

Black, Alexis

From: Patrick Kardish <PKardish@jonesedmunds.com>
Sent: Friday, August 7, 2020 3:37 PM
To: SWD_Waste
Cc: Black, Alexis; Henry.Norris@citrusbocc.com; Troy Hays; Elizabeth Kennelley; Dan.Sherlock@citrusbocc.com; Traci J. Schoenrock
Subject: Emailing: 2020.07.23_RPT_Citrus Co LF_WACS 39859_20Q3 LFG
Attachments: 2020.07.23_RPT_Citrus Co LF_WACS 39859_20Q3 LFG.pdf

Good Afternoon,

Attached is the Third Quarter 2020 Landfill Gas Monitoring Report for the Citrus County Central Landfill (WACS 39859).

Please let us know if you have any problems opening the attachment or have questions or comments concerning the report.

Thank you,

Patrick Kardish

Environmental Data Analyst



p. 352.377.5821 x. 1411

JONESEDMUNDS.COM

730 NE Waldo Road, Gainesville, FL 32641



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July 23, 2020

Ms. Alexis Black
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 2020
FDEP Permit No.: 21375-025-SO-01
FDEP Modification No.: 21375-026-SO-MM
Jones Edmunds Project Number: 03860-075-01

Dear Ms. Black:

Enclosed are the Third Quarter 2020 landfill gas monitoring results for the Citrus County Central Landfill conducted on July 15 and 16, 2020. The calibration log is also enclosed with this letter.

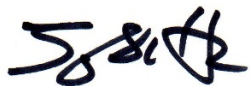
There were no detections of Methane in any of the landfill gas monitoring probes at any depth or in any of the on-site structures. Based on these sampling results from the probes at varying depths, Methane does not exceed 100% of the LEL at the compliance boundary and the site is in compliance with the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

The County continues to measure Methane concentrations in the groundwater monitoring wells. Methane was at or above 100% of the LEL in groundwater monitoring wells MW-3, MW-5, MW-6, MW-7, MW-16, MW-20, MW-21, and MW-B.

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

M:\EnvDocs\Citrus County\Gas Mon\2020\20Q3\20Q3_Citrus_Gas Mon_Letter.docx

xc: Henry Norris, Citrus County
Dan Sherlock, Citrus County
Traci Schoenrock, Citrus County

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

General Data

Gas Monitoring Probes (Wells) and Structures
Third Quarter 2020

Date:	7/15/2020 & 7/16/2020	Sampler:	Steve Messick
Time:	8:15 (7/15) & 8:05 A.M. (7/16)	Sky Conditions:	Clear, wind <3 mph (7/15) & Clear, wind <3 mph (7/16)
Air Temperature (deg C):	30 (7/15) & 30 (7/16)	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	7/15/2020	9:16	20	19.6	1.4	0.0	-	Gas Well
GP-1	7/15/2020	9:17	40	19.0	2.0	0.0	-	Gas Well
GP-2	7/16/2020	10:47	20	18.8	2.2	0.0	-	Gas Well
GP-2	7/16/2020	10:49	40	15.2	5.8	0.0	-	Gas Well
GP-3	7/16/2020	10:34	20	20.1	1.2	0.0	-	Gas Well
GP-3	7/16/2020	10:36	40	20.2	1.2	0.0	-	Gas Well
GP-4	7/15/2020	14:43	20	18.4	3.4	0.0	-	Gas Well
GP-4	7/15/2020	14:44	40	18.1	3.6	0.0	-	Gas Well
GP-5	7/15/2020	13:21	20	18.6	3.6	0.0	-	Gas Well
GP-5	7/15/2020	13:22	40	18.5	3.8	0.0	-	Gas Well
GP-6	7/15/2020	13:17	20	19.0	2.8	0.0	-	Gas Well
GP-6	7/15/2020	13:18	40	19.0	2.6	0.0	-	Gas Well
GP-7	7/15/2020	13:12	20	19.3	2.2	0.0	-	Gas Well
GP-7	7/15/2020	13:13	40	19.3	2.0	0.0	-	Gas Well
GP-8	7/15/2020	13:08	20	20.2	1.4	0.0	-	Gas Well
GP-8	7/15/2020	13:09	40	19.1	1.6	0.0	-	Gas Well
GP-9	7/15/2020	13:00	20	20.3	1.6	0.0	-	Gas Well
GP-9	7/15/2020	13:01	40	20.3	1.6	0.0	-	Gas Well
GP-10	7/15/2020	12:55	20	16.4	5.4	0.0	-	Gas Well
GP-10	7/15/2020	12:56	40	15.4	6.4	0.0	-	Gas Well
GP-11	7/15/2020	12:51	20	20.5	1.2	0.0	-	Gas Well
GP-11	7/15/2020	12:52	40	19.6	1.2	0.0	-	Gas Well
GP-12	7/15/2020	12:45	25	20.7	1.6	0.0	-	Gas Well
GP-12	7/15/2020	12:46	50	20.5	1.6	0.0	-	Gas Well
GP-12	7/15/2020	12:47	75	20.9	1.2	0.0	-	Gas Well
GP-13	7/15/2020	12:40	25	20.4	1.2	0.0	-	Gas Well
GP-13	7/15/2020	12:41	50	19.3	1.6	0.0	-	Gas Well
GP-13	7/15/2020	12:42	75	19.8	1.2	0.0	-	Gas Well
GP-14	7/15/2020	12:30	25	20.8	0.8	0.0	-	Gas Well
GP-14	7/15/2020	12:32	50	20.7	1.0	0.0	-	Gas Well
GP-14	7/15/2020	12:34	75	20.8	1.0	0.0	-	Gas Well
GP-15	7/15/2020	11:09	25	20.5	1.2	0.0	-	Gas Well
GP-15	7/15/2020	11:10	50	20.3	0.8	0.0	-	Gas Well
GP-15	7/15/2020	11:11	75	20.7	0.8	0.0	-	Gas Well
GP-16	7/15/2020	11:04	25	20.3	1.0	0.0	-	Gas Well
GP-16	7/15/2020	11:05	50	19.7	1.2	0.0	-	Gas Well
GP-16	7/15/2020	11:06	75	19.9	1.2	0.0	-	Gas Well

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

General Data

Gas Monitoring Probes (Wells) and Structures
Third Quarter 2020

Date:	7/15/2020 & 7/16/2020	Sampler:	Steve Messick
Time:	8:15 (7/15) & 8:05 A.M. (7/16)	Sky Conditions:	Clear, wind <3 mph (7/15) & Clear, wind <3 mph (7/16)
Air Temperature (deg C):	30 (7/15) & 30 (7/16)	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-17	7/15/2020	10:54	25	18.3	2.6	0.0	-	Gas Well
GP-17	7/15/2020	10:55	50	16.5	4.2	0.0	-	Gas Well
GP-17	7/15/2020	10:57	75	16.8	3.6	0.0	-	Gas Well
GP-18	7/15/2020	10:48	25	19.9	1.0	0.0	-	Gas Well
GP-18	7/15/2020	10:49	50	19.3	1.2	0.0	-	Gas Well
GP-18	7/15/2020	10:50	75	19.4	1.0	0.0	-	Gas Well
GP-19	7/15/2020	10:39	25	20.7	0.8	0.0	-	Gas Well
GP-19	7/15/2020	10:40	50	20.3	1.0	0.0	-	Gas Well
GP-19	7/15/2020	10:41	75	20.3	1.0	0.0	-	Gas Well
GP-20	7/15/2020	11:01	105	18.2	1.6	0.0	-	Gas Well
GP-21	7/15/2020	10:46	115	7.9	0.4	0.0	-	Gas Well
GP-22	7/15/2020	9:20	70	18.0	0.0	0.0	-	Gas Well
GP-23	7/15/2020	9:22	100	12.0	2.4	0.0	-	Gas Well
GP-24	7/16/2020	10:53	70	13.1	0.0	0.0	-	Gas Well
GP-25	7/16/2020	10:56	100	20.9	0.0	0.0	-	Gas Well
GP-26	7/16/2020	10:27	70	18.3	2.0	0.0	-	Gas Well
GP-27	7/16/2020	10:31	100	17.6	2.2	0.0	-	Gas Well
GP-28	7/15/2020	14:46	70	18.1	0.0	0.0	-	Gas Well
GP-29	7/15/2020	14:48	100	17.8	0.0	0.0	-	Gas Well
GP-30	7/15/2020	11:13	105	19.1	0.0	0.0	-	Gas Well
Admin Building	7/15/2020	8:35	-	20.9	0.0	0.0	-	Structure
Mod Bldg	7/15/2020	8:54	-	20.9	0.0	0.0	-	Structure
Shop	7/15/2020	8:48	-	20.9	0.0	0.0	-	Structure
Scale House	7/15/2020	8:43	-	20.9	0.0	0.0	-	Structure
Firing Range	7/15/2020	9:40	-	20.9	0.0	0.0	-	7 Structures
Haz Waste Drop-Off Center	7/16/2020	8:51	-	20.9	0.0	0.0	-	4 Structures
Equipment Container 1	7/16/2020	8:45	-	20.9	0.0	0.0	-	Structure
Storage Building	7/15/2020	8:51	-	20.9	0.0	0.0	-	Structure
Small Shed	7/15/2020	8:57	-	20.9	0.0	0.0	-	Structure

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

Groundwater Monitoring Wells and Piezometers
Third Quarter 2020

General Data

Date:	7/15/2020 & 7/16/2020	Sampler:	Steve Messick
Time:	8:15 (7/15) & 9:08 (7/16)	Sky Conditions:	Clear, wind <3 mph (7/15) & Hazy, wind <3 mph (7/16)
Air Temperature (deg C):	30 (7/15) & 30 (7/16)	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	7/16/2020	11:02	16.5	5.4	0.0	-	Groundwater Well
MW-2	7/15/2020	10:30	20.9	0.2	1.0	-	Groundwater Well
MW-3	7/16/2020	8:58	7.4	30.2	-	43.5	Groundwater Well
MW-5	7/16/2020	9:30	8.7	19.6	-	7.0	Groundwater Well
MW-6	7/16/2020	9:28	6.8	36.4	-	54.0	Groundwater Well
MW-7	7/16/2020	9:15	6.7	36.6	-	54.5	Groundwater Well
MW-8R	7/15/2020	9:56	15.9	7.4	2.0	-	Groundwater Well
MW-9	7/15/2020	10:05	15.0	9.0	1.0	-	Groundwater Well
MW-10	7/16/2020	10:06	13.3	15.4	0.0	-	Groundwater Well
MW-11	7/15/2020	14:38	18.8	1.4	0.0	-	Groundwater Well
MW-12	7/15/2020	14:24	18.0	2.4	0.0	-	Groundwater Well
MW-13	7/15/2020	14:10	20.9	0.6	0.0	-	Groundwater Well
MW-14	7/15/2020	13:56	9.3	14.0	60.0	-	Groundwater Well
MW-15	7/15/2020	13:49	8.5	15.4	67.0	-	Groundwater Well
MW-16	7/15/2020	9:08	7.2	30.2	-	50.0	Groundwater Well
MW-17	7/15/2020	13:35	18.6	2.8	3.0	-	Groundwater Well
MW-18	7/16/2020	10:18	19.4	1.2	0.0	-	Groundwater Well
MW-18D	7/16/2020	10:13	13.8	14.6	0.0	-	Groundwater Well
MW-19	7/16/2020	10:01	11.0	7.0	1.0	-	Groundwater Well
MW-19D	7/16/2020	9:56	20.9	0.0	0.0	-	Groundwater Well
MW-20	7/16/2020	8:35	5.7	35.8	-	48.5	Groundwater Well
MW-21	7/16/2020	9:41	6.8	22.4	-	8.0	Groundwater Well
MW-22	7/16/2020	9:46	7.5	16.8	80.0	-	Groundwater Well
MW-AA	7/15/2020	14:17	19.8	1.8	0.0	-	Groundwater Well
MW-B	7/15/2020	9:49	8.1	28.0	-	51.0	Groundwater Well
MW-E	7/15/2020	14:30	17.9	2.4	1.0	-	Groundwater Well
PZ-1	7/15/2020	10:11	20.9	0.0	0.0	-	Groundwater Well
PZ-2	7/16/2020	10:41	15.5	6.4	0.0	-	Groundwater Well

Field Data
and
Instrument Calibration Record

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

General Data

Gas Monitoring Probes (Wells) and Structures

Date:	7-15-20	Sampler:	Steve Messick
Time:	0815	Sky Conditions:	Clear, Wind < 3MPH
Air Temperature (deg C):	30°C	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	7-15-20	0916	20	19.6	1.4	0	—	Gas Well
GP-1	↓	0917	40	19.0	2.0	0	—	Gas Well
GP-2			20					Gas Well
GP-2			40					Gas Well
GP-3			20					Gas Well
GP-3			40					Gas Well
GP-4	7-15-20	1443	20	18.4	3.4	0	—	Gas Well
GP-4		1444	40	18.1	3.6	0	—	Gas Well
GP-5		1321	20	18.6	3.6	0	—	Gas Well
GP-5		1322	40	18.5	3.8	0	—	Gas Well
GP-6		1317	20	19.0	2.8	0	—	Gas Well
GP-6		1318	40	19.0	2.6	0	—	Gas Well
GP-7		1312	20	19.3	2.2	0	—	Gas Well
GP-7		1313	40	19.3	2.0	0	—	Gas Well
GP-8		1308	20	20.2	1.4	0	—	Gas Well
GP-8		1309	40	19.1	1.6	0	—	Gas Well
GP-9		1300	20	20.3	1.6	0	—	Gas Well
GP-9		1301	40	20.3	1.6	0	—	Gas Well
GP-10		1255	20	16.4	5.4	0	—	Gas Well
GP-10		1256	40	15.4	6.4	0	—	Gas Well
GP-11		1251	20	20.5	1.2	0	—	Gas Well
GP-11		1252	40	19.6	1.2	0	—	Gas Well
GP-12		1245	25	20.7	1.6	0	—	Gas Well
GP-12		1246	50	20.5	1.6	0	—	Gas Well
GP-12		1247	75	20.9	1.2	0	—	Gas Well
GP-13		1240	25	20.4	1.2	0	—	Gas Well
GP-13		1241	50	19.3	1.6	0	—	Gas Well
GP-13		1242	75	19.8	1.2	0	—	Gas Well
GP-14		1230	25	20.8	0.8	0	—	Gas Well
GP-14		1232	50	20.7	1.0	0	—	Gas Well
GP-14		1234	75	20.8	1.0	0	—	Gas Well
GP-15		1109	25	20.5	1.2	0	—	Gas Well
GP-15		1110	50	20.3	0.8	0	—	Gas Well
GP-15		1111	75	20.7	0.8	0	—	Gas Well
GP-16		1104	25	20.3	1.0	0	—	Gas Well
GP-16		1105	50	19.7	1.2	0	—	Gas Well
GP-16	↓	1106	75	19.9	1.2	0	—	Gas Well

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

General Data

Gas Monitoring Probes (Wells) and Structures

Date:	7-15-20	Sampler:	Steve Messick
Time:	0815	Sky Conditions:	Clear, Wind ~3 MPH
Air Temperature (deg C):	30°C	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-17	7-15-20	1054	25	18.3	2.6	Ø	—	Gas Well
GP-17		1055	50	16.5	4.2	Ø	—	Gas Well
GP-17		1057	75	16.8	3.6	Ø	—	Gas Well
GP-18		1048	25	19.9	1.0	Ø	—	Gas Well
GP-18		1049	50	19.3	1.2	Ø	—	Gas Well
GP-18		1050	75	19.4	1.0	Ø	—	Gas Well
GP-19		1039	25	20.7	0.8	Ø	—	Gas Well
GP-19		1040	50	20.3	1.0	Ø	—	Gas Well
GP-19		1041	75	20.3	1.0	Ø	—	Gas Well
GP-20		1101	105	18.2	1.6	Ø	—	Gas Well
GP-21		1046	115	7.9	0.4	Ø	—	Gas Well
GP-22		0920	70	18.0	0.0	Ø	—	Gas Well
GP-23	↙	0922	100	12.0	2.4	Ø	—	Gas Well
GP-24			70					Gas Well
GP-25			100					Gas Well
GP-26			70					Gas Well
GP-27			100					Gas Well
GP-28	7-15-20	1446	70	18.1	0.0	Ø	—	Gas Well
GP-29		1448	100	17.8	0.0	Ø	—	Gas Well
GP-30		1113	105	19.1	0.0	Ø	—	Gas Well
Admin Building		0835	-	20.9	0.0	Ø	—	Structure
Mod Bldg		0854	-	20.9	0.0	Ø	—	Structure
Shop		0848	-	20.9	0.0	Ø	—	Structure
Scale House		0843	-	20.9	0.0	Ø	—	Structure
Firing Range	↙	0740	-	20.9	0.0	Ø	—	7 Structures
Haz Waste Drop-Off Center			-					4 Structures
Equipment Container			-					Structure
Storage Building		0851	-	20.9	0.0	Ø	—	Structure
Small Shed		0857	-	20.9	0.0	Ø	—	
			-					
			-					
			-					
			-					

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

Groundwater Monitoring Wells and Piezometers

General Data

Date:	7-15-20	Sampler:	Steve Messick
Time:	0815	Sky Conditions:	Clear, Wind < 3 MPH
Air Temperature (deg C):	30°C	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							Groundwater Well
MW-2	7-15-20	1030	20.9	0.2	1	—	Groundwater Well
MW-3							Groundwater Well
MW-5							Groundwater Well
MW-6							Groundwater Well
MW-7							Groundwater Well
MW-8R	7-15-20	0956	15.9	7.4	2	—	Groundwater Well
MW-9	*	1005	15.0	9.0	1	—	Groundwater Well
MW-10							Groundwater Well
MW-11	7-15-20	1438	18.8	1.4	Ø	—	Groundwater Well
MW-12	↓	1424	18.0	2.4	Ø	—	Groundwater Well
MW-13	↓	1410	20.9	0.6	Ø	—	Groundwater Well
MW-14	↓	1356	9.3	14.0	60	—	Groundwater Well
MW-15	↓	1349	8.5	15.4	67	—	Groundwater Well
MW-16	↓	0908	7.2	30.2	—	50.0	Groundwater Well
MW-17	↓	1335	18.6	2.8	3	—	Groundwater Well
MW-18							Groundwater Well
MW-18D							Groundwater Well
MW-19							Groundwater Well
MW-19D							Groundwater Well
MW-20							Groundwater Well
MW-21							Groundwater Well
MW-22							Groundwater Well
MW-AA	7-15-20	1417	19.8	1.8	Ø	—	Groundwater Well
MW-B	↓	0949	8.1	28.0	—	51.0	Groundwater Well
MW-E	↓	1430	17.9	2.4	1	—	Groundwater Well
PZ-1	↓	1011	20.9	0.0	Ø	—	Groundwater Well
PZ-2							Groundwater Well

I lowered 90 to 95 feet of 0.125" tubing down into well to get reading closer to the water column.

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

General Data

Gas Monitoring Probes (Wells) and Structures

Date:	7-16-20	Sampler:	Steve Messick
Time:	0805	Sky Conditions:	Clear, Wind < 3 MPH
Air Temperature (deg C):	30°C	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			20					Gas Well
GP-1			40					Gas Well
GP-2	7-16-20	1047	20	18.8	2.2	Ø		Gas Well
GP-2		1049	40	15.2	5.8	Ø		Gas Well
GP-3		1034	20	20.1	1.2	Ø		Gas Well
GP-3		1036	40	20.2	1.2	Ø		Gas Well
GP-4			20					Gas Well
GP-4			40					Gas Well
GP-5			20					Gas Well
GP-5			40					Gas Well
GP-6			20					Gas Well
GP-6			40					Gas Well
GP-7			20					Gas Well
GP-7			40					Gas Well
GP-8			20					Gas Well
GP-8			40					Gas Well
GP-9			20					Gas Well
GP-9			40					Gas Well
GP-10			20					Gas Well
GP-10			40					Gas Well
GP-11			20					Gas Well
GP-11			40					Gas Well
GP-12			25					Gas Well
GP-12			50					Gas Well
GP-12			75					Gas Well
GP-13			25					Gas Well
GP-13			50					Gas Well
GP-13			75					Gas Well
GP-14			25					Gas Well
GP-14			50					Gas Well
GP-14			75					Gas Well
GP-15			25					Gas Well
GP-15			50					Gas Well
GP-15			75					Gas Well
GP-16			25					Gas Well
GP-16			50					Gas Well
GP-16			75					Gas Well

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

General Data

Gas Monitoring Probes (Wells) and Structures

Date:	7-16-20	Sampler:	Steve Messick
Time:	0805	Sky Conditions:	Clear, Wind < 3MPH
Air Temperature (deg C):	30°C	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-17			25					Gas Well
GP-17			50					Gas Well
GP-17			75					Gas Well
GP-18			25					Gas Well
GP-18			50					Gas Well
GP-18			75					Gas Well
GP-19			25					Gas Well
GP-19			50					Gas Well
GP-19			75					Gas Well
GP-20			105					Gas Well
GP-21			115					Gas Well
GP-22			70					Gas Well
GP-23			100					Gas Well
GP-24	7-16-20	1053	70	13.1	0.0	Ø		Gas Well
GP-25		1056	100	20.9	0.0	Ø		Gas Well
GP-26		1027	70	18.3	2.0	Ø		Gas Well
GP-27		1031	100	17.6	2.2	Ø		Gas Well
GP-28			70					Gas Well
GP-29			100					Gas Well
GP-30			105					Gas Well
Admin Building			-					Structure
Mod Bldg			-					Structure
Shop			-					Structure
Scale House			-					Structure
Firing Range			-					7 Structures
Haz Waste Drop-Off Center	7-16-20	0851	-	20.9	0.0	Ø		4 Structures
Equipment Container		0845	-	20.9	0.0	Ø		Structure
Storage Building			-					Structure
Small Shed			-					
			-					
			-					
			-					
			-					

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

Groundwater Monitoring Wells and Piezometers

General Data

Date:	7-16-20	Sampler:	Steve Messick
Time:	0908	Sky Conditions:	Hazy, wind < 3 MPH
Air Temperature (deg C):	30°C	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	7-16-20	1102	16.5	5.4	Ø	—	Groundwater Well
MW-2							Groundwater Well
MW-3	7-16-20	0858	7.4	30.2	—	43.5	Groundwater Well
MW-5		0930	8.7	19.6	—	7.0	Groundwater Well
MW-6		0925	6.8	36.4	—	54.0	Groundwater Well
MW-7		0915	6.7	36.6	—	54.5	Groundwater Well
MW-8R							Groundwater Well
MW-9							Groundwater Well
MW-10	7-16-20	1006	13.3	15.4	Ø	—	Groundwater Well
MW-11							Groundwater Well
MW-12							Groundwater Well
MW-13							Groundwater Well
MW-14							Groundwater Well
MW-15							Groundwater Well
MW-16							Groundwater Well
MW-17							Groundwater Well
MW-18	7-16-20	1018	19.4	1.2	Ø	—	Groundwater Well
MW-18D		1013	13.8	14.6	Ø	—	Groundwater Well
MW-19		1001	11.0	7.0	—	—	Groundwater Well
MW-19D		0956	20.9	0.0	Ø	—	Groundwater Well
MW-20		0835	5.7	35.8	—	48.5	Groundwater Well
MW-21		0941	6.8	22.4	—	8.0	Groundwater Well
MW-22		0946	7.5	16.8	80	—	Groundwater Well
MW-AA							Groundwater Well
MW-B							Groundwater Well
MW-E							Groundwater Well
PZ-1							Groundwater Well
PZ-2	7-16-20	1041	15.5	6.4	Ø	—	Groundwater Well

I lowered 90 to 95 feet of 0.125" tubing down into the well to get reading closer to water column.

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

SITE NAME Citrus County - Central LF DATE 7-15-20

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

Instrument Calibration Date July 11, 2019 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 15.09 % Methane (Volume), 14.81 % CO₂ (Volume), Balance Nitrogen

Standard Source Airgas Lot # 122-401489459-1

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			
20/07/15	0818	A	15.09	14.81	—	15.0	<1	15.0	<2	—	—	Yes	Init.	SM
	0824	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init.	SM
	1125	A	15.09	14.81	—	15.0	<1	14.8	<1	—	—	Yes	Cont.	SM
	1128	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	SM
	1451	A	15.09	14.81	—	15.0	<1	15.0	<2	—	—	Yes	Cont.	SM
	1455	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	SM
20/07/16	0823	A	15.09	14.81	—	15.0	<1	15.0	<2	—	—	Yes	Init.	SM
	0825	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init.	SM
	1110	A	15.09	14.81	—	15.0	<1	14.6	<2	—	—	Yes	Cont.	SM
	1113	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	SM

* Eagle SN E084039