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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 21, 2017

CERTIFIED MAIL - RETURN RECEIPT REQUESTED 9489 0090 0027 6009 3624 35

Mr. Brandon Rogers, General Manager
Blue Ridge Landfill TX, LP
P.O. Box 879
Fresno, Texas 77545-0879

Re: Response to the Revised Odor Control Plan ("the Plan") Submitted on
December 1, 2017
Agreed Order Docket No. 2016-1923-AIR-E; Case No. 53555
Blue Ridge Landfill TX, LP; RN102610102
Agreed Order Effective Date: July 12, 2017

Dear Mr. Rogers:

The Texas Commission on Environmental Quality ("TCEQ") has completed the review of the Revised Plan for the above-referenced facility. The Revised Plan was prepared by Weaver Consultants Group and received by the TCEQ on December 1, 2017. The Revised Plan was timely submitted according to the requirements of Agreed Order Docket No. 2016-1923-AIR-E, Ordering Provisions Nos. 3.a and 3.b.

Based upon our review, we are unable to approve the Revised Plan at this time because additional information is necessary to demonstrate that the Revised Plan will effectively address odor control at the landfill. Enclosed is a summary of the TCEQ's response to the Revised Plan.

Please submit all required information for outstanding Ordering Provisions Nos. 3.a. and 3.b. **by January 18, 2018**. If you complete the necessary corrective actions and address the comments by the stated deadline, we will not pursue further action for the alleged violation at this time. **However, please note that if you fail to adequately comply with the terms of the Order, the TCEQ will initiate an additional enforcement action, which may result in significantly higher penalties for failure to comply with a TCEQ Order. In addition, the TCEQ may demand payment of the portion of the penalty, which was deferred contingent on compliance with the Order.**

Mr. Brandon Rogers
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If you or members of your staff have any questions, please contact Mr. Rajesh Acharya of my staff at (512) 239-0577.

Sincerely,

A handwritten signature in cursive script that reads "Bryan Sinclair".

Bryan Sinclair, Director
Enforcement Division
Texas Commission on Environmental Quality

Enclosure – TCEQ's 2nd Response to the Blue Ridge Landfill Odor Control Plan

cc: Mr. Duncan C. Norton, Principal, Lloyd Gosselink Rochelle & Townsend, P.C.,
816 Congress Avenue, Suite 1900, Austin, Texas 78701-2478

**TCEQ's RESPONSE TO THE
REVISED BLUE RIDGE LANDFILL ("BRLF") ODOR CONTROL PLAN
SUBMITTED ON DECEMBER 1, 2017 (Revised Plan)**

SECTION 2. MINIMIZE ODORS FROM ADDITIONAL ON-SITE SOURCES

2.1 Active Disposal Areas

TCEQ Comments:

1. The Revised Plan indicates that a minimum of six inches of soil cover will be placed over the working face at the end of each day. As noted in the Notice of Deficiency ("NOD") letter dated October 6, 2017, the provisions of the Plan must be above the current permit limits in order to adequately address nuisance odor conditions.
2. Reference: "Upon determining that an area will not receive waste for at least 180 days, the site will initiate intermediate cover placement within 90 days." The TCEQ requests clarification on the amount of time the Plan proposes to have intermediate cover in place. As currently worded, the provision could be interpreted to mean that intermediate cover will not be completed until 90 days after the 180 days has lapsed, which exceeds the rule allowance (30 Texas Administrative Code §330.165(c)). The Plan should clearly state that intermediate cover will be in place by 180th day.
3. Reference: "A significantly odiferous load is a load that has an intense strong odor which is not typical of municipal solid waste or industrial waste." The TCEQ recommends revising the definition to "...an odor stronger or more intense than typical of municipal solid waste."
4. The Revised Plan did not adequately address the TCEQ comments on need for odor misting system operations during activity at the working face. Specifically, the Plan must provide more detail regarding proper configuration and additional controls for the odor misting system.
5. The Revised Plan eliminated discussion of Alternative Daily Cover ("ADC"). The TCEQ requests clarification as to why this information was eliminated.
6. The Revised Plan must include more detailed information on the waste screening process.

2.2 Landfill Cover

TCEQ Comments:

1. Reference: "The integrity of the landfill cover will be evaluated by the landfill operations manager or their designee, and the thickness of the cover soils *will be adjusted accordingly*." The Plan must provide more detail regarding the basis or methodology that will be used to adjust soil cover depth.
2. The Plan must require records to be maintained that document repair activities that are completed in response to Surface Emissions Monitoring ("SEM").
3. The Revised Plan must specify that approval for exceptions and extensions to the scope of work outlined in the Plan for repairing the cover material will be submitted to the TCEQ Houston Regional Office.

2.3 Inactive Disposal Areas

TCEQ Comments:

1. Reference the first bullet statement, the Plan must:
 - include provisions to ensure that additional cover installations are adequately documented in accordance with the Site Operating Plan;
 - require additional investigations and any necessary corrective actions upon visual observations of noncompliance; and
 - provide more information on how "adequacy of soil cover material thickness" will be determined.
2. Reference the third bullet statement: The TCEQ requests clarification as to why "40 contiguous acres" was selected.
3. The Plan must include timeframes for each of the bullet statements to ensure that proactive measures are in place to address nuisance odor conditions before they become an issue.

2.4 Storage Tanks

TCEQ Comments:

1. The Revised Plan proposes a potential 90-day delay between the time of new leachate tank installations and installation of the carbon canisters. Installation of the carbon canisters must occur at the time of tank installation and the tanks must not be put into use before effective odor control equipment has been installed.
2. The Plan must include more detail on the adjustments that will be made if odors associated with storage tank areas are detected.

3. The Plan must specify that spare carbon canisters will always be available and be replaced no more than five days upon detection of breakthrough.

The TCEQ recommends the following approach:

The Plan must include installing a dual-canister system consisting of two canisters in series, "upstream" (near the source) and "downstream" (near the outlet). The VOC concentrations must be measured between the two canisters on a regular schedule. The Plan should specify the point in which "breakthrough" has occurred, at which time the upstream canister must be replaced. The downstream canister would then be moved to the upstream position, and a new canister would be placed in the downstream position.

4. The Plan must clarify that the "7" reading on the Nasal Ranger instrument represents the dilution/threshold ratio, which is described in section 2.10 and Appendix 6.
5. The Plan did not adequately address all TCEQ comments in the sixth bullet statement of the NOD letter (regarding inclusion of a tank table listing).

2.5 Solidification Pits

TCEQ Comments:

1. The Plan must include requirements for the odor misting system to be in operation at all times when there is waste present, including when receiving waste at the solidification facility. Although the Revised Plan includes this requirement, it indicates that the system will be in use "as needed." The Plan must be revised to eliminate this condition.
2. The Plan must include more detail that explains the methods to be used to "adjust the odor neutralizing system".
3. The Plan must include more detail about the operation of the odor control system or when waste is in the pit or an odor is detected by the Nasal Ranger.

2.6 Leachate and Condensate Collection and Management System

TCEQ Comments:

1. As noted in Comment No. 1 of the NOD letter, the Plan must identify all areas of the leachate sumps and cleanout risers that have direct venting or are not sealed and procedures to install air control devices or seals. The Revised Plan does not adequately address this comment. The Plan must specify a sampling frequency for odors and volatile organic compounds ("VOCs") around vents and a timeframe for repairs when odors or VOCs are detected.
2. As noted in Comment No. 3 of the NOD letter, the Plan must include specific record-keeping protocols. The Revised Plan does not adequately address this

comment. The Plan must require that all corrective actions be completed immediately or no more than five days.

2.7 Citizen Collection Station

TCEQ Comments:

No comments were noted for this section.

2.8 Landfill Gas Collection and Control System (GCCS)

TCEQ Comments:

1. Reference the fourth paragraph, the phrase "Should a well have positive pressure..." should be revised to "Should a well be observed with a pressure equal to or greater than ambient pressure..."
2. Reference the provision that addresses drilling of new gas extraction wells, the Plan allows up to three months before piping will be installed and connected to the collection system. The TCEQ deems three months to be more time than is necessary. The Plan should include a significantly shorter timeframe for this action. BRLF must also ensure that gas extraction wells are capped and sealed between installation and connection to the collection system.
3. The Revised Plan did not adequately address Comment No. 9 in the NOD letter. Specifically, the TCEQ requested quicker timeframes for expanding the GCCS.
4. The TCEQ is requesting that Plan require a baseline evaluation of the GCCS be conducted within the first year and an evaluation be conducted annually thereafter.

2.9 Odor Control and Odor Neutralizing Systems

TCEQ Comments:

1. The Revised Plan did not adequately address Comment No. 1 in the NOD letter. The Plan must contain more detail about the odor control and odor neutralizing systems, including performance capabilities of the equipment, location considerations, and materials used.
2. The Revised Plan must include recordkeeping protocols to demonstrate when the odor control systems are active and when they are non-operational because of maintenance, repair, power outages, and rain events.
3. The proposed carbon canister breakthrough method is insufficient. The Plan must specify that spare carbon canisters will always be available and be replaced no more than five days upon detection of breakthrough.

The TCEQ recommends the following approach:

The Plan must include installing a dual-canister system consisting of two canisters in series, "upstream" (near the source) and "downstream" (near the outlet). The VOC concentrations must be measured between the two canisters on a regular schedule. The Plan should specify the point in which "breakthrough" has occurred, at which time the upstream canister must be replaced. The downstream canister would then be moved to the upstream position, and a new canister would be placed in the downstream position.

2.10 Nasal Ranger

TCEQ Comments:

1. Section 2.10 has been added to the Revised Plan to introduce the Nasal Ranger. The Plan should include technical justification for use of "7" as the threshold for corrective action.
2. The last sentence beginning with "The following state regulatory agencies..." is unnecessary and should be removed from the Plan.

Section 3. ODOR MONITORING PLAN

3.1 24-Hour Telephone Odor Complaint Hotline

TCEQ Comments:

1. The Revised Plan did not adequately address Comment No. 7 of the NOD letter. The Plan must include the criteria that BRLF will use to determine whether the telephone and online systems are functional and effective.
2. The Revised Plan did not adequately address Comment No. 9 of the NOD letter. As stated in the NOD letter, the Plan must provide for the Odor Complaint Hotline remaining in place for the life of the Site. BRLF may request that they be allowed to discontinue the complaint line by submitting a written request to MSW permits and the Houston Regional Office. The Plan must also include specific criteria for re-opening the Odor Complaint Hotline should odor nuisance issues continue.
3. The Plan must specify that the three miles will be measured from the permit boundary. Additionally, the TCEQ requests clarification as to how the distance limit of three miles was determined.
4. The Plan must specify that information about the complaint intake system provided to the public clarify that the BRLF complaints line explain is separate from the TCEQ's complaint process.

3.2 Odor Detection Monitoring/Survey

TCEQ Comments:

1. The Plan must include a detailed description as how BRLF will determine whether the source of the odors are attributed to the Site.
2. The Revised Plan did not adequately address Comment No. 6 of the NOD letter. Regarding investigative actions, the Plan must include a clear description of what the actions entail, procedures for how they will be done, what parameters will be considered, and how they will constitute an effective response to detection of off-site odors.
3. The TCEQ requests that the Plan require BRLF personnel to perform upwind perimeter odor surveys at the same interval.
4. The Plan must include the source of weather data being used by BRLF.

3.3 Fence-Line Sulfur Monitoring

TCEQ Comments:

1. The Plan must include information on the make, model, procedures, and quality control measures for the handheld hydrogen sulfide ("H₂S") meters.
2. The Revised Plan does not adequately address Comment No. 1 of the NOD letter. The Plan must explain the benefit of having an H₂S monitoring system.
3. The Revised Plan does not adequately address Comment No. 7 of the NOD letter. The Plan must state that fence-line sulfur monitoring will remain in place for the life of the Site.
4. The Plan must include information on the placement of monitors to ensure that they are positioned in a manner that would allow them to identify and respond to emissions that may result in nuisance odors.

Additional Discussion

It is unclear how the proposed fence line monitoring will detect potential off-site nuisance odors as indicated in the agreed order. The Plan only discusses H₂S monitoring. The proposed monitoring may not be indicative of all odors emanating from the landfill.

The proposed sensor is not exclusive to hydrogen sulfide but also picks up methanethiol (methyl mercaptan) and other reduced sulfur compounds. This may not be an issue since methanethiol has a putrid odor and other reduced sulfur compounds have odors associated with them. But these other compounds could cause positive biases in the data that may have an adverse effect on determining a correlation between odor complaints and the monitoring data.

The proposed sensor indicates that the operating conditions should be -20 to 40 degrees Celsius or -4 to 104 degrees Fahrenheit and 15 to 90% relative humidity. The lower ranges should not be of concern, but the upper ranges may be exceeded on a regular basis especially the relative humidity range. This will affect the accuracy of the data.

The proposed sensors have an indicated uncertainty of 30%. Given that a handheld H₂S monitor will be used to calibrate/validate the sensor by collocation, then the uncertainty will grow depending on the uncertainty of the handheld device. Since the accuracy of the data is of importance, a more detailed discussion on how the handheld device will be calibrated, how these collocated data will be used in the calibration/validation of the sensors, and frequency of the checks should be included in the Plan.

There are a couple of issues with data losses that should be addressed. The sensor's calibration is good for 12 months. Since the monitoring is to last longer than 12 months, sensors should be ordered and replaced before this time period is over instead of after, as indicated in the third paragraph of section 3.3. This will prevent the data between the calibration expiration date and the new sensor deployment date from being lost. Section 3.3, ninth paragraph indicates that when data is downloaded from the sensor, the sensor is reset and then takes 24 hours to stabilize. There are various ways to minimize the impact of the lost 24 hours, such as, have the recovery period coincide with days the landfill is closed, when the sensors will not be downwind of the landfill, or use the complaint history to determine if there are certain 24-hour periods that have fewer complaints.

SECTION 4. ODOR COMPLAINT PLAN

4.1 Receiving and Documenting Odor Complaints

TCEQ Comments:

1. The Plan states that incomplete complaints will not be documented or investigated. The Plan must require that all complaints be documented and investigated to the extent possible given the information provided.
2. The Plan must specify that the three miles will be measured from the permit boundary. Additionally, the TCEQ requests clarification as to how the distance limit of three miles was determined.
3. Appendix 9 of the Revised Plan no longer contains a space for the complainant's phone number, only an email address. Appendix 9 must be revised to include the telephone number of the complainant.

4.2 Responding to Odor Complaints and Corrective Actions

4.2.1 Response

TCEQ Comments:

1. Paragraph No. 1 of the Revised Plan does not state the method to be used to contact complainants. The Plan should establish a method that is direct as possible (e.g., if a telephone number is provided and a message can be left, BRLF will contact the complainant by telephone rather than email).
2. The Revised Plan did not adequately address Comment No. 5 of the NOD letter. The Plan must include protocols for review of meteorological data to determine how wind speed and direction may have contributed to an odor event.

4.2.2 Corrective Action

TCEQ Comments:

The Revised Plan did not adequately address any of the comments noted in the NOD letter.

4.3 Maintaining Records

TCEQ Comments:

1. The Plan must specify that records will be maintained for the life of Site.
2. The Plan must specify that records may be relocated to an alternate offsite location upon approval from the TCEQ Waste Permits Division.

SECTION 5. SURFACE EMISSIONS MONITORING

5.1 Quality Assurance Project Plan (QAPP)

TCEQ Comments:

No comments were noted for this section.

5.2 Frequency

TCEQ Comments:

The Revised Plan indicates that Surface Emissions Sampling will be performed bimonthly for two years, after which the frequency will be reduced to quarterly.

The Plan must include the basis upon which two years was selected as the reduction point or revise the Plan to establish the frequency reduction point to be dependent upon performance-based measures.

SECTION 6. IMPLEMENTATION SCHEDULE AND MILESTONES

TCEQ Comments:

1. Reference the third bullet statement, the Plan should require that the complaint hotline and website be activated immediately upon approval of the Plan.
2. The Plan must include scheduled communications with the public in regards to the Odor Complaint Hotline and Internet complaint form.
3. The Plan must provide for the Odor Complaint Hotline remaining in place for the life of the Site. BRLF may request that they be allowed to discontinue the complaint line by submitting a written request to MSW permits and the Houston Regional Office. The Plan must also include specific criteria for re-opening the hotline should odor nuisance issues continue.
4. The Plan must require that the fence-line monitoring begin immediately upon approval of the Plan and continue for the life of the site, not 12 months.

APPENDIX 1. COVER APPLICATION LOG

TCEQ Comments:

No comments were noted for this Section.

APPENDIX 2. ODOR SURVEY LOGS

TCEQ Comments:

The Odor Survey Logs must include instructions that explains to the user how to complete the forms.

APPENDIX 3. FIELD ODOR INVESTIGATION FORM

TCEQ Comments:

No comments were noted for this Section.

APPENDIX 4. SITE PLAN

TCEQ Comments:

No comments were noted for this Section.

APPENDIX 5. ODOR NEUTRALIZING SYSTEM – SDS

TCEQ Comments:

No comments were noted for this Section.

APPENDIX 6. NASAL RANGER

TCEQ Comments:

An example such as the one provided on Page 21 should be available for BRLF personnel to use when completing the Odor Monitoring Data Sheet.

APPENDIX 7. DRIVING ROUTE AND OFFSITE MONITORING LOCATIONS

TCEQ Comments:

No comments were noted for this Section.

APPENDIX 8. TECHNICAL DATA SHEET CAIRPOL

TCEQ Comments:

No comments were noted for this Section.

APPENDIX 9. ODOR COMPLAINT FORM

TCEQ Comments:

The Odor Complaint Form no longer contains a space for the complainant's phone number, it only provides space for an email address. The Odor Complaint Form must be revised to include the telephone number of the complainant.

APPENDIX 10. SURFACE EMISSION MONITORING PROCEDURES AND PROTOCOLS

TCEQ Comments:

Items numbered 8 and 9 in the Revised Plan should be renumbered as 7 a. and 7 b., respectively.

