

Smith, George

From: Elizabeth D. Kennelley, MS, CEPM <ekennelley@jonesedmunds.com>
Sent: Thursday, July 14, 2022 5:07 PM
To: Madden, Melissa; SWD_Waste
Cc: DAN S. SHERLOCK; Joshua L. Younce; Matthew S. Baer
Subject: Emailing: 2022.07.13_RPT_Citrus Co LF_WACS 39859_22Q2 LFG.pdf
Attachments: 2022.07.13_RPT_Citrus Co LF_WACS 39859_22Q2 LFG.pdf

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good afternoon,

Attached is the Second Quarter 2022 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,

Elizabeth D. Kennelley, MS, CEPM
Department Manager

P. 352.377.5821 X. 1416
JONESEDMUNDS.COM
730 NE Waldo Road, Gainesville, FL. 32641

The information contained in this message including any attachment is confidential. It is intended for the private use of the intended addressee only. If you are not the intended addressee, please immediately notify the sender by reply email and destroy the original transmission and any attachment. Email transmission of information cannot be guaranteed to be free of error or other defect. If verification is required, request a hard-copy version. The sender disclaims liability for any defects in this message caused by email transmission including a virus. It is the responsibility of the recipient to ensure that this message is virus free.

Your message is ready to be sent with the following file or link attachments:

2022.07.13_RPT_Citrus Co LF_WACS 39859_22Q2 LFG.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

July 13, 2022

Ms. Melissa Madden
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 2022
FDEP Permit No.: 21375-025-SO-01
FDEP Modification No.: 21375-026-SO-MM
Jones Edmunds Project Number: 03860-086-01

Dear Ms. Madden:

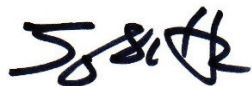
Enclosed are the Second Quarter 2022 landfill gas monitoring results for the Citrus County Central Landfill conducted on April 20 and 21, 2022. The calibration log is also enclosed with this letter.

Methane was not detected in any gas monitoring well on site. Based on these sampling results from the wells at varying depths, Methane does not exceed 100% Lower-Explosive-Limit (LEL) at the compliance boundary and the site is in compliance with the landfill gas migration rule. Methane was not detected in the on-site structures.

The County continues to measure Methane in the groundwater monitoring wells. Methane was detected below the LEL in groundwater monitoring wells MW-5, MW-15, MW-17, and MW-21. Methane was detected at or above 100% LEL in groundwater monitoring wells MW-6, MW-7, MW-16, and MW-20.

Results from this sampling event indicate that the site is in compliance with the landfill gas migration rule. 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\2022\22Q2\22Q2_Citrus_Gas Mon_Letter.docx

xc: Dan Sherlock, Citrus County
Joshua Younce, Citrus County
Matthew Baer, Citrus County

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

Second Quarter 2022

General Data

Sampler:	Steve Messick / Eulalio Ramos
Measuring Device:	Eagle RKI (SN E084039)

Date	Time	Air Temperature (deg C)	Sky Conditions
4/20/2022	9:20	23	Clear, Wind < 3mph
4/21/2022	9:15	21	Cloudy, Wind 0-5mph E

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	4/20/2022	15:23	20	18.9	2.0	0.0	-	Gas Well
GP-1	4/20/2022	15:24	40	18.5	2.4	0.0	-	Gas Well
GP-2	4/20/2022	15:03	20	19.4	1.4	0.0	-	Gas Well
GP-2	4/20/2022	15:04	40	16.9	3.0	0.0	-	Gas Well
GP-3	4/20/2022	14:49	20	20.4	1.2	0.0	-	Gas Well
GP-3	4/20/2022	14:50	40	20.0	1.0	0.0	-	Gas Well
GP-4	4/20/2022	14:38	20	18.6	3.0	0.0	-	Gas Well
GP-4	4/20/2022	14:39	40	18.5	3.2	0.0	-	Gas Well
GP-5	4/20/2022	14:35	20	18.1	3.4	0.0	-	Gas Well
GP-5	4/20/2022	14:36	40	18.4	3.4	0.0	-	Gas Well
GP-6	4/20/2022	14:31	20	18.7	2.8	0.0	-	Gas Well
GP-6	4/20/2022	14:32	40	18.9	2.6	0.0	-	Gas Well
GP-7	4/20/2022	14:26	20	19.2	1.8	0.0	-	Gas Well
GP-7	4/20/2022	14:27	40	19.2	1.8	0.0	-	Gas Well
GP-8	4/20/2022	14:22	20	19.2	1.4	0.0	-	Gas Well
GP-8	4/20/2022	14:23	40	18.6	1.6	0.0	-	Gas Well
GP-9	4/20/2022	14:16	20	19.3	1.8	0.0	-	Gas Well
GP-9	4/20/2022	14:17	40	19.2	1.8	0.0	-	Gas Well
GP-10	4/20/2022	14:11	20	14.7	6.4	0.0	-	Gas Well
GP-10	4/20/2022	14:12	40	14.6	6.6	0.0	-	Gas Well
GP-11	4/20/2022	14:07	20	19.3	1.2	0.0	-	Gas Well
GP-11	4/20/2022	14:08	40	19.0	1.2	0.0	-	Gas Well
GP-12	4/20/2022	14:01	25	19.6	1.4	0.0	-	Gas Well
GP-12	4/20/2022	14:02	50	19.5	1.4	0.0	-	Gas Well
GP-12	4/20/2022	14:03	75	19.8	1.2	0.0	-	Gas Well
GP-13	4/20/2022	13:54	25	18.7	1.8	0.0	-	Gas Well
GP-13	4/20/2022	13:55	50	18.6	1.6	0.0	-	Gas Well
GP-13	4/20/2022	13:56	75	18.4	1.6	0.0	-	Gas Well
GP-14	4/20/2022	13:49	25	19.8	0.6	0.0	-	Gas Well
GP-14	4/20/2022	13:50	50	19.2	1.0	0.0	-	Gas Well
GP-14	4/20/2022	13:51	75	19.3	1.0	0.0	-	Gas Well
GP-15	4/20/2022	13:41	25	20.3	1.0	0.0	-	Gas Well
GP-15	4/20/2022	13:42	50	20.1	0.8	0.0	-	Gas Well
GP-15	4/20/2022	13:43	75	20.2	0.8	0.0	-	Gas Well
GP-16	4/20/2022	13:33	25	19.3	1.2	0.0	-	Gas Well
GP-16	4/20/2022	13:34	50	19.3	1.2	0.0	-	Gas Well
GP-16	4/20/2022	13:35	75	20.8	0.2	0.0	-	Gas Well
GP-17	4/20/2022	13:26	25	16.7	3.8	0.0	-	Gas Well
GP-17	4/20/2022	13:27	50	13.1	6.8	0.0	-	Gas Well
GP-17	4/20/2022	13:28	75	16.3	3.8	0.0	-	Gas Well
GP-18	4/20/2022	13:16	25	18.1	2.0	0.0	-	Gas Well
GP-18	4/20/2022	13:17	50	17.9	2.0	0.0	-	Gas Well
GP-18	4/20/2022	13:18	75	19.3	0.8	0.0	-	Gas Well
GP-19	4/20/2022	13:08	25	19.7	1.0	0.0	-	Gas Well
GP-19	4/20/2022	13:09	50	19.5	1.0	0.0	-	Gas Well
GP-19	4/20/2022	13:10	75	19.8	0.8	0.0	-	Gas Well

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

Second Quarter 2022

General Data

Sampler:	Steve Messick / Eulalio Ramos
Measuring Device:	Eagle RKI (SN E084039)

Date	Time	Air Temperature (deg C)	Sky Conditions
4/20/2022	9:20	23	Clear, Wind < 3mph
4/21/2022	9:15	21	Cloudy, Wind 0-5mph E

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-20	4/20/2022	13:37	105	18.0	1.6	0.0	-	Gas Well
GP-21	4/20/2022	15:21	115	20.7	0.2	0.0	CO = 30 PPM	Gas Well
GP-22	4/20/2022	15:28	70	17.1	0.0	0.0	CO = 120 PPM	Gas Well
GP-23	4/20/2022	15:26	100	12.4	2.4	0.0	-	Gas Well
GP-24	4/20/2022	15:09	70	14.6	0.8	0.0	-	Gas Well
GP-25	4/20/2022	15:06	100	20.9	0.0	0.0	-	Gas Well
GP-26	4/20/2022	14:55	70	18.1	2.4	0.0	-	Gas Well
GP-27	4/20/2022	14:54	100	17.5	2.2	0.0	-	Gas Well
GP-28	4/20/2022	14:43	70	18.6	2.8	0.0	-	Gas Well
GP-29	4/20/2022	14:41	100	20.9	0.0	0.0	-	Gas Well
GP-30	4/20/2022	13:45	105	19.0	1.0	0.0	CO = 31 PPM	Gas Well
Admin Building	4/21/2022	9:35	-	20.9	0.0	0.0	-	Structure
Scale House	4/21/2022	9:43	-	20.9	0.0	0.0	-	Structure
Shop	4/21/2022	9:47	-	20.9	0.0	0.0	-	Structure
Storage Shed	4/21/2022	9:49	-	20.9	0.0	0.0	-	Structure
Mod Building	4/21/2022	9:51	-	20.9	0.0	0.0	-	Structure
Equipment Building	4/21/2022	9:53	-	20.9	0.0	0.0	-	Structure
Electronics Container	4/21/2022	9:56	-	20.9	0.0	0.0	-	Container
Chemical Container #1	4/21/2022	9:59	-	20.9	0.0	0.0	-	Container
Haz Waste Drop-Off Center	4/21/2022	10:10	-	20.9	0.0	0.0	-	4 Structures
Paints	4/21/2022	10:06	-	20.9	0.0	0.0	-	Container
Chemical Container #2	4/21/2022	10:03	-	20.9	0.0	0.0	-	Container
Firing Range	4/20/2022	9:36	-	20.9	0.0	0.0	-	2 Structures

CITRUS COUNTY CENTRAL LANDFILL
LANDFILL GAS MONITORING RESULTS

Second Quarter 2022

General Data

Sampler:	Steve Messick / Eulalio Ramos
Measuring Device:	Eagle RKI (SN E084039)

Date	Time	Air Temperature (deg C)	Sky Conditions
4/20/2022	9:20	23	Clear, Wind < 3mph
4/21/2022	9:15	21	Cloudy, Wind 0-5mph E

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	
MW-1R	4/20/2022	15:17	90	19.3	2.0	0.0	-	Groundwater Well
MW-2	4/20/2022	15:53	90	20.8	0.4	0.0	-	Groundwater Well
MW-3	4/21/2022	10:18	90	16.6	3.6	0.0	-	Groundwater Well
MW-5	4/21/2022	11:03	90	5.2	21.2	10.0	-	Groundwater Well
MW-6	4/21/2022	10:56	90	13.2	36.0	-	26.5	Groundwater Well
MW-7	4/21/2022	10:28	90	5.2	39.6	-	61.0	Groundwater Well
MW-8R	4/20/2022	10:31	90	17.5	6.0	0.0	-	Groundwater Well
MW-9	4/20/2022	10:38	90	17.1	6.2	0.0	-	Groundwater Well
MW-10	4/21/2022	11:38	90	15.8	13.0	0.0	-	Groundwater Well
MW-11	4/20/2022	10:54	90	20.9	0.0	0.0	-	Groundwater Well
MW-12	4/20/2022	11:08	90	20.9	0.0	0.0	-	Groundwater Well
MW-13	4/20/2022	11:21	90	20.9	0.0	0.0	-	Groundwater Well
MW-14	4/20/2022	11:27	90	20.1	1.2	0.0	-	Groundwater Well
MW-15	4/20/2022	11:33	90	10	12.0	40.0	-	Groundwater Well
MW-16	4/21/2022	10:47	90	5.7	39.0	-	45.0	Groundwater Well
MW-17	4/20/2022	11:42	90	9.6	12.4	40.0	-	Groundwater Well
MW-18	4/21/2022	11:45	90	16.0	12.2	0.0	-	Groundwater Well
MW-18D	4/21/2022	11:50	90	17.9	4.8	0.0	-	Groundwater Well
MW-19	4/21/2022	11:33	90	18.4	2.2	0.0	-	Groundwater Well
MW-19D	4/21/2022	11:27	90	16.4	4.0	0.0	-	Groundwater Well
MW-20	4/21/2022	10:37	90	4.8	42.0	-	60.0	Groundwater Well
MW-21	4/21/2022	11:11	90	5.4	21.0	10.0	-	Groundwater Well
MW-22	4/21/2022	11:16	90	8.4	12.4	0.0	-	Groundwater Well
MW-AA	4/20/2022	11:13	90	20.4	1.0	0.0	-	Groundwater Well
MW-B	4/20/2022	10:25	90	19.1	6.0	0.0	-	Groundwater Well
MW-E	4/20/2022	11:02	90	20.9	0.0	0.0	-	Groundwater Well
PZ-1	4/20/2022	10:43	90	20.9	0.0	0.0	-	Groundwater Well
PZ-2	4/21/2022	11:22	90	12.0	6.0	0.0	-	Groundwater Well

Instrument Calibration Record

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

SITE NAME Citrus County Central Landfill **DATE** 4-20-22
INSTRUMENT (MAKE/MODEL#) Eagle Multi-Gas Detector **INSTRUMENT #** GNV 80023*
Instrument Calibration Date 01/12/2022 **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 15.72% Methane (Volume), 14.71 % CO₂ (Volume), Balance Nitrogen

Standard Source Airgas Lot # 122-401950036-1

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

Standard Source Airgas Lot # 55-400485109-1

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			
22/04/20	0917	A	15.7	14.7	—	16.0	<2	14.6	<1	—	—	Yes	Init.	Am
	0921	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init.	Am
	1158	A	15.7	14.7	—	16.5	<5	15.4	<5	—	—	Yes	cont	ER
	1200	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	cont	ER
	1302	A	15.7	14.7	—	15.5	<2	14.6	<1	—	—	Yes	cont	ER
	1306	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	cont	ER
	1530	A	15.7	14.7	—	16.0	<2	15.4	<5	—	—	Yes	cont	ER
	1532	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	cont	ER
22/04/21	0917	A	15.7	14.7	—	15.5	<1	14.6	<1	—	—	Yes	Init	ER
	0920	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init	ER
	1200	A	15.7	14.7	—	16.0	<1	15.0	<1	—	—	Yes	cont	ER
	1202	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	cont	ER

* Eagle SN E084039