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## RULE 4566 COMPOSTING AND RELATED OPERATIONS (Adopted Month, Day, Year)

### 1.0 Purpose

The purpose of this rule is to limit emissions of volatile organic compounds (VOC) from composting of organic material and to minimize inadvertent decomposition from related operations.

### 2.0 Applicability

The provisions of this rule apply to facilities where composting or stockpiling of organic material occurs.

### 3.0 Definitions

3.1 Active Composting: the phase of the composting process that begins when organic materials are mixed or piled together for composting and ends when any of the following conditions is met:

3.1.1 The material has been composted for a period of 22 consecutive days;

3.1.2 Product respiration rate emits no more than 20 milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry using the test method in Section 6.2.1.1;

3.1.3 The organic material emits no more than seven (7) mg carbon dioxide per gram of organic material (CO<sub>2</sub>-C) per day, as measured using the test method in Section 6.2.1.2; or

3.1.4 The organic material has a Solvita Maturity Index of five (5) or greater as measured using the test method in Section 6.2.1.3.

3.2 Aerated Static Pile: a system designed, constructed, maintained, and operated for decomposing organic material in which the material is placed on top of perforated plates or pipes that are connected to blowers that either push or pull air through the piles.

3.3 Agricultural Chipping and Grinding: any chipping and grinding activity conducted at an agricultural site where agricultural material is generated on-site by the production and/or processing of farm products.

3.4 Agricultural Composting: composting of agricultural materials at an agricultural operation site, which were generated on-site and will be used on-site.

- 3.5 Agricultural Material: any vegetative material that are produced wholly from agricultural operations, the operation or maintenance of a system for the delivery of water in agricultural operations, or material not produced wholly from agricultural operations but which are essential to agricultural operations.
- 3.6 Agricultural Operations: operations primarily involved with the growing, harvesting, and packing of crops or the raising of fowl or animals, for the primary purpose of earning a living, or of conducting agricultural research or instruction by an educational institution.
- 3.7 Air Pollution Control Officer (APCO): as defined in Rule 1020 (Definitions).
- 3.8 Air Resources Board (ARB): as defined in Rule 1020 (Definitions).
- 3.9 Alternative Mitigation Measure: a mitigation measure proposed by the operator, that is determined by the APCO to achieve VOC reductions that are equal to or greater than the VOC reductions that would be achieved by other mitigation measures listed in this rule, that operators could choose as a means of complying with rule requirements.
- 3.10 Animal Manure: non-human animal excretions and waste, including, but not limited to, dried solids and urine from cows, cattle, or swine.
- 3.11 Background Hydrocarbon Level: a reading on a hydrocarbon analyzer that is measured at a distance no greater than two (2) meters upwind from any emissions point to be inspected and which is not influenced by any specific emission point.
- 3.12 Biofilter: a pollution control technique using living organisms (microbes) to capture and biologically modify VOC emissions. A biofilter is usually a bed of organic material (medium), typically a mixture of compost and wood chips or shreds. As air passes through the biofilter, the microbes on the organic material convert contaminants in the air stream to carbon dioxide and water.
- 3.13 Biosolids: organic material resulting from the treatment of sewage sludge or wastewater.
- 3.14 California Department of Resources Recycling and Recovery (CalRecycle): the California Department of Resources Recycling and Recovery or a person designated to act on their behalf.
- 3.15 Chipping and Grinding: any activity that mechanically reduces the size of organic material.

- 3.16 Community Composting: composting conducted by a residential neighborhood association using feedstock generated within the residential neighborhood to produce compost for the neighborhood's use.
- 3.17 Compost: a product resulting from the controlled biological decomposition of organic material.
- 3.18 Compostable Material: any organic material that is capable of undergoing active composting.
- 3.19 Composting: the controlled biological decomposition of organic material under aerobic (with air) or anaerobic (without air) conditions to form a humus-like material.
- 3.20 Composting Facility: any facility where composting occurs.
- 3.21 Contiguous or Adjacent Property: as defined in Rule 2201 (New and Modified Stationary Source Review Rule).
- 3.22 Curing Composting: the phase of the composting process that begins immediately after active composting and ends when any of the following conditions is met:
  - 3.22.1 The material has been composted for a period of 40 consecutive days after the active composting period; or
  - 3.22.2 Product respiration rate emits no more than 10 milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry using the test method in Section 6.2.1.1; or
  - 3.22.3 The organic material emits no more than four (4) mg CO<sub>2</sub>-C per gram of organic material per day, as measured using the test method in Section 6.2.1.2; or
  - 3.22.4 The compost has a Solvita Maturity Index of seven (7) or greater, as measured using the test method in Section 6.2.1.3.
- 3.23 Day: a continuous twenty-four hour period, beginning at 12:00 A.M.
- 3.24 Environmental Protection Agency (EPA): The United States Environmental Protection Agency or any person designated to act on behalf of the EPA.

- 3.25 Facility: a portion of real property that is on one or more contiguous or adjacent properties all of which are under common ownership or control.
- 3.26 Finished Compost: a humus-like material that has completed both the active phase and curing phases of composting.
- 3.27 Finished Compost Cover: unscreened finished compost that is used as a control technique to reduce VOC emissions and may include a mixture of screened finished compost or overs.
- 3.28 Food Material: any food scraps collected from the food service industry, grocery stores, or residential food scrap collection. Food material also includes food material that is chipped or ground. Food material mixed with green material is considered food material.
- 3.29 Food Processing By-Product: the by-products of food processing that are solid or semisolid substances derived from agricultural plant material delivered to a food processor for processing, and are not utilized in the final product. Food processing by-products includes culls, peelings, seeds, under or over ripe food, skins, cores, pomace, puree, hulls, shells, pits, stems, leaves and any other organic substance.
- 3.30 Green Material: any vegetative material generated from gardening, agriculture, or landscaping activities including, but not limited to a mixture of, grass clippings, leaves, tree and shrub trimmings, and plant remains.
- 3.31 Household Composting: composting conducted by a household, including but not limited to, single family residences, duplexes or apartment buildings, using organic materials that are generated on-site to produce compost which will be used on-site.
- 3.32 Hydrocarbon Analyzer: a hand-held portable hydrocarbon analyzer that meets the criteria specified in Section 6.2.4.2 or Section 6.2.5.5.
- 3.33 Inadvertent Decomposition: the uncontrolled decomposition of organic material associated with stockpiling organic material for an extended period of time.
- 3.34 In-vessel Composting System: a system where all compostable material is inside a pressurized enclosure that is not open to the atmosphere and that is composed of hard-piping, ductwork connections, and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment.
- 3.35 Land Application: for the purpose of this rule, any activity that involves applying or spreading the organic material in an open area.

- 3.36 Landclearing: an activity where trees and plants grown at the site are pulled and/or cut, then chipped or ground and removed to clear the site.
- 3.37 Land Incorporation: for the purpose of this rule, any activity that involves tilling, injecting, or plowing the organic material into the soil.
- 3.38 Mitigation Measure: for the purpose of this rule, an activity, work practice, or technology that reduces VOC air pollutants emitted by or associated with the processing of organic material.
- 3.39 Nursery Composting: composting conducted at a plant nursery using materials generated on-site to produce compost for on-site use.
- 3.40 Operator: for the purpose of this rule, any person who owns, leases, supervises, or operates a facility that processes organic material, or equipment on such a facility.
- 3.41 Organic Material: for the purpose of this rule, food processing by-products, food material, green material, wood material, or a mixture thereof, and may include a total of less than 100 wet tons per year of biosolids, animal manure, or poultry litter.
- 3.42 Overs: woody parts of the finished compost that have not completely broken down and will not pass through a trommel screen during screening.
- 3.43 Pathogen Reduction: any process conducted entirely or in part to reduce the number of disease-causing organisms present in organic material in accordance with Title 14 Chapter 3.1 Division 7 Section 17868 of the California Code of Regulations (CCR).
- 3.44 Pile: compostable material that is heaped together.
- 3.45 Portable Chipping and Grinding: chipping and grinding equipment that is registered as a portable emissions unit under Rule 2280 (Portable Equipment Registration), the Statewide Portable Equipment Registration Program pursuant to Sections 2450-2465, Article 5, Title 13, California Code of Regulations, or is otherwise exempt from permitting.
- 3.46 Poultry Litter: poultry excretions and waste, including, but not limited to, dried solids and urine from chickens, turkeys, geese, or ducks.

- 3.47 **Recreational Facilities Composting:** composting conducted at parks, arboretums and other recreational facilities using feedstock generated on-site to produce compost for on-site use.
- 3.48 **Solvita Maturity Index:** an index that defines the stage where compost exhibits resistance to further decomposition, in accordance with the test method specified in Section 6.2.1.3.
- 3.49 **Sprinkler Irrigation System:** a mobile system connected to a water source which uniformly applies water by means of nozzles operated under pressure.
- 3.50 **Stockpile:** for the purpose of this rule, a pile of compostable material that is temporarily stored prior to further processing.
- 3.51 **Throughput:** the weight of material to be processed, as it is received or generated at a facility, prior to any dewatering or treatment at the receiving location. Throughput includes the weight of moisture present in the organic material.
- 3.52 **Test Methods for the Examination of Composting and Compost (TMECC):** test methods for the examination of composting and compost by the US Composting Council Research and Education Foundation.
- 3.53 **VOC Control Device:** a device, into which captured air is vented, that reduces the VOC content in the air prior to the air being released into the atmosphere.
- 3.54 **Volatile Organic Compounds (VOC):** as defined in Rule 1020 (Definitions).
- 3.55 **Wood material:** untreated lumber and the woody material portion of mixed demolition wastes and mixed construction wastes. Wood material also includes the woody material portion of trees. Wood material or wood material chips to which other organic material has been added are not considered to be wood material.
- 3.56 **Year:** a continuous, 12-month period beginning on January 1 and ending on December 31.

## 4.0 Exemptions

The exemptions in Sections 4.1 and 4.2 do not apply to any facilities that require a permit from CalRecycle.

- 4.1 Facilities that conduct the following composting operations are exempt from all requirements of this rule:

- 4.1.1 Agricultural composting;
- 4.1.2 Community composting;
- 4.1.3 Household composting;
- 4.1.4 Nursery composting;
- 4.1.5 Recreational facilities composting;
- 4.2 Facilities that stockpile organic materials from the following operations are exempt from all requirements of this rule:
  - 4.2.1 Portable chipping and grinding, provided that organic material is stockpiled on the site on which it was generated and processed;
  - 4.2.2 Agricultural chipping and grinding;
  - 4.2.3 Landclearing chipping and grinding;
  - 4.2.4 Wood material chipping and grinding;
  - 4.2.5 Land incorporation, provided that organic material is processed within 14 days of stockpiling and that operator is not intentionally conducting pathogen reduction on the organic material at the facility;
  - 4.2.6 Land application, provided that organic material is land applied within 14 days of stockpiling, the application is no more than twelve (12) inches thick, and the operator is not intentionally conducting pathogen reduction on the organic material at the facility;
  - 4.2.7 Community drop-off site with roll-off containers on-site for incoming organic material and operated by a residential neighborhood association.
- 4.3 The following facilities are exempt from all requirements of this rule:
  - 4.3.1 Facilities subject to Rule 4204 (Cotton Gins) and cotton ginning facilities that are specifically exempt from Rule 4204.
  - 4.3.2 Agricultural operations subject to Rule 4550 (Conservation Management Practices) and agricultural operations that are specifically exempt from Rule 4550.

4.3.3 Facilities subject to Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations) and having a throughput less than 10,000 wet tons per year of organic material. For the purpose of this exemption only, biosolids, animal manure, and poultry litter are not counted in the organic material throughput determination.

4.3.4 Facilities subject to Rule 4570 (Confined Animal Facilities) and confined animal facilities that are specifically exempt from Rule 4570.

## 5.0 Requirements

### 5.1 Stockpile Requirements

An operator who stockpiles organic material shall comply with the following applicable requirements:

5.1.1 Operators of non-composting facilities, with total organic material throughputs of greater than or equal to 10,000 wet tons per year, shall:

5.1.1.1 Process or use the organic material within three (3) days of receipt; and

5.1.1.2 Cover each of the stockpiles, that is not processed within three (3) days of receipt, with at least six (6) inches of finished compost; or

5.1.1.3 Implement an APCO approved alternative mitigation measure, not listed above.

5.1.2 Operators of composting facilities, with total organic material throughputs of greater than or equal to 10,000 wet tons per year, shall:

5.1.2.1 Chip and grind and process the organic material for active composting within three (3) days of receipt; and

5.1.2.2 Cover each of the stockpiles, that is not processed for composting within three (3) days of receipt, with at least six (6) inches of finished compost; or

5.1.2.3 Implement an APCO approved alternative mitigation measure, not listed above.

### 5.2 Composting Requirements



- 5.2.1 Operators of composting facilities shall comply with all of the following:
  - 5.2.1.1 Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active compost pile and curing compost pile; and
  - 5.2.1.2 Maintain the moisture content of every active compost pile and curing compost pile between 40% and 70%, by weight.
  - 5.2.1.3 Test each active compost pile and each curing compost pile at least once each week using the applicable test methods in Section 6.2.2, unless the APCO determines, based on the weekly test results, that a different testing frequency is warranted to ensure compliance with sections 5.2.1.1 and 5.2.1.2.
  - 5.2.1.4 If a tested parameter is found to be outside the applicable limits specified in this section, the operator shall take action within 24 hours of discovery to bring pile characteristics within the specified limits, then re-test and demonstrate compliance.
- 5.2.2 In addition to the requirements in Section 5.2.1, the operator of a composting facility with a throughput of greater than or equal to 10,000 wet tons per year but less than 25,000 wet tons per year shall comply with one of the following:
  - 5.2.2.1 Using a sprinkler irrigation system, apply water to the surface area of all active composting piles within three hours before turning and until three inches in depth of the compost pile is wet; or
  - 5.2.2.2 Implement an APCO approved alternative mitigation measure that demonstrates at least a 24% reduction, by weight, in VOC emissions.
- 5.2.3 In addition to the requirements in Section 5.2.1, the operator of a composting facility with throughput of greater than or equal to 25,000 wet tons per year shall comply with one of the following:
  - 5.2.3.1 Cover all of the surface area of each pile in the active composting phase with finished compost cover having at least six inches of finished compost cover applied to the peak of the pile. Piles shall be covered within three hours of initial pile

formation and within three hours after each turning of the pile; or

5.2.3.2 Implement an APCO approved alternative mitigation measure that demonstrates at least 53% reduction, by weight, in VOC emissions.

5.2.4 Operators selecting to install and operate an aerated static pile system, in-vessel composting system, or other control options vented to a VOC emission control device with a VOC capture and control efficiency of at least 53% by weight shall comply with the applicable control requirements in sections 5.3 through 5.6.

### 5.3 Aerated Static Pile Systems, In-Vessel Systems, and Other Control Options Requirements

5.3.1 In addition to the requirements of Section 5.6, operators using an aerated static pile system shall operate the system to have no measurable increase, ( $< 0.45$  ppmv increase over background levels), of hydrocarbons within three feet (3') of any surface of the aerated static pile.

5.3.2 In addition to the requirements of Section 5.6, an in-vessel composting operation shall have no measurable increase, ( $< 0.45$  ppmv increase over background levels), of hydrocarbons outside the in-vessel enclosure, including any opening that occurs briefly for access or maintenance.

5.3.3 An operator shall test for VOCs once each calendar quarter.

5.3.3.1 The location and number of test points for aerated static pile composting system shall be determined using TMECC 02.01-B (Selection of Sampling Locations for Windrows and Piles).

5.3.3.2 The openings of an in-vessel composting system shall be tested according to the test method specified in Section 6.2.4.1.

5.3.3.3 The hydrocarbon analyzer shall meet the requirements specified in Section 6.2.4.2.

5.3.4 In lieu of complying with the applicable requirements of Sections 5.3.1 or 5.3.2, an operator may monitor one or more alternative parameters. The operator must demonstrate, to the satisfaction of the APCO, that the

alternative parameter(s) correlates to the composting system capturing as much of the VOC emissions as technologically practical.

5.3.5 In lieu of complying with the requirements of Section 5.3.3, an operator may use a different analyzer or test on a different schedule if the operator demonstrates, to the satisfaction of the APCO, that the alternate analyzer or alternate schedule is as indicative of system performance as the requirements Section 5.3.3.

#### 5.4 Biofilter Requirements:

5.4.1 In addition to complying with the applicable requirements of Section 5.3, an operator using a biofilter as a VOC emission control device shall maintain all biofilters at their facility in such a manner that each biofilter complies with the following conditions at all times when it is in operation:

5.4.1.1 The biofilter media temperature is between 70 degrees Fahrenheit and 110 degrees Fahrenheit,

5.4.1.2 The moisture content of the biofilter media is between 40% and 70% by weight.

5.4.1.3 The pH of the biofilter media is between 6.5 and 8.0.

5.4.1.4 Visual inspection - The biofilter media is free of observable rodent burrows, cracks, and channeling. Weed coverage shall be less than 10% of the exposed surface of the biofilter.

#### 5.4.2 Biofilter Monitoring Schedule

5.4.2.1 The biofilter media shall be tested for the following properties at least once per calendar month in five separate, evenly spaced locations throughout the biofilter: temperature, moisture, and pH.

5.4.2.2 Visual inspection of biofilter media shall be performed at least once each week.

5.4.3 In lieu of complying with the requirements of Section 5.4.1, an operator may be held to a different range of values or monitor alternative parameter(s) if the operator demonstrates, to the satisfaction of the APCO, that the range of values or alternate parameter(s) is as indicative of system performance as the applicable requirements of Section 5.4.1.

The alternate range of the parameters listed in 5.4.1 or alternate monitoring parameter can be demonstrated by a source test in accordance with Section 6.2.

5.4.4 In lieu of complying with the requirements of Section 5.4.2, an operator may monitor on a different schedule if the operator demonstrates, to the satisfaction of the APCO, that alternate schedule is as indicative of system performance as the schedule in Section 5.4.2.

5.4.5 An operator using approved alternative parameter(s) from Section 5.4.3 shall also demonstrate the monitoring frequency for the alternative parameter(s) as indicated in Section 5.4.4 is adequate to ensure rule compliance.

## 5.5 Non-Biofilter VOC Emission Control Device Requirements

5.5.1 In addition to the applicable requirements of Section 5.3, an operator using a VOC emission control device that is not a biofilter shall comply with the following requirements:

5.5.1.1 Monitor, on a daily basis, key system operating parameters that demonstrate, to the satisfaction of the APCO, continuous operation and compliance of the VOC emission control device during composting operations. Examples of key system operating parameters include, but are not limited to, temperatures, pressures, and flow rates and

5.5.1.2 Operate and maintain the VOC emission control device in accordance with the manufacturer's recommendations and any additional operating and maintenance standards determined necessary by the APCO to ensure proper operation of the VOC control device.

## 5.6 Source Testing Requirements for VOC Emission Control Device

5.6.1 The VOC emission control device (biofilter or non-biofilter) shall be tested for VOC control efficiency, in accordance to Section 6.2, within sixty (60) days of installation and at least once every calendar year thereafter. VOC emission control devices with an active Permit-to-Operate on *(Date of rule adoption)* shall be tested for VOC control efficiency on or before *(Six (6) months after rule adoption date)*, and every two (2) years thereafter.

5.6.2 The source test must be conducted under representative operating conditions with respect to seasonal conditions, compost composition, process throughput, processing of material, and pile geometries.

5.6.3 An operator of a biofilter may request a longer time between installation and the initial source test if the operator shows, to the satisfaction of the APCO, that a longer time is necessary. In no case shall the time between installation and the source test be greater than six (6) months.

## 6.0 Administrative Requirements

### 6.1 Recordkeeping

#### 6.1.1 Records for Stockpile

An operator subject to this rule shall maintain an operations log. In the operations log, the operator shall record the following information on a daily basis:

6.1.1.1 The date at which the organic material arrives on site;

6.1.1.2 The type and amount of organic material received;

6.1.1.3 The date at which the received material is composted, processed, or covered on-site; and

6.1.1.4 Other information necessary to determine compliance with the requirements.

#### 6.1.2 Composting Facility Records

An operator of a composting facility subject to this rule shall keep the following records:

##### 6.1.2.1 Throughput Records

On a daily basis, an operator shall record the type and amount of organic material received that would be used in the compost operation. The material may include, but are not limited to, feedstock or organic material that may be recovered from the composting process for reuse in another batch of compostable material.

## 6.1.2.2 Mitigation Measure Records

An operator shall keep records that demonstrate that the facility meets the mitigation measure requirements for the facility each day that the mitigation measure is performed. For operators using an approved alternative mitigation measure, the operator shall keep records for the alternative mitigation measure each day the alternative mitigation measure is performed. An operator shall keep records according to 6.1.3 through 6.1.5, as applicable, for the composting operations complying with Section 5.2.5.

## 6.1.3 VOC Inspection Records

An operator of a composting facility complying with Section 5.2.4 requirements shall maintain an inspection logbook. The following information shall be contained in the logbook:

- 6.1.3.1 The date of the VOC inspection.
- 6.1.3.2 The date of calibration for the portable hydrocarbon analyzer.
- 6.1.3.3 The reading of the portable hydrocarbon analyzer in ppmv for each inspection location.
- 6.1.3.4 If an alternate parameter is monitored, list the parameter monitored and record the level of the alternate parameter for each inspection location.

## 6.1.4 Biofilter Records

In addition to the records required in Section 6.1.2, an operator using a biofilter as a VOC emission control device shall keep records with the following information:

- 6.1.4.1 Date of biofilter monitoring.
- 6.1.4.2 The parameter monitored and the test results for the parameter monitored.
- 6.1.4.3 If an alternate parameter is monitored, list the parameter monitored and record the level of the alternate parameter for each location.

## 6.1.5 Non-Biofilter VOC Emission Control Device Records

In addition to the records required in Section 6.1.2, an operator using a VOC emission control system that is not a biofilter as a means of complying with this rule shall comply with all of the following:

6.1.5.1 Maintain daily records of key system operating parameters which will demonstrate continuous operation and compliance of the VOC emission control system during composting operations. Examples of key system operation parameters include, but are not limited to, temperature, pressure, and flow rates; and

6.1.5.2 Keep records describing all maintenance work on the VOC emission control system.

## 6.1.6 Records Retention

Unless otherwise specified in this section, the operator shall retain the applicable records, specified in this section, on-site for a period of five years; make the records available on-site during normal business hours to the APCO; and submit the records to the APCO upon request.

## 6.2 Test Methods

### 6.2.1 Compost Maturity/Stability

Any of the following test methods, as provided by the Test Methods for the Examination of Composting and Compost:

6.2.1.1 TMECC Method 05-08-A (SOUR: Specific Oxygen Uptake Rate); or

6.2.1.2 TMECC Method 05-08-B (Carbon Dioxide Evolution Rate); or

6.2.1.3 TMECC Method 05-08-E (Solvita Maturity Test®).

### 6.2.2 Composting Facility Mitigation Measure Test Methods

6.2.2.1 Oxygen Concentration – TMECC Method 05.08-C (In-Situ Oxygen Refresh Rate)

6.2.2.2 Moisture Content - TMECC Method 03.09 (Total Solids and Moisture at  $70 \pm 5$  degrees Centigrade)

## 6.2.3 Composting Facility Control Mitigation Measure Test Methods

### 6.2.3.1 Biofilter Control Efficiency

The control efficiency of a biofilter shall be determined using SCAQMD Method 25.3 (Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources). The SCAQMD Method 25.3 apparatus should be connected to sample directly inside the flux chamber or duct as applicable. Compost emissions are considered as water-soluble sources where the 50 ppm applicability limit of Method 25.3 does not apply.

### 6.2.3.2 VOC Emission Control Device (Non-Biofilter) Control Efficiency

The control efficiency of a VOC emission control system shall be determined using EPA Methods 2, 2A, or 2D for measuring flow rates and EPA Methods 25, 25A, or 25B for measuring total gaseous organic concentrations at the inlet and outlet of the control device. EPA Method 18 or ARB Method 422 shall be used to determine the emissions of exempt compounds.

## 6.2.4 VOC Test Method

### 6.2.4.1 Test Method – EPA Method 21 (VOC Leaks)

6.2.4.2 Hydrocarbon Analyzer – The portable hydrocarbon analyzer shall be a flame ionization detector that is operated per manufacturer's instructions and calibrated with certified zero and 10 ppmv methane standards.

## 6.2.5 Biofilter Test Methods

6.2.5.1 Temperature – EPA Method 170.1 (Temperature – Thermometric)

6.2.5.2 Moisture Content - TMECC Method 03.09 (Total Solids and Moisture at  $70 \pm 5$  degrees Centigrade)

6.2.5.3 Media pH - TMECC Method 04.11-A (1:5 Slurry pH)



#### 6.2.5.4 VOC – EPA Method 21 (VOC Leaks)

6.2.5.5 Hydrocarbon Analyzer – The portable hydrocarbon analyzer shall be a flame ionization detector that is operated per manufacturer’s instructions and calibrated with certified zero and 10 ppmv methane standards.

#### 6.2.6 Alternative Test Methods

An operator may use an alternative test method to those listed in Sections 6.2.1 through 6.2.5 for which written approval of the APCO has been obtained.

#### 6.2.7 Multiple Test Methods

When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule.

### 6.3 Alternative Mitigation Measures Compliance Plan

6.3.1 A compliance plan for alternative mitigation measures shall contain the following elements:

6.3.1.1 The name(s), address(es) and telephone number(s) of person(s) responsible for the preparation, submittal, and implementation of the compliance plan;

6.3.1.2 The name, address, and telephone number(s) of the facility for which the compliance plan is being prepared;

6.3.1.3 A description and process diagram of the operation;

6.3.1.4 A complete description of the control method(s) that will be used in place of a listed mitigation method;

6.3.1.5 All data, calculations methodology, calculations, records, manufacturer specifications, and all other information necessary to determine that proposed mitigation measure will achieve the required emission reductions;

- 6.3.1.6 Methodology and calculations establishing the daily and annual VOC emissions or projected VOC emissions. The operator may use the established baseline emission factors from the District's policy or establish operation-specific baseline emission factors per Section 6.3.1.7, provided that the baseline emission factors are used as part of the compliance plan submittal and that the operator demonstrates that the operation-specific baseline emission factors are representative of uncontrolled operations;
  - 6.3.1.7 If applicable, a source test protocol developed in accordance with the requirements of Section 6.2.2, to establish operation-specific baseline emission factors;
  - 6.3.1.8 A source testing protocol developed in accordance with the requirements of Section 6.2.2 to demonstrate compliance with the emission reductions proposed;
  - 6.3.1.9 An identification of all equipment needing permits to construct and operate.
- 6.3.2 In evaluating the compliance plan, the APCO may require tests and sampling, as necessary, to determine the adequacy of the compliance plan and the likelihood of compliance with the emission reduction requirements.
- 6.3.3 The APCO may approve operation-specific baseline emissions factors provided the baseline emissions factors are substantiated with source test data obtained in accordance with Section 6.2 of this rule and the material and mixtures of material is representative of normal operations.
- 6.3.4 The APCO shall provide interim approval of the compliance plan provided the operator submits all of the information required under Section 6.3.1 and the APCO verifies that, by design, the compliance plan will reduce emissions similar to or greater than listed mitigation measures and requirements.
- 6.3.5 Following the interim approval of the compliance plan, the APCO shall approve the compliance plan provided the operator submits, no later than 180 days after the effective date of compliance, a certification of the compliance report that includes all source test data, and the APCO verifies that the emissions from the mitigation measure and requirements meets the emission reduction limits.

- 6.3.6 The APCO may impose conditions necessary to ensure that the operation complies with the compliance plan and all applicable District rules.
- 6.3.7 The APCO may require the operator to maintain records consistent with the compliance plan necessary to demonstrate compliance with the compliance plan.
- 6.3.8 Compliance with the provision of the approved proposal does not exempt an operator from complying with the requirements of the California Health and Safety Code or any other District rule.

## 7.0 Compliance Schedule

### 7.1 Composting Operations

- 7.1.1 On and after (*Six months after rule adoption date*), operators of all composting facilities subject to this rule shall be in full compliance with Section 5.2.1 requirements.
- 7.1.2 On and after (*One (1) year after rule adoption date*), operators of composting facilities subject to Section 5.2.2 shall be in full compliance with those requirements.
- 7.1.3 On and after (*One (1) year after rule adoption date*), operators of composting facilities subject to Section 5.2.3 shall cover at least one out of three piles/windrows for those that are implementing the finished compost cover method or implement an alternative mitigation measure for at least 33% of total throughput.
- 7.1.4 On and after (*Two (2) years after rule adoption date*), operators of composting facilities subject to Section 5.2.3 shall cover at least two out of three piles/windrows for those that are implementing the finished compost cover method or implement an alternative mitigation measure for at least 66% of total throughput.
- 7.1.5 On and after (*Three (3) years after rule adoption date*), operators of composting facilities subject to Section 5.2.3 shall cover all piles/windrows for those implementing the finished compost cover method or implement an alternative mitigation measure for 100% of total throughput.

- 7.1.6 On and after (*Three (3) years after rule adoption date*), operators of composting facilities that select other controls options from Section 5.2.4 shall be in full compliance with all applicable rule requirements.
- 7.2 For operators of non-composting facilities, with total organic material throughputs of greater than or equal to 10,000 wet tons per year:
  - 7.2.1 On and after (*six months after rule adoption date*), all stockpile operations shall be in full compliance with all applicable rule requirements.
- 7.3 The operator of a facility that requires an Authority-to-Construct (ATC) in order to comply with the requirements of this rule, shall submit an application for that ATC no later than six months before the date on which facility is required to begin compliance.