REGULATION 13
CLIMATE POLLUTANTS
RULE 2
ORGANIC MATERIAL HANDLING AND COMPOSTING OPERATIONS

INDEX

REGULATION 13
CLIMATE POLLUTANTS
RULE 2
ORGANIC MATERIAL HANDLING AND COMPOSTING OPERATIONS

(Adopted Date)

13-2-100 GENERAL

13-2-101 Description: The purpose of this Rule is to minimize emissions of methane and volatile organic compounds (VOCs) from facilities that handle, compost, or store organic material.

13-2-102 Applicability: This Rule applies to the owner or operator of any facility that receives, handles, stores, distributes, transfers, or composts organic material.

13-2-103 Exemption, Backyard and Community Composting: This Rule shall not apply to any person conducting backyard or community composting provided that the total amount of organic material and compost onsite at any one time does not exceed 100 cubic yards in volume or occupy a total of more than 750 square feet in area.

13-2-104 Limited Exemption, Specific Composting Operations: A facility owner or operator is exempt from the requirements of Sections 13-2-301 through 305 for the following operations:

104.1 Agricultural Composting: Composting at an agricultural source [as defined in Regulation 2, Rule 1] provided such sources process less than 500 tons per year of organic material derived from non-agricultural operations;

104.2 Recreational Facilities Composting: Composting at a recreational facility, provided that the total amount of organic material and compost onsite at any one time does not exceed 100 cubic yards or occupy more than 750 square feet.

13-2-200 DEFINITIONS

13-2-201 Active Phase Composting: The phase of the composting process that begins when organic materials are piled together and continues until the material has been composted for either a minimum of 22 days if using an aeration system or a minimum of 30 days if organic materials are placed into windrows, and one of the following conditions is met:

201.1 The organic material emits no more than seven (7) milligrams carbon dioxide per gram of organic material (CO_2-C) per day; or

201.2 The organic material has a Solvita Maturity Index of five (5) or greater.

13-2-202 Aerated Static Pile Composting: A process that uses an air distribution system to blow or draw air through a pile of organic material and that involves little or no pile agitation or turning.

13-2-203 Aeration System: A system that forces or draws air through organic material using fans or blowers ducted to piping inserted into or through channels under organic material.

13-2-204 Agricultural Composting: Composting conducted on a property or on contiguous properties under common ownership or control used in the production of crops or the raising of fowl or animals where feedstock consists of material generated on-site by the production and processing of agricultural products.

13-2-205 Backyard Composting: Composting conducted at a single family or multi-family residence by or on behalf of the residence's owner or resident.

13-2-206 **Biofilter:** An air pollution control technology that oxidizes and/or removes organic compounds, methane and ammonia through the action of microorganisms.

13-2-207 **Biosolids:** Solid, semi-solid, or liquid residue generated from the treatment of domestic sewage, sludge, or waste water.

13-2-208 **Bulking Agent:** Carbon-based material, including but not limited to wood chips, wood shavings, straw, hay, and shredded paper or cardboard that adds structure or bulk to organic material to increase porosity and increase the ratio of carbon to nitrogen in the subsequent mixture.

13-2-209 **Certified Compost Operations Manager (CCOM):** Any person who has met the eligibility requirements of the U.S. Composting Council to be a certified compost operations manager (CCOM), has passed the CCOM test, and maintains certification through ongoing education, as required by the U.S. Composting Council's Certification Commission.

13-2-210 **Chipping and Grinding:** Mechanically reducing the size of organic material for further processing activities which may or may not include active phase composting leading to finished compost.

13-2-211 **Community Composting:** Composting conducted by a residential neighborhood association or K-12 school, college or university using feedstock generated on-site or within the residential neighborhood to produce compost for use on-site or within the neighborhood.

13-2-212 **Compost:** A product resulting from the managed biological decomposition of organic material.

13-2-213 **Composting:** A process in which organic materials are decomposed in the presence of oxygen through the action of microorganisms.

13-2-214 **Construction, Demolition, and Inert (CDI) Debris:** Source separated or separated for reuse solid waste and recyclable materials that mainly result from construction work, are not hazardous, and contain no more than 1 percent of putrescible material by volume.

13-2-215 **Curing Phase Composting:** The phase of the composting process that begins immediately after the end of the active phase and lasts until one or more of the following conditions are met:

- **215.1** The organic material emits no more than four (4) milligrams carbon dioxide per gram of organic material (CO_2-C) per day;
- **215.2** The material has a Solvita Maturity Index of seven (7) or greater; or
- **215.3** The material has been composted at least 40 consecutive calendar days after the active phase.

13-2-216 **Debagging:** Separation of film plastic from organic material.

13-2-217 **Digestate:** The material that remains following in-vessel anaerobic digestion of organic material.

13-2-218 **Facility Summary Report (FSR):** A report that describes a facility subject to this rule and details best management practices, equipment, abatement equipment, and procedures that are employed at the time of FSR submittal for compliance with the requirements of Sections 13-2-301 through 13-2-304 and any additional measures taken to minimize methane and VOC emissions.

13-2-219 **Feedstock:** Material that is fed into a process or activity including, but not limited to, green material, food material, biosolids, digestate, solid waste, or a mixture thereof.

13-2-220 **Finished Compost:** Humus-like material that results following completion of both the active and curing composting phases.

13-2-221 **Food Material:** Any pre- or post- consumer food scraps collected from food service or food processing industries, grocery stores, or residential food scrap collection. Food material mixed with green material is considered food material.

13-2-222 **Green Material:** Vegetative material generated from gardening, landscaping or agriculture activities, that includes but is not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains. Green material does not include food material, , biosolids, material separated from commingled solid waste, treated wood, or mixed CDI debris.

13-2-223 **Handling:** Processing, transferring, and manipulating organic material. Handling includes screening, chipping and grinding, tipping, sorting, and debagging. It does not include active phase or curing phase composting.

13-2-224 **Local Enforcement Agency (LEA):** An agency certified pursuant to Chapter 2 of Part 4 of Division 30 of the California Public Resources Code to carry out the powers and duties prescribed therein.

13-2-226 **Manure:** An agricultural material consisting of accumulated herbivore and avian excrement that includes feces and urine, and any bedding material, spilled feed, or soil that is mixed with feces or urine.

13-2-227 **Material Recovery Facility (MRF):** A facility where solid waste and/or recyclable materials are sorted or separated, by hand or by use of machinery, for the purposes of recycling, composting, and/or offsite disposal of residual waste.

13-2-228 **Organic Material:** Material composed of carbon-based compounds derived from organisms such as plants and animals and their waste products. Organic material includes, but is not limited to, food material, green material, wood material, biosolids, manure, or a mixture thereof.

13-2-229 **Overs:** The oversized organic material screened out by size at the end of active phase or curing phase composting.

13-2-230 **Putrescible Material:** Organic material capable of decomposition by microorganisms with sufficient rapidity as to cause odors, vector attraction, or other offensive conditions. Putrescible material may include, but is not limited to biosolids, digestate, food material, and manure.

13-2-231 **Recreational Facilities Composting:** Composting conducted at public and private parks, arboretums, golf courses, sporting stadiums, and other public and private outdoor recreational facilities that use feedstock generated on-site to produce compost exclusively for on-site use.

13-2-232 **Screening:** Separating material into grades by particle size.

13-2-233 **Solvita Maturity Index:** An index that defines the stage where organic material exhibits resistance to further decomposition, as determined by the procedure set forth in section 13-2-602.

13-2-234 **Solid Waste:** All decomposable and non-decomposable solid, semisolid, and liquid wastes, including, but not limited to, garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, CDI debris, organic material.

13-2-235 **Stockpile:** A storage pile that contains organic material or a mixture of organic and non-organic material.

13-2-236 **Tipping:** Unloading of material from a truck, trailer, or container.

13-2-237 **Tipping Floor:** The area where tipping takes place.

13-2-238 **Transfer Station:** A facility which receives, stores, or handles solid waste or organic material. Such facilities may also include separation, processing, or other operations, but typically only store and handle material for transport to another destination.

13-2-239 **Windrow:** Organic material that is placed in an elongated pile for composting.

13-2-300 **STANDARDS**

13-2-301 **Organic Material Handling Requirements:**

301.1 **Green Material Handling Operations:** As of XXXX XX, 2020 (*six months after date of rule adoption*), the owner or operator of a facility that handles less than 10,000 tons per year of green material that contains less than 15 percent by weight of food material, manure, biosolids, or mixture thereof, shall:

1.1 Conduct all tipping and sorting in a partial enclosure that consists of a tipping floor and two or more walls that act as a wind barrier, and an attached permanent roof with the same dimensions of the tipping floor;

1.2 Operate a handheld or overhead misting system within and at the openings of the partial enclosure;

1.3 At the end of each shift, clean all areas where organic material is handled such that no organic material greater than one (1) inch is visible in those areas after scraping or sweeping, except for material in stock piles;

1.4 Limit maximum drop height from transfer truck to tipping floor to ten (10) feet or less and into a transfer truck, measured from the lip of the truck, to five (5) feet or less; and

1.5 Limit maximum drop height from any screener, chipper, grinder, or other sorting device to apex of stockpile or into transfer trucks, measured from the lip of the truck, to five (5) feet or less.

301.2 **Organic Material Handling Operations:** As of XXXX XX, 2020 (*six months after date of rule adoption*), the owner or operator of a facility handling green material containing 15 percent or more by weight of food material, manure, biosolids, or mixture thereof or greater than 10,000 tons per year of organic material shall conduct all handling operations within an enclosure that achieves an overall capture and control efficiency of 80 percent by weight for methane and VOC emissions.

13-2-302 **Storage and Stockpiling Requirements:** As of XXXX XX, 2020 (*six months after date of rule adoption*), the owner or operator of a facility storing or stockpiling organic material or solid waste containing organic material shall:

302.1 **Labeling:** Record and label all stockpiles indicating the date and time each stockpile is constructed;

302.2 **Green Material:** Process all green material within three (3) operating days of receipt by chipping and grinding, utilizing on-site, or removing from the facility; utilizing on-site

may include active phase composting, anaerobic digestion, or mulch and erosion control;

302.3 Putrescible Material: Process all putrescible material within two (2) operating days of receipt by utilizing on-site or removing from the facility. Putrescible material stored at the facility longer than eight (8) hours, shall be stored in accordance with one of the following:

3.1 Stored within an enclosure that achieves an overall capture and control efficiency of 80 percent by weight for methane and VOC emissions,

3.2 Stored in a truck or container covered with a solid material, or 18-oz vinyl tarp,

3.3 Covered with a bulking agent, finished compost, or overs to a thickness of no less than six (6) inches and misted with water or odor neutralizer,

3.4 Covered with a solid material, 18-oz vinyl tarp, or equivalent securely anchored, or

3.5 Blended with other materials to begin active phase composting;

302.4 Temperature: The temperature of stockpiles as determined by the methods provided in Section 13-2-605 shall remain below 122 degrees Fahrenheit; and

302.5 Pile Dimensions:

5.1 Aerated: Maintain aerated pile dimensions so that the vertical dimension does not exceed 10 feet above grade and the shortest horizontal dimension does not exceed 30 feet; and

5.2 Unaerated: Maintain unaerated pile dimensions so that the vertical dimension does not exceed eight (8) feet above grade and the shortest horizontal dimension does not exceed 20 feet.

13-2-303 Active Phase Composting Requirements: Effective XXXX XX, 2020 (*six months after date of rule adoption*), the owner or operator of a facility conducting a composting operation shall comply with the following:

303.1 Labeling: Record and label all active phase compost piles indicating the date the pile is constructed and indicating the date the pile was reconstructed following any turning event or movement of the pile;

303.2 Pile Dimensions:

2.1 Aerated: Maintain aerated pile dimensions so that the vertical dimension does not exceed eight (8) feet above grade and the shortest horizontal dimension does not exceed 20 feet; and

2.2 Unaerated: Maintain unaerated pile dimensions so that the vertical dimension does not exceed six (6) feet above grade and the shortest horizontal dimension does not exceed 12 feet.

303.3 VOC Emissions Minimization Methods: The owner or operator of a facility conducting a composting operation shall comply with the following:

3.1 Moisture Content: Sufficiently water all active phase composting piles prior to pile construction and prior to any mechanical turning to ensure that the pile is adequately wetted as determined by the method provided in Section 13-2-604.

3.2 Biofilter: In addition to the procedures described in Section 13-2-303.3.1, for composting operations processing greater than 2,000 tons but less than or equal to 3,500 tons of organic material per year, cover at least the top third of each active phase composting pile or windrow with at least six (6) inches of finished compost cover or overs within three (3) hours of initial pile formation and within three (3) hours after each subsequent turning of the windrow, and maintain the moisture content in the finished compost cover at 50 percent or greater as determined by the methods referenced in Section 13-2-606.

3.3 Positive Aeration: In addition to the procedures described in Section 13-2-303.3.1, for composting operations processing greater than 3,500 tons of

organic material per year, conduct all active phase composting using a positive aeration system with all of the exposed surface area of each active phase composting pile covered with at least six (6) inches of finished compost cover or overs within three (3) hours of initial pile formation and within three (3) hours after any turning of the active phase composting pile, and maintain the moisture content in the finished compost cover as determined by the methods referenced in Section 13-2-606 at 50 percent or greater.

3.4 Alternative Emissions Minimization Method: The owner or operator may implement an alternative method approved by the APCO that demonstrates equivalent VOC emissions reductions as the procedures described in Sections 13-2-303.3.1 through 303.3.3.

303.4 Methane Emissions Minimization Methods: The owner or operator of a facility conducting a composting operation shall comply with the following:

4.1 Maintain the temperature of active phase compost piles as determined by the methods provided in Section 13-2-605 above 122 degrees Fahrenheit and below 165 degrees Fahrenheit;

4.2 Maintain the moisture content of any biofilter as determined by the methods referenced in Section 13-2-606 at 50 percent or greater;

4.3 Ensure that the initial carbon to nitrogen ratio as determined by the methods referenced in Section 13-2-610 is greater than 20;

4.4 Turn all active phase compost windrows at least three (3) times within 30 days or use an aeration system to maintain the oxygen concentration as determined by the methods referenced in Section 13-2-611 at 16 percent or greater; and

4.5 Maintain the bulk density of any active phase compost pile as determined by the methods referenced in Section 13-2-612 between 750 and 1,000 pounds per cubic yard (lb/yd^3).

13-2-304 Curing Phase Composting Requirements: Effective XXXX XX, 2020 (*six months after date of rule adoption*), the owner or operator of a facility conducting a composting operation shall comply with the following:

304.1 Labeling: Label all curing phase composting piles to indicate the date at which construction of the pile is complete or to indicate the date at which the pile is reconstructed following a turning event or movement of the pile;

304.2 Pile Dimensions

2.1 Aerated: Maintain aerated curing phase composting pile dimensions so that the vertical dimension does not exceed 10 feet above grade and the shortest horizontal dimension does not exceed 30 feet; and

2.2 Unaerated: Maintain unaerated curing phase composting pile dimensions so that the vertical dimensiondoes not exceed eight (8) feet above grade and the shortest horizontal dimension does not exceed 20 feet.

304.3 Temperature: The temperature of curing phase composting stockpiles as determined by the methods referenced in Section 13-2-605 shall remain below 122 degrees Fahrenheit at all times during the curing phase.

13-2-305 Composting Staff Certification Requirement: Effective XXXX XX, 2020 (*12 months after date of rule* adoption), the owner or operator of a facility processing 500 tons per year or more of organic material, and who is subject to Section 13-2-303 or 304, shall ensure that at least one full time employee of the facility holds a current certification from the U.S. Composting Council as a Certified Compost Operations Manager (CCOM). The CCOM may be the owner or operator and must be on-site on all operating days.

13-2-400 ADMINISTRATIVE REQUIREMENTS

13-2-401 Facility Summary Report Submission: Effective XXXX XX, 2020 (*six months after date of rule adoption*), the owner or operator of any facility subject to this Rule shall develop and submit a Facility Summary Report (FSR) to the APCO that meets the requirements of Section 13-2-403. The owner or operator of any facility subject to this Rule that commences operation after the effective FSR submission date, shall develop and submit an FSR to the APCO within 180 days from the date the owner or operator commences such operation. The owner or operator shall certify in writing that the FSR is complete and accurate.

13-2-402 Operations Subject to a Facility Summary Report: The FSR shall address all of the following operations that are conducted at the facility:

402.1 Organic Material Handling;
402.2 Storage and Stockpiling;
402.3 Active Phase Composting; and
402.4 Curing Phase Composting.

13-2-403 Contents of the Facility Summary Report: The owner or operator of any facility subject to this Rule shall prepare an FSR that details best management practices, control measures, equipment and procedures that are employed at the time of FSR submittal to demonstrate measures taken to minimize methane and VOC emissions. The FSR shall include the following:

403.1 Facility Information

1.1 Facility name;
1.2 Facility street address;
1.3 Facility mailing address;
1.4 Facility owner and operator contact information: name or and type of entity, phone number, and mailing and email address;
1.5 Facility contact information: name, title, phone number, and mailing and email address;
1.6 District assigned facility ID number, if applicable;
1.7 Name of each operation, contrivance, or equipment subject to this Rule identified by District Source number, if applicable; and
1.9 CalRecycle solid waste information system (SWIS) number, if applicable.

403.2 Technical Data

2.1 Process Flow Diagram: A detailed process flow diagram that clearly and accurately indicates all operations listed in Section 13-2-402, and the flows of materials handled or produced in those operations at the facility, starting from the point of material receipt from off site to the achievement of the final product. The process flow diagram shall identify the monitoring, processes, and controls that minimize and monitor emissions, including, but not limited to best management practices, biofilters, baghouses, baghouse leak detectors, scrubbers, and temperature monitors. All organic material handling sources, abatement, and control devices shall be identified either using District Source Numbers according to their District Permit or as exempt from District Permit requirements.

2.2 Facility Layout/Floor Plan: A facility layout/floor plan that clearly and accurately indicates the relative locations of all items identified in Section 13-2-403.2.1, including all equipment and permitted and exempt sources at a facility, all building walls, partitions, doors, windows, vents, and openings, and indicate all areas that have VOC or methane emissions or abatement, all organic material handling equipment, and any other source(s) that may contribute to emissions. All organic material handling sources, abatement, and control devices shall be identified either using District Source Numbers according to their District Permit or as exempt from District Permit requirements.

403.3 Breakdown of Feedstock and Throughput: Provide an estimate of total facility

throughput typically received in tons per day (TPD) and an estimated breakdown of facility feedstock in percentage (%) for the following material categories:

3.1 Biosolids;
3.2 CDI debris and other non-decomposable material;
3.3 Digestate;
3.4 Green Material;
3.5 Food Material;
3.6 Manure; and
3.7 Solid waste.

403.4 Designation of Confidential Information: With the submission of an FSR or any portions thereof or revisions thereto, the owner or operator of the facility shall designate as confidential any information claimed to be exempt from public disclosure as trade secrets or by other provisions of law. If a document is submitted that contains information designated confidential in accordance with this Section, the owner or operator shall provide a justification for this designation and shall submit a separate copy of the document marked as "public copy" with the information claimed to be confidential redacted.

13-2-404 Two-Year Review of the Facility Summary Report: The owner or operator of a facility subject to Section 13-2-401 shall update their FSR and submit the updated FSR to the APCO within 90 days of the two (2) year anniversary date of the submission of the most-recent FSR and every two (2) year anniversary thereafter.

13-2-405 Initial and Annual Demonstration of Overall Capture and Control Efficiency: No later than 30 operating days after XXXX XX, 2020 (six months after *date of rule adoption*), any owner or operator of any facility subject to Sections 13-2-301.2 or 13-2-302.3.1 shall conduct an initial demonstration of overall capture and control efficiency by conducting a source test according to the method referenced in Section 13-2-603. An annual demonstration of compliance with Sections 13-2-301.2 or 13-2-302.3.1 shall be conducted at least once each calendar year following the initial test, and within 15 months after the date of the most recently conducted annual demonstration of compliance.

13-2-500 MONITORING AND RECORDS

13-2-501 Recordkeeping Requirements: The owner or operator of any facility subject to this Rule shall maintain an operations log, in which all of the following information shall be recorded on a daily basis with a monthly summation, as applicable:

501.1 Throughput Records

1.1 The type of material received (*e.g.*, green material, putrescible material, solid waste, etc.), reported as percentages; and
1.2 The weight of each type of material received, reported in wet tons.

501.2 Organic Material Handling Operations: The date and time of each cleaning, as required by Section 13-2-301.1.3.

501.2 Storage or Stockpiling of Organic Material or Putrescible Material

2.1 The date and time the material was received on site;
2.2 The date and time of utilization or removal of the material;
2.3 The method of overnight covering for any putrescible material stockpile; and
2.4 The average temperature of each stockpile using the method provided in Section 13-2-605.

501.3 Active Phase Composting Operations

3.1 The date and time of initial formation of each active phase composting pile;
3.2 The date and time of each turning event of any active phase composting pile;
3.3 The date and time of the addition of finished compost cover or overs to each

active phase composting pile;

3.4 The amount, reported in cubic yards, of finished compost cover or overs added to each active phase composting pile; and

3.5 The average temperature of each active phase composting pile, using the method provided in Section 13-2-605;

3.6 The moisture content of any biofilter, using the method provided in Section 13-2-606;

3.7 The estimated carbon to nitrogen ratio of each active phase composting pile as determined by the methods referenced in Section 13-2-610 at the time of formation; and

3.8 The bulk density of each active phase composting pile as determined by the methods referenced in Section 13-2-612.

501.4 Curing Phase Composting Operations: The average temperature of each curing phase composting pile, using the method provided in Section 13-2-605.

501.5 Records Retention: The owner or operator of any facility subject to the requirements of this Rule shall maintain all records for a minimum of five (5) years and make them available to the APCO or a designee of the APCO upon request.

13-2-502 Records, Low Throughput: An owner or operator seeking exemption from the requirements of Sections 13-2-301 through 13-2-304 pursuant to Section 13-2-104.1, shall maintain a daily throughput log that accounts for all material processed in wet tons and the composition of the feedstock processed expressed in percentages. The daily throughput log shall be available to the APCO or a designee of the APCO upon request for the last two years from the date of entry.

13-2-600 MANUAL OF PROCEDURES

13-2-601 Determination of Carbon Dioxide Evolution Rate: For the purposes of determining the end of Active Phase or Curing Phase Composting as defined in Sections 13-2-201 and 215, the carbon dioxide evolution rate of compost in the active or curing phase shall be determined by TMECC Method 05-08-B (Carbon Dioxide Evolution Rate), where TMECC is the Test Methods for the Examination of Composting and Compost published by the US Composting Council Research and Education Foundation, or other equivalent method approved in writing by the APCO. Representative samples shall be collected in accordance with TMECC Method 02.01 (Field Sampling of Compost Materials).

13-2-602 Determination of Solvita Maturity Index: For the purposes of determining the end of Active Phase or Curing Phase Composting as defined in Sections 13-2-201 and 215, the Solvita Maturity Index shall be determined by TMECC Method 05-08-E (Solvita Maturity Test), where TMECC is the Test Methods for the Examination of Composting and Compost published by the US Composting Council Research and Education Foundation, or other equivalent method approved in writing by the APCO. Representative samples shall be collected in accordance with TMECC Method 02.01 (Field Sampling of Compost Materials).

13-2-603 Determination of Capture Efficiency: For the purposes of determining compliance with the overall capture and control efficiency requirements of Sections 13-2-301.2, 302.3, and 405, the capture efficiency shall be assumed to be 100 percent provided all relevant criteria of EPA Method 204 of 40 CFR part 51 as determined by the APCO are met.

13-2-604 Determination of Adequately Wetted: For the purposes of determining compliance with the moisture content requirements of Section 13-2-303.3, adequately wetted shall be determined by means of a squeeze ball test or alternative method approved in writing by the APCO. The squeeze ball test shall be conducted by taking a sample of the active phase material from the

top half of the pile, at least three inches below the outer surface. The material is squeezed into a ball using hand pressure while wearing a protective glove. There must be enough water to form a ball when compressed, but the ball may break when tapped. If the ball crumbles upon release of the hand pressure, additional water must be applied to the pile until the material passes the squeeze ball test.

13-2-605 Determination of Temperature: To determine compliance with the temperature limits of Sections 13-2-302.4, 303.4.1, and 304.3, at least one temperature reading shall be taken on each operating day for every 200 cubic-yards of material, or fraction thereof. Temperature measurements shall be monitored at a depth of 12 to 24 inches below the pile surface and at a depth of at least 12 inches from the point where any cover material meets the organic material, active or curing phase composting material.

13-2-606 Determination of Moisture Content of Biofilters: Compliance with the moisture content requirements of Sections 13-2-303.3 and 303.4.2 shall be determined using TMECC Method 03.09 (Total Solids and Moisture Content at 70+_5 degrees Centigrade), where TMECC is the Test Methods for the Examination of Composting and Compost published by the US Composting Council Research and Education Foundation, or other equivalent method approved in writing by the APCO. Representative samples shall be collected in accordance with TMECC Method 02.01 (Field Sampling of Compost Materials).

13-2-607 Determination of VOC Concentration: For the purposes of determining compliance with the control efficiency requirements of Sections 13-2-301.2, 302.3.1, and 303.3.4, VOC concentration shall be determined using South Coast Air Quality Management District Method 25.3 or other equivalent method approved in writing by the APCO.

13-2-608 Determination of Methane Concentration: For the purposes of determining compliance with the control efficiency requirements of Sections 13-2-301.2, 302.3.1, and 303.3.4, Methane concentration shall be determined using South Coast Air Quality Management District (SCAQMD) Method 25.3, EPA method 18, or other equivalent method approved in writing by the APCO.

13-2-609 Determination of Biofilter Efficiency: For the purposes of determining compliance with the control efficiency requirements of Sections 13-2-301.2, 302.3.1, and 303.3.4, VOC and Methane concentrations shall be determined by the methods in Sections 13-2-607 and 608 both at a sampling port upstream to the biofilter and at the biofilter surface. Emission rates shall be determined using ST-16 (Stack Gas Velocity and Volumetric Flowrate) and EPA Measurement of Gaseous Emission Rates from Land Surfaces Using an Emission Isolation Flux Chamber User's Guide, as modified in Attachment A of SCAQMD Rule 1133.3, or other equivalent methods approved in writing by the APCO.

13-2-610 Determination of Carbon to Nitrogen Ratio: Compliance with the initial carbon to nitrogen ratio requirement of Section 13-2-303.4.3 shall be determined using TMECC Method 05.02 (Carbon to Nitrogen Ratio), where TMECC is the Test Methods for the Examination of Composting and Compost published by the US Composting Council Research and Education Foundation, or other equivalent method approved in writing by the APCO. Representative samples shall be collected in accordance with TMECC Method 02.01 (Field Sampling of Compost Materials).

13-2-611 Determination of Oxygen Concentration: Compliance with the Oxygen concentration requirement of Section 13-2-303.4.4 shall be determined using TMECC Method 05.08 (Respirometry), where TMECC is the Test Methods for the Examination of Composting and Compost published by the US Composting Council Research and Education Foundation, or other equivalent method approved in writing by the APCO. Representative samples shall be

collected in accordance with TMECC Method 02.01 (Field Sampling of Compost Materials).

13-2-612 **Determination of Bulk Density:** Compliance with the bulk density requirement of Section 13-2-303.4.5 shall be determined using TMECC Method 03.01 (Air Capacity), or 03.03 (Bulk Density), where TMECC is the Test Methods for the Examination of Composting and Compost published by the US Composting Council Research and Education Foundation, or other equivalent method approved in writing by the APCO. Representative samples shall be collected in accordance with TMECC Method 02.01 (Field Sampling of Compost Materials).