

Smith, George

From: Black, Alexis
Sent: Friday, July 28, 2017 6:54 AM
To: Hsu, Benjamin
Subject: FW: Citrus County Central Landfill Op Permit# 21375-025-SO-018-01-3rd Quarter 2017 LFG Monirtoring Results
Attachments: 2017.07.27 RPT_Citrus County_17Q3 Gas Monitoring Report.pdf

From: Troy Hays [mailto:thayes@jonesedmunds.com]
Sent: Thursday, July 27, 2017 3:51 PM
To: Black, Alexis <Alexis.Black@dep.state.fl.us>
Cc: Henry C. Norris (Henry.Norris@citrusbocc.com) <Henry.Norris@citrusbocc.com>; Ray Oates (ray.oates@citrusbocc.com) <ray.oates@citrusbocc.com>; Madden, Melissa <Melissa.Madden@dep.state.fl.us>; Tafuni, Steven <Steven.Tafuni@dep.state.fl.us>; Morgan, Steve <Steve.Morgan@dep.state.fl.us>; Grondahl, Max <Max.Grondahl@dep.state.fl.us>; Elizabeth Kennelley <ekennelley@jonesedmunds.com>; Patrick Kardish <PKardish@jonesedmunds.com>
Subject: Citrus County Central Landfill Op Permit# 21375-025-SO-018-01-3rd Quarter 2017 LFG Monirtoring Results

Good Afternoon Alexis

Attached is the third quarter 2017 landfill gas monitoring report for the Citrus County Central Landfill. We have also included the results of the monitoring for landfill gas in the groundwater monitoring wells.

Please do not hesitate to call me with any questions at 352-258-9520.

Thanks,

Troy D. Hays, PG
Senior Manager / Vice President



INTEGRITY | KNOWLEDGE | SERVICE

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July 28, 2017

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 2017
FDEP Permit No.: 21375-025-SO-01
Jones Edmunds Project Number: 03860-060-01

Dear Mr. Morgan:

Enclosed are the Third Quarter 2017 landfill gas monitoring results for the Citrus County Central Landfill conducted on July 17 and 18, 2017. The calibration log is also enclosed with this letter.

Methane was not detected above the maximum limit of 100% LEL at any of the landfill gas monitoring wells or above the maximum limit of 25% in any of the on-site structures. Methane was also measured in the groundwater monitoring wells and the results are attached. If you have any questions regarding this information, please contact me at (352) 377-5821.

Sincerely,

A handwritten signature in dark ink, appearing to read "T. Hays", written over a horizontal line.

Troy D. Hays, PG
Sr. Manager/Vice President

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xc: Ray Oates, Citrus County

LANDFILL GAS MONITORING RESULTS CITRUS COUNTY CENTRAL LANDFILL

Third Quarter 2017

General Data

Date:	7/17/2017	Sampler:	Steve Messick
Time:	9:00	Sky Conditions:	Clear, Wind < 3mph
Air Temperature (deg C):	30	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	
GP-1	7/17/2017	11:23	19.4	1.4	0.0	-	Gas Well
GP-2	7/17/2017	11:14	19.9	1.0	0.0	-	Gas Well
GP-3	7/17/2017	11:11	20.9	0.0	0.0	-	Gas Well
GP-4	7/17/2017	11:07	20.4	0.8	0.0	-	Gas Well
GP-5	7/17/2017	11:04	20.2	1.0	0.0	-	Gas Well
GP-6	7/17/2017	11:00	19.2	2.0	0.0	-	Gas Well
GP-7	7/17/2017	10:57	20.0	1.2	0.0	-	Gas Well
GP-8	7/17/2017	10:54	20.1	1.0	0.0	-	Gas Well
GP-9	7/17/2017	10:51	20.0	1.2	0.0	-	Gas Well
GP-10	7/17/2017	10:48	20.8	0.2	0.0	-	Gas Well
GP-11	7/17/2017	10:45	20.4	0.6	0.0	-	Gas Well
GP-12	7/17/2017	10:42	20.8	0.2	0.0	-	Gas Well
GP-13	7/17/2017	10:39	20.8	0.0	0.0	-	Gas Well
GP-14	7/17/2017	10:37	20.8	0.0	0.0	-	Gas Well
GP-15	7/17/2017	10:34	19.3	1.6	0.0	-	Gas Well
GP-16	7/17/2017	10:31	19.4	1.2	0.0	-	Gas Well
GP-17	7/17/2017	10:28	20.6	0.0	0.0	-	Gas Well
GP-18	7/17/2017	10:23	19.4	1.0	0.0	-	Gas Well
GP-19	7/17/2017	10:18	20.0	1.0	0.0	-	Gas Well
Admin Building	7/17/2017	9:05	20.9	0.0	0.0	-	Structure
Mod Bldg	7/17/2017	9:08	20.9	0.0	0.0	-	Structure
Shop	7/17/2017	9:10	20.9	0.0	0.0	-	Structure
Scale House	7/17/2017	9:25	20.9	0.0	0.0	-	Structure
Treatment Facility	7/17/2017	9:35	20.9	0.0	0.0	-	Structure
Firing Range	7/17/2017	9:49	20.9	0.0	0.0	-	Structure
Equipment Container	7/17/2017	9:15	20.9	0.0	0.0	-	Fabrication Metal Inside
Small Shed	7/17/2017	9:30	20.9	0.0	0.0	-	Haz-Storage

LANDFILL GAS MONITORING RESULTS CITRUS COUNTY CENTRAL LANDFILL

Third Quarter 2017

General Data

Date:	07/17/2017 & 07/18/2017	Sampler:	Steve Messick
Time:	10:13 on 07/17/2017 & 9:00 on 07/18/2017	Sky Conditions:	Cloudy then rain on 07/17/2017 & Clear on 07/18/2017
Air Temperature (deg C):	34 on 07/17/2017 & 31 on 07/18/2017	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	7/17/2017	11:25	17.9	3.0	0.0	-	Groundwater Well
MW-2	7/17/2017	10:13	20.6	0.6	0.0	-	Groundwater Well
MW-3	7/18/2017	9:10	4.2	37.2	-	51.5	Groundwater Well
MW-5	7/18/2017	9:43	3.9	28.2	-	12.5	Groundwater Well
MW-6	7/18/2017	9:38	4.2	28.4	-	26.5	Groundwater Well
MW-7	7/18/2017	9:04	4.1	37.2	-	53.5	Groundwater Well
MW-8R	7/17/2017	13:28	9.0	17.2	0.0	-	Groundwater Well
MW-9	7/17/2017	13:38	9.1	16.8	0.0	-	Groundwater Well
MW-10	7/17/2017	14:11	4.6	17.4	35	-	Groundwater Well
MW-11	7/17/2017	13:11	13.2	4.4	0.0	-	Groundwater Well
MW-12	7/17/2017	12:56	18.7	2.8	0.0	-	Groundwater Well
MW-13	7/17/2017	12:39	4.1	20.2	53	-	Groundwater Well
MW-14	7/17/2017	11:49	18.7	6.0	0.0	-	Groundwater Well
MW-15	7/17/2017	12:12	4.1	20.6	53	-	Groundwater Well
MW-16	7/18/2017	9:20	3.9	35.6	-	82.0	Groundwater Well
MW-17	7/17/2017	12:00	7.9	14.6	0.0	-	Groundwater Well
MW-18	7/18/2017	10:04	13.1	9.0	0.0	-	Groundwater Well
MW-19	7/18/2017	10:10	14.1	7.8	0.0	-	Groundwater Well
MW-20	7/18/2017	9:29	4.0	32.0	-	80.0	Groundwater Well
MW-21	7/18/2017	9:52	3.9	26.8	-	8.5	Groundwater Well
MW-AA	7/17/2017	12:50	18.7	2.4	0.0	-	Groundwater Well
MW-B	7/17/2017	11:44	17.9	6.4	0.0	-	Groundwater Well
MW-E	7/17/2017	13:06	18.7	2.8	0.0	-	Groundwater Well
PZ-1	7/17/2017	13:48	4.1	10.0	36	-	Groundwater Well
PZ-2	7/18/2017	10:00	3.9	22.8	-	8	Groundwater Well

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

SITE NAME Citrus County Landfill DATE 7/17/17
INSTRUMENT (MAKE/MODEL#) Eagle Multi-Gas Detector INSTRUMENT # GNV 80023*
Instrument Calibration Date Nov. 18, 2016 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 15.01 % Methane (Volume), 15.05 % CO₂ (Volume), Balance Nitrogen

Standard Source Airgas Lot # 122-124598242-1

Standard B Zero Air (0 % Methane) (0% CO₂) (20.9 % O₂)

Standard Source Airgas Lot # 55-40483127-1

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			
17/07/17	0900	A	15.01	15.05	—	15.0	<1	15.0	<1	—	—	Yes	Init.	Am
↓	0902	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init.	Am
↓	1620	A	15.01	15.05	—	15.5	<4	14.6	<3	—	—	Yes	Cont.	Am
↓	1622	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	Am
12/07/18	0855	A	15.01	15.05	—	15.0	<1	15.0	<1	—	—	Yes	Init.	Am
↓	0858	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Init.	Am
↓	1015	A	15.01	15.05	—	15.0	<1	15.2	<2	—	—	Yes	Cont.	Am
↓	1017	B	—	—	21.0	—	—	—	—	20.9	<1	Yes	Cont.	Am

* Eagle SN E084039