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Draft Guidelines for Potential NOx and VOC Emissions Controls
Ozone Transport Commission
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There are additional measures under consideration by the OTC Stationary and Area Source Committee including; performance standards for electric generating units, high electric demand day (HEDD) units and ICI boilers, requirements for minor new source review at facilities and stage 1 and 2 at gas stations, and coordination with energy efficiency / renewable energy programs. The Committee has not drafted guidelines for these strategies at this time.

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1. Natural gas-fired industrial, commercial, and institutional (ICI) boilers, steam generators, process heaters, and water heaters

Introduction

Based on San Joaquin Valley Air Pollution Control District Rule 4308 and Rule 4307, California Air Resources Board Regulations and Texas Air Control Board Regulations

Definitions

This is only a partial identification of definitions necessary to this measure. Individual states will add definitions, as necessary.

“Type 1 unit” means a unit with a maximum rated heat input capacity greater than or equal to 75,000 Btu/hr but no more than 400,000 Btu/hr.

“Type 2 unit” means a unit maximum rated heat input capacity greater than 400,000 Btu/hr but less than 2.0 million Btu/hr.

“Type 3 unit” means a unit with a maximum rated heat input capacity of 2.0 million Btu/hr up to and including 5.0 million Btu/hr.

“Unit” means a natural gas fired boiler, steam generator, process heater or water heater.

Applicability

Any person who, on or after January 1, 2013, manufactures, supplies, sells, offers for sale, installs, or solicits the installation of:

- Any natural gas-fired boiler, steam generator, process heater or water heater with a rated heat input capacity greater than or equal to 75,000 British thermal units per hour and up to but not including 2,000,000 British thermal units per hour; or
- Any natural gas-fired boiler, steam generator, or process heater with a total rated heat input of 2.0 million Btu per hour (MMBtu/hr) up to and including 5.0 MMBtu/hr

The requirements do not apply to:

- Units using a fuel other than natural gas;
- Units used in recreational vehicles;
- Units installed in manufactured homes;
- Humidifiers, where the products of combustion come into direct contact with the material to be heated;
- Units located in residential dwellings designed for 4 or fewer families;
- Units burning less than 9,000 therms of natural gas per calendar year based on gas bills; or
- Units intended for shipment and use outside of state X

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Emissions limitations

<i>Type of unit</i>	<i>NOx emissions limit</i>
Type 1	0.093 lbs NOx/mmBtu heat input
Type 2	0.036 lbs NOx/mmBtu heat input
Type 3 - Atmospheric	0.014 lb/MMBtu heat input or 12 ppmv
Type 3-Non-atmospheric	0.011 lb/MMBtu heat input or 9 ppmv

Emission limits shall be corrected to 3% stack oxygen by volume, dry basis.

Test methods

Owners shall have a manufacturer's certification of compliance or conduct emissions testing of a unit prior to operation. For guidance see, "Nitrogen Oxides Emissions Compliance Testing for Natural Gas Fired Water Heaters and Small Boilers," Protocol, South Coast Air Quality Management District, Source Testing and Engineering Branch, Applied Science and Technology.

Monitoring

States are free to develop record keeping and reporting sufficient to determine compliance.

Record keeping and reporting:

States are free to develop record keeping and reporting sufficient to determine compliance.

For a manufacturer:

Maintain records of tests sufficient to certify that a particular unit meets the emissions limit if operated as recommended.

For a unit owner:

Maintain records to verify that routine tune-up and monitoring of the operational characteristics of the unit are performed.

Maintain a copy of the manufacturer certification or of a stack test conducted on the unit prior to operation.

Compliance date

January 1, 2013

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2. Municipal Waste Combustors

Introduction

Based on New Jersey Department of Environmental Protection (NJDEP) N.J.A.C. 7:27-19.12

Applicability

Any municipal solid waste incinerator in the state is subject to the provisions

Standards

The owner or operator of a MSW incinerator of any size shall cause it to emit NO_x at a maximum allowable emission concentration of (*under consideration: 90-150 ppmvd*) at seven percent oxygen based on a calendar day average:

- (a)
 1. On and after the compliance date, if compliance is achieved by optimizing the existing NO_x air pollution control system without modifying the MSW incinerator; or
 2. On and after the compliance date, if compliance is achieved by installing a new NO_x air pollution control system on an existing MSW incinerator or by physically modifying an existing MSW incinerator.
- (b) In lieu of complying with the maximum allowable emissions concentration at (a) above, the owner or operator of a MSW incinerator may comply by obtaining an alternative maximum allowable NO_x emission rate approved by the state.
- (c) The owner or operator of any MSW incinerator shall install a NO_x continuous emissions monitoring system on a MSW incinerator satisfying the requirements and shall demonstrate compliance with (a) or (b) above using the NO_x continuous emissions monitoring system.

Recordkeeping

Similar to requirements for other combustion sources, for example:

The owner or operator shall include in the application the following information regarding each combustion source:

1. Information sufficient to identify the combustion source, including a brief description, its location, its permit number, its company stack designation, any other identifying numbers, and any other information necessary to distinguish it from other equipment owned or operated by the applicant;
2. The maximum gross heat input rate of the combustion source, expressed in million BTUs per hour;
3. The type of fuel or fuels combusted in the combustion source;
4. The maximum allowable NO_x emission rate for the combustion source together with the calculations made to determine that rate;
5. The method to be used to measure the actual NO_x emission rate of each combustion source;

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6. A statement that the owner or operator will operate each combustion source included in the plan in accordance with state requirements;
7. The name and business telephone number of the individual responsible for recordkeeping and reporting required under state rules; and
8. Any other information that the state's requests, which is reasonably necessary to enable it to determine whether the source operations and items of equipment subject to fuel switching will comply with the requirements of this section.

Compliance date

TBD

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3. Architectural and Industrial Maintenance Coatings Rule Revision

Introduction

These guidelines are based on the 2007 CARB Suggested Control Measure (SCM) for Architectural Coatings. The OTC developed its 2002 Architectural Coatings Model Rule based upon the 2000 CARB SCM for Architectural Coatings. In 2007, CARB proposed an updated SCM for Architectural Coatings, which generally lowers VOC emissions through product reformulation and improves definitions of many categories from the 2000 SCM. Of the 47 coating categories regulated in the 2000 SCM, 15 categories have been eliminated (replaced or consolidated by new categories), 10 categories were added, and 19 have stricter VOC limits. The updated SCM also contains some revised compliance and reporting requirements.

The following is a summary of the recommended rule, and a summary of recommended changes to the CARB Model for the OTC region. For additional details of the rule see the 2007 CARB SCM.

Definitions

“Aluminum Roof Coating”: A coating labeled and formulated exclusively for application to roofs and containing at least 84 grams of elemental aluminum pigment per liter of coating (at least 0.7 pounds per gallon).

“Basement Specialty Coating”: A clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a hydrostatic seal for basements and other below-grade surfaces. Basement Specialty Coatings must meet the following criteria:

- Coating must be capable of withstanding at least 10 psi of hydrostatic pressure; and
- Coating must be resistant to mold and mildew growth and must achieve a microbial growth rating of 8 or more.

“Concrete/Masonry Sealer”: A clear or opaque coating that is labeled and formulated primarily for application to concrete and masonry surfaces to perform one or more of the following functions:

- Prevent penetration of water; or
- Provide resistance against abrasion, alkalis, acids, mildew, staining, or ultraviolet light; or
- Harden or dustproof the surface of aged or cured concrete.

“Driveway Sealer”: A coating labeled and formulated for application to worn asphalt driveway surfaces to perform one or more of the following functions:

- Fill cracks; or
- Seal the surface to provide protection; or
- Restore or preserve the appearance.

“Reactive Penetrating Sealer”: A clear or pigmented coating that is labeled and formulated for application to above-grade concrete and masonry substrates to provide protection from water and waterborne contaminants, including, but not limited to, alkalis, acids, and salts. Reactive Penetrating Sealers must penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate. Reactive Penetrating Sealers line the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film.

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“Stone Consolidant”: A coating that is labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weathering or other decay mechanisms. Stone Consolidants must penetrate into stone substrates to create bonds between particles and consolidate deteriorated material.

“Tub and Tile Refinish Coating”: A clear or opaque coating that is labeled and formulated exclusively for refinishing the surface of a bathtub, shower, sink, or countertop.

“Waterproofing Membrane”: A clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a seamless waterproofing membrane that prevents any penetration of liquid water into the substrate. Waterproofing Membranes are intended for the following waterproofing applications: below-grade surfaces, between concrete slabs, inside tunnels, inside concrete planters, and under flooring materials.

“Wood Coatings”: Coatings labeled and formulated for application to wood substrates only. The Wood Coatings category includes the following clear and semitransparent coatings: lacquers; varnishes; sanding sealers; penetrating oils; clear stains; wood conditioners used as undercoats; and wood sealers used as topcoats. The Wood Coatings category also includes the following opaque wood coatings: opaque lacquers; opaque sanding sealers; and opaque lacquer undercoaters. The Wood Coatings category does not include the following: clear sealers that are labeled and formulated for use on concrete/masonry surfaces; or coatings intended for substrates other than wood.

“Zinc-Rich Primer”: A coating that meets all of the following specifications:

- Coating contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids; and
- Coating is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of coatings; and
- Coating is intended for professional use only and is labeled as such.

The Following definitions that appeared in the previous OTC Model Rule are no longer included:

- Antenna Coating, Antifouling Coating, Clear Brushing Lacquers, Flow Coating, Lacquer, Quick Dry Enamel, Quick Dry Primer, Sealer, Sanding Sealer, Swimming Pool, Repair and Maintenance, Temperature Indicator Safety Coating, Undercoater, Varnish, Waterproofing Sealer, Waterproofing Concrete/Masonry Sealer

Applicability

This rule is applicable to any person who:

- Supplies, sells, or offers for sale any architectural coating for use within the State; or
- Manufactures, blends, or repackages any architectural coating for use within the State; or
- Applies or solicits the application of any architectural coating within the State.

This rule does not apply to:

- Any architectural coating that is supplied, sold, offered for sale, or manufactured for use only outside of the State or for shipment to other manufacturers for reformulation or repackaging.
- Any aerosol coating product.

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- Any architectural coating that is sold in a container with a volume of one liter (1.057 quart) or less.

Emissions limitations

The following categories and VOC limits are intended to replace the categories and limits in the previous OTC model rule. As discussed above, of the 47 coating categories regulated in the 2000 CARB SCM, 15 categories have been eliminated (replaced or consolidated by new categories), 10 categories were added, and 19 have stricter VOC limits.

Limits are expressed as VOC (g/L), thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.

COATING CATEGORY	Current VOC LIMIT	New VOC LIMIT
Flat Coatings	100	50
Non-flat Coatings	150	100
Non-flat - High Gloss Coatings	250	150
SPECIALTY COATINGS		
Aluminum Roof Coating		400
Antenna Coatings	530*	n/a
Anti-fouling Coatings	400	n/a
Basement Specialty Coating		400
Bituminous Roof Coatings	300	50
Bituminous Roof Primers	350	
Bond Breakers	350	
Calcimine Recoaters ²	475*	
Clear Wood Coatings		
Clear Brushing Lacquers	680	n/a
Lacquers	550	n/a
Sanding Sealers	350	n/a
Varnishes	350	n/a
Conversion Varnish ²	725*	
Concrete Curing Compounds	350*	
Concrete Masonry Sealers		100
Concrete Surface Retarders ²	780*	
Driveway Sealers		50
Dry Fog Coatings	400*	150

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Faux Finishing Coatings	350	
Fire-resistive Coatings	350	
Fire-retardant Coatings		
Clear	650	n/a
Opaque	350	n/a
Floor Coatings	250	100
Flow Coatings	420	n/a
Form-release Compounds	250	
Graphic Arts Coatings	500*	
High-temperature Coatings	420	
Impacted Immersion Coatings ²	780*	
Industrial Maintenance Coatings	340	250
Low-solids Coatings ¹	120*	
Magnesite Cement Coatings	450	
Mastic Texture Coatings	300*	100
Metallic Pigmented Coatings	500	
Multi-color Coatings	250	
Nuclear Coatings ²	450*	
Pre-treatment Wash Primers	420	
Primers, Sealers, and Undercoaters	200	100
Quick-dry Enamels	250	n/a
Quick-dry Primers, Sealers and Undercoaters	200	n/a
Reactive Penetrating Sealer		350
Recycled Coatings	250	
Roof Coatings	250	50
Rust Preventive Coatings	400*	250
Shellacs		
Clear	730	
Opaque	550	
Specialty Primers, Sealers, and Undercoaters	350	100
Stains	250	
Stone Consolidants		450
Swimming Pool Coatings	340	
Swimming Pool Repair and Maintenance Coatings	340	n/a
Temperature-indicator Safety Coatings	550	n/a

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Thermoplastic Rubber Coatings and Mastic ²	550*	
Traffic Marking Coatings	150*	100
Tub and Tile Refinish Coatings		420
Waterproofing Membranes		250
Waterproofing Sealers	250	n/a
Waterproofing Concrete/Masonry Sealers	400	n/a
Wood Coatings		275
Wood Preservatives	350	
Zinc-Rich Primers		340

Additional Revisions Under Evaluation

* Compliance dates for Rust Preventative Coatings and Specialty Primers, Sealers, and Undercoaters

Test methods

See CARB model

Record keeping and reporting.

Per current state rule

Compliance date

January 1, 2013

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4. Consumer Products Rule Revision

Introduction

These guidelines are based on the California Air Resources Board's (CARB) 2006 consumer products regulatory amendments that were adopted on November 17, 2006. The majority of the 2006 amendments had an effective date of December 31, 2008, while the remainder will have an effective date of December 31, 2010. The CARB 2006 amendments have more restrictive VOC limits for 12 existing consumer product categories (including subcategories) and three new categories (disinfectant, sanitizer and temporary hair color; including subcategories) will be regulated for the first time with VOC limits. In addition, there are 2 categories from CARB's 2004 rule amendments (second tier standards for antistatic aerosols and shaving gels, effective December 31, 2008 and December 31, 2009, respectively) that were not included in the last model that are being included here as well.

The following is a summary of the recommended rule revisions, and a summary of recommended changes to the CARB model for the OTC region. For additional details of the rule see the California consumer products regulations.

Definitions

This is only a partial identification of definitions necessary to this measure. Individual states will add definitions, as necessary.

“Disinfectant”: means a product that is labeled as a “disinfectant”, or is labeled to destroy or irreversibly inactivate infectious or other undesirable bacteria, pathogenic fungi, or viruses on surfaces or inanimate objects and whose label is registered as a “disinfectant” under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 U.S.C. 136, et seq.). Products that are labeled as both a “sanitizer” and a “disinfectant” are considered disinfectants. “Disinfectant” does not include any of the following: (A) products labeled solely for use on human or animals, (B) products labeled solely for agricultural use, (C) products labeled solely for use in swimming pools, therapeutic tubs, or hot tubs, (D) products which are labeled to be used on heat sensitive critical or semi-critical medical devices or medical equipment surfaces (E) products which are premoistened wipes or towelettes sold exclusively to medical, convalescent, or veterinary establishments, (F) products which are labeled to be applied to food-contact surfaces and are not required to be rinsed prior to contact with food, or (G) products which are labeled as “Bathroom and Tile Cleaners,” “Glass Cleaners,” “General Purpose Cleaners,” “Toilet/Urinal Care Products,” “Metal Polishes,” “Carpet Cleaners,” or “Fabric Refreshers” that may also make disinfecting or anti-microbial claims on the label.

“Sanitizer”: means a product that is labeled as a “sanitizer,” or is labeled to reduce, but not necessarily eliminate, microorganisms in the air, on surfaces, or on inanimate objects, and whose label is registered as a “sanitizer” under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. section 136 et seq.). Products that are labeled as both a “sanitizer” and a “disinfectant” are considered disinfectants. “Sanitizer” does not include (A) “Disinfectant,” (B) products labeled solely for use on humans or animals, (C) products labeled solely for agricultural use, (D) products labeled solely for use in swimming pools, therapeutic tubs, or hot tubs, (E) products which are labeled to be used on heat sensitive critical or semi-critical medical devices or medical equipment surfaces, (F) products which are pre-moistened wipes or

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towelettes sold exclusively to medical, convalescent or veterinary establishments (G) products which are labeled to be applied to food-contact surfaces and are not required to be rinsed prior to contact with food, or (H) products which are labeled as “Bathroom and Tile Cleaner,” “Glass Cleaner,” “General Purpose Cleaner,” “Toilet/Urinal Care Product,” “Metal Polish,” “Carpet Cleaner,” or “Fabric Refresher”

“Temporary Hair Color”: means any product that applies color, glitter, or UV-active pigments to hair, wigs, or fur and is removable when washed. “Temporary Hair Color” includes hair color mousses and products labeled to add texture or thickness to cover thinning/balding areas. “Temporary Hair Color” does not include “Hair Spray,” “Hair Styling Product,” or “Hair Mousse.”

Applicability

Any person who sells, supplies, offers for sale, or manufactures consumer products for use in the state. This rule shall not apply to any person who manufactures consumer products in the state for shipment and use only outside of the state.

- The requirements shall not apply to fragrances and colorants up to a combined level of 2 percent by weight contained in any antiperspirant or deodorant.
- The requirements shall not apply to those volatile organic compounds that contain more than 10 carbon atoms per molecule and for which the vapor pressure is unknown, or that have a vapor pressure of 2 mm Hg or less at 20°C.
- The medium volatility organic compound (MVOC) content standards shall not apply to ethanol.

Emissions limitations

The following categories and VOC limits are in addition to the categories already in the OTC model rule. As discussed above, there are new VOC limits for 12 existing consumer product categories and three new categories (disinfectant, sanitizer and temporary hair color; including subcategories). In addition, there are 2 categories from CARBs 2004 rule amendments (second tier standards for antistatic aerosols and shaving gels, effective December 31, 2008 and December 31, 2009, respectively) that were not included in the last model that are being included here as well.

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The following new products or product forms will be added to the list of consumer products to be regulated;

<u>PRODUCT</u>	<u>FORM</u>	<u>VOC CONTENT (% by weight)</u>
Anti-static Product	(aerosol)	80
Bathroom and Tile Cleaners	(non-aerosol)	1
Disinfectant	(aerosol)	70
	(non-aerosol)	1
Furniture Maintenance Products	(non-aerosol)	3
General Purpose Cleaners	(aerosol)	8
Oven Cleaners	(non-aerosol)	1
Sanitizer	(aerosol)	70
	(non-aerosol)	1
Temporary Hair Color	(aerosol)	55

The following existing products or product forms will have new VOC limits;

Construction, Panel and Floor Covering Adhesive		7
Brake Cleaners		10
Carburetor or Fuel-injection Air Intake Cleaners		10
Engine Degreaser	(aerosol)	10
Floor Polishes or Waxes (resilient flooring)		1
	(non-resilient flooring)	1
General Purpose Degreasers	(aerosol)	10
Laundry Starch/Sizing/Fabric Finish		4.5
Nail Polish Removers		1
Shaving Gel		4

Additional Revisions Under Evaluation

* Windshield wiper fluid: OTC did not include the CARB VOC limit for this category in the first model rule, based on industry comments. The OTC rule was consistent with the Federal rule.

Test methods

See CARB model

Record keeping and reporting.

Per current state rule.

Compliance date

January 1, 2013

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5. Revision to Solvent Cleaning Rules

Introduction

Based on SCAQMD rule 1122

Definitions

Per current state rules.

Applicability

This rule applies to all persons conducting any form of solvent cleaning using solvent-containing volatile organic compounds (VOCs) or a NESHAP halogenated solvent. Solvent cleaning includes the use of batch-loaded cold cleaners, open-top vapor degreasers, all types of conveyORIZED degreasers, and air-tight and airless cleaning systems that carry out solvent degreasing operations. Solvent degreasing operations that are regulated by this rule include, but are not limited to, the removal of contaminants from parts, products, tools, machinery and equipment.

Individual states exceptions may apply.

Emissions limitations

Solvent used for cleaning must not exceed a VOC content of 25 g/L. (Those states that currently have a vapor pressure limit of 1.0 mmHg for cold cleaning shall eliminate that limit.)

Work practices

Per current state rules.

Record keeping and reporting.

Per current state rules, if they require monthly records of solvent use and VOC content plus an identification of the solvent.

Compliance date

January 1, 2013

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6. Limiting VOC emissions from large above-ground storage tanks

Introduction

Based on N.J.A.C. 7:27-16, Control and Prohibition of Air Pollution by Volatile Organic Compounds. There are links to that rule and the rule proposal in the summary paper. The definitions are found at Section 16.1 Definitions, and the tank conditions are found at Section 16.2, VOC Stationary Storage Tanks.

California's South Coast Air Quality Management District (SCAQMD) Rule 1149 addresses degassing, cleaning, and roof landings. SCAQMD Rule 1178 addresses deck fittings, seals, domes, and inspections. California's San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) Rule 4623 addresses deck fittings, seals, degassing and cleaning. Texas Council on Environmental Quality (TCEQ) Chapter 115 regulations address deck fittings, seals, inspections, degassing, and roof landings. Some requirements from these rules are similar to MACT Subpart WW.

Definitions

This is only a partial identification of definitions necessary to this measure. Individual states will add definitions, as necessary

“Deck fitting” means a functional or operational device on a tank floating roof that substantially closes or seals a penetration in the deck of the floating roof including, but not limited to, any access hatch, fixed roof support column and well, gauge float, gauge hatch, sample port, guidepole, ladder and well, rim vent, roof drain, roof leg, and vacuum breaker, and excluding the rim seal system.

“Degassing” means the process of removing organic vapors from a storage tank in preparation for human entry.

“Domed roof” means a self-supporting fixed roof attached to the top of an external floating roof tank to reduce evaporative losses.

“Guidepole” means an anti-rotation device that is fixed to the top and bottom of a tank, passing through a well in a floating roof. A guidepole may be solid or be equipped with slots or holes for gauging purposes provided the guidepole is equipped with an appropriate sealing device that prevents openings that expose the stored liquid to the atmosphere.

“In-service roof landing” means a roof landing in which the tank is not taken out of service.

“Internal floating roof” means floating roof located inside a vessel with a fixed roof.

“Visible gap” means a gap of a deck fitting or roof opening of more than 1/8 inch (0.32 centimeters) between any gasket or seal and the opening that it is intended to seal.

Applicability

Tanks that have a volume greater than or equal to 40,000 gallons and store VOC with a vapor pressure greater than or equal to 0.5 psia at 70 degrees F are subject to this rule. Required type of control varies with tank type, size and material stored.

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Exceptions:

- Tanks maintained under a controlled elevated temperature
- Tanks equipped with a vapor control system reducing by at least 98 percent the weight of VOC emissions to the outdoor atmosphere
- Pressurized storage tanks designed to operate in excess of 15 pounds per square inch gauge (psig) without any emissions to the atmosphere except under emergency conditions.

Individual states exceptions may apply

Emissions limitations/ control requirements

- Deck fittings must be covered and gasketed with no visible gaps
- Each slotted guidepole must be equipped with either (1) a gasketed cover for the roof opening, a pole wiper and a pole sleeve **or** (2) a pole float, a gasketed cover for the roof opening, a pole wiper, and a pole float wiper.
- Each unslotted guidepole well must be equipped with a gasketed sliding cover and a flexible fabric sleeve or wiper.
- If an external floating roof tank stores any VOC, other than crude oil, with a vapor pressure of 3 psia or greater at 70 degrees F, it must be equipped with a domed roof before it is refilled after the first time it is removed from service.
- VOC emissions during tank degassing and cleaning must be exhausted to a vapor control system rated at a minimum 95% efficiency during ozone season
- Any in-service roof landing must be performed with the landed height of the floating roof at its minimum setting
- Owners or operators of a tank with in-service roof landings greater than 5 tons per year must control emissions from landings by either (1) a method that routes all vapors from the tank to a vapor control device with a control efficiency of at least 90 percent, from the time the roof is landed until it is within 10 percent by volume of being refloated, **or** (2) must modify or construct the tank such that the bottom of the roof deck can be lowered to one foot or less from the top-most point of the surface of the tank floor, **or** (3) must implement measures equally or more effective in preventing VOC emissions to the outdoor atmosphere.

Required type of control varies with tank type, size and material stored. See <http://www.nj.gov/dep/rules/proposals/080408a.pdf> , <http://www.state.nj.us/dep/aqm/Sub16.pdf> and <http://www.aqmd.gov/hb/2008/May/080534a.htm>

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Test methods

Consider establishing test methods for control devices through permitting

Monitoring

- Deck fittings and seals on external floating roof tanks must be inspected annually and each time the tank is degassed.
- Deck fittings and seals on an internal floating roof tank or domed tank must be inspected visually (though a hatch on the fixed roof or dome) annually, and the tank must undergo a more rigorous internal inspection each time it is degassed, and no less than once every ten years.

Record keeping and reporting.

- Owners and operators must keep records of each floating roof landing event including, but not limited to, tank contents before landing and after refilling; landed height of the floating roof; height of any liquid remaining in the bottom of the tank after landing; duration of landing; and landing emissions calculated using AP-42, Chapter 7 methodology.
- Owners and operators must keep records of all tank degassing, cleaning and sludge removal activities
- Owners and operators must keep records of all inspection reports

States are free to develop record keeping and reporting sufficient to determine compliance. NJ imposes other reporting for this category through permitting.

Compliance date

Phased compliance over ten years for upgrades that require removing a tank from service. Requirements that don't require removal of tanks from service should have a compliance date of one year after adoption.

NOTE: The measures discussed in this document represent possible controls the OTC is evaluating for potential NO_x and VOC emission reductions. No decision has yet been made by the OTC states to pursue these measures for inclusion in a state implementation plan.

7. Stationary Generators

Introduction

Based on Delaware Regulation No. 1144

Definitions

This is only a partial identification of definitions necessary to this measure. Individual states will add definitions, as necessary.

“Emergency” means:

- an electric power outage due to: a failure of the electrical grid; on-site disaster; local equipment failure; or public service emergencies such as flood, fire, natural disaster, or severe weather conditions (e.g., hurricane, tornado, blizzard, etc.); or
- when there is a deviation of voltage or frequency from the electrical provider to the premises of 3% or greater above, or 5% or greater below, standard voltage or frequency.

“Emergency generator” means a stationary generator used only during an emergency, during testing, and for maintenance purposes. An emergency generator may not be operated in conjunction with a voluntary demand-reduction program or any other interruptible power supply arrangement with a utility, other market participant, or system operator.

“Existing” means a generator which is installed before the adoption of the measure. An existing generator shall not be considered new if it is relocated and reinstalled on the same property, nor if it is reclassified from an emergency generator to a non-emergency generator or vice versa.

“New” means a generator which is installed after the adoption of the measure.

“Non-emergency generator” means a stationary generator that may be used during an emergency, during testing, and for maintenance purposes, as well as for any other purpose at times other than during an emergency.

Applicability

The owner or operator of any fossil fuel-fired generator with a standby power rating of more than 10kW and powered by reciprocating internal combustion engine. Both emergency and non-emergency generators are regulated.

The requirements shall not apply to:

- New generators subject to BACT or LAER.
- Emergency generators supplying emergency power only to a single-family residence.
- Mobile generators.

Individual states are free to add exceptions.

NOTE: The measures discussed in this document represent possible controls the OTC is evaluating for potential NOx and VOC emission reductions. No decision has yet been made by the OTC states to pursue these measures for inclusion in a state implementation plan.

Emissions limitations

- EPA Nonroad standards or NSPS standards for new, emergency generators are required.
- For new, non-emergency generators, the emissions standards would be:

Pollutant	Emission Standards (lbs/MWh)	
	Installed On or After January 1, 2010	Installed On or After January 1, 2012
Nitrogen Oxides	1.0	0.6
Nonmethane Hydrocarbons	0.5	0.3
Particulate Matter (liquid-fueled reciprocating engines only)	0.7	0.07
Carbon Monoxide	10.0	2.0
Carbon Dioxide	1,900	1,650

- For all new, non-emergency generators fueled by waste or landfill gases, the emissions standards would be:

Pollutant	Emission Standards (lbs/MWh)
Nitrogen Oxides	2.2
Nonmethane Hydrocarbons	0.7
Carbon Monoxide	10.0
Carbon dioxide	1900

NOTE: The measures discussed in this document represent possible controls the OTC is evaluating for potential NOx and VOC emission reductions. No decision has yet been made by the OTC states to pursue these measures for inclusion in a state implementation plan.

- For existing, non-emergency generators, the emissions standard would be:

Pollutant	Emission Standard (lbs/MWh)
Nitrogen Oxides	4.0
Nonmethane Hydrocarbons	1.9
Particulate Matter (liquid-fueled reciprocating engines only)	0.7
Carbon Monoxide	10.0
Carbon Dioxide	1,900

Test methods/Monitoring

Either obtain:

- Manufacturer’s certification of compliance with the standards when operated as recommended; or
- Conduct stack test using either EPA reference method, CARB reference method or other method as approved.
- State may require repeated stack testing at its option or installation and operation of CEM.

Record keeping and reporting.

- 1) Monthly and yearly records of the following data should be recorded and maintained on the property where the generator is located:
 - Fuel usage, by type;
 - Operating hours for each generator, via the use of a non-resettable hour meter; and
 - Operating, maintenance, and testing hours.

All records should be kept for 5 years. There would be no reporting requirement unless the records are specifically requested by the state permitting authority.
- 2) Documentation sufficient to demonstrate certification shall include:
 - A valid supplier’s certificate; or
 - A CARB executive order
- 3) Any emissions concentrations and parameters, measured using CEM or by stack testing, shall be recorded. Such records shall specify the pollutant or parameter measured and the units of measurement.

Compliance date

- Existing, emergency generators should be compliant no later 30 days after the adoption of the measure.
- Existing, non-emergency generators should be compliant within 1 year after the adoption of the measure.
- New, emergency generators should be compliant prior to initial operation.

NOTE: The measures discussed in this document represent possible controls the OTC is evaluating for potential NO_x and VOC emission reductions. No decision has yet been made by the OTC states to pursue these measures for inclusion in a state implementation plan.

- New, non-emergency generators should be compliant prior to initial operation.

Additional Requirements

- No generator may operate for testing or maintenance purposes on any day which has been forecasted to be “Code Orange” or “Code Red” for ground level ozone pollution or particle pollution, as announced by the state permitting authority.
- Each and every generator must register with the state permitting authority by submitting the following data:
 - Generator owner’s name, address, and telephone number;
 - The physical address of the generator, along with lat/long coordinates;
 - The make, model, and serial number of the generator;
 - The manufacture date and installation date of the generator;
 - The standby power rating and prime power rating (if known); and
 - A declaration of the use of the generator: emergency or non-emergency.