

Texas Commission on Environmental Quality Investigation Report

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Customer: Blue Ridge Landfill TX, LP
Customer Number: CN602820599

Regulated Entity Name: BLUE RIDGE LANDFILL

Regulated Entity Number: RN102610102

Investigation # 1526811

Incident Numbers

297287

297277

296624

Investigator: KIMBERLY RHODES

Site Classification MULTISECTOR GENERAL
PERMIT FOR INDUSTRIAL
WW

Conducted: 11/11/2018 -- 11/11/2018

NAIC Code: 562212

NAIC Code: 486210

SIC Code: 4922

SIC Code: 4953

SIC Code: 1521

Program(s): STORMWATER

Investigation Type: Compliance Investigation

Location: LOCATED ON 2200 FM 521

Additional ID(s): TXR05S302

Address: 2200 FM 521 RD,
FRESNO, TX , 77545

Local Unit: REGION 12 - HOUSTON

Activity Type(s): WWC MPL - WW Complaint

Principal(s):

Role

Name

RESPONDENT

BLUE RIDGE LANDFILL TX LP

Contact(s):

Role

Title

Name

Phone

REGULATED
ENTITY MAIL
CONTACT

ENVIRONMENTAL
MANAGER

MR SCOTT TREBUS

Phone (713) 726-7506
Fax (713) 675-3660

Other Staff Member(s):

Role

Name

Supervisor

WESTIN MASSEY

Investigator

CARLOS GRIGGS

Investigator

REYNA LOOSMORE

QA Reviewer

BERNARD GARRETT

Investigator

ISAIAH LONGORIA

Associated Check List

Checklist Name

Unit Name

WQ COMPLAINT INVESTIGATION

Complaint

Investigation Comments:

INTRODUCTION

On November 4, 12 and 13, 2018, the Texas Commission on Environmental Quality (TCEQ) Houston Region Office received three complaints (Incident No. 296624, 297277 and 297287) alleging odors coming from the Blue Ridge Landfill. A complaint investigation was conducted to determine compliance with applicable regulations.

On November 10, 2018, Ms. Reyna Loosmore and Mr. Carlos Griggs, Environmental Investigators with the Texas Commission on Environmental Quality (TCEQ) Houston Region Office, conducted a focused odor survey investigation in the City of Pearland and in Fort Bend, Brazoria, and Harris Counties in the west Pearland area. On November 11, 2018, Environmental Investigators Ms. Kimberly Rhodes and Mr. Isaiah Longoria of the TCEQ Houston Region Office conducted additional odor surveys in the same area. The purpose of these investigations was to investigate the complaints and to conduct odor surveys to determine if odors were present in the area and identify potential sources. See Attachment 1 for an aerial view of the area and odor survey locations for each day.

INVESTIGATION NARRATIVE: NOVEMBER 10, 2018

The investigation of the area took place on November 10, 2018. The surrounding land use is a mix of residential, industrial, and commercial areas. The terrain is flat with sporadic forest. Meteorological conditions were as follows: Temperature: 47.7 – 48.8° Fahrenheit; Wind Direction: north northeast; Wind Speed: approximately 7.0 – 10.5 miles per hour; Source of Meteorological Conditions: Continuous Air Monitoring Station (CAMS) Manvel Croix Park C84 (Attachment 2). No precipitation occurred during the investigation. The primary odor survey activities were conducted in zip code 77584; some portions of the odor survey activities may have also included portions of zip codes 77053, 77545, 77583 and 77047.

Ms. Loosmore arrived at the 400 block of Evergreen Street at 4:10 a.m. (Attachment 1 – November 10 Map Location 1). The investigator conducted a 60-minute odor survey (Attachment 3 – Log 1). No odors were detected. The investigator left the site at 5:11 a.m.

Ms. Loosmore arrived at the 14000 block of Mountain Sage Court at 5:19 a.m. (Attachment 1 – November 10 Map Location 2). The investigator conducted a 60-minute odor survey (Attachment 3 – Log 2). No odors were detected. The investigator left the site at 6:20 a.m.

Mr. Griggs arrived at the 13000 block of Moonlit Lake Lane at 5:20 a.m. (Attachment 1 – November 10 Map Location 3). The investigator conducted a 60-minute odor survey (Attachment 3 – Log 3). No odors were detected. The investigator left the site at 6:21 a.m.

Ms. Loosmore arrived at 2034 Trinity Bay Drive at 6:24 a.m. (Attachment 1 – November 10 Map Location 4). The investigator conducted a 60-minute odor survey (Attachment 3 – Log 4). No odors were detected. The investigator left the site at 7:25 a.m.

Mr. Griggs arrived at the intersection of Bluebonnet Drive and West Drive at 6:28 a.m. (Attachment 1 – November 10 Map Location 5). The investigator conducted a 60-minute odor survey (Attachment 3 – Log 5). No odors were detected. The investigator left the site at 7:29 a.m.

INVESTIGATION NARRATIVE: NOVEMBER 11, 2018

The investigation of the area took place on November 11, 2018. Meteorological conditions were as follows: Temperature: 47.5 – 48.3° Fahrenheit; Wind Direction: north northeast; Wind Speed: approximately 3.9 – 6.1 miles per hour; Source of Meteorological Conditions: Continuous Air Monitoring Station (CAMS) Manvel Croix Park C84 (Attachment 2). No precipitation occurred during the investigation. The primary odor survey activities were conducted in zip code 77584; some portions of the odor survey activities may have also included portions of zip codes 77053, 77545, 77583 and 77047.

Mr. Longoria arrived at the corner of Windward Bay Dr. and Bailey Springs Lane at 12:43 a.m. (Attachment 1 – November 11 Map Location 1). The investigator conducted a 60-minute odor survey (Attachment 4 – Log 1). No odors were detected. The investigator left the site at 1:46 a.m.

Mr. Longoria arrived at the corner of Golden Creek Lane and Shallow Falls Lane at 1:52 a.m. (Attachment 1 –

BLUE RIDGE LANDFILL - FRESNO

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November 11 Map Location 2). The investigator conducted a 60-minute odor survey (Attachment 4 – Log 2). No odors were detected. The investigator left the site at 2:53 a.m.

Ms. Rhodes arrived at the corner of Longlake Drive and Mountain Sage Drive at 1:00 a.m. (Attachment 1 – November 11 Map Location 3). The investigator conducted a 60-minute odor survey (Attachment 4 – Log 3). No odors were detected. The investigator left the site at 2:01 a.m.

Ms. Rhodes arrived at Tarpon Bay Court at 2:07 a.m. (Attachment 1 – November 11 Map Location 4). The investigator conducted a 60-minute odor survey (Attachment 4 – Log 4). No odors were detected. The investigator left the site at 3:08 a.m.

Mr. Longoria arrived at the corner of McHard Road and Amy Ridge Road at 2:59 a.m. (Attachment 1 – November 11 Map Location 5). The investigator conducted a 60-minute odor survey (Attachment 4 – Log 5). No odors were detected. The investigator left the site at 4:00 a.m.

CONCLUSION

No odors were documented on November 10 or 11, 2018. The complaint allegations that odors were being emitted from the Blue Ridge Landfill were unconfirmed.

COMPLAINTS

Based on a review of TCEQ Consolidated Compliance and Enforcement Data System (CCEDS) and regional office files, there have been hundreds of odor complaints received from within the survey area and numerous investigations related to odors. At the time of the review, multiple related investigations were being conducted by the Region 12 Office.

SUMMARY OF INVESTIGATION FINDINGS

No Violations Associated to this Investigation

Signed



Environmental Investigator

Date

1/8/19

Signed



Supervisor

Date

1/9/19

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Attachments: (in order of final report submittal)

☐ Enforcement Action Request (EAR)

☐ Letter to Facility (specify type) : _____

☐ Investigation Report

☐ Sample Analysis Results

☐ Manifests

☐ Notice of Registration

☐ Maps, Plans, Sketches

☐ Photographs

☐ Correspondence from the facility

☒ Other (specify) :

see List of Attachments

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 10, 2019

Mr. Scott Trebus
Environmental Manager
Blue Ridge Landfill
Post Office Box 879
Fresno, TX 77545-0879

Re: Complaint Investigation at:
Blue Ridge Landfill, 2200 FM 521, Fresno (Fort Bend County), Texas
TCEQ ID No.: TXR05S302

Dear Mr. Trebus,

On November 10-11, 2018, Ms. Reyna Loosmore, Mr. Carlos Griggs, Ms. Kimberly Rhodes and Mr. Isaiah Longoria of the Texas Commission on Environmental Quality (TCEQ) Houston Region Office conducted an investigation of the above-referenced facility to evaluate compliance with applicable requirements for stormwater and odors. No violations are being alleged as a result of the investigation.

The TCEQ appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact Ms. Kimberly Rhodes in the Houston Region Office at (713) 767-3667.

Sincerely,

A handwritten signature in black ink, appearing to read "Westin Massey".

Westin Massey
Water Section Manager
Houston Region Office
Texas Commission on Environmental Quality

WM/KAR/sh

**Blue Ridge Landfill
2200 FM 521 Rd, Fresno (Fort Bend County)
RN102610102
Investigation No.: 1526811
Incident No.s: 297277, 297287, 296624
Odor Survey and Complaint Investigation**

LIST OF ATTACHMENTS

1. Maps of odor survey locations
2. Weather data
3. November 10, 2018 Odor Logs
4. November 11, 2018 Odor Logs

Attachment 1

Area and Survey Location Map - November 10, 2018

Shadow Creek Subdivision Area



	Latitude	Longitude
Location 1: 400 block of Evergreen Street	29.5469	-95.4534
Location 2: 14000 block of Mountain Sage Court	29.5634	-95.4376
Location 3: 13000 block of Moonlit Lake Lane	29.5589	-95.4280
Location 4: 2034 Trinity Bay Drive	29.5756	-95.4263
Location 5: Intersection of Bluebonnet Drive and West Drive	29.5870	-95.4404

Area and Survey Location Map – November 11, 2018

Shadow Creek Subdivision Area



		Latitude	Longitude
Location 1:	Corner of Windward Bay Dr. and Bailey Springs Lane	29.5515	-95.4349
Location 2:	Corner of Golden Creek Lane and Shallow Falls Lane	29.5605	-95.4235
Location 3:	Corner of Longlake Drive and Mountain Sage Drive	29.5644	-95.4368
Location 4:	Tarpon Bay Court	29.5764	-95.4261
Location 5:	Corner of McHard Road and Amy Ridge Road	29.5814	-95.4615

Attachment 2

Questions or Comments >>

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Manvel Croix Park C84 Data by Site by Date (all parameters)

Use this form to retrieve hourly data collected at Manvel Croix Park C84. Although this is the most current data, it is not considered official until it has been certified by the technical staff. This information is updated hourly.

This web page provides the most current hourly averaged data available. Our convention for time-tagging data is the beginning of each hour. For example, values shown for the noon hour are based on measurements taken from noon to 1:00 p.m. The noon average will not be calculated until after 1:00 p.m. The noon average will then be available on our external server from 1:15 p.m. to 1:30 p.m. This results in an apparent one-hour time lag in the data. We also present our data in Local Standard Time for each measuring site. For most of Texas this is Central Standard Time. During Daylight Savings, this introduces another apparent one-hour time lag in the data.

Use the controls below to select a different date or time format. Click on the Generate Report button once you have made your selections.

Click on the Plot Data button once the tabular report has been generated to open a separate window containing data plots.

Find Site: CAMS AQS Description
 CAMS 84 Manvel Croix Park C84 [Select a different site](#)

Month: Day: Year: Time Format:

November 10 2018 12 Hour (AM/PM) [Generate Report](#) [Plot Data](#)

☒ Green underline for validated data

The table below contains hourly averages for all the pollutants and meteorological conditions measured at Manvel Croix Park C84 for **Saturday, November 10, 2018**. All times shown are in CST.

Parameter Measured	Morning												Afternoon							
	Mid	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00
Nitric Oxide	-0.3	-0.4	-0.3	-0.3	-0.3	-0.2	-0.1	0.6	0.8	1.4	1.5	2.0	1.9	1.6	1.0	0.6	0.5	0.1	-0.2	-0.1
Nitrogen Dioxide	4.0	4.1	3.2	4.9	5.2	6.2	7.4	7.3	6.7	7.8	8.0	7.6	8.4	5.8	6.4	7.0	8.7	9.5	9.7	8.1
Oxides of Nitrogen	3.8	3.8	3.0	4.8	5.0	6.1	7.5	8.1	7.7	9.5	9.7	9.7	10.5	7.5	7.6	7.8	9.5	9.8	9.7	8.1
Ozone	22	21	21	18	18	19	19	19	21	21	20	22	21	23	22	20	16	15	15	11
Wind Speed	8.3	7.7	8.5	8.3	7.0	7.0	9.6	10.5	10.3	9.5	7.6	7.4	6.5	7.0	6.2	7.0	7.3	5.6	4.9	4.1
Resultant Wind Speed	7.8	7.4	8.1	7.8	6.5	6.7	9.2	10.0	9.8	9.0	7.1	6.9	6.0	6.5	5.7	6.5	6.9	5.3	4.7	4.1
Resultant Wind Direction	16	16	20	17	12	24	31	29	30	26	9	26	5	1	5	9	24	21	22	2
Maximum Wind Gust	17.4	15.6	17.6	16.7	12.8	16.8	20.5	19.9	20.8	18.5	14.4	14.0	12.3	14.0	11.2	12.9	14.7	10.8	11.0	8.1
Std. Dev. Wind Direction	19	18	18	18	21	18	16	16	17	18	22	21	22	22	22	21	19	18	19	1
Outdoor Temperature	51.8	51.2	50.4	49.9	48.8	48.4	47.9	47.7	48.1	48.6	49.3	50.2	50.2	50.3	50.6	49.8	48.9	48.4	48.4	48.1
Parameter Measured	Morning												Afternoon							
	Mid	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00
Maximum values for each parameter are bold within the table. Minimum values are bold italic .																				
R - Data from this instrument meets EPA quality assurance criteria for regulatory purposes.																				

PLEASE NOTE: This data has not been verified by the TCEQ and may change. This is the most current data, but it is not official until it has been certified by our technical staff. Data is collected from TCEQ ambient monitoring sites and

may include data collected by other outside agencies. This data is updated hourly. All times shown are in local standard time unless otherwise indicated.

Following EPA reporting guidelines, negative values may be displayed in our hourly criteria air quality data, down to the negative of the EPA listed Method Detection Limit (MDL) for the particular instrument that made the measurements. The reported concentrations can be negative due to zero drift in the electronic instrument output, data logger channel, or calibration adjustments to the data. Prior to 1/1/2013, slightly negative values were automatically set to zero.

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Site	Parameter	Unit	Value	Time	Date
Manvel Croix Park	PM10	µg/m³	12	12:00	1/30/2018
Manvel Croix Park	PM2.5	µg/m³	8	12:00	1/30/2018
Manvel Croix Park	O3	ppb	45	12:00	1/30/2018
Manvel Croix Park	CO	ppm	0.8	12:00	1/30/2018
Manvel Croix Park	SO2	ppb	2	12:00	1/30/2018
Manvel Croix Park	NO2	ppb	15	12:00	1/30/2018
Manvel Croix Park	PM10	µg/m³	10	18:00	1/30/2018
Manvel Croix Park	PM2.5	µg/m³	7	18:00	1/30/2018
Manvel Croix Park	O3	ppb	40	18:00	1/30/2018
Manvel Croix Park	CO	ppm	0.7	18:00	1/30/2018
Manvel Croix Park	SO2	ppb	1	18:00	1/30/2018
Manvel Croix Park	NO2	ppb	12	18:00	1/30/2018

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Use the controls below to select a different date or time format. Click on the Generate Report button once you have made your selections.

Click on the Plot Data button once the tabular report has been generated to open a separate window containing data plots.

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 CAMS 84 Manvel Croix Park C84 [Select a different site](#)

Month: Day: Year: Time Format:

November 11 2018 12 Hour (AM/PM) [Generate Report](#) [Plot Data](#)

☒ Green underline for validated data

The table below contains hourly averages for all the pollutants and meteorological conditions measured at Manvel Croix Park C84 for **Sunday, November 11, 2018**. All times shown are in CST.

Parameter Measured	Morning												Afternoon							
	Mid	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00
Nitric Oxide	-0.3	SPN	SPN	SPN	SPN	SPN	0.2	1.9	3.3	3.7	2.4	1.3	1.5	1.4	1.0	0.8	0.4	0.2	0.1	0.1
Nitrogen Dioxide	6.5	SPN	SPN	SPN	SPN	SPN	11.3	12.4	10.6	9.8	6.1	5.2	5.6	6.2	7.6	8.6	9.8	11.1	12.6	7.1
Oxides of Nitrogen	6.5	SPN	SPN	SPN	SPN	SPN	11.8	14.5	14.1	13.8	8.6	6.6	7.2	7.7	8.8	9.5	10.3	11.5	12.9	7.1
Ozone	14	13	5	6	5	6	6	5	9	12	15	18	17	18	18	18	16	15	10	13
Wind Speed	3.9	4.2	4.6	5.2	6.1	6.6	5.9	6.3	6.9	8.1	8.6	8.7	8.7	9.4	9.5	7.2	8.3	9.8	8.4	9.1
Resultant Wind Speed	3.7	4.1	4.3	5.0	5.9	6.4	5.7	6.1	6.7	7.7	8.3	8.4	8.4	9.0	9.2	7.0	8.1	9.6	8.2	8.1
Resultant Wind Direction	22	15	9	19	28	30	32	36	49	53	66	66	73	63	61	61	53	43	47	47
Maximum Wind Gust	8.0	7.6	8.0	10.4	11.2	11.6	11.5	11.4	12.3	16.1	16.1	17.2	15.5	17.0	16.7	16.1	15.4	18.0	14.3	17.1
Std. Dev. Wind Direction	15	17	20	16	15	14	15	16	15	18	15	15	16	15	14	14	14	13	13	13
Outdoor Temperature	48.1	47.9	47.5	47.9	48.3	48.7	49.0	49.5	51.1	53.0	54.7	55.6	55.9	56.1	56.5	55.6	54.7	55.1	55.4	54.1
Parameter Measured	Mid	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00
	Morning												Afternoon							
Maximum values for each parameter are bold within the table. Minimum values are bold italic .																				
R - Data from this instrument meets EPA quality assurance criteria for regulatory purposes.																				

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Supplemental Investigator's Odor Intensity Time Log

Investigator: Reyna Loosmore

Location: 400 block of Evergreen St

Date of Investigation: November 10, 2018

Start Time: 4:10 am

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor
2	No odor
3	No odor
4	No odor
5	No odor
6	No odor
7	No odor
8	No odor
9	No odor
10	No odor
11	No odor
12	No odor
13	No odor
14	No odor
15	No odor
16	No odor
17	No odor
18	No odor
19	No odor
20	No odor
21	No odor
22	No odor
23	No odor
24	No odor
25	No odor
26	No odor
27	No odor
28	No odor
29	No odor
30	No odor

Minutes	Odor Intensity VL, L, M, S, VS
31 min	No odor
32	No odor
33	No odor
34	No odor
35	No odor
36	No odor
37	No odor
38	No odor
39	No odor
40	No odor
41	No odor
42	No odor
43	No odor
44	No odor
45	No odor
46	No odor
47	No odor
48	No odor
49	No odor
50	No odor
51	No odor
52	No odor
53	No odor
54	No odor
55	No odor
56	No odor
57	No odor
58	No odor
59	No odor
60	No odor

Odor Description: _____

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						

Supplemental Investigator's Odor Intensity Time Log

Investigator: Reyna Loosmore

Location: 14000 block of Mantain Sagec

Date of Investigation: November 10, 2018

Start Time: 5:19 am

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor
2	No odor
3	No odor
4	No odor
5	No odor
6	No odor
7	No odor
8	No odor
9	No odor
10	No odor
11	No odor
12	No odor
13	No odor
14	No odor
15	No odor
16	No odor
17	No odor
18	No odor
19	No odor
20	No odor
21	No odor
22	No odor
23	No odor
24	No odor
25	No odor
26	No odor
27	No odor
28	No odor
29	No odor
30	No odor

Minutes	Odor Intensity VL, L, M, S, VS
31 min	No odor
32	No odor
33	No odor
34	No odor
35	No odor
36	No odor
37	No odor
38	No odor
39	No odor
40	No odor
41	No odor
42	No odor
43	No odor
44	No odor
45	No odor
46	No odor
47	No odor
48	No odor
49	No odor
50	No odor
51	No odor
52	No odor
53	No odor
54	No odor
55	No odor
56	No odor
57	No odor
58	No odor
59	No odor
60	No odor

Odor Description: _____

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						

Supplemental Investigator's Odor Intensity Time Log

Investigator: Charles Griggs
Date of Investigation: 11/10/18

Location: 13000 block of Moonlit Lake Lane
Start Time: 5:20 am

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor
2	No odor
3	No odor
4	No odor
5	No odor
6	No odor
7	No odor
8	No odor
9	No odor
10	No odor
11	No odor
12	No odor
13	No odor
14	No odor
15	No odor
16	No odor
17	No odor
18	No odor
19	No odor
20	No odor
21	No odor
22	No odor
23	No odor
24	No odor
25	No odor
26	No odor
27	No odor
28	No odor
29	No odor
30	No odor

Minutes	Odor Intensity VL, L, M, S, VS
31 min	No odor
32	No odor
33	No odor
34	No odor
35	No odor
36	No odor
37	No odor
38	No odor
39	No odor
40	No odor
41	No odor
42	No odor
43	No odor
44	No odor
45	No odor
46	No odor
47	No odor
48	No odor
49	No odor
50	No odor
51	No odor
52	No odor
53	No odor
54	No odor
55	No odor
56	No odor
57	No odor
58	No odor
59	No odor
60	No odor

Odor Description: _____

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						

4)

Supplemental Investigator's Odor Intensity Time Log

Investigator: Reynold L. Casmore Location: 2034 Trinity Bay Dr
 Date of Investigation: November 10, 2018 Start Time: 6:24am

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor
2	No odor
3	No odor
4	No odor
5	No odor
6	No odor
7	No odor
8	No odor
9	No odor
10	No odor
11	No odor
12	No odor
13	No odor
14	No odor
15	No odor
16	No odor
17	No odor
18	No odor
19	No odor
20	No odor
21	No odor
22	No odor
23	No odor
24	No odor
25	No odor
26	No odor
27	No odor
28	No odor
29	No odor
30	No odor

Minutes	Odor Intensity VL, L, M, S, VS
31 min	No odor
32	No odor
33	No odor
34	No odor
35	No odor
36	No odor
37	No odor
38	No odor
39	No odor
40	No odor
41	No odor
42	No odor
43	No odor
44	No odor
45	No odor
46	No odor
47	No odor
48	No odor
49	No odor
50	No odor
51	No odor
52	No odor
53	No odor
54	No odor
55	No odor
56	No odor
57	No odor
58	No odor
59	No odor
60	No odor

Odor Description: _____

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						

5)

Supplemental Investigator's Odor Intensity Time Log

Investigator: Carlos Griggs
 Date of Investigation: 11/10/18

Location: Intersection of Bluebonnet Dr + West
 Start Time: 6:28 am
 Driv

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor
2	No odor
3	No odor
4	No odor
5	No odor
6	No odor
7	No odor
8	No odor
9	No odor
10	No odor
11	No odor
12	No odor
13	No odor
14	No odor
15	No odor
16	No odor
17	No odor
18	No odor
19	No odor
20	No odor
21	No odor
22	No odor
23	No odor
24	No odor
25	No odor
26	No odor
27	No odor
28	No odor
29	No odor
30	No odor

Minutes	Odor Intensity VL, L, M, S, VS
31 min	No odor
32	No odor
33	No odor
34	No odor
35	No odor
36	No odor
37	No odor
38	No odor
39	No odor
40	No odor
41	No odor
42	No odor
43	No odor
44	No odor
45	No odor
46	No odor
47	No odor
48	No odor
49	No odor
50	No odor
51	No odor
52	No odor
53	No odor
54	No odor
55	No odor
56	No odor
57	No odor
58	No odor
59	No odor
60	No odor

Odor Description: _____

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						

1.000.000
(3.000.000 - 2.000.000)

Investment in the Company's Common Stock
Total Investment in the Company's Common Stock

Investment in the Company's Common Stock	Investment in the Company's Common Stock
1.000.000	1.000.000
2.000.000	2.000.000
3.000.000	3.000.000
4.000.000	4.000.000
5.000.000	5.000.000
6.000.000	6.000.000
7.000.000	7.000.000
8.000.000	8.000.000
9.000.000	9.000.000
10.000.000	10.000.000
11.000.000	11.000.000
12.000.000	12.000.000
13.000.000	13.000.000
14.000.000	14.000.000
15.000.000	15.000.000
16.000.000	16.000.000
17.000.000	17.000.000
18.000.000	18.000.000
19.000.000	19.000.000
20.000.000	20.000.000
21.000.000	21.000.000
22.000.000	22.000.000
23.000.000	23.000.000
24.000.000	24.000.000
25.000.000	25.000.000
26.000.000	26.000.000
27.000.000	27.000.000
28.000.000	28.000.000
29.000.000	29.000.000
30.000.000	30.000.000
31.000.000	31.000.000
32.000.000	32.000.000
33.000.000	33.000.000
34.000.000	34.000.000
35.000.000	35.000.000
36.000.000	36.000.000
37.000.000	37.000.000
38.000.000	38.000.000
39.000.000	39.000.000
40.000.000	40.000.000
41.000.000	41.000.000
42.000.000	42.000.000
43.000.000	43.000.000
44.000.000	44.000.000
45.000.000	45.000.000
46.000.000	46.000.000
47.000.000	47.000.000
48.000.000	48.000.000
49.000.000	49.000.000
50.000.000	50.000.000

Attachment 4

Investment in the Company's Common Stock	Investment in the Company's Common Stock
1.000.000	1.000.000
2.000.000	2.000.000
3.000.000	3.000.000
4.000.000	4.000.000
5.000.000	5.000.000
6.000.000	6.000.000
7.000.000	7.000.000
8.000.000	8.000.000
9.000.000	9.000.000
10.000.000	10.000.000
11.000.000	11.000.000
12.000.000	12.000.000
13.000.000	13.000.000
14.000.000	14.000.000
15.000.000	15.000.000
16.000.000	16.000.000
17.000.000	17.000.000
18.000.000	18.000.000
19.000.000	19.000.000
20.000.000	20.000.000
21.000.000	21.000.000
22.000.000	22.000.000
23.000.000	23.000.000
24.000.000	24.000.000
25.000.000	25.000.000
26.000.000	26.000.000
27.000.000	27.000.000
28.000.000	28.000.000
29.000.000	29.000.000
30.000.000	30.000.000
31.000.000	31.000.000
32.000.000	32.000.000
33.000.000	33.000.000
34.000.000	34.000.000
35.000.000	35.000.000
36.000.000	36.000.000
37.000.000	37.000.000
38.000.000	38.000.000
39.000.000	39.000.000
40.000.000	40.000.000
41.000.000	41.000.000
42.000.000	42.000.000
43.000.000	43.000.000
44.000.000	44.000.000
45.000.000	45.000.000
46.000.000	46.000.000
47.000.000	47.000.000
48.000.000	48.000.000
49.000.000	49.000.000
50.000.000	50.000.000

U.S. #1
(29.5512, -95.4376)

Supplemental Investigator's Odor Intensity Time Log

Investigator: Isaiah Longoria
Date of Investigation: November 11, 2018

Start Time: ~~10:44~~ 12:44

Minutes	Odor Intensity VL, L, M, S, VS
1 min	NO odor (NO)
2	NO odor
3	NO odor
4	NO
5	NO
6	NO
7	NO
8	NO
9	NO
10	NO
11	NO
12	NO
13	NO
14	NO
15	NO
16	NO
17	NO
18	NO
19	NO
20	NO
21	NO
22	NO
23	NO
24	NO
25	NO
26	NO
27	NO
28	NO
29	NO
30	NO

Minutes	Odor Intensity VL, L, M, S, VS
31 min	NO
32	NO
33	NO
34	NO
35	NO
36	NO
37	NO
38	NO
39	NO
40	NO
41	NO
42	NO
43	NO
44	NO
45	NO
46	NO
47	NO
48	NO
49	NO
50	NO
51	NO
52	NO
53	NO
54	NO
55	NO
56	NO
57	NO
58	NO
59	NO
60	NO

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						X

U.S. #2
(29.5604, -95.4245)

Supplemental Investigator's Odor Intensity Time Log

Investigator: Isaiah Longoria
Date of Investigation: November 11, 2018

Start Time: 0152

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor (NO)
2	NO
3	NO
4	NO
5	NO
6	NO
7	NO
8	NO
9	NO
10	NO
11	NO
12	NO
13	NO
14	NO
15	NO
16	NO
17	NO
18	NO
19	NO
20	NO
21	NO
22	NO
23	NO
24	NO
25	NO
26	NO
27	NO
28	NO
29	NO
30	NO

Minutes	Odor Intensity VL, L, M, S, VS
31 min	NO
32	NO
33	NO
34	NO
35	NO
36	NO
37	NO
38	NO
39	NO
40	NO
41	NO
42	NO
43	NO
44	NO
45	NO
46	NO
47	NO
48	NO
49	NO
50	NO
51	NO
52	NO
53	NO
54	NO
55	NO
56	NO
57	NO
58	NO
59	NO
60	NO

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						X

Supplemental Investigator's Odor Intensity Time Log

Investigator: Kim Rhodes
Date of Investigation: 11/11/18

Location: Corner of Mt. Sage Dr. & Longlake Dr.
Start Time: 11:00am

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor
2	None
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None

Minutes	Odor Intensity VL, L, M, S, VS
31 min	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None

Odor Description: _____

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						

Supplemental Investigator's Odor Intensity Time Log

Investigator: Kim Rhodes
Date of Investigation: 11/11/18

Location: Tarpon Bay Ct.
Start Time: 2:07 am

Minutes	Odor Intensity VL, L, M, S, VS
2:08 1 min	None
2:09 2	None
10 3	None
11 4	None
12 5	None
13 6	None
14 7	None
15 8	None
16 9	None
17 10	None
18 11	None
19 12	None
20 13	None
21 14	None
22 15	None
23 16	None
24 17	None
25 18	None
26 19	None
27 20	None
28 21	None
29 22	None
30 23	None
31 24	None
32 25	None
33 26	None
34 27	None
35 28	None
36 29	None
37 30	None

Minutes	Odor Intensity VL, L, M, S, VS
38 31 min	None
39 32	None
40 33	None
41 34	None
42 35	None
43 36	None
44 37	None
45 38	None
46 39	None
47 40	None
48 41	None
49 42	None
50 43	None
51 44	None
52 45	None
53 46	None
54 47	None
55 48	None
56 49	None
57 50	None
58 51	None
59 52	None
3:00 53	None
01 54	None
02 55	None
03 56	None
04 57	None
05 58	None
06 59	None
07 60	None

Odor Description: _____

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						

U.S. # 3
(29.5814, -95.4615)

Supplemental Investigator's Odor Intensity Time Log

Investigator: Isaiah Longoria

Date of Investigation: November 11, 2018 Start Time: 0259

Minutes	Odor Intensity VL, L, M, S, VS
1 min	No odor (NO)
2	NO
3	NO
4	NO
5	NO
6	NO
7	NO
8	NO
9	NO
10	NO
11	NO
12	NO
13	NO
14	NO
15	NO
16	NO
17	NO
18	NO
19	NO
20	NO
21	NO
22	NO
23	NO
24	NO
25	NO
26	NO
27	NO
28	NO
29	NO
30	NO

Minutes	Odor Intensity VL, L, M, S, VS
31 min	NO
32	NO
33	NO
34	NO
35	NO
36	NO
37	NO
38	NO
39	NO
40	NO
41	NO
42	NO
43	NO
44	NO
45	NO
46	NO
47	NO
48	NO
49	NO
50	NO
51	NO
52	NO
53	NO
54	NO
55	NO
56	NO
57	NO
58	NO
59	NO
60	NO

Offensiveness: Highly _____ Offensive _____ Unpleasant _____ Not Unpleasant _____

Weighted Average Intensity:

	VS	S	M	L	VL	No Odor
1 Min						
10 Min						
1 Hour						X