20/15 17:35		10/20/15 17:50	
QC Batch No.:	151020GC8A2		151020GC8A2		151020GC8A2		151020GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.1		3.1	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	2.4 d	0.032	30	3.2	22	3.1	0.58 d	0.031
Carbon Dioxide	53	0.032	50	0.032	42	0.031	44	0.031
Oxygen/Argon	ND	1.6	ND	1.6	ND	1.5	2.9	1.5
Nitrogen	3.9	3.2	12	3.2	23	3.1	11	3.1
Methane	39	0.0032	5.3	0.0032	12	0.0031	42	0.0031
Carbon Monoxide	0.017	0.0032	0.20	0.0032	0.13	0.0031	0.0079	0.0031

Results normalized including non-methane hydrocarbons
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Reviewed/Approved By: _____ Date 10/26/15
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Operations Manager

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Client: Republic Services, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-21		G101902-22		G101902-23		G101902-24	
Client Sample I.D.:	GIW-11		GIW-12		GIW-13		GIW-8	
Date/Time Sampled:	10/14/15 11:00		10/14/15 11:11		10/14/15 11:24		10/14/15 11:40	
Date/Time Analyzed:	10/20/15 18:04		10/20/15 18:19		10/20/15 18:34		10/20/15 18:48	
QC Batch No.:	151020GC8A2		151020GC8A2		151020GC8A2		151020GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	26	3.2	5.9	3.2	25	3.2	5.0	3.2
Carbon Dioxide	47	0.032	20	0.032	57	0.032	62	0.032
Oxygen/Argon	4.8	1.6	11	1.6	ND	1.6	2.8	1.6
Nitrogen	19	3.2	57	3.2	7.0	3.2	12	3.2
Methane	2.9	0.0032	5.2	0.0032	8.5	0.0032	19	0.0032
Carbon Monoxide	0.25	0.0032	0.051	0.0032	0.20	0.0032	0.074	0.0032

Results normalized including non-methane hydrocarbons
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Reviewed/Approved By: _____ Date 10/26/15
Mark Johnson
Operations Manager

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Client: Republic Services, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-25		G101902-26		G101902-27		G101902-28	
Client Sample I.D.:	GIW-5		GIW-6		GIW-7		GIW-9	
Date/Time Sampled:	10/14/15 11:52		10/14/15 13:45		10/14/15 14:02		10/14/15 14:16	
Date/Time Analyzed:	10/20/15 19:03		10/20/15 19:17		10/20/15 19:32		10/20/15 19:46	
QC Batch No.:	151020GC8A2		151020GC8A2		151020GC8A2		151020GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	18	3.2	34	3.2	7.1	3.2	2.2 d	0.032
Carbon Dioxide	32	0.032	57	0.032	54	0.032	13	0.032
Oxygen/Argon	10	1.6	1.7	1.6	1.7	1.6	15	1.6
Nitrogen	37	3.2	6.1	3.2	5.8	3.2	66	3.2
Methane	1.9	0.0032	0.88	0.0032	31	0.0032	2.9	0.0032
Carbon Monoxide	0.11	0.0032	0.17	0.0032	0.070	0.0032	0.026	0.0032

Results normalized including non-methane hydrocarbons
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d = Reported from a secondary analysis QC Batch:151022GC8A1

Reviewed/Approved By: _____ Date 10/26/15

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Operations Manager

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Client: Republic Services, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-29		G101902-30		G101902-31		G101902-32	
Client Sample I.D.:	GIW-10		GIW-4		GIW-3		GIW-2	
Date/Time Sampled:	10/14/15 14:35		10/14/15 14:50		10/14/15 15:09		10/14/15 15:24	
Date/Time Analyzed:	10/20/15 20:01		10/20/15 20:16		10/21/15 8:12		10/21/15 8:26	
QC Batch No.:	151020GC8A2		151020GC8A2		151020GC8A2		151020GC8A2	
Analyst Initials:	AS		AS		AS		AS	
Dilution Factor:	3.2		3.2		3.2		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	42	3.2	36	3.2	24	3.2	25	3.2
Carbon Dioxide	51	0.032	43	0.032	41	0.032	63	0.032
Oxygen/Argon	ND	1.6	4.4	1.6	7.5	1.6	ND	1.6
Nitrogen	ND	3.2	16	3.2	27	3.2	ND	3.2
Methane	3.6	0.0032	0.53	0.0032	0.31	0.0032	7.8	0.0032
Carbon Monoxide	0.29	0.0032	0.22	0.0032	0.23	0.0032	0.23	0.0032

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

Reviewed/Approved By: _____ Date 10/22/15
Mark Johnson
Operations Manager

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Client: Republic Services, Inc.
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/19/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G101902-33		G101902-34					
Client Sample I.D.:	GIW-1		GEW-110					
Date/Time Sampled:	10/14/15 15:39		10/15/15 10:17					
Date/Time Analyzed:	10/21/15 8:41		10/21/15 8:55					
QC Batch No.:	151020GC8A2		151020GC8A2					
Analyst Initials:	AS		AS					
Dilution Factor:	3.1		3.0					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	24	3.1	5.2	3.0				
Carbon Dioxide	56	0.031	15	0.030				
Oxygen/Argon	3.7	1.5	14	1.5				
Nitrogen	13	3.1	62	3.0				
Methane	1.4	0.0031	3.8	0.0030				
Carbon Monoxide	0.28	0.0031	0.038	0.0030				

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

Reviewed/Approved By: _____ Date 10/26/15
Mark Johnson
Operations Manager

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QC Batch No.: 151020GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/20/15 10:43		10/20/15 9:08		10/20/15 9:22			
Analyst Initials:	AS		AS		AS			
Datafile:	20oct006		20oct003		20oct004			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	94	70-130%	91	70-130%	3.8	<30
Carbon Dioxide	ND	0.010	94	70-130%	90	70-130%	4.7	<30
Oxygen/Argon	ND	0.50	103	70-130%	98	70-130%	4.3	<30
Nitrogen	ND	1.0	101	70-130%	97	70-130%	4.1	<30
Methane	ND	0.0010	99	70-130%	97	70-130%	2.6	<30
Carbon Monoxide	ND	0.0010	115	70-130%	114	70-130%	0.6	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ **Date:** 10/20/15

Mark J. Johnson
Operations Manager

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QC Batch No.: 151020GC8A2
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/20/15 16:22		10/21/15 10:13		10/21/15 10:28			
Analyst Initials:	AS		AS		AS			
Datafile:	20oct029		20oct050		20oct051			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	90	70-130%	88	70-130%	2.0	<30
Carbon Dioxide	ND	0.010	91	70-130%	89	70-130%	2.4	<30
Oxygen/Argon	ND	0.50	104	70-130%	101	70-130%	2.2	<30
Nitrogen	ND	1.0	102	70-130%	100	70-130%	1.5	<30
Methane	ND	0.0010	99	70-130%	96	70-130%	2.1	<30
Carbon Monoxide	ND	0.0010	120	70-130%	116	70-130%	3.1	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ **Date:** 10/26/15

Mark J. Johnson
Operations Manager

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QC Batch # 151022GC8A1
Matrix: Air
Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	10/22/2015 9:13		10/22/2015 9:03		10/22/2015 9:08			
Hydrocarbon Date Analyzed:								
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	99	70-130	101	70-130	1.6	<20

ND = Not Detected (Below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By: _____ Date: 10/26/15

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Operations Manager

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

Air TECHNOLOGY Laboratories, Inc.

November 3, 2015

ADE-1461
EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946

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

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

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

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: G103001-01

Enclosed are results for sample(s) received 10/30/15 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

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

Preliminary results were e-mailed to Jim Getting, Mike Lambrich and Ryan Ayers on 10/30/15.

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

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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

AirTECHNOLOGY Laboratories, Inc.

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

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

- Standard ☐
- Same Day ☑
- 24 hours ■
- Other: 9d
- 48 hours ☐
- 72 hours ☐
- 96 hours ☐
- 5 day ☐

DELIVERABLES

- EDD ☐
- EDF ☐
- Level 3 ☐
- Level 4 ☐

PAGE: 4 OF 4

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

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

BILLING

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

ANALYSIS REQUEST

LAB USE ONLY	Canister Pressures ("hg) Canister ID	Sample Start	Sample End	Lab Receive	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	D1946 + CO, H2					
G103001-01	3155	-20.05	-5.23	-4.5	GEW-54	10/28/2015	1101	C	LFG	NA	X					

AUTHORIZATION TO PERFORM WORK: Dave Penoyer		COMPANY: Republic Services	DATE/TIME: 10-28-15 @ 11:23 a.
SAMPLED BY: Mike Lambrich		COMPANY: Republic Services	DATE/TIME
RELINQUISHED BY	10/28/15	DATE/ RECEIVED BY	DATE/TIME
RELINQUISHED BY FED EX		DATE/ RECEIVED BY	DATE/TIME 10/30/15 0859
RELINQUISHED BY		DATE/ RECEIVED BY	DATE/TIME

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

COMMENTS

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

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

Rev. 03 - 5/7/09

Client: Republic Services
Attn: Jim Getting
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 10/30/15
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	G103001-01
Client Sample I.D.:	GEW-54
Date/Time Sampled:	10/28/15 11:01
Date/Time Analyzed:	10/30/15 11:47
QC Batch No.:	151030GC8A1
Analyst Initials:	AS
Dilution Factor:	3.1

ANALYTE	Result % v/v	RL % v/v
Hydrogen	2.2 d	0.031
Carbon Dioxide	41	0.031
Oxygen/Argon	ND	1.5
Nitrogen	3.5	3.1
Methane	52	0.0031
Carbon Monoxide	ND	0.0031

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit
d = Reported from a secondary analysis. QC Batch: 151103GC8A1

Reviewed/Approved By: _____ Date 11/3/15
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.: 151030GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank		LCS		LCSD			
Date/Time Analyzed:	10/30/15 10:17		10/30/15 9:33		10/30/15 9:47			
Analyst Initials:	AS		AS		AS			
Datafile:	30oct009		30oct006		30oct007			
Dilution Factor:	1.0		1.0		1.0			
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Hydrogen	ND	1.0	77	70-130%	77	70-130%	0.2	<30
Carbon Dioxide	ND	0.010	87	70-130%	87	70-130%	0.1	<30
Oxygen/Argon	ND	0.50	101	70-130%	101	70-130%	0.0	<30
Nitrogen	ND	1.0	98	70-130%	98	70-130%	0.1	<30
Methane	ND	0.0010	100	70-130%	99	70-130%	0.7	<30
Carbon Monoxide	ND	0.0010	113	70-130%	112	70-130%	0.5	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 10/30/15

Mark J. Johnson
Operations Manager

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

QC Batch # 151103GC8A1
Matrix: Air
Units: % v/v

QC for Low Level Hydrogen Analysis

Lab No.:	Blank		LCS		LCSD			
Date Analyzed:	11/3/2015 08:59		11/3/2015 08:50		11/3/2015 08:54			
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	92	70-130	91	70-130	0.9	<20

ND = Not Detected (Below RL)
RL = PQL X Dilution Factor

Reviewed/Approved By: _____ Date: 11/3/15
Mark Johnson
Operations Manager

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

ATTACHMENT E

GAS WELLFIELD DATA

ATTACHMENT E-1

WELLFIELD DATA TABLE

October 2015 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-002	10/5/2015 15:18	56.7	40.3	0.0	3.0	112.8		0	0	0.2	0.2	-31.3
GEW-002	10/5/2015 15:20	56.3	41.4	0.0	2.3	117.8		11	14	-0.1	-0.1	-32.1
GEW-002	10/12/2015 10:38	56.5	40.0	0.0	3.5	119.9		9	9	-0.4	-0.4	-23.8
GEW-002	10/12/2015 10:47	57.3	40.3	0.0	2.4	119.8		10	10	-0.3	-0.3	-23.9
GEW-002	10/19/2015 9:19	56.5	41.1	0.0	2.4	117.6		29	29	-0.1	-0.1	-9.0
GEW-002	10/27/2015 17:57	56.0	41.4	0.0	2.6	116.5		40	39	-0.5	-0.5	-7.3
GEW-003	10/5/2015 15:24	53.6	39.6	0.0	6.8	119.4		15	14	-0.3	-0.3	-31.4
GEW-003	10/12/2015 10:54	52.9	38.4	0.0	8.7	111.3		12	12	-0.7	-0.7	-21.3
GEW-003	10/12/2015 11:03	53.5	38.6	0.0	7.9	111.8		13	13	-0.7	-0.7	-23.8
GEW-003	10/19/2015 9:25	54.6	40.7	0.0	4.7	111.8		7	22	0.0	-0.1	-8.8
GEW-003	10/27/2015 17:54	53.2	40.3	0.0	6.5	109.2		0	4	-0.1	0.0	-7.6
GEW-004	10/5/2015 15:29	52.9	39.5	0.0	7.6	120.4		18	10	-0.4	-0.4	-32.4
GEW-004	10/12/2015 11:10	53.7	39.1	0.0	7.2	120.5		13	19	-0.6	-0.6	-23.8
GEW-004	10/12/2015 11:17	54.3	38.9	0.0	6.8	121.0		10	13	-0.5	-0.5	-24.1
GEW-004	10/19/2015 9:29	54.3	40.8	0.0	4.9	118.1		27	25	-0.2	-0.1	-9.2
GEW-004	10/27/2015 17:50	53.3	40.2	0.0	6.5	117.5		0	5	-0.1	-0.1	-7.8
GEW-005	10/5/2015 15:42	47.4	36.8	0.0	15.8	96.9		30	31	-0.2	-0.2	-31.1
GEW-005	10/5/2015 15:43	47.2	36.9	0.0	15.9	97.1		26	27	-0.1	-0.1	-31.3
GEW-005	10/12/2015 11:46	49.7	36.1	0.0	14.2	97.3		11	11	-0.1	-0.1	-23.3
GEW-005	10/12/2015 11:56	50.8	35.9	0.0	13.3	97.3		26	26	-0.2	-0.2	-23.8
GEW-005	10/19/2015 9:43	51.5	38.6	0.0	9.9	95.6		5	2	0.0	0.0	-9.1
GEW-005	10/19/2015 9:44	51.2	39.1	0.0	9.7	96.2		21	21	-0.1	-0.1	-8.9
GEW-005	10/27/2015 17:39	47.9	37.8	0.0	14.3	96.8		0	0	0.0	0.0	-7.6
GEW-005	10/27/2015 17:40	48.1	37.1	0.0	14.8	96.8		12	15	-0.1	-0.1	-7.8
GEW-006	10/5/2015 15:51	54.1	38.3	0.0	7.6	92.1		18	16	-0.3	-0.3	-31.0
GEW-006	10/12/2015 13:56	58.0	36.4	0.0	5.6	92.7		24	21	-0.1	-0.1	-23.4
GEW-006	10/19/2015 9:57	56.0	39.1	0.0	4.9	91.3		13	15	0.0	-0.1	-8.5
GEW-006	10/27/2015 17:25	54.0	38.1	0.0	7.9	93.2		19	19	0.1	0.1	-7.9
GEW-006	10/27/2015 17:27	53.8	39.1	0.0	7.1	94.0		23	32	-0.1	-0.1	-7.6
GEW-007	10/5/2015 17:21	57.8	40.3	0.0	1.9	99.2		5	5	-1.2	-1.2	-31.6
GEW-007	10/5/2015 17:23	57.5	40.3	0.0	2.2	98.1		2	7	-0.4	-0.4	-31.6
GEW-007	10/12/2015 16:38	57.7	40.2	0.0	2.1	97.5		0	0	0.7	0.7	-23.5
GEW-007	10/12/2015 16:40	57.4	40.6	0.0	2.0	98.3		27	29	-0.2	-0.2	-23.5
GEW-007	10/19/2015 11:02	57.1	41.1	0.0	1.8	95.2		7	0	0.3	0.4	-7.3
GEW-007	10/19/2015 11:04	57.3	41.0	0.0	1.7	96.2		6	9	-0.2	-0.2	-7.5
GEW-007	10/26/2015 12:16	63.3	35.2	0.2	1.3	98.9		17	17	-1.8	-1.8	-9.2
GEW-007	10/26/2015 12:18	58.5	37.8	0.0	3.7	97.7		11	12	-0.5	-0.5	-9.4
GEW-008	10/5/2015 17:28	50.6	44.0	0.0	5.4	114.4		20	17	-0.8	-0.7	-31.2
GEW-008	10/12/2015 16:47	49.6	45.0	0.0	5.4	114.8		17	18	-0.3	-0.2	-23.3
GEW-008	10/12/2015 16:55	49.7	46.3	0.0	4.0	115.0		15	15	-0.2	-0.2	-23.4
GEW-008	10/19/2015 11:09	49.6	45.3	0.0	5.1	113.8		13	14	0.1	0.0	-7.4
GEW-008	10/19/2015 11:11	49.7	45.8	0.0	4.5	114.0		15	18	-0.1	-0.1	-7.5

October 2015 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-008	10/26/2015 12:23	51.1	41.1	0.0	7.8	114.5		21	23	-1.2	-1.2	-11.3
GEW-008	10/26/2015 12:24	49.9	43.1	0.0	7.0	114.3		13	15	-0.7	-0.7	-10.3
GEW-009	10/5/2015 17:31	51.6	42.7	0.0	5.7	122.6		14	11	-0.5	-0.5	-31.1
GEW-009	10/12/2015 17:02	52.1	42.2	0.0	5.7	125.0		13	12	-0.3	-0.3	-23.5
GEW-009	10/12/2015 17:11	52.5	42.0	0.0	5.5	125.1		32	32	-0.2	-0.2	-23.2
GEW-009	10/19/2015 11:14	53.4	43.9	0.0	2.7	124.9		0	0	0.0	0.0	-15.4
GEW-009	10/19/2015 11:16	54.0	43.1	0.0	2.9	126.3		23	20	-0.1	-0.1	-22.1
GEW-009	10/26/2015 12:28	44.8	40.7	0.0	14.5	121.2		17	8	-0.6	-0.6	-20.8
GEW-009	10/26/2015 12:30	45.7	40.2	0.0	14.1	120.7		6	2	-0.4	-0.4	-21.0
GEW-010	10/6/2015 8:37	40.2	42.4	2.6	14.8	98.7				-18.4	-18.4	-31.2
GEW-010	10/14/2015 10:21	46.2	45.0	1.7	7.1	97.9				-10.7	-10.7	-17.8
GEW-010	10/14/2015 10:29	46.0	44.7	1.7	7.6	97.9				-10.7	-10.7	-19.8
GEW-010	10/19/2015 14:42	41.3	45.8	1.7	11.2	100.4				-7.0	-7.2	-20.7
GEW-010	10/27/2015 11:06	42.8	48.2	0.7	8.3	91.7				-14.7	-14.6	-18.6
GEW-010	10/27/2015 11:08	41.4	47.4	1.1	10.1	83.4				-11.5	-11.5	-14.7
GEW-020A	10/21/2015 9:34	1.1	55.3	1.8	41.8	110.6				-18.6	-18.6	-18.1
GEW-022R	10/21/2015 9:42	2.0	64.1	0.0	33.9	193.7				-16.7	-16.7	-17.6
GEW-022R	10/21/2015 9:43	1.0	68.0	0.0	31.0	193.7				-12.8	-17.2	-14.7
GEW-026R	10/30/2015 12:25	0.1	5.4	20.6	73.9	67.0				-16.1	-17.0	-16.0
GEW-026R	10/30/2015 12:27	0.0	3.7	20.9	75.4	68.0				-16.5	-16.6	-16.6
GEW-028R	10/21/2015 11:27	1.4	51.6	3.3	43.7	194.8				-17.8	-17.8	-17.9
GEW-028R	10/21/2015 11:27	0.8	45.2	3.5	50.5	194.2				-17.8	-17.7	-18.1
GEW-038	10/6/2015 8:13	0.4	44.9	5.5	49.2	94.4				-32.2	-32.5	-32.7
GEW-038	10/6/2015 8:15	0.3	44.6	5.6	49.5	93.8				-32.2	-32.1	-32.4
GEW-038	10/14/2015 9:00	0.3	49.7	5.2	44.8	101.1				-29.4	-30.8	-28.7
GEW-038	10/14/2015 9:07	0.3	48.6	5.2	45.9	101.5				-27.4	-29.4	-27.3
GEW-038	10/19/2015 14:30	10.9	49.2	7.0	32.9	101.1				-22.0	-23.0	-22.3
GEW-038	10/19/2015 14:30	1.9	43.2	7.2	47.7	101.7				-24.4	-22.6	-25.8
GEW-038	10/27/2015 10:46	0.7	50.2	2.8	46.3	72.1				-23.1	-23.5	-22.5
GEW-038	10/27/2015 10:48	0.6	51.5	2.7	45.2	72.3				-23.8	-22.6	-23.4
GEW-039	10/6/2015 8:19	39.1	52.5	0.1	8.3	132.4				-0.8	-0.7	-32.1
GEW-039	10/6/2015 8:20	39.7	51.4	0.0	8.9	132.5				-0.8	-0.8	-29.8
GEW-039	10/14/2015 9:13	40.8	54.7	0.0	4.5	134.3				-0.6	-0.6	-29.4
GEW-039	10/14/2015 9:23	40.9	52.6	0.0	6.5	134.3				-0.2	-0.2	-28.1
GEW-039	10/19/2015 14:38	32.1	57.7	0.0	10.2	136.0				0.2	0.2	-23.4
GEW-039	10/19/2015 14:39	36.4	57.1	0.0	6.5	136.0				0.0	0.0	-24.3
GEW-039	10/27/2015 10:52	38.5	53.9	0.1	7.5	132.1				-0.1	-0.1	-20.7
GEW-039	10/27/2015 10:53	38.9	53.4	0.0	7.7	132.1				-0.1	-0.1	-19.6
GEW-040	10/5/2015 14:37	61.0	37.0	0.0	2.0	94.8		14	14	-0.4	-0.4	-31.4
GEW-040	10/12/2015 8:27	58.4	40.7	0.0	0.9	93.6		37	37	-0.3	-0.3	-24.2
GEW-040	10/12/2015 8:40	57.7	40.1	0.0	2.2	93.8		36	36	-0.3	-0.3	-24.2
GEW-040	10/19/2015 8:18	58.5	41.2	0.0	0.3	90.1		15	25	0.0	-0.1	-10.7

October 2015 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GEW-040	10/27/2015 10:40	59.2	38.1	0.1	2.6	90.6		35	35	-0.3	-0.3	-8.5
GEW-041R	10/5/2015 14:42	57.8	39.3	0.0	2.9	107.2		18	17	-0.4	-0.5	-32.4
GEW-041R	10/12/2015 9:30	57.2	39.4	0.0	3.4	106.8		16	16	-0.4	-0.4	-25.0
GEW-041R	10/19/2015 8:27	56.7	41.4	0.0	1.9	93.6		0	0	0.3	0.3	-0.1
GEW-041R	10/19/2015 8:33	56.7	41.7	0.0	1.6	106.8		29	34	-0.2	-0.2	-5.2
GEW-041R	10/27/2015 16:36	46.2	36.5	0.1	17.2	105.4		19	17	-0.3	-0.3	-8.1
GEW-042R	10/5/2015 14:45	56.9	40.2	0.0	2.9	103.4		9	9	-0.7	-0.7	-27.1
GEW-042R	10/12/2015 9:37	56.3	40.5	0.0	3.2	100.2		9	7	-0.6	-0.6	-18.6
GEW-042R	10/12/2015 9:47	56.6	41.2	0.0	2.2	100.5		11	10	-0.6	-0.6	-18.6
GEW-042R	10/19/2015 8:36	57.4	40.3	0.0	2.3	88.0		4	0	0.2	0.1	-3.3
GEW-042R	10/19/2015 8:38	56.6	41.8	0.0	1.6	96.0		10	9	-0.4	-0.4	-3.9
GEW-042R	10/27/2015 16:40	53.7	42.9	0.0	3.4	105.2		27	27	-0.4	-0.5	-2.0
GEW-043R	10/5/2015 14:51	55.8	41.4	0.0	2.8	129.9		31	27	-0.9	-0.7	-30.5
GEW-043R	10/12/2015 9:54	55.6	40.9	0.0	3.5	123.7		20	22	-1.1	-1.1	-23.6
GEW-043R	10/19/2015 8:44	56.0	41.4	0.0	2.6	128.0		15	16	0.4	0.4	-9.7
GEW-043R	10/19/2015 8:45	55.6	42.0	0.0	2.4	130.5		31	28	-0.2	-0.2	-9.2
GEW-043R	10/27/2015 16:46	53.8	41.3	0.0	4.9	129.0		32	33	-0.6	-0.6	-6.1
GEW-044	10/5/2015 14:56	51.7	37.5	0.0	10.8	90.3		6	6	-0.2	-0.2	-27.1
GEW-044	10/5/2015 14:57	51.6	38.4	0.0	10.0	90.1		4	5	-0.2	-0.2	-27.8
GEW-044	10/12/2015 10:01	55.8	39.5	0.0	4.7	89.7		0	0	-0.2	-0.2	-18.5
GEW-044	10/19/2015 8:50	56.9	41.7	0.0	1.4	64.9		4	5	0.3	0.3	-3.7
GEW-044	10/19/2015 8:52	56.8	41.6	0.0	1.6	74.9		7	7	-0.2	-0.2	-4.0
GEW-044	10/27/2015 18:12	44.5	36.6	0.0	18.9	88.0		0	10	0.0	0.0	-2.1
GEW-044	10/27/2015 18:13	44.5	37.3	0.0	18.2	88.9		7	3	-0.1	-0.1	-1.8
GEW-045R	10/5/2015 15:01	58.8	38.7	0.0	2.5	91.6		5	2	-0.4	-0.4	-32.3
GEW-045R	10/12/2015 10:09	59.7	37.3	0.0	3.0	91.9		0	0	-0.4	-0.4	-23.9
GEW-045R	10/12/2015 10:17	59.4	38.5	0.0	2.1	92.9		0	6	-0.5	-0.5	-24.3
GEW-045R	10/19/2015 8:56	58.9	40.2	0.0	0.9	75.5		0	0	0.1	0.1	-9.6
GEW-045R	10/19/2015 8:57	59.5	39.2	0.0	1.3	78.0		0	13	-0.2	-0.2	-9.7
GEW-045R	10/27/2015 18:06	60.5	38.0	0.0	1.5	78.2		5	0	0.3	0.3	-7.3
GEW-045R	10/27/2015 18:08	60.1	38.2	0.0	1.7	81.4		7	7	-0.4	-0.4	-7.3
GEW-046R	10/5/2015 15:14	56.0	40.1	0.0	3.9	100.0		30	30	-0.2	-0.2	-31.9
GEW-046R	10/12/2015 10:22	55.7	39.4	0.0	4.9	99.6		7	9	-0.4	-0.4	-24.2
GEW-046R	10/12/2015 10:31	56.2	39.9	0.0	3.9	100.0		9	9	-0.4	-0.4	-24.1
GEW-046R	10/19/2015 9:04	56.7	40.7	0.0	2.6	94.0		0	0	0.1	0.1	-9.5
GEW-046R	10/19/2015 9:06	56.0	41.5	0.0	2.5	97.9		24	24	-0.1	-0.1	-9.9
GEW-046R	10/27/2015 18:01	55.5	41.4	0.0	3.1	99.0		17	17	-0.1	-0.1	-7.3
GEW-047R	10/5/2015 15:36	45.5	37.8	0.1	16.6	115.0		13	17	-0.2	-0.2	-31.5
GEW-047R	10/5/2015 15:38	45.8	37.2	0.1	16.9	114.3		13	9	-0.2	-0.2	-31.3
GEW-047R	10/12/2015 11:26	47.3	37.0	0.2	15.5	114.4		9	11	-0.2	-0.2	-24.0
GEW-047R	10/12/2015 11:36	48.0	37.3	0.2	14.5	114.5		10	10	-0.1	-0.1	-23.3
GEW-047R	10/19/2015 9:39	46.6	37.6	0.0	15.8	112.8		21	32	-0.3	-0.2	-8.6

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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_2O		
GEW-047R	10/27/2015 17:44	42.6	36.9	0.0	20.5	114.3		0	0	0.0	0.0	-8.1
GEW-047R	10/27/2015 17:45	41.8	37.2	0.0	21.0	115.7		15	16	-0.1	-0.1	-8.3
GEW-048	10/5/2015 15:47	54.9	38.7	0.0	6.4	106.1		36	35	-0.3	-0.3	-31.0
GEW-048	10/12/2015 12:01	55.4	38.9	0.0	5.7	107.0		16	17	-0.3	-0.3	-23.6
GEW-048	10/12/2015 12:09	55.7	38.6	0.0	5.7	106.8		28	29	-0.4	-0.4	-21.8
GEW-048	10/19/2015 9:48	57.5	40.1	0.0	2.4	104.3		9	9	0.1	0.1	-7.0
GEW-048	10/19/2015 9:49	57.1	40.3	0.0	2.6	105.6		20	18	-0.1	-0.1	-8.1
GEW-048	10/27/2015 17:34	55.8	39.7	0.0	4.5	105.5		0	0	0.1	0.1	-5.6
GEW-048	10/27/2015 17:36	55.0	40.6	0.0	4.4	106.1		17	16	-0.1	-0.1	-6.7
GEW-049	10/5/2015 16:44	49.3	37.6	0.0	13.1	110.1		38	39	-0.3	-0.3	-27.5
GEW-049	10/5/2015 16:48	49.5	37.4	0.0	13.1	109.9		39	35	-0.3	-0.3	-30.5
GEW-049	10/12/2015 14:15	54.2	38.7	0.0	7.1	112.1		11	11	0.0	0.0	-19.0
GEW-049	10/12/2015 14:22	55.4	39.2	0.0	5.4	113.2		19	21	-0.1	-0.1	-19.7
GEW-049	10/19/2015 10:19	53.4	39.9	0.0	6.7	109.9		0	0	0.0	0.0	-3.0
GEW-049	10/19/2015 10:22	53.8	39.6	0.0	6.6	112.0		23	24	-0.1	-0.1	-3.2
GEW-049	10/27/2015 18:22	50.6	39.3	0.0	10.1	111.1		24	24	-0.1	-0.1	-2.4
GEW-050	10/5/2015 16:20	57.1	39.4	0.0	3.5	108.5		15	13	-0.3	-0.4	-24.6
GEW-050	10/12/2015 14:05	57.6	39.2	0.0	3.2	108.1		5	17	-0.1	0.0	-20.0
GEW-050	10/19/2015 10:06	57.4	39.8	0.0	2.8	107.2		20	16	-0.1	-0.1	-6.5
GEW-050	10/27/2015 17:16	55.1	40.1	0.0	4.8	107.7		11	14	0.2	0.1	-4.0
GEW-050	10/27/2015 17:18	55.1	39.7	0.0	5.2	108.6		20	20	-0.1	-0.1	-4.7
GEW-051	10/5/2015 16:53	55.8	41.0	0.0	3.2	126.0		14	18	-0.5	-0.5	-30.8
GEW-051	10/12/2015 14:26	55.8	39.8	0.0	4.4	127.2		15	15	0.0	0.0	-23.6
GEW-051	10/12/2015 14:28	55.1	41.0	0.0	3.9	127.3		16	16	-0.1	-0.1	-23.3
GEW-051	10/19/2015 10:25	55.3	41.1	0.0	3.6	125.1		9	9	0.3	0.3	-8.1
GEW-051	10/19/2015 10:27	55.1	41.8	0.0	3.1	128.0		21	24	-0.1	-0.1	-7.7
GEW-051	10/27/2015 18:18	55.4	40.9	0.0	3.7	125.5		17	17	-0.1	0.0	-5.2
GEW-052	10/5/2015 16:37	52.6	38.4	0.0	9.0	113.7		17	22	-0.5	-0.5	-31.2
GEW-052	10/5/2015 16:39	52.0	39.6	0.0	8.4	113.5		11	18	-0.4	-0.4	-31.1
GEW-052	10/12/2015 14:08	53.2	39.0	0.0	7.8	114.8		26	26	-0.1	-0.1	-23.5
GEW-052	10/19/2015 10:09	55.2	38.9	0.0	5.9	113.5		0	0	0.0	0.0	-9.0
GEW-052	10/19/2015 10:12	53.7	40.6	0.0	5.7	115.0		28	30	-0.2	-0.2	-8.6
GEW-052	10/27/2015 17:12	50.3	40.1	0.0	9.6	114.0		19	18	-0.1	-0.1	-6.5
GEW-053	10/5/2015 17:02	53.5	40.8	0.1	5.6	139.3		21	15	-0.5	-0.5	-30.7
GEW-053	10/5/2015 17:03	52.3	41.5	0.0	6.2	139.0		22	16	-0.4	-0.4	-31.5
GEW-053	10/12/2015 14:50	50.6	41.8	0.0	7.6	139.9		12	11	0.2	0.2	-23.6
GEW-053	10/12/2015 14:59	50.7	42.1	0.0	7.2	140.0		18	18	-0.1	-0.1	-23.4
GEW-053	10/19/2015 10:34	50.9	42.9	0.0	6.2	138.7		12	12	0.3	0.3	-8.0
GEW-053	10/19/2015 10:36	51.1	42.9	0.0	6.0	140.7		16	15	-0.1	-0.1	-7.5
GEW-053	10/27/2015 16:55	51.5	41.7	0.0	6.8	138.7		12	15	-0.3	-0.3	-6.4
GEW-053	10/27/2015 16:56	51.3	43.1	0.0	5.6	138.7		12	15	-0.3	-0.2	-6.4
GEW-054	10/5/2015 17:06	52.1	41.1	0.0	6.8	149.7		9	19	0.3	0.3	-29.6

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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_2O		
GEW-054	10/5/2015 17:08	51.7	42.0	0.0	6.3	150.9		21	21	-0.1	-0.1	-32.0
GEW-054	10/12/2015 14:39	52.2	42.6	0.0	5.2	144.7		28	29	-0.2	-0.2	-24.3
GEW-054	10/12/2015 14:40	51.9	42.3	0.0	5.8	144.7		16	18	-0.2	-0.2	-24.3
GEW-054	10/19/2015 10:44	53.6	41.9	0.0	4.5	146.1		0	0	0.9	0.9	-2.3
GEW-054	10/19/2015 10:46	52.1	42.5	0.0	5.4	148.5		23	20	-0.1	-0.1	-1.2
GEW-054	10/27/2015 17:00	50.1	42.0	0.0	7.9	143.3		45	49	-2.7	-3.0	-7.6
GEW-054	10/27/2015 17:04	51.5	41.3	0.0	7.2	142.2		21	18	-0.5	-0.5	-8.6
GEW-054	10/28/2015 10:57	54.0	42.8	0.1	3.1	142.5		10	11	0.5	0.5	-1.7
GEW-054	10/28/2015 11:04	53.4	42.6	0.0	4.0	142.9		13	11	0.5	0.5	-1.6
GEW-055	10/5/2015 17:11	54.6	41.7	0.0	3.7	125.7		11	15	-1.1	-1.1	-32.8
GEW-055	10/5/2015 17:13	54.1	42.5	0.0	3.4	124.9		9	35	-0.8	-0.8	-31.6
GEW-055	10/12/2015 15:13	53.1	42.5	0.0	4.4	126.3		6	7	-0.1	-0.1	-24.3
GEW-055	10/12/2015 15:45	53.8	41.8	0.0	4.4	126.3		19	21	-0.1	-0.1	-24.6
GEW-055	10/19/2015 10:51	53.5	42.5	0.0	4.0	122.3		0	0	0.4	0.3	-8.0
GEW-055	10/19/2015 10:54	53.1	43.4	0.0	3.5	129.9		28	28	-0.2	-0.2	-7.7
GEW-055	10/27/2015 17:07	53.1	42.1	0.0	4.8	125.2		8	15	-0.6	-0.6	-8.7
GEW-056R	10/6/2015 8:30	11.6	37.9	0.6	49.9	170.8				-4.2	-4.2	-31.0
GEW-056R	10/6/2015 8:32	11.7	38.0	0.4	49.9	170.8				-4.2	-4.2	-28.3
GEW-056R	10/14/2015 10:05	14.2	45.6	0.1	40.1	171.2				-2.1	-2.1	-14.2
GEW-056R	10/14/2015 10:14	13.8	44.8	0.1	41.3	171.6				-2.1	-2.1	-14.4
GEW-056R	10/19/2015 14:21	14.3	41.8	0.2	43.7	171.2				-1.3	-1.3	-6.7
GEW-056R	10/19/2015 14:21	13.9	45.6	0.2	40.3	171.2				-1.4	-1.4	-9.7
GEW-056R	10/27/2015 11:01	13.2	45.6	0.3	40.9	167.3				-2.6	-2.6	-14.2
GEW-056R	10/27/2015 11:02	13.1	43.3	0.1	43.5	166.9				-2.6	-2.6	-13.7
GEW-057B	10/21/2015 14:30	1.2	58.9	0.0	39.9	156.6				1.8	2.0	2.1
GEW-057B	10/21/2015 14:31	1.4	58.3	0.0	40.3	158.4				2.6	2.4	2.7
GEW-057R	10/21/2015 14:34	1.6	57.8	0.0	40.6	188.5				2.8	2.8	2.8
GEW-057R	10/21/2015 14:35	1.6	56.8	0.0	41.6	188.4				1.4	1.5	1.5
GEW-058	10/21/2015 14:18	4.5	53.0	0.6	41.9	187.9				-17.6	-18.6	-18.2
GEW-058	10/21/2015 14:18	4.9	54.9	0.4	39.8	187.9				-16.7	-17.1	-17.1
GEW-058A	10/21/2015 14:15	0.5	60.3	0.0	39.2	180.3				3.4	3.6	-21.5
GEW-058A	10/21/2015 14:16	0.5	58.8	0.0	40.7	181.9				-2.8	-2.9	-18.6
GEW-059R	10/21/2015 14:10	1.2	51.5	0.5	46.8	186.3				-10.3	-10.3	-22.3
GEW-059R	10/21/2015 14:11	1.6	57.6	0.6	40.2	186.3				-10.3	-10.3	-22.3
GEW-061B	10/21/2015 14:38	0.5	5.5	20.4	73.6	91.7				-20.6	-21.0	-21.9
GEW-061B	10/21/2015 14:38	0.4	1.5	21.1	77.0	92.8				-21.0	-20.6	-21.0
GEW-065A	10/21/2015 15:02	1.6	53.0	0.1	45.3	194.2				-12.2	-9.9	-16.5
GEW-065A	10/21/2015 15:05	6.1	61.1	0.1	32.7	194.2				-13.7	-13.2	-14.6
GEW-067A	10/21/2015 14:48	2.0	34.7	9.0	54.3	186.3				-8.9	-8.9	-9.1
GEW-067A	10/21/2015 14:49	2.1	35.9	9.3	52.7	186.3				-9.3	-9.3	-9.3
GEW-077	10/21/2015 11:18	2.7	61.5	0.2	35.6	183.6				-18.2	-18.1	-17.1
GEW-077	10/21/2015 11:19	2.0	65.2	0.2	32.6	184.1				-17.3	-17.6	-16.6

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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_2O		
GEW-080	10/20/2015 14:44	1.5	32.4	5.7	60.4	90.6				-11.2	-11.4	-11.2
GEW-080	10/20/2015 14:48	1.5	36.5	4.6	57.4	90.7				-12.4	-12.4	-12.5
GEW-080	10/21/2015 10:26	0.9	17.4	12.6	69.1	81.5				-18.1	-18.1	-18.2
GEW-080	10/21/2015 10:27	1.2	22.2	10.5	66.1	80.4				-17.6	-18.1	-17.5
GEW-082R	10/21/2015 10:36	2.1	54.1	0.0	43.8	192.5				-16.7	-16.2	-17.6
GEW-082R	10/21/2015 10:36	1.6	55.7	0.0	42.7	192.5				-16.4	-16.4	-17.1
GEW-086	10/27/2015 11:02	15.4	28.1	6.3	50.2	106.0				-6.9	-6.4	-23.4
GEW-086	10/27/2015 11:02	13.6	31.4	6.3	48.7	105.8				-6.0	-5.9	-19.3
GEW-089	10/21/2015 14:45	1.0	6.5	20.4	72.1	92.7				-20.1	-20.6	-22.1
GEW-089	10/21/2015 14:45	0.6	3.0	20.8	75.6	93.6				-17.0	-17.0	-16.9
GEW-090	10/21/2015 14:05	6.4	51.4	0.3	41.9	189.6				-16.2	-16.2	-17.1
GEW-090	10/21/2015 14:06	6.6	51.5	0.3	41.6	189.6				-16.2	-15.3	-16.4
GEW-102	10/21/2015 11:46	11.5	59.0	0.1	29.4	85.6				59.3	59.3	-19.0
GEW-102	10/21/2015 11:47	14.5	60.4	0.0	25.1	85.5				-7.2	-7.9	-19.0
GEW-104	10/21/2015 14:21	0.8	61.5	0.0	37.7	96.5				15.6	15.6	15.7
GEW-104	10/21/2015 14:21	0.9	61.3	0.0	37.8	97.3				14.2	14.2	13.7
GEW-105	10/21/2015 13:44	5.5	37.5	9.2	47.8	94.8				-15.8	-15.8	-15.7
GEW-105	10/21/2015 13:45	6.1	36.9	9.0	48.0	95.2				-15.8	-15.8	-16.0
GEW-107	10/21/2015 13:49	1.6	29.8	11.0	57.6	88.9				-22.0	-22.0	-22.0
GEW-107	10/21/2015 13:49	1.0	30.4	10.0	58.6	89.5				-22.5	-22.0	-22.5
GEW-109	10/6/2015 8:24	7.8	48.6	0.0	43.6	177.2				-30.2	-29.3	-29.8
GEW-109	10/6/2015 8:26	7.1	50.9	0.0	42.0	176.7				-29.8	-29.7	-30.1
GEW-109	10/14/2015 9:33	6.1	54.9	0.0	39.0	180.8				-26.4	-26.4	-26.7
GEW-109	10/14/2015 9:43	6.1	55.2	0.0	38.7	180.9				-26.9	-26.9	-27.3
GEW-109	10/19/2015 14:35	7.4	47.2	0.6	44.8	165.0				-23.4	-23.4	-22.8
GEW-109	10/19/2015 14:36	8.3	50.5	0.6	40.6	165.9				-23.9	-23.0	-23.6
GEW-109	10/27/2015 10:55	7.4	50.0	0.0	42.6	176.2				-19.9	-19.9	-20.5
GEW-109	10/27/2015 10:57	5.7	52.9	0.1	41.3	175.7				-19.6	-19.5	-20.0
GEW-110	10/6/2015 8:49	1.4	10.0	16.9	71.7	107.6				-0.2	-0.2	-30.7
GEW-110	10/6/2015 8:50	1.4	10.6	16.9	71.1	108.2				-0.2	-0.2	-27.9
GEW-110	10/15/2015 10:11	4.4	15.9	13.7	66.0	112.5				-0.2	-0.2	-15.3
GEW-110	10/15/2015 10:20	3.8	15.0	13.8	67.4	115.2				-0.2	-0.2	-15.6
GEW-110	10/19/2015 14:44	14.8	30.6	8.1	46.5	120.2				-0.2	-0.1	-17.2
GEW-110	10/19/2015 14:44	11.0	26.5	8.2	54.3	120.2				-0.2	-0.2	-16.0
GEW-110	10/27/2015 11:16	1.6	13.7	15.4	69.3	116.0				-0.2	-0.2	-14.4
GEW-110	10/27/2015 11:18	1.9	13.3	15.3	69.5	116.8				-0.2	-0.2	-16.3
GEW-116	10/21/2015 10:45	0.9	11.6	19.5	68.0	86.8		4	5	-11.3	-11.3	-17.6
GEW-116	10/21/2015 10:46	1.0	8.5	19.0	71.5	88.9		8	6	-13.3	-13.3	-17.6
GEW-117	10/21/2015 10:39	4.5	58.1	2.1	35.3	82.4				-17.9	-18.1	-14.2
GEW-120	10/6/2015 11:27	17.5	63.8	0.0	18.7	177.7				-6.8	-6.5	-6.7
GEW-120	10/6/2015 11:29	16.8	62.1	0.2	20.9	177.2				-6.8	-6.8	-6.8
GEW-120	10/21/2015 9:31	3.6	21.0	13.0	62.4	77.3				-18.6	-18.7	-18.5

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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_2O		
GEW-120	10/21/2015 9:31	3.5	20.4	12.8	63.3	80.4				-18.6	-18.6	-18.6
GEW-121	10/6/2015 11:33	3.3	55.6	0.1	41.0	189.1				-9.2	-9.2	-9.4
GEW-121	10/6/2015 11:36	2.9	57.2	0.0	39.9	189.1				-8.7	-8.8	-9.1
GEW-121	10/21/2015 9:36	2.9	61.0	0.0	36.1	189.1				-5.0	-5.0	-5.3
GEW-121	10/21/2015 9:37	3.3	61.5	0.0	35.2	188.5				-17.1	-16.6	-17.6
GEW-122	10/7/2015 15:50	6.6	52.5	0.1	40.8	183.5				-14.5	-14.2	-14.2
GEW-122	10/7/2015 15:52	6.4	55.0	0.1	38.5	183.5				-14.5	-14.6	-14.3
GEW-122	10/21/2015 10:30	8.9	56.7	0.1	34.3	176.7				-18.1	-18.2	-18.1
GEW-122	10/21/2015 10:30	8.4	57.6	0.2	33.8	176.7				-18.2	-18.5	-18.1
GEW-123	10/6/2015 17:03	3.8	60.7	0.2	35.3	190.6				-22.8	-22.9	-23.3
GEW-123	10/6/2015 17:04	3.5	61.7	0.2	34.6	190.7				-22.4	-22.4	-22.9
GEW-123	10/21/2015 9:39	8.6	60.7	0.3	30.4	180.3				-18.7	-18.7	-19.8
GEW-123	10/21/2015 9:40	8.3	59.5	0.5	31.7	179.8				-17.7	-18.2	-17.6
GEW-124	10/6/2015 17:08	8.3	58.2	0.1	33.4	166.4				-18.8	-18.4	-18.8
GEW-124	10/6/2015 17:10	7.0	60.1	0.1	32.8	164.2				-19.3	-19.5	-19.1
GEW-124	10/21/2015 9:46	9.8	65.7	0.0	24.5	163.5				-15.2	-14.7	-14.6
GEW-124	10/21/2015 9:48	9.9	65.6	0.0	24.5	163.2				-16.7	-17.2	-17.0
GEW-125	10/6/2015 17:14	3.9	34.1	10.9	51.1	90.7				-23.0	-22.9	-22.9
GEW-125	10/6/2015 17:16	4.6	33.2	9.9	52.3	91.3				-22.9	-22.8	-22.9
GEW-125	10/21/2015 9:53					74.7				-18.3	-18.2	-18.1
GEW-125	10/21/2015 9:55	0.1	1.7	22.0	76.2	75.2				-18.2	-18.2	-17.8
GEW-126	10/6/2015 17:20	7.6	55.0	0.2	37.2	193.1				-22.2	-22.8	-21.9
GEW-126	10/6/2015 17:22	6.5	55.1	0.1	38.3	193.3				-23.8	-23.8	-22.5
GEW-126	10/21/2015 9:58	9.4	58.1	0.1	32.4	193.1				-17.7	-18.1	-18.0
GEW-126	10/21/2015 9:59	9.2	58.7	0.2	31.9	193.1				-19.1	-17.6	-19.0
GEW-127	10/6/2015 17:25	0.5	49.4	5.5	44.6	93.4				-23.1	-22.9	-23.2
GEW-127	10/6/2015 17:28	0.4	52.0	4.6	43.0	92.3				-23.7	-23.7	-23.6
GEW-127	10/21/2015 10:02					77.3				-18.1	-18.1	-18.1
GEW-127	10/21/2015 10:06	0.3	46.9	8.0	44.8	79.3				-18.2	-18.2	-18.5
GEW-127	10/26/2015 11:44	0.9	55.1	0.3	43.7	176.2				-8.8	-8.3	-17.6
GEW-128	10/6/2015 17:32	0.6	61.0	0.1	38.3	181.0				-23.2	-23.4	-23.8
GEW-128	10/6/2015 17:33	0.5	60.6	0.1	38.8	181.4				-16.0	-17.0	-23.2
GEW-128	10/21/2015 10:11	0.5	56.3	0.2	43.0	182.4				-14.3	-14.4	-18.2
GEW-128	10/21/2015 10:12	0.8	62.0	0.1	37.1	182.3				-14.7	-14.2	-17.9
GEW-129	10/6/2015 17:37	2.3	54.2	1.7	41.8	90.1				-23.5	-23.7	-23.4
GEW-129	10/6/2015 17:39	2.5	57.9	0.6	39.0	87.9				-23.7	-23.8	-23.5
GEW-129	10/21/2015 10:14	0.7	61.5	0.0	37.8	162.2				-18.1	-17.7	-18.5
GEW-129	10/21/2015 10:15	0.8	63.4	0.0	35.8	161.8				-18.1	-17.8	-18.2
GEW-131	10/7/2015 15:44	14.4	51.5	0.1	34.0	172.2				-23.5	-23.4	-23.5
GEW-131	10/7/2015 15:46	13.8	51.4	0.1	34.7	171.2				-23.3	-23.2	-23.0
GEW-131	10/21/2015 10:23	15.9	53.3	0.3	30.5	175.7				-17.7	-17.6	-17.6
GEW-131	10/21/2015 10:23	15.0	53.8	0.3	30.9	175.8				-17.6	-17.6	-18.0

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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_2O		
GEW-132	10/6/2015 16:56	6.6	29.8	8.9	54.7	171.2				-20.0	-21.0	-20.0
GEW-132	10/6/2015 16:58	6.2	30.2	9.0	54.6	171.2				-15.1	-14.6	-23.5
GEW-132	10/21/2015 10:33	9.9	49.0	3.2	37.9	177.7				-9.8	-9.8	-17.1
GEW-132	10/21/2015 10:33	10.2	49.1	3.3	37.4	177.7				-9.3	-9.4	-15.2
GEW-133	10/6/2015 11:19	0.5	45.7	5.0	48.8	83.0		6	10	-22.4	-22.1	-22.2
GEW-133	10/6/2015 11:22	0.5	51.8	3.0	44.7	84.5		6	10	-22.4	-22.5	-22.4
GEW-133	10/21/2015 10:42	0.8	48.8	5.3	45.1	100.2		118	118	-17.6	-17.6	-17.1
GEW-133	10/21/2015 10:43	0.7	48.8	5.0	45.5	103.2		117	117	-17.6	-17.5	-17.6
GEW-134	10/6/2015 11:12	19.3	53.6	0.1	27.0	165.0				-22.0	-22.4	-22.2
GEW-134	10/6/2015 11:13	19.1	55.9	0.1	24.9	165.7				-22.3	-22.1	-22.4
GEW-134	10/21/2015 10:49	19.9	55.7	0.6	23.8	173.1				-17.2	-17.1	-17.6
GEW-134	10/21/2015 10:50	20.6	50.9	0.6	27.9	173.6				-17.2	-17.2	-17.6
GEW-135	10/6/2015 11:06	5.6	54.0	0.2	40.2	185.7				-19.0	-19.0	-22.5
GEW-135	10/6/2015 11:07	5.8	54.3	0.2	39.7	185.7				-18.5	-19.0	-19.5
GEW-135	10/21/2015 11:04	9.1	58.7	0.3	31.9	186.3				-13.7	-14.2	-14.4
GEW-135	10/21/2015 11:06	11.2	60.2	0.1	28.5	186.3				-13.8	-13.7	-14.2
GEW-136	10/6/2015 10:55	3.0	22.4	13.7	60.9	134.7				-17.0	-17.0	-17.6
GEW-136	10/6/2015 10:58	2.8	21.0	13.9	62.3	134.3				-11.2	-11.2	-20.0
GEW-136	10/21/2015 11:09	7.4	30.1	11.5	51.0	131.1				-8.4	-7.4	-10.8
GEW-136	10/21/2015 11:10	7.6	29.8	11.5	51.1	131.7				-7.9	-7.9	-12.8
GEW-137	10/6/2015 10:51	24.5	44.7	1.1	29.7	101.5				-18.6	-17.0	-18.5
GEW-137	10/21/2015 11:13	26.2	40.5	1.2	32.1	120.2				-13.7	-13.7	-13.6
GEW-138	10/7/2015 17:10	16.2	52.8	0.4	30.6	162.7				-3.9	-3.9	-17.3
GEW-138	10/7/2015 17:12	17.3	55.1	0.3	27.3	162.7				-3.8	-3.8	-15.2
GEW-138	10/21/2015 11:15	24.1	57.2	0.3	18.4	161.8				-5.0	-4.6	-11.9
GEW-138	10/21/2015 11:16	23.4	58.8	0.4	17.4	161.8				-8.4	-6.5	-12.4
GEW-139	10/7/2015 17:17	1.4	56.4	0.5	41.7	187.9				-18.4	-18.8	-19.1
GEW-139	10/7/2015 17:19	1.1	57.9	0.5	40.5	188.3				-15.6	-16.0	-19.7
GEW-139	10/21/2015 11:21	3.0	62.4	0.4	34.2	187.9				-12.8	-12.6	-14.6
GEW-139	10/21/2015 11:22	2.9	54.4	0.4	42.3	187.9				-10.9	-10.9	-14.1
GEW-140	10/7/2015 17:03	10.3	56.3	0.2	33.2	184.6				-3.4	-3.3	-3.4
GEW-140	10/7/2015 17:04	10.2	55.8	0.1	33.9	184.6				-3.5	-3.5	-3.0
GEW-141	10/7/2015 16:25	1.0	51.0	2.5	45.5	82.7				-25.6	-25.2	-25.5
GEW-141	10/7/2015 16:27	0.8	56.3	1.1	41.8	82.6				-25.3	-25.3	-25.5
GEW-141	10/21/2015 11:30	5.3	62.7	0.3	31.7	147.7				-18.1	-18.1	-18.1
GEW-141	10/21/2015 11:31	5.7	63.7	0.0	30.6	146.6				-18.3	-18.2	-18.6
GEW-142	10/7/2015 16:32	0.1	54.4	1.5	44.0	152.9				-21.3	-21.3	-21.1
GEW-142	10/7/2015 16:33	0.2	56.2	0.8	42.8	154.1				-21.9	-22.0	-21.8
GEW-142	10/21/2015 11:34	1.5	41.1	6.5	50.9	158.3				-14.5	-14.6	-14.2
GEW-142	10/21/2015 11:35	1.7	47.0	4.6	46.7	159.6				-14.5	-14.3	-14.2
GEW-143	10/7/2015 16:47	0.2	57.3	0.0	42.5	99.6				1.0	1.1	1.6
GEW-143	10/7/2015 16:48	0.3	56.5	0.0	43.2	100.2				1.4	1.4	1.5

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		(% vol)				°F		scfm		H_2O		
GEW-143	10/21/2015 11:37	1.8	52.2	0.1	45.9	116.3				10.3	10.1	10.3
GEW-143	10/21/2015 11:37	2.4	56.9	0.0	40.7	118.3				10.2	10.2	10.3
GEW-144	10/7/2015 16:54	0.1	35.6	10.6	53.7	108.8				-14.5	-12.4	-13.4
GEW-144	10/7/2015 16:57	0.7	25.9	12.6	60.8	109.0				-19.7	-20.5	-21.1
GEW-144	10/21/2015 11:40	5.7	48.9	4.9	40.5	107.0				-9.2	-12.8	-9.5
GEW-145	10/8/2015 9:49	0.4	14.4	18.1	67.1	75.7				-21.4	-21.4	-21.4
GEW-145	10/8/2015 9:50	0.2	10.2	18.8	70.8	77.1				-20.0	-19.9	-20.0
GEW-145	10/21/2015 11:43	3.1	24.2	19.0	53.7	85.0				-18.7	-18.7	-18.5
GEW-145	10/21/2015 11:43	2.0	11.4	18.9	67.7	85.6				-19.4	-19.1	-19.5
GEW-146	10/8/2015 9:42	14.4	41.5	1.8	42.3	97.3				-0.5	-0.6	-15.1
GEW-146	10/8/2015 9:44	14.4	41.9	1.5	42.2	99.0				-3.5	-3.5	-13.5
GEW-146	10/21/2015 15:13	22.1	42.7	2.5	32.7	95.4				-5.0	-4.9	-17.1
GEW-147	10/8/2015 9:34	4.5	53.0	0.1	42.4	190.2				-11.7	-11.7	-12.2
GEW-147	10/8/2015 9:36	4.3	53.8	0.1	41.8	190.2				-11.7	-11.7	-12.2
GEW-147	10/21/2015 15:16	10.5	51.0	0.1	38.4	190.2				-14.8	-14.7	-14.4
GEW-147	10/21/2015 15:17	10.3	55.7	0.1	33.9	190.2				-13.7	-13.7	-14.6
GEW-148	10/8/2015 9:22	1.4	42.7	6.5	49.4	73.6				-1.5	-1.0	-1.3
GEW-148	10/8/2015 9:27	1.6	43.3	6.2	48.9	74.1				-0.6	-0.8	-0.5
GEW-148	10/21/2015 14:55	4.0	55.1	0.2	40.7	171.4				-0.6	-0.8	-0.8
GEW-148	10/21/2015 14:55	3.8	58.3	0.1	37.8	172.3				-0.6	-0.6	-0.9
GEW-149	10/8/2015 8:39	7.7	33.9	7.8	50.6	151.3				-1.0	-1.0	-13.6
GEW-149	10/8/2015 8:42	8.2	33.8	8.0	50.0	153.3				-3.9	-3.9	-10.0
GEW-149	10/21/2015 14:01	6.7	19.6	10.2	63.5	131.1				-7.4	-7.5	-13.2
GEW-149	10/21/2015 14:02	6.0	24.9	9.8	59.3	134.0				-1.7	-1.7	-17.6
GEW-150	10/8/2015 10:03	4.7	63.6	0.1	31.6	162.7				4.0	4.1	4.1
GEW-150	10/8/2015 10:05	4.7	65.1	0.0	30.2	163.6				3.3	3.5	3.4
GEW-150	10/21/2015 13:40	4.4	67.3	0.0	28.3	171.7				15.6	15.6	16.0
GEW-150	10/21/2015 13:41	4.2	67.7	0.0	28.1	172.7				15.6	15.6	16.1
GEW-151	10/8/2015 8:46	0.2	17.0	15.9	66.9	74.3				-22.9	-23.4	-22.9
GEW-151	10/8/2015 8:50	0.2	15.8	15.6	68.4	74.3				-21.5	-22.9	-21.5
GEW-151	10/21/2015 14:51	0.8	15.8	15.3	68.1	93.6				-18.1	-18.6	-18.4
GEW-151	10/21/2015 14:52	1.3	14.8	14.6	69.3	93.6				-21.0	-21.0	-21.4
GEW-152	10/8/2015 8:15	2.5	24.7	13.1	59.7	177.2				-24.5	-24.8	-24.7
GEW-152	10/8/2015 8:18	2.4	22.4	13.3	61.9	176.7				-25.9	-25.9	-26.4
GEW-152	10/21/2015 13:52	1.3	20.1	16.2	62.4	179.8				-21.5	-21.1	-22.1
GEW-152	10/21/2015 13:53	1.2	14.4	16.6	67.8	179.8				-21.5	-22.0	-22.5
GEW-153	10/8/2015 8:24	22.4	45.4	0.0	32.2	134.8				-25.3	-25.3	-25.1
GEW-153	10/8/2015 8:26	22.6	45.5	0.0	31.9	134.6				-25.3	-25.3	-25.4
GEW-153	10/21/2015 13:55	23.6	38.4	0.3	37.7	136.2				-22.0	-21.5	-22.0
GEW-153	10/21/2015 13:55	23.7	42.3	0.2	33.8	136.1				-21.5	-21.5	-21.8
GEW-154	10/8/2015 8:31	4.6	54.1	0.4	40.9	191.9				-6.3	-6.3	-16.4
GEW-154	10/8/2015 8:34	4.0	53.2	2.6	40.2	191.9				-5.8	-5.8	-15.5

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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_2O		
GEW-154	10/21/2015 13:58	4.5	16.3	16.8	62.4	122.3				-8.9	-7.8	-14.6
GEW-154	10/21/2015 13:58	4.7	9.4	17.8	68.1	122.3				-8.4	-8.4	-14.2
GEW-155	10/6/2015 10:45	7.3	32.8	5.5	54.4	120.2				-11.3	-11.3	-11.9
GEW-155	10/6/2015 10:47	7.2	32.4	5.4	55.0	120.4				-9.0	-10.1	-9.5
GEW-156	10/8/2015 9:55	11.5	47.4	1.8	39.3	159.6				-0.8	-0.8	-26.3
GEW-156	10/8/2015 9:57	11.7	48.8	1.9	37.6	160.1				-6.5	-6.8	-23.3
GEW-156	10/21/2015 14:42	7.8	15.2	12.1	64.9	113.0				-10.9	-10.9	-16.6
GEW-156	10/21/2015 14:42	8.6	18.7	11.7	61.0	113.7				-6.4	-6.5	-22.3
GIW-01	10/2/2015 10:49	2.7	64.8	0.2	32.3	176.7		0	0	-15.3	-15.1	-15.6
GIW-01	10/2/2015 10:50	2.8	64.3	0.2	32.7	176.9		29	27	-16.2	-16.7	-16.9
GIW-01	10/6/2015 9:40	3.3	59.6	0.2	36.9	188.5		28	29	-16.7	-17.0	-25.6
GIW-01	10/6/2015 9:41	3.2	60.4	0.2	36.2	188.5		52	20	-17.0	-17.0	-25.4
GIW-01	10/14/2015 15:35	2.1	67.4	0.2	30.3	163.6		17	20	-15.7	-15.8	-16.1
GIW-01	10/14/2015 15:44	1.9	67.4	0.2	30.5	162.3		14	19	-15.7	-14.4	-15.6
GIW-01	10/19/2015 14:13	4.2	58.1	0.0	37.7	188.5		10	10	-7.8	-7.8	-14.4
GIW-01	10/19/2015 14:14	3.7	66.0	0.0	30.3	188.0		24	33	-7.8	-6.8	-11.8
GIW-01	10/30/2015 14:31	3.0	64.8	0.0	32.2	187.9		23	24	-11.2	-11.2	-18.3
GIW-01	10/30/2015 14:32	3.3	65.0	0.1	31.6	187.9		29	24	-10.7	-10.7	-15.3
GIW-02	10/2/2015 10:32	7.4	55.6	1.3	35.7	55.8		9	11	-0.3	-0.3	-17.2
GIW-02	10/6/2015 9:34	3.6	42.5	7.3	46.6	73.2		7	7	-0.5	-0.5	-25.3
GIW-02	10/6/2015 9:35	4.8	44.9	7.1	43.2	74.3		6	6	-0.5	-0.5	-25.4
GIW-02	10/14/2015 15:20	8.5	65.6	0.1	25.8	91.1		5	5	-0.2	-0.2	-14.6
GIW-02	10/14/2015 15:28	8.4	64.2	0.1	27.3	90.7		5	5	-0.2	-0.2	-16.6
GIW-02	10/19/2015 14:09	6.8	59.4	0.1	33.7	84.0		12	11	-0.2	-0.2	-12.1
GIW-02	10/30/2015 14:23	9.0	57.2	0.3	33.5	64.6		8	7	-0.2	-0.2	-15.2
GIW-02	10/30/2015 14:26	9.5	60.0	0.2	30.3	65.3		9	9	-3.3	-3.4	-18.1
GIW-03	10/2/2015 10:28	0.5	51.4	2.9	45.2	56.0		0	0	-0.2	-0.3	-17.3
GIW-03	10/6/2015 9:26	0.6	38.1	8.0	53.3	74.1		0	6	-3.0	-2.8	-25.2
GIW-03	10/6/2015 9:27	0.3	40.8	7.9	51.0	75.2		12	10	-2.9	-2.9	-25.3
GIW-03	10/14/2015 15:06	0.4	42.2	6.9	50.5	89.6		20	15	-1.5	-1.5	-13.6
GIW-03	10/14/2015 15:14	0.2	42.7	7.3	49.8	88.7		16	13	-1.8	-1.7	-14.8
GIW-03	10/19/2015 14:05	0.4	43.1	6.7	49.8	83.3		6	0	-1.5	-1.5	-10.5
GIW-03	10/19/2015 14:05	0.4	44.5	6.7	48.4	83.8		0	0	-1.7	-1.8	-14.8
GIW-03	10/30/2015 14:15	0.3	43.9	6.9	48.9	64.5		12	10	-1.8	-1.7	-17.6
GIW-03	10/30/2015 14:16	0.3	43.5	6.8	49.4	65.1		26	0	-2.1	-2.3	-19.0
GIW-04	10/2/2015 10:26	1.4	52.3	0.2	46.1	55.2		0	0	-3.6	-4.7	-16.9
GIW-04	10/6/2015 9:23	1.1	40.5	7.5	50.9	74.1		0	3	-24.4	-24.4	-24.6
GIW-04	10/6/2015 9:23	0.7	39.2	7.6	52.5	74.1		4	0	-24.4	-24.4	-24.5
GIW-04	10/14/2015 14:46	0.5	38.7	6.4	54.4	92.7		20	5	-14.7	-15.2	-12.8
GIW-04	10/14/2015 14:55	0.5	40.1	5.7	53.7	90.9		16	0	-15.1	-15.0	-15.6
GIW-04	10/19/2015 14:02	0.8	41.6	4.9	52.7	84.5		0	0	-13.1	-13.8	-14.6
GIW-04	10/30/2015 14:09	0.5	40.0	5.7	53.8	63.7		8	16	-17.5	-17.5	-18.0

October 2015 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GIW-04	10/30/2015 14:11	0.6	43.4	3.9	52.1	63.6		14	3	-17.6	-17.3	-16.6
GIW-05	10/2/2015 10:26	2.5	41.1	7.5	48.9	55.7		17	17	-16.7	-16.7	-17.2
GIW-05	10/2/2015 10:27	2.6	40.4	7.5	49.5	55.7		17	18	-16.7	-16.7	-17.5
GIW-05	10/6/2015 9:15	2.5	36.9	8.9	51.7	75.9		13	12	-24.0	-24.0	-24.9
GIW-05	10/6/2015 9:17	2.6	35.9	9.3	52.2	77.1		13	13	-23.8	-23.8	-24.9
GIW-05	10/14/2015 11:48	3.4	36.0	9.9	50.7	87.6		13	13	-14.7	-14.7	-16.9
GIW-05	10/14/2015 11:56	3.5	34.5	10.1	51.9	88.7		13	13	-14.7	-14.7	-19.3
GIW-05	10/19/2015 14:32	1.6	33.6	9.3	55.5	85.7		10	9	-10.1	-10.0	-12.5
GIW-05	10/19/2015 14:33	2.1	34.8	9.1	54.0	86.1		3	7	-10.6	-10.6	-15.0
GIW-05	10/30/2015 14:50	4.1	44.9	4.3	46.7	63.8		12	9	-16.1	-16.1	-16.6
GIW-05	10/30/2015 14:52	4.2	47.2	4.5	44.1	64.1		10	10	-15.1	-15.1	-19.5
GIW-06	10/2/2015 10:39	2.1	51.7	1.2	45.0	55.6		12	13	-16.2	-16.2	-16.9
GIW-06	10/6/2015 9:14	2.3	49.5	2.3	45.9	74.8		0	11	-24.3	-24.2	-25.0
GIW-06	10/14/2015 13:41	1.2	59.9	0.9	38.0	87.5		11	0	-13.7	-13.9	-14.1
GIW-06	10/14/2015 13:49	1.2	61.0	0.8	37.0	86.8		10	18	-15.6	-15.1	-15.6
GIW-06	10/19/2015 13:47	1.5	59.6	0.9	38.0	82.8		18	7	-13.6	-13.6	-13.8
GIW-06	10/30/2015 13:46	1.4	55.8	0.7	42.1	62.9		12	5	-17.5	-17.0	-17.0
GIW-06	10/30/2015 13:48	1.4	57.6	0.5	40.5	63.5		10	11	-16.8	-16.5	-16.6
GIW-07	10/2/2015 10:43	4.7	52.6	0.3	42.4	55.9		15	16	-8.4	-8.4	-36.5
GIW-07	10/6/2015 9:11	9.7	62.3	0.4	27.6	71.2		17	20	-23.5	-23.5	-27.2
GIW-07	10/14/2015 13:58	33.3	55.3	0.6	10.8	88.6		23	25	-23.9	-23.5	-22.5
GIW-07	10/14/2015 14:06	32.4	54.6	0.7	12.3	89.5		6	7	-25.0	-23.9	-24.0
GIW-07	10/19/2015 13:51	27.9	50.9	1.6	19.6	82.5		27	27	-24.0	-24.0	-22.5
GIW-07	10/30/2015 13:53	34.4	52.2	0.7	12.7	65.4		19	0	-26.9	-26.4	-26.4
GIW-07	10/30/2015 13:54	35.5	51.3	0.7	12.5	65.7		16	0	-25.8	-25.9	-25.8
GIW-08	10/2/2015 10:19	22.6	51.2	1.9	24.3	56.2				-12.0	-12.0	-16.3
GIW-08	10/2/2015 10:21	21.8	52.5	2.0	23.7	56.4				-7.9	-7.9	-16.4
GIW-08	10/6/2015 9:08	18.6	51.0	2.6	27.8	77.3				-14.6	-14.6	-28.5
GIW-08	10/6/2015 9:11	18.6	49.7	2.8	28.9	78.8				-6.9	-7.0	-28.3
GIW-08	10/14/2015 11:36	23.1	57.6	2.4	16.9	86.0		149	149	-4.5	-4.5	-28.2
GIW-08	10/14/2015 11:44	23.2	59.6	2.2	15.0	85.3		150	150	-4.6	-4.6	-28.8
GIW-08	10/19/2015 14:26	17.7	57.5	2.2	22.6	85.7		137	137	-3.8	-3.8	-25.6
GIW-08	10/30/2015 14:47	21.4	55.3	1.6	21.7	65.3				-5.0	-4.9	-27.1
GIW-09	10/2/2015 10:35	3.4	37.0	11.8	47.8	64.1		163	164	-5.0	-5.0	-16.8
GIW-09	10/2/2015 10:36	2.3	25.6	13.3	58.8	64.1		164	164	-5.0	-5.0	-17.2
GIW-09	10/6/2015 9:17	1.7	30.5	12.7	55.1	82.5		212	212	-8.8	-8.8	-28.9
GIW-09	10/6/2015 9:17	1.9	24.4	13.0	60.7	82.5		220	222	-9.5	-10.3	-28.9
GIW-09	10/14/2015 14:13	3.4	12.9	14.5	69.2	88.3				-6.9	-6.6	-25.8
GIW-09	10/14/2015 14:21	3.3	11.8	14.5	70.4	87.6				-6.8	-6.5	-27.3
GIW-09	10/19/2015 13:55	5.8	23.5	13.4	57.3	85.5				-6.2	-6.2	-24.0
GIW-09	10/19/2015 13:55	3.8	19.2	13.7	63.3	85.7				-6.4	-6.2	-27.1
GIW-09	10/30/2015 14:00	7.6	15.6	15.0	61.8	72.4		186	183	-6.8	-6.8	-28.5

October 2015 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
GIW-09	10/30/2015 14:01	7.8	13.7	15.2	63.3	72.2		183	177	-6.4	-6.6	-25.7
GIW-10	10/2/2015 10:23	4.6	52.5	0.2	42.7	55.8		14	14	-2.6	-2.6	-16.8
GIW-10	10/6/2015 9:21	3.4	43.5	3.2	49.9	74.3		25	0	-15.7	-15.6	-24.5
GIW-10	10/14/2015 14:31	4.2	55.1	0.1	40.6	89.7		0	0	-3.1	-3.1	-15.7
GIW-10	10/14/2015 14:39	3.6	54.3	0.0	42.1	90.7		23	13	-3.6	-3.6	-13.6
GIW-10	10/19/2015 13:59	1.1	43.8	3.0	52.1	83.5		0	0	-9.8	-9.8	-15.5
GIW-10	10/30/2015 14:38	4.5	54.6	0.1	40.8	65.6		6	8	-2.7	-2.7	-18.4
GIW-10	10/30/2015 14:40	5.0	54.2	0.0	40.8	65.9		9	9	-2.8	-2.8	-17.0
GIW-11	10/2/2015 10:32	4.2	40.9	6.5	48.4	75.9				-8.4	-7.9	-16.8
GIW-11	10/2/2015 10:33	4.2	41.7	6.5	47.6	75.9				-7.9	-7.8	-17.5
GIW-11	10/6/2015 9:23	4.0	38.7	6.8	50.5	93.2				-12.6	-14.0	-24.6
GIW-11	10/6/2015 9:26	4.0	40.0	6.7	49.3	90.9				-5.8	-5.9	-25.7
GIW-11	10/14/2015 10:45	4.5	49.1	4.5	41.9	88.8		137	137	-3.9	-3.8	-13.5
GIW-11	10/14/2015 11:03	3.9	49.9	4.5	41.7	89.6		141	141	-4.1	-4.1	-16.8
GIW-11	10/19/2015 14:23	4.7	51.4	2.6	41.3	85.6		119	119	-2.9	-2.9	-13.6
GIW-11	10/30/2015 14:56	3.8	48.8	4.4	43.0	73.0				-4.0	-4.1	-15.7
GIW-12	10/2/2015 10:37	4.9	21.4	11.1	62.6	84.7		204	206	-8.8	-9.0	-17.0
GIW-12	10/2/2015 10:38	4.9	19.7	11.1	64.3	84.9				-8.9	-8.9	-16.4
GIW-12	10/6/2015 9:30	4.7	18.5	11.6	65.2	96.2				-11.6	-11.7	-25.5
GIW-12	10/6/2015 9:32	4.6	17.5	11.7	66.2	94.8				-8.7	-9.2	-25.4
GIW-12	10/14/2015 11:07	6.8	22.2	10.7	60.3	93.4		164	162	-5.4	-5.3	-17.2
GIW-12	10/14/2015 11:14	7.0	20.9	10.9	61.2	93.8		164	163	-5.4	-5.4	-15.8
GIW-12	10/19/2015 14:19	5.1	36.6	8.1	50.2	91.7		134	134	-3.7	-3.7	-11.2
GIW-12	10/19/2015 14:19	6.0	30.5	8.3	55.2	91.8		138	142	-3.9	-4.0	-12.4
GIW-12	10/30/2015 15:00	5.3	23.1	11.2	60.4	82.5				-7.3	-7.3	-17.5
GIW-12	10/30/2015 15:03	5.3	21.7	11.4	61.6	82.6				-4.9	-5.1	-17.8
GIW-13	10/2/2015 10:41	7.6	57.8	0.6	34.0	57.9				-4.2	-4.0	-4.3
GIW-13	10/2/2015 10:43	7.4	58.8	0.6	33.2	58.1				-3.6	-3.6	-3.7
GIW-13	10/6/2015 9:36	11.0	53.1	1.0	34.9	76.1				-10.4	-10.3	-10.3
GIW-13	10/14/2015 11:19	11.3	60.2	0.9	27.6	83.6		181	191	-6.4	-7.3	-7.0
GIW-13	10/14/2015 11:27	12.1	57.9	0.8	29.2	85.5		195	212	-7.4	-8.9	-7.2
GIW-13	10/19/2015 14:16	3.0	63.3	0.0	33.7	87.8		86	86	-1.5	-1.5	-1.3
GIW-13	10/30/2015 15:06	8.5	58.2	0.4	32.9	63.8				-4.8	-4.9	-4.8
LCS-5A	10/5/2015 16:58	58.4	39.0	0.0	2.6	93.6				-29.2	-29.3	-30.4
LCS-5A	10/12/2015 14:34	58.3	39.9	0.0	1.8	94.6				-21.9	-21.9	-23.1
LCS-5A	10/19/2015 10:40	57.6	40.0	0.0	2.4	94.6				-6.9	-6.9	-7.2
LCS-5A	10/27/2015 16:51	58.6	40.0	0.0	1.4	91.4				-6.0	-7.4	-5.9
LCS-6B	10/5/2015 15:33	54.2	40.1	0.4	5.3	84.7		5	6	-0.5	-0.5	-31.6
LCS-6B	10/12/2015 11:22	53.9	39.3	0.7	6.1	88.8		7	7	-0.5	-0.5	-23.9
LCS-6B	10/19/2015 9:35	52.1	40.4	0.5	7.0	70.7		0	0	-0.7	-0.7	-9.7
LCS-6B	10/27/2015 17:48	53.8	40.6	0.1	5.5	66.4		5	4	-0.2	-0.2	-8.3
PGW-60	10/5/2015 17:42	53.0	38.9	1.0	7.1	82.1		13	12	-18.8	-18.6	-28.7

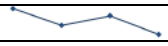
October 2015 Wellfield Monitoring Data - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO_2	O_2	Balance Gas	Init Temp	Adj Temp	Init Flow	Adj Flow	Init Static Press	Adj Static Press	System Pressure
		(% vol)				°F		scfm		H_2O		
PGW-60	10/5/2015 17:45	52.5	39.1	1.2	7.2	82.0		11	15	-15.1	-15.1	-28.5
PGW-60	10/12/2015 15:54	55.3	40.6	0.2	3.9	88.3		8	10	-7.6	-7.5	-20.2
PGW-60	10/19/2015 9:12	56.1	41.8	0.0	2.1	78.4		0	4	-0.8	-2.4	-2.3
PGW-60	10/26/2015 12:39	52.6	35.2	0.7	11.5	80.4		10	11	-0.9	-0.7	-7.8
SEW-002	10/21/2015 10:19	0.1	12.9	20.5	66.5	77.3		19	21	-4.1	-4.1	-17.8
SEW-002	10/21/2015 10:19	0.1	7.1	20.9	71.9	78.0		14	16	-4.4	-4.4	-17.7
T-56	10/5/2015 15:54	42.7	34.0	0.0	23.3	76.5		9	13	-0.1	-0.1	-31.5
T-56	10/5/2015 15:55	42.7	33.0	0.0	24.3	76.8		11	11	0.0	-0.1	-32.1
T-56	10/12/2015 14:00	50.3	35.1	0.0	14.6	77.0		14	14	0.0	0.0	-23.5
T-56	10/19/2015 10:01	41.5	33.5	0.0	25.0	72.2		14	15	-0.1	0.0	-8.5
T-56	10/27/2015 17:30	51.1	37.0	0.0	11.9	70.2		12	18	0.0	0.0	-8.0

ATTACHMENT E-2

MAXIMUM WELLHEAD TEMPERATURE TABLE

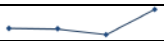
Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	July 2015	August 2015	September 2015	October 2015		
GEW-001	--	--	--	--		
GEW-002	126.0	124.2	122.4	119.9		
GEW-003	124.9	118.3	118.3	119.4		
GEW-004	122.7	123.1	122.1	121.0		
GEW-005	98.2	102.1	100.2	97.3		
GEW-006	93.1	92.9	93.6	94.0		
GEW-007	107.6	102.3	102.4	99.2		
GEW-008	119.4	119.2	116.0	115.0		
GEW-009	126.4	126.9	126.3	126.3		
GEW-010	110.5	93.7	112.3	100.4		
GEW-011	185.2	--	--	--		
GEW-013A	--	--	--	--		
GEW-014A	--	--	--	--		
GEW-015	--	--	--	--		
GEW-016R	--	--	--	--		
GEW-018B	--	--	--	--		
GEW-018R	--	--	--	--		
GEW-019A	--	--	--	--		
GEW-020A	70.9	--	--	110.6		
GEW-021A	115.8	--	--	--		
GEW-022R	187.6	--	191.4	193.7		
GEW-023A	--	--	--	--		
GEW-024A	200.1	--	--	--		
GEW-025A	--	--	--	--		
GEW-026R	84.9	91.9	95.6	68.0		
GEW-027A	175.8	115.3	121.5	--		
GEW-028R	184.6	188.5	189.1	194.8		
GEW-029	--	--	--	--		
GEW-030R	--	--	--	--		
GEW-033R	--	--	--	--		
GEW-034	--	--	--	--		
GEW-034A	--	--	--	--		
GEW-035	87.7	--	--	--		
GEW-036	--	--	--	--		
GEW-037	94.6	--	--	--		
GEW-038	149.3	118.4	136.0	101.7		
GEW-039	135.7	134.3	134.0	136.0		
GEW-040	97.4	96.8	96.9	94.8		
GEW-041R	110.9	110.4	107.9	107.2		
GEW-042R	104.5	101.5	103.4	105.2		
GEW-043R	134.7	135.9	131.9	130.5		
GEW-044	96.1	96.0	98.7	90.3		
GEW-045R	101.4	100.6	97.1	92.9		
GEW-046R	101.5	101.8	101.5	100.0		

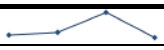
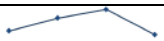
Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	July 2015	August 2015	September 2015	October 2015		
GEW-047R	118.6	121.8	118.8	115.7		
GEW-048	109.8	108.5	107.4	107.0		
GEW-049	112.2	114.7	115.0	113.2		
GEW-050	111.5	111.1	109.7	108.6		
GEW-051	127.5	128.3	129.6	128.0		
GEW-052	116.6	115.8	118.1	115.0		
GEW-053	140.6	140.5	140.7	140.7		
GEW-054	152.9	150.6	143.6	150.9		
GEW-055	128.7	128.0	128.7	129.9		
GEW-056R	168.1	173.1	178.6	171.6		
GEW-057B	--	179.8	184.1	158.4		
GEW-057R	178.0	184.1	192.5	188.5		
GEW-058	189.8	189.6	188.5	187.9		
GEW-058A	179.7	181.4	182.0	181.9		
GEW-059R	187.2	185.2	186.8	186.3		
GEW-061B	92.1	89.9	96.8	92.8		
GEW-064A	--	--	--	--		
GEW-065A	196.0	196.0	195.4	194.2		
GEW-066	--	--	--	--		
GEW-067A	165.7	185.2	190.2	186.3		
GEW-068A	--	--	--	--		
GEW-069R	--	--	--	--		
GEW-070R	--	--	--	--		
GEW-071	--	--	--	--		
GEW-071B	--	--	--	--		
GEW-072RR	--	--	--	--		
GEW-073R	--	--	--	--		
GEW-075	--	--	--	--		
GEW-076R	--	--	--	--		
GEW-077	--	--	--	184.1		
GEW-078R	--	--	--	--		
GEW-080	--	--	--	90.7		
GEW-081	--	--	--	--		
GEW-082R	195.0	192.5	192.5	192.5		
GEW-083	--	--	--	--		
GEW-084	--	--	--	--		
GEW-085	107.0	--	--	--		
GEW-086	--	190.2	137.3	106.0		
GEW-087	--	--	--	--		
GEW-088	--	--	--	--		
GEW-089	93.1	84.9	101.5	93.6		
GEW-090	189.1	190.8	188.5	189.6		
GEW-091	--	--	--	--		
GEW-100	--	--	--	--		
GEW-101	130.6	--	--	--		

Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	July 2015	August 2015	September 2015	October 2015		
GEW-102	--	--	82.3	85.6		
GEW-103	--	--	--	--		
GEW-104	88.1	104.7	110.9	97.3		
GEW-105	98.9	94.4	100.2	95.2		
GEW-106	--	--	--	--		
GEW-107	70.2	94.8	99.6	89.5		
GEW-108	--	--	--	--		
GEW-109	178.7	175.8	180.8	180.9		
GEW-110	131.6	118.3	136.0	120.2		
GEW-112	--	--	--	--		
GEW-113	--	--	--	--		
GEW-116	65.6	93.6	105.0	88.9		
GEW-117	68.2	89.5	139.0	82.4		
GEW-118	--	--	--	--		
GEW-120	129.7	159.6	176.7	177.7		
GEW-121	189.6	191.8	189.1	189.1		
GEW-122	191.9	196.6	184.6	183.5		
GEW-123	189.6	186.3	183.5	190.7		
GEW-124	146.3	147.3	162.3	166.4		
GEW-125	99.8	194.2	191.3	91.3		
GEW-126	196.0	190.8	180.8	193.3		
GEW-127	188.9	189.1	95.6	176.2		
GEW-128	182.1	182.8	181.4	182.4		
GEW-129	164.6	164.5	162.6	162.2		
GEW-130	--	--	--	--		
GEW-131	148.1	154.9	149.1	175.8		
GEW-132	184.7	185.2	180.3	177.7		
GEW-133	123.7	--	81.9	103.2		
GEW-134	194.8	188.5	179.3	173.6		
GEW-135	190.7	192.3	189.6	186.3		
GEW-136	171.2	175.2	158.3	134.7		
GEW-137	125.6	123.7	113.8	120.2		
GEW-138	190.1	185.1	191.3	162.7		
GEW-139	194.3	193.7	190.8	188.3		
GEW-140	187.4	184.5	185.7	184.6		
GEW-141	135.6	140.7	148.1	147.7		
GEW-142	187.0	173.1	185.4	159.6		
GEW-143	194.3	197.9	149.7	118.3		
GEW-144	113.8	115.5	102.2	109.0		
GEW-145	--	90.3	98.3	85.6		
GEW-146	106.2	109.0	103.4	99.0		
GEW-147	194.3	193.6	191.8	190.2		
GEW-148	109.9	108.2	89.7	172.3		
GEW-149	144.4	147.7	145.1	153.3		
GEW-150	131.4	181.5	181.9	172.7		

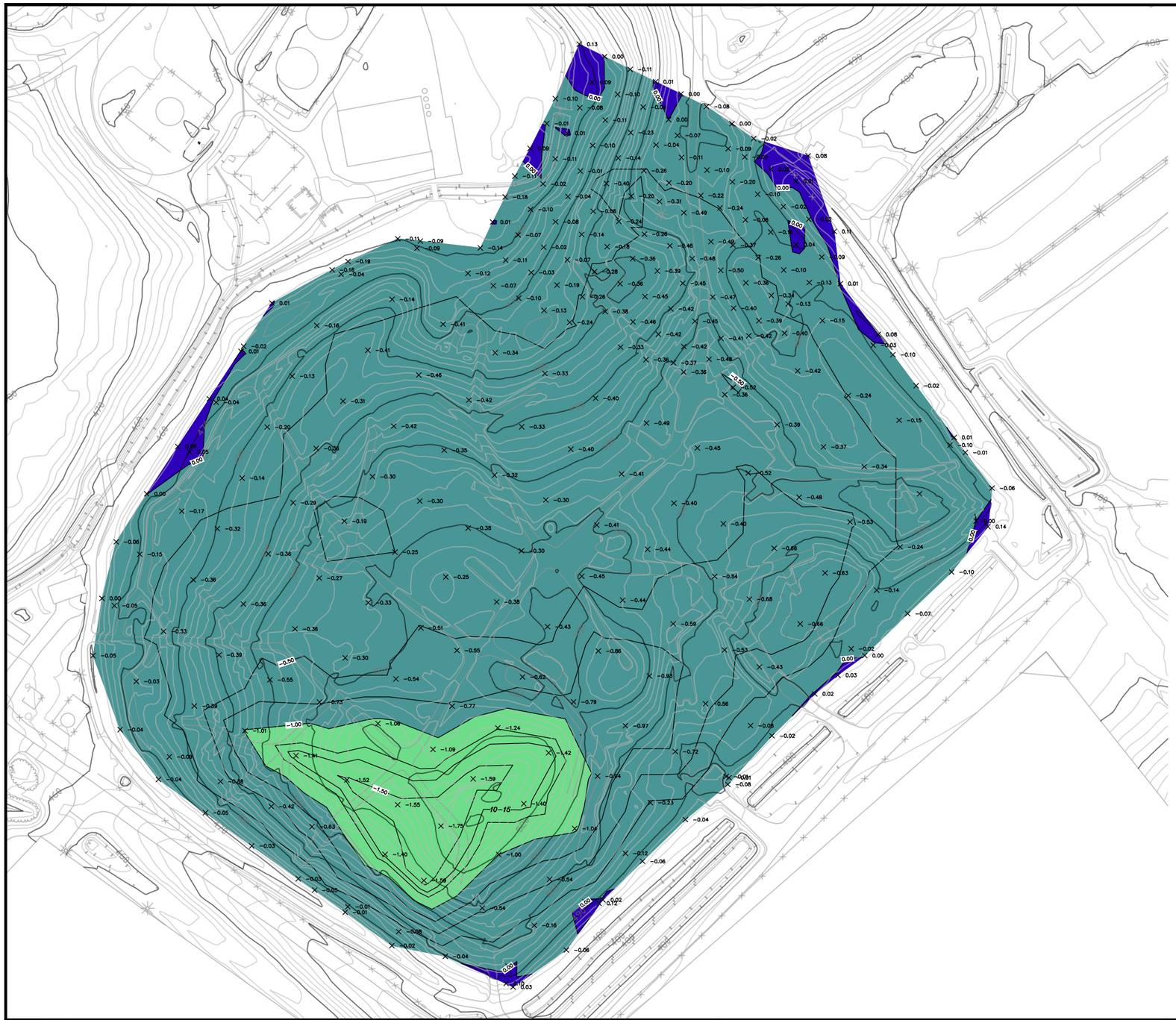
Wellfield Temperature - Bridgeton Landfill

Well Name	Maximum Initial Temperature From All Monthly Wellhead Readings (in °F)				Temp Trend ><30°F	Comments
	July 2015	August 2015	September 2015	October 2015		
GEW-151	103.9	114.5	196.0	93.6		
GEW-152	127.2	180.3	193.7	179.8		
GEW-153	109.7	121.5	131.4	136.2		
GEW-154	134.3	175.9	93.7	191.9		
GEW-155	187.9	179.8	146.2	120.4		
GEW-156	141.1	141.2	155.9	160.1		
GIW-01	176.7	189.1	189.6	188.5		
GIW-02	103.9	89.9	100.4	91.1		
GIW-03	103.0	91.3	96.7	89.6		
GIW-04	105.1	89.2	92.7	92.7		
GIW-05	96.2	91.9	97.9	88.7		
GIW-06	101.8	95.6	95.2	87.5		
GIW-07	99.8	92.7	95.0	89.5		
GIW-08	98.7	91.1	99.4	86.0		
GIW-09	103.0	95.4	98.4	88.3		
GIW-10	100.6	78.8	95.0	90.7		
GIW-11	112.8	98.7	101.3	93.2		
GIW-12	116.1	114.7	107.2	96.2		
GIW-13	96.2	124.9	144.4	87.8		
LCS-1D	--	--	--	--		
LCS-2D	91.5	--	--	--		
LCS-3C	--	--	--	--		
LCS-4B	--	--	--	--		
LCS-5A	95.8	96.7	94.8	94.6		
LCS-6B	99.7	98.2	99.7	88.8		
PGW-60	91.7	89.9	91.2	88.3		
SEW-002	157.5	138.7	--	78.0		
SEW-012A	--	--	--	--		
SEW-017R	96.0	--	--	--		
SEW-031R	197.2	--	--	--		
SEW-032R	--	--	--	--		
SEW-060R	--	--	--	--		
SEW-061R	--	--	--	--		
SEW-062R	--	--	--	--		
SEW-063	144.9	--	--	--		
SEW-064	--	--	--	--		
SEW-067	--	--	--	--		
SEW-072R	--	--	--	--		
SEW-074	--	--	--	--		
SEW-079R	--	--	--	--		
T-56	92.2	--	87.8	77.0		

-- = Indicates no data available.

ATTACHMENT F

SETTLEMENT FRONT MAP



N

0 200'

GRAPHIC SCALE

NOTES

1. EXISTING CONTOURS DEVELOPED FROM SITE AERIAL TOPOGRAPHIC SURVEY BY COOPER AERIAL SURVEYS, CO. ON FEBRUARY 10, 2015.
2. FOR CLARITY, NOT ALL SITE FEATURES MAY BE SHOWN.
3. ELEVATION DIFFERENCE DETERMINED BY SUBTRACTING SPOT ELEVATIONS SURVEYED ON 9-15-15 FROM SPOT ELEVATIONS SURVEYED ON 10-15-15.
4. SURVEY POINTS WERE PERFORMED USING GPS METHODS.
5. SETTLEMENT RANGE SURFACE WAS GENERATED FROM THE SPOT ELEVATION DIFFERENCES.
6. ELEVATION DIFFERENCES THAT ARE SHOWN AS NEGATIVE INDICATE SPOTS OF SETTLEMENT.
7. ANY POINTS THAT ARE NOT A GROUND-TO-GROUND COMPARISON TO THE PREVIOUS MONTH'S POINTS, OR THAT WERE NOT SURVEYED IN THE SAME LOCATION AS THE PREVIOUS MONTH ARE NOT INCLUDED AND WERE NOT USED IN ANY SURFACE GENERATION.

LEGEND

× −0.42	SPOT ELEVATION DIFFERENCE (10-15-15 TO 9-15-15)
——	MINOR ELEVATION CHANGE CONTOUR (0.25 FEET)
—−0.50—	MAJOR ELEVATION CHANGE CONTOUR (0.50 FEET)
——10−15——	SETTLEMENT FRONT CONTOUR FOR AREA WITH 1.35' PER 30 DAYS FOR CURRENT PERIOD OF DAYS

ELEVATION CHANGE (FEET)

Number	Minimum Elev. Change	Maximum Elev. Change	Area (sq.ft.)	Color
1	−5.00	−4.00	0.00	🟪
2	−4.00	−3.00	0.00	🟥
3	−3.00	−2.00	0.00	🟨
4	−2.00	−1.00	127029.74	🟩
5	−1.00	0.00	1382485.39	🟦
6	0.00	1.00	31367.33	🟪

REV. NO.	DATE	DESCRIPTION

BRIDGETON LANDFILL

CB&I Environmental & Infrastructure, Inc.

STATE OF ILLINOIS LICENSED DESIGN FIRM #184004093

BRIDGETON LANDFILL
BRIDGETON, MO

SETTLEMENT MAP
SEPTEMBER 15, 2015 THROUGH OCTOBER 15, 2015

DRAWN BY: ORC | APPROVED BY: JPV | PROJ. NO.: 155162 | DATE: NOVEMBER 2015

ATTACHMENT G

SUMMARY OF ODOR COMPLAINTS

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

Name: Robbin Dailey

Message: Odor logged October 1, 2015, at 2:32 pm strength of 7

Follow-up: Bridgeton Landfill staff performed an odor patrol within half an hour of the time stated in this concern, no odor related to the Bridgeton Landfill was observed.

Name: Michael Dailey

Message: Odor logged October 1, 2015, at 2:33 pm strength of 7

Follow-up: Bridgeton Landfill staff performed an odor patrol within half an hour of the time stated in this concern, no odor related to the Bridgeton Landfill was observed.

Name: Michael Dailey

Message: Odor logged October 1, 2015, at 1:34 pm strength of 5

Follow-up: The following concern coincides with a Bridgeton Landfill odor patrol. No odor related to the Bridgeton Landfill was observed at multiple locations in close proximity to this concern location.

Name: Robbin Dailey

Message: Odor logged October 1, 2015, at 1:34 pm strength of 5

Follow-up: The following concern coincides with a Bridgeton Landfill odor patrol. No odor related to the Bridgeton Landfill was observed at multiple locations in close proximity to this concern location.

Name: Kathy Bell

Message: Odor logged October 1, 2015, at 4:05 pm strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. No odor related to the Bridgeton Landfill was detected during odor patrols performed before and after this concern. No technical disruptions were experienced by Bridgeton Landfill at the time of this concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Kathryn Schlag

Message: Odor logged October 2, 2015, at 10:25 strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff was performing an odor patrol at the time of this concern, no odor related to the Bridgeton Landfill was observed at multiple points in close proximity to this concern location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 2, 2015, at 5:23 PM strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The location cited in this concern is of significant distance from the Bridgeton Landfill and of far closer proximity to another known odor source that was directly upwind of this location at the time of this concern. No odor was observed during odor patrols on this date.

Name: Audra Richardson

Message: Odor logged October 4, 2015, at 3:00 PM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time cited in this concern the location given was outside of the downwind pathway of the Bridgeton Landfill. Odor patrols before and after this concern did not observe any odor at multiple points between this location and the Bridgeton Landfill. This is not believed to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 5, 2015, at 8:48 AM strength of 10

Follow-up: The following concern location is the default selection within the boundaries of the Bridgeton Landfill. This is an invalid concern.

Name: Louise Kuhlmann

Message: Odor logged October 5, 2015, at 7:00 AM strength of 7

Follow-up: The following concern location is directly adjacent to another known odor source with frequent off-site odors. Winds at this time were of a low velocity northwestern origin, placing this well upwind of the Bridgeton Landfill. Odor patrols on this date did not observe off-site odor originating from the Bridgeton Landfill.

Name: Rhonda Steelman

Message: Odor logged October 5, 2015, at 2:30 PM strength of 5

Follow-up: The following concern location is directly adjacent to another known odor source with frequent off-site odors. Winds at this time were of a low velocity northwestern origin, placing this well upwind of the Bridgeton Landfill. Odor patrols on this date did not observe off-site odor originating from the Bridgeton Landfill.

Name: NA

Message: Odor logged October 6, 2015, at 8:15 AM strength of 4

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately six hours after the stated observation time. Morning odor patrols by Bridgeton Landfill staff did not detect any odor associated with the Bridgeton Landfill at multiple points in close proximity to this concern location. This is not believed to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 5, 2015, at 4:35 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately twenty hours after the stated observation time. Odor patrols by Bridgeton Landfill staff before and after this concern did not detect any odor associated with the Bridgeton Landfill at multiple points in close proximity to this concern location. This is not believed to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 5, 2015, at 4:35 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately twenty hours after the stated observation time. Odor patrols by Bridgeton Landfill staff before and after this concern did not detect any odor associated with the Bridgeton Landfill at multiple points in close proximity to this concern location. This is not believed to have been a Bridgeton Landfill odor.

Name: Jennifer Strange

Message: Odor logged October 6, 2015, at 5:00 PM strength of 2

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted from a location of significant distance from the Bridgeton Landfill and outside of the downwind pathway of the site. This location was of far closer proximity and directly downwind of two other known odor sources with more frequent off-site emissions than

the Bridgeton Landfill. Bridgeton Landfill odor patrols before and after this concern did not detect any odor related to the Bridgeton Landfill at multiple points between this location and the Bridgeton Landfill. This is not believed to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 7, 2015, at 1:30 AM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately seven hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Bob LaBeaume

Message: Odor logged October 7, 2015, at 3:15 AM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately six hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Kathy Baumann

Message: Odor logged October 7, 2015, at 5:30 AM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately six hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Martina Sandheinrich

Message: Odor logged October 7, 2015, at 8:21 AM strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately eleven hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged October 8, 2015, at 6:48 AM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within an hour of receiving this concern. No odor related to the Bridgeton Landfill was observed at this location. As the St. Charles Rock Road is a frequently used pathway for multiple solid waste hauling operations it is possible for this to have originated from such a source. This is not believed to have been a Bridgeton Landfill odor.

Name: Amanda Arseneau

Message: Odor logged October 8, 2015, at 8:05 AM strength of 3

Follow-up: The following concern location is the default selection within the boundaries of the Bridgeton Landfill. This is an invalid concern.

Name: Amanda Arseneau

Message: Odor logged October 8, 2015, at 8:05 AM strength of 3

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately sixteen hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged October 8, 2015, at 2:45 AM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately nine hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Michael Dailey

Message: Odor logged October 8, 2015, at 2:45 AM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately nine hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols

performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Michael Dailey

Message: Odor logged October 7, 2015, at 11:17 PM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately twelve hours after the stated observation time. Bridgeton Landfill staff did not observe any odor related to the Bridgeton Landfill in odor patrols performed the evening before and the morning after the time cited in this odor concern. This is not believed to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 8, 2015, at 8:00 AM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately four hours after the stated observation time. Bridgeton Landfill staff performed an odor patrol shortly after the time stated in this concern, no odor related to the Bridgeton Landfill was observed at multiple points between the Bridgeton Landfill and this concern. Winds were of a southwestern origin placing this concern upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 8, 2015, at 2:39 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol as performed shortly before the time cited in this concern. A garbage odor unassociated with the Bridgeton Landfill was detected at the closest observation point to this concern location. This odor was likely associated with a known nearby odor source and did not originate from the Bridgeton Landfill.

Name: Rhonda Steelman

Message: Odor logged October 8, 2015, at 4:00 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. A garbage odor unassociated with the Bridgeton Landfill was detected during previous odor patrols on this date. This odor was likely associated with a known nearby odor source located to the southwest of this concern location. Winds were of a southwest origin at the time of this concern, placing the Bridgeton Landfill upwind of this location. This was not a Bridgeton Landfill odor.

Name: Rhonda Steelman

Message: Odor logged October 8, 2015, at 6:47 PM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. A garbage odor unassociated with the Bridgeton Landfill was detected during previous odor patrols on this date. This odor was likely associated with a known nearby odor source located to the southwest of this concern location. Winds were of a southwest origin at the time of this concern, placing the Bridgeton Landfill upwind of this location. This was not a Bridgeton Landfill odor.

Name: Rhonda Steelman

Message: Odor logged October 7, 2015, at 12:48 PM strength of 4

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately twenty eight hours after the stated observation time. Bridgeton Landfill staff performed an odor patrol in the hour before the time cited in this concern and did not observe any off-site odor related to the Bridgeton Landfill. The location cited in this concern is of close proximity to two other known odor sources. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged October 8, 2015, at 7:30 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of the time cited in this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged October 8, 2015, at 7:30 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of the time cited in this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Michael Dailey

Message: Odor logged October 8, 2015, at 7:30 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of the time cited in this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Robbin Dailey

Message: Odor logged October 8, 2015, at 6:00 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of receipt of this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Michael Dailey

Message: Odor logged October 8, 2015, at 6:00 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of receipt of this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Koboldt

Message: Odor logged October 8, 2015, at 7:30 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of receipt of this concern. No odor related to the Bridgeton Landfill was observed at observation points along the southern boundary of the Bridgeton Landfill. This concern location is eight miles south of the Bridgeton Landfill and winds were of a southwestern origin, placing this location at a significant upwind distance from the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Tonya Mason

Message: Odor logged October 8, 2015, at 5:49 PM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of receipt of this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Tonya Mason

Message: Odor logged October 8, 2015, at 7:54 PM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of receipt of this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged October 8, 2015, at 8:15 PM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Bridgeton Landfill staff performed an odor patrol within one hour of receipt of this concern. No odor related to the Bridgeton Landfill was observed at observation points in close proximity with this concern location. Winds were of a persistent southwestern origin, placing this location directly downwind of another known odor source with frequent off-site odor. This was not a Bridgeton Landfill odor.

Name: Bob LaBeaume

Message: Odor logged October 9, 2015, at 5:40 AM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately four hours after the stated observation time. The location cited in this concern is to the southwest of the Bridgeton Landfill. Winds have been of a persistent western origin placing this location outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source. This is not believed to have been a Bridgeton Landfill odor.

Name: David Blackwell

Message: Odor logged October 8, 2015, at 8:00 AM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately thirty hours after the stated observation time. Bridgeton Landfill staff performed an odor patrol shortly after the time stated in this concern, no odor related to the Bridgeton Landfill was observed at multiple points between the Bridgeton Landfill and this concern. Winds were of a southwestern origin placing this concern upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged October 10, 2015, at 6:55 PM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time cited in this odor concern winds were of a persistently southern to southwestern origin, placing this location upwind of the Bridgeton Landfill. Odor patrols on this date did not observe any off-site odor related to the Bridgeton Landfill and no technical disruptions with the potential to cause odor occurred. This was not a Bridgeton Landfill odor.

Name: Emily jacobi

Message: Odor logged October 11, 2015, at 8:42 PM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time cited in this odor concern Bridgeton Landfill staff performed an odor patrol. No odor related to the Bridgeton Landfill was observed at multiple points between this concern location and the Bridgeton Landfill. Winds were of a southern origin, placing this location upwind of the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Emily jacobi

Message: Odor logged October 10, 2015, at 6:35 PM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately 26 hours from the stated time of observation. At the time cited in this odor concern winds were of a persistently southern to southwestern origin, placing this location upwind of the Bridgeton Landfill. Odor patrols on this date did not observe any off-site odor related to the Bridgeton Landfill and no technical disruptions with the potential to cause odor occurred. This was not a Bridgeton Landfill odor.

Name: Mea Baker

Message: Odor logged October 11, 2015, at 9:08 AM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately 12 hours after the stated time of observation. At the time cited in this concern winds were of a persistent southern origin placing this location at a significant distance upwind of the Bridgeton Landfill. Odor patrols on this date did not observe any off-site odor related to the Bridgeton Landfill and no technical disruptions with the potential to cause odor occurred. This was not a Bridgeton Landfill odor.

Name: Mea Baker

Message: Odor logged October 11, 2015, at 9:11 PM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately 26 hours from the stated time of observation. At the time cited in this odor concern winds were of a persistently southern to southwestern origin, placing this location at a substantial distance upwind of the Bridgeton Landfill. Odor patrols on this date did not observe any off-site odor related to the Bridgeton Landfill and no technical disruptions with the potential to cause odor occurred. This was not a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged October 12, 2015, at 5:47 AM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southern origin throughout the morning on this date. No odor related to the Bridgeton Landfill was observed off-site during daily odor patrols. This is not believed to have been a Bridgeton Landfill odor and likely originated from another odor source located to the west of the Bridgeton Landfill.

Name: Robbin Dailey

Message: Odor logged October 12, 2015, at 12:15 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent western origin at the time cited in this concern, placing this location upwind of the Bridgeton Landfill. No odor related to the Bridgeton Landfill was observed off-site during odor patrols performed approximately two hours before and two hours after (immediately following receipt of this concern) the time cited in this concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Michael Dailey

Message: Odor logged October 12, 2015, at 12:15 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent western origin at the time cited in this concern, placing this location upwind of the Bridgeton Landfill. No odor related to the Bridgeton Landfill was observed off-site during odor patrols performed approximately two hours before and two hours after (immediately following receipt of this concern) the time cited in this concern. This is not believed to have been a Bridgeton Landfill odor.

Name: Rhonda Steelman

Message: Odor logged October 12, 2015, at 8:18 AM strength of 10

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

Name: Jaclin Klaus

Message: Odor logged October 12, 2015, at 7:00 PM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. The concern was received approximately five hours after the cited observation time. An odor patrol occurred two hours after the cited observation time and did not observe any Bridgeton Landfill related odor off-site. Winds were of a generally western origin at the time of this concern. This location is of a substantial distance west of the Bridgeton Landfill and directly adjacent to another known odor source. This is not believed to have been a Bridgeton Landfill odor.

Name: David Blackwell

Message: Odor logged October 10, 2015, at 9:00 AM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately three days after the stated observation date. An odor patrol was performed by Bridgeton Landfill staff before, during, and after the time cited in this observation. No odor related to the Bridgeton Landfill was observed during this patrol. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 13, 2015, at 8:55 AM strength of 10

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

Name: Bob LaBeaume

Message: Odor logged October 13, 2015, at 12:30 PM strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was received approximately two hours after the cited time of observation. Bridgeton Landfill odor patrols performed before and after the cited observation time did not observe any odor related to the Bridgeton Landfill at multiple points between this location and the Bridgeton Landfill. This is not believed to have been a Bridgeton Landfill odor.

Name: Sharon Bishop

Message: Odor logged October 13, 2015, at 3:57 PM strength of 5

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

Name: BobLabeaume

Message: Odor logged October 13, 2015, at 6:48 PM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds at the time of this concern were of a due west origin, placing this location well outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source with an observed odor during Bridgeton Landfill odor patrols performed on this evening. That was the likely source of this odor and not the Bridgeton Landfill.

Name: NA

Message: Odor logged October 13, 2015, at 8:27 PM strength of 8

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

Name: Emily jacobi

Message: Odor logged October 13, 2015, at 9:19 PM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds at the time of this concern were of a due west origin, placing this location well outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source with an observed odor during Bridgeton Landfill odor patrols performed on this evening. That was the likely source of this odor and not the Bridgeton Landfill.

Name: Mea Baker

Message: Odor logged October 13, 2015, at 6:00 PM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds at the time of this concern were of a due west origin, placing this location well outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source with an observed odor during Bridgeton Landfill odor patrols performed on this evening. That was the likely source of this odor and not the Bridgeton Landfill.

Name: Mea Baker

Message: Odor logged October 12, 2015, at 9:00 AM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern was submitted approximately 36 hours after the stated observation time. Winds were of a western origin at this date and time placing this location well upwind of the Bridgeton landfill. An odor patrol was performed within the hour of this concern and no odor related to the Bridgeton Landfill was observed off-site. This was not a Bridgeton Landfill odor.

Name: Desiree Friedrich

Message: Odor logged October 13, 2015, at 9:51 PM strength of 10

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

Name: Kandice

Message: Odor logged October 13, 2015, at 9:58 PM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern cited a location of significant distance from the Bridgeton Landfill during a period that places the location well upwind of the Bridgeton Landfill. An odor patrol on this evening did not detect Bridgeton Landfill odors off-site. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 13, 2015, at 11:15 PM strength of 10

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

Name: NA

Message: Odor logged October 13, 2015, at 3:48 PM strength of 2

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed minutes before the stated time of this concern. No odor related to the Bridgeton Landfill was observed at multiple points between the Bridgeton Landfill and this location. This was not a Bridgeton Landfill odor.

Name: Katie Roach

Message: Odor logged October 13, 2015, at 8:50 PM strength of 4

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds at the time of this concern were of a due west origin, placing this location well outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source with an observed odor during Bridgeton Landfill odor patrols performed on this evening. That was the likely source of this odor and not the Bridgeton Landfill.

Name: Leslie McQueen

Message: Odor logged October 13, 2015, at 10:38 PM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds at the time of this concern were of a due west origin, placing this location well outside the downwind pathway of the Bridgeton Landfill and directly downwind of another known odor source with an observed odor during Bridgeton Landfill odor patrols performed on this evening. That was the likely source of this odor and not the Bridgeton Landfill.

Name: Rose Eichholz

Message: Odor logged October 14, 2015, at 6:41 AM strength of 8

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time cited in this concern winds were of a northern origin placing this location outside the downwind corridor of the Bridgeton Landfill. An odor patrol was performed approximately one hour after receipt of this concern, no odor related to the Bridgeton Landfill was observed at multiple points between this concern location and the Bridgeton Landfill. This is not believed to have been a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged October 14, 2015, at 7:00 AM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. At the time cited in this concern winds were of a northern origin placing this location outside the downwind corridor of the Bridgeton Landfill. An odor patrol was performed approximately one hour after receipt of this concern, no odor related to the Bridgeton Landfill was observed at

multiple points between this concern location and the Bridgeton Landfill. This is not believed to have been a Bridgeton Landfill odor.

Name: Marcy

Message: Odor logged October 14, 2015, at 4:20 PM strength of 9

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. An odor patrol was performed within the hour cited in this concern despite submittal of this concern occurring approximately six hours later. The patrol observed no odor related to the Bridgeton Landfill off-site. This was not a Bridgeton Landfill odor.

Name: Marcy

Message: Odor logged October 14, 2015, at 10:03 PM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southwestern origin on this evening, placing this location well upwind of the Bridgeton Landfill. An odor patrol in close timing with this concern observed a non-Bridgeton Landfill odor at a location downwind of another known odor source located to the west of this concern's location. This was the likely source and not the Bridgeton Landfill.

Name: Lindsay Mercer

Message: Odor logged October 14, 2015, at 8:08 PM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southwestern origin on this evening, placing this location well upwind of the Bridgeton Landfill. An odor patrol in close timing with this concern observed a non-Bridgeton Landfill odor at a location downwind of another known odor source located to the west of this concern's location. This was the likely source, not the Bridgeton Landfill.

Name: NA

Message: Odor logged October 14, 2015, at 10:10 PM strength of 10

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

Name: Ashlee

Message: Odor logged October 14, 2015, at 10:22 PM strength of 5

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southwestern origin on this evening, placing this location well upwind of

the Bridgeton Landfill. An odor patrol in close timing with this concern observed a non-Bridgeton Landfill odor at a location downwind of another known odor source located to the west of this concern's location. This was the likely source, not the Bridgeton Landfill.

Name: Meghan Cousino

Message: Odor logged October 14, 2015, at 10:49 PM strength of 7

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southwestern origin on this evening, placing this location well upwind of the Bridgeton Landfill. An odor patrol in close timing with this concern observed a non-Bridgeton Landfill odor at a location downwind of another known odor source located to the west of this concern's location. This was the likely source, not the Bridgeton Landfill.

Name: Christina Slaughter

Message: Odor logged October 14, 2015, at 9:10 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southwestern origin on this evening, placing this location well upwind of the Bridgeton Landfill. An odor patrol in close timing with this concern observed a non-Bridgeton Landfill odor at a location downwind of another known odor source located to the west of this concern's location. This was the likely source, not the Bridgeton Landfill.

Name: NA

Message: Odor logged October 14, 2015, at 10:00 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southwestern origin on this evening, placing this location well upwind of the Bridgeton Landfill. An odor patrol in close timing with this concern observed a non-Bridgeton Landfill odor at a location downwind of another known odor source located to the west of this concern's location. This was the likely source, not the Bridgeton Landfill.

Name: NA

Message: Odor logged October 15, 2015, at 12:40 AM strength of 10

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

Name: Michelle Stacy

Message: Odor logged October 14, 2015, at 8:15 PM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were of a persistent southwestern origin on this evening, placing this location well upwind of the Bridgeton Landfill. An odor patrol in close timing with this concern observed a non-Bridgeton Landfill odor at a location downwind of another known odor source located to the west of this concern's location. This was the likely source, not the Bridgeton Landfill.

Name: philip

Message: Odor logged October 15, 2015, at 6:37 AM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. This concern location is of a substantial distance to the southwest of the Bridgeton Landfill. Winds were still at the time of this concern. An odor patrol performed the morning of this concern observed a garbage/trash odor at multiple locations unrelated to the Bridgeton Landfill. No off-site odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 15, 2015, at 7:01 AM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were still at the time of this concern. An odor patrol performed the morning of this concern observed a garbage/trash odor at multiple locations unrelated to the Bridgeton Landfill, including at an observation point in close proximity to this concern location. No off-site odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Kathy Bell

Message: Odor logged October 15, 2015, at 6:52 AM strength of 6

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were still at the time of this concern. An odor patrol performed the morning of this concern observed a garbage/trash odor at multiple locations unrelated to the Bridgeton Landfill, including at an observation point in close proximity to this concern location. No off-site odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Denise Heinle

Message: Odor logged October 15, 2015, at 6:53 AM strength of 10

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were still at the time of this concern. An odor patrol performed the morning of this concern observed a garbage/trash odor at multiple locations unrelated to the Bridgeton Landfill,

including at an observation point in close proximity to this concern location. No off-site odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Glenn Ferrer

Message: Odor logged October 15, 2015, at 6:45 AM strength of 2

Follow-up: The following concern has been investigated by Bridgeton Landfill staff. Winds were still at the time of this concern. An odor patrol performed the morning of this concern observed a garbage/trash odor at multiple locations unrelated to the Bridgeton Landfill. This location is of a significant distance from the Bridgeton Landfill. No off-site odor related to the Bridgeton Landfill was observed. This was not a Bridgeton Landfill odor.

Name: Becky Elledge

Message: Odor logged October 15, 2015, at 8:12 AM strength of 8

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

Name: Lauren Brown

Message: Odor logged October 15, 2015, at 7:30 AM strength of 7

Follow-up: On the date of this concern winds were of a persistent southern origin placing the cluster of concerns received predominantly of an upwind location to the Bridgeton Landfill and downwind of other known odor sources. A garbage odor was noticed at multiple points throughout the area likely originating from one potential source. These were not Bridgeton Landfill odors. (encompasses all odor concerns for the October 15, 2015 date).

Name: Renee Thompson

Message: Odor logged October 16, 2015, at 9:06 AM strength of 7

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

Name: NA

Message: Odor logged October 17, 2015, at 8:00 AM strength of 8

Follow-up: On October 18th 2015 a total of 15 concerns were received with all but one dated on October 17th or 18th (the other on the 15th). No odor originating from the Bridgeton Landfill was observed during these dates during multiple odor patrols. As a large number of these concerns fail to list a correct location and/or have significant time lapse in stated observation to

submittal time these concerns are of dubious authenticity and are not the result of a Bridgeton Landfill odor.

Name: Amanda Arseneau

Message: Odor logged October 19, 2015, at 4:10 PM strength of 2

Follow-up: The following concern is immediately adjacent to another known odor source during a period of southern winds placing this upwind of Bridgeton Landfill and downwind from that other source. This was not a Bridgeton Landfill odor.

Name: Tonya Mason

Message: Odor logged October 20, 2015, at 2:20 AM strength of 10

Follow-up: The following concern is immediately adjacent to another known odor source during a period of southern winds placing this upwind of Bridgeton Landfill and downwind from that other source. This was not a Bridgeton Landfill odor.

Name: Debi Disser

Message: Odor logged October 20, 2015, at 3:30 AM strength of 7

Follow-up: No odor related to the Bridgeton Landfill was observed during multiple odor patrols before and after this date. No technical disturbances with the potential to cause odor occurred during this time period. Odor from other non-Bridgeton Landfill sources resulted in concern submittals at other nearby locations. This is not believed to have been a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 20, 2015, at 6:15 AM strength of 4

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

Name: Jennifer Woodman

Message: Odor logged October 19, 2015, at 8:30 PM strength of 9

Follow-up: The following concern is of a significant distance from the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Natalie Brenton

Message: Odor logged October 20, 2015, at 9:32 AM strength of 10

Follow-up: The following concern is directly adjacent to another known odor source with frequent observations form the other odor source at this location. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 20, 2015, at 9:40 AM strength of 6

Follow-up: The following concern is immediately adjacent to another known odor source during a period of southern winds placing this upwind of Bridgeton Landfill and downwind from that other source. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 20, 2015, at 8:00 AM strength of 10

Follow-up: The following concern is of significant distance from the Bridgeton Landfill. Odor patrols performed within the hour of this concern did not notice any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: Tina Layne

Message: Odor logged October 19, 2015, at 12:31 AM strength of 7

Follow-up: The following concern is of significant distance from the Bridgeton Landfill. Odor patrols performed within close chronological proximity of this concern did not notice any odor related to the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 20, 2015, at 2:00 PM strength of 6

Follow-up: The following concern is of significant distance from the Bridgeton Landfill during a period of generally southern winds. This was not a Bridgeton Landfill odor.

Name: Amanda Arseneau

Message: Odor logged October 20, 2015, at 5:08 PM strength of 3

Follow-up: The following concern is of significant distance from the Bridgeton Landfill during a period of generally southern winds. This was not a Bridgeton Landfill odor.

Name: Tina Layne

Message: Odor logged October 20, 2015, at 11:17 PM strength of 3

Follow-up: The following concern is of significant distance from the Bridgeton Landfill. This was not a Bridgeton Landfill odor.

Name: NA

Message: Odor logged October 20, 2015, at 4:57 PM strength of 7

Follow-up: The following concern is immediately adjacent to another odor source from the Bridgeton Landfill during a period of generally southern winds, placing it upwind of the Bridgeton Landfill and downwind from that other source. This was not a Bridgeton Landfill odor.

Name: Jason Reynolds

Message: Odor logged October 20, 2015, at 6:22 AM strength of 8

Follow-up: The following concern is immediately adjacent to another odor source from the Bridgeton Landfill during a period of generally southern winds, placing it upwind of the Bridgeton Landfill and downwind from that other source. This was not a Bridgeton Landfill odor.

Name: Jason Reynolds

Message: Odor logged October 21, 2015, at 8:00 AM strength of 8

Follow-up: On October 21st, 2015 multiple concerns were submitted clearly related to a non-Bridgeton Landfill odor. Locations were consistently upwind of Bridgeton Landfill or of significantly remote distance. These were not the result of any Bridgeton Landfill odors.

Name: NA

Message: Odor logged October 22, 2015, at 8:00 AM strength of 10

Follow-up: Over the last week of October a multitude of concerns either lacking location data, listing a location of significant distance from the Bridgeton Landfill, or a location directly upwind of the Bridgeton Landfill at the time of the submittal were received. Investigation of these concerns indicates that these were likely the result of community action group efforts to drive odor concerns and either not related to true odor observations or were other sources of odor being misappropriated to the Bridgeton Landfill.

ATTACHMENT H

LIQUID CHARACTERIZATION DATA AND DISCHARGE LOG

Bridgeton Landfill - Leachate PreTreatment Plant

October 2015

Liquid Characterization Data

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

Hauled Disposal to MSD – Bissell Point

Date	Waste	Source	Transporter	Quantity
10/1/2015	LPTP Activated Sludge/ Permeate	Tank 1 (T1)	MBI	0
10/2/2015				0
10/3/2015				210,000
10/4/2015				187,500
10/5/2015				142,500
10/6/2015				97,500
10/7/2015				97,500
10/8/2015				97,500
10/9/2015				0
10/10/2015				0
10/11/2015				0
10/12/2015				135,000
10/13/2015				142,500
10/14/2015				142,500
10/15/2015				142,500
10/16/2015				0
10/17/2015				0
10/18/2015				0
10/19/2015				0
10/20/2015				0
10/21/2015				0
10/22/2015				0
10/23/2015				0
10/24/2015				0
10/25/2015				0
10/26/2015				0
10/27/2015				0
10/28/2015				0
10/29/2015				0
10/30/2015				0
10/31/2015				0
			Total=	**1,395,000**

Direct Discharge to MSD

Date	Waste	Source	Quantity (gal)
10/1/2015	LPTP Permeate	Through Tank AST 97k (MSD Sampling Point 013)	259,517
10/2/2015			183,961
10/3/2015			142,965
10/4/2015			139,365
10/5/2015			98,609
10/6/2015			130,087
10/7/2015			160,822
10/8/2015			245,052
10/9/2015			266,709
10/10/2015			275,678
10/11/2015			284,804
10/12/2015			268,696
10/13/2015			276,370
10/14/2015			264,557
10/15/2015			251,848
10/16/2015			245,257
10/17/2015			227,778
10/18/2015			200,746
10/19/2015			255,000
10/20/2015			228,207
10/21/2015			95,196
10/22/2015			268,343
10/23/2015			271,374
10/24/2015			129,880
10/25/2015			104,739
10/26/2015			245,980
10/27/2015			210,574
10/28/2015			124,513
10/29/2015			148,335
10/30/2015			222,043
10/31/2015			233,685
		Total =	**6,460,689**