

AIR CP_102610102_CP_20160608_INVESTIGATION_1349162_
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 # 1349162 Investigator: TOM PINKSTON Conducted: 06/08/2016 -- 06/09/2016 Program(s): AIR OPERATING PERMITS Investigation Type: Compliance Investigation Additional ID(s): FG0536E 1472 Address: 2200 FM 521 RD, FRESNO, TX , 77545	Incident Numbers Site Classification MAJOR SOURCE NAIC Code: 562212 SIC Code: 4953 SIC Code: 1521 Location: LOCATED ON 2200 FM 521 Local Unit: REGION 12 - HOUSTON Activity Type(s): FIAIRODOR - AIR FIAIRODOR - FOC INV ODOR SURVEY
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Principal(s):

Role	Name
RESPONDENT	BLUE RIDGE LANDFILL TX LP

Contact(s):

Role	Title	Name	Phone
REGULATED ENTITY CONTACT	LANDFILL OPERATIONS MANAGER	MR MATT MONTAGNA	Office (281) 668-9739

Other Staff Member(s):

Role	Name
QA Reviewer	LETASHA MILLER
QA Reviewer	MARK KOLKMEIER
Supervisor	LETASHA MILLER
Investigator	CESAR BAUTISTA

Associated Check List

<u>Checklist Name</u>	<u>Unit Name</u>
AIR FOCUSED INVESTIGATION - ODOR SURVEY	Blue Ridge Landfill

Investigation Comments:

INTRODUCTION/ INVESTIGATION SUMMARY

Introduction

On June 8, 2016 and June 9, 2016, Mr. Tom Pinkston and Mr. Cesar Bautista of the Texas Commission on Environmental Quality (TCEQ) Houston Region Office conducted a focused odor survey investigation in the Shadow Creek Ranch (SCR) Subdivision, located in Pearland and in Fort Bend, Brazoria and Harris counties. The purpose of this investigation (Investigation Typecode FIAIRODOR) was to survey the area for odor sources. The odor survey maps are depicted on Attachment 1 Maps, Map a. Odor Survey Routes.

Investigation Narrative

The investigation began on June 8, 2016 at 21:00 hours and concluded on June 9, 2016 at 06:30 hours. The surrounding land use is a mix of residential, industrial, and commercial. The terrain is flat with sporadic forest. Weather data was taken from the Continuous Air Monitoring Station at 4503 Croix Parkway, Manvel, TX. The temperatures ranged from 75 °F (degrees Fahrenheit) to 83 °F and the sky was clear with no precipitation. From June 8, 2016 at 21:00 hours through June 9, 2016 at 01:00 hour, the wind was mostly from the southeast and the median wind speed was approximately 4 miles per hour (mph). On June 9, 2016, from 01:00 through 03:00 hours, the wind direction was from the north and the median wind speed was 1.5 mph; however, wind direction was observed to vary greatly. On June 9, 2016, from 03:00 through 07:00 hours, the wind direction was from the northwest and the mean wind speed was 4.5 mph.

Wednesday, June 8, 2016

At 21:24 hours, the investigators arrived at the Village of Diamond Bay Water Park in the SCR subdivision and met with Mr. Tom Randolph, Mr. Manuel Gonzalez, Ms. Maria Tran, Mr. Nathan Hoppens and MS. Peyton Pearce, TCEQ Monitoring Division, Strategic Sampling Work Group. After surveying the area and organizing with the Monitoring Division, the investigators departed the site. No odors were detected.

At 21:40 hours, the investigators began an odor survey of the SCR subdivision (refer to Attachment 1 Maps, Map c. Southern Routes 7 and 8). At this time, winds were from the southeast, placing SCR upwind of most industrial areas in the area. No odors were detected.

At 22:15 hours, the investigators surveyed McHard Road west of Alameda Road and east to Hiram Clark Road (refer to Attachment 1 Maps, Map b. Northern Routes, Route 2). This area has industrial sites (Lone Star Disposal and Recycling (Lone Star) and Akzo Nobel on the north and Blue Ridge Landfill (Blue Ridge) on the south). Following, the investigators surveyed the residential neighborhood north of McHard Road and west of Akzo Nobel (refer to Attachment 1 Maps, Map b. Northern Routes, Route 1). At the time of this survey Routes 1 and 2 were downwind of Blue Ridge Landfill. No odor was detected on Route 1.

While traveling west on McHard Road, an odor associated with landfill waste was detected approximately 500 feet after passing Hiram Clarke Road. The investigators stopped at the intersection of North Ripple Ridge Drive and noted the odor was not detectable within two minutes after stopping. The investigators then stopped once more near Park Manor Street and noticed the same odor and a similar pattern of odor disappearing. When traveling at speeds of 5 to 10 miles per hour, the odor appeared to be less sporadic and almost continual. The investigators decided to use this to determine the area affected by the plume. This would also allow them to locate a central point where an odor intensity time log could be conducted. The investigators returned to the intersection of McHard Road and Hiram Clarke Road and conducted an odor survey of Route 2 marking off the area the odor was detected. The odor was detected along McHard Road starting at Point 1a and was no longer detectable after Point 1b. The odor was detected along South Post Oak Road from Point 2a through 2b; and along Court Road from Point 3a to 3b.

The odor appeared to be most intense along McHard Road. Refer to Attachment 1 Maps, Map d. Stop A.

At 22:45 hours, the investigators stopped at a point on McHard Road which appeared near the center of the plume and in an area where the odor appeared most intense (refer to Attachment 1 Maps, Map d. Stop A). Winds were approximately 1 to 4 mph east southeast ranging from 94° to 143° with a mean wind direction of 120°. Given the investigators' location downwind of Blue Ridge and upwind of most other industrial sites, the source of the odor appeared to be Blue Ridge. An offensive odor associated with landfill waste was detected; however, anytime the odor was detected, that odor would quickly dissipate and would remain undetectable for more than 15 minutes before returning again. The greatest duration of the odor was 5 minutes. The greatest one-minute intensity during this time was moderate. The greatest 10-minute weighted average of the odor intensity was very light. The odor was characterized as an offensive odor. The TCEQ's Odor Complaint Investigation Procedures and applicable

BLUE RIDGE LANDFILL - FRESNO

6/8/2016 to 6/9/2016 Inv. # - 1349162

Page 3 of 5

Frequency Intensity Duration Offensiveness (FIDO) Chart notes that an offensive odor with a one-minute reading of moderate intensity would not constitute a nuisance condition with a daily frequency and that a very light intensity would require a four-hour duration with a daily frequency; therefore, according to the TCEQ's Odor Complaint Investigation Procedures, the odor detected at Stop A did not constitute a nuisance odor.

Thursday, June 9, 2016

At 01:00 hours, no further odors were detected and the wind was beginning to change from a southern to a northern direction. The investigators left Stop A. The investigators proceeded west using Route 2, confirming there were no more odors detectable along this route, then moved to Route 3. A very strong, highly offensive odor of hydrogen sulfide was detected on the feeder road of Beltway 8. Refer to Stop C on Attachment 1 Maps, Map a. Odor Survey Routes. Upon stopping to investigate the odor, southeast winds were observed at approximately 1-3 mph. At Stop C, odors were detected when the investigators were downwind of Lone Star and Akzo Nobel. The wind shifted north and the odor was no longer detected. The investigators turned to Route 4 (refer to Attachment 1 Maps, Map b. Northern Routes), which consists of Bluebonnet Drive and places the investigators downwind of Lone Star Landfill and upwind of Akzo Nobel. No odor was detected. The investigators proceeded to Route 1 placing them downwind of Akzo Nobel and Lone Star Landfill, and upwind of Blue Ridge. No odor was detected. The odor at Stop C was detected when winds indicate the source is to the south of Beltway 8; however, due to winds shifting direction the investigators could not locate any location upwind and since the odor was not detected after leaving Stop C the source of the odor could not be determined.

At 01:20 hours, an odor survey of the Shadow Creek Ranch neighborhood was conducted. Refer to Attachment 1 Maps, Map c. Southern Routes, Routes 7, 8 and 9.

At 02:00 hours, the investigators met with the staff from the TCEQ's Monitoring division to coordinate additional efforts.

At 02:30 hours, the investigators conducted an odor survey along Route 1 and 2 (Attachment 1 Maps, Map b. Northern Routes). No odor was detected.

At 02:50 hours, the investigator drove along Route 7, south along Alameda Road, and Route 10, which is south and was downwind of Blue Ridge. No odor was detected. The investigators returned to Alameda Road and West Broadway Street and continued through Route 7 to Route 9. No odor was detected. Refer to Attachment 1 Maps, Map c. Southern Routes

At 03:15 hours, the investigators drove west along McHard Road using Route 1. A very strong, highly offensive odor associated with hydrogen sulfide was detected at Stop B (Attachment 1 Maps, Map c. Stop B). Predominate winds were observed to be northeast placing the investigators directly downwind of Lone Star Landfill and slightly west of upwind from Akzo Nobel. The investigators were upwind of Blue Ridge at this time. An Investigator's Odor Intensity Time Log was conducted for one hour starting at 03:20 hrs (Attachment 2, Odor Logs). The highest 1-minute odor intensity was very strong. The maximum 10-minute weighted average intensity was moderate. The weighted one hour average intensity was light. At 04:40 hours, the investigators drove to Route 5, which goes north on West Drive from McHard Road and separates several industrial areas that are located on the west side of Route 5. No odor was detected. The investigators then drove down Route 4 placing the investigators upwind of Akzo Nobel and downwind of Lone Star. No odor was detected. At 05:00 hrs, the investigators drove back to Stop B and no odor was detected. The odor that was detected at Stop B appears to have stopped after the initial survey, preventing the investigators from determining the source. This is a single occurrence of a highly offensive odor with a 1-hour weighted average of light from an unknown source north of McHard Road. Based on TCEQ's Odor Complaint Investigation Procedures and the applicable FIDO Chart the odor would need to be present for one hour with a weighted average intensity of very strong to constitute a nuisance odor; therefore, this odor does not constitute a nuisance condition.

At 04:25 hrs, the investigators surveyed Routes 1, 2, 3, 7, and 9. No further odor was detected.

At 06:30 hrs, the investigators departed the area.

Exit Interview

An exit interview was not conducted.

GENERAL FACILITY AND PROCESS INFORMATION

Process Description

Blue Ridge Landfill is a municipal solid waste landfill with a landfill gas collection and control system.

BACKGROUND

Agreed Orders Court Orders, and Other Compliance Agreements

Based on review of CCEDS and the regional office files, there were no agreed orders, court orders, or other compliance agreements related to air quality violations for the site.

Prior Enforcement Issues

Based on a review of CCEDS and the regional office files, no violations related to air quality were issued by the TCEQ to the alleged source during the past five years.

Complaints

Based on a review of CCEDS and regional office records, there have been over a thousand odor complaints received within the survey area. At the time of the review, multiple related odor investigations were being conducted by the Region 12 office.

ADDITIONAL INFORMATION

Conclusions, Recommendations, and Current Enforcement Actions

There were two separate odors detected during this investigation. An offensive odor of landfill waste was detected and the source appeared to be Blue Ridge Landfill. The strongest one minute intensity was moderate. The greatest 10 minute weighted average was very light. The second odor investigated was a hydrogen sulfide odor from a source north of McHard Road. The strongest one minute intensity was very strong. The greatest 10 minute weighted average was moderate. Based on the TCEQ's Odor Complaint Investigation Procedures and application of the FIDO chart neither odor constitutes a nuisance condition.

No further odors were detected during the course of this investigation.

Additional Issues

No additional issues were noted during this investigation.

REPORT ATTACHMENTS

1. Maps

- a. Odor Survey Routes
- b. Northern Routes
- c. Southern Routes
- d. Stop A
- e. Stop B

2. Odor Logs

No Violations Associated to this Investigation

Signed

Tom 7-4

Environmental Investigator

Date

5/25/2017

Signed

Letitia Menden

Supervisor

Date

5/25/17

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) : _____

Attachment 1

Maps

Investigation #1349162

Blue Ridge Landfill

RN102610102

FG0536E

June 6, 2016

a. Odor Survey Routes.



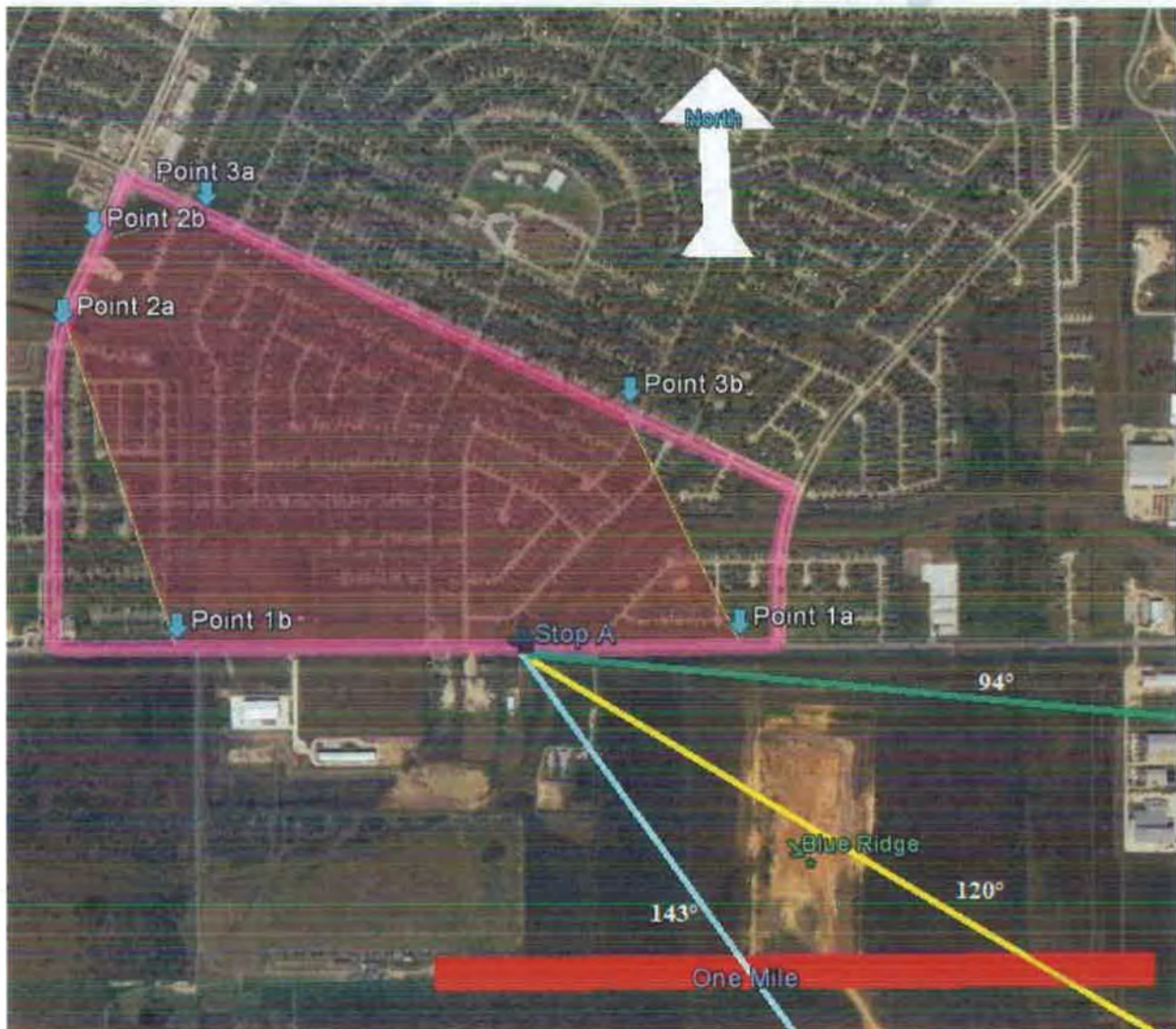
b. Northern Routes



c. Southern Routes



d. Stop A



- Time in area: June 8, 2016 22:15 through June 9, 2016 0:100.
- Downwind observations: During this time, this area was downwind of Blue Ridge Landfill. An odor of landfill waste was detected. Points were drawn showing where odor was detected. The area colored red represents the apparent odor plume.
- Upwind observations: No odor detected on FM 521, upwind of Blue Ridge Landfill.

e. Stop B



- Time in area: June 9, 2016 03:15 – 04:20 hrs
- Downwind observations: A hydrogen sulfide odor was detected.
- Upwind observations: After the one hour odor intensity time log no odor could be detected upwind of the site or at this location so the source could not be confirmed; therefore the area upwind could not be determined.

Attachment 2

Odor Logs

Investigation #1349162

Blue Ridge Landfill

RN102610102

FG0536E

June 6, 2016

Investigator's Odor Intensity Time Log

Date of Investigation: 6/8/2016 Start Time 10:45 ^{6/8/16}
 Name and Address of Alleged Source: _____
 Investigator's Name: Print: Tom P. K. S. for Sign: [Signature]
10:45

Minutes	Odor Intensity VL, L, M, S, VS
1 min	L
2	VL
3	L
4	VL
5	VL
6	—
7	—
8	M
9	L
10	L
11	L
12	—
13	—
14	—
15	—
16	—
17	—
18	—
19	—
20	—
21	—
22	—
23	—
24	—
25	—
26	—
27	—
28	—
29	—
30	—

Minutes	Odor Intensity VL, L, M, S, VS
31 min	—
32	—
33	—
34	—
35	—
36	—
37	—
38	—
39	—
40	—
41	—
42	—
43	—
44	—
45	—
46	—
47	—
48	—
49	—
50	—
51	—
52	—
53	—
54	—
55	—
56	—
57	—
58	—
59	—
60	—

Investigation Type: FI AL ODO
 Air Account NO: _____
 Attachment: 2
 Page: 1 of 2

6/9/16 239

Fair
12.50

SE wind
@ 1-3 mph

3
2 = 9/10 = 0.9

very fast

wind
[Diagram]

20.45 = 0.116
23.15 = 0.116

24.35 = 0.15
01.35 = 0.15

Offensiveness: Highly _____ Offensive X Unpleasant _____ Not Unpleasant _____
 Dominant Odor Intensity For:

	VS	S	M	L	VL	No Odor
1 Min			<u>1</u>	<u>5</u>	<u>3</u>	
10 Min					<u>(0.9)</u>	
1 Hour					<u>X</u>	

Investigator's Odor Intensity Time Log

Date of Investigation: 6/9/2010

Start Time 6-16 03:20

Name and Address of Alleged Source:

Investigator's Name: Print: Tom P. K. Kim

Sign: [Signature]

29° 34' 55" N
95° 26' 9" W

Minutes	Odor Intensity VL, L, M, S, VS
1 min	VS 5
2	VS 5
3	M 3
4	M 3
5	M 3
6	M 3
7	M 3
8	M 3
9	M 3
10	L 2
11	L 2
12	L 2
13	M 3
14	L 2
15	VL 1
16	VL 1
17	VL 1
18	VL 1
19	VL 1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1

Minutes	Odor Intensity VL, L, M, S, VS
31 min	S 4
32	S 4
33	M 3
34	M 3
35	L 2
36	L 2
37	VL 1
38	VL 1
39	1
40	1
41	1
42	1
43	1
44	1
45	1
46	1
47	1
48	1
49	1
50	1
51	1
52	1
53	1
54	1
55	1
56	1
57	1
58	1
59	1
60	1

Offensiveness: Highly X Offensive _____ Unpleasant _____ Not Unpleasant _____

Dominant Odor Intensity For:

	VS	S	M	L	VL	No Odor
1 Min	X					
10 Min			X (3.3)			
1 Hour				1.67 X		

very offensive
changed to a sulfuric smell.
started H₂S smell shortly (15 min)
@ 31 min mark H₂S smell returned for 5 min

3:20
Base
Car Place
Near
AN

NNW
wind
~ 1 mph

Investigation Type: FIELD
Air Account NO: _____
Attachment: 2
Page: 2 of 2

352

4:20

105/80 1.67 1 hour

Page _____ of _____

Attachment _____

For Record No. _____

Investigation No. _____