

Johnson, Sabrina O

From: Borderieux, Scott
Sent: Tuesday, October 8, 2019 1:57 PM
To: SWD_Waste
Subject: FW: 2nd and 3rd Qtr reports as requested
Attachments: 2019.06.21_RPT_Citrus_WACS 39859_19Q2 Gas Mon.pdf; 2019.08.14_RPT_Citrus_WACS 39859_19Q3 Gas Mon.pdf

Scott Borderieux
Engineering Specialist
Compliance Assurance
Florida Department of Environmental
Protection -- Southwest District
13051 N. Telecom Pkwy Suite 101
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(813) 470-5758 (direct line)
(813) 470-5995 - fax
scott.borderieux@floridadep.gov

From: Henry C. Norris <Henry.Norris@citrusbocc.com>
Sent: Tuesday, October 8, 2019 1:56 PM
To: Madden, Melissa <Melissa.Madden@FloridaDEP.gov>; Borderieux, Scott <Scott.Borderieux@FloridaDEP.gov>
Subject: 2nd and 3rd Qtr reports as requested



Henry C Norris Jr
Solid Waste Division Director
Citrus County Board of County Commissioners
230 W. Gulf to Lake Hwy
Lecanto, FL 34461
352.527.7670

"Please Note: Florida has a very broad Public Records Law. Most written communications to or from State and Local Officials regarding State or Local business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure."

June 21, 2019

Mr. Steve Morgan
Solid Waste Section
Department of Environmental Protection
13051 N Telecom Pkwy
Temple Terrace, FL 33637-0926

RE: Citrus County Central Landfill
Landfill Gas Monitoring Results – Second Quarter 2019
FDEP Permit No.: 21375-025-SO-01
Jones Edmunds Project Number: 03860-069-01

Dear Mr. Morgan:

Enclosed are the Second Quarter 2019 landfill gas monitoring results for the Citrus County Central Landfill conducted on May 6 and 7, 2019. The calibration log is also enclosed with this letter.

There were no detections of Methane in any of the landfill gas monitoring probes at any depths or in any of the on-site structures. Based on these sampling results from the probes at varying depths, Methane does not exceed 100% of the LEL at the compliance boundary and the site is in compliance with the landfill gas migration rule.

The County continues to measure landfill gas concentration in the groundwater monitoring wells. Methane was at or above 100% of the LEL in groundwater monitoring wells MW-3, MW-6, MW-7, MW-16, and MW-20.

The results from the measurements conducted in the new landfill gas monitoring probes along with the existing probes retrofitted with tubing installed to varying depths indicate that the site is in compliance with the landfill gas migration rules. If you have any questions regarding this information, please contact me at (352) 377-5821.

Sincerely,



Troy D. Hays, PG
Sr. Manager/Vice President
730 NE Waldo Road
Gainesville, FL 32618

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xc: Ray Oates, Citrus County

**LANDFILL GAS MONITORING RESULTS
CITRUS COUNTY CENTRAL LANDFILL**

Second Quarter 2019

General Data

Date:	5/6/2019 & 5/7/2019	Sampler:	Steve Messick
Time:	9:00 AM on 5/6/19 & 8:55 AM on 5/7/19	Sky Conditions:	Cloudy, Wind < 3 mph on 5/6/19 & Hazy, Wind < 3 mph on 5/7/19
Air Temperature (deg C):	27° on 5/6/19 & 26° on 5/7/19	Measuring Device:	Eagle RKI (SN E084039)

Sampling Data

Station I.D.	Date Sampled	Time Sampled	O2 %Volume	CO2 %Volume	Methane		Station Type
					Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	
MW-1R	5/7/2019	9:56	5.9	17.4	0.0	-	Groundwater Well
MW-2	5/6/2019	14:24	20.9	0.4	0.0	-	Groundwater Well
MW-3	5/7/2019	9:11	6.5	25.1	-	48.0	Groundwater Well
MW-5	5/7/2019	9:48	8.9	13.4	0.0	-	Groundwater Well
MW-6	5/7/2019	9:41	4.5	24.8	-	24.5	Groundwater Well
MW-7	5/7/2019	9:23	7.0	28.2	-	41.0	Groundwater Well
MW-8R	5/6/2019	9:40	15.0	8.4	0.0	-	Groundwater Well
MW-9	5/6/2019	9:50	14.1	10.0	0.0	-	Groundwater Well
MW-10	5/6/2019	13:24	13.2	12.6	0.0	-	Groundwater Well
MW-11	5/6/2019	11:11	20.9	0.0	0.0	-	Groundwater Well
MW-12	5/6/2019	10:56	19.1	1.8	0.0	-	Groundwater Well
MW-13	5/6/2019	10:43	20.9	0.0	0.0	-	Groundwater Well
MW-14	5/6/2019	10:37	7.0	13.2	52.0	-	Groundwater Well
MW-15	5/6/2019	10:32	5.3	15.0	61.0	-	Groundwater Well
MW-16	5/7/2019	8:58	5.7	27.0	-	61.5	Groundwater Well
MW-17	5/6/2019	10:25	6.9	12.0	0.0	-	Groundwater Well
MW-18	5/6/2019	15:13	12.9	8.2	0.0	-	Groundwater Well
MW-18D	5/6/2019	15:08	14.5	6.8	0.0	-	Groundwater Well
MW-19	5/6/2019	15:30	13.1	12.8	0.0	-	Groundwater Well
MW-19D	5/6/2019	13:36	19.1	1.8	0.0	-	Groundwater Well
MW-20	5/7/2019	9:33	7.6	27.0	-	39.5	Groundwater Well
MW-21	5/6/2019	14:47	7.8	14.6	68.0	-	Groundwater Well
MW-22	5/6/2019	14:55	5.0	13.8	83.0	-	Groundwater Well
MW-AA	5/6/2019	10:50	19.1	2.0	0.0	-	Groundwater Well
MW-B	5/6/2019	9:26	16.4	9.0	0.0	-	Groundwater Well
MW-E	5/6/2019	11:03	19.1	1.0	0.0	-	Groundwater Well
PZ-1	5/6/2019	9:56	20.9	0.0	0.0	-	Groundwater Well
PZ-2	5/6/2019	15:02	10.7	5.8	0.0	-	Groundwater Well

**LANDFILL GAS MONITORING RESULTS
CITRUS COUNTY CENTRAL LANDFILL**

General Data

Second Quarter 2019

Date:	5/6/2019 & 5/7/2019	Sampler:	Steve Messick
Time:	11:20 AM on 5/6/19 & 10:10 AM on 5/7/19	Sky Conditions:	Cloudy, wind < 3 mph on 5/6/19 & Overcast, wind <3 mph on 5/7/19
Air Temperature (deg C):	30° on 5/6/19 & 29° on 5/7/19	Measuring Device:	Eagle RKI (SN E084039)

Sampling Data

Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Methane		Station Type
						Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	
GP-1	5/7/2019	10:11	20	19.0	1.4	0.0	-	Gas Well
GP-1	5/7/2019	10:13	40	18.3	1.8	0.0	-	Gas Well
GP-2	5/7/2019	10:24	20	20.0	1.0	0.0	-	Gas Well
GP-2	5/7/2019	10:26	40	16.2	3.8	0.0	-	Gas Well
GP-3	5/7/2019	10:55	20	19.4	1.0	0.0	-	Gas Well
GP-3	5/7/2019	10:57	40	19.3	1.2	0.0	-	Gas Well
GP-4	5/6/2019	11:22	20	19.1	2.2	0.0	-	Gas Well
GP-4	5/6/2019	11:24	40	17.7	3.2	0.0	-	Gas Well
GP-5	5/6/2019	12:37	20	18.8	2.2	0.0	-	Gas Well
GP-5	5/6/2019	12:39	40	17.1	4.0	0.0	-	Gas Well
GP-6	5/6/2019	12:43	20	19.1	1.8	0.0	-	Gas Well
GP-6	5/6/2019	12:45	40	18.9	2.0	0.0	-	Gas Well
GP-7	5/6/2019	12:48	20	19.7	1.6	0.0	-	Gas Well
GP-7	5/6/2019	12:50	40	19.6	1.4	0.0	-	Gas Well
GP-8	5/6/2019	12:53	20	19.4	1.0	0.0	-	Gas Well
GP-8	5/6/2019	12:55	40	18.8	1.2	0.0	-	Gas Well
GP-9	5/6/2019	12:58	20	19.6	1.4	0.0	-	Gas Well
GP-9	5/6/2019	13:00	40	19.8	1.4	0.0	-	Gas Well
GP-10	5/6/2019	13:05	20	16.0	3.0	0.0	-	Gas Well
GP-10	5/6/2019	13:07	40	13.6	6.4	0.0	-	Gas Well
GP-11	5/6/2019	13:10	20	19.6	1.0	0.0	-	Gas Well
GP-11	5/6/2019	13:12	40	18.1	0.8	0.0	-	Gas Well
GP-12	5/6/2019	13:15	25	19.8	1.0	0.0	-	Gas Well
GP-12	5/6/2019	13:17	50	19.5	1.2	0.0	-	Gas Well
GP-12	5/6/2019	13:19	75	19.8	0.8	0.0	-	Gas Well
GP-13	5/6/2019	13:23	25	19.4	0.6	0.0	-	Gas Well
GP-13	5/6/2019	13:25	50	18.0	2.2	0.0	-	Gas Well
GP-13	5/6/2019	13:27	75	18.3	1.8	0.0	-	Gas Well
GP-14	5/6/2019	13:30	25	19.7	0.8	0.0	-	Gas Well
GP-14	5/6/2019	13:32	50	19.2	1.0	0.0	-	Gas Well
GP-14	5/6/2019	13:34	75	19.4	1.0	0.0	-	Gas Well
GP-15	5/6/2019	13:40	25	20.1	0.6	0.0	-	Gas Well
GP-15	5/6/2019	13:42	50	20.1	0.6	0.0	-	Gas Well

**LANDFILL GAS MONITORING RESULTS
CITRUS COUNTY CENTRAL LANDFILL**

General Data

Second Quarter 2019

Date:	5/6/2019 & 5/7/2019	Sampler:	Steve Messick
Time:	11:20 AM on 5/6/19 & 10:10 AM on 5/7/19	Sky Conditions:	Cloudy, wind < 3 mph on 5/6/19 & Overcast, wind <3 mph on 5/7/19
Air Temperature (deg C):	30° on 5/6/19 & 29° on 5/7/19	Measuring Device:	Eagle RKI (SN E084039)

Sampling Data

Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Methane		Station Type
						Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	
GP-15	5/6/2019	13:44	75	20.5	0.4	0.0	-	Gas Well
GP-16	5/6/2019	13:46	25	19.6	1.0	0.0	-	Gas Well
GP-16	5/6/2019	13:48	50	19.2	1.4	0.0	-	Gas Well
GP-16	5/6/2019	13:50	75	19.4	1.2	0.0	-	Gas Well
GP-17	5/6/2019	13:55	25	16.4	2.4	0.0	-	Gas Well
GP-17	5/6/2019	13:57	50	15.8	2.8	0.0	-	Gas Well
GP-17	5/6/2019	13:59	75	16.5	2.4	0.0	-	Gas Well
GP-18	5/6/2019	14:02	25	19.8	1.4	0.0	-	Gas Well
GP-18	5/6/2019	14:04	50	19.6	1.2	0.0	-	Gas Well
GP-18	5/6/2019	14:06	75	20.1	1.0	0.0	-	Gas Well
GP-19	5/6/2019	14:15	25	20.1	1.2	0.0	-	Gas Well
GP-19	5/6/2019	14:17	50	20.1	1.2	0.0	-	Gas Well
GP-19	5/6/2019	14:19	75	20.3	1.0	0.0	-	Gas Well
GP-20	5/6/2019	13:52	105	17.7	1.4	0.0	-	Gas Well
GP-21	5/6/2019	14:08	115	20.9	0.0	0.0	-	Gas Well
GP-22	5/7/2019	10:07	70	16.6	0.0	0.0	-	Gas Well
GP-23	5/7/2019	10:02	100	9.3	2.6	0.0	-	Gas Well
GP-24	5/7/2019	10:35	70	12.5	0.0	0.0	-	Gas Well
GP-25	5/7/2019	10:40	100	19.5	0.0	0.0	-	Gas Well
GP-26	5/7/2019	11:03	70	16.8	2.2	0.0	-	Gas Well
GP-27	5/7/2019	11:10	100	15.6	2.8	0.0	-	Gas Well
GP-28	5/6/2019	11:29	70	18.3	2.0	0.0	-	Gas Well
GP-29	5/6/2019	11:26	100	20.7	0.0	0.0	-	Gas Well
GP-30	5/6/2019	13:37	105	19.1	1.4	0.0	-	Gas Well
Admin Building	5/7/2019	8:35	-	20.9	0.0	0.0	-	Structure
Mod Bldg	5/7/2019	8:40	-	20.9	0.0	0.0	-	Structure
Shop	5/7/2019	8:45	-	20.9	0.0	0.0	-	Structure
Scale House	5/7/2019	8:48	-	20.9	0.0	0.0	-	Structure
Firing Range	5/6/2019	9:12	-	20.9	0.0	0.0	-	7 Structures
Haz Waste Drop off Center	5/7/2019	9:07	-	20.9	0.0	0.0	-	4 Structures
Storage Building	5/7/2019	8:50	-	20.9	0.0	0.0	-	Structure

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

SITE NAME Citrus County - Central DATE 5/6/19
 INSTRUMENT (MAKE/MODEL#) Eagle Multi-Gas Detector INSTRUMENT # GNV 80023*
 Instrument Calibration Date 11/11/16 Reference Meter Book Eagle Meter Book 1

PARAMETER: [check only one]

- TEMPERATURE CONDUCTIVITY SALINITY pH ORP
 TURBIDITY RESIDUAL Cl DO OTHER LANDFILL GAS

STANDARDS: [Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]

Standard A 15.33 % Methane (Volume), 15.04 % CO₂ (Volume), Balance Nitrogen
 Standard Source Airgas Lot # 122-40110286-1
 Standard B Zero Air (0 % Methane) (0% CO₂) (21.0 % O₂)
 Standard Source Airgas Lot # 55-400483127-1
 Standard C % LEL Methane, % CO₂ (Volume), 0% O₂ (Volume), Bal Nitrogen
 Standard Source _____ Lot # _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	CH ₄ STD VALUE (% Vol)	CO ₂ STD VALUE (% Vol)	O ₂ STD VALUE (% Vol)	INSTRUMENT RESPONSE (%) DEVIATION (LIMITS +/- 5%)						CALIB- RATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
						CH ₄		CO ₂		O ₂				
						RES	DEV	RES	DEV	RES	DEV			
19/05/06	0854	A	15.33	15.04	—	15.5	<2	15.0	<1	—	—	Yes	Init.	ARM
	0859	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init.	ARM
	1141	A	15.33	15.04	—	15.5	<2	15.0	<1	—	—	Yes	Cont.	ARM
	1144	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	ARM
	1544	A	15.33	15.04	—	15.0	<3	15.4	<3	—	—	Yes	Cont.	ARM
	1546	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	ARM
19/05/07	0828	A	15.33	15.04	—	15.5	<2	15.2	<2	—	—	Yes	Init.	ARM
	0830	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init.	ARM
	1120	A	15.33	15.04	—	15.0	<3	14.6	<3	—	—	Yes	Cont.	ARM
	1125	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	ARM

* Eagle SN E084039

August 14, 2019

Mr. Steve Morgan
Solid Waste Section
Department of Environmental Protection
13051 N Telecom Pkwy
Temple Terrace, FL 33637-0926

RE: Citrus County Central Landfill
Landfill Gas Monitoring Results – Third Quarter 2019
FDEP Permit No.: 21375-025-SO-01
Jones Edmunds Project Number: 03860-069-01

Dear Mr. Morgan:

Enclosed are the Third Quarter 2019 landfill gas monitoring results for the Citrus County Central Landfill conducted on July 22 and 24, 2019. The calibration log is also enclosed with this letter.

There were no detections of Methane in any of the landfill gas monitoring probes at any depths or in any of the on-site structures. Based on these sampling results from the probes at varying depths, Methane does not exceed 100% of the LEL at the compliance boundary and the site is in compliance with the landfill gas migration rule.

The County continues to measure landfill gas concentration in the groundwater monitoring wells. Methane was at or above 100% of the LEL in groundwater monitoring wells MW-1R, MW-3, MW-5, MW-7, MW-16, MW-20, and MW-21.

The results from the measurements conducted in the new landfill gas monitoring probes along with the existing probes retrofitted with tubing installed to varying depths indicate that the site is in compliance with the landfill gas migration rules. If you have any questions regarding this information, please contact me at (352) 377-5821.

Sincerely,



Troy D. Hays, PG
Sr. Manager/Vice President
730 NE Waldo Road
Gainesville, FL 32618

\\Gnvmain\envserv\EnvDocs\Citrus County\Gas Mon\2019\19Q3\19Q3_Citrus_Gas Mon_Letter.docx

xc: Ray Oates, Citrus County

**LANDFILL GAS MONITORING RESULTS
CITRUS COUNTY CENTRAL LANDFILL**

Third Quarter 2019

General Data

Date:	7/22/19 & 7/24/19	Sampler:	Steve Messick
Time:	12:45 PM on 7/22/19 & 10:13 AM on 7/24/19	Sky Conditions:	Scattered Clouds, Wind < 3 mph on 7/22/19 & Cloudy, Wind 0-7 mph on 7/24/19
Air Temperature (deg C):	35° on 7/22/19 & 28° on 7/24/19	Measuring Device:	Eagle RKI (SN E084039)

Sampling Data

Station I.D.	Date Sampled	Time Sampled	O2 %Volume	CO2 %Volume	Methane		Station Type
					Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	
MW-1R	7/22/2019	15:42	0.7	32.0	-	34.5	Groundwater Well
MW-2	7/24/2019	10:13	20.2	2.6	6.0	-	Groundwater Well
MW-3	7/22/2019	15:19	0.7	37.6	-	66.5	Groundwater Well
MW-5	7/22/2019	15:05	0.6	27.8	-	11.0	Groundwater Well
MW-6	7/22/2019	15:01	16.4	9.0	0.0	-	Groundwater Well
MW-7	7/22/2019	15:25	0.7	44.2	-	61.5	Groundwater Well
MW-8R	7/22/2019	14:31	8.9	13.0	0.0	-	Groundwater Well
MW-9	7/22/2019	14:23	1.3	9.0	86.0	-	Groundwater Well
MW-10	7/22/2019	13:58	9.3	19.2	0.0	-	Groundwater Well
MW-11	7/22/2019	13:26	11.8	4.0	0.0	-	Groundwater Well
MW-12	7/22/2019	13:16	2.8	8.6	25.0	-	Groundwater Well
MW-13	7/22/2019	13:06	5.2	11.8	0.0	-	Groundwater Well
MW-14	7/22/2019	13:01	1.1	16.8	96.0	-	Groundwater Well
MW-15	7/22/2019	12:55	0.7	19.6	97.0	-	Groundwater Well
MW-16	7/22/2019	15:12	0.3	38.4	-	66.5	Groundwater Well
MW-17	7/22/2019	12:47	4.1	14.6	0.0	-	Groundwater Well
MW-18	7/22/2019	13:53	9.3	11.4	0.0	-	Groundwater Well
MW-18D	7/22/2019	13:50	13.1	7.4	0.0	-	Groundwater Well
MW-19	7/22/2019	14:01	9.6	19.0	0.0	-	Groundwater Well
MW-19D	7/22/2019	14:06	17.6	2.2	0.0	-	Groundwater Well
MW-20	7/22/2019	15:34	0.6	37.8	-	61.0	Groundwater Well
MW-21	7/22/2019	13:39	0.6	22.2	-	5.5	Groundwater Well
MW-22	7/22/2019	13:32	6.3	7.6	0.0	-	Groundwater Well
MW-AA	7/22/2019	13:11	5.3	11.8	0.0	-	Groundwater Well
MW-B	7/22/2019	14:40	12.6	12.6	0.0	-	Groundwater Well
MW-E	7/22/2019	13:21	8.7	3.2	24.0	-	Groundwater Well
PZ-1	7/22/2019	14:18	1.3	9.0	84.0	-	Groundwater Well
PZ-2	7/22/2019	13:44	3.2	22.2	-	5.0	Groundwater Well

**LANDFILL GAS MONITORING RESULTS
CITRUS COUNTY CENTRAL LANDFILL**

Third Quarter 2019

General Data

Date:	7/22/19 & 7/24/19	Sampler:	Steve Messick
Time:	12:45 PM on 7/22/19 & 10:13 AM on 7/24/19	Sky Conditions:	Scattered Clouds, Wind < 3 mph on 7/22/19 & Cloudy, Wind 0-7 mph on 7/24/19
Air Temperature (deg C):	35° on 7/22/19 & 28° on 7/24/19	Measuring Device:	Eagle RKI (SN E084039)

Sampling Data

Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Methane		Station Type
						Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	
GP-1	7/22/2019	15:58	20	17.4	2.8	0.0	-	Gas Well
GP-1	7/22/2019	15:56	40	16.9	3.2	0.0	-	Gas Well
GP-2	7/22/2019	16:20	20	16.0	3.8	0.0	-	Gas Well
GP-2	7/22/2019	16:18	40	12.1	6.4	0.0	-	Gas Well
GP-3	7/22/2019	16:24	20	17.5	2.2	0.0	-	Gas Well
GP-3	7/22/2019	16:23	40	17.6	2.2	0.0	-	Gas Well
GP-4	7/24/2019	9:54	20	17.9	2.8	0.0	-	Gas Well
GP-4	7/24/2019	9:52	40	17.0	4.2	0.0	-	Gas Well
GP-5	7/24/2019	9:58	20	18.2	2.4	0.0	-	Gas Well
GP-5	7/24/2019	10:00	40	16.9	4.2	0.0	-	Gas Well
GP-6	7/24/2019	15:19	20	17.9	2.8	0.0	-	Gas Well
GP-6	7/24/2019	15:17	40	17.9	3.0	0.0	-	Gas Well
GP-7	7/24/2019	15:13	20	18.4	2.2	0.0	-	Gas Well
GP-7	7/24/2019	15:11	40	18.3	2.4	0.0	-	Gas Well
GP-8	7/24/2019	15:04	20	17.9	1.8	0.0	-	Gas Well
GP-8	7/24/2019	15:02	40	17.2	2.2	0.0	-	Gas Well
GP-9	7/24/2019	14:35	20	18.9	1.8	0.0	-	Gas Well
GP-9	7/24/2019	14:33	40	18.8	1.8	0.0	-	Gas Well
GP-10	7/24/2019	14:25	20	13.7	6.0	0.0	-	Gas Well
GP-10	7/24/2019	14:23	40	12.1	7.6	0.0	-	Gas Well
GP-11	7/24/2019	14:20	20	18.6	1.4	0.0	-	Gas Well
GP-11	7/24/2019	14:18	40	17.6	1.6	0.0	-	Gas Well
GP-12	7/24/2019	14:13	25	19.1	1.8	0.0	-	Gas Well
GP-12	7/24/2019	14:10	50	19.1	1.8	0.0	-	Gas Well
GP-12	7/24/2019	14:07	75	20.9	0.2	0.0	-	Gas Well
GP-13	7/24/2019	14:02	25	17.6	2.0	0.0	-	Gas Well
GP-13	7/24/2019	14:00	50	16.9	2.4	0.0	-	Gas Well
GP-13	7/24/2019	13:58	75	17.2	2.2	0.0	-	Gas Well
GP-14	7/24/2019	13:54	25	19.2	1.2	0.0	-	Gas Well
GP-14	7/24/2019	13:52	50	19.1	1.2	0.0	-	Gas Well
GP-14	7/24/2019	13:50	75	20.1	0.8	0.0	-	Gas Well
GP-15	7/24/2019	12:58	25	19.6	1.4	0.0	-	Gas Well
GP-15	7/24/2019	12:56	50	19.6	1.4	0.0	-	Gas Well
GP-15	7/24/2019	12:54	75	20.1	1.0	0.0	-	Gas Well
GP-16	7/24/2019	12:28	25	19.1	1.4	0.0	-	Gas Well

**LANDFILL GAS MONITORING RESULTS
CITRUS COUNTY CENTRAL LANDFILL**

Third Quarter 2019

General Data

Date:	7/22/19 & 7/24/19	Sampler:	Steve Messick
Time:	12:45 PM on 7/22/19 & 10:13 AM on 7/24/19	Sky Conditions:	Scattered Clouds, Wind < 3 mph on 7/22/19 & Cloudy, Wind 0-7 mph on 7/24/19
Air Temperature (deg C):	35° on 7/22/19 & 28° on 7/24/19	Measuring Device:	Eagle RK1 (SN E084039)

Sampling Data

Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Methane		Station Type
						Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	
GP-16	7/24/2019	12:26	50	18.8	1.6	0.0	-	Gas Well
GP-16	7/24/2019	12:24	75	18.9	1.6	0.0	-	Gas Well
GP-17	7/24/2019	11:01	25	15.4	3.8	0.0	-	Gas Well
GP-17	7/24/2019	10:58	50	15.1	4.2	0.0	-	Gas Well
GP-17	7/24/2019	10:55	75	15.1	4.2	0.0	-	Gas Well
GP-18	7/24/2019	10:42	25	19.2	1.2	0.0	-	Gas Well
GP-18	7/24/2019	10:40	50	19.1	1.4	0.0	-	Gas Well
GP-18	7/24/2019	10:38	75	19.0	1.4	0.0	-	Gas Well
GP-19	7/24/2019	10:24	25	19.8	1.2	0.0	-	Gas Well
GP-19	7/24/2019	10:22	50	19.8	1.2	0.0	-	Gas Well
GP-19	7/24/2019	10:20	75	20.2	1.2	0.0	-	Gas Well
GP-20	7/24/2019	12:20	105	17.3	1.0	0.0	-	Gas Well
GP-21	7/24/2019	10:34	115	5.9	0.0	0.0	-	Gas Well
GP-22	7/22/2019	15:53	70	14.9	0.0	0.0	-	Gas Well
GP-23	7/22/2019	15:50	100	5.0	3.4	0.0	-	Gas Well
GP-24	7/22/2019	16:03	70	7.4	0.0	0.0	-	Gas Well
GP-25	7/22/2019	16:06	100	9.2	0.8	0.0	-	Gas Well
GP-26	7/22/2019	16:26	70	15.7	3.0	0.0	-	Gas Well
GP-27	7/22/2019	16:28	100	14.6	3.0	0.0	-	Gas Well
GP-28	7/24/2019	9:50	70	17.2	3.2	0.0	-	Gas Well
GP-29	7/24/2019	9:30	100	14.7	0.0	0.0	-	Gas Well
GP-30	7/24/2019	12:52	105	18.7	1.2	0.0	-	Gas Well
Admin Building	7/24/2019	8:20	-	20.9	0.0	0.0	-	Structure
Mod Bldg	7/24/2019	8:35	-	20.9	0.0	0.0	-	Structure
Shop	7/24/2019	8:29	-	20.9	0.0	0.0	-	Structure
Scale House	7/24/2019	8:25	-	20.9	0.0	0.0	-	Structure
Firing Range	7/22/2019	15:53	-	20.9	0.0	0.0	-	7 Structures
Haz Waste Drop off Center	7/22/2019	9:02	-	20.9	0.0	0.0	-	4 Structures
Storage Building	7/24/2019	8:38	-	20.9	0.0	0.0	-	Structure
Electric Building	7/24/2019	8:48	-	20.9	0.0	0.0	-	Structure

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

SITE NAME Citrus Co. Central Class I LF. DATE 7/22/19 & 7/24/19

INSTRUMENT (MAKE/MODEL#) Eagle Multi-Gas Detector INSTRUMENT # GNV 80023*

Instrument Calibration Date 11/11/16 Reference Meter Book Eagle Meter Book 1

PARAMETER: [check only one]

- TEMPERATURE CONDUCTIVITY SALINITY pH ORP
 TURBIDITY RESIDUAL CI DO OTHER LANDFILL GAS

STANDARDS: [Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]

Standard A 14.99% Methane (Volume), 14.95 % CO₂ (Volume), Balance Nitrogen

Standard Source Airgas Lot # 122-401175248-1

Standard B Zero Air (0 % Methane) (0% CO₂) (21.0 % O₂)

Standard Source Airgas Lot # 55-400483127-1

Standard C % LEL Methane, % CO₂ (Volume), 0% O₂ (Volume), Bal Nitrogen

Standard Source _____ Lot # _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	CH ₄ STD VALUE (% Vol)	CO ₂ STD VALUE (% Vol)	O ₂ STD VALUE (% Vol)	INSTRUMENT RESPONSE (%) DEVIATION (LIMITS +/- 5%)						CALIB- RATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
						CH ₄		CO ₂		O ₂				
						RES	DEV	RES	DEV	RES	DEV			
19/07/22	1239	A	14.99	14.95	-	15.0	<1	14.8	<2	-	-	Y	I	Am
	1241	B	-	-	21.0	-	-	-	-	20.9	<1	Y	I	Am
	1633	A	14.99	14.95	-	15.0	<1	15.2	<2	-	-	Y	C	Sam
	1635	B	-	-	21.0	-	-	-	-	20.9	<1	Y	C	Sam
19/07/24	0815	A	14.99	14.95	-	15.0	<1	15.0	<1	-	-	Y	I	Am
	0817	B	-	-	21.0	-	-	-	-	20.9	<1	Y	I	Am
	1524	A	14.99	14.95	-	15.0	<1	15.2	<2	-	-	Y	C	Am
	1526	B	-	-	21.0	-	-	-	-	20.9	-	Y	C	Am

* Eagle SN E084039