

Integrity • Knowledge • Service

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 - Third 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 Third Quarter 2022 landfill gas monitoring results for the Citrus County Central Landfill conducted on July 28 and 29, 2022. The calibration log is also enclosed with this letter.

Methane was not detected in any landfill 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-14 and MW-E. Methane was detected at or above 100% LEL in groundwater monitoring wells MW-3, MW-5, MW-6, MW-7, MW-11, 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\22Q3\22Q3 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

Third Quarter 2022

General Data

Sampler:	Royce Gamble
Measuring Device:	Eagle RKI (SN E084039)

Date	Time	Air Temperature (deg C)	Sky Conditions
7/28/2022	9:30	30	Mostly Clear
7/29/2022	-	-	-

Sampling Data

	nane	Metha						
Station Type	Peak Recorded Concentration as % Volume	Peak Recorded Concentration as % LEL	CO2 %Volume	O2 %Volume	Depth of Intake (Feet)	Time Sampled	Date Sampled	Station I.D.
Gas Well	-	0.0	1.0	20.6	20	9:59	7/28/2022	GP-1
Gas Well	-	0.0	1.6	20.1	40	10:02	7/28/2022	GP-1
Gas Well	-	0.0	2.0	19.5	20	10:30	7/28/2022	GP-2
Gas Well	-	0.0	6.0	15.2	40	10:32	7/28/2022	GP-2
Gas Well	-	0.0	1.4	20.2	20	10:50	7/28/2022	GP-3
Gas Well	-	0.0	1.2	20.5	40	10:51	7/28/2022	GP-3
Gas Well	-	0.0	2.4	19.9	20	11:56	7/29/2022	GP-4
Gas Well	-	0.0	2.6	19.5	40	11:57	7/29/2022	GP-4
Gas Well	-	0.0	2.8	19.3	20	11:48	7/29/2022	GP-5
Gas Well	-	0.0	2.4	19.8	40	11:49	7/29/2022	GP-5
Gas Well	-	0.0	2.4	19.8	20	11:45	7/29/2022	GP-6
Gas Well	-	0.0	2.4	19.5	40	11:46	7/29/2022	GP-6
Gas Well	-	0.0	1.8	19.8	20	11:37	7/29/2022	GP-7
Gas Well	-	0.0	0.6	20.9	40	11:38	7/29/2022	GP-7
Gas Well	-	0.0	1.2	20.2	20	11:34	7/29/2022	GP-8
Gas Well	-	0.0	1.0	20.5	40	11:35	7/29/2022	GP-8
Gas Well	-	0.0	1.6	20.4	20	11:28	7/29/2022	GP-9
Gas Well	-	0.0	1.8	20.1	40	11:30	7/29/2022	GP-9
Gas Well	-	0.0	4.3	17.0	20	11:23	7/29/2022	GP-10
Gas Well	_	0.0	5.0	16.3	40	11:25	7/29/2022	GP-10
Gas Well	_	0.0	1.2	20.7	20	11:19	7/29/2022	GP-11
Gas Well	-	0.0	1.2	19.5	40	11:20	7/29/2022	GP-11
Gas Well	-	0.0	1.2	19.6	25	15:28	7/28/2022	GP-12
Gas Well	-	0.0	1.4	19.6	50	15:30	7/28/2022	GP-12
Gas Well	_	0.0	1.2	19.5	75	15:32	7/28/2022	GP-12
Gas Well	-	0.0	1.8	18.9	25	15:02	7/28/2022	GP-12
Gas Well	-	0.0	1.8	18.7	50	15:04	7/28/2022	GP-13
Gas Well	-	0.0	1.4	18.6	75	15:06	7/28/2022	GP-13
Gas Well	-	0.0	1.4	19.8	25	14:42	7/28/2022	GP-14
Gas Well	-	0.0	1.6	19.4	50	14:46	7/28/2022	GP-14
Gas Well	-	0.0	1.0	19.4	75	14:46	7/28/2022	GP-14
Gas Well	-	0.0	1.4	20.5	25	14:46	7/28/2022	GP-14
Gas Well	-	0.0	1.4	20.5	50	14:32	7/28/2022	GP-15 GP-15
	-		0.8	20.4	75	+	7/28/2022	GP-15 GP-15
Gas Well	-	0.0	1.6	19.5	25	14:35 14:22	7/28/2022	GP-15 GP-16
Gas Well	-	0.0	0.6	20.9	50	+	· · ·	GP-16 GP-16
	-	0.0	1.2		75	14:24	7/28/2022 7/28/2022	GP-16 GP-16
Gas Well Gas Well	-	0.0	6.6	19.8 14.1	25	14:25 14:14	7/28/2022	GP-16 GP-17
	-			14.1	50	14:14	7/28/2022	GP-17 GP-17
Gas Well	-	0.0	6.0 2.6	18.2	75	14:15	7/28/2022	GP-17 GP-17
						+	· · ·	
Gas Well	-	0.0	2.6	18.0	25	14:07	7/28/2022	GP-18
Gas Well	-	0.0	2.4	18.4	50	14:08	7/28/2022	GP-18
Gas Well	-	0.0	1.8	19.0	75	14:09	7/28/2022	GP-18
Gas Well	-	0.0	1.2	20.2	25	14:00	7/28/2022	GP-19
Gas Well	CO = 4 PPM	0.0	1.2	20.1	50 75	14:02 14:04	7/28/2022 7/28/2022	GP-19 GP-19

CITRUS COUNTY CENTRAL LANDFILL LANDFILL GAS MONITORING RESULTS

Third Quarter 2022

General Data

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Measuring Device:	Eagle RKI (SN E084039)						

Date	Time	Air Temperature (deg C)	Sky Conditions
7/28/2022	9:30	30	Mostly Clear
7/29/2022	-	-	-

Sampling Data

						Meth	Methane			
Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	Station Type		
GP-20	7/28/2022	14:27	105	18.2	1.6	0.0	CO = 34 PPM	Gas Well		
GP-21	7/28/2022	14:11	115	20.9	0.0	0.0	-	Gas Well		
GP-22	7/28/2022	10:04	70	17.6	0.0	0.0	-	Gas Well		
GP-23	7/28/2022	10:07	100	20.9	0.0	0.0	-	Gas Well		
GP-24	7/28/2022	10:35	70	15.7	0.3	0.0	-	Gas Well		
GP-25	7/28/2022	10:36	100	20.9	0.0	0.0	-	Gas Well		
GP-26	7/28/2022	10:53	70	18.3	2.1	0.0	-	Gas Well		
GP-27	7/28/2022	10:55	100	18.0	1.9	0.0	-	Gas Well		
GP-28	7/29/2022	11:59	70	20.3	1.4	0.0	-	Gas Well		
GP-29	7/29/2022	12:01	100	20.9	0.0	0.0	-	Gas Well		
GP-30	7/28/2022	14:37	105	19.7	1.2	0.0	CO = 25 PPM	Gas Well		
Admin Building	7/28/2022	16:18	-	20.9	0.0	0.0	-	Structure		
Scale House	7/28/2022	15:55	-	20.9	0.0	0.0	-	Structure		
Shop	7/28/2022	16:00	-	20.9	0.0	0.0	-	Structure		
Storage Shed	7/28/2022	16:04	-	20.9	0.0	0.0	-	Structure		
Mod Building	7/28/2022	16:06	-	20.9	0.0	0.0	-	Structure		
Equipment Building	7/29/2022	13:10	-	20.9	0.0	0.0	-	Structure		
Electronics Container	7/29/2022	13:11	-	20.9	0.0	0.0	-	Container		
Chemical Container #1	7/29/2022	13:12	-	20.9	0.0	0.0	-	Container		
Haz Waste Drop-Off Center	7/29/2022	13:15	-	20.9	0.0	0.0	-	4 Structures		
Paints	7/29/2022	13:16	-	20.9	0.0	0.0	-	Container		
Chemical Container #2	7/29/2022	13:17	-	20.9	0.0	0.0	-	Container		
Firing Range	7/29/2022	12:32	-	20.9	0.0	0.0	-	2 Structures		

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Date	Time	Air Temperature (deg C)	Sky Conditions
7/28/2022	9:30	30	Mostly Clear
7/29/2022	-	-	-

Sampling Data

	nane	Meth							
Station Type	Peak Recorded Concentration as % Volume	Peak Recorded Concentration as % LEL	CO2 %Volume	O2 %Volume	Depth of Intake (Feet)	Time Sampled	Date Sampled	Station I.D.	
Groundwater \	-	0.0	1.8	19.8	-	9:55	7/28/2022	MW-1R	
Groundwater \	-	0.0	0.0	20.9	-	13:50	7/28/2022	MW-2	
Groundwater \	25.0	-	4.8	17.1	-	13:28	7/28/2022	MW-3	
Groundwater \	9.0	-	19.6	8.6	-	12:51	7/28/2022	MW-5	
Groundwater \	8.0	-	16.2	10.4	-	12:55	7/28/2022	MW-6	
Groundwater \	43.0	-	23.1	11.4	-	13:36	7/28/2022	MW-7	
Groundwater \	-	0.0	0.4	20.9	-	12:29	7/28/2022	MW-8R	
Groundwater \	-	0.0	0.4	20.9	-	12:05	7/28/2022	MW-9	
Groundwater \	-	0.0	9.2	17.5	-	11:21	7/28/2022	MW-10	
Groundwater \	93.0	-	23.1	11.3	-	10:26	7/29/2022	MW-11	
Groundwater \	-	0.0	0.0	20.9	-	10:37	7/29/2022	MW-12	
Groundwater \	-	0.0	0.6	20.9	-	10:49	7/29/2022	MW-13	
Groundwater	-	1.0	1.0	20.9	-	10:55	7/29/2022	MW-14	
Groundwater	-	0.0	0.0	20.9	-	11:02	7/29/2022	MW-15	
Groundwater	-	0.0	2.2	20.5	-	13:08	7/28/2022	MW-16	
Groundwater	-	0.0	0.2	20.9	-	11:08	7/29/2022	MW-17	
Groundwater	-	0.0	0.4	20.9	-	11:06	7/28/2022	MW-18	
Groundwater	-	0.0	1.0	17.9	-	11:04	7/28/2022	MW-18D	
Groundwater	-	0.0	4.8	18.9	-	11:25	7/28/2022	MW-19	
Groundwater	-	0.0	0.6	20.7	-	11:30	7/28/2022	MW-19D	
Groundwater	40.5	-	30.0	9.7	-	15:38	7/28/2022	MW-20	
Groundwater	-	0.0	5.8	12.9	-	10:22	7/28/2022	MW-21	
Groundwater	-	0.0	1.2	20.6	-	10:18	7/28/2022	MW-22	
Groundwater	-	0.0	0.6	20.9	-	10:41	7/29/2022	MW-AA	
Groundwater	-	0.0	5.3	19.5	-	12:38	7/28/2022	MW-B	
Groundwater	-	4.0	0.4	20.9	-	10:32	7/29/2022	MW-E	
Groundwater	-	0.0	0.0	20.9	-	11:40	7/28/2022	PZ-1	
Groundwater	-	0.0	8.6	13.1	-	10:47	7/28/2022	PZ-2	
Groundwater	-	0.0	0.0	20.9	-	12:18	7/29/2022	MW-7S	
Groundwater	-	0.0	0.0	20.9	-	12:20	7/29/2022	MW-7D	
Groundwater \	=	0.0	0.0	20.9	_	12:32	7/29/2022	MW-20D	



DEP-SOP-001/01 FT 1600 Field Measurement of Landfill Gas

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SOP Revision Date: February 1, 2004

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

SITE NAME Litros		terul		7/28/22							
INSTRUMENT (MAKE/MODEL#) <u>Eagle Multi-Gas Detector</u> INSTRUMENT # <u>GNV 80023*</u>											
Instrument Calibration Date <u>01/12/2022</u> Reference Meter Book <u>Eagle Meter Book 1</u>											
PARAMETER: [check o	nly one]										
☐ TEMPERATURE	CONDUCTIVITY	☐ SALINITY	☐ pH	ORP							
☐ TURBIDITY	☐ RESIDUAL CI	□ DO	X OTHER_	LANDFILL GAS							
STANDARDS: [Specify th values, and the date the stand			rigin of the stand	dards, the standard							
Standard A15.7	% Methane (Volum	e), 14.7 % CO ₂ (Volume), Ba	alance Nitrogen							
Standard Source	Airgas	Lot #	122-4019500	36-1							
Standard B Zer	o Air (0 % Methane)) (0% CO ₂) (21.	0 % O ₂)	1							
Standard Source	Airgas	Lot #	55-4004851	09-1							
Standard C%	LEL Methane,	% CO ₂ (Volume),	0% O₂ (Volu	me), Bal Nitrogen							
Standard Source		Lot#									

DATE	TIME (A,		CH₄ STD	CO ₂	O ₂ STD			MENT I)	CALIB- RATED	TYPE	SAMPLER		
(yy/mm/dd)	(hr:min)	B, C)	VALUE (% Vol)	VALUE (% Vol)	VALUE (% Vol)	С	H₄	C	O ₂	C)2	(YES,	(INIT, CONT)	INITIALS		
		-,		-,	(20 00.)	(,0 00,1)	(70 101)	RES	DEV	RES	DEV	RES	DEV	110,		
22/4/28	0938	A	15.7	14.7	_	15.5	41	14.6	4	_	-	yes	INIT	2		
Ĺ	0939	В		-	21.0	_	-	_	-	20.9	41	y 65	INIT	100		
	1627	A	15.7	14.7	-	15.0	45	14.6	۷1	-		yes	CONT	12		
1	1428	В	_	-	21.0	_	i	-		20.9	41	yes	CONT	321		
22/7/29	1015	A	15.7	14.7	1	15.5	41	14.4	41	-	-	yes	INIT	Di		
1	1014	В	_	-	21.0	Chipsian.	-		-	20.9	41	425	INIT	Di		
	1210	A	15.7	14.7	gastera	15.5	41	14.6	41	-	-	Yes	CONT	30		
4	12(1	В		-	21.0	~		_	-	20.9	41	VLS	CONT	120		
												,		01		

^{*} Eagle SN E084039