

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

**RULE 8-34 – ORGANIC COMPOUNDS – SOLID WASTE DISPOSAL SITES**  
*(Amended June 15, 2005)*

**REGULATION 8  
ORGANIC COMPOUNDS  
RULE 34  
SOLID WASTE DISPOSAL SITES**

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**REGULATION 8  
ORGANIC COMPOUNDS  
RULE 34  
SOLID WASTE DISPOSAL SITES**

(Adopted May 2, 1984)

**8-34-100 GENERAL**

**8-34-101 Description:** The purpose of this Rule is to limit the emission of non-methane organic compounds and methane from the waste decomposition process at solid waste disposal sites. The use of materials that contain volatile organic compounds, such as contaminated soil or sludge, in land treatment or refuse cover operations is considered to be an aeration operation and is subject to Regulation 8, Rule 40.

*(Amended 9/17/86; 11/17/93; 10/6/99)*

**8-34-110 Limited Exemption, Old Landfills:** The requirements of this Rule shall not apply to any landfill meeting the requirements of Sections 8-34-110.1, 110.2, and 110.3, provided the requirements of Section 8-34-405 are satisfied.

110.1 The landfill is a closed landfill or an inactive landfill with no design capacity available for future waste deposition,

110.2 The landfill last received solid waste at least thirty years ago, and

110.3 The owner has demonstrated that the site does not pose a health risk to human beings or a threat to the environment pursuant to California Health and Safety Code, Section 41805.5.

*(Adopted October 6, 1999)*

**8-34-111 Limited Exemptions, Small Solid Waste Disposal Sites:** The requirements of this Rule shall not apply to any solid waste disposal site meeting the requirements of Sections 8-34-111.1 and 111.2, provided the requirements of Sections 8-34-402 and 405 are satisfied.

111.1 The solid waste disposal site has an in-place tonnage of less than 907,194 megagrams (1,000,000 tons) of decomposable solid waste, and

111.2 The solid waste disposal site has a maximum design capacity of less than 2,500,000 megagrams (2,755,000 tons) or less than 2,500,000 cubic meters (3,269,000 cubic yards).

111.3 Deleted October 6, 1999.

*(Amended 9/17/86; 11/17/93; 7/17/96; 10/6/99)*

**8-34-112 Deleted November 17, 1993**

**8-34-113 Limited Exemption, Inspection and Maintenance:** The requirements of Sections 8-34-301, 303 and 305 shall not apply to solid waste disposal sites during inspection and maintenance of the landfill gas collection or emission control system provided that the following conditions are met:

113.1 Emission of raw landfill gas to the atmosphere is minimized during shutdown.

113.2 The gas collection and emission control systems are not shutdown for more than 240 hours in any calendar year. The duration of a gas collection system shutdown shall not exceed 5 consecutive days. For the purposes of determining consecutive days of shutdown, collection system startups lasting less than 12 hours shall be considered to be shutdown days.

113.3 The applicable requirements of Section 8-34-501 are fulfilled.

*(Adopted 11/17/93; Amended 7/17/96; 10/6/99)*

**8-34-114 Limited Exemption, Energy Recovery Device and Emission Control System:** Until July 1, 2002, for any energy recovery device or emission control system installed and operating before January 1, 1995, the provision of Section 8-34-301.4 shall not apply provided the equipment reduces the amount of organic compounds and methane in the collected gases by at least 90 percent by weight. Effective July 1, 2002, this exemption shall not apply to any energy recovery device or emission control system.

*(Adopted 11/17/93; Amended 10/6/99)*

**8-34-115 Deleted October 6, 1999**

**8-34-116 Limited Exemption, Well Raising:** The requirements of Sections 8-34-301.1, 301.2 and 305 shall not apply to individual wells involved in well raising provided all of the following conditions are met:

- 116.1 New fill is being added,
- 116.2 No more than five gas collection wells or ten percent of the gas collection wells of the landfill gas collection system, whichever number is less, are shut down at any time for well raising purposes. For the purposes of this section, a well shall be deemed shutdown if it has been disconnected from a vacuum source and is not meeting the requirements of Section 8-34-305,
- 116.3 A gas collection well is not disconnected from a vacuum source for longer than 24 consecutive hours unless fill is actively being placed or compacted in the immediate vicinity around the well,
- 116.4 Once installed, a gas collection well extension is sealed or capped until the raised well is reconnected to a vacuum source, and
- 116.5 Well disconnection times are recorded pursuant to Section 8-34-501.

*(Adopted 7/17/96; Amended 10/6/99)*

**8-34-117 Limited Exemption, Gas Collection System Components:** The requirements of Sections 8-34-301.1, 301.2, and 305 shall not apply to individual landfill gas collection system components that must be temporarily shut down in order to repair the components, to connect new landfill gas collection system components to the existing system, to prevent or extinguish fires, or to perform construction activities meeting the requirements of Sections 8-34-118.1 through 118.9, provided the following requirements are met:

- 117.1 Existing gas collection system components are being repaired to maintain compliance with this Rule or are being shut down to prevent or extinguish fires,
- 117.2 New gas collection system components are required to maintain compliance with this Rule and are included in the most recent Collection and Control System Design Plan as specified in Section 8-34-408,
- 117.3 For other construction activities, the requirements of Sections 8-34-118.1 through 118.9 must be met,
- 117.4 No more than five gas collection wells or ten percent of the gas collection wells of the landfill gas collection system, whichever number is less, are shut down at any time, except in cases where wells are being shut down to prevent or extinguish fires. For the purposes of this section, a well shall be deemed shutdown if it has been disconnected from a vacuum source and is not meeting the requirements of Section 8-34-305,
- 117.5 No gas collection well may be disconnected from a vacuum source for longer than 24 consecutive hours, unless the operator receives prior written approval from the APCO for a longer well shutdown time. Under no circumstances shall a gas collection well be disconnected from a vacuum source for longer than 5 consecutive days.
- 117.6 Well disconnection times are recorded pursuant to Section 8-34-501.

*(Adopted October 6, 1999)*

**8-34-118 Limited Exemption, Construction Activities:** The requirements of Sections 8-34-303 shall not apply to the working face of the landfill or to areas of the landfill surface where the landfill cover material has been removed and refuse has been exposed for the express purpose of installing, expanding, replacing, or repairing components of the landfill gas, leachate, or gas condensate collection and removal systems, provided the following requirements are met:

- 118.1 The operator shall submit a construction plan in writing to the APCO at least seven calendar days prior to beginning any construction activities, unless the construction activity is urgently required. Appropriate reasons for urgent construction activities include, but are not limited to, preventing or extinguishing fires, minimizing emissions of raw landfill gas to the atmosphere or meeting the requirements of Sections 8-34-414 or 415. For urgent construction activities, the operator shall notify the APCO of the need for an urgent construction activity within 24 hours of discovery of the problem and shall submit an urgent construction activity report to the APCO within 30

calendar days of discovery of the problem. The construction plan or urgent construction activity report shall contain the following:

- 1.1 A description of the action(s) being taken,
  - 1.2 A description of the areas of the landfill that will be affected by these actions,
  - 1.3 A description of any landfill gas collection system components that will be affected by these actions,
  - 1.4 A map of the landfill showing the affected areas and any affected collection system components,
  - 1.5 The reason the action is required including a copy of the statute, regulation, standard, provision and/or permit clause that obligates the landfill to take the action(s) or written approval for the action(s) from the appropriate enforcement agencies,
  - 1.6 A construction schedule including projected construction start and finish dates, projected equipment installation dates, and projected shutdown times for individual gas collection system components, and
  - 1.7 A description of the mitigation measures planned to minimize potential air quality impacts.
- 118.2 For construction activities related to the installation, expansion, replacement, or repair of landfill gas collection system components, the action must be required to maintain compliance with this Rule, and any new collection system components must be included in the most recent Collection and Control System Design Plan.
- 118.3 For construction activities related to leachate or gas condensate collection and removal systems, the action must be required by or approved by the appropriate enforcement agency.
- 118.4 Emission of raw landfill gas to the atmosphere is minimized during construction,
- 118.5 Any excavated refuse is covered immediately and then properly disposed of within 24 hours of excavation,
- 118.6 No drilled wells or excavated trenches shall be left uncovered for more than 8 hours,
- 118.7 The installation time for each component is minimized,
- 118.8 Landfill gas collection wells are sealed or capped until the well is connected to a vacuum source,
- 118.9 The construction dates and times for each well are recorded pursuant to Section 8-34-501.

*(Adopted October 6, 1999)*

**8-34-119 Limited Exemption, Inactive or Closed Landfills:** The requirements of Sections 8-34-305, 406, 407, 412, 413, 414, 505, and 506 shall not apply to inactive or closed landfills that last received waste before November 8, 1987 and that have no design capacity available for future waste deposition.

*(Adopted October 6, 1999)*

**8-34-120 Limited Exemption, Small Design Capacity Landfills:** The requirements of Sections 8-34-305, 406, 407, 412, 413, 414, 505, and 506 shall not apply to solid waste disposal sites with a design capacity of less than 2,500,000 megagrams (2,755,000 tons) or less than 2,500,000 cubic meters (3,269,000 cubic yards).

*(Adopted October 6, 1999)*

**8-34-121 Limited Exemption, Low Emission Landfills:** The requirements of Sections 8-34-301, 303, 304, and 305 shall not apply to solid waste disposal sites which meet all of the following requirements:

- 121.1 The solid waste disposal site has an in-place tonnage of less than 907,194 megagrams (1,000,000 tons) of decomposable solid waste, and
- 121.2 The solid waste disposal site has an NMOC emission rate of less than 50 megagrams per year (55 tons per year) as determined using the procedures in 40 CFR 60.754(a).

*(Adopted October 6, 1999)*

- 8-34-122 Limited Exemption, Permanent Collection and Control System Shutdown:** The requirements of Sections 8-34-301, 303, 304, and 305 shall not apply to closed landfills which meet all of the following requirements:
- 122.1 The landfill last accepted waste at least 30 years ago,
  - 122.2 The gas collection system and emission control system have been in operation for a minimum of fifteen years,
  - 122.3 The landfill has an NMOC emission rate of less than 50 megagrams per year (55 tons per year) as determined using the procedures in 40 CFR 60.752(b)(2)(v)(C) and 60.754(b),
  - 122.4 The operator can demonstrate to the satisfaction of the APCO, by conducting a health risk screening analysis performed according to the District's Health Risk Screening Analysis Guidelines, that the landfill, without a gas collection system, would not require TBACT pursuant to Regulation 2-5-301, and
  - 122.5 The APCO has approved the Equipment Removal Report required pursuant to Section 8-34-410.

*(Adopted 10/6/9; Amended 6/15/05)*

## **8-34-200 DEFINITIONS**

Except as noted below, all terms in this Rule shall be defined as in 40 CFR 60.751.

- 8-34-201 Solid Waste Disposal Site:** A Waste Management Facility, as defined by California Code of Regulations Title 27 §20164, or a Municipal Solid Waste Landfill as defined in 40 CFR 60.31(c) or 60.751.

*(Amended 9/17/86; 11/17/93; 10/6/99)*

- 8-34-202 Solid Waste:** All decomposable and non-decomposable solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes. Solid waste also includes any material meeting the definition of Solid Waste in 40 CFR 60.751.

*(Adopted 9/17/86; Amended 7/17/96; 10/6/99)*

- 8-34-203 Non-decomposable Solid Waste:** Materials which do not degrade biologically to form landfill gas. Examples include, but are not limited to, earth, rock, concrete, asphalt paving fragments, clay products, inert tailings, inert plastics, plasterboard, vehicle tires, glass, inert slag, asbestos, and demolition materials containing minor amounts (less than 10 percent by volume) of wood and metals. Materials that do not meet this definition shall be considered decomposable solid waste.

*(Adopted 9/17/86; Amended 11/17/93; 7/17/96; 10/6/99)*

- 8-34-204 Landfill Gas:** Any untreated, raw gas derived through a natural process from the decomposition of organic waste deposited in a solid waste disposal site or from the evolution of volatile species in the waste.

*(Adopted September 17, 1986)*

- 8-34-205 Active Landfill:** A landfill that is accepting solid waste for disposal.

*(Adopted 10/17/93; Amended 10/6/99)*

- 8-34-206 Background:** The ambient concentration of total organic compounds, including all methane and non-methane organic compounds, determined at least 3 meters (10 feet) upwind from the valve or connector to be inspected and not influenced by any specific emission point as indicated by a hydrocarbon analyzer specified by Section 8-34-504.

*(Adopted 11/17/93; Amended 10/6/99)*

- 8-34-207 Energy Recovery Device:** Any combustion device which uses landfill gas to recover energy in the form of steam or electricity, including, but not limited to, gas turbines, internal combustion engines, boilers and boiler-to-steam turbine systems.

*(Adopted November 17, 1993)*

- 8-34-208 Emission Control System:** Any system which disposes of collected landfill gas employing one or more of the following means: combustion, adsorption, gas treatment for subsequent sale, or sale for processing offsite, or an equivalent method that achieves the destruction/treatment efficiency specified in the applicable standards section.

- (Adopted 11/17/93; Amended 7/17/96)*
- 8-34-209 Destruction Efficiency:** A measure of the ability of the control device to combust, transform, or otherwise prevent emissions of non-methane organic compounds in landfill gas to the atmosphere, expressed as a percentage.
- (Adopted 11/17/93; Amended 10/6/99)*
- 8-34-210 Gas Collection System:** Any system which employs various gas collection wells and connected piping, and mechanical blowers, fans, pumps, or compressors to create a pressure gradient and extract landfill gas.
- (Adopted 11/17/93; Amended 7/17/96)*
- 8-34-211 Inactive Landfill:** A landfill that is no longer accepting solid waste for disposal.
- (Adopted 11/17/93; Amended 10/6/99)*
- 8-34-212 Landfill:** Any location within a solid waste disposal site used for the permanent disposal of waste where the organic portion of the waste is subject to natural processes of aerobic and anaerobic decomposition.
- (Adopted November 17, 1993)*
- 8-34-213 Component Leak:** The concentration of total organic compounds (non-methane organic compounds and methane) measured above background, expressed as methane and measured 1 centimeter or less from the component leak source.
- (Adopted 11/17/93; Amended 10/6/99)*
- 8-34-214 Minimization:** The shutting of valves, insertion of sewer plugs, or any other similar method that reduces emissions of raw landfill gas to the atmosphere.
- (Adopted November 17, 1993)*
- 8-34-215 Non-repeatable, Momentary Readings:** Indications of the presence of non-methane organic compounds and methane which persist for less than five seconds and do not recur when the sampling probe of a portable gas detector is placed in the same location.
- (Adopted 11/17/93; Amended 10/6/99)*
- 8-34-216 Operator:** The landowner of a solid waste disposal site and any other person who through a lease, franchise agreement or other arrangement with the landowner becomes responsible to the District for compliance with the provisions of this Rule.
- (Adopted November 17, 1993)*
- 8-34-217 Non-Methane Organic Compound (NMOC):** Any compound which contains at least one atom of carbon except: methane, carbon monoxide, carbon dioxide, metallic carbides, carbonates, and carbonic acid.
- (Adopted 11/17/93; Amended 10/6/99)*
- 8-34-218 Enforcement Agency:** The California Regional Water Quality Control Board (RWQCB), California Integrated Waste Management Board (CIWMB), or a designated local enforcement agency that has CIWMB delegated regulatory enforcement authority over solid waste disposal sites.
- (Adopted July 17, 1996)*
- 8-34-219 Continuous Operation:** A landfill gas collection system and emission control system shall be considered to be operated continuously when all existing gas collection wells are operating under vacuum while maintaining landfill gas flow with the collected landfill gas being processed by an emission control system or energy recovery device 24 hours per day.
- (Adopted July 17, 1996)*
- 8-34-220 Leak Repair:** Tightening, adjustment, the addition of sealing material or replacement of components that reduce leakage to the atmosphere below the limit specified in Section 8-34-301.2.
- (Adopted 7/17/96; Amended 10/6/99)*
- 8-34-221 Well Raising:** A landfill activity where an existing gas collection well is temporarily disconnected from a vacuum source, and the non-perforated pipe attached to the well is extended vertically to allow the addition of a new layer of solid waste or the final cover; or is extended horizontally to allow the horizontal extension of an existing layer of solid waste or cover material. The extended pipe (well extension) is then re-connected in order to continue collecting gas from that well.
- (Adopted 7/17/96; Amended 10/6/99)*
- 8-34-222 Fill:** Solid waste and surface cover material that is placed in a landfill.
- (Adopted July 17, 1996)*
- 8-34-223 Closed Landfill:** A landfill which is no longer accepting solid waste for disposal and has documentation that closure was conducted in accordance with the applicable statutes, regulations, and local ordinances in effect at the time.

*(Adopted July 17, 1996)*

**8-34-224 Working Face:** The open area where daily waste is deposited and compacted with landfill equipment.

*(Adopted July 17, 1996)*

**8-34-225 Landfill Surface:** The area of the landfill under which decomposable solid waste has been placed, excluding the working face. Vaults containing equipment that is not part of the gas collection system and that are located at or near the surface of the landfill shall be considered part of the landfill surface. Such vaults may contain gas condensate or leachate management systems, ground water monitoring equipment, perimeter probes used exclusively for detecting subsurface landfill gas migration, electrical, water, sewer, or related equipment. Vaults containing gas collection system equipment, where the operator has demonstrated to the satisfaction of the APCO that the collection system equipment contained within the vault is properly operating and not leaking in excess of the 8-34-301.2 limit, shall be considered part of the landfill surface.

*(Adopted October 6, 1999)*

**8-34-226 Controlled Solid Waste Disposal Site:** Any solid waste disposal site that is equipped with a landfill gas collection system.

*(Adopted October 6, 1999)*

**8-34-227 Surface Leak:** The concentration of total organic compounds (non-methane organic compounds and methane) measured above background, expressed as methane. Until July 1, 2002, surface leak concentrations shall be measured at 7.5 centimeters (3 inches) above the landfill surface. Effective July 1, 2002, surface leak concentrations shall be measured at 5 centimeters (2 inches) above the landfill surface.

*(Adopted October 6, 1999)*

**8-34-228 Component:** Any equipment that is part of the gas collection system or emission control system and that contains landfill gas including, but not limited to, wells, pipes, flanges, fittings, valves, flame arrestors, knock-outs, sampling ports, blowers, compressors, or connectors, but excluding landfill gas analyzers. Vaults containing gas collection system equipment, where the top of the vault is located at or near the surface of the landfill, are considered to be components, unless the operator can demonstrate to the satisfaction of the APCO that the collection system equipment contained within the vault is properly operating and not leaking in excess of the 8-34-301.2 limit.

*(Adopted October 6, 1999)*

**8-34-229 Administrator:** For the purposes of this Rule, "Administrator" (as referred to in 40 CFR 60.750 et. seq.) means the Air Pollution Control Officer (APCO) of the Bay Area Air Quality Management District, except that the APCO shall not be empowered to approve alternatives to the test methods, standards, or work practices allowed by this Rule, except where such authority has been granted in 40 CFR 60.750 et. seq., such as in 40 CFR 60.752(b)(2)(i), 60.753(c) and (d).

*(Adopted October 6, 1999)*

## **8-34-300 STANDARDS**

**8-34-301 Landfill Gas Collection and Emission Control System Requirements:** Except as provided in Sections 8-34-110, 111, 113, 114, 116, 117, 121 and 122, an operator shall collect and process landfill gases through a gas collection system and emission control system installed in such a manner that the requirements of Sections 8-34-301.1 and 301.2 and either 301.3 or 301.4 are met:

301.1 The gas collection and emission control systems are operated continuously as defined in Section 8-34-219, unless the requirements of Section 8-34-404 are met; and

301.2 There are no component leaks that exceed 1000 ppm by volume measured as methane at any component that contains landfill gas, unless the leak has been discovered by the operator, recorded pursuant to Section 8-34-501, and repaired within 7 days; and

301.3 Until July 1, 2002, the collected gases are processed in a flare, of the enclosed ground type, which achieves an organic compound and methane



destruction efficiency of at least 98 percent by weight. Effective July 1, 2002, the collected gases are processed in an enclosed ground type flare, which reduces the amount of NMOC in the collected gases by at least 98 percent by weight or emits less than 30 ppm by volume of NMOC at the outlet, dry basis, expressed as methane, corrected to 3% oxygen; or

- 301.4 Until July 1, 2002, the collected gases are processed in an energy recovery device or emission control system that reduces the amount of organic compounds in the collected gases by at least 97 percent by weight and reduces the amount of methane in the collected gases by at least 97 percent by weight. Effective July 1, 2002, the collected gases are processed in an emission control system device, or series of devices, other than a flare, which reduces the amount of NMOC in the collected gases by at least 98 percent by weight or emits less than 120 ppm by volume of NMOC at the outlet, dry basis, expressed as methane, corrected to 3% oxygen.-

*(Amended 9/17/86; 11/17/93; 7/17/96; 10/6/99)*

**8-34-302 Deleted November 17, 1993**

**8-34-303 Landfill Surface Requirements:** Until July 1, 2002 and except as provided in Sections 8-34-110, 111, 113, 118, 121 and 122, at no point on the surface of the landfill shall there be a concentration of organic compounds and methane, measured 7.5 cm (3 in) above the surface of the landfill that exceeds 1000 ppm by volume, expressed as methane above background, other than non-repeatable, momentary readings. Effective July 1, 2002 and except as provided in Sections 8-34-110, 111, 113, 118, 121 and 122, at no point on the landfill surface shall there be a surface leak that exceeds 500 ppm by volume, expressed as methane above background, other than non-repeatable, momentary readings, unless the landfill surface leak has been discovered by the operator and all of the requirements of Section 8-34-415 are satisfied.

*(Adopted 11/17/93; Amended 7/17/96; 10/6/99)*

**8-34-304 Gas Collection System Installation Requirements:** Gas collection wells or other approved gas collection system components shall be installed and operational in each area, cell, or group of cells in the landfill within 60 days of the sooner of the following dates:

- 304.1 The date in which the initial solid waste has been in place for a period of 2 years or more, for inactive or closed areas or cells or areas at final grade; or
- 304.2 The date in which the initial solid waste has been in place for a period of 5 years or more, for active areas or cells; or
- 304.3 The date in which a cumulative total of 1,000,000 tons of decomposable solid waste has been placed in an area or cell.
- 304.4 If Sections 304.1 through 304.3 do not apply, and an NMOC Emission Rate Report indicates that the NMOC emission rate calculated in accordance with 40 CFR 60.754(a) will exceed 50 megagrams per year (55 tons per year), then the initial gas collection and emission control system shall be installed and operational by July 1, 2002 or within 30 months of the date that NMOC emissions are first reported to exceed 50 megagrams per year, whichever is later. The operator may elect to recalculate the NMOC emission rate in accordance with 40 CFR 60.754(a)(3) or (4), provided that the operator complies with all provisions of 40 CFR 60.757(b), (c)(1), and (c)(2).

*(Adopted October 6, 1999)*

**8-34-305 Wellhead Requirements:** Effective July 1, 2002 and except as provided in Sections 8-34-119 or 120, each wellhead in the gas collection system shall meet the requirements of Sections 8-34-305.1 and 305.2 and either 305.3 or 305.4, unless the operator has discovered the excess and has satisfied all of the requirements of Section 8-34-414; or the operator has received permit conditions containing alternative operating levels:

- 305.1 Each wellhead shall operate under a vacuum (negative pressure); and
- 305.2 The landfill gas temperature in each wellhead shall be less than 55° C (131° F); and either
- 305.3 The nitrogen concentration in each wellhead shall be less than 20% by volume; or

305.4 The oxygen concentration in each wellhead shall be less than 5% by volume.  
(Adopted October 6, 1999)

## **8-34-400 ADMINISTRATIVE REQUIREMENTS**

**8-34-401 Deleted November 17, 1993**

**8-34-402 Small Solid Waste Disposal Site Exemption Petition:** Any operator seeking to satisfy the conditions of Section 8-34-111 shall comply with the following requirements:

- 402.1 A written petition for exemption shall be submitted to the APCO, and
- 402.2 The petitioner shall submit copies of all permits, waste discharge requirements, site disposal records, and any other data necessary to determine whether an exemption should be granted.
- 402.3 If the landfill is an active landfill or an inactive landfill with design capacity available for future waste deposition, the exemption granted under Section 8-34-111 shall be for a period of 12 months. A renewal request shall be submitted annually to the APCO until the operator completes all closure requirements in accordance with California Code of Regulation Title 27, Sections 20950 through 21200.

(Adopted 9/17/86; Amended 11/17/93; 7/17/96; 10/6/99)

**8-34-403 Deleted November 17, 1993**

**8-34-404 Less than Continuous Operation Petition:** Any operator seeking to operate less than continuously shall submit a written petition to the APCO that contains the following:

- 404.1 The landfill gas flow rate and methane concentrations as measured for the entire system or as measured for individual gas collection wells or components for which less than continuous operation is being sought;
- 404.2 A map showing the locations of individual components; and
- 404.3 An operating, maintenance, and inspection schedule.
- 404.4 If the APCO grants written approval, such approval shall contain landfill gas flow rate, methane concentration, and operating conditions.
- 404.5 A less than continuous operation petition must be renewed every three years or whenever the information submitted pursuant to Section 8-34-404.1 changes.

A petition to operate the entire gas collection and emission control systems less than continuously will only be considered when a landfill is not generating enough landfill gas to operate the emission control system continuously.

(Adopted 11/17/93; Amended 7/17/96; 10/6/99)

**8-34-405 Design Capacity Reports:** Any operator of a solid waste disposal site shall submit an Initial Design Capacity Report and, if applicable, an Amended Design Capacity Report to the APCO in accordance with the provisions of 40 CFR 60.757(a). The Initial Design Capacity Report is due no later than December 31, 1999, unless the site meets the requirements of 40 CFR 60.750. Sites meeting the requirements of 40 CFR 60.750 must meet the federal compliance times for landfills subject to New Source Performance Standards (NSPS).

(Adopted October 6, 1999)

**8-34-406 Initial NMOC Emission Rate Report:** Except as provided in Sections 8-34-119 or 120, any operator of a solid waste disposal site, which has a maximum design capacity of at least 2,500,000 megagrams (2,755,000 tons) and at least 2,500,000 cubic meters (3,269,000 cubic yards), shall submit an Initial NMOC Emission Rate Report to the APCO in accordance with the provisions of 40 CFR 60.757(b). The Initial NMOC Emission Rate Report is due no later than December 31, 1999, unless the site meets the requirements of 40 CFR 60.750. Sites meeting the requirements of 40 CFR 60.750 must meet the federal compliance times for landfills subject to New Source Performance Standards (NSPS).

(Adopted October 6, 1999)

**8-34-407 Periodic NMOC Emission Rate Reports:** Except as provided in Sections 8-34-119 or 120, any operator of a solid waste disposal site, which has a maximum design capacity of at least 2,500,000 megagrams (2,755,000 tons) and at least 2,500,000 cubic meters (3,269,000 cubic yards), shall submit annual NMOC Emission Rate

Reports to the APCO in accordance with the provisions of 40 CFR 60.757(b), unless one of the following criteria apply:

- 407.1 The solid waste disposal site is closed as defined in 8-34-223, or
- 407.2 The solid waste disposal site is equipped with a gas collection and emission control system operating in compliance with the provisions of this rule and with the provisions of 40 CFR 60.752(b)(2), 60.753, and 60.755, or
- 407.3 The NMOC emission rate is calculated to be less than 50 megagrams per year (55 tons per year) in each of the next five years and the operator submits a 5-year report in lieu of an annual report.

*(Adopted October 6, 1999)*

**8-34-408 Collection and Control System Design Plan:** Any operator of a solid waste disposal site, which meets one of the criteria listed in Sections 8-34-408.1 through 408.4 below, is required to submit to the APCO a Collection and Control System Design Plan, prepared by a professional engineer and meeting the requirements of this Rule and 40 CFR 60.752(b)(2)(i) and 60.759. The Collection and Control System Design Plan shall be submitted to the APCO as a permit application. The APCO shall review and either approve or deny the Collection and Control System Design Plan in accordance with the permit application procedures identified in Regulation 2, Rule 1. An amended Collection and Control System Design Plan shall be submitted within 90 days of any event that requires a change to this plan.

- 408.1 An Initial or Periodic NMOC Emission Rate Report indicates that the NMOC emission rate will exceed 50 megagrams per year (55 tons per year). In this case, the Collection and Control System Design Plan shall be submitted within 1 year of the date of this Initial or Periodic NMOC Emission Rate Report, or
- 408.2 The solid waste disposal site is equipped with a collection and control system as of October 6, 1999. In this case, the initial Collection and Control System Design Plan is due no later than December 31, 2000, or
- 408.3 The operator is required to install and operate a gas collection system in the future, pursuant to Section 8-34-304.3. In this case, the Collection and Control System Design Plan is due at least 90 days before the date the gas collection system is required to be in operation, pursuant to Section 8-34-304. If the collection system is required to be in operation prior to March 31, 2001, the Collection and Control System Design Plan is due December 31, 2000, or
- 408.4 Sections 8-34-408.1 through 408.3 do not apply, but the operator elects to install a gas collection system. In this case, the Collection and Control System Design Plan is due at least 90 days before the operator's projected gas collection system installation date. If the operator plans to install the collection system prior to March 31, 2001, the Collection and Control System Design Plan is due December 31, 2000.

*(Adopted October 6, 1999)*

**8-34-409 Closure Report:** In accordance with the provisions of 40 CFR 60.757(d), any operator of a controlled solid waste disposal site, which has ceased accepting waste, shall submit a Closure Report to the APCO within 30 days of waste acceptance cessation. Landfills that are closed as of October 6, 1999 are not subject to this requirement.

*(Adopted October 6, 1999)*

**8-34-410 Equipment Removal Report:** In accordance with the provisions of 40 CFR 60.757(e), any operator of a controlled solid waste disposal site seeking to satisfy the requirements of Section 8-34-122 shall submit an Equipment Removal Report to the APCO at least 30 days prior to capping any wells or shutting down any control equipment. The Equipment Removal Report shall be submitted to the APCO as a permit application. The Equipment Removal Report shall contain sufficient information to determine compliance with all provisions of Section 8-34-122. The APCO shall review and either approve or deny the Equipment Removal Report in accordance with the permit application procedures identified in Regulation 2, Rule 1.

*(Adopted October 6, 1999)*

**8-34-411 Annual Report:** In accordance with the provisions of 40 CFR 60.757(f), any operator of a controlled solid waste disposal site shall submit to the APCO Annual

Reports containing the information required by Sections 8-34-501, 503, 505, 506, 507, 508, and 509. The initial Annual Report shall include the initial Performance Test Report required by Section 8-34-413 and is due no later than 180 days from the initial start-up of the gas collection system, but not earlier than January 1, 2003.

*(Adopted October 6, 1999)*

**8-34-412 Compliance Demonstration Test:** Except as provided in Sections 8-34-119 or 120, any operator of equipment that is subject to Sections 8-34-301.3 or 301.4, shall conduct a Compliance Demonstration Test in accordance with the requirements of 40 CFR 60.8 and 60.752(b)(2)(iii)(B) using the test methods identified in 40 CFR 60.754(d). The initial Compliance Demonstration Test shall be conducted within 120 days of initial start up of the gas collection system or by October 1, 2002, whichever is later. Any operator that is subject to this requirement and that is required to have a Major Facility Review Permit, shall conduct annual Compliance Demonstration Tests.

*(Adopted October 6, 1999)*

**8-34-413 Performance Test Report:** Any operator required to meet Section 8-34-412 shall submit a Performance Test Report to the APCO in accordance with the provisions of 40 CFR 60.8. The initial Performance Test Report shall contain the information specified in 40 CFR 60.757(g) and shall be included in the initial Annual Report required by Section 8-34-411. Any operator required to perform annual Compliance Demonstration Tests shall submit the annual Performance Test Report along with the Annual Report required by Section 8-34-411.

*(Adopted October 6, 1999)*

**8-34-414 Repair Schedule for Wellhead Excesses:** In accordance with the provisions of 40 CFR 60.755(a)(3 and 5), any operator subject to the requirements of Section 8-34-305 shall meet the following requirements, if any excess of a limit specified in Sections 8-34-305.1, 305.2, 305.3, or 305.4 is detected.

414.1 The operator shall record the date, the excess value and the well identification number.

414.2 The operator shall initiate action to correct the excess within 5 calendar days of discovering the problem.

414.3 If the excess cannot be corrected within 15 days of the date that the problem was first discovered, the gas collection system shall be expanded to correct the excess.

414.4 If a gas collection system expansion is required pursuant to Section 8-34-414.3, the expansion shall be completed and all new wells shall be operating within 120 days of the date that the problem was first discovered.

*(Adopted October 6, 1999)*

**8-34-415 Repair Schedule for Landfill Surface Leak Excesses:** In accordance with the provisions of 40 CFR 60.755(c)(4), any operator subject to the requirements of Section 8-34-303 shall meet the following requirements, if any excess of the limit specified in Section 8-34-303 is detected:

415.1 The operator shall mark the location and record the date, location and value of each monitored excess.

415.2 The operator shall initiate action, such as cover maintenance or well vacuum adjustments, to correct the excess within 5 calendar days of discovering the excess.

415.3 The location of the excess shall be re-monitored within 10 calendar days of the date that the excess was first discovered.

415.4 If the re-monitoring pursuant to Section 8-34-415.3 indicates no excess of the Section 8-34-303 limit, the location shall be re-monitored within 1 month of the date that the excess was first discovered.

415.5 If the re-monitoring pursuant to Section 8-34-415.4 indicates no excess of the Section 8-34-303 limit, no further monitoring is required until the next regularly scheduled quarterly monitoring date.

415.6 If monitoring pursuant to Sections 8-34-415.3 or 415.4 indicates a second excess of the Section 8-34-303 limit, additional corrective action shall be initiated within 5 calendar days of detecting the second excess.

415.7 Any location exhibiting a second excess within a quarterly period shall be re-monitored within 10 calendar days of detecting the second excess.

- 415.8 If the re-monitoring pursuant to Section 8-34-415.7 indicates no excess of the Section 8-34-303 limit, the location shall be re-monitored within 1 month of the date that the second excess was discovered.
- 415.9 If the re-monitoring pursuant to Section 8-34-415.8 indicates no excess of the Section 8-34-303 limit, no further monitoring is required until the next regularly scheduled quarterly monitoring date.
- 415.10 If monitoring pursuant to Section 8-34-415.7 or 415.8 indicates a third excess of the Section 8-34-303 limit within a quarterly period, a gas collection system expansion shall be required.
- 415.11 If a gas collection system expansion is required pursuant to Section 8-34-415.10, the expansion shall be completed and all new wells shall be operating within 120 days of the date that the excess was first discovered.

*(Adopted October 6, 1999)*

**8-34-416 Cover Repairs:** Any operator subject to Section 8-34-510 shall repair the landfill surface cover as necessary to maintain compliance with the provisions of Section 8-34-303.

*(Adopted October 6, 1999)*

## **8-34-500 MONITORING AND RECORDS**

**8-34-501 Operating Records:** Any operator subject to this Rule shall record the following:

- 501.1 All collection system downtime, including individual well shutdown times and the reason for the shutdown;
- 501.2 All emission control system downtime and the reason for the shutdown;
- 501.3 Continuous temperature for all operating flares and any enclosed combustors subject to Section 8-34-507;
- 501.4 Testing performed to satisfy any of the requirements of this Rule;
- 501.5 Monthly landfill gas flow rates and well concentration readings for facilities subject to Section 8-34-404.
- 501.6 For operations subject to Sections 8-34-503 and 506, records of all monitoring dates, leaks in excess of the limits in Section 8-34-301.2 or Section 8-34-303 that are discovered by the operator, including the location of the leak, leak concentration in ppm by volume, date of discovery, the action taken to repair the leak, date of repair, date of any required re-monitoring, and the re-monitored concentration in ppm by volume.
- 501.7 Annual waste acceptance rate and the current amount of waste in-place.
- 501.8 Records of the nature, location, amount, and date of deposition of non-degradable wastes, for any landfill areas excluded from the collection system requirement as documented in the Collection and Control System Design Plan.
- 501.9 For operations subject to Section 8-34-505, records of all monitoring dates and any excesses of the limits stated in Section 8-34-305 that are discovered by the operator, including well identification number, the measured excess, the action taken to repair the excess, and the date of repair.
- 501.10 Continuous gas flow rate records for any site subject to Section 8-34-508.
- 501.11 For operations subject to Section 8-34-509, records of key emission control system operating parameters.
- 501.12 The records required above shall be made available and retained for a period of five years.

*(Adopted 11/17/93; Amended 7/17/96; 10/6/99)*

**8-34-502 Deleted October 6, 1999**

**8-34-503 Landfill Gas Collection and Emission Control System Leak Testing:** For facilities subject to Section 8-34-301.2, testing shall be performed quarterly in accordance with Section 8-34-602.

*(Adopted 11/17/93; Amended 7/17/96; 10/6/99)*

**8-34-504 Portable Hydrocarbon Detector:** Any instrument used for the measurement of total organic compounds, including all methane and non-methane organic compounds, shall be a gas detector that meets the specifications and performance criteria of and

has been calibrated in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A).

*(Adopted 11/17/93; Amended 10/6/99)*

**8-34-505 Well Head Monitoring:** In accordance with the provisions of 40 CFR 60.756(a), any operator of a controlled landfill that is subject to the requirements of Section 8-34-305, shall monitor each individual wellhead on a monthly basis for the parameters listed in Sections 8-34-505.1 and 505.2 and either 505.3 or 505.4. Well head monitoring shall begin no later than August 1, 2002.

505.1 Gauge pressure, and

505.2 Landfill gas temperature, and

505.3 Landfill gas nitrogen concentration, or

505.4 Landfill gas oxygen concentration.

*(Adopted October 6, 1999)*

**8-34-506 Landfill Surface Monitoring:** In accordance with the provisions of 40 CFR 60.755(c)(1-3) and 60.756(f), any operator subject to the requirements of Section 8-34-303, shall monitor the landfill surface for total NMOC and methane concentration on a quarterly basis using the equipment and procedures specified by Section 8-34-607, unless the operator meets the requirements of Sections 8-34-119 or 120 or 506.1 through 506.3. Landfill surface monitoring shall begin no later than October 1, 2002.

506.1 The landfill is closed as defined in Section 8-34-223, and

506.2 The operator has detected no excesses of the Section 8-34-303 limit in three consecutive quarters of landfill surface monitoring, and

506.3 The operator shall monitor the landfill surface for total NMOC and methane concentration on an annual basis. The operator shall return to a quarterly monitoring schedule if any excess of the Section 8-34-303 limit is detected.

*(Adopted October 6, 1999)*

**8-34-507 Continuous Temperature Monitor and Recorder:** Any operator using a flare or other enclosed combustor to meet the requirements of Section 8-34-301, shall measure the temperature in the combustion zone of the device, using a continuous temperature monitor and recorder meeting the requirements of 40 CFR 60.756(b)(1).

*(Adopted October 6, 1999)*

**8-34-508 Gas Flow Meter:** In accordance with the provisions of 40 CFR 60.756(b)(2), any operator subject to the requirements of Section 8-34-301 shall install, calibrate, and maintain a gas flow measuring device that records the flow rate of landfill gas to the emission control system at least every 15 minutes. The gas flow meter shall be installed and operating no later than July 1, 2002.

*(Adopted October 6, 1999)*

**8-34-509 Key Emission Control System Operating Parameter(s):** Any operator using an emission control system other than a flare or other enclosed combustor shall determine the key emission control system operating parameter(s) for the device using District approved methods and shall monitor the parameter(s) on a scheduled approved by the APCO.

*(Adopted October 6, 1999)*

**8-34-510 Cover Integrity Monitoring:** In accordance with the provisions of 40 CFR 60.755(c)(5), any operator of a controlled solid waste disposal site shall monitor the landfill surface for cover integrity on a monthly basis using procedures specified in the Collection and Control System Design Plan for the site. Cover integrity monitoring shall begin no later than August 1, 2002.

*(Adopted October 6, 1999)*

## **8-34-600 MANUAL OF PROCEDURES**

**8-34-601 Determination of Emissions:** Emissions of non-methane organic compounds as specified in Section 8-34-301 shall be measured as prescribed by any of the following methods: BAAQMD Manual of Procedures, Volume IV, ST-7 and ST-14 or EPA Reference Methods 18, 25, 25A, or 25C (40 CFR 60, Appendix A). If Method 18 is used, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollution Emission Factors (AP-42). A source shall be considered in violation if the NMOC emissions measured by any of the

referenced test methods exceed the standards of this rule. For the purposes of determining compliance using ST-7, NMOC is the same as organic compounds.

*(Amended 11/17/93; 6/15/94; 10/6/99)*

**8-34-602 Collection and Control System Leak Inspection Procedures:** For the purposes of Section 8-34-301.2, leaks shall be measured using a portable gas detector as prescribed in EPA Reference Method 21 (40 CFR 60, Appendix A).

*(Adopted 11/17/93; Amended 7/17/96; 10/6/99)*

**8-34-603 Landfill Gas Sampling Procedure:** For the purposes of Sections 8-34-121.2, 406, 407 or 408, landfill gas samples, which are necessary for determining landfill gas production rate or a site-specific k value, shall be taken either from existing wells or from temporary wells that meet the requirements specified in EPA Reference Method 2E (40 CFR 60, Appendix A). Landfill gas sampling for other purposes shall be performed according to BAAQMD Manual of Procedures, Volume IV, Part 1 or ST-7, or EPA Reference Methods 18, 25, 25A, or 25C (40 CFR 60, Appendix A). If Method 18 is used, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollution Emission Factors (AP-42).

*(Adopted 11/17/93; Amended 7/17/96; 10/6/99)*

**8-34-604 Determination of Concentration:** For the purposes of Sections 8-34-121.2, 305, 404, 406, 407, or 408, the percentage concentration of carbon dioxide, methane, nitrogen, or oxygen in the landfill gas shall be determined as prescribed in EPA Reference Method 3C (40 CFR 60, Appendix A).

*(Adopted 11/17/93; Amended 7/17/96; 10/6/99)*

**8-34-605 Determination of NMOC Emission Rate:** For the purposes of Sections 8-34-121.2, 406, or 407, the non-methane organic compound (NMOC) emission rate shall be determined as prescribed in 40 CFR 60.754(a). For the purposes of Section 8-34-122, the NMOC emission rate shall be determined as prescribed in 40 CFR 60.754(b). For the purposes of Section 8-34-408, the NMOC emission rate for non-productive areas shall be determined as prescribed in 40 CFR 60.759(a)(3)(ii).

*(Adopted October 6, 1999)*

**8-34-606 Determination of Maximum Expected Gas Generation Rate:** For the purposes of Section 8-34-408, the maximum expected gas generation rate shall be determined as prescribed in 40 CFR 60.755(a)(1).

*(Adopted October 6, 1999)*

**8-34-607 Landfill Surface Inspection Procedures:** For the purposes of Section 8-34-303, the surface concentration of non-methane organic compounds and methane shall be measured using a portable hydrocarbon detector meeting the requirements of 40 CFR 60.755(d) and the applicable requirements of EPA Reference Method 21 (40 CFR 60, Appendix A). The probe shall be placed 5 centimeters (2 inches) above the ground. Monitoring shall be performed under the meteorological conditions specified in BAAQMD Manual of Procedures. The background concentration shall be determined as specified in BAAQMD Manual of Procedures. In accordance with the provisions of 40 CFR 60.753(d) and 60.755(c)(1-3), the entire perimeter of the landfill surface shall be inspected. The interior landfill shall be inspected along a pattern that traverses the landfill in 30 meter intervals or other APCO approved site-specific spacing. Landfill surface areas with distressed vegetation, cracks or seeps shall also be inspected. Steep slopes and other dangerous areas may be excluded from landfill surface inspection.

*(Adopted October 6, 1999)*

**8-34-608 Determination of Gauge Pressure:** For the purposes of Section 8-34-305.1 and 505.1, gauge pressure shall be determined using a hand-held manometer, magnahelic gauge, or other APCO approved pressure measuring device. The device shall be calibrated and operated in accordance with manufacturer's specifications.

*(Adopted October 6, 1999)*