

**REGULATION 8  
ORGANIC COMPOUNDS  
RULE 53  
VACUUM TRUCK OPERATIONS**

**INDEX**

**8-53-100 GENERAL**

- 8-53-101 Description
- 8-53-102 Applicability
- 8-53-103 Exemption, Emergencies

**8-53-200 DEFINITIONS**

- 8-53-201 Air-Mover
- 8-53-202 Affected Facility
- 8-53-203 Aviation Gas
- 8-53-204 Background Concentration
- 8-53-205 Bulk Plant
- 8-53-206 Bulk Terminal
- 8-53-207 Control Equipment
- 8-53-208 Crude Oil
- 8-53-209 Gasoline
- 8-53-210 Gasoline Blending Stock
- 8-53-211 Loading Event
- 8-53-212 Marine Terminal
- 8-53-213 Organic Compound
- 8-53-214 Organic Liquid Pipeline Facility
- 8-53-215 Petroleum Refinery
- 8-53-216 Regulated Material
- 8-53-217 Splash Loading
- 8-53-218 Total Organic Compounds
- 8-53-219 Transmix
- 8-53-220 Vacuum Truck
- 8-53-221 Vacuum Truck Operation

**8-53-300 STANDARDS**

- 8-53-301 Emission Limit
- 8-53-302 Liquid Leaks
- 8-53-303 Vapor Leaks
- 8-53-304 Unloading of Regulated Material

**8-53-400 ADMINISTRATIVE REQUIREMENTS**

- 8-53-401 Loading Event Schedule Reporting Requirements

**8-53-500 MONITORING AND RECORDS**

- 8-53-501 Emissions Monitoring Requirement
- 8-53-502 Recordkeeping Requirement

**8-53-600 MANUAL OF PROCEDURES**

- 8-53-601 Measurement of TOC Concentrations
- 8-53-602 Flash Point Determinations

**REGULATION 8  
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**8-53-100 GENERAL**

**8-53-101 Description:** The purpose of this rule is to limit the emissions of total organic compounds, from movement of materials using vacuum trucks and other similar equipment, including, but not limited to air movers, at petroleum refineries, bulk plants, bulk terminals, marine terminals, and organic liquid pipeline facilities.

**8-53-102 Applicability:** This rule applies to the following:

- 102.1 Petroleum refineries;
- 102.2 Bulk plants;
- 102.3 Bulk terminals;
- 102.4 Marine terminals;
- 102.5 Organic liquid pipeline facilities.

**8-53-103 Exemption, Emergencies:** Vacuum trucks responding to emergency situations shall be exempt from the requirements of this rule, provided it can be shown that (1) the emergency was a result of an accident, (2) use of equipment capable of complying with the rule would delay the response, and (3) the delay would pose an imminent risk of significant harm to personnel, the public, or the environment.

**8-53-200 DEFINITIONS**

**8-53-201 Air Mover:** A specialized type of vacuum truck that uses a combination of vacuum and air flow to load a variety of material types into the truck.

**8-53-202 Affected Facility:** A facility to which this rule applies pursuant to Section 8-53-102.

**8-53-203 Aviation Gas:** Gasoline suitable for use in piston-driven aircraft.

**8-53-204 Background Concentration:** The ambient concentration of TOC determined at least 3 meters (10 feet) upwind from the vacuum truck blower exhaust, as determined by a hydrocarbon analyzer pursuant to Section 8-53-501.

**8-53-205 Bulk Plant:** A distribution facility that is subject to Regulation 8, Rule 39 or to Section 302 of Regulation 8, Rule 6.

**8-53-206 Bulk Terminal:** A distribution facility that is subject to Regulation 8, Rule 33 or to Section 301 of Regulation 8, Rule 6.

**8-53-207 Control Equipment:** Equipment used to reduce TOC emissions from vacuum truck operations in order to comply with emission limits set forth in Section 301 of this rule, including, but not limited to, carbon adsorption systems, internal combustion engines, thermal oxidizers, refrigerated condenser systems, and liquid scrubbers.

**8-53-208 Crude Oil:** A naturally occurring mixture consisting predominantly of hydrocarbons and/or sulfur, nitrogen and oxygen derivatives of hydrocarbons that is removed from the earth in a liquid state or is capable of being so removed.

**8-53-209 Gasoline:** Any petroleum-derived, volatile mixture of hydrocarbons suitable for use as a fuel in a spark-ignited, internal combustion engine.

**8-53-210 Gasoline Blending Stock:** Any organic liquid used as a component of gasoline, including, but not limited to aromatic or alcohol octane boosters and oxygenates, isomerate, reformate, alkylate, straight run gasoline, cat gasoline, pyrolysis gasoline, FCC gasoline and light hydrocrackate.

**8-53-211 Loading Event:** The loading at an affected facility of regulated materials into a vacuum truck or other container through a vacuum truck operation.

**8-53-212 Marine Terminal:** Any facility or structure constructed to load or unload organic liquid bulk cargo into or off of marine tank vessels.

**8-53-213 Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

- 8-53-214 Organic Liquid Pipeline Facility:** Any pipeline used to transport petroleum, petroleum products, or petroleum product blending stock, including any breakout stations and terminals.
- 8-53-215 Petroleum Refinery:** Any facility that processes petroleum products as defined in North American Industry Classification System code number 32411, Petroleum Refineries.
- 8-53-216 Regulated Material:** A regulated material is any of the following:
- 216.1 Gasoline, gasoline blending stock, aviation gasoline, crude oil, or any other organic compound or mixture of organic compounds that exists as a liquid at actual conditions of use or storage having a flash point of less than 100 degrees F.; or transmix containing any of the foregoing;
  - 216.2 Any material from any tank subject to the requirements of Regulation 8, Rule 5, Section 301;
  - 216.3 Any material from any of the following units subject to Regulation 8, Rule 8:
    - 3.1 Wastewater separator;
    - 3.2 Air flotation unit;
    - 3.3 Pre-air flotation unit;
    - 3.4 Sludge-dewatering unit;
    - 3.5 Oil-water separator slop oil vessel;
    - 3.6 Air flotation unit slop oil vessel;
    - 3.7 Oil-water separator effluent channel, pond, trench, or basin;
    - 3.8 Wastewater collection system component.
- 8-53-217 Splash Loading:** A method of transferring material into a tank, vessel, or other type of container in which the transferred material exits the transfer pipe, hose, or other outlet above the level of the container's contents during all or most of the transfer.
- 8-53-218 Total Organic Compounds (TOC):** Organic compounds and methane.
- 8-53-219 Transmix:** A mixture of hydrocarbons resulting from (1) at an organic liquid pipeline facility, the sequential transmission of batches of materials through a pipeline and mixing at the interface between different materials, or (2) at a bulk plant or bulk terminal, the collection for re-refining of material that is not loaded, typically because it does not meet a fuel specification or has become contaminated.
- 8-53-220 Vacuum Truck:** Portable equipment with an affixed barrel or tank that relies on the creation of a pressure differential, typically through use of a pump or blower, to pneumatically load materials into the barrel or tank of the equipment.
- 8-53-221 Vacuum Truck Operation:** The movement of regulated material into a vacuum truck or into any other container through use of a vacuum truck. For purposes of this rule, the use of other means, typically gravity feed or an auxiliary pump, to push or pull materials into a vacuum truck shall be considered a vacuum truck operation.
- 8-53-300 STANDARDS**
- 8-53-301 Emission Limit:** Effective June 1, 2012, for any loading event, emissions shall be controlled so that the TOC concentration does not exceed 500 ppmv, expressed as methane (C<sub>1</sub>), above background, as measured at the exhaust of a vacuum truck operation or, if an auxiliary control device is used to control emissions from a vacuum truck operation, at the exhaust of the control device.
- 8-53-302 Liquid Leaks:** Effective June 1, 2012, vacuum truck equipment shall be visually inspected for liquid leaks prior to and during each loading event. Loading events shall shut down within 60 seconds upon detection of any liquid leaking from a vacuum truck or associated equipment at a rate in excess of three drops per minute.
- 8-53-303 Vapor Leaks:** Effective June 1, 2012, vacuum truck equipment shall be inspected for organic vapor leaks prior to and during each loading event using methods that comply with Section 8-53-601. No vacuum truck operation or associated abatement device shall leak organic vapor in excess of 500 ppmv, expressed as methane (C<sub>1</sub>), above background. Loading events shall shut down within 60 seconds upon detection of any vapor leak from a vacuum truck or associated equipment in excess of 500 ppmv, expressed as methane (C<sub>1</sub>), above background.

- 8-53-304 Unloading of Regulated Material:** Effective June 1, 2012, unloading of regulated material from a vacuum truck shall meet the following requirements:
- 304.1 If regulated material is unloaded into a tank, vessel or other type of container, splash loading shall not be employed.
  - 304.2 If regulated material is unloaded into a sump, regulated material shall be promptly cleaned from the sump, and sump contents shall be promptly pumped into storage.

#### **8-53-400 ADMINISTRATIVE REQUIREMENTS**

- 8-53-401 Loading Event Schedule Reporting Requirements:** Effective June 1, 2012, upon request by the APCO or the designee of the APCO, the owner or operator of an affected facility subject to this rule shall provide a list of scheduled loading events and the following information for each event:
- 401.1 Loading event start date and time;
  - 401.2 Facility name, plant number (if applicable), and source number (if applicable), tank, pipeline, or reservoir address, and equipment location;
  - 401.3 Vacuum truck company name, owner/operator's name, and telephone number;
  - 401.4 Control equipment company name, control equipment type, operator's name and telephone number if the control equipment is operated by someone other than the vacuum truck owner/operator; and,
  - 401.5 Tank, pipeline, box, container, or reservoir capacity, estimated volume of material to be loaded.

The list shall include loading events that are scheduled within sixty (60) days of the schedule request. The list shall be provided to District staff within five (5) working days and may be provided via hard copy or electronically. Changes to loading event schedules shall be reported to District staff no less than 48 hours prior to loading events.

#### **8-53-500 MONITORING AND RECORDS**

- 8-53-501 Emissions Monitoring Requirement:** Effective June 1, 2012, the owner or operator of an affected facility using a vacuum truck operation shall monitor and record emissions as follows:
- 501.1 When TOC emissions from a vacuum truck operation are controlled primarily by technology other than a carbon adsorption system, emissions from the control device shall be measured (as specified in Section 8-53-601) as follows:
    - 1.1 Commence measurements for each new loading event before the barrel is twenty (20) percent full. An additional measurement shall be performed before the barrel is sixty (60) percent full. If a vacuum truck is already 20% or 60% filled prior to a new loading event, the emission measurement shall be performed within two (2) minutes or as soon as possible upon the start of the loading event;
    - 1.2 Emission measurements shall include the date and time of the loading event (including total time for the event), the TOC concentration, the material flow rate (in acfm or scfm), as well as the name and model number of the TOC emission control device if one is utilized.
  - 501.2 When TOC emissions from a vacuum truck operation are controlled primarily by a carbon adsorption system, emissions from the control device shall be measured (as specified in Section 8-53-601) as follows:
    - 2.1 Commence emission measurements within sixty (60) seconds of startup for each material loading event. Additional measurements shall be performed every ten (10) minutes thereafter;
    - 2.2 When a carbon vessel has been replaced, a new TOC emission measurement must occur within sixty (60) seconds of the carbon vessel replacement.

2.3 Emission measurements shall include the date and time of the loading event, the TOC concentration, the material flow rate (in acfm or scfm), and the model of the TOC emission control device.

501.3 The owner or operator of an affected facility shall retain records and lists required by this Section and shall make them available for inspection by the APCO upon request, for the previous 36-month period.

**8-53-502 Recordkeeping Requirement:** Effective June 1, 2012, the owner or operator of an affected facility using vacuum truck operations shall comply with the following daily recordkeeping requirements:

502.1 For each loading-event:

1.1 Record and identify the type of TOC-containing materials loaded into the vacuum truck barrel;

1.2 Record the total daily volume of TOC-containing materials processed through each vacuum truck taking into consideration existing loads at the beginning of the day and all loads discharged during the day;

1.3 Record the TOC ppmv concentration, including date and time, measured from the integrated vacuum truck control equipment exhaust or the external control equipment exhaust whichever is applicable; and,

1.4 The make, model, and serial number of the device used to measure the TOC concentration.

502.2 The owner or operator of an affected facility shall retain records and lists required by this Section and shall make them available for inspection by the APCO upon request, for the previous 36-month period.

**8-53-600 MANUAL OF PROCEDURES**

**8-53-601 Measurement of TOC Concentrations:** The determination of TOC concentration limits set forth in Sections 301 of this rule shall be conducted in accordance with USEPA Reference Methods 21 or 25A; or BAAQMD Manual of Procedures, Volume IV, ST-7. If USEPA Reference Method 21 is used to determine the compliance status, the portable analyzer shall use flame ionization detection and shall meet the specifications and performance criteria of, and shall be calibrated in accordance with, EPA Reference Method 21 (40 CFR 60, Appendix A).

**8-53-602 Flash Point Determinations:** Measurements of flash point required by this rule shall be in accordance with ASTM Standard Test Method D56 ("Standard Test Method for Flash Point by Tag Closed Cup Tester") or ASTM Standard Test Method D93 ("Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester"), whichever is applicable, or by an alternate method approved in writing by the APCO and U.S. EPA.