

Bridgeton Landfill, LLC

Monthly Data Submittals

August 2020

Required by Section IX.f of Final Consent Judgement, Case No. 13SL-CC01088-01
Effective June 29, 2018

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Provided Separately:

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

September 21, 2020

Commentary on Data

September 21, 2020

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

Gas Volume

- As presented in Attachment B-1, the gas collection volumetric rate for this month averaged a total site flow of 1,087 SCFM, as normalized per the MDNR weekly flow and TRS sampling results.
- On October 8, 2019 all landfill gas from the North Quarry was directed to the FL-120 Flare (combined with the South Quarry Landfill Gas). Therefore, as of this date, there was no flare testing nor data from the Auxiliary Flare. For the August 2020 Monthly Report, this affected the Appendix A – Flare Data and Flare Graphs.

Gas Quality

- Attachments D and E present the monthly data related to gas quality as measured at the respective wellheads.
- Attachment E-1 presents vertical wells which exhibited oxygen levels at or greater than 5% during one (1) or more weekly monitoring events during this reporting period. These consisted of 8 GEW wells that are experiencing low or restricted flows, and one (1) leachate collection sump (LCS) that exhibit low gas flow due to the cooling loops that are installed in these wells. By the end of the month, none of the GEW wells and one LCS still exhibited oxygen levels at or greater than 5% at the wellhead. All of these wells are low-flow/vacuum sensitive wells with valves that are only slightly open. On-going tuning, maintenance, and pump operation are being performed to manage the oxygen content.
- Attachment E-2 presents gas temperatures as measured at the wellheads. Two (2) vertical wells (excluding GIW wells) increased by 30°F or more and three (3) decreased by 30°F or more during this reporting period. All wells that exhibited changes greater than 30°F are within the historical gas temperature norms for these wells or within the range of temperatures of nearby vertical wells.
- All gas wells in the North Quarry exhibited a maximum wellhead temperature less than 145°F during this reporting period, with the exception of GEW-054 (145.9°F). Carbon monoxide (CO) results were non-detect (ND) for North Quarry wells, with the exception of GEW-053 (56 ppm), consistent with past events.
- Site personnel are performing a comprehensive wellfield investigation to optimize the landfill gas collection and control system (GCCS). Wells that have previously been decommissioned due to excessive moisture and/or dangerous conditions have been reviewed and monitored to determine if the wells have obstructions that would prohibit pump installation and would therefore preclude leachate and landfill gas

collection. Wells with no identified downhole integrity issues and which are no longer exhibiting excessive moisture and/or dangerous conditions have been brought back online. Wells with no identified downhole integrity issues but which still exhibit excessive moisture and/or dangerous conditions will remain decommissioned until conditions at the location improve. Wells with poor gas quality are planned to be decommissioned in the latter half of 2020. This investigation will continue through the Third Quarter 2020. Wellfield expansion and abandonment activities will be reported in the quarterly Landfill Gas Corrective Action Update.

Settlement

- The South Quarry exhibited monthly maximum settlement up to 0.29 feet over 32 days during this reporting period (see Attachment E).

Bird Monitoring and Mitigation

- Bridgeton Landfill conducted bird monitoring during this reporting period in accordance with the Approved Bird Hazard Monitoring and Mitigation Plan, last updated in December 2016. Birds noted on-site are dispersed using pyrotechnics, a cap gun, vehicles, or on foot. Logs of bird population observations are provided to the Airport and the USDA APHIS Wildlife Services on a weekly basis.

Natural Gas Usage

- Natural gas was not used as a supplemental fuel for the destruction of landfill gas in the previous month.

ATTACHMENT A

DAILY FLARE MONITORING DATA

ATTACHMENT A-1

FLOW DATA TABLE

Daily Flare Monitoring Data - Bridgeton Landfill
August 2020

Date	Average Device Flow* (scfm)			Total Avg. Flow** (scfm)
	Utility Flare (FL-100)	Utility Flare (FL-120)	Utility Flare (FL-140)	
8/1/2020	34	0	1,044	1,079
8/2/2020	28	0	1,078	1,106
8/3/2020	60	0	1,035	1,095
8/4/2020	8	0	1,088	1,096
8/5/2020	53	0	1,059	1,112
8/6/2020	55	0	1,071	1,125
8/7/2020	58	0	1,053	1,111
8/8/2020	62	0	1,024	1,086
8/9/2020	860	0	0	860
8/10/2020	1,076	0	0	1,076
8/11/2020	1,069	0	0	1,069
8/12/2020	1,064	0	0	1,065
8/13/2020	1,059	0	0	1,059
8/14/2020	669	409	0	1,078
8/15/2020	1,068	0	0	1,068
8/16/2020	1,067	0	0	1,067
8/17/2020	1,087	0	0	1,087
8/18/2020	1,075	0	0	1,075
8/19/2020	680	400	0	1,080
8/20/2020	0	1,089	0	1,089
8/21/2020	0	1,098	0	1,098
8/22/2020	0	1,090	0	1,090
8/23/2020	0	1,086	0	1,086
8/24/2020	0	1,095	0	1,095
8/25/2020	108	968	0	1,077
8/26/2020	4	1,101	0	1,105
8/27/2020	1	1,127	0	1,128
8/28/2020	0	1,168	0	1,168
8/29/2020	0	1,136	0	1,136
8/30/2020	0	1,145	0	1,145
8/31/2020	0	1,128	0	1,128
AVERAGE	375	430	282	1,087

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

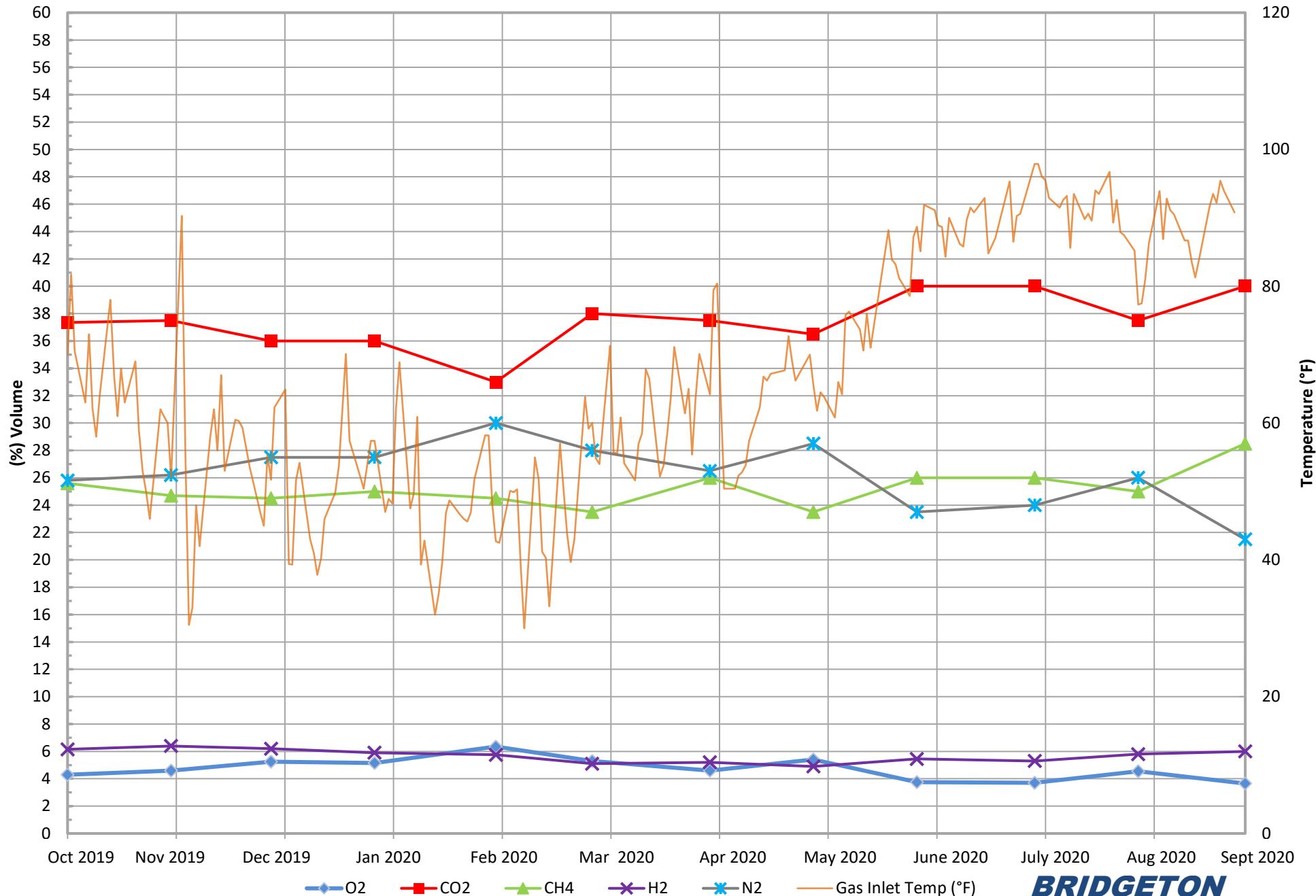
*** On 3/18/2016, the Bridgeton Landfill began separating the North Quarry gas to the Auxiliary Flare.

On 10/8/19, the Bridgeton Landfill combined the North Quarry gas and the South Quarry Gas to the Main Flare

ATTACHMENT A-2

FLOW DATA GRAPHS

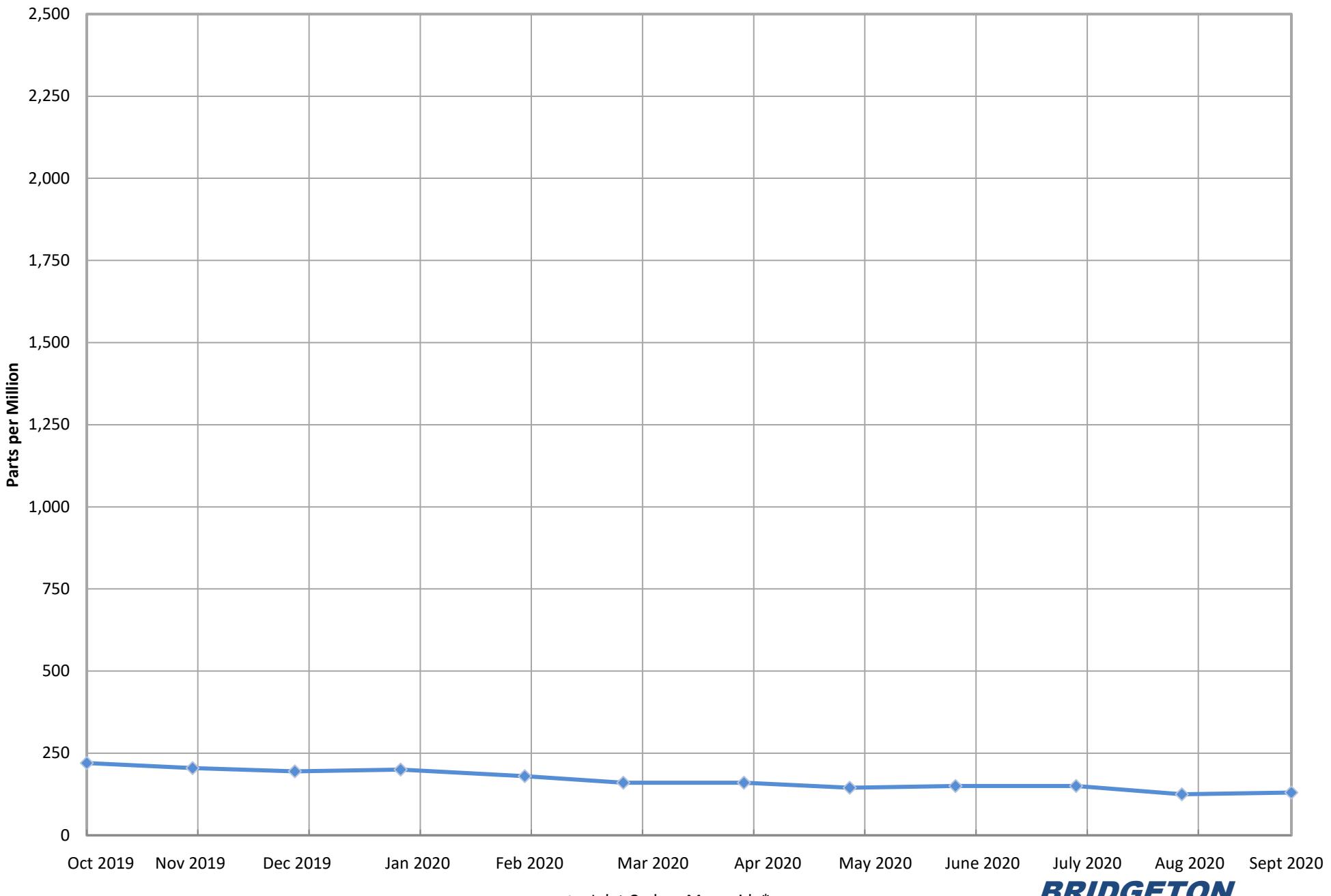
Combined Inlet Gas and Temperature*



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

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LANDFILL**

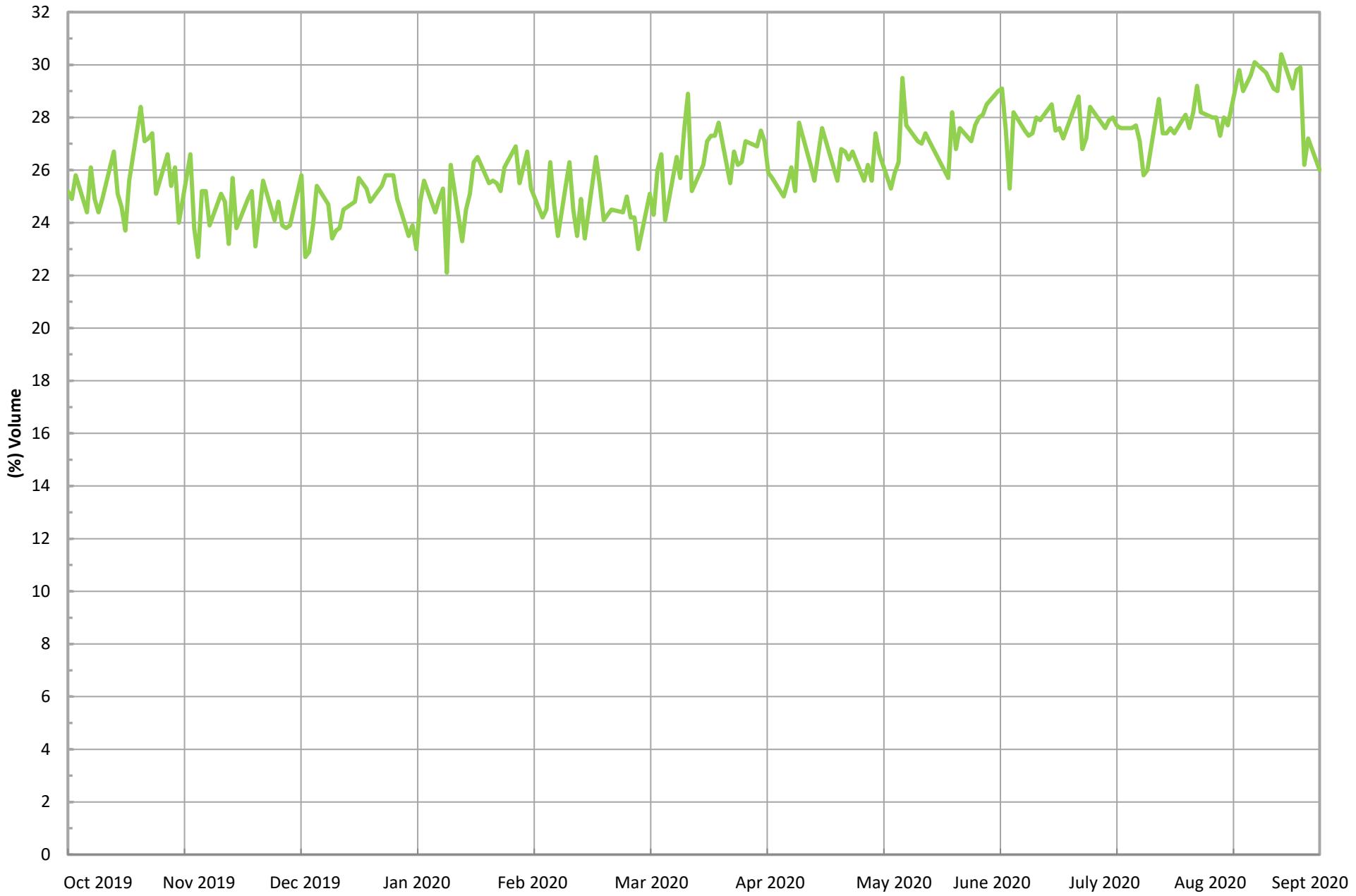
Combined Inlet Carbon Monoxide*



*Data collected from Laboratory Reports.

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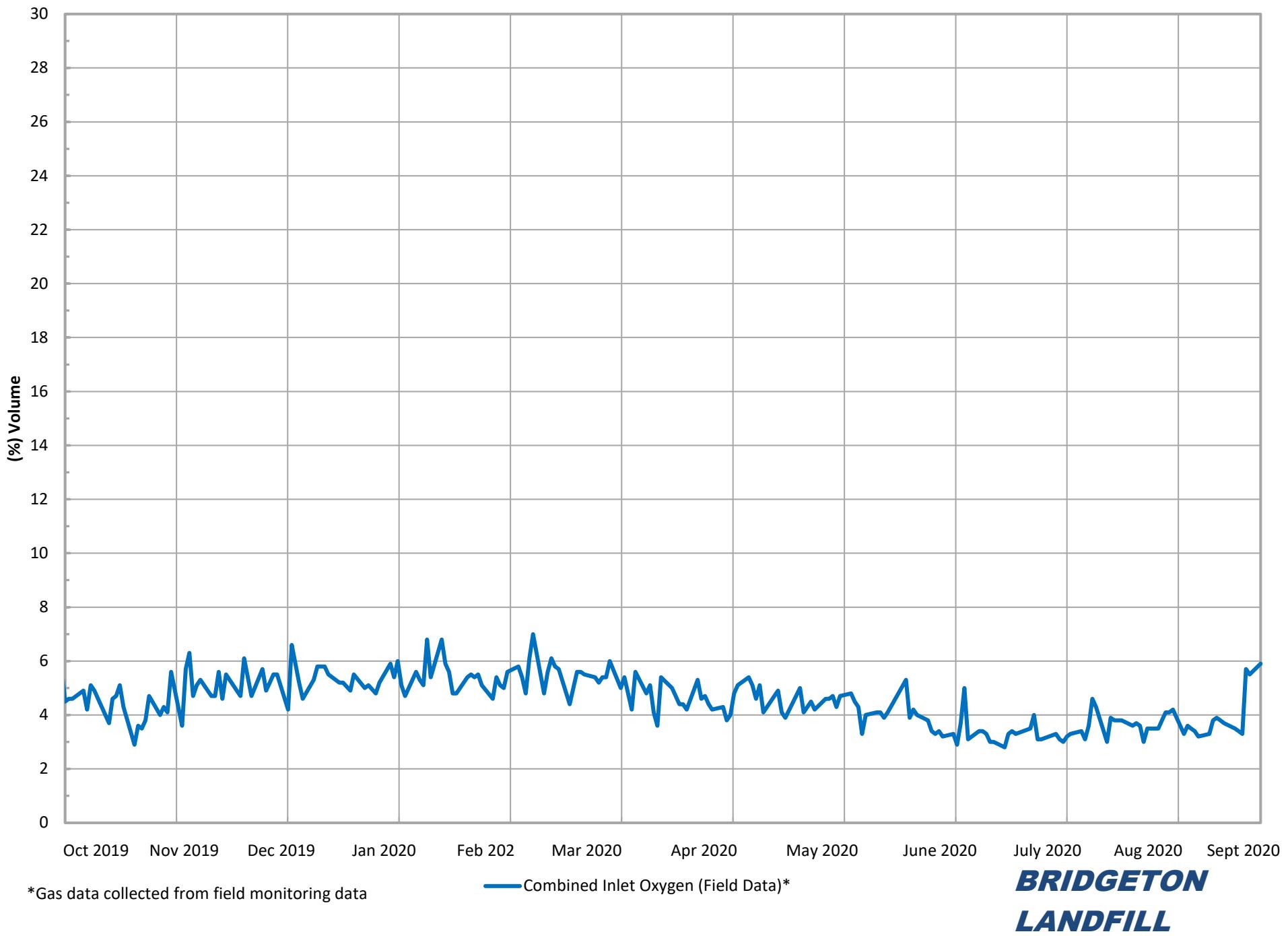
Combined Inlet Methane (Field Data)*



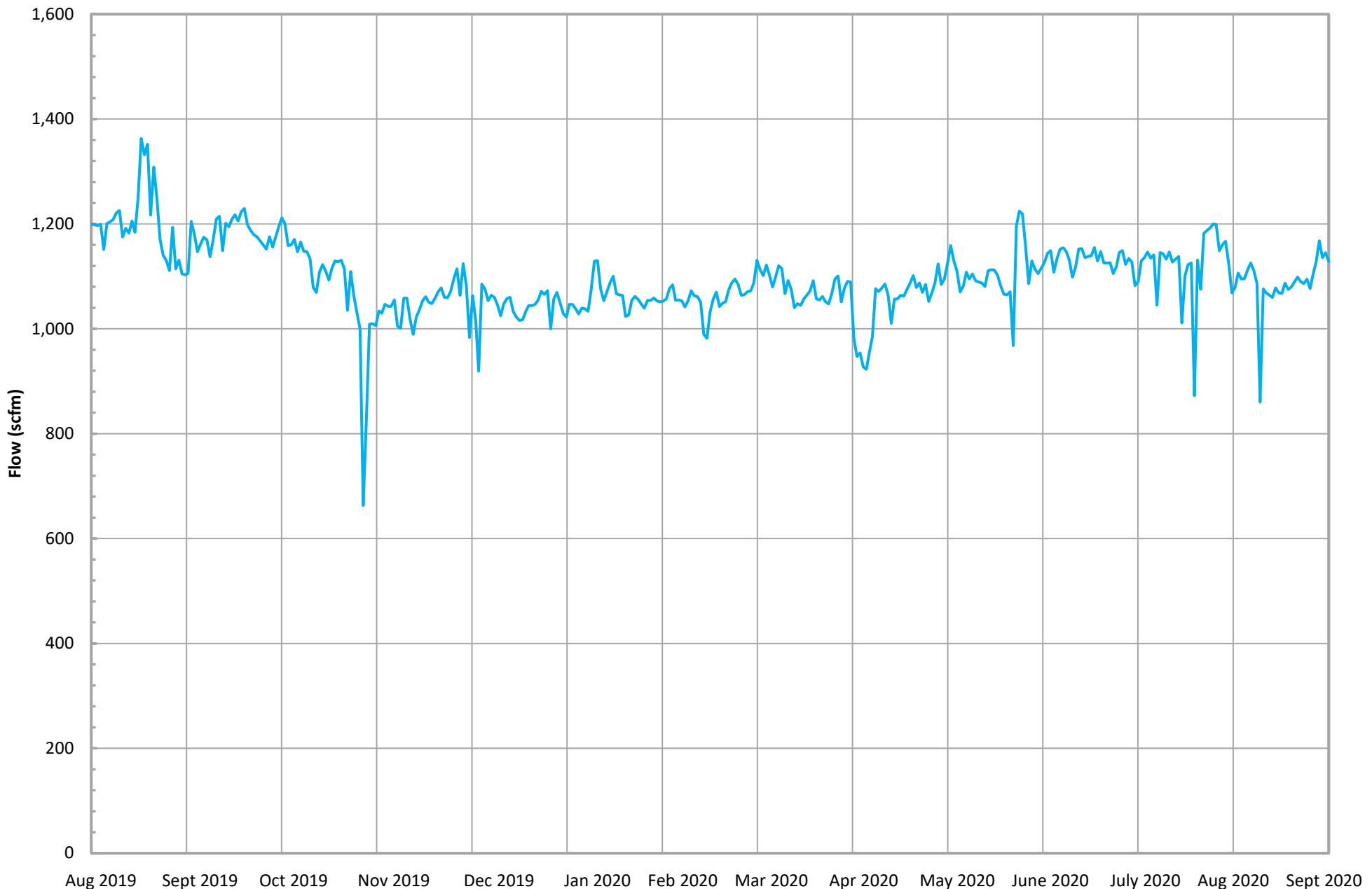
*Gas data collected from field monitoring data.

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Combined Inlet Oxygen (Field Data)*



Total Combined Flow (scfm)*



*Combined flow is based on tabulated flow data collected daily from FL-100, FL-120, FL-140, and the Auxiliary Candlestick Flare. On 10/8/19, the Auxiliary Candlestick Flare was redirected to the Main Flare.

— Total Combined Flow (scfm)*

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ATTACHMENT B

WELL CONDITION/STATUS REPORT

August 2020

ID	Well Condition	Comments
GEW-2	Operational	
GEW-2S	Operational	
GEW-3	Operational	
GEW-4	Operational	
GEW-5	Operational	
GEW-6	Operational	
GEW-7	Operational	
GEW-8	Operational	
GEW-9	Operational	
GEW-10	Operational	
GEW-13A	Operational	
GEW-15	Operational	
GEW-16R	Operational	
GEW-18B	Operational	
GEW-19A	Operational	
GEW-39	Operational	
GEW-40	Operational	
GEW-41R	Operational	
GEW-42R	Operational	
GEW-43R	Operational	
GEW-44	Operational	
GEW-45R	Operational	
GEW-46R	Operational	
GEW-47R	Operational	
GEW-48	Operational	
GEW-49	Operational	
GEW-50	Operational	
GEW-51	Operational	
GEW-52	Operational	
GEW-53	Operational	
GEW-54	Operational	
GEW-55	Operational	
GEW-56R	Operational	
GEW-57B	Operational	
GEW-58A	Operational	
GEW-59R	Operational	
GEW-67A	Operational	
GEW-68A	Operational	
GEW-78R	Operational	
GEW-82R	Operational	
GEW-86	Operational	
GEW-87	Operational	
GEW-88	Operational	
GEW-90	Operational	

August 2020		
ID	Well Condition	Comments
GEW-91	Operational	
GEW-100	Operational	
GEW-101	Operational	
GEW-102	Operational	
GEW-104	Operational	
GEW-105	Operational	
GEW-106	Operational	
GEW-107	Operational	
GEW-108	Operational	
GEW-109	Operational	
GEW-110	Operational	
GEW-113	Operational	
GEW-116	Operational	
GEW-117	Operational	
GEW-118	Operational	
GEW-120	Operational	
GEW-121	Operational	
GEW-122	Operational	
GEW-123	Operational	
GEW-124	Operational	
GEW-125	Operational	
GEW-126	Operational	
GEW-127	Operational	
GEW-128	Non-Operational	Decommissioned
GEW-129	Operational	
GEW-130	Operational	
GEW-131	Operational	
GEW-132	Operational	
GEW-133	Operational	
GEW-134	Operational	
GEW-135	Operational	
GEW-137	Operational	
GEW-138	Non-Operational	Decommissioned
GEW-139	Operational	
GEW-140	Operational	
GEW-144	Operational	
GEW-145	Operational	
GEW-147	Operational	
GEW-148	Operational	
GEW-149	Operational	
GEW-150	Operational	
GEW-151	Operational	
GEW-152	Operational	
GEW-153	Operational	

August 2020

ID	Well Condition	Comments
GEW-154	Non-Operational	Decommissioned
GEW-155	Non-Operational	Decommissioned
GEW-156	Operational	
GEW-157	Operational	
GEW-158	Operational	
GEW-159	Non-Operational	Decommissioned
GEW-160	Operational	
GEW-161	Operational	
GEW-162	Operational	
GEW-163	Operational	
GEW-164	Operational	
GEW-165	Operational	
GEW-166	Operational	
GEW-167	Operational	
GEW-168	Operational	
GEW-169	Operational	
GEW-170	Operational	
GEW-171	Operational	
GEW-172	Operational	
GEW-173	Non-Operational	Decommissioned
GEW-174	Operational	
GEW-175	Operational	
GEW-176	Non-Operational	Decommissioned
GEW-177	Operational	
GEW-178	Operational	
GEW-179	Operational	
GEW-180	Operational	
GEW-181	Operational	
GEW-182	Non-Operational	Decommissioned
GEW-184	Non-Operational	Decommissioned
GEW-185	Operational	
GEW-186	Operational	
GEW-187	Operational	
GEW-188	Non-Operational	Decommissioned
GEW-217	Operational	
GEW-218	Operational	
GEW-219	Non-Operational	Decommissioned
GEW-220	Operational	
GEW-221	Operational	
GEW-222	Operational	
GEW-223	Operational	
GEW-224	Operational	
GEW-225	Operational	
GEW-226	Operational	

August 2020		
ID	Well Condition	Comments
GEW-227	Operational	
GEW-228	Operational	
GEW-229	Operational	
GEW-230	Operational	
GEW-231	Non-Operational	Decommissioned
GEW-232	Operational	
GEW-233	Operational	
GEW-234	Operational	
GEW-235	Operational	
GEW-236	Operational	
GEW-237	Operational	
GEW-238	Operational	
GEW-239	Operational	
GEW-240	Operational	
GIW-1	Operational	
GIW-2	Operational	
GIW-3	Operational	
GIW-4	Operational	
GIW-5	Operational	
GIW-6	Operational	
GIW-7	Operational	
GIW-8	Operational	
GIW-9	Operational	
GIW-10	Operational	
GIW-11	Operational	
GIW-12	Operational	
GIW-13	Operational	

ATTACHMENT C

LABORATORY DATA

ATTACHMENT C-1

LABORATORY ANALYSES 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	4/7/2020	53	43	ND	3.9	ND	ND	
GEW-002	5/12/2020	51	42	ND	6.4	ND	ND	
GEW-002	6/10/2020	44	34	4.0	17	ND	ND	
GEW-002	6/24/2020	52	40	ND	7.3	ND	ND	See Note 3
GEW-002	7/8/2020	53	43	ND	4.0	ND	ND	
GEW-002	8/12/2020	53	43	ND	3.7	ND	ND	
GEW-02S	4/7/2020	54	34	2.3	9.6	ND	ND	
GEW-02S	4/28/2020	54	34	2.3	9.1	ND	ND	
GEW-02S	5/12/2020	57	35	1.7	6.6	ND	ND	
GEW-02S	5/27/2020	54	34	2.6	9.4	ND	ND	See Note 4
GEW-02S	6/10/2020	59	37	ND	3.5	ND	ND	
GEW-02S	7/8/2020	58	36	ND	4.5	ND	ND	
GEW-02S	8/12/2020	55	36	1.6	7.1	ND	ND	See Note 3
GEW-02S	8/24/2020	56	36	ND	6.6	ND	ND	
GEW-003	4/8/2020	51	42	ND	6.2	ND	ND	
GEW-003	5/12/2020	51	42	ND	7.1	ND	ND	
GEW-003	6/10/2020	50	42	ND	7.5	ND	ND	
GEW-003	7/8/2020	46	42	ND	11	ND	ND	
GEW-003	8/12/2020	51	45	ND	4.0	ND	ND	
GEW-004	4/7/2020	51	41	ND	6.8	ND	ND	
GEW-004	5/12/2020	49	40	ND	9.5	ND	ND	
GEW-004	6/10/2020	49	41	ND	9.3	ND	ND	
GEW-004	7/8/2020	50	41	ND	8.0	ND	ND	
GEW-004	8/12/2020	50	41	ND	7.7	ND	ND	
GEW-005	4/8/2020	52	38	ND	9.1	ND	ND	
GEW-005	5/12/2020	49	38	ND	12	ND	ND	
GEW-005	6/10/2020	44	36	ND	19	ND	ND	
GEW-005	7/8/2020	52	40	ND	7.0	ND	ND	
GEW-005	8/12/2020	52	39	ND	8.9	ND	ND	
GEW-006	4/8/2020	54	39	ND	6.8	ND	ND	
GEW-006	5/12/2020	54	39	ND	5.8	ND	ND	
GEW-006	6/10/2020	53	39	ND	7.4	ND	ND	
GEW-006	7/8/2020	54	40	ND	6.0	ND	ND	
GEW-006	8/12/2020	54	40	ND	5.4	ND	ND	
GEW-007	4/6/2020	52	40	ND	6.9	ND	ND	
GEW-007	5/11/2020	53	42	ND	4.4	ND	ND	
GEW-007	6/8/2020	52	41	ND	6.1	ND	ND	
GEW-007	7/7/2020	53	42	ND	3.8	ND	ND	
GEW-007	8/10/2020	53	42	ND	4.1	ND	ND	
GEW-008	4/6/2020	51	43	ND	3.6	1.2	ND	
GEW-008	5/11/2020	51	44	ND	3.2	0.96	ND	
GEW-008	6/8/2020	49	43	ND	5.3	1.0	ND	
GEW-008	7/8/2020	50	44	ND	3.4	1.0	ND	
GEW-008	8/10/2020	50	44	ND	3.6	1.3	ND	
GEW-009	4/7/2020	49	42	ND	7.6	0.62	ND	
GEW-009	5/11/2020	49	43	ND	6.3	0.60	ND	
GEW-009	6/8/2020	48	42	ND	7.6	0.53	ND	
GEW-009	7/8/2020	48	43	ND	7.0	0.44	ND	
GEW-009	8/10/2020	49	44	ND	6.3	0.52	ND	
GEW-040	4/7/2020	51	33	ND	14	ND	ND	
GEW-040	5/11/2020	54	35	ND	10	ND	ND	
GEW-040	6/8/2020	51	34	ND	14	ND	ND	
GEW-040	7/8/2020	50	35	ND	14	ND	ND	
GEW-040	8/11/2020	51	35	ND	13	ND	ND	
GEW-041R	4/7/2020	51	35	ND	13	ND	ND	
GEW-041R	5/11/2020	52	36	ND	11	ND	ND	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-041R	6/8/2020	50	35	1.7	12	ND	ND	
GEW-041R	6/24/2020	50	36	ND	12	ND	ND	
GEW-041R	7/8/2020	49	37	ND	14	ND	ND	
GEW-041R	8/11/2020	51	37	ND	11	ND	ND	
GEW-042R	4/7/2020	53	39	ND	7.1	ND	ND	
GEW-042R	5/11/2020	53	40	ND	6.9	ND	ND	
GEW-042R	6/8/2020	51	38	1.9	9.4	ND	ND	
GEW-042R	6/24/2020	53	40	ND	6.0	ND	ND	
GEW-042R	7/8/2020	52	40	ND	6.5	ND	ND	
GEW-042R	8/11/2020	54	40	ND	5.6	ND	ND	
GEW-043R	4/7/2020	51	41	ND	6.8	0.13	ND	
GEW-043R	5/11/2020	52	41	ND	6.0	0.098	ND	
GEW-043R	6/9/2020	52	42	ND	5.1	0.11	ND	
GEW-043R	7/8/2020	52	42	ND	4.8	0.089	ND	
GEW-043R	8/11/2020	53	43	ND	3.7	0.11	ND	
GEW-044	4/7/2020	50	37	ND	12	ND	ND	
GEW-044	5/12/2020	41	34	ND	24	ND	ND	
GEW-044	6/9/2020	52	38	ND	9.2	ND	ND	
GEW-044	7/8/2020	48	37	ND	14	ND	ND	
GEW-044	8/12/2020	52	37	ND	10	ND	ND	
GEW-045R	4/7/2020	52	39	ND	7.9	ND	ND	
GEW-045R	5/12/2020	51	39	ND	9.1	ND	ND	
GEW-045R	6/10/2020	50	38	ND	9.9	ND	ND	
GEW-045R	7/8/2020	52	40	ND	7.5	ND	ND	
GEW-045R	8/12/2020	53	40	ND	5.8	ND	ND	
GEW-046R	4/7/2020	49	38	ND	11	ND	ND	
GEW-046R	5/12/2020	47	38	ND	14	ND	ND	
GEW-046R	6/10/2020	44	36	ND	19	ND	ND	
GEW-046R	7/8/2020	49	39	ND	11	ND	ND	
GEW-046R	8/12/2020	51	44	ND	3.8	ND	ND	
GEW-047R	4/8/2020	48	40	ND	12	ND	ND	
GEW-047R	5/12/2020	48	40	ND	11	ND	ND	
GEW-047R	6/10/2020	46	39	ND	14	ND	ND	
GEW-047R	7/8/2020	49	42	ND	7.4	ND	ND	
GEW-047R	8/12/2020	51	42	ND	6.8	ND	ND	
GEW-048	4/8/2020	52	40	ND	7.0	ND	ND	
GEW-048	5/12/2020	52	40	ND	6.6	ND	ND	
GEW-048	6/10/2020	51	40	ND	7.7	ND	ND	
GEW-048	7/8/2020	51	40	ND	7.7	ND	ND	
GEW-048	8/12/2020	52	40	ND	7.1	ND	ND	
GEW-049	4/7/2020	52	42	ND	5.5	ND	ND	
GEW-049	5/12/2020	45	37	ND	16	ND	ND	
GEW-049	6/9/2020	47	38	3.1	12	ND	ND	
GEW-049	6/24/2020	47	39	ND	14	ND	ND	See Note 3
GEW-049	7/8/2020	48	39	ND	12	ND	ND	
GEW-049	8/12/2020	48	40	ND	12	ND	ND	
GEW-050	4/7/2020	52	38	ND	8.6	ND	ND	
GEW-050	5/11/2020	52	39	ND	9.2	ND	ND	
GEW-050	6/8/2020	51	38	1.7	9.4	ND	ND	
GEW-050	6/24/2020	52	40	ND	7.1	ND	ND	
GEW-050	7/7/2020	52	39	ND	7.6	ND	ND	
GEW-050	8/10/2020	47	36	3.2	13	ND	ND	See Note 3
GEW-050	8/24/2020	52	40	ND	6.7	ND	ND	
GEW-051	4/7/2020	52	42	ND	4.7	0.87	ND	
GEW-051	5/11/2020	52	43	ND	4.0	0.88	ND	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-051	6/8/2020	51	42	ND	4.6	0.92	ND	
GEW-051	7/8/2020	52	43	ND	3.8	0.82	ND	
GEW-051	8/10/2020	51	42	ND	4.6	0.95	ND	
GEW-052	4/7/2020	48	38	ND	13	ND	ND	
GEW-052	5/11/2020	48	39	ND	12	ND	ND	
GEW-052	6/8/2020	47	38	1.7	13	ND	ND	
GEW-052	6/24/2020	49	39	ND	12	ND	ND	
GEW-052	7/7/2020	49	38	ND	12	ND	ND	
GEW-052	8/10/2020	50	40	ND	9.3	ND	ND	
GEW-053	4/7/2020	48	43	ND	4.7	3.2	54	
GEW-053	5/11/2020	48	44	ND	4.7	3.1	60	
GEW-053	6/8/2020	48	44	ND	4.3	3.2	61	
GEW-053	7/8/2020	48	44	ND	4.5	2.7	55	
GEW-053	8/10/2020	48	43	ND	4.7	3.2	56	
GEW-054	4/7/2020	51	43	ND	3.4	1.5	ND	
GEW-054	5/11/2020	51	44	ND	ND	1.5	ND	
GEW-054	6/8/2020	50	44	ND	3.4	1.6	ND	
GEW-054	7/8/2020	50	44	ND	ND	1.4	ND	
GEW-054	8/11/2020	50	44	ND	3.5	1.6	ND	
GEW-055	4/7/2020	49	42	ND	6.7	1.2	ND	
GEW-055	5/11/2020	49	43	ND	5.9	1.1	ND	
GEW-055	6/8/2020	49	42	ND	6.7	1.1	ND	
GEW-055	7/8/2020	50	43	ND	4.7	1.0	ND	
GEW-055	8/11/2020	50	44	ND	4.0	1.3	ND	
Flare Station ²	4/6/2020	26.0	37.5	4.6	26.5	5.2	160	See Note 9
Flare Station ²	5/5/2020	23.5	36.5	5.4	28.5	4.9	145	See Note 9
Flare Station ²	6/3/2020	26.0	40.0	3.8	23.5	5.5	150	See Note 9
Flare Station ²	7/6/2020	26.0	40.0	3.7	24.0	5.3	150	See Note 9
Flare Station ²	8/4/2020	25.0	37.5	4.6	26.0	5.8	125	See Note 9

Notes: (1) Based on the comparison of field to laboratory readings, oxygen to balance gas ratios, and historical concentrations, the sample was determined to be suspect due to oxygen introduction which likely occurred during sample collection or laboratory analytical methods. (2) MDNR also collected duplicate LFG samples at these locations during this sampling period. (3) Based on the oxygen verification readings taken with an Envision meter, it was determined there is a sample train leak. (4) Based on the oxygen verification readings taken with an Envision meter, it was determined that the readings are accurate. (5) Flare station gas concentration data is an average of NQ EP14 A (or 1) and NQ EP14 B (or 2), located in the North Quarry. (6) Flare station gas concentration data is an average of Outlets 1 and 2 (A & B) or SQ OU 1 and OU 2, located in the South Quarry. (7) Sample not reported by lab due to canister leak. (8) Invalid sample due to canister leak; resampled. (9) On 10/8/19 the North Quarry and South Quarry Flares were combined.

ND = Analyte not detected in sample.

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

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)	(ppm)				(ppm)	
South Quarry								
GEW-010	4/8/2020	53	43	ND	ND	0.096	ND	
GEW-010	5/12/2020	53	43	ND	ND	0.073	ND	
GEW-010	6/10/2020	52	44	ND	ND	0.060	ND	
GEW-010	7/15/2020	52	43	ND	3.5	0.056	ND	
GEW-010	8/12/2020	52	45	ND	ND	0.078	ND	
GEW-013A	4/7/2020	13	60	ND	ND	22	680	
GEW-013A	7/14/2020	9.6	37	3.4	38	11	260	
GEW-015	4/9/2020	22	49	ND	11	17	530	
GEW-015	7/14/2020	21	48	ND	11	18	410	
GEW-016R	4/9/2020	8.2	58	ND	6.6	26	780	
GEW-016R	7/14/2020	8.1	51	ND	17	21	530	
GEW-018B	4/13/2020	6.2	44	2.5	23	24	630	
GEW-018B	7/14/2020	1.3	51	ND	3.9	41	740	
GEW-019A	4/10/2020	0.66	55	5.5	19	18	870	See Note 4
GEW-019A	7/13/2020	1.2	59	3.6	13	23	840	
GEW-039	4/9/2020	22	30	3.1	44	ND	ND	
GEW-039	5/13/2020	27	32	2.5	39	ND	ND	
GEW-039	6/10/2020	21	30	2.7	45	ND	ND	
GEW-039	7/17/2020	20	25	6.9	47	ND	ND	
GEW-039	8/13/2020	21	30	2.4	47	ND	ND	
GEW-056R	4/8/2020	44	45	ND	6.2	3.6	67	
GEW-056R	5/12/2020	42	43	ND	12	2.8	53	
GEW-056R	6/10/2020	41	42	2.4	12	2.5	50	
GEW-056R	7/15/2020	45	45	ND	6.9	2.7	53	
GEW-056R	8/12/2020	44	45	ND	7.5	3.2	48	
GEW-057B	4/9/2020	5.0	55	ND	3.0	34	600	
GEW-057B	7/10/2020	0.98	32	9.2	32	24	310	See Note 4
GEW-058A	4/9/2020	7.7	32	3.5	42	14	400	
GEW-058A	7/9/2020	8.2	35	2.5	32	22	490	
GEW-059R	4/8/2020	13	40	ND	22	23	520	
GEW-059R	7/6/2020	13	38	ND	22	26	470	
GEW-067A	4/6/2020	6.0	56	ND	ND	31	570	
GEW-067A	7/14/2020	16	40	2.9	18	22	280	
GEW-068A	4/9/2020	13	52	ND	6.1	27	920	
GEW-068A	7/13/2020	3.1	54	ND	ND	38	1,000	
GEW-078R	4/10/2020	8.6	27	1.6	51	11	400	
GEW-078R	7/14/2020	9.7	32	ND	43	13	380	
GEW-082R	4/10/2020	7.3	34	ND	40	17	550	
GEW-082R	7/14/2020	7.6	34	ND	39	18	440	
GEW-086	4/6/2020	6.1	52	ND	ND	36	910	
GEW-086	7/14/2020	13	31	2.5	44	8.3	100	
GEW-087	4/9/2020	10	30	5.6	52	2.8	80	See Note 4
GEW-087	7/14/2020	20	45	ND	22	11	260	
GEW-088	4/7/2020	1.7	45	ND	15	35	1,000	
GEW-088	7/14/2020	1.8	46	ND	6.7	43	1,000	
GEW-090	4/6/2020	20	42	ND	18	19	380	
GEW-090	7/14/2020	19	42	ND	17	21	330	
GEW-091	4/8/2020	6.0	49	ND	5.4	36	230	
GEW-091	5/13/2020	2.3	55	ND	4.3	36	380	
GEW-091	6/10/2020	2.2	51	2.3	8.0	34	340	
GEW-091	7/15/2020	2.0	49	2.0	7.5	36	320	
GEW-091	8/13/2020	2.5	48	1.8	6.1	38	350	
GEW-100	4/13/2020	11	64	ND	ND	22	540	
GEW-100	7/13/2020	13	51	3.6	13	18	280	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GEW-101	4/9/2020	38	60	ND	ND	ND	ND	
GEW-101	7/13/2020	34	62	ND	ND	ND	ND	
GEW-102	4/9/2020	25	50	ND	ND	21	120	
GEW-102	7/10/2020	30	42	3.3	12	12	82	
GEW-104	4/9/2020	24	40	ND	26	8.4	170	
GEW-104	7/10/2020	10	52	ND	7.9	28	440	
GEW-105	4/9/2020	38	45	ND	4.9	11	280	
GEW-105	7/10/2020	39	45	ND	3.9	11	210	
GEW-106	4/9/2020	13	50	ND	12	23	540	
GEW-106	7/9/2020	10.0	47	ND	12	30	640	
GEW-107	4/8/2020	26	52	ND	ND	18	570	
GEW-107	7/9/2020	33	48	ND	5.1	12	370	
GEW-108	4/9/2020	37	48	ND	3.8	10	200	
GEW-108	5/13/2020	37	48	ND	4.0	9.5	180	
GEW-108	6/10/2020	32	46	ND	4.6	16	260	
GEW-108	7/17/2020	38	47	ND	ND	12	190	
GEW-108	8/13/2020	37	45	ND	ND	13	180	
GEW-109	4/9/2020	41	42	2.1	15	0.41	ND	
GEW-109	5/13/2020	41	44	1.5	13	0.37	ND	
GEW-109	6/10/2020	42	43	1.7	13	0.33	ND	
GEW-109	7/17/2020	40	42	2.1	16	0.41	ND	
GEW-109	8/13/2020	41	43	1.9	13	0.40	ND	
GEW-110	4/8/2020	37	48	ND	4.9	8.9	150	
GEW-110	5/12/2020	25	32	8.0	29	6.1	98	See Note 3
GEW-110	6/10/2020	28	35	6.3	26	4.6	90	See Note 4
GEW-110	7/15/2020	42	47	ND	ND	7.1	90	
GEW-110	8/12/2020	41	48	ND	ND	7.5	96	
GEW-113	4/9/2020	9.7	61	ND	6.1	22	870	
GEW-113	7/14/2020	10	56	ND	9.8	21	580	
GEW-116	4/8/2020	31	64	ND	ND	0.91	48	
GEW-116	7/14/2020	19	44	2.7	31	2.8	220	
GEW-117	4/8/2020	33	58	ND	5.7	1.9	160	
GEW-117	7/14/2020	27	54	ND	15	2.0	150	
GEW-118	4/10/2020	1.8	58	ND	3.2	34	640	
GEW-118	7/14/2020	1.5	57	ND	ND	36	330	
GEW-120	4/13/2020	48	49	ND	ND	0.17	ND	
GEW-120	7/13/2020	27	40	3.0	29	0.15	38	
GEW-121	4/13/2020	33	55	ND	3.9	6.3	210	
GEW-121	7/13/2020	25	46	ND	21	7.2	200	
GEW-122	4/13/2020	38	37	ND	18	6.9	260	
GEW-122	7/13/2020	37	37	ND	18	7.1	240	
GEW-123	4/13/2020	29	59	ND	9.6	1.8	250	
GEW-123	7/13/2020	29	60	ND	9.1	1.2	190	
GEW-124	4/13/2020	44	37	4.2	15	ND	ND	
GEW-124	7/13/2020	50	44	ND	4.9	ND	ND	
GEW-125	4/13/2020	35	56	ND	6.1	2.1	280	
GEW-125	7/13/2020	38	46	ND	14	0.36	79	
GEW-126	4/14/2020	20	50	2.0	16	12	730	
GEW-126	7/13/2020	22	52	1.9	11	13	590	
GEW-127	4/14/2020	12	45	4.5	26	12	810	
GEW-127	7/13/2020	17	52	ND	15	14	730	
GEW-129	4/14/2020	35	56	ND	4.8	3.3	280	
GEW-129	7/14/2020	35	53	ND	8.4	1.3	130	
GEW-130	4/14/2020	22	45	ND	17	14	930	
GEW-130	7/13/2020	22	45	ND	14	17	830	
GEW-131	4/14/2020	39	46	ND	ND	11	700	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide (ppm)	Comments
		(%)						
GEW-131	7/13/2020	38	46	ND	ND	12	520	
GEW-132	4/10/2020	15	31	2.7	41	9.9	470	
GEW-132	7/14/2020	11	29	3.1	47	9.5	350	
GEW-133	4/10/2020	1.2	65	ND	3.9	27	1,300	
GEW-133	7/14/2020	3.5	34	ND	47	14	480	
GEW-134	4/10/2020	8.0	35	4.4	44	7.9	280	
GEW-134	7/14/2020	7.1	39	2.0	40	11	310	
GEW-135	4/10/2020	3.5	50	1.7	19	26	690	
GEW-135	7/14/2020	3.2	53	ND	12	30	630	
GEW-137	4/9/2020	36	42	ND	21	ND	ND	
GEW-137	7/14/2020	37	42	ND	19	ND	ND	
GEW-139	4/13/2020	17	40	3.6	22	17	760	
GEW-139	7/13/2020	18	40	2.6	18	21	730	
GEW-140	4/13/2020	28	43	ND	13	14	370	
GEW-140	7/13/2020	30	41	ND	14	13	250	
GEW-144	4/9/2020	36	34	6.8	24	0.050	ND	See Note 3
GEW-144	7/13/2020	38	41	4.5	16	0.12	ND	
GEW-145	4/9/2020	29	48	ND	ND	19	250	
GEW-145	7/10/2020	30	46	ND	ND	20	180	
GEW-147	4/9/2020	14	45	3.1	24	14	440	
GEW-147	7/14/2020	13	45	ND	22	17	360	
GEW-148	4/9/2020	17	53	ND	5.3	23	1,100	
GEW-148	7/14/2020	18	51	ND	ND	27	990	
GEW-149	4/6/2020	7.2	24	1.7	65	1.4	45	
GEW-149	7/14/2020	9.1	29	ND	60	0.16	ND	
GEW-150	4/9/2020	21	40	4.5	21	12	330	
GEW-150	7/10/2020	25	44	2.4	15	14	310	
GEW-151	4/7/2020	5.3	30	6.7	41	16	390	See Note 4
GEW-151	7/14/2020	5.9	44	2.0	11	36	620	
GEW-152	4/8/2020	18	50	1.7	12	18	430	
GEW-152	7/9/2020	23	48	ND	8.5	19	440	
GEW-153	4/8/2020	21	30	ND	45	2.7	180	
GEW-153	7/6/2020	23	33	ND	40	2.9	170	
GEW-156	4/9/2020	30	44	ND	15	10	250	
GEW-156	7/10/2020	30	44	ND	10	13	270	
GEW-157	4/9/2020	34	41	2.8	10	12	220	
GEW-157	7/10/2020	29	43	2.0	7.2	18	240	
GEW-158	4/9/2020	25	46	ND	16	12	320	
GEW-158	7/10/2020	29	46	ND	9.6	14	310	
GEW-160	4/8/2020	21	38	ND	24	15	340	
GEW-160	5/13/2020	22	39	ND	24	13	290	
GEW-160	6/10/2020	20	33	4.0	32	10	210	
GEW-160	7/15/2020	22	37	ND	27	12	230	
GEW-160	8/13/2020	24	33	3.8	29	11	170	
GEW-161	4/8/2020	8.9	53	ND	5.5	30	990	
GEW-161	5/13/2020	6.3	56	ND	4.5	32	1,000	
GEW-161	6/10/2020	5.4	54	ND	5.4	33	1,000	
GEW-161	7/15/2020	4.9	49	ND	7.3	37	1,100	
GEW-161	8/13/2020	6.4	51	ND	4.8	36	920	
GEW-162	4/8/2020	12	66	ND	6.8	13	550	
GEW-162	5/13/2020	12	65	ND	9.0	13	510	
GEW-162	6/10/2020	13	64	ND	9.6	11	460	
GEW-162	7/15/2020	13	58	ND	14	13	420	
GEW-162	8/13/2020	13	61	ND	12	12	420	
GEW-163	4/13/2020	27	56	ND	12	4.1	130	
GEW-163	7/13/2020	28	58	ND	10	2.3	89	
GEW-164	4/13/2020	31	49	ND	18	0.072	ND	

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Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)						
GEW-164	7/13/2020	31	49	ND	18	ND	38	
GEW-165	4/13/2020	17	45	4.9	25	7.9	290	
GEW-165	7/13/2020	16	43	4.3	28	7.7	230	
GEW-166	4/13/2020	5.5	55	ND	4.1	33	2,200	
GEW-166	7/13/2020	7.4	40	5.3	26	21	1,100	See Note 4
GEW-167	4/8/2020	11	43	3.1	15	27	1,100	
GEW-167	7/13/2020	13	46	ND	8.6	32	1,200	
GEW-168	4/14/2020	28	41	5.7	22	3.1	100	See Note 4
GEW-168	7/13/2020	37	55	ND	ND	3.4	86	
GEW-169	4/14/2020	17	47	2.0	23	11	570	
GEW-169	7/13/2020	18	45	2.0	25	9.8	420	
GEW-170	4/13/2020	12	43	4.3	25	15	860	
GEW-170	7/13/2020	10	37	4.2	35	13	560	
GEW-171	4/13/2020	17	52	4.0	15	11	500	
GEW-171	7/13/2020	24	59	2.7	10	3.3	190	
GEW-172	4/13/2020	19	41	3.8	19	16	730	
GEW-172	7/13/2020	24	45	1.7	11	18	630	
GEW-174	4/13/2020	13	34	ND	48	4.2	74	
GEW-174	7/10/2020	14	37	ND	38	9.1	170	
GEW-175	4/9/2020	27	35	5.8	31	1.7	67	See Note 4
GEW-175	7/10/2020	26	37	4.1	31	1.0	72	
GEW-177	4/14/2020	11	55	ND	14	19	1,500	
GEW-177	7/13/2020	10	43	3.5	26	16	1,100	
GEW-178	4/9/2020	35	44	3.6	17	ND	ND	
GEW-178	7/10/2020	26	36	2.4	35	ND	ND	
GEW-179	4/9/2020	44	51	ND	4.6	ND	ND	
GEW-179	7/10/2020	41	43	ND	15	ND	ND	
GEW-180	4/9/2020	31	62	ND	4.9	ND	ND	
GEW-180	7/13/2020	33	62	ND	4.3	ND	ND	
GEW-181	4/9/2020	24	72	ND	3.5	ND	ND	
GEW-181	7/13/2020	19	50	7.0	25	ND	ND	See Note 3
GEW-185	4/13/2020	39	58	ND	ND	ND	ND	
GEW-185	7/13/2020	29	50	ND	19	ND	ND	
GEW-186	4/13/2020	35	42	2.8	18	0.97	84	
GEW-186	7/13/2020	47	48	ND	ND	1.1	43	
GEW-187	4/9/2020	40	52	ND	5.0	2.0	79	
GEW-187	5/13/2020	41	54	ND	ND	1.9	71	
GEW-187	6/10/2020	41	51	ND	4.2	2.1	66	
GEW-187	7/17/2020	43	53	ND	ND	1.4	50	
GEW-187	8/13/2020	42	53	ND	ND	2.1	45	
GEW-217	4/9/2020	10	55	ND	4.4	28	590	
GEW-217	7/10/2020	32	46	ND	ND	18	210	
GEW-218	4/9/2020	20	41	3.3	25	10	300	
GEW-218	7/10/2020	21	46	ND	18	13	340	
GEW-220	4/8/2020	31	50	ND	4.4	13	420	
GEW-220	7/10/2020	16	35	7.5	27	13	430	See Note 3
GEW-221	4/9/2020	25	57	ND	9.7	6.4	160	
GEW-221	7/13/2020	26	56	ND	13	3.4	130	
GEW-222	4/13/2020	33	42	2.5	13	8.7	290	
GEW-222	7/13/2020	39	43	ND	8.7	7.7	110	
GEW-223	4/13/2020	31	64	ND	ND	2.3	230	
GEW-223	7/13/2020	31	64	ND	ND	0.76	200	
GEW-224	4/13/2020	31	59	ND	ND	7.3	540	
GEW-224	7/13/2020	32	59	ND	ND	4.2	400	
GEW-225	4/13/2020	17	51	1.8	9.4	21	1,400	
GEW-225	7/13/2020	14	50	ND	8.4	26	1,300	
GEW-226	4/13/2020	12	36	ND	35	15	690	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide (ppm)	Comments
		(%)						
GEW-226	7/13/2020	13	35	ND	37	13	480	
GEW-227	4/10/2020	1.6	39	2.7	36	20	470	
GEW-227	7/14/2020	1.4	43	2.0	22	30	580	
GEW-228	4/9/2020	3.8	16	11	65	4.2	59	See Note 4
GEW-228	7/14/2020	3.5	28	5.1	44	18	220	See Note 4
GEW-229	4/6/2020	13	30	ND	46	9.7	270	
GEW-229	7/14/2020	7.6	26	ND	56	7.5	160	
GEW-230	4/6/2020	3.6	47	2.0	17	29	620	
GEW-230	7/14/2020	3.2	30	2.6	53	10	190	
GEW-232	4/9/2020	25	60	ND	7.0	6.3	240	
GEW-232	7/14/2020	26	56	ND	13	3.4	140	
GEW-233	4/10/2020	0.68	38	4.0	36	22	520	
GEW-233	7/14/2020	3.0	34	3.6	43	15	360	
GEW-234	4/10/2020	7.9	50	ND	12	27	1,100	
GEW-234	7/14/2020	1.5	37	6.1	32	22	640	See Note 4
GEW-235	4/13/2020	25	53	ND	8.1	12	320	
GEW-235	7/13/2020	23	50	ND	11	14	280	
GEW-236	4/10/2020	2.9	41	4.1	20	31	320	
GEW-236	7/14/2020	3.9	22	8.8	53	12	86	See Note 4
GEW-237	4/8/2020	32	42	4.2	19	2.9	100	
GEW-237	7/10/2020	30	41	4.3	23	1.7	83	
GEW-238	4/9/2020	5.3	64	ND	3.3	25	780	
GEW-238	7/14/2020	16	54	1.9	14	14	360	
GEW-239	4/6/2020	1.2	55	ND	ND	38	1,100	
GEW-239	7/14/2020	1.3	50	ND	ND	43	950	
GEW-240	4/13/2020	1.7	26	8.6	52	12	340	See Note 4
GEW-240	7/13/2020	2.1	39	1.7	30	25	580	
GIW-01	4/8/2020	26	59	ND	ND	11	330	
GIW-01	5/12/2020	28	57	ND	3.7	9.8	330	
GIW-01	6/10/2020	27	51	2.8	11	7.8	250	
GIW-01	7/15/2020	30	56	ND	4.0	9.4	250	
GIW-01	8/5/2020	27	54	ND	6.2	10	240	
GIW-02	4/8/2020	8.8	65	ND	8.0	17	900	
GIW-02	5/12/2020	11	58	ND	15	14	550	
GIW-02	6/10/2020	14	54	ND	21	10	470	
GIW-02	7/15/2020	7.6	48	3.3	25	16	640	
GIW-02	8/5/2020	10	50	1.7	23	14	510	
GIW-03	4/8/2020	21	49	ND	17	12	430	
GIW-03	5/13/2020	21	46	ND	21	11	410	
GIW-03	6/10/2020	24	44	ND	21	9.6	350	
GIW-03	7/15/2020	20	43	ND	25	11	330	
GIW-03	8/5/2020	22	44	ND	21	12	320	
GIW-04	4/8/2020	19	50	ND	7.8	22	710	
GIW-04	5/13/2020	21	50	ND	6.9	20	650	
GIW-04	6/10/2020	23	48	ND	9.0	19	570	
GIW-04	7/15/2020	22	46	ND	9.7	20	470	
GIW-04	8/5/2020	23	47	ND	7.6	21	460	
GIW-05	4/8/2020	7.8	19	14	52	6.9	70	See Note 4
GIW-05	5/13/2020	23	47	ND	13	15	210	
GIW-05	6/10/2020	8.0	14	17	61	0.82	39	See Note 4
GIW-05	7/15/2020	30	39	1.7	19	10	110	
GIW-05	8/5/2020	27	36	3.1	23	10	100	
GIW-06	4/8/2020	33	42	ND	20	3.8	35	
GIW-06	5/13/2020	26	40	1.8	29	3.0	33	
GIW-06	6/10/2020	38	45	ND	13	3.1	33	
GIW-06	7/15/2020	33	41	ND	22	2.8	ND	
GIW-06	8/12/2020	34	38	ND	23	3.5	32	
GIW-07	4/8/2020	48	46	ND	5.1	ND	ND	

Laboratory Analysis - Bridgeton Landfill

Well Name	Date Sampled	Methane	CO ₂	O ₂ /Argon	Nitrogen	Hydrogen	Carbon Monoxide	Comments
		(%)					(ppm)	
GIW-07	5/13/2020	47	47	ND	5.5	ND	ND	
GIW-07	6/10/2020	50	45	ND	3.2	ND	ND	
GIW-07	7/15/2020	48	47	ND	4.2	ND	ND	
GIW-07	8/12/2020	50	46	ND	3.3	ND	ND	
GIW-08	4/8/2020	45	46	ND	7.6	ND	ND	
GIW-08	5/13/2020	43	44	ND	12	ND	ND	
GIW-08	6/10/2020	46	46	ND	7.7	ND	ND	
GIW-08	7/15/2020	45	45	ND	9.4	ND	ND	
GIW-08	8/12/2020	44	43	1.9	11	ND	ND	
GIW-09	4/8/2020	22	43	ND	21	13	150	
GIW-09	5/13/2020	21	40	ND	27	11	140	
GIW-09	6/10/2020	26	41	ND	22	9.3	110	
GIW-09	7/15/2020	25	39	ND	25	9.2	89	
GIW-09	8/12/2020	28	40	ND	20	9.8	84	
GIW-10	4/8/2020	23	34	ND	34	7.5	130	
GIW-10	5/13/2020	22	33	ND	37	6.6	120	
GIW-10	6/10/2020	25	34	ND	35	4.6	87	
GIW-10	7/15/2020	24	33	ND	35	6.5	84	
GIW-10	8/12/2020	25	33	ND	33	7.3	82	
GIW-11	4/8/2020	25	35	ND	36	2.7	140	
GIW-11	5/13/2020	23	33	1.9	40	2.2	150	
GIW-11	6/10/2020	26	36	ND	35	2.1	46	
GIW-11	7/15/2020	23	34	ND	40	1.9	83	
GIW-11	8/12/2020	24	33	2.1	38	2.4	100	
GIW-12	4/8/2020	29	36	2.4	28	4.5	160	
GIW-12	5/13/2020	29	36	2.1	29	2.6	100	
GIW-12	6/10/2020	33	39	ND	25	2.1	72	
GIW-12	7/15/2020	29	36	2.2	30	2.4	73	
GIW-12	8/12/2020	31	37	1.9	27	2.7	69	
GIW-13	4/8/2020	44	47	ND	3.7	4.6	80	
GIW-13	5/13/2020	46	46	ND	3.7	3.4	59	
GIW-13	6/10/2020	47	45	ND	3.9	3.1	51	
GIW-13	7/15/2020	42	47	ND	6.5	4.2	62	
GIW-13	8/12/2020	38	45	ND	7.0	8.7	64	

Notes: (1) Based on the comparison of field to laboratory readings, oxygen to balance gas ratios, and historical concentrations, the sample was determined to be suspect due to oxygen introduction which likely occurred during sample collection or laboratory analytical methods. (2) MDNR also collected duplicate LFG samples at these locations during this sampling period. (3) Based on the oxygen verification readings taken with an Envision meter, it was determined there is a sample train leak. (4) Based on the oxygen verification readings taken with an Envision meter, it was determined that the readings are accurate. (5) Flare station gas concentration data is an average of NQ EP14 A (or 1) and NQ EP14 B (or 2), located in the North Quarry. (6) Flare station gas concentration data is an average of Outlets 1 and 2 (A & B) or SQ OU 1 and OU 2, located in the South Quarry. (7) Sample not reported by lab due to canister leak. (8) Invalid sample due to canister leak; resampled.

ND = Analyte not detected in sample.

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

ATTACHMENT C-2

LABORATORY ANALYSES REPORTS



August 24, 2020



Republic Services
ATTN: Mike Lambrich
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

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

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

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: L081402-01/49

Enclosed are results for sample(s) received 8/14/20 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 TNI Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Mike Lambrich, Erin Fanning and Anthony Kimutis; Michele Clark, Dustin Thoenen and Don Murphy, Weaver Consultants Group; and Jan Feezor, Feezor Engineering on 8/21/20.

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

Sincerely,

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

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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



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

CHAIN OF CUSTODY RECORD

Project No.:	TURNAROUND TIME				DELIVERABLES		PAGE: 1 OF 6	
	Standard	<input type="checkbox"/>	48 hours	<input checked="" type="checkbox"/>	EDD	<input checked="" type="checkbox"/>	Condition upon receipt:	
	Same Day	<input type="checkbox"/>	72 hours	<input type="checkbox"/>	EDF	<input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>	
	24 hours	<input type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Other:	5 Day			Level 4	<input type="checkbox"/>	Chilled _____ deg C	
Project Name:	Bridgeton Landfill				BILLING		ANALYSIS REQUEST	
Report To:	Mike Lambrich							
Company:	Republic Services				P.O. No.: PO7112802		INITIALS AC 145	
Street:	13570 St. Charles Rock Rd.				Bill to: Republic Services			
City/State/Zip:	Bridgeton, MO 63044				Attn: Mike Lambrich			
Phone& Fax:	314-683-3921				13570 St. Charles Rock Rd.			
e-mail:	mlambrich@republicservices.com				Bridgeton, MO 63044			

LAB USE ONLY	Cannister Pressure ("hg)			SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H2	
	Cannister ID	Sample Start	Sample End								
L081402-51	O1410	-19.6	-5	GEW 50	8/10/2020	8:20	C	LFG	NA	X	5
	O1427	-20.1	-5	GEW 52	8/10/2020	8:31	C	LFG	NA	X	5
	O1413	-20.7	-5	GEW 7	8/10/2020	8:45	C	LFG	NA	X	5
	O1407	-20.5	-5	GEW 8	8/10/2020	8:56	C	LFG	NA	X	6
	O1422	-20.3	-5	GEW 9	8/10/2020	9:08	C	LFG	NA	X	5
	O1425	-20.5	-5	GEW 51	8/10/2020	11:08	C	LFG	NA	X	6
	O1403	-20.2	-5	GEW 53	8/10/2020	11:26	C	LFG	NA	X	6
	O1421	-20.2	-5	GEW 54	8/11/2020	8:43	C	LFG	NA	X	5
	O1415	-20.5	-5	GEW 55	8/11/2020	9:00	C	LFG	NA	X	5
	O1419	-20.6	-5	GEW 41R	8/11/2020	9:22	C	LFG	NA	X	5

AUTHORIZATION TO PERFORM WORK:	Dave Penoyer	COMPANY:	Republic Services	COMMENTS
SAMPLED BY:	Anthony Kimutis	COMPANY:	Republic Services	DATE/TIME 8/16/2020 - 8/11/2020
RELINQUISHED BY	<i>Antony K</i>	DATE/TIME 8/13/2020	RECEIVED BY	DATE/TIME
RELINQUISHED BY	<i>FedEx</i>	DATE/TIME 8/14/2020	RECEIVED BY	DATE/TIME <i>Doggett</i> - 8/14/2020 0950
RELINQUISHED BY		DATE/TIME	RECEIVED BY	DATE/TIME
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____				

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				TURNAROUND TIME			DELIVERABLES		PAGE: 2 OF 6			
				Standard	<input type="checkbox"/>	48 hours	<input checked="" type="checkbox"/>	EDD	<input checked="" type="checkbox"/>	Condition upon receipt:		
				Same Day	<input type="checkbox"/>	72 hours	<input type="checkbox"/>	EDF	<input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>		
				24 hours	<input type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>		
				Other:	5 Day			Level 4	<input type="checkbox"/>	Chilled _____ deg C		
Project No.: Project Name: Bridgeton Landfill Report To: Mike Lambrich Company: Republic Services Street: 13570 St. Charles Rock Rd. City/State/Zip: Bridgeton , MO 63044 Phone& Fax: 314-683-3921 e-mail: mlambrich@publicservices.com				BILLING			ANALYSIS REQUEST					
LAB USE ONLY		Cannister Pressure ("hg)			SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H ₂	INITIAL VAC "H ₂ "
		Cannister ID	Sample Start	Sample End								
Log 81402-11	O1398	-20.7	-5	GEW 40	8/11/2020	9:45	C	LFG	NA	X	5	
-12	O1412	-20.2	-5	GEW 42R	8/11/2020	9:59	C	LFG	NA	X	5	
-13	O1400	-20.4	-5	GEW 43R	8/11/2020	10:09	C	LFG	NA	X	5	
-14	O1426	-20.2	-5	GEW 44	8/12/2020	7:57	C	LFG	NA	X	5	
-15	O1418	-20.9	-5	GEW 49	8/12/2020	8:08	C	LFG	NA	X	5	
-16	O1399	-20.1	-5	GEW 45R	8/12/2020	8:24	C	LFG	NA	X	5	
-17	O1401	-20.7	-5	GEW 46R	8/12/2020	8:35	C	LFG	NA	X	5	
-18	O1404	-20.5	-5	GEW 2S	8/12/2020	8:48	C	LFG	NA	X	5	
-19	O1402	-20.6	-5	GEW 2	8/12/2020	9:08	C	LFG	NA	X	5	
-20	O1420	-20.7	-5	GEW 3	8/12/2020	9:20	C	LFG	NA	X	5	
AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services								COMMENTS				
SAMPLED BY: Anthony Kimutis COMPANY: Republic Services								DATE/TIME 8/11/20 - 8/13/2020				
RELINQUISHED BY <i>Attekt</i>		DATE/TIME 8/13/2020		RECEIVED BY		DATE/TIME						
RELINQUISHED BY <i>FENEx</i>		DATE/TIME 8/14/2020		RECEIVED BY <i>Dmpj</i>		DATE/TIME 8/14/2020 0900						
RELINQUISHED BY DATE/TIME								RECEIVED BY		DATE/TIME		
METHOD OF TRANSPORT (circle one): Walk-In <input type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> Courier <input type="checkbox"/> ATLI <input type="checkbox"/> Other <input type="checkbox"/>												

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

 AirTECHNOLOGY <i>Laboratories, Inc.</i>				18501 E. Gale Ave., Suite 130 City of Industry, CA 91748 Ph: 626-964-4032 Fx: 626-964-5832		CHAIN OF CUSTODY RECORD								
				TURNAROUND TIME			DELIVERABLES		PAGE: 3 OF 6					
				Standard	<input type="checkbox"/>	48 hours	<input checked="" type="checkbox"/>	EDD	<input checked="" type="checkbox"/>	Condition upon receipt:				
				Same Day	<input type="checkbox"/>	72 hours	<input type="checkbox"/>	EDF	<input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>				
				24 hours	<input type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>				
				Other:	5 Day			Level 4	<input type="checkbox"/>	Chilled _____ deg C				
				BILLING				ANALYSIS REQUEST						
				P.O. No.: PO7112802										
				Bill to: Republic Services										
				Attn: Mike Lambrich										
				13570 St. Charles Rock Rd.										
				Bridgeton, MO 63044										
LAB USE ONLY	Cannister Pressure ("hg)			SAMPLE IDENTIFICATION		SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H2	INITIAL VAC "H"		
	Cannister ID	Sample Start	Sample End											
LO81402-21	O1408	-20.3	-5	GEW 4		8/12/2020	9:32	C	LFG	NA	X	5		
-22	O1411	-20.4	-5	GEW 47R		8/12/2020	10:04	C	LFG	NA	X	5		
-23	O1424	-20.6	-5	GEW 5		8/12/2020	10:16	C	LFG	NA	X	5		
-24	O1405	-20.5	-5	GEW 48		8/12/2020	10:26	C	LFG	NA	X	5		
-25	O1416	-20.4	-5	GEW 6		8/12/2020	10:37	C	LFG	NA	X	5		
AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services						COMMENTS								
SAMPLER BY: Anthony Kimutis COMPANY: Republic Services DATE/TIME: 8/12/2020														
RELINQUISHED BY: Antony Kimutis DATE/TIME: 8/13/2020		RECEIVED BY: _____		DATE/TIME: _____										
RELINQUISHED BY: FedEx DATE/TIME: 8/14/20		RECEIVED BY: Jay J- 8/14/20 0958		DATE/TIME: 8/14/20 0958										
RELINQUISHED BY: _____ DATE/TIME: _____						RECEIVED BY: _____		DATE/TIME: _____						
METHOD OF TRANSPORT (circle one): Walk-In Walk-In FedEx UPS Courier ATLI Other _____														

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 Air TECHNOLOGY Laboratories, Inc.				CHAIN OF CUSTODY RECORD										
				TURNAROUND TIME				DELIVERABLES		PAGE: 4 OF 6				
Standard <input type="checkbox"/> 48 hours <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> 96 hours <input type="checkbox"/> Other: 5 Day				EDD <input checked="" type="checkbox"/>		Condition upon receipt:								
				EDF <input type="checkbox"/>		Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>								
				Level 3 <input type="checkbox"/>		Intact Yes <input type="checkbox"/> No <input type="checkbox"/>								
				Level 4 <input type="checkbox"/>		Chilled _____ deg C								
Project No.: Project Name: Bridgeton Landfill Report To: Mike Lambrich Company: Republic Services Street: 13570 St. Charles Rock Rd. City/State/Zip: Bridgeton, MO 63044 Phone& Fax: 314-683-3921 e-mail: mlambrich@publicservices.com				BILLING				ANALYSIS REQUEST						
				P.O. No.: PO7112802 Bill to: Republic Services Attn: Mike Lambrich 13570 St. Charles Rock Rd. Bridgeton, MO 63044										
LAB USE ONLY <i>LITTLE LAMB VACUUM</i>		Cannister Pressure ("hg)			SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H ₂			
		Cannister ID	Sample Start	Sample End										
		<i>Log 1462-26</i>	3837	-20.2	-5	GIW 1	8/5/2020	9:58	C	LFG		NA	X	5
		<i>-27</i>	5307	-20.4	-5	GIW 2	8/5/2020	10:07	C	LFG		NA	X	5
		<i>-28</i>	A7650	-20.9	-5	GIW 3	8/5/2020	10:31	C	LFG		NA	X	5
		<i>-29</i>	5817	-20.4	-5	GIW 4	8/5/2020	10:40	C	LFG		NA	X	5
		<i>-30</i>	6152	-20.5	-5	GIW 5	8/5/2020	10:49	C	LFG		NA	X	5
		<i>-31</i>	A7778	-20.2	-5	GIW 6	8/12/2020	9:13	C	LFG		NA	X	5
		<i>-32</i>	5270	-20.2	-5	GIW 7	8/12/2020	9:21	C	LFG		NA	X	5
		<i>-33</i>	5308	-19.4	-5	GIW 8	8/12/2020	9:30	C	LFG		NA	X	5
<i>-34</i>	5905	-20.2	-5	GIW 9	8/12/2020	9:39	C	LFG	NA	X	5			
<i>-35</i>	5323	-20.2	-5	GIW 10	8/12/2020	13:44	C	LFG	NA	X	6			
AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services SAMPLED BY: Andy Guthrie COMPANY: Hunt Environmental Services DATE/TIME: 8/5/20 - 8/13/2020								COMMENTS						
RELINQUISHED BY: <i>Ante K</i> DATE/TIME: 8/13/2020		RECEIVED BY DATE/TIME: 8/13/2020												
RELINQUISHED BY: <i>FENEX</i> DATE/TIME: 8/14/2020		RECEIVED BY <i>C. O. G.</i> DATE/TIME: 8/14/2020 0950												
RELINQUISHED BY DATE/TIME:		RECEIVED BY DATE/TIME:												
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____														

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				TURNAROUND TIME			DELIVERABLES		PAGE: 5 OF 6			
				Standard <input type="checkbox"/>	48 hours <input type="checkbox"/>	EDD <input checked="" type="checkbox"/>	Condition upon receipt:					
				Same Day <input type="checkbox"/>	72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>					
				24 hours <input type="checkbox"/>	96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>					
				Other: 5 Day		Level 4 <input type="checkbox"/>	Chilled _____ deg C					
				BILLING			ANALYSIS REQUEST					
				P.O. No.: PO7112802								
				Bill to: Republic Services								
				Attn: Mike Lambrich								
				13570 St. Charles Rock Rd.								
				Bridgeton, MO 63044								
				13570 St. Charles Rock Rd.								
				Bridgeton, MO 63044								
LAB USE ONLY	Cannister Pressure ("hg)			SAMPLE IDENTIFICATION		SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H2	INSTRUMENTS USED
	Cannister ID	Sample Start	Sample End									
L081402-36	5924	-20.4	-5	GIW 11		8/12/2020	14:04	C	LFG	NA	X	6
-37	5929	-20.3	-5	GIW 12		8/12/2020	14:17	C	LFG	NA	X	5
-38	5813	-20.1	-5	GIW 13		8/12/2020	14:29	C	LFG	NA	X	6
-39	3159	-19.2	-5	GEW 110		8/12/2020	14:44	C	LFG	NA	X	5
-40	3835	-20.3	-5	GEW 10		8/12/2020	14:54	C	LFG	NA	X	6
-41	6131	-19.9	-5	GEW 56R		8/12/2020	15:05	C	LFG	NA	X	6
-42	A7815	-20.2	-5	GEW 162		8/13/2020	7:46	C	LFG	NA	X	5
-43	A8080	-20.4	-5	GEW 161		8/13/2020	7:56	C	LFG	NA	X	5
-44	5839	-18.3	-5	GEW 160		8/13/2020	8:05	C	LFG	NA	X	5
-45	5903	-20.3	-5	GEW 91		8/13/2020	8:14	C	LFG	NA	X	5
AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services								COMMENTS				
SAMPLED BY: Andy Guthrie COMPANY: Hunt Environmental Services DATE/TIME: 8/10/20 - 8/13/2020												
RELINQUISHED BY: <i>Andy Guthrie</i> DATE/TIME: 8/13/2020		RECEIVED BY: <i>John J. Foy</i> DATE/TIME: 8/14/2020										
RELINQUISHED BY: <i>FedEx</i> DATE/TIME: 8/14/2020		RECEIVED BY: <i>John J. Foy</i> DATE/TIME: 8/14/2020 0950										
RELINQUISHED BY: DATE/TIME:		RECEIVED BY: DATE/TIME:										
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other												

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

CHAIN OF CUSTODY RECORD

Project No.:	Project Name:	TURNAROUND TIME			DELIVERABLES		PAGE: 6 OF 6	
		Standard	<input type="checkbox"/>	48 hours	<input checked="" type="checkbox"/>	EDD	<input checked="" type="checkbox"/>	Condition upon receipt:
		Same Day	<input type="checkbox"/>	72 hours	<input type="checkbox"/>	EDF	<input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
		24 hours	<input type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>
		Other:	5 Day			Level 4	<input type="checkbox"/>	Chilled _____ deg C
Report To:	Mike Lambrich			BILLING		ANALYSIS REQUEST		
Company:	Republic Services			P.O. No.: PO7112802		<p style="writing-mode: vertical-rl; transform: rotate(180deg);">INITIAL LAB VACUUM</p>		
Street:	13570 St. Charles Rock Rd.			Bill to: Republic Services				
City/State/Zip:	Bridgeton , MO 63044			Attn: Mike Lambrich				
Phone& Fax:	314-683-3921			13570 St. Charles Rock Rd.				
e-mail:	mlambrich@republicservices.com			Bridgeton, MO 63044				

LAB USE ONLY	Cannister Pressure ("hg)			SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVA-TION	D1946 + CO, H2	
	Cannister ID	Sample Start	Sample End								
L081402-46	A7772	-20.3	-5	GEW 108	8/13/2020	8:50	C	LFG	NA	X	
-47	5830	-20.4	-5	GEW 187	8/13/2020	9:00	C	LFG	NA	X	5
-48	A7668	-20.6	-5	GEW 109	8/13/2020	9:10	C	LFG	NA	X	5
-49	3165	-20.12	-5	GEW 39	8/13/2020	9:25	C	LFG	NA	X	5

AUTHORIZATION TO PERFORM WORK: Dave Penoyer			COMPANY: Republic Services		COMMENTS		
SAMPLED BY: Andy Guthrie			COMPANY: Hunt Environmental Services		DATE/TIME: 8/13/2020		
RELINQUISHED BY: <i>Andy L</i>	DATE/TIME: <i>8/13/2020</i>	RECEIVED BY	DATE/TIME				
RELINQUISHED BY: <i>FedEx</i>	DATE/TIME: <i>8/14/20</i>	RECEIVED BY: <i>CDR</i>	DATE/TIME: <i>8/14/20 09:00</i>				
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME				
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other							

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

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

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-01	L081402-02	L081402-03	L081402-04								
Client Sample I.D.:	GEW 50	GEW 52	GEW 7	GEW 8								
Date/Time Sampled:	8/10/20 8:20	8/10/20 8:31	8/10/20 8:45	8/10/20 8:56								
Date/Time Analyzed:	8/17/20 16:07	8/17/20 16:22	8/17/20 16:36	8/17/20 16:51								
QC Batch No.:	200817GC8A2	200817GC8A2	200817GC8A2	200817GC8A2								
Analyst Initials:	CM	CM	CM	CM								
Dilution Factor:	3.2	3.2	3.2	3.4								
ANALYTE	Result % v/v	RL % v/v										
Hydrogen	ND	d	0.032	ND	d	0.032	ND	d	0.032	1.3	d	0.034
Carbon Dioxide	36		0.032	40		0.032	42		0.032	44		0.034
Oxygen/Argon	3.2		1.6	ND		1.6	ND		1.6	ND		1.7
Nitrogen	13		3.2	9.3		3.2	4.1		3.2	3.6		3.4
Methane	47		0.0032	50		0.0032	53		0.0032	50		0.0034
Carbon Monoxide	ND		0.0032	ND		0.0032	ND		0.0032	ND		0.0034

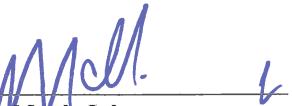
Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Analyzed by secondary analysis, batch number 200820GC8A1

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 8/21/20

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-05	L081402-06		L081402-07		L081402-08		
Client Sample I.D.:	GEW 9	GEW 51		GEW 53		GEW 54		
Date/Time Sampled:	8/10/20 9:08	8/10/20 11:08		8/10/20 11:26		8/11/20 8:43		
Date/Time Analyzed:	8/17/20 17:05	8/17/20 17:20		8/17/20 17:34		8/17/20 17:49		
QC Batch No.:	200817GC8A2	200817GC8A2		200817GC8A2		200817GC8A2		
Analyst Initials:	CM	CM		CM		CM		
Dilution Factor:	3.2	3.4		3.4		3.2		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	0.52 d	0.032	0.95 d	0.034	3.2 d	0.034	1.6 d	0.032
Carbon Dioxide	44	0.032	42	0.034	43	0.034	44	0.032
Oxygen/Argon	ND	1.6	ND	1.7	ND	1.7	ND	1.6
Nitrogen	6.3	3.2	4.6	3.4	4.7	3.4	3.5	3.2
Methane	49	0.0032	51	0.0034	48	0.0034	50	0.0032
Carbon Monoxide	ND	0.0032	ND	0.0034	0.0056	0.0034	ND	0.0032

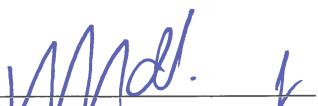
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Mark Johnson
Operations Manager

Date _____



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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-09	L081402-10		L081402-11		L081402-12			
Client Sample I.D.:	GEW 55	GEW 41R		GEW 40		GEW 42R			
Date/Time Sampled:	8/11/20 9:00	8/11/20 9:22		8/11/20 9:45		8/11/20 9:59			
Date/Time Analyzed:	8/17/20 18:04	8/17/20 18:18		8/17/20 18:33		8/17/20 18:47			
QC Batch No.:	200817GC8A2	200817GC8A2		200817GC8A2		200817GC8A2			
Analyst Initials:	CM		CM		CM		CM		
Dilution Factor:	3.2		3.2		3.2		3.2		
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	
Hydrogen	1.3	d	0.032	ND	d	0.032	ND	d	0.032
Carbon Dioxide	44		0.032	37		0.032	35		0.032
Oxygen/Argon	ND		1.6	ND		1.6	ND		1.6
Nitrogen	4.0		3.2	11		3.2	13		3.2
Methane	50		0.0032	51		0.0032	51		0.0032
Carbon Monoxide	ND		0.0032	ND		0.0032	ND		0.0032

Results normalized including non-methane hydrocarbons

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Mark Johnson
Operations Manager

Date 8/21/20

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-13	L081402-14	L081402-15	L081402-16					
Client Sample I.D.:	GEW 43R	GEW 44	GEW 49	GEW 45R					
Date/Time Sampled:	8/11/20 10:09	8/12/20 7:57	8/12/20 8:08	8/12/20 8:24					
Date/Time Analyzed:	8/17/20 19:02	8/17/20 19:16	8/17/20 19:31	8/17/20 19:45					
QC Batch No.:	200817GC8A2	200817GC8A2	200817GC8A2	200817GC8A2					
Analyst Initials:	CM	CM	CM	CM					
Dilution Factor:	3.2	3.2	3.2	3.2					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	
Hydrogen	0.11	d	0.032	ND	d	0.032	ND	d	0.032
Carbon Dioxide	43		0.032	37		0.032	40		0.032
Oxygen/Argon	ND		1.6	ND		1.6	ND		1.6
Nitrogen	3.7		3.2	10		3.2	12		5.8
Methane	53		0.0032	52		0.0032	48		0.0032
Carbon Monoxide	ND		0.0032	ND		0.0032	ND		0.0032

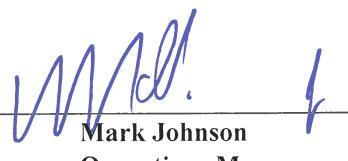
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 Operations Manager

Date _____

8/21/20

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**AirTECHNOLOGY Laboratories, Inc.**

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-17	L081402-18	L081402-19	L081402-20				
Client Sample I.D.:	GEW 46R	GEW 2S	GEW 2	GEW 3				
Date/Time Sampled:	8/12/20 8:35	8/12/20 8:48	8/12/20 9:08	8/12/20 9:20				
Date/Time Analyzed:	8/17/20 20:00	8/17/20 20:15	8/17/20 20:29	8/17/20 20:44				
QC Batch No.:	200817GC8A2	200817GC8A2	200817GC8A2	200817GC8A2				
Analyst Initials:	CM	CM	CM	CM				
Dilution Factor:	3.2	3.2	3.2	3.2				
ANALYTE	Result % v/v	RL % v/v						
Hydrogen	ND d	0.032						
Carbon Dioxide	44	0.032	36	0.032	43	0.032	45	0.032
Oxygen/Argon	ND	1.6	1.6	1.6	ND	1.6	ND	1.6
Nitrogen	3.8	3.2	7.1	3.2	3.7	3.2	4.0	3.2
Methane	51	0.0032	55	0.0032	53	0.0032	51	0.0032
Carbon Monoxide	ND	0.0032	ND	0.0032	ND	0.0032	ND	0.0032

Results normalized including non-methane hydrocarbons

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Mark Johnson
Operations Manager

Date: 8/21/20

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-21	L081402-22	L081402-23	L081402-24					
Client Sample I.D.:	GEW 4	GEW 47R	GEW 5	GEW 48					
Date/Time Sampled:	8/12/20 9:32	8/12/20 10:04	8/12/20 10:16	8/12/20 10:26					
Date/Time Analyzed:	8/17/20 22:41	8/17/20 22:55	8/17/20 23:10	8/17/20 23:24					
QC Batch No.:	200817GC8A3	200817GC8A3	200817GC8A3	200817GC8A3					
Analyst Initials:	CM	CM	CM	CM					
Dilution Factor:	3.2	3.2	3.2	3.2					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	
Hydrogen	ND	d	0.032	ND	d	0.032	ND	d	0.032
Carbon Dioxide	41		0.032	42		0.032	39		0.032
Oxygen/Argon	ND		1.6	ND		1.6	ND		1.6
Nitrogen	7.7		3.2	6.8		3.2	8.9		3.2
Methane	50		0.0032	51		0.0032	52		0.0032
Carbon Monoxide	ND		0.0032	ND		0.0032	ND		0.0032

Results normalized including non-methane hydrocarbons

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RL = Reporting Limit

d = Analyzed by secondary analysis, batch number 200820GC8A2

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager
Date: 8/17/20

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**AirTECHNOLOGY Laboratories, Inc.**

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-25	L081402-26		L081402-27		L081402-28			
Client Sample I.D.:	GEW 6	GIW 1		GIW 2		GIW 3			
Date/Time Sampled:	8/12/20 10:37	8/5/20 9:58		8/5/20 10:07		8/5/20 10:31			
Date/Time Analyzed:	8/17/20 23:39	8/19/20 8:11		8/19/20 8:25		8/19/20 8:40			
QC Batch No.:	200817GC8A3	200819GC8A1		200819GC8A1		200819GC8A1			
Analyst Initials:	CM	CM		CM		CM			
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	10	3.2	14	3.2	12	3.2
Carbon Dioxide	40		0.032	54	0.032	50	0.032	44	0.032
Oxygen/Argon	ND		1.6	ND	1.6	1.7	1.6	ND	1.6
Nitrogen	5.4		3.2	6.2	3.2	23	3.2	21	3.2
Methane	54		0.0032	27	0.0032	10	0.0032	22	0.0032
Carbon Monoxide	ND		0.0032	0.024	0.0032	0.051	0.0032	0.032	0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: _____



Mark Johnson
Operations Manager

Date _____



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Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-29	L081402-30		L081402-31		L081402-32				
Client Sample I.D.:	GIW 4	GIW 5		GIW 6		GIW 7				
Date/Time Sampled:	8/5/20 10:40	8/5/20 10:49		8/12/20 9:13		8/12/20 9:21				
Date/Time Analyzed:	8/19/20 8:54	8/19/20 9:09		8/19/20 9:23		8/19/20 9:38				
QC Batch No.:	200819GC8A1	200819GC8A1		200819GC8A1		200819GC8A1				
Analyst Initials:	CM		CM		CM		CM			
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	21	3.2	10	3.2	3.5	d	0.032	ND	d	0.032
Carbon Dioxide	47	0.032	36	0.032	38		0.032	46		0.032
Oxygen/Argon	ND	1.6	3.1	1.6	ND		1.6	ND		1.6
Nitrogen	7.6	3.2	23	3.2	23		3.2	3.3		3.2
Methane	23	0.0032	27	0.0032	34		0.0032	50		0.0032
Carbon Monoxide	0.046	0.0032	0.010	0.0032	0.0032		0.0032	ND		0.0032

Results normalized including non-methane hydrocarbons

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Reviewed/Approved By: _____



Mark Johnson
Operations Manager

Date 8/11/20

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-33	L081402-34		L081402-35		L081402-36				
Client Sample I.D.:	GIW 8	GIW 9		GIW 10		GIW 11				
Date/Time Sampled:	8/12/20 9:30	8/12/20 9:39		8/12/20 13:44		8/12/20 14:04				
Date/Time Analyzed:	8/19/20 9:52	8/19/20 10:07		8/19/20 10:21		8/19/20 10:36				
QC Batch No.:	200819GC8A1	200819GC8A1		200819GC8A1		200819GC8A1				
Analyst Initials:	CM	CM		CM		CM				
Dilution Factor:	3.2	3.2		3.4		3.4				
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v		
Hydrogen	ND	d	0.032	9.8	3.2	7.3	3.4	2.4	d	0.034
Carbon Dioxide	43		0.032	40	0.032	33	0.034	33		0.034
Oxygen/Argon	1.9		1.6	ND	1.6	ND	1.7	2.1		1.7
Nitrogen	11		3.2	20	3.2	33	3.4	38		3.4
Methane	44		0.0032	28	0.0032	25	0.0034	24		0.0034
Carbon Monoxide	ND		0.0032	0.0084	0.0032	0.0082	0.0034	0.010		0.0034

Results normalized including non-methane hydrocarbons

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Operations Manager

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8/21/20

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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-37	L081402-38		L081402-39		L081402-40				
Client Sample I.D.:	GIW 12		GIW 13		GEW 110		GEW 10			
Date/Time Sampled:	8/12/20 14:17		8/12/20 14:29		8/12/20 14:44		8/12/20 14:54			
Date/Time Analyzed:	8/19/20 10:51		8/19/20 11:05		8/19/20 11:20		8/19/20 11:34			
QC Batch No.:	200819GC8A1		200819GC8A1		200819GC8A1		200819GC8A1			
Analyst Initials:	CM		CM		CM		CM			
Dilution Factor:	3.2		3.4		3.2		3.4			
ANALYTE	Result % v/v	RL % v/v								
Hydrogen	2.7	d	0.032	7.0	3.4	7.5	3.2	0.078	d	0.034
Carbon Dioxide	37		0.032	45	0.034	48	0.032	45		0.034
Oxygen/Argon	1.9		1.6	ND	1.7	ND	1.6	ND		1.7
Nitrogen	27		3.2	8.7	3.4	ND	3.2	ND		3.4
Methane	31		0.0032	38	0.0034	41	0.0032	52		0.0034
Carbon Monoxide	0.0069		0.0032	0.0064	0.0034	0.0096	0.0032	ND		0.0034

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Operations Manager

Date _____



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AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-41	L081402-42	L081402-43	L081402-44
Client Sample I.D.:	GEW 56R	GEW 162	GEW 161	GEW 160
Date/Time Sampled:	8/12/20 15:05	8/13/20 7:46	8/13/20 7:56	8/13/20 8:05
Date/Time Analyzed:	8/19/20 11:49	8/19/20 12:03	8/19/20 12:18	8/19/20 12:32
QC Batch No.:	200819GC8A1	200819GC8A1	200819GC8A1	200819GC8A1
Analyst Initials:	CM	CM	CM	CM
Dilution Factor:	3.4	3.2	3.2	3.2
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	3.2 d	0.034	12	3.2
Carbon Dioxide	45	0.034	61	0.032
Oxygen/Argon	ND	1.7	ND	1.6
Nitrogen	7.5	3.4	12	3.2
Methane	44	0.0034	13	0.0032
Carbon Monoxide	0.0048	0.00337	0.042	0.0032

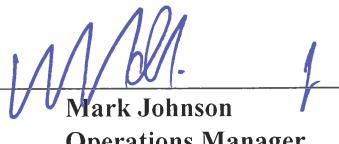
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Operations Manager

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Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-45	L081402-46	L081402-47	L081402-48
Client Sample I.D.:	GEW 91	GEW 108	GEW 187	GEW 109
Date/Time Sampled:	8/13/20 8:14	8/13/20 8:50	8/13/20 9:00	8/13/20 9:10
Date/Time Analyzed:	8/19/20 12:47	8/19/20 14:43	8/19/20 14:58	8/19/20 15:12
QC Batch No.:	200819GC8A1	200819GC8A2	200819GC8A2	200819GC8A2
Analyst Initials:	CM	CM	CM	CM
Dilution Factor:	3.2	3.2	3.2	3.2
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Hydrogen	38	3.2	13	3.2
Carbon Dioxide	48	0.032	45	0.032
Oxygen/Argon	1.8	1.6	ND	1.6
Nitrogen	6.1	3.2	ND	3.2
Methane	2.5	0.0032	37	0.0032
Carbon Monoxide	0.035	0.0032	0.018	0.0032
			0.0045	0.0032
			ND	0.0032

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Analyzed by secondary analysis, batch number 200820GC8A2

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 8/11/20

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

Client: Republic Services
Attn: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/14/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L081402-49					
Client Sample I.D.:	GEW 39					
Date/Time Sampled:	8/13/20 9:25					
Date/Time Analyzed:	8/19/20 15:27					
QC Batch No.:	200819GC8A2					
Analyst Initials:	CM					
Dilution Factor:	3.2					
ANALYTE	Result % v/v	RL % v/v				
Hydrogen	ND	d	0.032			
Carbon Dioxide	30		0.032			
Oxygen/Argon	2.4		1.6			
Nitrogen	47		3.2			
Methane	21		0.0032			
Carbon Monoxide	ND		0.0032			

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Analyzed by secondary analysis, batch number 200820GC8A2

Reviewed/Approved By: _____


Mark Johnson
Operations Manager

Date 8/21/20

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

page 1 of 1

QC Batch No: 200817GC8A2
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS	LCSD				Limits			
Date Analyzed:	8/17/20 15:50		8/17/20 15:06	8/17/20 15:20							
Analyst Initials:	CM		CM	CM							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	5.77	115	5.70	114	1.2	70	130	30
Carbon Dioxide	ND	0.010	10	10.5	105	10.3	103	2.1	70	130	30
Oxygen/Argon	ND	0.50	15	15.1	102	15.0	101	1.1	70	130	30
Nitrogen	ND	1.0	70	68.0	97	67.3	96	1.1	70	130	30
Methane	ND	0.0010	0.10	0.0979	98	0.0975	97	0.4	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.0950	95	0.0944	94	0.6	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark Johnson
 Operations Manager

Date _____

8/21/20

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: 200817GC8A3
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS	LCSD							
Date Analyzed:	8/17/20 22:26		8/17/20 21:42	8/17/20 21:57							
Analyst Initials:	CM		CM	CM							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low % Rec	High % Rec	Max. RPD
Hydrogen	ND	1.0	5.0	5.79	116	5.61	112	3.2	70	130	30
Carbon Dioxide	ND	0.010	10	10.5	105	10.6	105	0.2	70	130	30
Oxygen/Argon	ND	0.50	15	15.2	103	15.3	103	0.2	70	130	30
Nitrogen	ND	1.0	70	69.2	99	69.6	99	0.5	70	130	30
Methane	ND	0.0010	0.10	0.0983	98	0.0979	98	0.4	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.103	103	0.102	102	0.5	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager
Date 8/21/20

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: 200819GC8A1

Matrix: Air

Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS	LCSD				Limits			
Date Analyzed:	8/19/20 7:46		8/19/20 7:02	8/19/20 7:17							
Analyst Initials:	CM		CM	CM							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	4.86	97	4.86	97	0.0	70	130	30
Carbon Dioxide	ND	0.010	10	9.96	99	9.89	99	0.7	70	130	30
Oxygen/Argon	ND	0.50	15	15.4	104	15.4	104	0.1	70	130	30
Nitrogen	ND	1.0	70	69.3	99	69.0	99	0.4	70	130	30
Methane	ND	0.0010	0.10	0.0955	96	0.0954	95	0.1	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.0997	100	0.0994	99	0.3	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 8/21/20

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: 200819GC8A2
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS	LCSD							
Date Analyzed:	8/19/20 14:28		8/19/20 13:45	8/19/20 13:59							
Analyst Initials:	CM		CM	CM							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	4.67	93	4.65	93	0.4	70	130	30
Carbon Dioxide	ND	0.010	10	9.73	97	10.0	100	2.9	70	130	30
Oxygen/Argon	ND	0.50	15	15.3	103	15.2	103	0.2	70	130	30
Nitrogen	ND	1.0	70	68.4	98	68.9	98	0.7	70	130	30
Methane	ND	0.0010	0.10	0.0976	98	0.0971	97	0.6	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.102	102	0.102	102	0.0	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date: 8/21/20

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: 200820GC8A1

Matrix: Air

Reporting Units: % v/v

**ASTM D1946 Low Level Hydrogen
LABORATORY CONTROL SAMPLE SUMMARY**

Lab No.:	METHOD BLANK		LCS	LCSD	Limits						
Date Analyzed:	8/20/20 9:00		8/20/20 8:40	8/20/20 8:45							
Analyst Initials:	CM		CM	CM							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	0.010	1.0	1.000	100	0.998	100	0.2	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark Johnson
Operations Manager

Date _____

8/21/20

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

QC Batch No: 200820GC8A2

Matrix: Air

Reporting Units: % v/v

**ASTM D1946 Low Level Hydrogen
LABORATORY CONTROL SAMPLE SUMMARY**

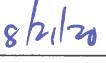
Lab No.:	METHOD BLANK		LCS	LCSD							
Date Analyzed:	8/20/20 10:58		8/20/20 10:48	8/20/20 10:53							
Analyst Initials:	CM		CM	CM							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	0.010	1.0	0.983	98	0.988	99	0.4	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


Mark Johnson
Operations Manager

Date _____ 

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

QC Batch No: 200821GC8A1

Matrix: Air

Reporting Units: % v/v

**ASTM D1946 Low Level Hydrogen
LABORATORY CONTROL SAMPLE SUMMARY**

Lab No.:	METHOD BLANK		LCS	LCSD							
Date Analyzed:	8/21/20 7:28		8/21/20 7:16	8/21/20 7:20							
Analyst Initials:	AS		AS	AS							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	0.010	1.0	0.911	91	0.929	93	2.0	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 8/21/20

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



August 28, 2020



Republic Services
ATTN: Mike Lambrich
13570 St. Charles Rock Rd.
Bridgeton, MO 63044

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

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

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

LABORATORY TEST RESULTS

Project Reference: Bridgeton Landfill
Lab Number: L082602-01/02

Enclosed are results for sample(s) received 8/26/20 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 TNI Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Mike Lambrich, Erin Fanning and Anthony Kimutis; Michele Clark, Dustin Thoenen and Don Murphy, Weaver Consultants Group; and Jan Feezor, Feezor Engineering on 8/27/20.

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

Sincerely,

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

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

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

 Air TECHNOLOGY <i>Laboratories, Inc.</i>				18501 E. Gale Ave., Suite 130 City of Industry, CA 91748 Ph: 626-964-4032 Fx: 626-964-5832		CHAIN OF CUSTODY RECORD <table border="1"> <thead> <tr> <th colspan="3">TURNAROUND TIME</th> <th colspan="2">DELIVERABLES</th> <th colspan="2">PAGE: 1 OF 1</th> </tr> </thead> <tbody> <tr> <td>Standard</td> <td><input type="checkbox"/></td> <td>48 hours</td> <td><input type="checkbox"/></td> <td>EDD</td> <td><input checked="" type="checkbox"/></td> <td>Condition upon receipt:</td> </tr> <tr> <td>Same Day</td> <td><input type="checkbox"/></td> <td>72 hours</td> <td><input type="checkbox"/></td> <td>EDF</td> <td><input type="checkbox"/></td> <td>Sealed Yes <input type="checkbox"/> No <input type="checkbox"/></td> </tr> <tr> <td>24 hours</td> <td><input checked="" type="checkbox"/></td> <td>96 hours</td> <td><input type="checkbox"/></td> <td>Level 3</td> <td><input type="checkbox"/></td> <td>Intact Yes <input type="checkbox"/> No <input type="checkbox"/></td> </tr> <tr> <td>Other:</td> <td colspan="2">5 Day</td> <td><input type="checkbox"/></td> <td>Level 4</td> <td><input type="checkbox"/></td> <td>Chilled _____ deg C</td> </tr> </tbody> </table>							TURNAROUND TIME			DELIVERABLES		PAGE: 1 OF 1		Standard	<input type="checkbox"/>	48 hours	<input type="checkbox"/>	EDD	<input checked="" type="checkbox"/>	Condition upon receipt:	Same Day	<input type="checkbox"/>	72 hours	<input type="checkbox"/>	EDF	<input type="checkbox"/>	Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>	24 hours	<input checked="" type="checkbox"/>	96 hours	<input type="checkbox"/>	Level 3	<input type="checkbox"/>	Intact Yes <input type="checkbox"/> No <input type="checkbox"/>	Other:	5 Day		<input type="checkbox"/>	Level 4	<input type="checkbox"/>	Chilled _____ deg C
TURNAROUND TIME			DELIVERABLES		PAGE: 1 OF 1																																										
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Other:	5 Day		<input type="checkbox"/>	Level 4	<input type="checkbox"/>	Chilled _____ deg C																																									
Project No.: Project Name: Bridgeton Landfill				BILLING			ANALYSIS REQUEST																																								
Report To: Mike Lambrich Company: Republic Services Street: 13570 St. Charles Rock Rd. City/State/Zip: Bridgeton , MO 63044 Phone& Fax: 314-683-3921 e-mail: mlambrich@republicservices.com				P.O. No.: PO7112802 Bill to: Republic Services Attn: Mike Lambrich 13570 St. Charles Rock Rd. Bridgeton, MO 63044																																											
LAB USE ONLY		Cannister Pressure ("hg)		SAMPLE IDENTIFICATION		SAMPLE DATE D1946 + CO, H2	SAMPLE TIME 5"	CONTAINER QTY/TYPE 5.5"	MATRIX LAB IN TIN VAC "hg"	PRESERVA-TION	X																																				
		Cannister ID	Sample Start									Sample End																																			
L - 01		O1417	-20.8	-5	GEW 50	8/24/2020	10:40	C	LFG	NA	X																																				
L - 02		O1423	-20.7	-5	GEW 2S	8/24/2020	10:53	C	LFG	NA	X																																				
AUTHORIZATION TO PERFORM WORK: Dave Penoyer COMPANY: Republic Services SAMPLED BY: Anthony Kimutis COMPANY: Republic Services DATE/TIME: 8/24/2020 RELINQUISHED BY: Anthony Kimutis DATE/TIME: 8/25/2020 RECEIVED BY: John DeLoach DATE/TIME: 8/26/2020 10:53 RELINQUISHED BY: FEDEx DATE/TIME: 8/26/2020 10:53 RECEIVED BY: John DeLoach DATE/TIME: 8/26/2020 10:53 RELINQUISHED BY: DATE/TIME: RECEIVED BY: DATE/TIME: 							COMMENTS																																								
METHOD OF TRANSPORT (circle one): Walk-In Walk-In FedEx FedEx UPS UPS Courier Courier ATLI ATLI Other 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: Mike Lambrich
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 08/26/20
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	L082602-01	L082602-02						
Client Sample I.D.:	GEW 50	GEW 2S						
Date/Time Sampled:	8/24/20 10:40	8/24/20 10:53						
Date/Time Analyzed:	8/26/20 10:53	8/26/20 11:08						
QC Batch No.:	200826GC8A1	200826GC8A1						
Analyst Initials:	AS	AS						
Dilution Factor:	3.2	3.3						
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Hydrogen	ND	d	0.032	ND	d	0.033		
Carbon Dioxide	40		0.032	36		0.033		
Oxygen/Argon	ND		1.6	ND		1.6		
Nitrogen	6.7		3.2	6.6		3.3		
Methane	52		0.0032	56		0.0033		
Carbon Monoxide	ND		0.0032	ND		0.0033		

Results normalized including non-methane hydrocarbons

ND = Not Detected (below RL)

RL = Reporting Limit

d = Analyzed by secondary analysis, batch number 200827GC8A1

Reviewed/Approved By:


 Mark Johnson
 Operations Manager

Date 8/27/20

The cover letter is an integral part of this analytical report



QC Batch No: 200826GC8A1

Matrix: Air

Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK		LCS	LCSD				Limits			
Date Analyzed:	8/26/20 9:11		8/26/20 8:27	8/26/20 8:42							
Analyst Initials:	AS		AS	AS							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	1.0	5.0	5.57	111	5.57	111	0.1	70	130	30
Carbon Dioxide	ND	0.010	10	10.1	101	10.2	102	0.8	70	130	30
Oxygen/Argon	ND	0.50	15	15.3	103	15.3	103	0.0	70	130	30
Nitrogen	ND	1.0	70	68.1	97	68.1	97	0.0	70	130	30
Methane	ND	0.0010	0.10	0.100	100	0.100	100	0.3	70	130	30
Carbon Monoxide	ND	0.0010	0.10	0.0982	98	0.0982	98	0.0	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 8/27/20

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: 200827GC8A1

Matrix: Air

Reporting Units: % v/v

**ASTM D1946 Low Level Hydrogen
LABORATORY CONTROL SAMPLE SUMMARY**

Lab No.:	METHOD BLANK		LCS	LCSD							
Date Analyzed:	8/27/20 9:24		8/27/20 9:14	8/27/20 9:19							
Analyst Initials:	CM		CM	CM							
Dilution Factor:	1.0		1.0	1.0							
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Hydrogen	ND	0.010	1.0	0.937	94	0.939	94	0.2	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager
Date 8/27/21

The cover letter is an integral part of this analytical report

**AirTECHNOLOGY Laboratories, Inc.**

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

ATTACHMENT D

GAS WELLFIELD DATA

ATTACHMENT D-1

WELLFIELD DATA TABLE

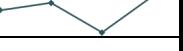
ATTACHMENT D-2

MAXIMUM WELLHEAD TEMPERATURE TABLE

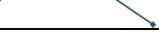
Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend	Comments
	May 2020	June 2020	July 2020	August 2020		
GEW-002	109.1	109.8	113.5	113.0		
GEW-003	110.7	117.3	120.0	114.3		
GEW-004	110.0	113.1	114.7	113.0		
GEW-005	81.7	87.5	92.7	90.5		
GEW-006	81.9	89.1	91.4	85.6		
GEW-007	92.7	95.9	96.0	98.3		
GEW-008	112.3	113.7	113.6	114.3		
GEW-009	122.3	123.9	122.1	123.4		
GEW-010	99.7	108.3	105.9	108.2		
GEW-013A	188.9	190.7	182.7	194.3		
GEW-015	114.8	128.6	125.6	125.3		
GEW-016R	166.1	169.5	168.5	166.6		
GEW-018B	196.1	200.1	197.9	200.8		
GEW-019A	87.7	107.5	109.5	111.7		
GEW-039	108.5	110.8	113.0	111.6		
GEW-040	85.1	104.8	102.3	85.8		
GEW-041R	88.9	98.4	109.2	95.5		
GEW-042R	104.0	106.0	107.7	105.0		
GEW-043R	115.3	115.6	116.8	115.3		
GEW-044	71.8	91.5	103.0	92.5		
GEW-045R	92.2	97.0	102.5	99.0		
GEW-046R	94.6	99.6	105.2	105.5		
GEW-047R	98.4	104.8	108.2	106.0		
GEW-048	95.9	98.9	100.8	98.7		
GEW-049	80.0	96.2	103.8	96.1		
GEW-050	99.7	104.5	103.8	104.3		
GEW-051	117.8	121.0	121.8	121.5		
GEW-052	103.6	110.3	110.0	110.8		
GEW-053	142.2	143.5	143.9	142.5		
GEW-054	146.3	146.3	146.3	145.9		
GEW-055	128.3	130.6	130.6	130.0		
GEW-056R	112.0	121.8	118.3	118.1		
GEW-057B	142.5	162.9	176.9	171.6		
GEW-058A	104.3	129.4	133.8	134.0		
GEW-059R	110.2	146.3	137.1	143.5		
GEW-067A	192.3	195.8	139.9	197.2		
GEW-068A	182.7	200.9	198.6	179.2		
GEW-078R	153.3	158.1	161.5	159.0		
GEW-082R	171.0	173.6	173.6	172.6		

Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend	Comments
	May 2020	June 2020	July 2020	August 2020		
GEW-086	162.9	171.6	176.9	188.9		
GEW-087	180.9	188.4	158.1	195.7		
GEW-088	181.3	183.9	183.3	180.3		
GEW-090	165.7	167.1	169.5	165.7		
GEW-091	201.6	199.3	200.8	197.9		
GEW-100	159.4	165.7	174.7	121.0		
GEW-101	82.6	110.2	99.6	100.4		
GEW-102	74.1	96.2	103.6	97.4		
GEW-104	186.4	194.3	187.6	176.9		
GEW-105	124.5	141.9	139.0	136.2		
GEW-106	166.6	180.7	171.6	175.1		
GEW-107	122.9	141.9	142.2	140.0		
GEW-108	162.4	165.7	165.7	161.1		
GEW-109	103.0	101.9	112.2	103.9		
GEW-110	101.6	118.4	129.4	130.7		
GEW-113	177.5	180.0	179.2	179.2		
GEW-116	146.8	150.6	150.3	145.9		
GEW-117	124.7	137.7	149.1	142.9		
GEW-118	194.3	195.7	198.6	200.7		
GEW-120	108.5	113.7	120.5	118.7		
GEW-121	150.2	153.7	153.3	148.0		
GEW-122	109.5	114.5	118.4	111.3		
GEW-123	93.4	105.6	116.3	93.0		
GEW-124	78.9	90.5	94.4	103.0		
GEW-125	83.0	95.3	107.5	103.3		
GEW-126	86.1	96.0	107.5	106.2		
GEW-127	106.1	122.1	117.3	114.5		
GEW-128	--	--	--	--		Temporarily decommissioned
GEW-129	122.6	128.5	128.9	128.6		
GEW-130	155.7	156.5	154.0	153.1		
GEW-131	128.6	135.9	141.9	137.4		
GEW-132	135.5	142.2	141.9	144.9		
GEW-133	87.0	158.3	157.3	152.5		
GEW-134	97.2	104.8	107.2	104.8		
GEW-135	118.9	132.9	126.7	135.2		
GEW-137	90.4	107.5	105.9	105.8		
GEW-138	--	--	--	--		Temporarily decommissioned

Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend	Comments
	May 2020	June 2020	July 2020	August 2020		
GEW-139	161.1	157.7	160.7	151.7		
GEW-140	139.6	149.9	147.7	114.0		
GEW-144	80.3	97.2	98.7	108.7		
GEW-145	79.8	105.7	104.8	96.3		
GEW-147	162.0	165.2	162.9	161.1		
GEW-148	154.8	162.9	162.1	156.0		
GEW-149	89.6	91.7	102.1	95.3		
GEW-150	176.6	176.4	169.0	168.1		
GEW-151	91.9	100.1	106.4	126.7		
GEW-152	91.7	122.3	110.2	111.5		
GEW-153	116.3	126.1	125.3	118.9		
GEW-154	--	--	--	--		Temporarily decommissioned
GEW-155	--	--	--	--		Temporarily decommissioned
GEW-156	109.2	128.3	131.7	139.8		
GEW-157	100.4	117.1	110.9	110.0		
GEW-158	110.5	126.9	118.1	126.6		
GEW-159	--	--	--	--		Temporarily decommissioned
GEW-160	91.0	96.7	104.0	104.5		
GEW-161	109.7	109.7	123.7	120.2		
GEW-162	91.2	94.3	102.8	96.5		
GEW-163	130.6	138.3	133.3	126.0		
GEW-164	143.2	143.5	142.7	141.2		
GEW-165	145.6	149.2	148.0	150.6		
GEW-166	166.6	171.0	168.5	168.5		
GEW-167	138.7	153.3	151.3	148.4		
GEW-168	106.5	105.7	120.7	116.3		
GEW-169	123.5	128.9	139.0	137.7		
GEW-170	136.5	141.8	145.2	139.6		
GEW-171	76.3	111.5	112.0	103.8		
GEW-172	152.1	158.1	151.7	146.3		
GEW-173	--	--	--	--		Temporarily decommissioned
GEW-174	118.7	128.3	128.8	123.4		
GEW-175	135.5	136.5	136.9	136.5		
GEW-176	--	--	--	--		Temporarily decommissioned
GEW-177	169.5	169.0	168.3	167.8		
GEW-178	84.7	107.1	102.5	93.9		

Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend	Comments
	May 2020	June 2020	July 2020	August 2020		
GEW-179	95.8	103.8	103.8	100.9		
GEW-180	92.7	101.3	102.3	93.1		
GEW-181	79.7	100.7	102.5	97.0		
GEW-182	--	--	--	--		Temporarily decommissioned
GEW-184	--	--	--	--		Temporarily decommissioned
GEW-185	128.3	124.2	121.0	93.7		
GEW-186	95.5	101.8	104.8	109.2		
GEW-187	114.5	116.0	119.4	116.0		
GEW-188	--	--	--	--		Temporarily decommissioned
GEW-217	183.9	127.5	179.2	149.1		
GEW-218	114.0	125.0	125.8	121.5		
GEW-219	--	--	--	--		Temporarily decommissioned
GEW-220	181.5	185.8	183.9	184.5		
GEW-221	101.3	129.2	134.1	127.8		
GEW-222	79.3	106.5	100.1	90.0		
GEW-223	110.8	138.7	139.1	132.6		
GEW-224	152.1	157.3	156.9	156.5		
GEW-225	156.5	155.6	161.6	149.1		
GEW-226	178.0	180.3	178.0	175.8		
GEW-227	193.6	193.6	192.3	187.0		
GEW-228	190.2	198.7	190.4	183.9		
GEW-229	98.1	122.6	106.7	114.0		
GEW-230	164.9	163.3	164.3	158.1		
GEW-231	--	--	--	-		Temporarily decommissioned
GEW-232	165.2	170.6	166.0	165.7		
GEW-233	112.1	139.6	126.9	130.6		
GEW-234	204.7	203.9	200.8	203.0		
GEW-235	129.4	143.9	144.9	140.6		
GEW-236	201.1	203.9	203.9	204.7		
GEW-237	152.1	153.7	152.5	151.0		
GEW-238	191.1	189.6	192.3	191.9		
GEW-239	202.3	201.8	202.3	202.3		
GEW-240	197.9	165.7	200.1	198.6		
GEW-2S	71.4	98.9	104.7	99.7		
GIW-01	142.5	142.5	149.5	145.6		
GIW-02	93.1	87.0	108.2	94.4		

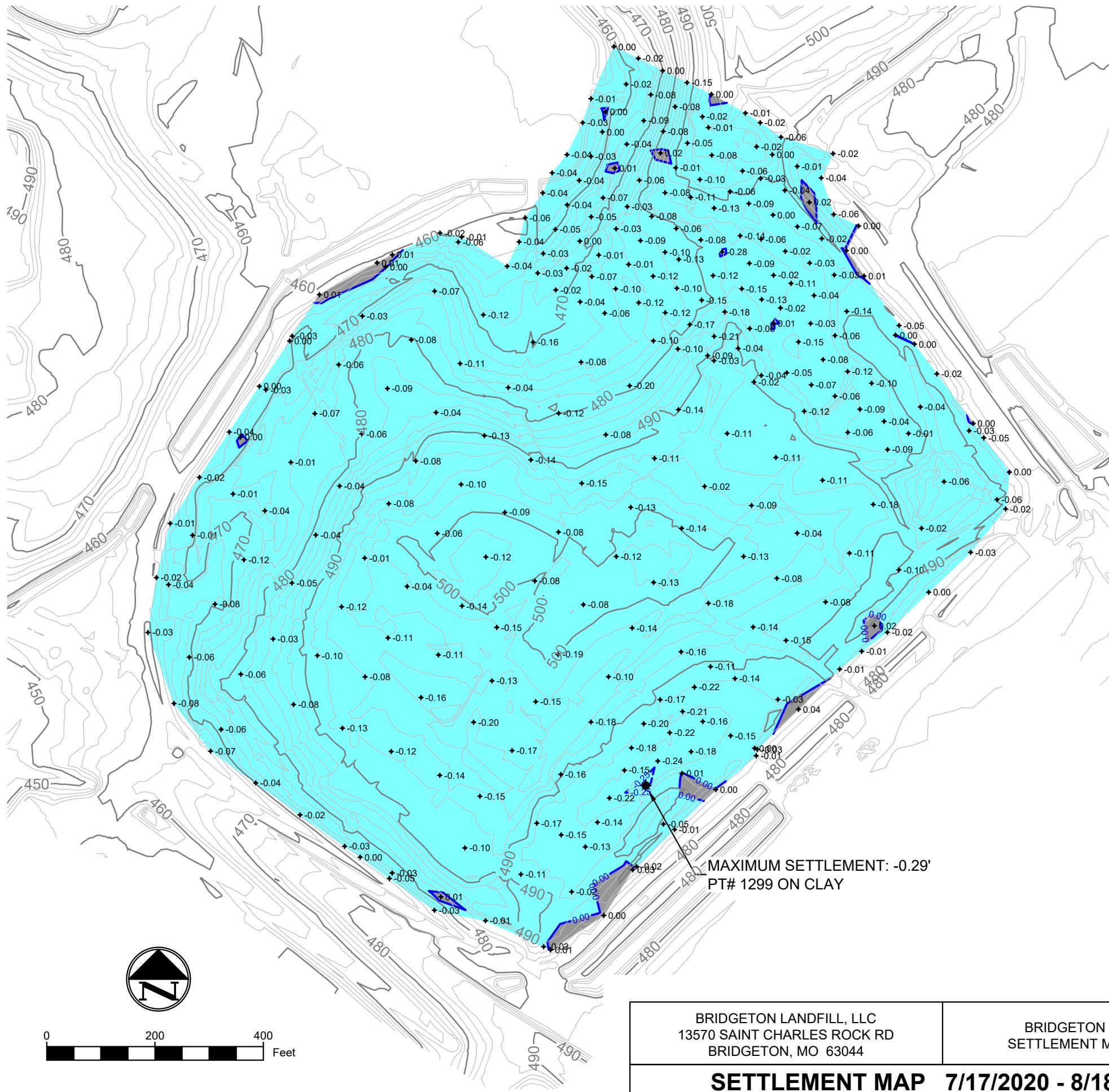
Wellfield Temperature - Bridgeton Landfill

Well Name					Temp Trend	Comments
	May 2020	June 2020	July 2020	August 2020		
GIW-03	93.4	88.2	104.8	100.1		
GIW-04	90.1	91.0	102.3	95.6		
GIW-05	96.0	96.5	106.5	103.0		
GIW-06	92.2	89.8	105.4	100.6		
GIW-07	90.8	90.5	103.0	97.2		
GIW-08	98.6	92.9	108.0	101.3		
GIW-09	91.2	94.1	100.9	100.8		
GIW-10	93.3	89.8	102.2	97.7		
GIW-11	92.9	98.1	100.1	96.7		
GIW-12	91.9	97.2	102.1	95.0		
GIW-13	94.1	99.7	101.6	98.9		
LCS-1D	85.6	104.0	101.8	92.5		
LCS-2D	78.9	105.0	109.0	88.2		
LCS-3D	124.9	155.3	166.1	161.1		
LCS-4B	85.5	94.4	99.1	98.9		
LCS-5A	92.5	99.5	97.3	102.1		
LCS-5B	130.3	134.7	139.7	140.0		
LCS-6B	91.3	106.0	108.5	104.5		
SEW-002	82.8	106.6	105.0	107.1		
SEW-003	95.6	95.0	107.5	98.7		
T-56	64.4	80.4	84.0	81.9		

-- = Indicates no data available.

ATTACHMENT E

SETTLEMENT FRONT MAP



LEGEND

- 12-10-2019 TOPOGRAPHY (2' CONTOUR)
- 500 12-10-2019 TOPOGRAPHY (10' CONTOUR)
- .25 MINOR ELEVATION CHANGE CONTOUR (0.25 FEET)
- .50 MAJOR ELEVATION CHANGE CONTOUR (0.50 FEET)
- .03 SPOT ELEVATION DIFFERENCE (7-17-2020 to 8-18-2020)
- 8-2020 *SETTLEMENT FRONT CONTOUR FOR AREA WITH 1.44' PER 32 DAYS FOR CURRENT PERIOD OF DAYS
- *NONE FOR AUGUST 2020

NOTES:

- EXISTING CONTOURS DEVELOPED FROM SITE AERIAL TOPOGRAPHIC SURVEY BY COOPER AERIAL SURVEYS CO. ON DECEMBER 10, 2019.
- FOR CLARITY, NOT ALL SITE FEATURES MAY BE SHOWN.
- ELEVATION DIFFERENCE DETERMINED BY SUBTRACTING SPOT ELEVATIONS SURVEYED ON 7-17-20 FROM SPOT ELEVATIONS SURVEYED ON 8-18-20.
- SURVEY POINTS WERE PERFORMED USING GPS METHODS.
- SETTLEMENT RANGE SURFACE WAS GENERATED FROM THE SPOT ELEVATION DIFFERENCES.
- ELEVATION DIFFERENCES THAT ARE SHOWN AS NEGATIVE INDICATE SPOTS OF SETTLEMENT.
- 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.

BRIDGETON LANDFILL, LLC
13570 SAINT CHARLES ROCK RD
BRIDGETON, MO 63044

BRIDGETON LANDFILL
SETTLEMENT MONITORING

SETTLEMENT MAP 7/17/2020 - 8/18/2020

PROJECT NUMBER: BT-145 | FILE PATH: C:\Users\spins\Dropbox (Feezor Engineering)\Bridgeton100-149\BT-145 (Agreed Order Reporting)\Monthly Reports\2020\08-2020 Report\Internal Draft\Site Data\Settlement\QC\Settlement



AUGUST 2020		DRAWING NO.:
DESIGNED BY: IN		001
APPROVED BY: DRF		
REVISION	DATE	

ATTACHMENT F

LIQUID CHARACTERIZATION DATA AND DISCHARGE LOG

Bridgeton Landfill - Leachate PreTreatment Plant

August 2020

Liquid Characterization Data

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

Hauled Disposal to MSD – Bissell Point

Date	Waste	Source	Transporter	Quantity
8/1/2020				0
8/2/2020				0
8/3/2020				0
8/4/2020				0
8/5/2020				0
8/6/2020				0
8/7/2020				0
8/8/2020				0
8/9/2020				0
8/10/2020				0
8/11/2020				0
8/12/2020				0
8/13/2020				0
8/14/2020				0
8/15/2020	LPTP Activated Sludge/ Permeate	Tank 1 (T1)	MBI	0
8/16/2020				0
8/17/2020				0
8/18/2020				0
8/19/2020				0
8/20/2020				0
8/21/2020				0
8/22/2020				0
8/23/2020				0
8/24/2020				0
8/25/2020				0
8/26/2020				0
8/27/2020				0
8/28/2020				0
8/29/2020				0
8/30/2020				0
8/31/2020				0

Total

0

Direct Discharge to MSD

Date	Waste	Source	Quantity (gal)
8/1/2020			210,998
8/2/2020			163,208
8/3/2020			154,252
8/4/2020			205,318
8/5/2020			137,318
8/6/2020			257,132
8/7/2020			235,976
8/8/2020			138,466
8/9/2020			112,102
8/10/2020			246,286
8/11/2020			236,030
8/12/2020			232,188
8/13/2020			159,678
8/14/2020			170,386
8/15/2020	LPTP Permeate	Through Tank AST 97k (MSD Sampling Point 013)	183,442
8/16/2020			174,560
8/17/2020			179,792
8/18/2020			156,784
8/19/2020			176,392
8/20/2020			223,664
8/21/2020			194,424
8/22/2020			166,138
8/23/2020			139,382
8/24/2020			187,632
8/25/2020			147,542
8/26/2020			104,980
8/27/2020			149,210
8/28/2020			180,846
8/29/2020			224,160
8/30/2020			188,770
8/31/2020			140,432

Total

5,577,488

ATTACHMENT G

VOLUMES OF LEACHATE PROCESSED

Bridgeton Landfill - Leachate Volumes
August 2020

Total volume of leachate from the individual leachate collection sumps during the month. Additional non-LCS leachate was collected and the total volume was 2,805,889 gallons. Therefore, the total leachate collected was 3,708,748 gallons.

ID	Volume
LCS -1D	0
LCS-2D	0
LCS-3D	111,503
LCS-4B	0
LCS-5A	761,680
LCS-5B	27,236
LCS-6B	2,440