# REGULATION 3
# FEES

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# REGULATION 3
# FEES

(Adopted June 18, 1980)

**3-100 GENERAL**

**3-101 Description:** This regulation establishes the regulatory fees charged by the District.

*(Amended 7/6/83, 11/2/83, 2/21/90, 12/16/92, 8/2/95, 12/2/98, 5/21/03, 5/21/08, 5/20/09, 6/19/13)*

**3-102 Deleted July 12, 1989**

**3-103 Exemption, Abatement Devices:** Installation, modification, or replacement of abatement devices on existing sources are subject to fees pursuant to Section 3-302.3. All abatement devices are exempt from annual permit renewal fees. However, emissions from abatement devices, including any secondary emissions, shall be included in facility-wide emissions calculations when determining the applicability of and the fees associated with Schedules M, N, P, and T.

*(Amended 6/4/86; 7/1/98; 6/7/00; 5/21/08)*

**3-104 Deleted August 2, 1995**

**3-105 Exemption, Excavation of Contaminated Soil and Removal of Underground Storage Tank Operation Fees:** Fees shall not be required, pursuant to Section 3-322, for operations associated with the excavation of contaminated soil and the removal of underground storage tanks if one of the following is met:

105.1 The tank removal operation is being conducted within a jurisdiction where the APCO has determined that a public authority has a program equivalent to the District program and persons conducting the operations have met all the requirements of the public authority.

105.2 Persons submitting a written notification for a given site have obtained an Authority to Construct or Permit to Operate in accordance with Regulation 2, Rule 1, Section 301 or 302. Evidence of the Authority to Construct or the Permit to Operate must be provided with any notification required by Regulation 8, Rule 40.

*(Adopted 1/5/94; Amended 5/21/03)*

**3-106 Deleted December 2, 1998**

**3-107 Exemption, Sources Exempt from Permit Requirements:** Any source that is exempt from permit requirements pursuant to Regulation 2, Rule 1, Sections 103 through 128 is exempt from permit fees. However, emissions from exempt sources shall be included in facility-wide emissions calculations when determining the applicability of and the fees associated with Schedules M, N, and P.

*(Adopted 6/7/00)*

**3-200 DEFINITIONS**

**3-201 Cancelled Application:** Any application which has been withdrawn by the applicant or cancelled by the APCO for failure to pay fees or to provide the information requested to make an application complete.

*(Amended 6/4/86, 4/6/88)*

**3-202 Gasoline Dispensing Facility:** Any stationary facility which dispenses gasoline directly into the fuel tanks of vehicles, such as motor vehicles, aircraft or boats. The facility shall be treated as a single source which includes all necessary equipment for the exclusive use of the facility, such as nozzles, dispensers, pumps, vapor return lines, plumbing and storage tanks.

*(Amended 2/20/85)*

**3-203 Filing Fee:** A fixed fee for each source in an authority to construct.

*(Amended 6/4/86)*

**3-204 Initial Fee:** The fee required for each new or modified source based on the type and size of the source. The fee is applicable to new and modified sources seeking to obtain an authority

to construct. Operation of a new or modified source is not allowed until the permit to operate fee is paid.

*(Amended 6/4/86)*

**3-205** **Authority to Construct:** Written authorization from the APCO, pursuant to Section 2-1-301, for a source to be constructed or modified or for a source whose emissions will be reduced by the construction or modification of an abatement device.

*(Amended June 4, 1986)*

**3-206** **Modification:** See Section 1-217 of Regulation 1.

**3-207** **Permit to Operate Fee:** The fee required for the annual renewal of a permit to operate or for the first year of operation (or prorated portion thereof) of a new or modified source which received an authority to construct.

*(Amended 6/4/86, 7/15/87, 12/2/98, 6/7/00)*

**3-208** **Deleted June 4, 1986**

**3-209** **Small Business:** A business with no more than 10 employees and gross annual income of no more than $750,000 that is not an affiliate of a non-small business.

*(Amended 6/4/86, 6/6/90, 6/7/00, 6/15/05, 6/16/10)*

**3-210** **Solvent Evaporating Source:** Any source utilizing organic solvent, as part of a process in which evaporation of the solvent is a necessary step. Such processes include, but are not limited to, solvent cleaning operations, painting and surface coating, rotogravure coating and printing, flexographic printing, adhesive laminating, etc. Manufacture or mixing of solvents or surface coatings is not included.

*(Amended 7/3/91)*

**3-211** **Source:** See Section 1-227 of Regulation 1.

**3-212** **Deleted August 2, 1995**

**3-213** **Major Stationary Source:** For the purpose of Schedule M, a major stationary source shall be any District permitted plant, building, structure, stationary facility or group of facilities under the same ownership, leasehold, or operator which, in the base calendar year, emitted to the atmosphere organic compounds, oxides of nitrogen (expressed as nitrogen dioxide), oxides of sulfur (expressed as sulfur dioxide), or $PM_{10}$ in an amount calculated by the APCO equal to or exceeding 50 tons per year.

*(Adopted 11/2/83; Amended 2/21/90, 6/6/90, 8/2/95, 6/7/00)*

**3-214** **Deleted October 20, 1999, effective March 1, 2000**

**3-215** **Deleted October 20, 1999, effective March 1, 2000**

**3-216** **Deleted October 20, 1999, effective March 1, 2000**

**3-217** **Deleted October 20, 1999, effective March 1, 2000**

**3-218** **Deleted October 20, 1999, effective March 1, 2000**

**3-219** **Deleted October 20, 1999, effective March 1, 2000**

**3-220** **Deleted October 20, 1999, effective March 1, 2000**

**3-221** **Deleted October 20, 1999, effective March 1, 2000**

**3-222** **Deleted October 20, 1999, effective March 1, 2000**

**3-223** **Start-up Date:** Date when new or modified equipment under an authority to construct begins operating. The holder of an authority to construct is required to notify the APCO of this date at least 3 days in advance. For new sources, or modified sources whose authorities to construct have expired, operating fees are charged from the startup date.

*(Adopted 6/4/86; Amended 6/6/90)*

**3-224** **Permit to Operate:** Written authorization from the APCO pursuant to Section 2-1-302.

*(Adopted 6/4/86; Amended 6/7/00)*

**3-225** **Deleted June 3, 2015**

**3-226** **Air Toxics "Hot Spots" Information and Assessment Act of 1987:** The Air Toxics "Hot Spots" Information and Assessment Act of 1987 directs the California Air Resources Board and the Air Quality Management Districts to collect information from industry on emissions of potentially toxic air contaminants and to inform the public about such emissions and their impact on public health. It also directs the Air Quality Management District to collect fees sufficient to cover the necessary state and District costs of implementing the program.

*(Adopted 10/21/92; Amended 6/15/05)*

**3-227** **Toxic Air Contaminant, or TAC:** An air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a present or potential hazard to human health. For the purposes of this rule, TACs consist of the substances listed in Table 2-5-1 of Regulation 2, Rule 5.

*(Adopted 10/21/92; Amended 6/15/05)*

**3-228** **Deleted December 2, 1998**

**3-229** **Deleted December 2, 1998**

**3-230** **Deleted December 2, 1998**

**3-231** **Deleted December 2, 1998**

**3-232** **Deleted December 2, 1998**

**3-233** **Deleted December 2, 1998**

**3-234** **Deleted December 2, 1998**

**3-235** **Deleted December 2, 1998**

**3-236** **Deleted December 2, 1998**

**3-237** **$PM_{10}$:** See Section 2-1-229 of Regulation 2, Rule 1.

*(Adopted 6/7/00)*

**3-238** **Risk Assessment Fee:** Fee for a new or modified source of toxic air contaminants for which a health risk assessment (HRA) is required under Regulation 2-5-401, for an HRA required under Regulation 11, Rule 18, or for an HRA prepared for other purposes (e.g., for determination of permit exemption in accordance with Regulations 2-1-316, 2-5-301 and 2-5-302; or for determination of exemption from emission control requirements pursuant to Regulation 8-47-113 and 8-47-402).

*(Adopted 6/15/05; Amended 6/21/17)*

**3-239** **Toxic Surcharge**: Fee paid in addition to the permit to operate fee for a source that emits one or more toxic air contaminants at a rate which exceeds a chronic trigger level listed in Table 2-5-1.

*(Adopted 6/15/05)*

**3-240** **Biogenic Carbon Dioxide:** Carbon dioxide emissions resulting from materials that are derived from living cells, excluding fossil fuels, limestone and other materials that have been transformed by geological processes. Biogenic carbon dioxide originates from carbon (released in the form of emissions) that is present in materials that include, but are not limited to, wood, paper, vegetable oils, animal fat, and food, animal and yard waste.

*(Adopted 5/21/08)*

**3-241** **Green Business:** A business or government agency that has been certified under the Bay Area Green Business Program coordinated by the Association of Bay Area Governments and implemented by participating counties.

*(Adopted 6/19/10)*

**3-242** **Incident:** A non-routine release of an air contaminant that may cause adverse health consequences to the public or to emergency personnel responding to the release, or that may cause a public nuisance or off-site environmental damage.

*(Adopted 6/19/13)*

**3-243** **Incident Response:** The District's response to an incident. The District's incident response may include the following activities: i) inspection of the incident-emitting equipment and facility records associated with operation of the equipment; ii) identification and analysis of air quality impacts, including without limitation, identifying areas impacted by the incident, modeling, air monitoring, and source sampling; iii) engineering analysis of the specifications or operation of the equipment; and iv) administrative tasks associated with processing complaints and reports.

*(Adopted 6/19/13)*

**3-244** **Permit to Operate Renewal Date:** The first day of a Permit to Operate's Permit Renewal Period.

*(Adopted 6/19/13)*

**3-245** **Permit Renewal Period:** The length of time the source is authorized to operate pursuant to a Permit to Operate.

*(Adopted 6/19/13)*

**3-300** **STANDARDS**

**3-301** **Hearing Board Fees:** Applicants for variances or appeals or those seeking to revoke or modify variances or abatement orders or to rehear a Hearing Board decision shall pay the applicable fees, including excess emission fees, set forth in Schedule A.

*(Amended 6/7/00)*

**3-302** **Fees for New and Modified Sources:** Applicants for authorities to construct and permits to operate new sources shall pay for each new source: a filing fee of $516, the initial fee, the risk assessment fee, the permit to operate fee, and toxic surcharge (given in Schedules B, C, D, E, F, H, I or K). Applicants for authorities to construct and permits to operate modified sources shall pay for each modified source, a filing fee of $516, the initial fee, the risk assessment fee, and any incremental increase in permit to operate and toxic surcharge fees. Where more than one of the schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules. If any person requests more than three HRA scenarios required pursuant to Regulation 2, Rule 5 in any single permit application, they shall pay an additional risk assessment fee for each of these scenarios. Except for gasoline dispensing facilities (Schedule D) and semiconductor facilities (Schedule H), the size to be used for a source when applying the schedules shall be the maximum size the source will have after the construction or modification. Where applicable, fees for new or modified sources shall be based on maximum permitted usage levels or maximum potential to emit including any secondary emissions from abatement equipment. The fee rate applied shall be based on the fee rate in force on the date the application is declared by the APCO to be complete according to 2-1-402, excluding 2-1-402.3 fees. The APCO may reduce the fees for new and modified sources by an amount deemed appropriate if the owner or operator of the source attends an Industry Compliance School sponsored by the District.

302.1 Small Business Discount: If an applicant qualifies as a small business and the source falls under schedules B, C, D (excluding gasoline dispensing facilities), E, F, H, I or K, the filing fee, initial fee, and risk assessment fee shall be reduced by 50%. All other applicable fees shall be paid in full. If an applicant also qualifies for a Green Business Discount, only the Small Business Discount (i.e., the 50% discount) shall apply.

302.2 Deleted July 3, 1991

302.3 Fees for Abatement Devices: Applicants for an authority to construct and permit to operate abatement devices where there is no other modification to the source shall pay a $516 filing fee and initial and risk assessment fees that are equivalent to 50% of the initial and risk assessment fees for the source being abated, not to exceed a total of $10,747. For abatement devices abating more than one source, the initial fee shall be 50% of the initial fee for the source having the highest initial fee.

302.4 Fees for Reactivated Sources: Applicants for a Permit to Operate reactivated, previously permitted equipment shall pay the full filing, initial, risk assessment, permit, and toxic surcharge fees.

302.5 Deleted June 3, 2015

302.6 Green Business Discount: If an applicant qualifies as a green business, the filing fee, initial fee, and risk assessment fee shall be reduced by 10%. All other applicable fees shall be paid in full.

*(Amended 5/19/82, 7/6/83, 6/4/86, 7/15/87, 6/6/90, 7/3/91, 6/15/94, 10/8/97, 7/1/98, 5/19/99, 6/7/00, 6/6/01,5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**3-303** **Back Fees:** An applicant required to obtain a permit to operate existing equipment in accordance with District regulations shall pay back fees equal to the permit to operate fees and toxic surcharges given in the appropriate Schedule (B, C, D, E, F, H, I or K) prorated from the effective date of permit requirements. Where more than one of these schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules. The applicant shall also pay back fees equal to toxic inventory fees pursuant to Section 3-320 and Schedule N. The maximum back fee shall not exceed a total of five years' permit, toxic surcharge, and toxic inventory fees. An owner/operator required to register existing equipment in accordance with District regulations shall pay back fees equal to the annual renewal fee given in Schedule R prorated from the effective date of registration requirements, up to a maximum of five years.

*(Amended 5/19/82, 7/6/83, 6/4/86, 7/15/87, 6/6/90, 7/3/91, 10/8/97, 6/15/05, 5/20/09)*

**3-304** **Alteration:** Except as provided below, an applicant to alter an existing permitted source shall pay the filing fee and 50% of the initial fee for the source, provided that the alteration does not result in an increase in emissions of any regulated air pollutant. For gasoline dispensing facilities subject to Schedule D, an applicant for an alteration shall pay a fee of 1.75 times the filing fee.

304.1 Schedule D Fees: Applicants for alteration to a gasoline dispensing facility subject to Schedule D shall pay a fee of 1.75 times the filing fee.

304.2 Schedule G Fees: Applicants for alteration to a permitted source subject to Schedule G-3, G-4, or G-5 shall pay the filing fee, 100% of the initial fee, and, if District regulations require a health risk assessment of the alteration, the risk assessment fee provided for in Schedule G-2. The applicant shall pay the permit renewal and the toxic surcharge fees applicable to the source under Schedules G-3, G-4, or G-5.

*(Amended 6/4/86, 11/15/00, 6/2/04, 6/3/15, 6/15/16, 6/6/18, 6/5/19)*

**3-305** **Cancellation or Withdrawal:** There will be no refund of the initial fee and filing fee if an application is cancelled or withdrawn. There will be no refund of the risk assessment fee if the risk assessment has been conducted prior to the application being cancelled or withdrawn. If an application for identical equipment for the same project is submitted within six months of the date of cancellation or withdrawal, the initial fee will be credited in full against the fee for the new application.

*(Amended 7/6/83, 4/6/88, 10/8/97, 6/15/05, 6/21/17, 6/16/21)*

**3-306** **Change in Conditions:** If an applicant applies to change the conditions on an existing authority to construct or permit to operate, the applicant will pay the following fees. There will be no change in anniversary date.

306.1 Administrative Condition Changes: An applicant applying for an administrative change in permit conditions shall pay a fee equal to the filing fee for a single source, provided the following criteria are met:

1.1 The condition change applies to a single source or a group of sources with shared permit conditions.

1.2 The condition change does not subject the source(s) to any District Regulations or requirements that were not previously applicable.

1.3 The condition change does not result in any increase in emissions of POC, NPOC, $NO_x$, CO, $SO_2$, or $PM_{10}$ at any source or the emission of a toxic air contaminant above the trigger levels identified in Table 2-5-1

1.4 The condition change does not require a public notice.

306.2 Other Condition Changes: Applicant shall pay the filing, initial, and risk assessment fees required for new and modified equipment under Section 3-302. If the condition change will result in higher permit to operate fees, the applicant shall also pay any incremental increases in permit to operate fees and toxic surcharges.

*(Amended 7/6/83, 6/4/86, 6/6/90, 10/8/97, 6/7/00, 6/15/05, 6/21/17)*

**3-307** **Transfers:** The owner/operator of record is the person to whom a permit is issued or, if no permit has yet been issued to a facility, the person who applied for a permit. Permits are valid only for the owner/operator of record. Upon submittal of a $102 transfer of ownership fee, permits are re-issued to the new owner/operator of record with no change in expiration dates.

*(Amended 2/20/85, 6/4/86, 11/5/86, 4/6/88, 10/8/97, 5/1/02, 5/21/03, 6/02/04, 6/19/13, 6/4/14, 6/15/16)*

**3-308** **Change of Location:** An applicant who wishes to move an existing source, which has a permit to operate, shall pay no fee if the move is on the same facility. If the move is not on the same facility, the source shall be considered a new source and subject to Section 3-302. This section does not apply to portable permits meeting the requirements of Regulation 2-1-220 and 413.

*(Amended 7/6/83; 6/4/86; 6/15/05)*

**3-309** Deleted June 21, 2017

**3-310** **Fee for Constructing Without a Permit:** An applicant for an authority to construct and a permit to operate a source, which has been constructed or modified without an authority to construct, shall pay the following fees:

310.1 Sources subject to permit requirements on the date of initial operation shall pay fees

for new construction pursuant to Section 3-302, any back fees pursuant to Section 3-303, and a late fee equal to 100% of the initial fee. A modified gasoline dispensing facility subject to Schedule D that is not required to pay an initial fee shall pay fees for a modified source pursuant to Section 3-302, back fees, and a late fee equal to 100% of the filing fee.

310.2 Sources previously exempt from permit requirements that lose their exemption due to changes in District, state, or federal regulations shall pay a permit to operate fee and toxic surcharge for the coming year and any back fees pursuant to Section 3-303.

310.3 Sources previously exempt from permit requirements that lose their exemption due to a change in the manner or mode of operation, such as an increased throughput, shall pay fees for new construction pursuant to Section 3-302. In addition, sources applying for permits after commencing operation in a non-exempt mode shall also pay a late fee equal to 100% of the initial fee and any back fees pursuant to Section 3-303.

310.4 Sources modified without a required authority to construct shall pay fees for modification pursuant to Section 3-302 and a late fee equal to 100% of the initial fee.

*(Amended 7/6/83, 4/18/84, 6/4/86, 6/6/90, 7/3/91, 8/2/95, 10/8/97, 6/02/04, 6/15/05, 6/6/12)*

**3-311 Emission Banking Fees:** An applicant to bank emissions for future use, to convert an emission reduction credit (ERC) into an Interchangeable Emission Reduction Credit (IERC), or to transfer ownership of ERCs shall pay the following fees:

311.1 Banking ERCs: An applicant to bank emissions for future use shall pay a filing fee of $516 per source plus the initial fee given in Schedules B, C, D, E, F, H, I or K. Where more than one of these schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules.

311.2 Converting Existing ERCs: An applicant to convert an existing ERC into an IERC shall pay a filing fee of $516 per source plus the initial fee given in Schedules B, C, D, E, F, H, I or K. Where more than one of these schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules.

311.3 Transferring ERC Ownership: An applicant to transfer an ERC it currently owns to another owner shall pay a filing fee of $516.

*(Amended 7/6/83, 6/4/86, 7/15/87, 7/3/91, 6/15/94, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03,6/02/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**3-312 Emission Caps and Alternative Compliance Plans:** Any facility which elects to use an alternative compliance plan contained in:

312.1 Regulation 8 ("bubble") to comply with a District emission limitation or to use an annual or monthly emission limit to acquire a permit in accordance with the provisions of Regulation 2, Rule 2, shall pay an additional annual fee equal to fifteen percent of the total plant permit to operate fee.

312.2 Regulation 2, Rule 9, or Regulation 9, Rule 10 shall pay an annual fee of $1,305 for each source included in the alternative compliance plan, not to exceed $13,053.

*(Adopted 5/19/82; Amended 6/4/86, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/23/03, 6/2/04,6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19)*

**3-313 Deleted May 19, 1999**

**3-314 Deleted August 2, 1995**

**3-315 Costs of Environmental Documentation:** An applicant for an Authority to Construct shall pay, in addition to the fees required under Section 3-302 and in any applicable schedule, the District's costs of performing any environmental evaluation and preparing and filing any documents pursuant to the California Environmental Quality Act (Public Resources Code, Section 21000, et seq), including the costs of any outside consulting assistance which the District may employ in connection with the preparation of any such evaluation or documentation, as well as the District's reasonable internal costs (including overhead) of processing, reviewing, or filing any environmental evaluation or documentation.

*(Adopted 12/18/85; Amended 5/1/02, 6/3/15)*

**3-316 Deleted June 6, 1990**

**3-317 Asbestos Operation Fees:** After July 1, 1988, persons submitting a written plan, as required

by Regulation 11, Rule 2, Section 401, to conduct an asbestos operation shall pay the fee given in Schedule L.

*(Adopted 7/6/88; Renumbered 9/7/88; Amended 8/2/95)*

**3-318** **Public Notice Fee, Schools:** Pursuant to Section 42301.6(b) of the Health and Safety Code, an applicant for an authority to construct or permit to operate subject to the public notice requirements of Regulation 2-1-412 shall pay, in addition to the fees required under Section 3-302 and in any applicable schedule, a fee to cover the expense of preparing and distributing the public notices to the affected persons specified in Regulation 2-1-412 as follows:

318.1 A fee of $2,272 per application, and

318.2 The District's cost exceeding $2,272 of preparing and distributing the public notice.

318.3 The District shall refund to the applicant the portion of any fee paid under this Section that exceeds the District's cost of preparing and distributing the public notice.

*(Adopted 11/1/89; Amended 10/8/97, 7/1/98, 5/19/99, 6/7/00, 5/21/03, 6/2/04, 6/16/10, 6/15/16, 6/21/17, 6/6/18)*

**3-319** **Major Stationary Source Fees:** Any major stationary source emitting 50 tons per year of organic compounds, sulfur oxides, nitrogen oxides, or $PM_{10}$ shall pay a fee based on Schedule M. This fee is in addition to permit and other fees otherwise authorized to be collected from such facilities and shall be included as part of the annual permit renewal fees.

*(Adopted 6/6/90; Amended 8/2/95, 6/7/00)*

**3-320** **Toxic Inventory Fees:** Any facility that emits one or more toxic air contaminants in quantities above a minimum threshold level shall pay an annual fee based on Schedule N. This fee will be in addition to permit to operate, toxic surcharge, and other fees otherwise authorized to be collected from such facilities.

320.1 An applicant who qualifies as a small business under Regulation 3-209 shall pay a Toxic Inventory Fee as set out in Schedule N up to a maximum fee of $10,207 per year.

*(Adopted 10/21/92; Amended 5/19/99, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/20/09, 6/16/10, 5/4/11, 6/15/16, 6/21/17, 6/5/19, 6/16/21)*

**3-321** **Deleted December 2, 1998**

**3-322** **Excavation of Contaminated Soil and Removal of Underground Storage Tank Operation Fees:** Persons submitting a written notification for a given site to conduct either excavation of contaminated soil or removal of underground storage tanks as required by Regulation 8, Rule 40, Section 401, 402, 403 or 405 shall pay a fee based on Schedule Q.

*(Adopted 1/5/94; Amended 8/2/95; 5/21/03)*

**3-323** **Pre-Certification Fees:** An applicant seeking to pre-certify a source, in accordance with Regulation 2, Rule 1, Section 415, shall pay the filing fee, initial fee and permit to operate fee given in the appropriate schedule.

*(Adopted June 7, 1995)*

**3-324** **Deleted June 7, 2000**

**3-325** **Deleted December 2, 1998**

**3-326** **Deleted December 2, 1998**

**3-327** **Permit to Operate, Renewal Fees:** After the expiration of the initial permit to operate, the permit to operate shall be renewed on an annual basis or other time period as approved by the APCO. The fee required for the renewal of a permit to operate is the permit to operate fee and toxic surcharge listed in Schedules B, C, D, E, F, H, I, and K, prorated for the period of coverage. When more than one of the schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules. This renewal fee is applicable to all sources required to obtain permits to operate in accordance with District regulations. The permit renewal invoice shall also specify any applicable major stationary source fees based on Schedule M, toxic inventory fees based on Schedule N, major facility review fees based on Schedule P, greenhouse gas fees based on Schedule T, ~~petroleum~~ refining emissions tracking fees based on Schedule W, and community air monitoring fees based on Schedule X. Where applicable, renewal fees shall be based on actual usage or emission levels that have been reported to or calculated by the District.

327.1 Renewal Processing Fee: In addition, the facility shall also pay a processing fee at the time of renewal that covers each Permit Renewal Period as follows:

1.1 $102 for facilities with one permitted source, including gasoline dispensing facilities,
1.2 $201 for facilities with 2 to 5 permitted sources,
1.3 $401 for facilities with 6 to 10 permitted sources,
1.4 $602 for facilities with 11 to 15 permitted sources,
1.5 $799 for facilities with 16 to 20 permitted sources,
1.6 $999 for facilities with more than 20 permitted sources.

327.2 Assembly Bill 617 Community Health Impact Fee: An owner/operator of a permitted facility subject to Schedule P (Major Facility Review Fees) shall pay an Assembly Bill 617 community health impact fee of 5.7 percent of the facility's total renewal fee, up to a maximum fee of $100,000 per year per facility owner.

327.3 Criteria Pollutant and Toxic Emissions Reporting (CTR): The owner/operator of a permitted facility shall pay a CTR fee of 4.4 percent of the facility's total renewal fee, up to a maximum fee of $50,000 per year.

*(Adopted 6/7/00; Amended 6/2/04, 6/16/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17,6/6/18, 6/5/19, 6/3/20, 6/16/21)*

**3-328 Fee for OEHHA Risk Assessment Reviews:** Any facility that submits a health risk assessment to the District in accordance with Section 44361 of the California Health and Safety Code shall pay any fee requested by the State Office of Environmental Health Hazard Assessment (OEHHA) for reimbursement of that agency's costs incurred in reviewing the risk assessment.

*(Adopted 6/7/00)*

**3-329 Fees for New Source Review Health Risk Assessment**: Any person required to submit a health risk assessment (HRA) pursuant to Regulation 2-5-401 shall pay an appropriate Risk Assessment Fee pursuant to Regulation 3-302 and Schedules B, C, D, E, F, H, I or K. In addition, any person that requests that the District prepare or review an HRA (e.g., for determination of permit exemption in accordance with Regulations 2-1-316, 2-5-301 and 2-5-302; or for determination of exemption from emission control requirements pursuant to Regulation 8-47-113 and 8-47-402) shall pay a Risk Assessment Fee. A Risk Assessment Fee shall be assessed for each source that is proposed to emit a toxic air contaminant (TAC) at a rate that exceeds a trigger level in Table 2-5-1: Toxic Air Contaminant Trigger Levels. If a project requires an HRA due to total project emissions, but TAC emissions from each individual source are less than the Table 2-5-1 trigger levels, a Risk Assessment Fee shall be assessed for the source in the project with the highest TAC emissions.

*(Adopted 6/15/05; Amended 6/21/17)*

**3-330 Fee for Renewing an Authority to Construct:** An applicant seeking to renew an authority to construct in accordance with Regulation 2-1-407 shall pay a fee of 50% of the initial fee in effect at the time of the renewal. If the District determines that an authority to construct cannot be renewed, any fees paid under this section shall be credited in full against the fee for a new authority to construct for functionally equivalent equipment submitted within six months of the date the original authority to construct expires.

*(Adopted June 15, 2005)*

**3-331 Registration Fees:** Any person who is required to register equipment under District rules shall submit a registration fee, and any annual fee thereafter, as set out in Schedule R. The APCO may reduce registration fees by an amount deemed appropriate if the owner or operator of the equipment attends an Industry Compliance School sponsored by the District.

*(Adopted June 6, 2007; Amended 6/16/10)*

**3-332 Naturally Occurring Asbestos Fees**: After July 1, 2007, any person required to submit or amend an Asbestos Dust Mitigation Plan (ADMP) pursuant to Title 17 of the California Code of Regulations, Section 93105, Asbestos Air Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations shall pay the fee(s) set out in Schedule S.

*(Adopted June 6, 2007; Amended 6/5/19)*

**3-333 Major Facility Review (MFR) and Synthetic Minor Application Fees**: Any facility that

applies for, or is required to undergo, an initial MFR permit, an amendment to an MFR permit, a minor or significant revision to an MFR permit, a reopening of an MFR permit, a renewal of an MFR permit, an initial synthetic minor operating permit, or a revision to a synthetic minor operating permit, shall pay the applicable fees set forth in Schedule P.

*(Adopted May 21, 2008)*

**3-334** **Greenhouse Gas Fees:** Any permitted facility with greenhouse gas emissions shall pay a fee based on Schedule T. This fee is in addition to permit and other fees otherwise authorized to be collected from such facilities, and shall be included as part of the annual permit renewal fees.

*(Adopted May 21, 2008)*

**3-335** **Indirect Source Review Fees:** Applicants that must file an Air Quality Impact Assessment pursuant to District rules for a project that is deemed to be an indirect source shall pay a fee based on Schedule U.

*(Adopted May 20, 2009)*

**3-336** **Open Burning Operation Fees:** Effective July 1, 2013, any person required to provide notification to the District prior to burning; submit a petition to conduct a Filmmaking or Public Exhibition fire; receive an acreage burning allocation to conduct a Stubble fire; or submit a smoke management plan and receive an acreage burning allocation to conduct a Wildland Vegetation Management (Prescribed Burning) fire or Marsh Management fire shall pay the fee given in Schedule V.

*(Adopted June 19, 2013; Amended 6/3/20)*

**3-337** **Exemption Fee:** An applicant who wishes to receive a certificate of exemption shall pay a filing fee of $516 per exempt source.

*(Adopted June 19, 2013; Amended 6/4/14; 6/3/15, 6/21/17, 6/16/21)*

**3-338** **Incident Response Fee:** Any facility required to obtain a District permit, and any District-regulated area-wide or indirect source, that is the site where an incident occurs to which the District responds, shall pay a fee equal to the District's actual costs in conducting the incident response as defined in Section 3-243, including without limitation, the actual time and salaries, plus overhead, of the District staff involved in conducting the incident response and the cost of any materials.(Adopted June 19, 2013)

**3-339** ~~**Petroleum**~~ **Refining Emissions Tracking Fees:** Any person required to submit an Annual Emissions Inventory, Monthly Crude Slate Report, or air monitoring plan in accordance with Regulation 12, Rule 15 shall pay the applicable fees set forth in Schedule W.

*(Adopted 6/15/16)*

**3-340** **Major Stationary Source Community Air Monitoring Fees:** Any major stationary source emitting 35 tons per year of organic compounds, sulfur oxides, nitrogen oxides, carbon monoxide or $PM_{10}$ shall pay a community air monitoring fee based on Schedule X. This fee is in addition to permit and other fees otherwise authorized to be collected from such facilities and shall be included as part of the annual permit renewal fees.

*(Adopted 6/15/16)*

**3-341** **Fee for Risk Reduction Plan:** Any person required to submit a Risk Reduction Plan in accordance with Regulation 11, Rule 18 shall pay the applicable fees set forth below:

341.1 $1,582 for facilities with one source subject to risk reduction pursuant to Regulation 11, Rule 18, including gasoline dispensing facilities;

341.2 $3,164 for facilities with 2 to 5 sources subject to risk reduction pursuant to Regulation 11, Rule 18;

341.3 $6,328 for facilities with 6 to 10 sources subject to risk reduction pursuant to Regulation 11, Rule 18;

341.4 $12,655 for facilities with 11 to 15 sources subject to risk reduction pursuant to Regulation 11, Rule 18;

341.5 $25,310 for facilities with 16 to 20 sources subject to risk reduction pursuant to Regulation 11, Rule 18;

341.6 $33,747 for facilities with more than 20 sources subject to risk reduction pursuant to Regulation 11, Rule 18.

*(Adopted 6/21/17, Amended 6/5/19, 6/3/20, 6/16/21)*

**3-342** **Fee for Facility-Wide Health Risk Assessment:** Any person required to undergo a health risk assessment (HRA) to assess compliance with the Regulation 11, Rule 18 risk action levels shall pay a risk assessment fee for each source pursuant to Regulation 3-329 and Schedules B, C, D, E, F, H, I or K. The maximum fee required for any single HRA of a facility conducted pursuant to Regulation 11, Rule 18 shall not exceed a total of $158,188.

If a facility retains a District-approved consultant to complete the required facility-wide HRA, the facility shall pay a fee to cover the District's costs of performing the review of the facility-wide HRA, including the costs of any outside consulting assistance which the District may employ in connection with any such review, as well as the District's reasonable internal costs (including overhead) of processing, reviewing, or approving the facility-wide HRA. The total HRA review cost shall be determined based on the District's actual review time in hours multiplied by an hourly charge of $216 per hour. Facilities shall pay an HRA review fee as indicated below and the District's cost exceeding the applicable HRA review fees indicated below for performing the review of the facility-wide HRA:

342.1 $2,596 for facilities with one to 10 sources subject to risk reduction pursuant to Regulation 11, Rule 18, including gasoline dispensing facilities;

342.2 $6,960 for facilities with 11 to 50 sources subject to risk reduction pursuant to Regulation 11, Rule 18;

342.3 $14,764 for facilities with more than 50 sources subject to risk reduction pursuant to Regulation 11, Rule 18.

The District shall refund to the applicant the portion of any fee paid under this Section that exceeds the District's cost of performing the review of the facility-wide HRA.

*(Adopted 6/21/17; Amended 6/6/18,6/5/19, 6/16/21)*

**3-343** **Fees for Air Dispersion Modeling:** An applicant for an Authority to Construct or Permit to Operate shall pay, in addition to the fees required under Section 3-302 and 3-329 and in any applicable schedule, the District's costs of performing any air dispersion modeling needed to determine compliance with any District regulatory requirement. The total air dispersion modeling fee cost shall be determined based on the District's actual review time in hours multiplied by an hourly charge of $216 per hour. This fee shall also apply for costs incurred in reviewing air dispersion modeling submittals by applicants and the costs of any outside consulting assistance which the District may employ in connection with the preparation of any such evaluation or documentation, as well as the District's reasonable internal costs (including overhead) of processing, reviewing, or approving the air dispersion modeling.

*(Adopted 6/5/19; Amended 6/16/21)*

## 3-400 ADMINISTRATIVE REQUIREMENTS

**3-401** **Permits:** Definitions, standards, and conditions contained in Regulation 2, Permits, are applicable to this regulation.

**3-402** **Single Anniversary Date:** The APCO may assign a single anniversary date to a facility on which all its renewable permits to operate expire and will require renewal. Fees will be prorated to compensate for different time periods resulting from change in anniversary date.

**3-403** **Change in Operating Parameters:** See Section 2-1-404 of Regulation 2, Rule 1.

**3-404** **Deleted June 7, 2000**

**3-405** **Fees Not Paid:** If an applicant or owner/operator fails to pay the fees specified on the invoice by the due date, the following procedure(s) shall apply:

405.1 Authority to Construct: The application will be cancelled, but can be reactivated upon payment of fees.

405.2 New Permit to Operate: The Permit to Operate shall not be issued, and the facility will be notified that operation, including startup, is not authorized.

2.1 Fees received during the first 30 days following the due date must include a late fee equal to 10 percent of all fees specified on the invoice.

2.2 Fees received more than 30 days after the due date must include a late fee equal

to 25 percent of all fees specified on the invoice.

405.3 Renewal of Permit to Operate: The owner or operator of a facility must renew the Permit to Operate in order to continue to be authorized to operate the source. Permit to Operate Fees for the Permit Renewal Period shall be calculated using fee schedules in effect on the Permit to Operate Renewal Date. The permit renewal invoice will include all fees to be paid in order to renew the Permit to Operate, as specified in Section 3-327. If not renewed as of the date of the next Permit Renewal Period, a Permit to Operate lapses and further operation is no longer authorized. The District will notify the facility that the permit has lapsed. Reinstatement of lapsed Permits to Operate will require the payment of all unpaid prior Permit to Operate fees and associated reinstatement fees for each unpaid prior Permit Renewal Period, in addition to all fees specified on the permit renewal invoice.

405.4 Reinstatement of Lapsed Permit to Operate: To reinstate a Permit to Operate, the owner or operator must pay all of the following fees:

4.1 The applicable Permit to Operate Fees for the current year, as specified in Regulation 3-327, and the applicable reinstatement fee, if any, calculated as follows:

4.1.1 Fees received during the first 30 days following the due date must include all fees specified on the permit renewal invoice plus a reinstatement fee equal to 10 percent of all fees specified on the invoice.

4.1.2 Fees received more than 30 days after the due date, but less than one year after the due date, must include all fees specified on the permit renewal invoice plus a reinstatement fee equal to 25 percent of all fees specified on the invoice.

4.2 The applicable Permit to Operate Fees specified in Regulation 3-327 for each prior Permit Renewal Period for which all Permit to Operate Fees and associated reinstatement fees have not been paid. Each year's Permit to Operate Fee shall be calculated at the fee rates in effect on that year's Permit to Operate Renewal Date. The reinstatement fee for each associated previously-unpaid Permit to Operate Fee shall be calculated in accordance with Regulation 3-405.4.1 and 4.1.2.

Each year or period of the lapsed Permit to Operate is deemed a separate Permit Renewal Period. The oldest outstanding Permit to Operate Fee and reinstatement fees shall be paid first.

405.5 Registration and Other Fees: Persons who have not paid the fee by the invoice due date, shall pay the following late fee in addition to the original invoiced fee. Fees shall be calculated using fee schedules in effect at the time of the fees' original determination.

5.1 Fees received during the first 30 days following the due date must include an additional late fee equal to 10 percent of all fees specified on the invoice.

5.2 Fees received more than 30 days after the due date must include an additional late fee equal to 25 percent of all fees specified on the invoice.

*(Amended 7/6/83, 6/4/86, 11/5/86, 2/15/89, 6/6/90, 7/3/91, 8/2/95, 12/2/98, 6/15/05, 6/7/06, 6/6/12, 6/19/13, 6/4/14, 6/6/18,6/5/19)*

**3-406 Deleted June 4, 1986**

**3-407 Deleted August 2, 1995**

**3-408 Permit to Operate Valid for 12 Months:** A Permit to Operate is valid for 12 months from the date of issuance or other time period as approved by the APCO.

*(Amended 6/4/86; Amended 6/7/00)*

**3-409 Deleted June 7, 2000**

**3-410 Deleted August 2, 1995**

**3-411 Advance Deposit of Funds:** The APCO may require that at the time of the filing of an application for an Authority to Construct for a project for which the District is a lead agency under the California Environmental Quality Act (Public Resources Code, Section 21000, et

seq.), the applicant shall make an advance deposit of funds, in an amount to be specified by the APCO, to cover the costs which the District estimates to incur in connection with the District's performance of its environmental evaluation and the preparation of any required environmental documentation. In the event the APCO requires such an estimated advance payment to be made, the applicant will be provided with a full accounting of the costs actually incurred by the District in connection with the District's performance of its environmental evaluation and the preparation of any required environmental documentation.

*(Adopted 12/18/85; Amended 8/2/95)*

**3-412 Deleted December 2, 1998**

**3-413 Toxic "Hot Spots" Information and Assessment Act Revenues:** No later than 120 days after the adoption of this regulation, the APCO shall transmit to the California Air Resources Board, for deposit into the Air Toxics "Hot Spots" Information and Assessment Fund, the revenues determined by the ARB to be the District's share of statewide Air Toxics "Hot Spot" Information and Assessment Act expenses.

*(Adopted 10/21/92)*

**3-414 Deleted December 2, 1998**

**3-415 Failure to Pay - Further Actions:** When an applicant or owner/operator fails to pay the fees specified on the invoice by the due date, the APCO may take the following actions against the applicant or owner/operator:

415.1 Issuance of a Notice to Comply.

415.2 Issuance of a Notice of Violation.

415.3 Revocation of an existing Permit to Operate. The APCO shall initiate proceedings to revoke permits to operate for any person who is delinquent for more than one month. The revocation process shall continue until payment in full is made or until permits are revoked.

415.4 The withholding of any other District services as deemed appropriate until payment in full is made.

*(Adopted 8/2/95; Amended 12/2/98, 6/15/05)*

**3-416 Adjustment of Fees**: The APCO or designees may, upon finding administrative error by District staff in the calculation, imposition, noticing, invoicing, and/or collection of any fee set forth in this rule, rescind, reduce, increase, or modify the fee. A request for such relief from an administrative error, accompanied by a statement of why such relief should be granted, must be received within two years from the date of payment.

*(Adopted 10/8/97)*

**3-417 Temporary Amnesty for Unpermitted and Unregistered Sources:** The APCO has the authority to declare an amnesty period, during which the District may waive all or part of the back fees and/or late fees for sources that are currently operating without valid Permits to Operate and/or equipment registrations.

*(Adopted 6/16/10)*

**3-418 Temporary Incentive for Online Production System Transactions:** The APCO has the authority to declare an incentive period for transactions made using the online production system, during which the District may waive all or any part of the fees for these transactions.

*(Adopted 6/6/18)*

**SCHEDULE A**
**HEARING BOARD FEES[1]**

Established by the Board of Directors December 7, 1977 Resolution No. 1046
(Code section references are to the California Health & Safety Code, unless otherwise indicated)

| | | Large Companies | Small Business | Third Party |
|---|---|---|---|---|
| 1. | For each application for variance exceeding 90 days, in accordance with §42350, including applications on behalf of a class of applicants, which meet the requirements of the Hearing Board Rules for a valid and proper class action for variance | $6,999 | $1,047 | |
| | Plus, for each hearing in addition to the first hearing necessary to dispose of said variance application in accordance with §42350, the additional sum of | $3,504 | $353 | |
| 2. | For each application for variance not exceeding 90 days, in accordance with §42350, including applications on behalf of a class of applicants, which meet the requirements of the Hearing Board Rules for a valid and proper class action for variance | $4,202 | $1,047 | |
| | Plus, for each hearing in addition to the first hearing necessary to dispose of said variance application, in accordance with §42350, the additional sum of | $2,098 | $353 | |
| 3. | For each application to modify a variance in accordance with §42356 | $2,788 | $353 | |
| | Plus, for each hearing in addition to the first hearing on said application to modify a variance, in accordance with §42345, necessary to dispose of the application, the additional sum of | $2,098 | $353 | |
| 4. | For each application to extend a variance, in accordance with §42357 | $2,788 | $353 | |
| | Plus, for each hearing in addition to the first hearing on an application to extend a variance, in accordance with §42357, necessary to dispose of the application, the additional sum of | $2,098 | $353 | |
| 5. | For each application to revoke a variance | $4,202 | $353 | |
| 6. | For each application for approval of a Schedule of Increments of Progress in accordance with §41703 | $2,788 | $353 | |
| 7. | For each application for variance in accordance with §41703, which exceeds 90 days | $6,999 | $1,047 | |
| | Plus, for each hearing in addition to the first hearing on said application for variance in accordance with §41703, the additional sum of | $3,504 | $353 | |
| 8. | For each application for variance in accordance with §41703, not to exceed 90 days | $4,202 | $1,047 | |
| | Plus, for each hearing in addition to the hearing on said application for a variance in accordance with §41703, the additional sum of | $2,098 | $353 | |
| 9. | For each Appeal (Permit, Banking, Title V) | $6,999 per hearing day | $3,504 per hearing day | $3,504 for entire appeal period |
| 10. | For each application for intervention in accordance with Hearing Board Rules §§2.3, 3.6 & 4.6 | $3,504 | $704 | |
| 11. | For each application to Modify or Terminate an abatement order | $6,999 per hearing day | $3,504 per hearing day | |
| 12. | For each application for an interim variance in accordance with §42351 | $3,504 | $704 | |

| | | Large Companies | Small Business | Third Party |
|---|---|---|---|---|
| 13. | For each application for an emergency variance in accordance with §42359.5 ..... | $1,747 | $353 | |
| 14. | For each application to rehear a Hearing Board decision in accordance with §40861 ..... | 100% of previous fee charged | 100% of previous fee charged | |
| 15. | Excess emission fees..... | See Attachment I | See Attachment I | |
| 16. | Miscellaneous filing fee for any hearing not covered above | $3,504 | $1,047 | $1,047 |
| 17. | For each published Notice of Public Hearing..... | Cost of Publication | $0 | $0 |
| 18. | Court Reporter Fee (to be paid only if Court Reporter required for hearing) ..... | Actual Appearance and Transcript costs per hearing solely dedicated to one Docket | $0 | Actual Appearance and Transcript costs per hearing solely dedicated to one Docket |

NOTE 1 Any applicant who believes they have a hardship for payment of fees may request a fee waiver from the Hearing Board pursuant to Hearing Board Rules.

*(Amended 10/8/97, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE A**
**ATTACHMENT I**
**EXCESS EMISSION FEE**

**A. General**

(1) Each applicant or petitioner for a variance from these Rules and Regulations shall pay to the Clerk or Deputy Clerk of the Hearing Board, in addition to the other filing fees required in Schedule A, an emission fee based on the total weight of emissions discharged, per source or product, other than those described in division (B) below, during the variance period in excess of that allowed by these rules in accordance with the schedule set forth in Table I.

(2) Where the total weight of emission discharged cannot be easily calculated, the petitioner shall work in concert with District staff to establish the amount of excess emissions to be paid.

(3) In the event that more than one rule limiting the discharge of the same contaminant is violated, the excess emission fee shall consist of the fee for violation which will result in the payment of the greatest sum. For the purposes of this subdivision, opacity rules and particulate mass emissions shall not be considered rules limiting the discharge of the same contaminant.

**B. Excess Visible Emission Fee**

Each applicant or petitioner for a variance from Regulation 6 or Health and Safety Code Section 41701 shall pay to the Clerk or Deputy Clerk of the Hearing Board, in addition to the filing fees required in Schedule A and the excess emission fees required in (A) above (if any), an emission fee based on the difference between the percent opacity allowed by Regulation 6 and the percent opacity of the emissions allowed from the source or sources operating under the variance, in accordance with the schedule set forth in Table II.

In the event that an applicant or petitioner is exempt from the provisions of Regulation 6, the applicant or petitioner shall pay a fee calculated as described herein above, but such fee shall be calculated based upon the difference between the opacity allowed under the variance and the opacity allowed under the provisions of Health and Safety Code Section 41701, in accordance with the schedule set forth in Table II.

**C. Applicability**

The provisions of subdivision (A) shall apply to all variances that generate excess emissions.

**D. Fee Determination**

(1) The excess emission fees shall be calculated by the petitioner based upon the requested number of days of operation under variance multiplied by the expected excess emissions as set forth in subdivisions (A) and (B) above. The calculations and proposed fees shall be set forth in the petition.

(2) The Hearing Board may adjust the excess emission fee required by subdivisions (A) and (B) of this rule based on evidence regarding emissions presented at the time of the hearing.

**E. Small Businesses**

(1) A small business shall be assessed twenty percent (20%) of the fees required by subdivisions (A) and (B), whichever is applicable. "Small business" is defined in the Fee Regulation.

(2) Request for exception as a small business shall be made by the petitioner under penalty of perjury on a declaration form provided by the Executive Officer which shall be submitted to the Clerk or Deputy Clerk of the Hearing Board at the time of filing a petition for variance.

**F. Group, Class and Product Variance Fees**

Each petitioner included in a petition for a group, class or product variance shall pay the filing fee specified in Schedule A, and the excess emission fees specified in subdivisions (A) and (B), whichever is applicable.

**G. Adjustment of Fees**

If after the term of a variance for which emission fees have been paid, petitioner can establish, to the satisfaction of the Executive Officer/APCO, that emissions were actually less than those upon which the fee was based, a pro rata refund shall be made.

**H. Fee Payment/Variance Invalidation**

(1) Excess emission fees required by subdivisions (A) and (B), based on an estimate provided during the variance Hearing, are due and payable within fifteen (15) days of the granting of the variance. The petitioner shall be notified in writing of any adjustment to the amount of excess emission fees due, following District staff's verification of the estimated emissions. Fee payments to be made as a result of an adjustment are due and payable within fifteen (15) days of notification of the amount due.

(2) Failure to pay the excess emission fees required by subdivisions (A) and (B) within fifteen (15) days of notification that a fee is due shall automatically invalidate the variance. Such notification may be given by personal service or by deposit, postpaid, in the United States mail and shall be due fifteen (15) days from the date of personal service or mailing. For the purpose of this rule, the fee payment shall be considered to be received by the District if it is postmarked by the United States Postal Service on or before the expiration date stated on the billing notice. If the expiration date falls on a Saturday, Sunday, or a state holiday, the fee payment may be postmarked on the next business day following the Saturday, Sunday, or the state holiday with the same effect as if it had been postmarked on the expiration date.

**TABLE I**
**SCHEDULE OF EXCESS EMISSIONS FEES**

| | |
|---|---|
| Air Contaminants | All at $6.70 per pound |

Organic gases, except methane and those containing sulfur
Carbon Monoxide
Oxides of nitrogen (expressed as nitrogen dioxide)
Gaseous sulfur compounds (expressed as sulfur dioxide)
Particulate matter

| | |
|---|---|
| Toxic Air Contaminants | All at $33.35 per pound |

Asbestos
Benzene
Cadmium
Carbon tetrachloride
Chlorinated dioxins and dibenzofurans (15 species)
Diesel exhaust particulate matter
Ethylene dibromide
Ethylene dichloride
Ethylene oxide
Formaldehyde
Hexavalent chromium
Methylene chloride
Nickel
Perchloroethylene
1,3-Butadiene
Inorganic arsenic
Beryllium
Polynuclear aromatic hydrocarbons (PAH)
Vinyl chloride
Lead
1,4-Dioxane
Trichloroethylene

**TABLE II**
**SCHEDULE OF EXCESS VISIBLE EMISSION FEE**

For each source with opacity emissions in excess of twenty percent (20%), but less than forty percent (40%) (where the source is in violation of Regulation 6 and California Health and Safety Code Section 41701), the fee is calculated as follows:

Fee = (Opacity* equivalent - 20) x number of days allowed in variance x $6.85

For each source with opacity emissions in excess of forty percent (40%) (where the source is in violation of Regulation 6 and California Health and Safety Code Section 41701), the fee is calculated as follows:

Fee = (Opacity* equivalent - 40) x number of days allowed by variance x $6.85

* Where "Opacity" equals maximum opacity of emissions in percent (not decimal equivalent) allowed by the variance. Where the emissions are darker than the degree of darkness equivalent to the allowed Ringelmann number, the percentage equivalent of the excess degree of darkness shall be used as "opacity."

*(Adopted 6/7/00; Amended 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE B**
**COMBUSTION OF FUEL**
(Adopted June 18, 1980)

For each source that burns fuel, which is not a flare and not exempted by Regulation 2, Rule 1, the fee shall be computed based on the maximum gross combustion capacity (expressed as higher heating value, HHV) of the source.

1. INITIAL FEE: $68.62 per MM BTU/HOUR
   a. The minimum fee per source is: $366
   b. The maximum fee per source is: $128,009
2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.
   a. RAF for first toxic air contaminant (TAC) source in application: $516 plus $68.62 per MM BTU/hr
   b. Minimum RAF for first TAC source: $882
   c. RAF for each additional TAC source: $68.62 per MM BTU/hr *
   d. Minimum RAF per additional TAC source: $366*
   e. Maximum RAF per source is: $128,009
   * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1
3. PERMIT TO OPERATE FEE: $34.30 per MM BTU/HOUR
   a. The minimum fee per source is: $260
   b. The maximum fee per source is: $64,004
4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.
5. ROUNDING: Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.
6. Applicants for an authority to construct and permit to operate a project, which burns municipal waste or refuse-derived fuel, shall pay in addition to all required fees, an additional fee to cover the costs incurred by the State Department of Health Services, and/or a qualified contractor designated by the State Department of Health Services, in reviewing a risk assessment as required under H&S Code Section 42315. The fee shall be transmitted by the District to the Department of Health Services and/or the qualified contractor upon completion of the review and submission of comments in writing to the District.
7. A surcharge equal to 100% of all required initial and permit to operate fees shall be charged for sources permitted to burn one or more of the following fuels: coke, coal, wood, tires, black liquor, and municipal solid waste.

NOTE: MM BTU is million BTU of higher heat value
One MM BTU/HR = 1.06 gigajoules/HR

*(Amended 6/5/85; 6/4/86, 3/4/87, 6/6/90, 7/3/91, 6/15/94, 10/8/97, 7/1/98, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17,6/6/18,6/5/19, 6/16/21)*

**SCHEDULE C**
**STATIONARY CONTAINERS FOR THE STORAGE OF ORGANIC LIQUIDS**
(Adopted June 18, 1980)

For each stationary container of organic liquids which is not exempted from permits by Regulation 2 and which is not part of a gasoline dispensing facility, the fee shall be computed based on the container volume, as follows:

1. INITIAL FEE: 0.185 cents per gallon
   a. The minimum fee per source is: $204
   b. The maximum fee per source is: $27,858
2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.
   a. RAF for first toxic air contaminant (TAC) source in application: $516 plus 0.185 cents per gallon
   b. Minimum RAF for first TAC source: $678
   c. RAF for each additional TAC source: 0.185 cents per gallon *
   d. Minimum RAF per additional TAC source: $204 *
   e. Maximum RAF per source is: $27,858
   * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1
3. PERMIT TO OPERATE FEE: 0.093 cents per gallon
   a. The minimum fee per source is: $147
   b. The maximum fee per source is: $13,928
4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.
5. ROUNDING: Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

*(Amended 2/20/85, 6/5/85, 6/4/86, 7/3/91, 6/15/94, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/20/09, 6/16/10, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18,6/5/19, 6/16/21)*

**SCHEDULE D**
**GASOLINE TRANSFER AT GASOLINE DISPENSING FACILITIES, BULK PLANTS AND TERMINALS**
(Adopted June 18, 1980)

A. All gasoline dispensing facilities shall pay the following fees:

1. INITIAL FEE: $356.05 per single product nozzle (spn)
$356.05 per product for each multi-product nozzle (mpn)

2. PERMIT TO OPERATE FEE: $136.38 per single product nozzle (spn)
$136.38 per product for each multi-product nozzle (mpn)

3. Initial fees and permit to operate fees for hardware modifications at a currently permitted gasoline dispensing facility shall be consolidated into a single fee calculated according to the following formula:

$$\$492.42 \times \{[(mpn_{proposed})(\text{products per nozzle}) + spn_{proposed}] - [(mpn_{existing})(\text{products per nozzle}) + spn_{existing}]\}$$

*mpn* = multi-product nozzles
*spn* = single product nozzles

The above formula includes a toxic surcharge.

If the above formula yields zero or negative results, no initial fees or permit to operate fees shall be charged.

For the purposes of calculating the above fees, a fuel blended from two or more different grades shall be considered a separate product.

Other modifications to facilities' equipment, including but not limited to tank addition/replacement/conversion, vapor recovery piping replacement, moving or extending pump islands, will not be subject to initial fees or permit to operate fees.

4. RISK ASSESSMENT FEE (RAF) if required pursuant to Regulation 3-329 or 3-342 (including increases in permitted throughput for which a health risk assessment is required.) of:

a. $3,827 per application for a new gas dispensing facility

b. $584 per application for all other

5. Nozzles used exclusively for the delivery of diesel fuel or other fuels exempt from permits shall pay no fee. Multi-product nozzles used to deliver both exempt and non-exempt fuels shall pay fees for the non-exempt products only.

B. All bulk plants, terminals or other facilities using loading racks to transfer gasoline or gasohol into trucks, railcars or ships shall pay the following fees:

1. INITIAL FEE: $4,676.76 per single product loading arm
$4,676.76 per product for multi-product arms

2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.
   a. RAF for first toxic air contaminant (TAC) source in application: $5,295
   b. RAF for each additional TAC source: $4,677 *
      * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $1,303 per single product loading arm
$1,303 per product for multi-product arms

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

C. Fees in (A) above are in lieu of tank fees. Fees in (B) above are in addition to tank fees.

D. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

*(Amended 2/20/85, 6/5/85, 6/4/86, 7/3/91, 6/15/94, 10/8/97, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE E**
**SOLVENT EVAPORATING SOURCES**
(Adopted June 18, 1980)

For each solvent evaporating source, as defined in Section 3-210 except for dry cleaners, the fee shall be computed based on the net amount of organic solvent processed through the sources on an annual basis (or anticipated to be processed, for new sources) including solvent used for the cleaning of the sources.

1. INITIAL FEE:
   a. The fee per source is: $1,892 per 1,000 gallons
   b. The minimum fee per source is: $942
   c. The maximum fee per source is: $75,180
2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.
   a. RAF for first toxic air contaminant (TAC) source in application: $516 plus initial fee
   b. Minimum RAF for first TAC source: $1,551
   c. RAF for each additional TAC source: equal to initial fee *
   d. Minimum RAF per additional TAC source: $942 *
   e. Maximum RAF per source is: $75,180
   * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1
3. PERMIT TO OPERATE FEE:
   a. The fee per source is: $942 per 1,000 gallons
   b. The minimum fee per source is: $679
   c. The maximum fee per source is: $37,587
4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.
5. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

*(Amended 5/19/82, 10/17/84, 6/5/85, 6/4/86, 10/8/87, 7/3/91, 6/15/94, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE F**
**MISCELLANEOUS SOURCES**
(Adopted June 18, 1980)

For each source not governed by Schedules B, C, D, E, H or I, (except for those sources in the special classification lists, G-1 - G-5) the fees are:

1. INITIAL FEE: $707

2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.

   a. RAF for first (toxic air contaminant) TAC source in application: $1,328
   b. RAF for each additional TAC source: $707*
      * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $514

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1. List of special classifications requiring graduated fees is shown in Schedules G-1, G-2, G-3, G-4, and G-5.

G-1 FEES FOR SCHEDULE G-1. For each source in a G-1 classification, fees are:

1. INITIAL FEE: $5,741

2. RISK ASSESSMENT FEE (RAF) , if required pursuant to Regulation 3-329 or 3-342.

   a. RAF for first toxic air contaminant (TAC) source in application: $6,515
   b. RAF for each additional TAC source: $5,741*
      * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $2,866

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

G-2 FEES FOR SCHEDULE G-2. For each source in a G-2 classification, fees are:

1. INITIAL FEE: $7,579

2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.

   a. RAF for first toxic air contaminant (TAC) source in application: $8,352
   b. RAF for each additional TAC source: $7,579*
      * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $3,787

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

G-3 FEES FOR SCHEDULE G-3. For each source in a G-3 classification, fees are:

1. INITIAL FEE: $39,993

2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.

a. RAF for first toxic air contaminant (TAC) source in application: $40,646
b. RAF for each additional TAC source: $39,993 *

* RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $19,993

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

G-4 FEES FOR SCHEDULE G-4. For each source in a G-4 classification, fees are:

1. INITIAL FEE: $100,207

2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.

a. RAF for first toxic air contaminant (TAC) source in application: $100,981
b. RAF for each additional TAC source: $100,207*

* RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $50,101

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

G-5 FEES FOR SCHEDULE G-5. For each source in a G-5 classification, fees are:

1. INITIAL FEE: $51,731

2. RISK ASSESSMENT FEE (RAF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk assessment is required under Regulation 2-5-401.

a. RAF for first TAC source in application: $52,193
b. RAF for each additional TAC source: $51,731*

* RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $25,865

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

*(Amended 5/19/82, 6/5/85, 6/4/86, 6/6/90, 7/3/91, 6/15/94, 10/8/97, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE G-1**
(Adopted June 18, 1980)

| Equipment or Process Description | Materials Processed or Produced |
|---|---|
| Asphalt Roofing Manufacturing – Asphalt Dipping | Asphalt Roofing or Related Materials |
| Calcining Kilns, excluding those processing cement, lime, or coke (see G-4 for cement, lime, or coke Calcining Kilns) | Any Materials except cement, lime, or coke |
| Chemical Manufacturing, Inorganic – Processing Units with a Capacity of 1000 Gallons/Hour or more | Any Inorganic Materials |
| Chemical Manufacturing, Inorganic – Processing Units with a Capacity of 5 Tons/Hour or more | Any Inorganic Materials |
| Chemical Manufacturing, Inorganic – Reactors with a Capacity of 1000 Gallons or more | Any Inorganic Materials |
| Chemical Manufacturing, Organic – Latex Dipping | Any latex materials |
| Chemical Manufacturing, Organic – Processing Units with a Capacity of 1000 Gallons/Hour or more | Any Organic Materials |
| Chemical Manufacturing, Organic – Processing Units with a Capacity of 5 Tons/Hour or more | Any Organic Materials |
| Chemical Manufacturing, Organic – Reactors with a Capacity of 1000 Gallons or more | Any Organic Materials |
| Compost Operations – Windrows, Static Piles, Aerated Static Piles, In-Vessel, or similar methods | Any waste materials such as yard waste, food waste, agricultural waste, mixed green waste, bio-solids, animal manures, etc. |
| Crushers | Any minerals or mineral products such as rock, aggregate, cement, concrete, or glass; waste products such as building or road construction debris; and any wood, wood waste, green waste; or similar materials |
| Electroplating Equipment | Hexavalent Decorative Chrome with permitted capacity greater than 500,000 amp-hours per year or Hard Chrome |

| | Equipment or Process Description | Materials Processed or Produced |
|---|---|---|
| | Foil Manufacturing – Any Converting or Rolling Lines | Any Metal or Alloy Foils |
| | Galvanizing Equipment | Any |
| | Glass Manufacturing – Batching Processes including storage and weigh hoppers or bins, conveyors, and elevators | Any Dry Materials |
| | Glass Manufacturing – Mixers | Any Dry Materials |
| | Glass Manufacturing – Molten Glass Holding Tanks | Any molten glass |
| | Grinders | Any minerals or mineral products such as rock, aggregate, cement, concrete, or glass; waste products such as building or road construction debris; and any wood, wood waste, green waste; or similar materials |
| | Incinerators – Crematory | Human and/or animal remains |
| | Incinerators – Flares | Any waste gases |
| | Incinerators – Other (see G-2 for hazardous or municipal solid waste incinerators, see G-3 for medical or infectious waste incinerators) | Any Materials except hazardous wastes, municipal solid waste, medical or infectious waste |
| | Incinerators – Pathological Waste (see G-3 for medical or infectious waste incinerators) | Pathological waste only |
| | Loading and/or Unloading Operations – Bulk Plants and Bulk Terminals, excluding those loading gasoline or gasohol (see Schedule D for Bulk Plants and Terminals loading gasoline or gasohol) | Any Organic Materials except gasoline or gasohol |
| | ~~Petroleum~~ Refining – Alkylation Units | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Asphalt Oxidizers | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Benzene Saturation Units/Plants | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Catalytic Reforming Units | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Chemical Treating Units including alkane, naphthenic acid, and naptha merox treating, or similar processes | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Converting Units including Dimersol Plants, Hydrocarbon Splitters, or similar processes | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Distillation Units, | Any Hydrocarbons |

| | Equipment or Process Description | Materials Processed or Produced |
|---|---|---|
| | excluding crude oil units with capacity > 1000 barrels/hour (see G-3 for > 1000 barrels/hour crude distillation units) | |
| | ~~Petroleum~~ Refining – Hydrogen Manufacturing | Hydrogen or Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Hydrotreating or Hydrofining | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Isomerization | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – MTBE Process Units/Plants | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Sludge Converter | Any ~~Petroleum~~ Waste Materials |
| | ~~Petroleum~~ Refining – Solvent Extraction | Any Hydrocarbons |
| | ~~Petroleum~~ Refining – Sour Water Stripping | Any ~~Petroleum~~ Process or Waste Water |
| | ~~Petroleum~~ Refining – Storage (enclosed) | ~~Petroleum~~ Coke or Coke Products |
| | ~~Petroleum~~ Refining – Waste Gas Flares (not subject to Regulation 12, Rule 11) | Any ~~Petroleum~~ Refining Gases |
| | ~~Petroleum~~ Refining – Miscellaneous Other Process Units | Any Hydrocarbons |
| | Remediation Operations, Groundwater – Strippers | Contaminated Groundwater |
| | Remediation Operations, Soil – Any Equipment (excluding sub-slab depressurization equipment) | Contaminated Soil |
| | Spray Dryers | Any Materials |
| | Sterilization Equipment | Ethylene Oxide |
| | Wastewater Treatment, Industrial – Oil-Water Separators, excluding oil-water separators at ~~Petroleum~~ refineries (see G-2 for ~~Petroleum~~ Refining - Oil-Water Separators) | Wastewater from any industrial facilities except ~~Petroleum~~ refineries |
| | Wastewater Treatment, Industrial – Strippers including air strippers, nitrogen strippers, dissolved air flotation units, or similar equipment and excluding strippers at ~~Petroleum~~ refineries (see G-2 for ~~Petroleum~~ Refining – Strippers) | Wastewater from any industrial facilities except ~~Petroleum~~ refineries |
| | Wastewater Treatment, Industrial - Storage Ponds, excluding storage ponds at ~~Petroleum~~ refineries (see G-2 for ~~Petroleum~~ Refining – Storage Ponds) | Wastewater from any industrial facilities except ~~Petroleum~~ refineries |
| | Wastewater Treatment, Municipal – Preliminary Treatment | Municipal Wastewater |
| | Wastewater Treatment, Municipal – Primary Treatment | Municipal Wastewater |
| | Wastewater Treatment, Municipal – Digesters | Municipal Wastewater |

| Equipment or Process Description | Materials Processed or Produced |
|---|---|
| Wastewater Treatment, Municipal – Sludge Handling Processes, excluding sludge incinerators (see G-2 for sludge incinerators) | Sewage Sludge |

*(Amended 6/4/86, 6/6/90, 5/19/99, 6/7/00, 6/2/04, 6/15/05, 6/6/18)*

**SCHEDULE G-2**
(Adopted June 6, 1990)

| Equipment or Process Description | Materials Processed or Produced |
|---|---|
| Asphalt Roofing Manufacturing – Asphalt Blowing | Asphalt Roofing or Related Materials |
| Asphaltic Concrete Manufacturing – Aggregate Dryers | Any Dry Materials |
| Asphaltic Concrete Manufacturing – Batch Mixers | Any Asphaltic Concrete Products |
| Asphaltic Concrete Manufacturing – Drum Mixers | Any Asphaltic Concrete Products |
| Asphaltic Concrete Manufacturing – Other Mixers and/or Dryers | Any Dry Materials or Asphaltic Concrete Products |
| Concrete or Cement Batching Operations – Mixers | Any cement, concrete, or stone products or similar materials |
| Furnaces – Electric | Any Mineral or Mineral Product |
| Furnaces – Electric Induction | Any Mineral or Mineral Product |
| Furnaces – Glass Manufacturing | Soda Lime only |
| Furnaces – Reverberatory | Any Ores, Minerals, Metals, Alloys, or Related Materials |
| Incinerators – Hazardous Waste including any unit required to have a RCRA permit | Any Liquid or Solid Hazardous Wastes |
| Incinerators – Solid Waste, excluding units burning human/animal remains or pathological waste exclusively (see G-1 for Crematory and Pathological Waste Incinerators) | Any Solid Waste including Sewage Sludge (except human/animal remains or pathological waste) |
| Metal Rolling Lines, excluding foil rolling lines (see G-1 for Foil Rolling Lines) | Any Metals or Alloys |
| ~~Petroleum~~ Refining – Stockpiles (open) | ~~Petroleum~~ Coke or coke products only |
| ~~Petroleum~~ Refining, Wastewater Treatment – Oil-Water Separators | Wastewater from ~~Petroleum~~ refineries only |
| ~~Petroleum~~ Refining, Wastewater Treatment – Strippers including air strippers, nitrogen strippers, dissolved air flotation units, or similar equipment | Wastewater from ~~Petroleum~~ refineries only |
| ~~Petroleum~~ Refining, Wastewater Treatment – Storage Ponds | Wastewater from ~~Petroleum~~ refineries only |
| Pickling Lines or Tanks | Any Metals or Alloys |
| Sulfate Pulping Operations – All Units | Any |
| Sulfite Pulping Operations – All Units | Any |

*(Amended 6/7/00)*

**SCHEDULE G-3**
(Adopted June 18, 1980)

| Equipment or Process Description | Materials Processed or Produced |
|---|---|
| Furnaces – Electric Arc | Any Metals or Alloys |
| Furnaces – Electric Induction | Any Metals or Alloys |
| Incinerators – Medical Waste, excluding units burning pathological waste exclusively (see G-1 for Pathological Waste Incinerators) | Any Medical or Infectious Wastes |
| Loading and/or Unloading Operations – Marine Berths | Any Organic Materials |
| ~~Petroleum~~ Refining – Cracking Units including hydrocrackers and excluding thermal or fluid catalytic crackers (see G-4 for Thermal Crackers and Catalytic Crackers) | Any Hydrocarbons |
| ~~Petroleum~~ Refining – Distillation Units (crude oils) including any unit with a capacity greater than 1000 barrels/hour (see G-1 for other distillation units) | Any ~~Petroleum~~ Crude Oils |
| Phosphoric Acid Manufacturing – All Units (by any process) | Phosphoric Acid |

*(Amended 5/19/82; Amended and renumbered 6/6/90; Amended 6/7/00, 6/15/05, 5/2/07)*

**SCHEDULE G-4**
(Adopted June 6, 1990)

| Equipment or Process Description | Materials Processed or Produced |
|---|---|
| Acid Regeneration Units | Sulfuric or Hydrochloric Acid only |
| Annealing Lines (continuous only) | Metals and Alloys |
| Calcining Kilns (see G-1 for Calcining Kilns processing other materials) | Cement, Lime, or Coke only |
| Fluidized Bed Combustors | Solid Fuels only |
| Nitric Acid Manufacturing – Any Ammonia Oxidation Processes | Ammonia or Ammonia Compounds |
| ~~Petroleum~~ Refining - Coking Units including fluid cokers, delayed cokers, flexicokers, and coke kilns | ~~Petroleum~~ Coke and Coke Products |
| ~~Petroleum~~ Refining - Cracking Units including fluid catalytic crackers and thermal crackers and excluding hydrocrackers (see G-3 for Hydrocracking Units) | Any Hydrocarbons |
| ~~Petroleum~~ Refining - Sulfur Removal including any Claus process or any other process requiring caustic reactants | Any ~~Petroleum~~ Refining Gas |
| Sulfuric Acid Manufacturing – Any Chamber or Contact Process | Any Solid, Liquid or Gaseous Fuels Containing Sulfur |

*(Amended 6/7/00)*

**SCHEDULE G-5**

| Equipment or Process Description | Materials Processed or Produced |
|---|---|
| ~~Petroleum~~ Refinery Flares (subject to Regulation 12, Rule 11) | Any ~~Petroleum~~ Vent Gas (as defined in section 12-11-210 and section 12-12-213) |

*(Adopted 5/2/07)*

**SCHEDULE H**
**SEMICONDUCTOR AND RELATED OPERATIONS**
(Adopted May 19, 1982)

All of the equipment within a semiconductor fabrication area will be grouped together and considered one source. The fee shall be as indicated:

1. INITIAL FEE:
   a. The minimum fee per source is: $821
   b. The maximum fee per source is: $65,683

   The initial fee shall include the fees for each type of operation listed below, which is performed at the fabrication area:

   c. SOLVENT CLEANING OPERATIONS, such as usage of:

   Solvent Sinks (as defined in Regulation 8-30-214);
   Solvent Spray Stations (as defined in Regulation 8-30-221);
   Solvent Vapor Stations (as defined in Regulation 8-30-222); and
   Wipe Cleaning Operation (as defined in Regulation 8-30-225).

   The fee is based on the gross throughput of organic solvent processed through the solvent cleaning operations on an annual basis (or anticipated to be processed, for new sources):

   $555 per 1,000 gallon

   d. COATING OPERATIONS, such as application of:

   Photoresist (as defined in Regulation 8-30-215); other wafer coating;
   Solvent-Based Photoresist Developer (as defined in Regulation 8-30-219); and other miscellaneous solvent usage.

   The fee is based on the gross throughput of organic solvent processed through the coating operations on an annual basis (or anticipated to be processed, for new sources):

   $1,649 per 1,000 gallon

2. RISK ASSESSMENT FEE (RAF) , if required pursuant to Regulation 3-329 or 3-342.
   a. RAF for first toxic air contaminant (TAC) source in application: $516 plus initial fee
   b. Minimum RAF for first TAC source: $1,428
   c. RAF for each additional TAC source: equal to initial fee *
   d. Minimum RAF per additional TAC source: $821 *
   e. Maximum RAF per source is: $65,683

   * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE:
   a. The minimum fee per source is: $594
   b. The maximum fee per source is: $32,836

   The permit to operate fee shall include the fees for each type of operation listed below, which is performed at the fabrication area:

   c. SOLVENT CLEANING OPERATIONS, such as usage of:

   Solvent Sinks (as defined in Regulation 8-30-214);

Solvent Spray Stations (as defined in Regulation 8-30-221);
Solvent Vapor Stations (as defined in Regulation 8-30-222); and
Wipe Cleaning Operation (as defined in Regulation 8-30-225).

The fee is based on the gross throughput of organic solvent processed through the solvent cleaning operations on an annual basis (or anticipated to be processed, for new sources):

$279 per 1,000 gallon

d. COATING OPERATIONS, such as application of:

Photoresist (as defined in Regulation 8-30-215); other wafer coating;
Solvent-Based Photoresist Developer (as defined in Regulation 8-30-219); and other miscellaneous solvent usage.
The fee is based on the gross throughput of organic solvent processed through the coating operations on an annual basis (or anticipated to be processed, for new sources):
$821 per 1,000 gallon

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5. The fee for each source will be rounded to the whole dollar. Fees for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

*(Amended 1/9/85, 6/5/85, 6/4/86, 7/3/91, 6/15/94, 10/8/97, 7/1/98, 5/19/99, 10/20/99, 6/7/00, 6/6/01, 5/1/02,5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE I**
**DRY CLEANERS**
(Adopted July 6, 1983)

For dry cleaners, the fee shall be computed based on each cleaning machine, except that machines with more than one drum shall be charged based on each drum, regardless of the type or quantity of solvent, as follows:

1. INITIAL FEE FOR A DRY CLEANING MACHINE (per drum):
   a. If the washing or drying capacity is no more than 100 pounds: $700
   b. If the washing or drying capacity exceeds 100 pounds: $700 plus
      For that portion of the capacity exceeding 100 pounds: $20.95 per pound

2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.
   a. RAF for first toxic air contaminant (TAC) source in application: $508 plus initial fee
   b. Minimum RAF for first TAC source: $1,245
   c. RAF for each additional TAC source: equal to initial fee*
   d. Minimum RAF per additional TAC source: $700*

      * RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE FOR A DRY CLEANING MACHINE (per drum):
   a. If the washing or drying capacity is no more than 100 pounds: $511
   b. If the washing or drying capacity exceeds 100 pounds: $511 plus
      For that portion of the capacity exceeding 100 pounds: $10.52 per pound

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

*(Amended 10/17/84, 6/5/85, 6/4/86, 7/3/91, 6/15/94, 10/8/97, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/02/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19)*

**SCHEDULE K**
**SOLID WASTE DISPOSAL SITES**
(Adopted July 15, 1987)

1. INITIAL FEE:

| | | |
|---|---|---|
| a. | Landfill (Decomposition Process) | $6,679 |
| b. | Active Landfill (Waste and Cover Material Dumping Process) | $3,338 |
| c. | Active Landfill (Excavating, Bulldozing, and Compacting Processes) | $3,338 |

2. RISK ASSESSMENT FEE (RAF), if required pursuant to Regulation 3-329 or 3-342.

| | | |
|---|---|---|
| a. | RAF for first toxic air contaminant (TAC) source in application: | $516 plus initial fee |
| b. | RAF for each additional TAC source: | equal to initial fee* |

* RAF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE:

| | | |
|---|---|---|
| a. | Landfill (Decomposition Process) | $3,338 |
| b. | Active Landfill (Waste and Cover Material Dumping Process) | $1,669 |
| c. | Active Landfill (Excavating, Bulldozing, and Compacting Processes) | $1,669 |

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5. Evaluation of Reports and Questionnaires:

| | | |
|---|---|---|
| a. | Evaluation of Solid Waste Air Assessment Test Report as required by Health & Safety Code Section 41805.5(g) | $3,680 |
| b. | Evaluation of Inactive Site Questionnaire as required by Health & Safety Code Section 41805.5(b) | $1,845 |
| c. | Evaluation of Solid Waste Air Assessment Test Report in conjunction with evaluation of Inactive Site Questionnaire as required by Health & Safety Code Section 41805.5(b) | $1,845 |
| d. | Evaluation of Initial or Amended Design Capacity Reports as required by Regulation 8, Rule 34, Section 405 | $1,357 |
| e. | Evaluation of Initial or Periodic NMOC Emission Rate Reports as required by Regulation 8, Rule 34, Sections 406 or 407 | $3,881 |
| f. | Evaluation of Closure Report as required by Regulation 8, Rule 34, Section 409 | $1,357 |
| g. | Evaluation of Annual Report as required by Regulation 8, Rule 34, Section 411 | $3,396 |

6. Fees for each source will be rounded off to the nearest dollar. The fee for sources will be rounded up or down to the nearest dollar.

7. For the purposes of this fee schedule, landfill shall be considered active, if it has accepted solid waste for disposal at any time during the previous 12 months or has plans to accept solid waste for disposal during the next 12 months.

*(Amended 7/3/91, 6/15/94, 10/8/97, 7/1/98, 5/19/99, 10/6/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE L**
**ASBESTOS OPERATIONS**
(Adopted July 6, 1988)

1. Asbestos Operations conducted at single family dwellings are subject to the following fees:
   a. OPERATION FEE:
      $185 for amounts 100 to 500 square feet or linear feet.
      $679 for amounts 501 square feet or linear feet to 1000 square feet or linear feet.
      $988 for amounts 1001 square feet or liner feet to 2000 square feet or linear feet.
      $1,358 for amounts greater than 2000 square feet or linear feet.
   b. Cancellation: $90 of above amounts non-refundable for notification processing.
2. Asbestos Operations, other than those conducted at single family dwellings, are subject to the following fees:
   a. OPERATION FEE:
      $524 for amounts 100 to 159 square feet or 100 to 259 linear feet or 35 cubic feet
      $754 for amounts 160 square feet or 260 linear feet to 500 square or linear feet or greater than 35 cubic feet.
      $1,098 for amounts 501 square feet or linear feet to 1000 square feet or linear feet.
      $1,620 for amounts 1001 square feet or liner feet to 2500 square feet or linear feet.
      $2,309 for amounts 2501 square feet or linear feet to 5000 square feet or linear feet.
      $3,169 for amounts 5001 square feet or linear feet to 10000 square feet or linear feet.
      $4,031 for amounts greater than 10000 square feet or linear feet.
   b. Cancellation: $248 of above amounts non-refundable for notification processing.
3. Demolitions (including zero asbestos demolitions) conducted at a single-family dwelling are subject to the following fee:
   a. OPERATION FEE: $90
   b. Cancellation: $90 (100% of fee) non-refundable, for notification processing.
4. Demolitions (including zero asbestos demolitions) other than those conducted at a single family dwelling are subject to the following fee:
   a. OPERATION FEE: $372
   b. Cancellation: $248 of above amount non-refundable for notification processing.
5. Asbestos operations with less than 10 days prior notice (excluding emergencies) are subject to the following additional fee:
   a. OPERATION FEE: $619
6. Asbestos demolition operations for the purpose of fire training are exempt from fees.

*(Amended 9/5/90, 1/5/94, 8/20/97, 10/7/98, 7/19/00, 8/1/01, 6/5/02, 7/2/03, 6/2/04, 6/6/07, 5/21/08, 5/20/09, 6/16/10, 6/15/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16,6/5/19)*

**SCHEDULE M**
**MAJOR STATIONARY SOURCE FEES**
(Adopted June 6, 1990)

For each major stationary source emitting 50 tons per year or more of Organic Compounds, Sulfur Oxides, Nitrogen Oxides, and/or $PM_{10}$, the fee shall be based on the following:

| | | |
|---|---|---|
| 1. | Organic Compounds | $126.38 per ton |
| 2. | Sulfur Oxides | $126.38 per ton |
| 3. | Nitrogen Oxides | $126.38 per ton |
| 4. | $PM_{10}$ | $126.38 per ton |

Emissions calculated by the APCO shall be based on the data reported for the most recent 12-month period prior to billing. In calculating the fee amount, emissions of Organic Compounds, Sulfur Oxides, Nitrogen Oxides, or $PM_{10}$, if occurring in an amount less than 50 tons per year, shall not be counted.

*(Amended 7/3/91, 6/15/94, 7/1/98, 5/9/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE N**
**TOXIC INVENTORY FEES**
(Adopted October 21, 1992)

For each stationary source emitting substances covered by California Health and Safety Code Section 44300 *et seq.*, the Air Toxics "Hot Spots" Information and Assessment Act of 1987, which have trigger levels listed in Table 2-5-1, a fee based on the weighted emissions of the facility shall be assessed based on the following formulas:

.

1. A fee of $6 for each gasoline product dispensing nozzle in a Gasoline Dispensing Facility; or
2. A fee calculated by multiplying the facility's weighted toxic inventory ($w_i$) by the following factor:

   Air Toxic Inventory Fee Factor $0.92 per weighted pound per year

   Using the last reported data, the facility's weighted toxic inventory ($w_i$) is calculated as a sum of the individual TAC emissions multiplied by either the inhalation cancer potency factor for the TAC (see Regulation 2, Rule 5, Table 2-5-1, column 10) times 28.6 if the emission is a carcinogen, or by the reciprocal of the chronic inhalation reference exposure level for the TAC (see Regulation 2, Rule 5, Table 2-5-1, column 8) if the emission is not a carcinogen.
3. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above and rounded down to the nearest dollar for amounts 50 cents and lower.

*(Amended 12/15/93, 6/15/05, 5/2/07, 6/16/10, 5/4/11, 6/4/14, 6/3/15, 6/15/16,6/6/18,6/5/19, 6/3/20, 6/16/21)*

**SCHEDULE P**
**MAJOR FACILITY REVIEW FEES**
(Adopted November 3, 1993)

1. MFR / SYNTHETIC MINOR ANNUAL FEES

Each facility, which is required to undergo major facility review in accordance with the requirements of Regulation 2, Rule 6, shall pay annual fees (1a and 1b below) for each source holding a District Permit to Operate. These fees shall be in addition to and shall be paid in conjunction with the annual renewal fees paid by the facility. However, these MFR permit fees shall not be included in the basis to calculate Alternative Emission Control Plan (bubble) or toxic air contaminant surcharges. If a major facility applies for and obtains a synthetic minor operating permit, the requirement to pay the fees in 1a and 1b shall terminate as of the date the APCO issues the synthetic minor operating permit.

a. MFR SOURCE FEE ..... $930 per source

b. MFR EMISSIONS FEE..... $36.59 per ton of regulated air pollutants emitted

Each MFR facility and each synthetic minor facility shall pay an annual monitoring fee (1c below) for each pollutant measured by a District-approved continuous emission monitor or a District-approved parametric emission monitoring system.

c. MFR/SYNTHETIC MINOR MONITORING FEE .....$9,296 per monitor per pollutant

2. SYNTHETIC MINOR APPLICATION FEES

Each facility that applies for a synthetic minor operating permit or a revision to a synthetic minor operating permit shall pay application fees according to 2a and either 2b (for each source holding a District Permit to Operate) or 2c (for each source affected by the revision). If a major facility applies for a synthetic minor operating permit prior to the date on which it would become subject to the annual major facility review fee described above, the facility shall pay, in addition to the application fee, the equivalent of one year of annual fees for each source holding a District Permit to Operate.

a. SYNTHETIC MINOR FILING FEE ..... $1,295 per application

b. SYNTHETIC MINOR INITIAL PERMIT FEE..... $930 per source

c. SYNTHETIC MINOR REVISION FEE..... $930 per source modified

3. MFR APPLICATION FEES

Each facility that applies for or is required to undergo: an initial MFR permit, an amendment to an MFR permit, a minor or significant revision to an MFR permit, a reopening of an MFR permit or a renewal of an MFR permit shall pay, with the application and in addition to any other fees required by this regulation, the MFR filing fee and any applicable fees listed in 3b-h below. The fees in 3b apply to each source in the initial permit. The fees in 3g apply to each source in the renewal permit, The fees in 3d-f apply to each source affected by the revision or reopening.

a. MFR FILING FEE..... $1,295 per application

b. MFR INITIAL PERMIT FEE..... $1,295 per source

c. MFR ADMINISTRATIVE AMENDMENT FEE..... $366 per application

d. MFR MINOR REVISION FEE ..... $1,838 per source modified

e. MFR SIGNIFICANT REVISION FEE ..... $3,427 per source modified

f. MFR REOPENING FEE..... $1,124 per source modified

g. MFR RENEWAL FEE..... $546 per source

Each facility that requests a permit shield or a revision to a permit shield under the provisions of Regulation 2, Rule 6 shall pay the following fee for each source (or group of sources, if the requirements for these sources are grouped together in a single table in the MFR permit) that is covered by the requested shield. This fee shall be paid in addition to any other applicable fees.

h. MFR PERMIT SHIELD FEE..... $1,936 per shielded source or group of sources

4. MFR PUBLIC NOTICE FEES

Each facility that is required to undergo a public notice related to any permit action pursuant to Regulation 2-6 shall pay the following fee upon receipt of a District invoice.

MFR PUBLIC NOTICE FEE ..... Cost of Publication

5. MFR PUBLIC HEARING FEES

If a public hearing is required for any MFR permit action, the facility shall pay the following fees upon receipt of a District invoice.

a. MFR PUBLIC HEARING FEE ..... Cost of Public Hearing not to exceed $15,819

b. NOTICE OF PUBLIC HEARING FEE ..... Cost of distributing Notice of Public Hearing

6. POTENTIAL TO EMIT DEMONSTRATION FEE

Each facility that makes a potential to emit demonstration under Regulation 2-6-312 in order to avoid the requirement for an MFR permit shall pay the following fee:

a. PTE DEMONSTRATION FEE ..... $221 per source, not to exceed $21,746

*(Amended 6/15/94, 10/8/97, 7/1/98, 5/19/99, 6/7/00, 6/6/01, 5/1/02, 5/21/03, 6/2/04, 6/15/05, 6/7/06, 5/2/07, 5/21/08, 5/20/09, 6/16/10, 5/4/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE Q**
**EXCAVATION OF CONTAMINATED SOIL AND**
**REMOVAL OF UNDERGROUND STORAGE TANKS**
(Adopted January 5, 1994)

1. Persons excavating contaminated soil or removing underground storage tanks subject to the provisions of Regulation 8, Rule 40, Section 401, 402, 403 or 405 are subject to the following fee:

   a. OPERATION FEE: $168

*(Amended 7/19/00, 8/1/01, 6/5/02, 7/2/03, 6/2/04, 6/6/07, 5/21/08, 5/20/09, 6/16/10, 6/15/11, 6/6/12, 6/4/14, 6/3/15, 6/15/16)*

**SCHEDULE R**
**EQUIPMENT REGISTRATION FEES**

1. Persons operating commercial cooking equipment who are required to register equipment as required by District rules are subject to the following fees:

| | | |
|---|---|---|
| a. | Conveyorized Charbroiler REGISTRATION FEE: | $744 per facility |
| b. | Conveyorized Charbroiler ANNUAL RENEWAL FEE: | $209 per facility |
| c. | Under-fired Charbroiler REGISTRATION FEE: | $744 per facility |
| d. | Under-fired Charbroiler ANNUAL RENEWAL FEE: | $209 per facility |

2. Persons operating non-halogenated dry cleaning equipment who are required to register equipment as required by District rules are subject to the following fees:

| | | |
|---|---|---|
| a. | Dry Cleaning Machine REGISTRATION FEE: | $371 |
| b. | Dry Cleaning Machine ANNUAL RENEWAL FEE: | $259 |

3. Persons operating diesel engines who are required to register equipment as required by District or State rules are subject to the following fees:

| | | |
|---|---|---|
| a. | Diesel Engine REGISTRATION FEE: | $250 |
| b. | Diesel Engine ANNUAL RENEWAL FEE: | $166 |
| c. | Diesel Engine ALTERNATIVE COMPLIANCE PLAN FEE (for each plan submitted under District Regulation 11-17-402): | $250 |

4. Persons operating boilers, steam generators and process heaters who are required to register equipment by District Regulation 9-7-404 are subject to the following fees:

| | | |
|---|---|---|
| a. | REGISTRATION FEE | $137 per device |
| b. | ANNUAL RENEWAL FEE: | $115 per device |

5. Persons owning or operating graphic arts operations who are required to register equipment by District Regulation 8-20-408 are subject to the following fees:

| | | |
|---|---|---|
| a. | REGISTRATION FEE: | $446 |
| b. | ANNUAL RENEWAL FEE: | $278 |

6. Persons owning or operating mobile refinishing operations who are required to register by District Regulation 8-45-4 are subject to the following fees:

| | | |
|---|---|---|
| a. | REGISTRATION FEE | $209 |
| b. | ANNUAL RENEWAL FEE | $123 |

*(Adopted 7/6/07, Amended 12/5/07, 5/21/08, 7/30/08, 11/19/08, 12/3/08, 5/20/09, 6/16/10, 6/15/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18)*

**SCHEDULE S**
**NATURALLY OCCURRING ASBESTOS OPERATIONS**

1. ASBESTOS DUST MITIGATION PLAN INITIAL REVIEW AND AMENDMENT FEES:

   Any person submitting an Asbestos Dust Mitigation Plan (ADMP) for initial review of a Naturally Occurring Asbestos (NOA) project shall pay the following fee (including NOA Discovery Notifications which would trigger an ADMP review): $730

   Any person submitting a request to amend an existing ADMP shall pay the following fee: $374

2. AIR MONITORING PROCESSING FEE:

   NOA projects requiring an Air Monitoring component as part of the ADMP approval are subject to the following fee in addition to the ADMP fee: $5,635

3. INSPECTION FEE:

   The owner of any property for which an ADMP is required shall pay fees to cover the costs incurred by the District after July 1, 2012 in conducting inspections to determine compliance with the ADMP on an ongoing basis. Inspection fees shall be invoiced by the District on a quarterly basis, and at the conclusion of dust generating activities covered under the ADMP, based on the actual time spent in conducting such inspections, and the following time and materials rate: $166 per hour

*(Adopted 6/6/07; Amended 5/21/08, 5/20/09, 6/16/10, 6/15/11, 6/6/12, 6/19/13, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18, 6/5/19, 6/16/21)*

**SCHEDULE T**
**GREENHOUSE GAS FEES**

For each permitted facility emitting greenhouse gases, the fee shall be based on the following:

1. Carbon Dioxide Equivalent (CDE) Emissions $0.131 per metric ton

Emissions calculated by the APCO shall be based on the data reported for the most recent 12-month period prior to billing. The annual emissions of each greenhouse gas (GHG) listed below shall be determined by the APCO for each permitted (i.e., non-exempt) source. For each emitted GHG, the CDE emissions shall be determined by multiplying the annual GHG emissions by the applicable Global Warming Potential (GWP) value. The GHG fee for each facility shall be based on the sum of the CDE emissions for all GHGs emitted by the facility, except that no fee shall be assessed for emissions of biogenic carbon dioxide.

**Global Warming Potential Relative to Carbon Dioxide***

| GHG | CAS Registry Number | GWP** |
|---|---|---|
| Carbon Dioxide | 124-38-9 | 1 |
| Methane | 74-82-8 | 34 |
| Nitrous Oxide | 10024-97-2 | 298 |
| Nitrogen Trifluoride | 7783-54-2 | 17,885 |
| Sulfur Hexafluoride | 2551-62-4 | 26,087 |
| HCFC-22 | 75-45-6 | 2,106 |
| HCFC-123 | 306-83-2 | 96 |
| HCFC-124 | 2837-89-0 | 635 |
| HCFC-141b | 1717-00-6 | 938 |
| HCFC-142b | 75-68-3 | 2,345 |
| HCFC-225ca | 422-56-0 | 155 |
| HCFC-225cb | 507-55-1 | 633 |
| HFC-23 | 75-46-7 | 13,856 |
| HFC-32 | 75-10-5 | 817 |
| HFC-125 | 354-33-6 | 3,691 |
| HFC-134a | 811-97-2 | 1,549 |
| HFC-143a | 420-46-2 | 5,508 |
| HFC-152a | 75-37-6 | 167 |
| HFC-227ea | 431-89-0 | 3,860 |

| | | |
|---|---|---|
| HFC-236fa | 690-39-1 | 8,998 |
| HFC-245fa | 460-73-1 | 1,032 |
| HFC-365mfc | 406-58-6 | 966 |
| HFC-43-10-mee | 138495-42-8 | 1,952 |
| PFC-14 | 75-73-0 | 7,349 |
| PFC-116 | 76-16-4 | 12,340 |
| PFC-218 | 76-19-7 | 9,878 |
| PFC-318 | 115-25-3 | 10,592 |

* Source: Myhre, G., et al., 2013: Anthropogenic and Natural Radiative Forcing (and Supplementary Material). In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available from www.ipcc.ch.

** GWPs compare the integrated radiative forcing over a specified period (i.e.100 years) from a unit mass pulse emission to compare the potential climate change associated with emissions of different GHGs. GWPs listed include climate-carbon feedbacks.

*(Adopted 5/21/08; Amended 5/20/09, 6/16/10, 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18,6/5/19, 6/16/21)*

**SCHEDULE U**
**INDIRECT SOURCE REVIEW FEES**

The applicant for any project deemed an indirect source pursuant to District rules shall be subject to the following fees:

1. APPLICATION FILING FEE

   When an applicant files an Air Quality Impact Assessment as required by District rules, the applicant shall pay a non-refundable Application Filing Fee as follows:

   a. Residential project: $615
   b. Non-residential or mixed use project: $918

2. APPLICATION EVALUATION FEE

   Every applicant who files an Air Quality Impact Assessment as required by District rules shall pay an evaluation fee for the review of an air quality analysis and the determination of Offsite Emission Reduction Fees necessary for off-site emission reductions. The Application Evaluation fee will be calculated using the actual staff hours expended and the prevailing weighted labor rate. The Application Filing fee, which assumes eight hours of staff time for residential projects and twelve hours of staff time for non-residential and mixed use projects, shall be credited towards the actual Application Evaluation Fee.

3. OFFSITE EMISSION REDUCTION FEE

   (To be determined)

*(Adopted 5/20/09; Amended 6/16/10, 6/4/14, 6/3/15, 6/15/16, 6/21/17)*

## SCHEDULE V
### OPEN BURNING

1. Any prior notification required by Regulation 5, Section 406 is subject to the following fee:
   a. OPERATION FEE: $150
   b. The operation fee paid as part of providing notification to the District prior to burning will be determined for each property, as defined in Regulation 5, Section 217, and will be valid for one year from the fee payment date when a given fire is allowed, as specified in Regulation 5, Section 401 for the following fires:

| Regulation 5 Section – Fire | Burn Period |
|---|---|
| 401.1 - Disease and Pest | January 1 – December 31 |
| 401.2 - Crop Replacement[1] | October 1 – April 30 |
| 401.3 - Orchard Pruning and Attrition[2] | November 1 – April 30 |
| 401.4 - Double Cropping Stubble | June 1 – August 31 |
| 401.6 - Hazardous Material[1] | January 1 – December 31 |
| 401.7 - Fire Training | January 1 – December 31 |
| 401.8 - Flood Debris | October 1 – May 31 |
| 401.9 - Irrigation Ditches | January 1 – December 31 |
| 401.10 - Flood Control | January 1 – December 31 |
| 401.11 - Range Management[1] | July 1 – April 30 |
| 401.12 - Forest Management[1] | November 1 – April 30 |
| 401.14 - Contraband | January 1 – December 31 |

   [1] Any Forest Management fire, Range Management fire, Hazardous Material fire not related to Public Resources Code 4291, or any Crop Replacement fire for the purpose of establishing an agricultural crop on previously uncultivated land, that is expected to exceed 10 acres in size or burn piled vegetation cleared or generated from more than 10 acres is defined in Regulation 5, Section 213 as a type of Prescribed Burning and, as such, is subject to the Prescribed Burning operation fee in Section 3 below.

   [2] Upon the determination of the APCO that heavy winter rainfall has prevented this type of burning, the burn period may be extended to no later than June 30.

   c. Any person who provided notification required under Regulation 5, Section 406, who seeks to burn an amount of material greater than the amount listed in that initial notification, shall provide a subsequent notification to the District under Regulation 5, Section 406 and shall pay an additional open burning operation fee prior to burning.
2. Any Marsh Management fire conducted pursuant to Regulation 5, Section 401.13 is subject to the following fee, which will be determined for each property by the proposed acreage to be burned:
   a. OPERATION FEE: $540 for 50 acres or less
   $734 for more than 50 acres but less than or equal to 150 acres
   $925 for more than 150 acres

b. The operation fee paid for a Marsh Management fire will be valid for a Fall or Spring burning period, as specified in Regulation 5, Subsection 401.13. Any burning subsequent to either of these time periods shall be subject to an additional open burning operation fee.

3. Any Wildland Vegetation Management fire (Prescribed Burning) conducted pursuant to Regulation 5, Section 401.15 is subject to the following fee, which will be determined for each prescribed burning project by the proposed acreage to be burned:

   a. OPERATION FEE: $602 for 50 acres or less
   $816 for more than 50 acres but less than or equal to 150 acres
   $1,062 for more than 150 acres

   b. The operation fee paid for a prescribed burn project will be valid for the burn project approval period, as determined by the District. Any burning subsequent to this time period shall be subject to an additional open burning operation fee.

4. Any Filmmaking fire conducted pursuant to Regulation 5, Section 401.16 and any Public Exhibition fire conducted pursuant to Regulation 5, Section 401.17 is subject to the following fee:

   a. OPERATION FEE: $778

   b. The operation fee paid for a Filmmaking or Public Exhibition fire will be valid for the burn project approval period, as determined by the District. Any burning subsequent to this time period shall be subject to an additional open burning operation fee.

5. Any Stubble fire conducted pursuant to Regulation 5, Section 401.5 that requires a person to receive an acreage burning allocation prior to ignition is subject to the following fee, which will be determined for each property by the proposed acreage to be burned:

   a. OPERATION FEE: $385 for 25 acres or less
   $540 for more than 25 acres but less than or equal to 75 acres
   $656 for more than 75 acres but less than or equal to 150 acres
   $772 for more than 150 acres

   b. The operation fee paid for a Stubble fire will be valid for one burn period, which is the time period beginning September 1 and ending December 31, each calendar year. Any burning subsequent to this time period shall be subject to an additional open burning operation fee.

6. All fees paid pursuant to Schedule V are non-refundable.
7. All fees required pursuant to Schedule V must be paid before conducting a fire.

*(Adopted June 19, 2013; Amended 6/4/14, 6/3/15, 6/15/16, 6/21/17, 6/6/18 ,6/5/19, 6/3/20, 6/16/21)*

**SCHEDULE W**
**~~PETROLEUM~~ REFINING EMISSIONS TRACKING FEES**

1. ANNUAL EMISSIONS INVENTORIES:

   Any ~~Petroleum~~ Refinery owner/operator required to submit an Annual Emissions Inventory Report in accordance with Regulation 12, Rule 15, Section 401 shall pay the following fees:

   a. Initial submittal: $67,689
   b. Each subsequent annual submittal: $33,845

   Any Support Facility owner/operator required to submit an Annual Emissions Inventory Report in accordance with Regulation 12, Rule 15, Section 401 shall pay the following fees:

   a. Initial submittal: $4,137
   b. Each subsequent annual submittal: $2,069

2. AIR MONITORING PLANS:

   Any person required to submit an air monitoring plan in accordance with Regulation 12, Rule 15, Section 403 shall pay a one-time fee of $9,401.

*(Adopted 6/15/16; Amended 6/5/19, 6/16/21)*

**SCHEDULE X**
**MAJOR STATIONARY SOURCE COMMUNITY AIR MONITORING FEES**

For each major stationary source, emitting 35 tons per year or more of Organic Compounds, Sulfur Oxides, Nitrogen Oxides, Carbon Monoxide and/or $PM_{10}$ within the vicinity of a District proposed community air monitoring location, the fee shall be based on the following:

| | | |
|---|---|---|
| 1. | Organic Compounds | $60.61 per ton |
| 2. | Sulfur Oxides | $60.61 per ton |
| 3. | Nitrogen Oxides | $60.61 per ton |
| 4. | Carbon Monoxide | $60.61 per ton |
| 5. | $PM_{10}$ | $60.61 per ton |

Emissions calculated by the APCO shall be based on the data reported for the most recent 12-month period prior to billing. In calculating the fee amount, emissions of Organic Compounds, Sulfur Oxides, Nitrogen Oxides, Carbon Monoxide, or $PM_{10}$, if occurring in an amount less than 35 tons per year, shall not be counted.

*(Adopted: 6/15/16; Amended: 6/21/17)*

# REGULATION 6
# PARTICULATE MATTER
# RULE 5
# PARTICULATE EMISSIONS FROM ~~PETROLEUM~~ REFINERY FLUIDIZED CATALYTIC CRACKING UNITS

## INDEX

# REGULATION 6
# PARTICULATE MATTER
# RULE 5
# PARTICULATE EMISSIONS FROM ~~PETROLEUM~~ REFINERY FLUIDIZED CATALYTIC CRACKING UNITS

(Adopted December 16, 2015)

**6-5-100 GENERAL**

**6-5-101 Description:** This rule limits the emissions of particulate matter, including filterable and condensable particulate matter from ~~petroleum~~ refinery fluidized catalytic cracking units (FCCUs) as well as emissions of precursors of secondary particulate matter. Regulation 6, Rule 1 addresses filterable particulate emissions from FCCUs. For the purposes of this rule, commingled emissions from an FCCU and one or more other sources from a single exhaust point shall all be considered to be FCCU emissions as described in District Regulation 1: General Provisions and Definitions, Section 1-107.

*(Amended July 21, 2021)*

**6-5-110 EXEMPTIONS**

**6-5-111 Limited Exemption, Emissions Abated by Wet Scrubber:** The emission limit for ammonia in Section 6-5-301.1 shall not apply to sources that are abated by a wet scrubber that is required to be operated by a District permit and that constitutes best available control technology (BACT) for any pollutant when permitted or constructed.

*(Amended 12/19/2018; 7/21/2021)*

**6-5-112 Limited Exemption, Emissions during Startup or Shutdown Periods:** The emission limit for ammonia in Section 6-5-301.1 and short-term seven-day rolling average emission limit for sulfur dioxide in Section 6-5-301.2.2 shall not apply to emissions during an FCCU startup or shutdown period. FCCU startup and shutdown periods shall be as defined in this rule, unless a different period is specified in a District Permit to Operate for an FCCU, in which case the Permit to Operate shall take precedence. This exemption is also applicable to a non-FCCU source with startup or shutdown provisions specified in a Permit to Operate, if that source is subject to the requirements of Section 6-5-301 because the source emissions are commingled with those of an FCCU at a single exhaust point; the startup or shutdown provisions specified in the Permit to Operate shall be the basis for this exemption. Whenever this exemption applies to any source, it shall apply to all sources with commingled emissions.

*(Amended July 21, 2021)*

**6-5-113 Deleted July 21, 2021**

**6-5-114 Limited Exemption, FCCU without Nitrogen-Based Additives:** The emission limit for ammonia in Section 6-5-301.1 shall not apply to an FCCU where ammonia, urea or any other nitrogen-based additive is not used in a way that contributes to ammonia or condensable particulate FCCU emissions.

*(Amended July 21, 2021)*

**6-5-115 Limited Exemption, Ammonia Optimization:**

115.1 Before July 21, 2026, the ammonia emission limit in Section 6-5-301.1 shall not apply to the owner/operator of a ~~petroleum~~ refinery that implements an optimization of ammonia and/or urea injection in accordance with Section 6-5-403.

115.2 Effective July 21, 2026, the ammonia emission limit in Section 6-5-301.1 shall apply to all owner/operators previously exempt under Section 6-5-115.1.

*Amended July 21, 2021*

**6-5-200 DEFINITIONS**

**6-5-201 Ammonia Slip:** Ammonia slip is the amount of unreacted ammonia emitted to the atmosphere from the FCCU, regardless of the source of the ammonia.

**6-5-202 Catalyst Regeneration Unit (CRU):** A catalyst regeneration unit regenerates spent FCCU catalyst by burning off the coke that has deposited on the catalyst surface. The resulting CRU flue gas is the primary emission source addressed by this rule.

**6-5-203 Condensable Particulate Matter:** Liquid droplets that coalesce, or gaseous emissions that condense to form liquid or solid particles. These liquid and/or solid particles are identified as condensable organic or condensable inorganic particulate matter using EPA Test Method 202.

**6-5-204 Daily Average:** The arithmetic mean of the measured ammonia emissions subject to Section 6-5-301.1 on any calendar day that the FCCU operates.

*(Amended July 21, 2021)*

**6-5-205 FCCU Shutdown:** Unless otherwise specified in a District Permit to Operate, FCCU shutdown is a period which begins when fresh feed flow to the FCCU reactor stops and ends when the main blower for catalyst recirculation is shutdown.

**6-5-206 FCCU Startup:** Unless otherwise specified in a District Permit to Operate, FCCU startup is a period not exceeding 120 hours which begins with the startup of the main blower for introduction of catalyst and ends after fresh feed is introduced to the FCCU reactor, when the process reaches steady state.

**6-5-207 Fluidized Catalytic Cracking Unit (FCCU):** A fluidized catalytic cracking unit (FCCU) is a processing unit that converts heavy ~~petroleum~~ organic fractions, typically from crude oil distillation units, into lighter fuel intermediates by using a fine, powdered catalyst to promote a chemical reaction in which the heavy ~~petroleum~~ organic molecules are broken into smaller molecules. In addition to the cracking reactor, an FCCU includes a catalyst regeneration unit (CRU), ancillary equipment including blowers, and all equipment for controlling air pollutant emissions and recovering heat.

~~**6-5-208 Petroleum Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes crude oil to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks. petroleum refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), petroleum conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking) petroleum treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, blending, loading, and unloading), auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).~~

**6-5-209 Primary Particulate Matter:** Material emitted to the atmosphere as filterable or condensable particulate matter.

**6-5-210 Secondary Particulate Matter:** Material emitted to the atmosphere in a gaseous form that will not coalesce or condense to a solid or liquid form at atmospheric temperature and pressure, but that may react in the atmosphere into a solid or liquid form. For the purposes of this rule, precursors of Secondary Particulate Matter shall include sulfur dioxide ($SO_2$) and ammonia.

**6-5-211 Wet Scrubber:** A device that removes air pollutants from gas streams by contacting the gas stream with a scrubbing liquid.

**6-5-212 Total Particulate Matter 10 Microns or Less in Diameter (Total $PM_{10}$):** Material emitted to the atmosphere as filterable particulate matter or condensable particulate matter less than 10 microns in diameter.

*(Adopted July 21, 2021)*

**6-5-213 Total Particulate Matter 2.5 Microns or Less in Diameter (Total $PM_{2.5}$):** Material emitted to the atmosphere as filterable particulate matter or condensable particulate matter less than 2.5 microns in diameter.

*(Adopted July 21, 2021)*

**6-5-214 Alternative Feedstock**: Any feedstock, including but not limited to any intermediate, product or byproduct material, that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**6-5-215** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**6-5-300 STANDARDS**

**6-5-301** **Fluidized Catalytic Cracking Unit (FCCU) Emission Limits:** The owner/operator of a ~~petroleum~~ refinery that includes an FCCU shall not cause emissions to the atmosphere from the FCCU that exceed the limits in Table 1 on or after the indicated effectiveness date:

**Table 1 – FCCU Emission Limits**

| Section | Pollutant | Emission Limit | | Effective Date |
|---|---|---|---|---|
| 301.1 | Ammonia | 10 ppmvd at 3% $O_2$ as a daily average | | January 1, 2018 or July 21, 2026, for an owner/operator previously exempt under Section 6-5-115.1 |
| 301.2 | Sulfur Dioxide | 2.1 | 25 ppmvd at 0% $O_2$ on a 365-day rolling average basis; and | July 21, 2026 |
| | | 2.2 | 50 ppmvd at 0% $O_2$ on a 7-day rolling average basis | July 21, 2026 |
| 301.3 | Total $PM_{10}$ | 0.010 gr/dscf at 5% $O_2$ on a rolling four-quarter average basis | | July 21, 2026 |

*(Amended 12/19/2018; 7/21/2021)*

**6-5-400 ADMINISTRATIVE REQUIREMENTS**

**6-5-401** **Ammonia Control Plan and Permit Applications:** No later than January 1, 2017, the owner/operator of a ~~petroleum~~ refinery subject to the ammonia emission limit in Section 6-5-301.1 shall submit to the APCO a control plan detailing the measures, if any, to be taken in order to meet the requirements of Section 6-5-301.1, and also applications for all Authorities to Construct necessary for compliance with Section 6-5-301.1.

*(Amended July 21, 2021)*

**6-5-402** **Ammonia Monitoring Plan:** No later than January 1, 2017, the owner/operator of a ~~petroleum~~ refinery that includes an FCCU subject to the ammonia emission limit in Section 6-5-301 shall submit to the APCO a plan for the installation of an ammonia monitoring system to perform monitoring as required by Section 6-5-501. This plan shall identify the proposed monitoring technique, monitoring equipment, installation details and installation schedule.

**6-5-403** **Ammonia Optimization:** Effective until July 21, 2026, as an alternative to compliance with the ammonia emission limit of Section 6-5-301 per the limited exemption in Section 6-5-115.1,

the owner/operator of a ~~petroleum~~ refinery may instead establish an enforceable ammonia emission limit for the FCCU that results in the minimization of total FCCU $PM_{2.5}$ emissions (including all condensable particulate matter), as follows:

403.1 No later than March 1, 2016, the ~~petroleum~~ refinery owner/operator shall submit to the APCO an Optimization and Demonstration Protocol for the purpose of establishing the minimum rate of ammonia and/or urea injection necessary to minimize total $PM_{2.5}$ FCCU emissions (including all condensable particulate matter) while complying with all existing permit requirements, excluding permit requirements that are not based on District BACT requirements, on District prohibitory rule limits or on federal consent decrees. The Optimization Protocol shall include the ammonia and/or urea injection rates to be evaluated and the criteria for selecting these rates, and also the criteria for determining the Optimized Ammonia Emissions Concentration that minimizes total $PM_{2.5}$ FCCU emissions.

403.2 Within 60 days, the APCO shall either approve or disapprove the Optimization and Demonstration Protocol.

403.3 The ~~petroleum~~ refinery owner/operator shall commence and complete the Optimization and Demonstration Protocol, approved by the APCO, no later than June 30, 2017.

403.4 The ~~petroleum~~ refinery owner/operator shall report to the APCO the results of the Optimization and Demonstration Protocol and the proposed Optimized Ammonia Emissions Concentration no later than August 31, 2017. No later than this same date, the ~~petroleum~~ refinery owner/operator shall submit a District permit application to 1) establish the Optimized Ammonia Emissions Concentration as an enforceable permit requirement, and to 2) relax any existing permit conditions that are not based on District BACT requirements, on District prohibitory rule limits or on federal consent decrees to the extent necessary to minimize total FCCU $PM_{2.5}$ emissions.

403.5 Disapproval of an Optimization and Demonstration Protocol, or a failure to meet any requirement or deadline in this section shall not constitute a violation of this rule, but shall preclude the applicability of the limited exemption in Section 6-5-115.1.

*(Amended July 21, 2021)*

**6-5-404 Reporting Requirements:** The owner/operator of a ~~petroleum~~ refinery that includes an FCCU subject to the requirements in Section 6-5-301 shall submit a written report for each calendar month to the APCO. The report shall be due by the 30th day following the end of the calendar month. The report shall be submitted electronically in an APCO approved format and shall include a summary of the data obtained from the monitoring systems required or source testing conducted pursuant to Sections 6-5-501 and 6-5-503.

*(Adopted July 21, 2021)*

## 6-5-500 MONITORING AND RECORDS

**6-5-501 Ammonia Monitoring:** The owner/operator of a ~~petroleum~~ refinery that includes an FCCU subject to the ammonia emission limit in Section 6-5-301.1 shall, no later than January 1, 2018, operate one of the following:

501.1 A mass-balance monitoring system that includes all of the following:

- 1.1 Parametric monitors that comply with District Regulation 1: General Provisions and Definitions, Section 1-523 to continuously measure the injection or addition rate (pounds per hour) of ammonia, urea or any other nitrogen-based additive into the emission stream, and;
- 1.2 Continuous emission monitors that comply with District Regulation 1: General Provisions and Definitions, Section 1-522 to continuously measure NOx and oxygen concentrations at appropriate locations to allow a calculation of the amount of ammonia and/or urea consumed in NOx-reduction reactions, and therefore the remaining, emitted amount of non-consumed ammonia.

501.2 Any other ammonia emission monitoring system approved in writing by the APCO.

*(Amended July 21, 2021)*

**6-5-502 Sulfur Dioxide Monitoring:** No later than July 21, 2026, the owner/operator of a ~~petroleum~~ refinery that includes an FCCU subject to the sulfur dioxide limits in Section 6-5-301.2 shall

comply with the monitoring requirements of District Regulation 1: General Provisions and Definitions, Sections 1-520 and 1-522.

*(Adopted July 21, 2021)*

**6-5-503** **Total $PM_{10}$ and Total $PM_{2.5}$ Monitoring:** No later than July 21, 2026, the owner/operator of a ~~petroleum~~ refinery that includes an FCCU subject to the Total $PM_{10}$ emission limit in Section 6-5-301.3 shall implement one of the following:

503.1 A source testing protocol that includes, at a minimum, one source test each calendar quarter for Total $PM_{10}$ and Total $PM_{2.5}$ emissions in accordance with the test methods listed in Sections 6-5-604 and 605. During each source test, the owner/operator shall monitor and record, at a minimum, all operating data for the selected operating parameters of the FCCU control equipment, fresh feed rate, and flue gas flow rate.

503.2 Any other Total $PM_{10}$ and Total $PM_{2.5}$ emission monitoring system approved in writing by the APCO.

*(Adopted July 21, 2021)*

**6-5-504** **Records:** The owner/operator of a ~~petroleum~~ refinery subject to the requirements in Section 6-5-301 shall maintain records of the data required to be measured in Sections 6-5-501, 502, and 503. These records shall be kept for a period of at least five years and shall be made available to the APCO on request.

*(Amended July 21, 2021)*

**6-5-600** **MANUAL OF PROCEDURES**

**6-5-601** **Compliance Determination:** All compliance determinations shall be made in the as-found operating condition. Source tests shall meet the requirements set forth in District Manual of Procedures, Volume IV, Source Test Policy and Procedures. No compliance determinations shall be made for the emission limit for ammonia in Section 6-5-301.1 and short-term seven-day rolling average emission limit for sulfur dioxide in Section 6-5-301.2.2 during periods subject to the exemption in Section 6-5-112.

*(Amended July 21, 2021)*

**6-5-602** **Determination of Ammonia and Oxygen:** Determination of ammonia shall be by Regulation 1: General Provisions and Definitions, Section 1-522 NOx monitors or other APCO approved ammonia monitoring systems that have been installed pursuant to Section 6-5-501 and that meet the applicable requirements for ammonia monitoring set forth in the District Manual of Procedures. Determination of oxygen shall be by Regulation 1: General Provisions and Definitions, Section 1-522 oxygen monitor. Compliance with the ammonia limits in Section 6-5-301.1 shall be determined by the monitoring systems that have been installed pursuant to Section 6-5-501.

*(Amended July 21, 2021)*

**6-5-603** **Determination of Sulfur Dioxide:** Compliance with the sulfur dioxide limits in Section 6-5-301.2 shall be determined by a monitoring system that meets the requirements of District Regulation 1: General Provisions and Definitions, Section 1-522.

*(Adopted July 21, 2021)*

**6-5-604** **Determination of Total Particulate Matter 10 Microns or Less in Diameter (Total $PM_{10}$):** Determination of Total $PM_{10}$ shall be by the summation of filterable $PM_{10}$ as measured by EPA Test Method 201A and condensable PM as measured by EPA Test Method 202. Compliance with the Total $PM_{10}$ limit in Section 6-5-301.3 shall be determined by the time-weighted average of all source tests conducted in accordance with the District Manual of Procedures during the previous four calendar quarters.

*(Adopted July 21, 2021)*

**6-5-605** **Determination of Total Particulate Matter 2.5 Microns or Less in Diameter (Total $PM_{2.5}$):** Determination of Total $PM_{2.5}$ shall be by the summation of filterable $PM_{2.5}$ as measured by EPA Test Method 201A and condensable PM as measured by EPA Test Method 202.

*(Adopted July 21, 2021)*

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 1
# GENERAL PROVISIONS

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 1
# GENERAL PROVISIONS

(Adopted January 1, 1980)

**8-1-100 GENERAL**

**8-1-101 Description:** The purpose of this Regulation is to limit the emission of organic compounds to the atmosphere. Certain organic compounds may also be subject to the requirements of Regulations 11 or 12. (Amended March 17, 1982)

**8-1-110 Exemptions:** The following shall be exempted from the provisions of this regulation:

110.1 Any structure designed and used exclusively as a dwelling for not more than two families, provided that this exclusion does not apply to the application of an architectural coating.

110.2 Any internal combustion engine.

110.3 Any operation or group of operations which are related to each other by being a part of a continuous process, or a series of such operations on the same process material, which are subject to Regulation 8, Rule 2 or Rule 4, and for which emissions of organic compounds are reduced at least 85% on a mass basis. Where such reduction is achieved by incineration, at least 90% of the organic carbon shall be oxidized to carbon dioxide.

110.4 Stationary storage tanks having a capacity of less than 1.0 $m^3$ (260 gal.).

110.5 Any stationary storage tank installed prior to January 4, 1967 which is not used for storage of gasoline to be dispensed to internal combustion engine fuel tanks, and is either less than 7.6 $m^3$ (2000 gal.) capacity or an underground tank with an offset fill line.

110.6 Deleted May 4, 1988.

110.7 Any emission of organic compounds where the person responsible for such emission demonstrates to the satisfaction of the APCO that the emission contains ethane and if the ethane were not present the emission would not violate any standard.(Adopted March 17, 1982)

**8-1-200 DEFINITIONS**

**8-1-201 Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.(Amended June 17, 1981, March 17, 1982)

**8-1-202 Organic Liquids:** All precursor organic compounds which contain hydrogen and which would exist as liquids at actual conditions of use or storage.

*(Amended March 17, 1982)*

~~**8-1-203 Petroleum Refinery Complex:** Any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants or other products through distillation of petroleum or through redistillation, cracking, rearrangement or reforming of unfinished petroleum derivatives. (Renumbered March 17, 1982)~~

**8-1-204 Process Unit Turnaround:** Any non-emergency unit shutdown, for the purpose of repair, maintenance or inspection, and subsequent start-up.

*(Renumbered March 17, 1982)*

**8-1-205 Submerged Fill Pipe:** Any discharge pipe or nozzle which meets either of the following conditions:

205.1 Where the tank is filled from the top, the discharge pipe or nozzle is totally submerged when the liquid level is 15 cm.(6 in.) from the bottom of the tank.

205.2 Where the tank is filled from the side, the discharge pipe or nozzle is totally submerged when the liquid level is 45 cm. (18 in.) from the bottom of the tank.

*(Renumbered March 17, 1982)*

**8-1-206** **True Vapor Pressure:** The pressure exerted when an organic liquid is in equilibrium with its own vapor expressed in bars. True vapor pressure may be found by referring to applicable nomographs in American Petroleum Institute Bulletin No. 2517.

*(Renumbered March 17, 1982)*

**8-1-207** **Volatile Organic Compound (VOC):** Any organic compound which would be emitted during use, application, curing or drying of a solvent or surface coating.

*(Amended March 17, 1982;June 15, 1994)*

**8-1-208** **Organic Compound, Non-Precursor:** Methylene chloride, 1,1,1, trichloroethane, 1,1,2 trichlorotrifluoroethane (CFC-113), trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), dichlorotetrafluoroethane (CFC-114), dichlorodifluoromethane (CFC-22) chloropentafluoroethane (CFC-115), 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124), pentafluoroethane (HFC-125), 1,1,2,2-tetrafluoroethane (HFC-134), 1,1,1-trifluoroethane (HFC-134a), 1,1-difluoroethane (HFC-152a), trifluoromethane (CFC-23); and perfluorocarbons which fall into these classes:

(1) Cyclic, branched, or linear completely fluorinated alkanes;
(2) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
(3) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, and
(4) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

*(Adopted March 17, 1982, Amended June 15, 1994)*

**8-1-209** **Deleted June 15, 1994**

**8-1-300** **STANDARDS**

**8-1-320** **Surface Preparation; Clean-up; Coating, Ink, Paint Removal:** Effective August 1, 1988 a person shall not use open containers for the storage or disposal of cloth or paper impregnated with organic compounds that are used for surface preparation, clean-up, or coating, ink, or paint removal. (Adopted May 18, 1988)

**8-1-321** **Closed Containers:** Effective August 1, 1988 a person shall not store spent or fresh organic compounds to be used for surface preparation, clean-up, or coating, ink, or paint removal, in open containers. (Adopted May 18, 1988)

**8-1-322** **Spray Equipment Clean-up Limitation:** Effective August 1, 1988 a person shall not use organic compounds for the clean-up of spray equipment unless equipment for collection of the cleaning compounds and minimizing its evaporation to the atmosphere is used.(Adopted May 18, 1988)

**8-1-600** **MANUAL OF PROCEDURES**

**8-1-601** **Analysis of Sample:** Samples of organic compounds as defined in Subsection 110.6 shall be analyzed for vapor pressure as prescribed in the Manual of procedures, Volume III, Method 13. (Adopted March 17, 1982)

**8-1-602** **Determination of Emissions:** Emissions of organic compounds as specified in Subsection 8-1-110.3 shall be measured as prescribed by any of the following methods: 1) BAAQMD Manual of Procedures, Volume IV, ST-7, 2) EPA Method 25 or 25A, 3) or any other method approved by the APCO. A source shall be considered in violation if the VOC emissions measured by any of the referenced test methods exceed the standards of the rule.

*(Adopted March 17, 1982, Amended June 15, 1994)*

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 5
# STORAGE OF ORGANIC LIQUIDS

**INDEX**

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 5
# STORAGE OF ORGANIC LIQUIDS

(Adopted January 1, 1978)

**8-5-100 GENERAL**

**8-5-101 Description:** The purpose of this rule is to limit emissions of organic compounds from storage tanks.

Note: New storage tanks may also be subject to Regulation 10 and storage tanks located at bulk plants may also be subject to the requirements of Regulation 8, Rule 6 or Rule 33.

*(Amended 9/4/85; 5/4/88; 1/20/93; 10/18/06)*

**8-5-110 Exemptions:** This rule does not apply to emissions from the following sources:

110.1 Storage tanks having a capacity of less than 1.0 $m^3$ (264 gal).

110.2 Any storage tank installed prior to January 4, 1967, which is not used for storage of gasoline to be dispensed to internal combustion engine fuel tanks, and is either of a capacity of less than 7.6 $m^3$ (2,008 gal), or an underground tank with an offset fill line.

110.3 Any above ground gasoline tank of 7.6 $m^3$ (2,008 gal) or less capacity installed and in service prior to January 9, 1976, and equipped with a submerged fill pipe.

*(Amended 5/4/88; 1/20/93; 11/27/02, 10/18/06)*

**8-5-111 Limited Exemption, Tank Removal From and Return to Service:** The requirements of Sections 8-5-304, 305, 306 and 307 shall not apply to storage tanks during or after tank decommissioning, and shall not apply during temporary removal from service provided that the operator complies with the following requirements:

111.1 The operator shall notify the APCO. This notification shall identify the specific requirement for which an exemption is necessary and explain how the planned or performed activities necessarily prevent compliance with those requirements. The notification requirement may be satisfied in one of the following ways:

1.1 Three days prior to such work being done, written notification is received by the APCO; or

1.2 Telephone notification is made to the APCO prior to such work being done, and written notice is received by the APCO within three days after such work has been done.

111.2 The tank is in compliance with all applicable requirements of this rule at the time the notification in Section 8-5-111.1 is made.

111.3 When the floating roof is resting on the leg supports, the process of filling, emptying, and refilling shall be continuous and shall be accomplished as rapidly as possible.

111.4 Vapor recovery shall be used on tanks so equipped during filling and emptying procedures.

111.5 Emissions shall be minimized during the period of exemption. If the tank interior is to be opened to the atmosphere through an access hatch or manway, as much product as possible shall be drained from the tank, and degassing equipment and an associated abatement device shall be connected and operated, as required by Section 8-5-328, as soon as possible.

111.6 Effective January 1, 2007, if the tank operator discovers that the tank is not in compliance with all applicable requirements of this rule during the exemption period, telephone notification shall be made to the APCO within 24 hours of discovery and a written report that describes the non-compliance and any corrective actions taken shall be submitted within 60 days of discovery. This telephone notification and report are not required for tanks that are subject to deviation reporting requirements in a Major Facility Permit issued pursuant to Regulation 2, Rule 6. Notification and reporting are not otherwise required when returning a tank to service.

*(Amended 1/20/93; 12/15/99; 11/27/02; 10/18/06)*

**8-5-112 Limited Exemption, Preventative Maintenance and Inspection of Tanks in Operation:** The requirements of Sections 8-5-304, 305, 306, 307.2, 307.3 and 328 shall not apply to storage tanks during preventative maintenance of a vapor control device, tank roof, roof fitting or tank seal; during primary seal inspection; or during removal and installation of a secondary seal provided that the operator complies with the following requirements:

112.1 The operator shall notify the APCO. This notification shall identify the affected tank and the specific requirement for which an exemption is necessary, shall explain how the planned or performed activities necessarily prevent compliance with those requirements, and shall describe the measures to be taken to minimize emissions. For secondary seal installations, the type of installed seal shall be specified. The notification requirement may be satisfied in one of the following ways:

1.1 Three days prior to such work being done, written notification is received by the APCO; or

1.2 Except for secondary seal replacements, which are subject to Section 8-5-112.1.1, telephone notification is made to the APCO prior to such work being done, and written notice is received by the APCO within three days after such work has been done.

112.2 The tank is in compliance with all applicable requirements of this rule at the time the notification in Section 8-5-112.1 is made.

112.3 Product shall be moved neither in nor out of the storage tank and emissions shall be minimized.

112.4 The time of exemption allowed under this section does not exceed 7 consecutive days.

112.5 Effective January 1, 2007, if the tank operator discovers that the tank is not in compliance with all applicable requirements of this rule during the exemption period, telephone notification shall be made to the APCO within 24 hours of discovery and a written report that describes the non-compliance and any corrective actions taken shall be submitted within 60 days of discovery. This telephone notification and report are not required for tanks that are subject to deviation reporting requirements in a Major Facility Permit issued pursuant to Regulation 2, Rule 6.

112.6 Effective June 1, 2007, the tank operator shall keep the following records for at least 24 months after each use of this exemption:

6.1 The affected tank and the date and duration of the exemption;

6.2 The preventative maintenance, inspection or other activity that was performed;

6.3 The specific standards of this rule for which an exemption was necessary; and

6.4 Actions taken to minimize emissions during the exemption period.

*(Adopted 9/4/85; Amended 5/4/88; 1/20/93; 12/15/99; 11/27/02; 10/18/06)*

**8-5-113 Deleted May 4, 1988**

**8-5-114 Deleted May 4, 1988**

**8-5-115 Deleted May 4, 1988**

**8-5-116 Exemption, Gasoline Storage Tanks at Gasoline Dispensing Facilities:** The provisions of this rule shall not apply to any gasoline storage tank located at a gasoline dispensing facility subject to the requirements of Regulation 8, Rule 7.

*(Adopted 1/20/93; Amended 10/18/06)*

**8-5-117 Limited Exemption, Low Vapor Pressure:** The provisions of this rule, except for Section 8-5-307.3, shall not apply to tanks storing organic liquids with a true vapor pressure of less than or equal to 25.8 mm Hg (0.5 psia) as determined by Sections 8-5-602 or 604.

*(Adopted 1/20/93; Amended 11/27/02; 10/18/06)*

**8-5-118 Limited Exemption, Gas Tight Requirement:** The gas tight requirement of Section 8-5-306.2 shall not apply to tanks at facilities that are subject to the requirements of Regulation 8, Rule 18.

*(Adopted October 18, 2006)*

**8-5-119 Limited Exemption, Repair Period:** A tank operator who has implemented an Enhanced Monitoring Program pursuant to Section 8-5-411 and who discovers equipment that fails to meet a requirement listed in Section 8-5-119.1 shall not be deemed in violation of that requirement, provided the operator complies with all of the conditions listed in Sections 8-5-119.2 and 119.3. The period of such an exemption shall not exceed the amount of time

necessary to meet the requirement in accordance with Section 8-5-119.2.3. An operator shall not be entitled to this exemption for any violation discovered by the APCO during an APCO-initiated inspection.

119.1 The exemption is available only for the following requirements:
- 1.1 Section 8-5-303.1 (good operating condition requirement only), 303.2 (gas tight requirement only);
- 1.2 Sections 8-5-304.4, 304.5, 304.6, 305.5 and 305.6;
- 1.3 Section 8-5-306.2;
- 1.4 Sections 8-5-307.1 and 307.3;
- 1.5 Sections 8-5-320.3, 320.4.2, 320.4.3, 320.5.2 (gaps only), 320.5.3 and 320.6;
- 1.6 Sections 8-5-321.1, 321.3.1, 321.3.2, 321.3.3, and 321.4;
- 1.7 Sections 8-5-322.1, 322.2, 322.3, 322.4, and 322.5.

119.2 The following conditions shall be met for the exemption to be available:
- 2.1 The tank operator shall have implemented an Enhanced Monitoring Program in accordance with Section 8-5-411;
- 2.2 The tank operator shall minimize excess emissions resulting from the failure to meet the requirement as soon as possible, but no later than 8 hours after discovery;
- 2.3 The tank operator shall bring the tank into compliance with the requirement as soon as possible, but no later than 48 hours after discovery;
- 2.4 The tank operator shall not move material into or out of the tank until the tank is in compliance with all applicable requirements, except to the extent necessary to make repairs.

119.3 The tank operator shall submit a report within 60 days of any use of this exemption. The report shall include the following:
- 3.1 the affected tank and the date and duration of the exemption;
- 3.2 the repair or other activity that was performed;
- 3.3 the specific requirements of this rule for which an exemption was necessary; and
- 3.4 actions taken to minimize emissions during the exemption period.

*(Adopted October 18, 2006)*

**8-5-200 DEFINITIONS**

**8-5-201 Deleted October 18, 2006**

**8-5-202 Storage Tank:** Any container, reservoir, or tank used for the storage of organic liquids, excluding tanks that are permanently affixed to mobile vehicles such as railroad tank cars, tanker trucks or ocean vessels.

*(Adopted 9/4/85; Amended 11/27/02; 10/18/06)*

**8-5-203 Deleted November 27, 2002**

**8-5-204 Organic Liquid:** Any organic compound that exists as a liquid at actual conditions of use or storage.

*(Adopted 9/4/85; Amended 1/20/93)*

**8-5-205 Gasoline:** Any distillate, including aviation gasoline and additives, that has a Reid vapor pressure of four (4.0) pounds or greater.

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*(Adopted 9/4/85; Amended 5/4/88, mm/dd/yyyy)*

**8-5-206 Gas Tight:** A concentration of organic compounds of less than 100 ppm (expressed as methane) above background, for any point or item, except for pressure relief devices; and less than 500 ppm (expressed as methane) above background, for pressure relief devices only.

*(Adopted 5/4/88; Amended 1/20/93; 11/27/02; 10/18/06)*

**8-5-207 Approved Emission Control System:** A system for reducing emissions to the atmosphere that consists of a collection system and an abatement device, which is approved in writing by the APCO and achieves the overall abatement efficiency specified in the applicable standards section.

*(Adopted 1/20/93; Amended 11/27/02)*

**8-5-208 Degassing:** The process of removing organic gases from a tank.

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*(Adopted January 20, 1993)*

**8-5-209** **External Floating Roof Tank:** An open top tank with a storage vessel cover consisting of a double deck or pontoon single deck that rests upon and is supported by the liquid being contained.

*(Adopted 1/20/93; Amended 10/18/06)*

**8-5-210** **Internal Floating Roof Tank:** A tank with a floating cover or roof that rests upon or is floated upon the liquid being contained, and that also has a fixed roof on top of the tank shell to shield the floating roof from wind, rain and other elements. An external floating roof tank that has been retrofitted with a geodesic dome or other fixed roof shall be considered to be an internal floating roof tank for the purposes of this rule.

*(Adopted 1/20/93; Amended 11/27/02; 10/18/06)*

**8-5-211** **True Vapor Pressure:** The vapor pressure of a liquid at storage temperature.

*(Adopted 1/20/93; Amended 11/27/02)*

**8-5-212** **Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

*(Adopted January 20, 1993)*

**8-5-213** **Viewport:** An accessible opening in the fixed roof of an internal floating roof tank that measures at least 0.75 meters (30 inches) on each side or at least 0.75 meters (30 inches) in diameter.

*(Adopted January 20, 1993)*

**8-5-214** **Gauge Float**: A device to indicate the level of liquid within a tank. The float rests on the liquid surface inside a well in the tank.

*(Adopted December 15, 1999)*

**8-5-215** **Guidepole:** An anti-rotation device that is fixed to the top and bottom of a tank, passing through a well in a floating roof. Guidepoles may be solid or be equipped with slots or holes for gauging purposes.

*(Adopted December 15, 1999)*

**8-5-216** **Zero Gap Pole Wiper Seal:** A seal with no gap exceeding 0.06 inches between the guidepole or gauge well and pole wiper seal.

*(Adopted December 15, 1999)*

**8-5-217** **Decommissioning:** The removal of all organic liquid and gases from a storage tank with the intent of no longer using the tank for storage of organic liquids or gases.

*(Adopted November 27, 2002)*

**8-5-218** **Stock Change:** The removal of organic liquids from a tank prior to refilling the tank with a different organic liquid.

*(Adopted November 27, 2002)*

**8-5-219** **Tank Cleaning:** The process of washing or rinsing the interior of a storage tank, or removing sludge, or rinsing liquid from a storage tank.

*(Adopted November 27, 2002)*

**8-5-220** **Temporary Removal From Service:** The removal of organic liquid from a storage tank for tank cleaning, stock change, tank repair, roof repair, or removal of contaminated stock, followed by return to service.

*(Adopted November 27, 2002)*

**8-5-221** **Liquid Balancing:** The process of reducing the vapor pressure of the contents of a tank by adding lower-vapor pressure liquid without breaking tank vacuum, and, for floating roof tanks, without landing the floating roof on its supports.

*(Adopted November 27, 2002)*

**8-5-222** **Pressure Relief Device:** Any device that is used to relieve either positive or negative pressure upstream of the device, or both.

*(Adopted October 18, 2006)*

**8-5-223** **Pressure Vacuum Valve:** A type of pressure relief device that is used to control breathing losses from a fixed-roof tank by allowing slight positive or negative pressure variations in a tank while preventing the movement of gas into or out of the tank.

*(Adopted October 18, 2006)*

**8-5-224** **Connection:** Flanged, screwed, or other joined fittings used to connect any piping or equipment.

*(Adopted October 18, 2006)*

**8-5-225** **Good Operating Condition:** A tank component or related equipment is in good operating condition when it operates as designed without visible breaks, cracks or other defects that

result in organic emissions.

*(Adopted October 18, 2006)*

**8-5-226 Emission Minimization:** Emission minimization required in Sections 8-5-119.2.2 means reducing excess emissions caused by violation of a rule standard to the lowest achievable level using best modern practices while maintaining the associated tank in service.

*(Adopted October 18, 2006)*

**8-5-300 STANDARDS**

**8-5-301 Storage Tanks Control Requirements:** A person shall not store organic liquid in any storage tank unless such tank is equipped with a vapor loss control device that is specified by the table below for the tank capacity, or for a higher capacity, and for the true vapor pressure of the tank organic liquid contents, or for a higher true vapor pressure.

| Tank Capacity | True Vapor Pressure of Tank Organic Contents | | |
|---|---|---|---|
| | >0.5 to ≤1.5 psia | >1.5 to <11 psia | ≥ 11 psia |
| ≥1.0 $m^3$ to ≤37.5 $m^3$ (≥264 gallons to ≤9,906 gallons) | Submerged fill pipe | Submerged fill pipe (underground tank or aboveground non-gasoline tank), pressure vacuum valve, internal or external floating roof | Pressure tank or approved emission control system |
| >37.5 $m^3$ to <75 $m^3$ (>9,906 gallons to <19,803 gallons) | Submerged fill pipe | Submerged fill pipe (underground tank), pressure vacuum valve, internal or external floating roof | Pressure tank or approved emission control system |
| ≥75 $m^3$ to <150 $m^3$ (≥19,803 gallons to <39,626 gallons) | Submerged fill pipe | Internal or external floating roof | Pressure tank or approved emission control system |
| ≥150 $m^3$ (≥39,626 gallons) | Internal or external floating roof | Internal or external floating roof | Pressure tank or approved emission control system |

*(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; 12/15/99; Amended, Renumbered 11/27/02; Amended 10/18/06)*

**8-5-302 Requirements for Submerged Fill Pipes:** A submerged fill pipe required by Section 8-5-301 must meet either of the following requirements:

302.1 Where the tank is filled from the top, the end of the discharge pipe or nozzle must be totally submerged when the liquid level is 15 cm (6 in.) from the bottom of the tank.

302.2 Where the tank is filled from the side, the discharge pipe or nozzle must be totally submerged when the liquid level is 46 cm (18 in.) from the bottom of the tank.

*(Adopted 9/4/85; Amended, Renumbered 11/27/02; Amended 10/18/06)*

**8-5-303 Requirements for Pressure Vacuum Valves:** A pressure vacuum valve required by Section 8-5-301 must meet the following requirements:

303.1 The pressure vacuum valve must be set to either at least 90% of the tank's maximum allowable working pressure, or at least 25.8 mm Hg (0.5 psig), and the valve must be in good operating condition.

303.2 The pressure vacuum valve sealing mechanism must remain in a gas tight condition except when operating pressure exceeds the valve set pressure, or except when the sealing mechanism is vented to a vapor recovery or disposal system that has an overall abatement efficiency of at least 95% by weight.

*(Amended 9/4/85; 5/4/88; 1/20/93; Amended, Renumbered, 11/27/02; Amended 10/18/06)*

**8-5-304 Requirements for External Floating Roof Tanks:** An external floating roof required by

Section 8-5-301 must meet the following requirements:

304.1 The floating roof fittings must meet the requirements of Section 8-5-320.

304.2 The floating roof must be equipped with a primary seal that meets the requirements of Section 8-5-321.

304.3 The floating roof must be equipped with a secondary seal that meets the requirements of Section 8-5-322.

304.4 The floating roof must rest on the surface of the liquid tank contents and must be in good operating condition. There shall be no liquid tank contents on top of either the primary or secondary seal, or on top of the floating roof (this requirement does not apply to liquid that clings to the inside tank walls as the tank is drained, or to liquid that drips from the tank walls onto the seals).

304.5 The tank shell must be in good operating condition with no liquid leakage through the shell.

304.6 An external floating roof tank shall not be operated with organic liquid tank contents in any tank pontoon unless the following conditions are met:

6.1 Within 48 hours of discovery of organic liquid in a pontoon, all lids or other openings on the affected pontoon shall be sealed and maintained in a gas tight condition; and

6.2 The next time the tank is removed from service, repairs shall be made on all pontoon leaks on that tank.

*(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; Amended, Renumbered 11/27/02; Amended 10/18/06)*

**8-5-305 Requirements for Internal Floating Roof Tanks:** An internal floating roof required by Section 8-5-301 must meet the following requirements:

305.1 For a tank with seals installed on or before February 1, 1993, the tank must be equipped with one of the following:

1.1 A liquid mounted primary seal, mounted in full contact with the liquid in the annular space between the tank shell and floating roof,

1.2 A metallic shoe primary seal, or

1.3 A vapor mounted primary and a secondary seal

If sections of seal with a total length equal to or greater than the diameter of the tank are replaced at one time, or if sections of seal with a total cumulative length equal to or greater than 50% of the total seal circumference are replaced over time, then the seal shall be considered to be newly installed and subject to Section 8-5-305.2.

305.2 For a tank with seals installed after February 1, 1993, the tank must be equipped with a liquid mounted or metallic shoe primary seal that meets the requirements of Section 8-5-321 and a secondary seal that meets the requirements of Section 8-5-322.

305.3 Internal floating roof tanks that are placed into service or de-gassed after February 1, 1993 shall be equipped with at least 3 viewports in the fixed roof of the tank. This requirement shall not apply to external floating roof tanks retrofitted with domes or other fixed roofs after February 1, 1993, as long as the dome consists of translucent panels through which sufficient light passes to allow inspection of the floating roof seal.

305.4 The floating roof fittings must meet the requirements of Section 8-5-320.

305.5 The floating roof must rest on the surface of the liquid tank contents and must be in good operating condition. There shall be no liquid tank contents on top of either the primary or secondary seal, or on top of the floating roof (this requirement does not apply to liquid that clings to the inside tank walls as the tank is drained, or to liquid that drips from the tank walls onto the seals).

305.6 The tank shell must be in good operating condition with no liquid leakage through the shell.

*(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; Amended, Renumbered 11/27/02; Amended 10/18/06)*

**8-5-306 Requirements for Approved Emission Control Systems:** An Approved Emission Control System required by Section 8-5-301 must meet the following requirements:

306.1 It must provide an abatement efficiency of at least 95% by weight, based on a comparison of controlled emissions to those emissions which would occur from a fixed

or cone roof tank in the same product service without an approved emission control system, expressed as a percentage. Baseline emissions shall be calculated using the criteria in API Bulletin 2518

306.2 It must be gas tight.

*(Amended 1/20/93; Amended, Renumbered 11/27/02; Amended 10/18/06)*

**8-5-307 Requirements for Fixed Roof Tanks, Pressure Tanks and Blanketed Tanks:**

307.1 Fixed roof tank shells and pressure tank shells must be in good operating condition with no liquid leakage through the shell.

307.2 A pressure tank must maintain working pressures sufficient at all times to prevent organic vapor or gas loss to the atmosphere.

307.3 The sealing mechanism on pressure relief devices located on pressure tanks and on tanks blanketed with organic gases other than natural gas shall be maintained in a gas tight condition except when operating pressure exceeds the valve set pressure, or except when the sealing mechanism is vented to a vapor recovery or disposal system that has an overall abatement efficiency of at least 95% by weight.

*(Adopted 9/4/85; Amended 5/4/88; 1/20/93; Amended, Renumbered 11/27/02; Amended 11/18/06)*

**8-5-310 Deleted May 4, 1988**

**8-5-311 Deleted November 27, 2002**

**8-5-312 Deleted January 20, 1993**

**8-5-313 Deleted January 20, 1993**

**8-5-314 Deleted January 20, 1993**

**8-5-320 Floating Roof Tank Fitting Requirements:** The fittings on any floating roof storage tank subject to Section 8-5-304 or 305 shall meet the following conditions:

320.1 Deleted November 27, 2002.

320.2 All openings through the floating roof, except pressure relief devices, shall provide a projection below the liquid surface to prevent belching of liquid and reduce escaping organic vapors.

320.3 All openings through the floating roof, except floating roof legs, shall be equipped with a gasketed cover, seal or lid, which shall meet either of the following requirements, as applicable, except as provided in Sections 8-5-320.4, 320.5 or 320.6.

3.1 The gasketed cover, seal or lid shall have no measurable gap exceeding 0.32 cm (1/8 in.), except when the opening is in use.

3.2 For inaccessible openings on internal floating roof tanks, there shall be no visible gaps as viewed from the fixed roof manway or viewports, except when the opening is in use.

320.4 Solid sampling or gauging wells, and similar fixed projections through a floating roof such as an anti-rotational pipe, shall meet the following conditions:

4.1 The well shall provide a projection below the liquid surface.

4.2 The well shall be equipped with a cover, seal or lid, which shall at all times be in a closed position with no gap exceeding 0.32 cm (1/8 in.), except when the well is in use.

4.3 The gap between the well and the roof shall be added to the gaps measured to determine compliance of the secondary seal and in no case shall exceed 1.3 cm (1/2 in.).

320.5 Slotted sampling or gauging wells, and similar fixed projections through a floating roof such as an anti-rotational pipe, shall meet the following conditions:

5.1 The well shall provide a projection below the liquid surface.

5.2 The well on an external floating roof shall be equipped with the following: a sliding cover, a cover gasket, a pole sleeve, pole wiper and an internal float and float wiper designed to minimize the gap between the float and the well, provided that the gap shall in no case exceed 1.3 cm (1/2 in.), or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface.

5.3 The gap between the well and the roof shall be added to the gaps measured to determine compliance of the secondary seal and in no case shall exceed 1.3 cm (1/2 in.).

320.6 Any emergency roof drain shall be provided with a slotted membrane fabric cover, or equivalent, that covers at least 90% of the area of the opening.

*(Amended 9/4/85; 5/4/88; 1/20/93; 12/15/99; 11/27/02; 10/18/06)*

**8-5-321 Primary Seal Requirements:** A person shall not operate a storage tank equipped with a primary seal subject to the requirements of Section 8-5-304 or 305 unless such tank meets the following conditions:

321.1 There shall be no holes, tears, or other openings in the primary seal fabric that allow the emission of organic vapors.

321.2 The seal shall be either a metallic shoe or a liquid mounted type, except as provided in Section 8-5-305.1.3.

321.3 Metallic-shoe-type seals shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 61 cm (24 in.) for external floating roofs and 18 inches for internal floating roofs above the stored liquid surface. Measurements of the gap between tank shell and seals shall be made around the full circumference of the tank, and measured gaps shall meet the following requirements:

3.1 The geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least 46 cm (18 in.) in the vertical plane above the liquid surface.

3.2 For welded tanks, no gap between the tank shell and the primary seal shall exceed 3.8 cm (1-1/2 in.). No continuous gap greater than 0.32 cm (1/8 in.) shall exceed 10% of the circumference of the tank. The cumulative length of all primary seal gaps exceeding 1.3 cm (1/2 in.) shall be not more than 10% of the circumference, and the cumulative length of all primary seal gaps exceeding 0.32 cm (1/8 in.) shall be not more than 40% of the circumference.

3.3 For riveted tanks, no gap between the tank shell and the primary seal shall exceed 6.4 cm (2-1/2 in.). The cumulative length of all primary seal gaps exceeding 3.8 cm (1-1/2 in.) shall be not more than 10% of the circumference.

321.4 For resilient-toroid-seal equipped tanks, no gap between the tank shell and the primary seal shall exceed 1.3 cm (1/2 in.). The cumulative length of all gaps exceeding 0.32 cm (1/8 in.) shall be not more than 5% of the circumference. Measurements of the gap shall be made around the full circumference of the tank.

*(Amended 1/20/93; 12/15/99; 11/27/02; 10/18/06)*

**8-5-322 Secondary Seal Requirements:** A person shall not operate a storage tank equipped with a secondary seal subject to the requirements of Sections 8-5-304 or 305, unless such tank meets the following requirements. In determining compliance with seal gap requirements, measurements of the gap between tank shell and seals shall be made around the full circumference of the tank.

322.1 There shall be no holes, tears, or other openings in the secondary seal fabric that allow the emission of organic vapors.

322.2 The secondary seal shall allow easy insertion of probes up to 3.8 cm (1-1/2 in.) in width in order to measure gaps in the primary seal.

322.3 No gap between the tank shell and the secondary seal shall exceed 1.3 cm (1/2 in.). The cumulative length of all secondary seal gaps exceeding 0.32 cm (1/8 in.) shall be not more than 5% of the circumference of the tank.

322.4 For riveted tanks, the secondary seal shall consist of at least two sealing surfaces, such that the sealing surfaces prevent the emission of organic compounds around the rivets. Serrated sealing surfaces are allowable if the length of serration does not exceed 15.2 cm (6 in.).

322.5 For welded external floating roof tanks with seals installed after September 4, 1985 or welded internal floating roof tanks with seals installed after February 1, 1993, no gap between the tank shell and the secondary seal shall exceed 1.5 mm (0.06 in.). The cumulative length of all secondary seal gaps exceeding 0.5 mm (0.02 in.) shall be not more than 5% of the circumference of the tank excluding gaps less than 5 cm (1.79 in.) from vertical weld seams. If sections of seal with a total length equal to or greater

than the diameter of the tank are replaced at one time, or if sections of seal with a total cumulative length equal to or greater than 50% of the total seal circumference are replaced over time, then the seal shall be considered to be newly installed for the purpose of this section.

322.6 The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal.

*(Amended 1/20/93; 11/27/02; 10/18/06)*

**8-5-323 Deleted January 20, 1993**

**8-5-324 Deleted January 20, 1993**

**8-5-325 Deleted January 20, 1993**

**8-5-326 Deleted May 4, 1988**

**8-5-327 Deleted May 4, 1988**

**8-5-328 Tank Degassing Requirements:** A tank operator shall not open the interior vapor space of a tank subject to this rule to the atmosphere through a hatch or manway, except to connect or disconnect degassing equipment or to conduct tank contents or emissions sampling, unless such tank meets the following conditions:

328.1 For tanks larger than 75 $m^3$, the emissions of organic compounds resulting from degassing shall be controlled by an abatement device that collects and processes all organic vapors and gases and has an abatement efficiency of at least 90% by weight. The system shall be operated until the concentration of organic compounds in the tank is less than 10,000 ppm expressed as methane. In order to satisfy this requirement, effective June 1, 2007, the residual organic concentration must be measured to be less than 10,000 ppm as methane for at least four consecutive measurements performed at intervals no shorter than 15 minutes each.

328.2 For all tanks subject to this rule, tank degassing shall not commence after the District predicts an excess of the Federal or State Ambient Air Quality Standard for ozone for the following day, unless emissions resulting from degassing are controlled as required by Section 8-5-328.1.

328.3 Effective June 1, 2007, the tank operator shall provide written notification that is received by the APCO at least 3 days before the start of a degassing operation that is subject to this rule. However, where degassing must be performed on an emergency basis, telephone notification shall be made to the APCO within 8 hours of commencing degassing. This notification shall identify the tanks to be degassed, including their location and the liquid stored in the tanks, the nature of the emergency, and the time and date degassing will commence.

*(Adopted 1/20/93; Amended 11/27/02; 10/18/06)*

**8-5-329 Deleted November 27, 2002**

**8-5-330 Deleted November 27, 2002**

**8-5-331 Tank Cleaning Requirements:** Effective June 1, 2007, tank interior cleaning agents must meet the following requirements, unless all organic vapors and gases emitted during tank cleaning are collected and processed at an abatement device that has an abatement efficiency of at least 90% by weight.

331.1 Agents used to clean tank interiors shall have an initial boiling point greater than 302 degrees F, a true vapor pressure less than 0.5 psia, or a VOC content less than 50 grams per liter.

331.2 Except as allowed in Section 8-5-331.3, steam shall not be used to clean tank interiors at facilities that operate wastewater treatment facilities.

331.3 Steam may be used to remove scale or film from tank interior surfaces only after routine tank cleaning, including sludge removal, has been completed.

*(Adopted October 18, 2006)*

**8-5-332 Sludge Handling Requirements:** Effective June 1, 2007, the operator of a tank shall place sludge removed from that tank directly into a sludge container that meets the following requirements. This section applies to sludge removed from any tank that was subject to the requirements of this rule at any time since it was last put into service.

332.1 The sludge container shall allow no liquid leakage.

332.2 The sludge container shall have no measurable gap exceeding 1.3 cm (1/2 in.) except

when the container is being loaded or unloaded, and except during sludge sampling or treatment.

*(Adopted October 18, 2006)*

**8-5-400 ADMINISTRATIVE REQUIREMENTS**

**8-5-401 Inspection Requirements for External Floating Roof Tanks:** Tanks subject to the requirements of Section 8-5-304 shall be inspected by the operator as follows:

401.1 The entire circumference of each primary and secondary seal shall be inspected for compliance with the requirements of Sections 8-5-321 and 8-5-322 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411. If a new primary or secondary seal is installed, or if a primary or secondary seal is repaired, both seals shall be inspected at the time of the seal installation or repair. Flexible wiper seals shall be inspected when the outer edge of the seal is curved upward.

401.2 Tank fittings shall be inspected for compliance with the requirements of Section 8-5-320 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411.

*(Amended 1/20/93; Amended, Renumbered 11/27/02; Amended 10/18/06)*

**8-5-402 Inspection Requirements for Internal Floating Roof Tanks:** Tanks subject to the requirements of Section 8-5-305 shall be inspected by the operator as follows:

402.1 The entire circumference of each primary and secondary seal shall be inspected for compliance with the requirements of Sections 8-5-321 and 8-5-322. The time between inspections shall not exceed 10 years. If a new primary or secondary seal is installed, or if a primary or secondary seal is repaired, both seals shall be inspected at the time of the seal installation or repair. Flexible wiper seals shall be inspected when the outer edge of the seal is curved upward.

402.2 The entire circumference of the outermost seal (secondary seal where so equipped, or primary seal where no secondary seal is required) shall be visually inspected for compliance with the requirements of Sections 8-5-305.1, 8-5-305.2, 8-5-305.3, 8-5-321.1 and 8-5-322.1 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411. Flexible wiper seals shall be inspected when the outer edge of the seal is curved upward.

402.3 Tank fittings shall be inspected for compliance with the requirements of Section 8-5-320 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411. Standards involving gap measurements shall be checked whenever the tank roof is accessible, but need not be checked more frequently than twice per calendar year, or 4 times per calendar year for tanks subject to enhanced monitoring pursuant to Section 8-5-411.

*(Amended 1/20/93; Amended, Renumbered 11/27/02; Amended 10/18/06)*

**8-5-403 Inspection Requirements for Pressure Relief Devices:** Pressure relief devices, including pressure vacuum valves, shall be inspected by the tank operator for compliance with the following requirements twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411:

403.1 Pressure vacuum valves: gas tight standards in Section 8-5-303.

403.2 Effective June 1, 2007, for all pressure relief devices except pressure vacuum valves: gas tight standard in Section 8-5-307.3.

*(Adopted 11/27/02; Amended 10/18/06)*

**8-5-404 Inspection, Abatement Efficiency Determination and Source Test Reports:** Within 60 days of any inspection, abatement efficiency determination or source test required by this rule, a report shall be submitted to the APCO that certifies compliance with each individual requirement associated with the inspection, abatement efficiency determination or source test,

and that includes data, supported by necessary calculations, to support this certification.

*(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; 11/27/02; 10/18/06)*

**8-5-405 Deleted October 18, 2006**

**8-5-410 Deleted May 4, 1988**

**8-5-411 Enhanced Monitoring Program**: The operator of a tank that is subject to this rule may implement an Enhanced Monitoring Program by complying with all of the following:

411.1 The tank operator shall submit to the APCO a list of all tanks at a facility that are subject to this rule, and the capacity of each tank. At least 25% of these tanks, but no less than 1 tank at each facility, shall be selected by the operator for enhanced monitoring. The selected tanks shall constitute at least 20% of the total tank capacity at the facility that is subject to this rule. Only external floating roof tanks may be selected for enhanced monitoring unless there are not enough to constitute 25% of the total number of tanks. In this case, other tank types may be selected as necessary to constitute the required number. All tanks selected for enhanced monitoring must be subject to Section 8-5-401, 402 or 403.

411.2 An Enhanced Monitoring Program shall go into effect at a facility after the APCO determines that the criteria in Section 411.1 are satisfied. The specific tanks selected by the operator for enhanced monitoring may be changed at any time by the operator upon written notification to the APCO provided that the criteria in Section 8-5-411.1 continue to be satisfied. An Enhanced Monitoring Program may be discontinued at any time by the operator upon written notification to the APCO.

411.3 The operator shall perform enhanced monitoring as specified in Sections 8-5-401, 402 and 403.

*(Adopted October 18, 2006)*

**8-5-412 Monitoring of Leaking Pontoons**: The operator of a floating roof tank on which a leaking pontoon has been discovered shall inspect the lids and other openings on any leaking pontoon for compliance with the requirements of Section 8-5-304.6.1 once per calendar quarter beginning the quarter after the leaking pontoon is discovered until a repair of the leak is completed.

*(Adopted October 18, 2006)*

**8-5-500 MONITORING AND RECORDS**

**8-5-501 Records:**

501.1 A person who operates a tank subject to this rule shall keep an accurate record of the type and amount of liquids stored, type of blanket gases used, and the true vapor pressure ranges of such liquids and gases. These records shall be kept for at least 24 months.

501.2 For internal and external floating roof tanks, a tank operator who replaces all or part of a primary or secondary seal shall keep an accurate record of the length of seal replaced and the date(s) on which replacement occurred. These records shall be kept for at least 10 years.

501.3 Unless otherwise specified, the tank operator shall retain all records required by this rule, and shall retain copies of any report, notification or other submittal required by this rule for at least 24 months.

501.4 The tank operator shall keep engineering data sheets showing setpoints for pressure vacuum valves installed after June 1, 2007.

*(Amended 1/20/93; 11/27/02; 10/18/06)*

**8-5-502 Source Test Requirements:** Any tank operator who uses an Approved Emission Control System or other abatement device to comply with the requirements of this rule shall perform a source test as specified in this section. Source testing, including prior notification of the District, shall be performed in accordance with the Manual of Procedures, Volume IV. This section does not apply to any device that collects all emissions and vents them to a fuel gas collection system for combustion, or to any device that is subject to periodic source testing in accordance with a District permit to operate.

502.1 A tank operator using an Approved Emission Control System or other abatement

device to comply with the requirements of Sections 8-5-303.2, 306.1 or 307.3 shall perform a source test on the system verifying operation at the required abatement efficiency at least once in any calendar year in which the system is used to comply with this rule.

502.2 A tank operator using an abatement device to comply with the requirements of Sections 8-5-328.1 or 331 shall:

2.1 Demonstrate that a source test on the system verifying operation at the required abatement efficiency was completed within the 12 months prior to the operator's commencement of use and shall maintain a complete copy of the source test report; or

2.2 Perform such a source test during the operation in question.

*(Adopted 1/20/93; Amended 11/27/02; 10/18/06)*

**8-5-503 Deleted October 18, 2006**

**8-5-600 MANUAL OF PROCEDURES**

**8-5-601 Analysis of Samples, Reid Vapor Pressure**: Samples of organic compounds as specified in this rule shall be analyzed for Reid vapor pressure as prescribed in the Manual of Procedures, Volume III, Lab Method 13 or any other method approved by the APCO.

*(Amended 9/4/85; 5/4/88; 10/18/06)*

**8-5-602 Analysis of Samples, True Vapor Pressure:** Samples of organic compounds not listed in Table I shall be analyzed for true vapor pressure at the tank storage temperature as prescribed in the Manual of Procedures, Volume III, Lab Method 28 or any other method approved by the APCO.

*(Adopted 9/4/85; Amended 5/4/88; 10/18/06)*

**8-5-603 Determination of Abatement Efficiency:** Abatement efficiency of an Approved Emission Control System or other abatement device as specified in Section 8-5-502 shall be determined as prescribed in the Manual of Procedures, Volume IV, ST-7 or any other method approved by the APCO. For Approved Emission Control Systems subject to Section 8-5-306.1 only, baseline emissions shall be determined as specified in Section 8-5-306.1.

*(Renumbered 9/4/85; Amended 1/20/93; 11/27/02; 10/18/06)*

**8-5-604 Determination of Applicability Based on True Vapor Pressure**: Table I shall be used to determine if a storage tank is subject to the requirements of this rule. For organic compounds not listed in Table I, refer to Sections 8-5-601 or 602.

*(Adopted 9/4/85; Amended 5/4/88; 1/20/93; 10/18/06)*

**8-5-605 Deleted October 18, 2006**

**8-5-605 Measurement of Leak Concentrations and Residual Concentrations:** Determination of organic compound concentrations shall be conducted as follows:

605.1 Any instrument used for the measurement of organic compound concentration shall be a combustible gas indicator that meets the specifications and performance criteria of and has been calibrated in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A).

605.2 Measurements of organic compound concentration, except as otherwise specified, shall be conducted in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A). Measurements of residual organic concentration required by Section 8-5-328.1 shall be measured with the instrument probe inlet placed at least 12 inches above the bottom of the tank and above the surface of any sludge material on the bottom of the tank, and at least 12 inches inside the tank measured from the inner surface of the tank wall.

*(Adopted 1/20/93; Amended 11/27/02; 10/18/06)*

**8-5-606 Analysis of Samples, Tank Cleaning Agents**

606.1 Initial boiling point shall be determined in accordance with ASTM D-1078-93, or by an alternate method approved in writing by the APCO and U.S. EPA.

606.2 True vapor pressure shall be determined in accordance with the Manual of Procedures, Volume III, Method 28, or by an alternate method approved in writing by the APCO and U.S. EPA.

606.3 VOC content shall be determined in accordance with the Manual of Procedures, Volume III, Method 31, or by an alternate method approved in writing by the APCO and U.S. EPA.

*(Adopted October 18, 2006)*

**TABLE I***

**STORAGE TEMPERATURE VERSUS TRUE VAPOR PRESSURE (TVP)**

| | Density (lb/gal) | Reference Gravity API | IBP °F | Max. Temp. °F Not to Exceed 0.5 Psia TVP | Max. Temp. °F Not to Exceed 1.5 Psia TVP |
|---|---|---|---|---|---|
| **Crude Oils:*** | | - | - | - | - |
| San Joaquin Valley | - | - | 390 | 249 | - |
| **Middle Distillates:** | | | | | |
| Kerosene | - | 42.5 | 350 | 195 | 250 |
| Diesel | - | 36.4 | 372 | 230 | 290 |
| Gas Oil | - | 26.2 | 390 | 249 | 310 |
| Stove Oil | - | 23 | 421 | 275 | 340 |
| **Jet Fuels:** | | | | | |
| JP-1 | - | 43.1 | 330 | 165 | 230 |
| JP-3 | - | 54.7 | 110 | - | 25 |
| JP-4 | - | 51.5 | 150 | 20 | 68 |
| JP-5 | - | 39.6 | 355 | 205 | 260 |
| JP-7 | - | 44-50 | 360 | 205 | 260 |
| **Fuel Oil:** | | | | | |
| No. 1 | - | 42.5 | 350 | 195 | 250 |
| No. 2 | - | 36.4 | 372 | 230 | 290 |
| No. 3 | - | 26.2 | 390 | 249 | 310 |
| No. 4 | - | 23 | 421 | 275 | 340 |
| No. 5 | - | 19.9 | 560 | 380 | 465 |
| No. 6 | - | 16.2 | 625 | 450 | - |
| **Asphalts:** | | | | | |
| 60-100 pen. | - | - | - | 490 | 550 |
| 120-150 pen. | - | - | - | 450 | 500 |
| 200-300 pen. | - | - | - | 360 | 420 |
| **Organic Compounds:** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Acetone | 6.6 | 47 | 133 | - | 35 |
| Acrylonitrile | 6.8 | 41.8 | 173 | 30 | 62 |
| Benzene | 7.4 | 27.7 | 176 | 34 | 70 |
| Carbon Disulfide | 10.6 | 22.1 | 116 | - | 10 |
| Carbon Tetrachloride | 13.4 | - | 170 | 20 | 63 |
| Chloroform | 12.5 | - | 142 | - | 40 |
| Cyclohexane | 6.5 | 49.7 | 177 | 30 | 65 |
| 1,2 Dichloroethane | 10.5 | - | 180 | 35 | 75 |
| Ethyl Acetate | 7.5 | 23.6 | 171 | 38 | 70 |
| Ethyl Alcohol | 6.6 | 47.0 | 173 | 55 | 85 |
| Isopropyl Alcohol | 6.6 | 47.0 | 181 | 62 | 95 |
| Methyl Alcohol | 6.6 | 47.0 | 148 | 30 | 62 |
| Methyl Ethyl Ketone | 6.7 | 44.3 | 175 | 30 | 70 |
| Toluene | 7.3 | 30 | 231 | 75 | 120 |
| Vinylacetate | 7.8 | 19.6 | 163 | 30 | 65 |

* True vapor pressure for crude oils should be determined from the specific crude slate.

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 6
# ORGANIC LIQUID BULK TERMINALS AND BULK PLANTS

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 6
# ORGANIC LIQUID BULK TERMINALS AND BULK PLANTS

**8-6-100 GENERAL**

**8-6-101 Description:** The purpose of this rule is to limit emissions of organic compounds as defined in Section 8-6-207 from transfer operations at non-gasoline organic liquid bulk terminals and bulk plants. (Amended March 17, 1982; February 2, 1994)

**8-6-110 Exemption, Low Vapor Pressure Organic Liquids:** Until December 1, 1994, the requirements in this Rule shall not apply to loading or delivery of any organic liquid having a true vapor pressure less than 77.5 mmHg (1.5 psia). After December 1, 1994, the requirements of this Rule shall not apply to loading and delivery of any organic liquid having a true vapor pressure less than 25.8 mmHg (0.5 psia), as determined by the methods specified in Sections 8-6-603 or 604.

*(Amended February 2, 1994)*

**8-6-111 Exemption, Low Throughput:** The vapor recovery requirements of subsection 8-6-302.1 do not apply when the total annual throughput of organic liquids with at least 77.5 mmHg (1.5 psia) true vapor pressure transferred into delivery vehicles only is less than 2,271 cubic meters (600,000 gallons) on a facility-wide basis.

*(Amended February 2, 1994)*

**8-6-112 Deleted February 2, 1994**

**8-6-113 Deleted February 2, 1994**

**8-6-114 Exemption, Maintenance and Repair:** The requirements of Section 8-6-306 shall not apply to spills resulting from maintenance or repair operations provided proper operating practices are employed to minimize evaporation of organic compounds into the atmosphere.

**8-6-115 Exemption, Bulk Gasoline Distribution Facilities:** Gasoline bulk terminals and bulk plants are not subject to the requirements of this rule. Such facilities are subject to the provisions of Regulation 8, Rules 33 or 39.

*(Adopted November 30, 1983; Amended February 2, 1994)*

**8-6-116 Exemption, Small Transportable Containers:** The requirements of subsection 8-6-302.2 shall not apply to loading organic liquids into any transportable container with a capacity less than 0.114 cubic meters (30 gallons). (Amended February 2, 1994)

**8-6-117 Exemption, Liquefied Organic Gases:** The requirements of this rule do not apply to transfer operations involving liquefied organic gases such as liquefied petroleum gas (LPG) and halogenated gases. (Amended February 2, 1994)

**8-6-200 DEFINITIONS**

**8-6-201 Bulk Plant:** Until December 1, 1994, any storage and distribution facility that receives organic liquid by pipeline, railcar, and/or delivery vehicle; stores it in stationary tanks; and/or mixes it in blending tanks; and/or loads it into delivery vehicles or transportable containers, for delivery to distributors, marketers or any product end user; and which has an annual throughput of not more than 22,710 cubic meters (6,000,000 gallons). After December 1, 1994, the annual throughput shall include organic liquids of at least 25.8 mmHg (0.5 psia) true vapor pressure.

*(Amended July 2, 1980; February 2, 1994)*

**8-6-202 Deleted February 2, 1994**

**8-6-203 Submerged Fill Pipes:** Any discharge pipe, lance, or nozzle which meets either of the following conditions:

203.1 Where the vessel is filled from the top, the end of the discharge pipe or nozzle must be submerged when the liquid level is 15 centimeters (6 inches) from the bottom of the vessel. When the vessel is filled from the top with a retractable lance, the lance shall remain below the liquid surface during the transfer operation.

203.2 Where the vessel is filled from the side, the discharg pipe or nozzle must be totally

submerged when the liquid level is 46 centimeters (18 inches) from the bottom of the vessel.

*(Renumbered March 17, 1982; Amended February 2, 1994)*

**8-6-204** **Bulk Terminal:** Until December 1, 1994, any storage and distribution facility that receives organic liquid; stores it in stationary tanks; and/or mixes it in blending tanks; and/or loads it into delivery vehicles and transportable containers, for delivery to distributors, marketers or any product end user; and which has an annual throughput of more than 22,710 cubic meters (6,000,000 gallons). After December 1, 1994, the annual throughput shall include organic liquids of at least 25.8 mmHg (0.5 psia) true vapor pressure.(Renumbered March 17, 1982; Amended February 2, 1994)

**8-6-205** **True Vapor Pressure:** The pressure exerted when an organic liquid is in equilibrium with its own vapor at 25°C (77°F). For liquid mixtures, true vapor pressure is the sum of the equilibrium partial pressures exerted by all organic compounds in the liquid and can be estimated using Raoult's Law as follows:

$$P^* = \sum_{i=1}^{n} \frac{\frac{(w_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where:

$W_i$ = Weight of the "i"th organic compound, in grams

$W_W$ = Weight of water, in grams

$MW_i$ = Molecular weight of the "i"th organic compound, in grams/gram-mole

$MW_W$ = Molecular weight of water, in grams/gram-mole

$P^*$ = True vapor pressure of liquid mixture at 25°C, in mmHg

$VP_i$ = Vapor pressure of the "i"th organic compound at 25°C, in mmHg

For organic liquids and organic liquid mixtures to which heat is applied, the true vapor pressure shall be determined at 25°C (77°F) or the actual loading temperature, whichever is higher.

*(Renumbered March 17, 1982; Amended February 2, 1994)*

**8-6-206** **Vapor Tight:** A leak less than 100 percent of the Lower Explosive Limit on a portable hydrocarbon detector measured at a distance of 1 centimeter from the source.

*(Renumbered March 17, 1982; Amended February 2, 1994)*

**8-6-207** **Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides of carbonates, and ammonium carbonate.(Adopted February 2, 1994)

**8-6-208** **Loading Equipment:** Any combination of loading arms, pumps, flexible hosing, dispensing nozzles, meters, and other piping and valves necessary to fill delivery vehicles or transportable containers with organic liquids. (Adopted February 2, 1994)

**8-6-209** **Organic Liquid:** Any organic compound or mixture of organic compounds that exists in the liquid phase at actual loading conditions. For the purposes of this rule, organic liquids shall not include coatings, adhesives and sealants.

*(Adopted February 2, 1994)*

**8-6-210** **Transportable Containers:** Any portable enclosed vessel such as a tote tank or cylindrical drum, which contains 550 gallons or less and is used to transport and distribute organic liquids. (Adopted February 2, 1994)

**8-6-211** **Leak Free:** An organic liquid leak not exceeding three drops per minute excluding losses which occur upon disconnecting transfer fittings. Such disconnect losses shall not exceed 10 milliliters (ml) during a bottom loading operation or no more than two milliliters (ml) during a top loading operation, averaged over three disconnects.

*(Adopted February 2, 1994)*

**8-6-212** **Delivery Vehicle:** Any motor truck or truck trailer equipped with a stationary cargo tank having a capacity more than 550 gallons and designed and built for the transportation of organic liquids. (Adopted February 2, 1994)

**8-6-213** **Switch Loading:** For the purpose of this rule, switch loading refers to the transfer of organic

liquids into a delivery vehicle cargo tank, which results in displacement of organic vapors remaining from a previous load. (Adopted February 2, 1994)

**8-6-214** **Vapor Loss Control System:** A system for reducing emissions to the atmosphere, consisting of an abatement device and a collection system, which achieves the abatement efficiency or emission limit specified in the applicable standard(s) during the transfer operation and meets the requirements of Regulation 2, Rule 1.

*(Adopted February 2, 1994)*

**8-6-215** **Liquefied ~~Petroleum~~ Gas:** A compressed gas composed of one or more of the following flammable hydrocarbons (propane, n-butane, isobutane, propylene, and butylenes), which is used especially as a fuel or as raw material for chemical synthesis, including hydrocarbons that are obtained, originate or manufactured from non-petroleum materials.

**8-6-216** **Vapor Balance System:** A piping system that is designed to collect organic vapors displaced from organic liquid transfer operations, and to route the collected vapors to the vessel from which the liquid being loaded originated. (Adopted February 2, 1994)

**8-6-217** **Throughput:** The total volume of organic liquid transferred into delivery vehicles and transportable containers. The volume of water in an organic liquid/water mixture shall not be considered part of the facility throughput. (Adopted February 2, 1994)

**8-6-300 STANDARDS**

**8-6-301** **Bulk Terminal Limitations:** A person shall not transfer or allow the transfer of organic liquids from bulk terminal loading equipment unless a vapor loss control system is properly connected and used. Such transfer operations shall not emit into the atmosphere more than 21 grams of organic compounds per cubic meter (0.17 pounds per 1,000 gallons) of organic liquid loaded. Switch loading shall be subject to this standard.(Amended March 17, 1982; February 2, 1994)

**8-6-302** **Bulk Plant Limitations:** A person shall not load or allow the loading of any organic liquid from bulk plant loading equipment unless the following requirements are satisfied:

302.1 Vapor Recovery Requirement: Any emissions displaced while transferring an organic liquid with a true vapor pressure of at least 77.5 mmHg (1.5 psia) into a delivery vehicle shall be controlled by a vapor balance system or a vapor loss control system, which is properly connected and used during loading. Emissions to atmosphere shall not exceed 44 grams of organic compounds per cubic meter (0.35 pounds per 1,000 gallons) of organic liquid loaded.

302.2 Submerged Fill Requirement: Except as provided in Section 8-6-116, either a submerged fill pipe, bottom filling, or a vapor loss control system shall be used when transferring an organic liquid into a delivery vehicle or transportable container. When a vapor loss control system is used, emissions to atmosphere shall not exceed 44 grams of organic compound per cubic meter (0.35 pounds per 1000 gallons) of organic compound loaded.

*(Amended July 2, 1980; February 2, 1984)*

**8-6-303** **Deleted February 2, 1994**

**8-6-304** **Deliveries to Storage Tanks:** A person shall not transfer or allow the transfer of any organic liquid with a true vapor.pressure of at least 77.5 mmHg (1.5 psia) into any bulk terminal or bulk plant storage tank having a capacity between 7.6 and 150 cubic meters, (2,008 and 39,630 gallons) inclusive, unless a vapor balance system or vapor loss control system, has been properly installed on the storage tank and is properly connected during delivery. Emissions to atmosphere shall not exceed 21 grams of organic compounds per cubic meter (0.17 pounds per 1,000 gallons) of organic compound loaded. (Amended February 2, 1994)

**8-6-305** **Delivery Vehicle Requirements:** Any delivery vehicle loaded at a terminal or bulk plant which is subject to the requirements of Sections 8-6-301 or 302.1 shall be equipped to allow proper connection to the vapor balance system or vapor loss control system required by the section and shall be maintained to be vapor tight, leak free, and in good working order.(Amended February 2, 1994)

**8-6-306** **Equipment Maintenance:** All equipment associated with organic liquid delivery and loading operations shall be maintained to be vapor tight, leak free and in good working order. (Amended February 2, 1994)

**8-6-307** **Operating Practices:** Any organic liquid subject to this Rule shall not be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation to the atmosphere. (Amended February 2, 1994)

**8-6-400 ADMINISTRATIVE REQUIREMENTS**

**8-6-401** **Deleted February 2, 1994**

**8-6-402** **Deleted February 2, 1994**

**8-6-403** **Compliance Schedule:** Any person who must install or modify equipment to comply with the requirements of Sections 301, 302 or 304 shall comply with the following increments of progress:

403.1 By June 1, 1994 submit a completed application to the APCO for an Authority to Construct.

403.2 After December 1, 1994 be in final compliance. (Adopted February 2, 1994)

**8-6-500 MONITORING AND RECORDS**

**8-6-501** **Records:** After December 1, 1994, a person whose loading equipment is subject to this rule shall comply with the following requirements:

501.1 A person shall maintain a current record of the true vapor pressure of each organic liquid and organic liquid mixture.

501.2 A person shall maintain monthly records that provide the throughput (gallons) of each organic liquid and organic liquid mixture transferred into delivery vehicles and transportable containers with at least 25.8 mmHg (0.5 psia) true vapor pressure.

501.3 Such records shall be retained for the previous 24-month period and be available to the APCO upon request. (Adopted February 2, 1994)

**8-6-502** **Portable Hydrocarbon Detector:** Any instrument used for the measurement of organic compounds shall meet the specifications and performance criteria, and shall be calibrated in accordance with EPA Reference Method 21 (40CFR60, Appendix A).

*(Adopted February 2, 1994)*

**8-6-503** **Burden of Proof:** The burden of proof of eligibility for exemption from the requirements of this rule is on the applicant. Persons seeking such an exemption shall maintain adequate records and furnish them to the APCO upon request.

*(Adopted February 2, 1994)*

**8-6-600 MANUAL OF PROCEDURES**

**8-6-601** **Efficiency and Rate Determination:** The means for determining compliance with Sections 8-6-301, 302, and 304 are set forth in the Manual of Procedures, Volume IV, ST-3 or ST-34. (Amended March 17, 1982; February 2, 1994)

**8-6-602** **Deleted February 2, 1994**

**8-6-603** **Analysis of Samples, True Vapor Pressure:** Samples of organic compounds as specified in Section 8-6-110 shall be analyzed for true vapor pressure at 25°C (77°F), as prescribed in the Manual of Procedures, Volume III, Method 28 or any other method approved by the APCO. For organic liquids and organic liquid mixtures to which heat is applied, the true vapor pressure shall be determined at 25°C (77°F) or the actual loading temperature, whichever is higher.

*(Adopted March 17, 1982; Amended February 2, 1994)*

**8-6-604** **Determination of Applicability:** Any of the following methods may be used to determine if an organic liquid is subject to the requirements of this rule based on its true vapor pressure:

604.1 EPA-450/3-87-026 (Exhibit A-2 in Appendix A or Appendix D), or

604.2 Standard reference texts, or

604.3 For liquid mixtures, use Raoult's Law of Partial Pressures as defined in Section 8-6-205 or ASTM Method D 2879-83. (Adopted February 2, 1994)

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 7
# GASOLINE DISPENSING FACILITIES

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 7
# GASOLINE DISPENSING FACILITIES

**8-7-100 GENERAL**

**8-7-101 Description:** The purpose of this Rule is to limit emissions of organic compounds from gasoline dispensing facilities.

*(Amended 3/17/82; 11/30/83; 10/17/90)*

**8-7-110 Exemptions**

**8-7-111 Phase I Exemptions:** The following are exempt from Section 8-7-301:

111.1 Storage tanks with an actual capacity of less than 0.95 cubic meters (250 gallons).

111.2 Deleted November 6, 2002

111.3 Storage tanks with a capacity of less than 2.2 cubic meters (550 gallons), used primarily for the fueling of implements of husbandry as defined in Division 16, Chapter 1, of the California Vehicle Code, provided such tanks are equipped with a submerged fill pipe.

111.4 Storage tanks installed before January 1, 1999 where the APCO determines in writing that Phase I vapor recovery is not feasible.

*(Amended and Renumbered 11/30/83; 3/4/87; Amended 10/17/90; 6/1/94; 11/17/99; 11/6/02)*

**8-7-112 Phase II Exemptions:** The following are exempt from Sections 8-7-302 and 313. These exemptions shall not apply to tanks equipped with Phase II vapor recovery equipment unless the Phase II equipment has been removed or otherwise decomissioned to the APCO's satisfaction.

112.1 Facilities which are exempt from Phase I.

112.2 Delivery of fuel to a fuel tank of a vehicle belonging to a class of vehicles for which the APCO has determined in writing that fill-neck configuration or location or some other design feature of the class makes application of the requirements of this rule infeasible. This subsection 8-7-112.2 shall not exempt any gasoline dispensing facility from installing and using such vapor recovery systems as required by this Rule.

112.3 Dispensing of gasoline at facilities where the APCO determines in writing that Phase II vapor recovery is not feasible.

112.4 Mobile refueling and any other vehicle to vehicle refueling.

112.5 Tanks installed prior to March 4, 1987 at facilities which exclusively refuel motor vehicle tanks with a capacity of 0.019 cubic meters (5 gallons) or less.

112.6 Facilities which exclusively refuel aircraft or marine vessels.

112.7 Tanks installed prior to March 4, 1987 at facilities with an annual throughput of less than 227 cubic meters (60,000 gallons) where Phase II vapor recovery equipment was not installed prior to July 1, 1983. Should throughput exceed 227 cubic meters (60,000 gallons) in any consecutive 12-month period, this exemption shall no longer apply.

112.8 Deleted March 4, 1987

112.9 Facilities which can demonstrate to the APCO that at least 90% of the vehicles refueled at the facility in any (time period) are owned by a common operator and equipped with onboard refueling vapor recovery (ORVR). This exemption shall not apply to facilities required to have Phase II vapor recovery under state law.

*(Amended and Renumbered 11/30/83; 3/4/87; Amended 10/17/90; 6/1/94; 11/17/99; 11/6/02)*

**8-7-113 Tank Gauging and Inspection Exemption:** Any tank may be opened for gauging or inspection when loading operations are not in progress provided that such tank is not pressurized.

*(Adopted November 30, 1983)*

**8-7-114 Stationary Tank Testing Exemption:** The requirements of 8-7-301 do not apply to deliveries made to completely fill stationary tanks for the purpose of tank integrity leak testing, provided that such deliveries do not exceed 3.8 cubic meters (1000 gallons) at each facility.

*(Adopted 11/30/83; Amended 11/17/99)*

**8-7-115** **Exemption, Hold Open Latch**: The requirements of Section 8-7-314 shall not apply to nozzles which primarily refuel marine vessels or aircraft, or in areas where prohibited by the local fire marshal.

*(Adopted November 17, 1999)*

**8-7-116** **Exemption, Periodic Testing Requirements**: The Periodic Testing Requirements of subsections 8-7-301.13, 302.14, and 302.15 shall not apply to new or modified equipment subject to start-up test requirements of Section 8-7-406. This exemption applies only to specific tests required to be performed under Section 8-7-406. The equipment remains subject to all other periodic tests required by Sections 8-7-301 and 302. This exemption does not apply to any start-up or periodic testing required otherwise by this regulation, District Permit conditions, applicable CARB Executive Orders, or state law.

*(Adopted November 6, 2002)*

**8-7-117** **Limited Testing Frequency Exemption, ISD-Equipped Tanks**: Tanks equipped with an in-station diagnostics (ISD) system shall be required to conduct and pass any tests required by subsections 8-7-301.13, 302.14, and 302.15 at least once in the preceding 24-month period rather than at least once in the preceding 12-month period as set forth in those subsections. This limited exemption does not apply to any start-up or periodic testing otherwise required by this regulation, District Permit conditions, applicable CARB Executive Orders, or state law.

*(Adopted November 6, 2002)*

**8-7-200** **DEFINITIONS**

**8-7-201** **CARB Certified Vapor Recovery System:** A vapor recovery system which has been certified by the California Air Resources Board (CARB) pursuant to Section 41954 of the California Health and Safety Code.

*(Adopted 11/30/83; Amended 10/17/90; 11/17/99)*

**8-7-202** **Gasoline:** Any distillate, including aviation gasoline and additives, that has a Reid vapor pressure of four (4.0) pounds or greater.

*(Adopted 11/30/83; Amended 10/17/90, mm/dd/yyyy)*

**8-7-203** **Leak Free:** A liquid leak of no greater than three drops per minute.

*(Adopted 11/30/83; Amended 10/17/90)*

**8-7-204** **Phase I:** Gasoline vapor recovery during transfer of gasoline between any gasoline cargo tank and any stationary tanks at dispensing facilities.

*(Adopted 11/30/83; Amended 10/17/90; 11/17/99)*

**8-7-205** **Phase II:** Gasoline vapor recovery during motor vehicle refueling operations from stationary tanks at gasoline dispensing facilities.

*(Adopted 11/30/83; Amended 11/17/99)*

**8-7-206** **Vapor Tight:** one of the following applicable criteria:

206.1 A leak of less than 100 percent of the lower explosive limit on a combustible gas detector measured at a distance of 2.5 cm (1 inch) from the source; or

206.2 No visible evidence of air entrainment in the sight glasses of liquid delivery hoses or bubbling of applied soap solution; or

206.3 Absence of a leak as determined by the Manual of Procedures, Volume IV, ST-30, ST-38 or CARB Method TP-201.3.

*(Adopted 11/30/83; Amended 3/4/87; 10/17/90; 6/1/94; 11/17/99; 11/6/02)*

**8-7-207** **Submerged Fill Pipe:** Any discharge pipe or nozzle which meets either of the following conditions:

207.1 Where the tank is filled from the top, the end of the discharge pipe or nozzle must be totally submerged when the liquid level is 15 cm (6 inches) from the bottom of the tank.

207.2 Where the tank is filled from the side, the discharge pipe or nozzle must be totally submerged when the liquid level is 46 centimeters (18 inches) from the bottom of the tank.

*(Adopted November 30, 1983)*

**8-7-208** **Top Off:** Any attempt to dispense gasoline to a fuel tank after the dispensing nozzle's primary shutoff mechanism has engaged. The filling of a class of vehicle tanks which, because of the configuration of the fill pipe, cause premature activation of the primary shutoff, shall not be

considered topping off.

*(Renumbered 11/30/83; Amended 11/17/99; 11/6/02)*

**8-7-209** **Gasoline Dispensing Facility (GDF):** Any stationary operation which dispenses gasoline directly into the fuel tanks of motor vehicles. This facility shall be treated as a single source which includes all necessary equipment for the exclusive use of the facility, such as nozzles, dispensers, pumps, vapor return lines, plumbing and storage tanks.

*(Adopted 3/4/87; Amended 11/17/99)*

**8-7-210** **Fuel Tank:** Any container from which gasoline is directly removed for the operation of an engine.

*(Adopted November 17, 1999)*

**8-7-211** **Gasoline Cargo Tank:** Any mobile container, including associated pipes and fittings, that is used for the transportation of gasoline and would be required to be certified in accordance with Section 41962 of the California Health and Safety Code if used to transport gasoline on a highway.

*(Adopted November 17, 1999)*

**8-7-212** **Liquid Retain:** Liquid gasoline remaining in or accumulating in the nozzle/hose assembly on the atmospheric side of the vapor check valve after a refueling event.

*(Adopted November 17, 1999)*

**8-7-213** **Spitting:** Liquid gasoline dispensed from the nozzle spout when the trigger is depressed without the dispenser being activated.

*(Adopted 11/17/99; Amended 11/6/02)*

**8-7-214** **Hold Open Latch:** A certified device which is an integral part of the nozzle and is manufactured specifically for the purpose of dispensing gasoline without requiring the consumer's continued physical contact with the nozzle during a refueling event.

*(Adopted November 17, 1999)*

**8-7-215** **Stationary Tank:** Any non-mobile container used for the storage or distribution of gasoline.

*(Adopted November 17, 1999)*

**8-7-216** **Motor Vehicle:** For the purposes of this rule, all vehicles defined as motor vehicles in Section 415 of the California Motor Vehicle Code plus self propelled mobile equipment, marine vessels, and aircraft.

*(Adopted November 17, 1999)*

**8-7-217** **Balance System:** A Phase II vapor recovery system operating on the principle of vapor displacement.

*(Adopted November 17, 1999)*

**8-7-218** **Vacuum-Assist System:** A Phase II vapor recovery system utilizing a vacuum producing device such as, but not limited to, a compressor or turbine to create a vacuum during gasoline dispensing to capture or assist in the capture of gasoline vapors.

*(Adopted11/17/99; Amended 11/6/02)*

**8-7-219** **Retail Gasoline Dispensing Facility:** Any gasoline dispensing facility subject to the payment of California sales tax for the sale of gasoline to the public. All other GDFs shall be considered non-retail.

*(Adopted November 17, 1999)*

**8-7-220** **Mobile Refueler:** A tank truck or trailer transporting gasoline in an onboard storage tank and dispensing it directly into any motor vehicle fuel tank.

*(Adopted November 17, 1999)*

**8-7-221** **On-Board Refueling Vapor Recovery (ORVR):** A vehicle-based vapor recovery system required by California Code of Regulations, title 13, section 1978, or 40 Code of Federal Regulations Part 86.

*(Adopted 11/17/99; Amended 11/6/02)*

**8-7-222** **Insertion Interlock:** A CARB-certified mechanism that is an integral part of a bellows-equipped dispensing nozzle that prohibits the dispensing of fuel unless the bellows is compressed.

*(Adopted November 17, 1999)*

**8-7-223** **In-Station Diagnostic (ISD) System:** Equipment certified by CARB pursuant to Certification Procedure CP-201 to monitor performance of a vapor recovery system at a gasoline dispensing facility.

*(Adopted November 6, 2002)*

**8-7-300 STANDARDS**

**8-7-301 Phase I Requirements:** A person subject to this section shall comply with all of the following requirements:

301.1 A person shall not transfer or allow the transfer of gasoline into stationary tanks at a gasoline dispensing facility unless a CARB certified Phase I vapor recovery system is used. Effective June 1, 2000, a person shall not transfer or allow the transfer of gasoline between a cargo tank or a mobile refueler and a stationary tank unless a CARB certified Phase I vapor recovery system is used during each gasoline transfer.

301.2 All Phase I vapor recovery systems at gasoline dispensing facilities shall be installed as per the most recent CARB certifications and shall meet the emission limitations of the applicable CARB certification. This standard shall apply to each stationary tank during each bulk gasoline delivery.

301.3 All Phase I vapor recovery systems shall be equipped with a submerged fill pipe.

301.4 Deleted November 17, 1999

301.5 All Phase I vapor recovery equipment shall be maintained to be properly operating as specified by the manufacturer and/or the applicable CARB Executive Order.

301.6 All Phase I vapor recovery equipment, except for components with an allowable leak rate, shall be maintained to be leak-free and vapor tight. Components with allowable leak rates, including pressure vacuum relief valves, shall operate within the applicable leakage rate.

301.7 All Phase I vapor recovery systems shall have a CARB certified poppetted drybreak or other CARB-certified poppeted fitting on the vapor riser.

301.8 Effective June 1, 2000 no coaxial Phase I systems certified by CARB prior to January 1, 1994 may be installed on new or modified tanks.

301.9 Effective June 1, 2000, all new Phase I systems must be equipped with a CARB-certified anti-rotational coupler or swivel adapter.

301.10 Effective six months after CARB-certification, no person shall install or modify a Phase I vapor recovery system unless the system vapor recovery rate is 98% or the highest vapor recovery rate specified by CARB if the highest rate is less than 98%.

301.11 No person shall operate a Phase I system on an underground tank unless the system is equipped with a CARB-certified spill box.

301.12 Effective June 1, 2000, or effective as prescribed by California Code of Regulations, title 17, section 94011, whichever is later, no person shall install or operate a spill-box equipped with a drain valve on the vapor pipe of a two-point Phase I system unless the drain valve has been permanently plugged.

301.13 Effective June 1, 2003, no person shall operate a gasoline storage tank equipped with a Phase I vapor recovery system without demonstrating compliance with the vapor tightness standards of subsections 8-7-301.6 and 302.5 by conducting and passing a test pursuant to Section 8-7-602 on the tank and any vapor recovery equipment connected to the tank at least once in the preceding 12 month period.

*(Adopted 11/30/83; Amended 10/17/90; 11/17/99; 11/6/02)*

**8-7-302 Phase II Requirements:** A person subject to this section shall comply with all of the following requirements:

302.1 A person shall not transfer or allow the transfer of gasoline from stationary tanks into motor vehicle fuel tanks at a gasoline dispensing facility unless a CARB certified Phase II vapor recovery system is used during each transfer.

302.2 All Phase II vapor recovery systems shall be maintained as per the most recent CARB certifications and the manufacturer's specifications.

302.3 All Phase II vapor recovery equipment shall be maintained to be properly operating as specified by the manufacturer and the applicable CARB Executive Order and free of defects as defined in Section 41960.2(c) of the California Health and Safety Code and California Code of Regulations, title 17, section 94006.

302.4 Any component identified as defective but that does not substantially impair the effectiveness of the Phase II vapor recovery system pursuant to Section 41960.2 (e) of the California Health and Safety Code and California Code of Regulations, title 17, section 94006 shall be repaired or replaced within seven days.

302.5 All Phase II vapor recovery equipment shall be maintained to be both leak-free and

vapor tight. This requirement shall not apply to components with an allowable leak rate or at the nozzle/fill-pipe interface.

302.6 All bellows-equipped vapor recovery nozzles shall be equipped with an insertion interlock.

302.7 Effective June 1, 2000, or effective as prescribed by California Code of Regulations, title 17, section 94011, whichever is later, no person shall install or operate a vapor recovery nozzle on a balance system unless the nozzle is equipped with a built-in vapor check valve. Remote vapor check valves may not be used in conjunction with nozzles with built-in vapor check valves.

302.8 All liquid removal devices required by CARB Executive Order shall achieve a minimum liquid removal rate of at least 5 milliliters per gallon dispensed. This standard shall apply at dispensing rates exceeding 5 gallons per minute, or as otherwise specified in the applicable Executive Order.

302.9 No person shall install or operate a vapor recovery nozzle unless it is equipped with a coaxial hose.

302.10 No person shall install or operate a gasoline dispenser at a gasoline dispensing facility unless the connection between the riser and the dispenser cabinet is constructed from either galvanized piping or flexible tubing that is listed for use with gasoline. The nominal diameter of this connector shall not be less than 1 inch unless otherwise specified by the applicable CARB Executive Order.

302.11 No person shall operate a vacuum assist Phase II vapor recovery system installed after June 1, 2000 unless it has been certified by CARB to be compatible with ORVR.

302.12 Effective June 1, 2000, liquid retain from any nozzle shall not exceed 100 ml per 1,000 gallons dispensed or the quantity specified in CARB Certification Procedure CP-201, whichever is less. The quantity of liquid retain shall be determined using CARB Test Procedure TP-201.2E or a test procedure that has been determined by CARB to be equivalent to TP-201.2E.

302.13 Effective June 1, 2000, spitting from any nozzle shall not exceed 1.0 ml per nozzle per test or the quantity specified in CARB Certification Procedure CP-201, whichever is less. The quantity of spitting shall be determined using CARB Test Procedure TP-201.2D or a test procedure that has been determined by CARB to be equivalent to TP-201.2D.

302.14 Effective June 1, 2003, no person shall operate a Balance Phase II vapor recovery system equipped with vapor return piping unless a Backpressure test in accordance with Section 8-7-601 has been conducted and passed in the preceding 12 month period. The vapor return piping shall meet the following standards:

14.1 The dynamic back pressure standard specified in the applicable CARB Executive Order.

14.2 Dynamic back pressures less than or equal to 0.15, 0.45, and 0.95 inches of water when measured at nitrogen flow rates of 20, 60, and 100 CFH respectively for systems subject to a CARB Executive Order that does not specify a backpressure standard.

302.15 Effective June 1, 2003, no person shall operate a Vacuum Assist Phase II vapor recovery system unless the following tests have been conducted and passed in the preceding 12 month period:

15.1 An Air-to-Liquid Volume Ratio (A/L) test conducted in accordance with Section 8-7-604 on all nozzles on a Phase II system for which the applicable CARB Executive Order specifies an A/L standard. The A/L for each nozzle shall be within the range specified in the applicable Executive Order.

15.2 Any other test(s) required to be re-performed on a periodic basis by the CARB Executive Order applicable to the Phase II system. Test results shall be within the limits established in the applicable CARB Executive Order.

*(Adopted 11/30/83; Amended 10/17/90; 11/17/99; 11/6/02)*

**8-7-303 Topping Off:** A person shall not top off fuel tanks or other vessels.

*(Renumbered 11/30/83; Amended 11/17/99)*

**8-7-304 Certification Requirements:** A person shall not offer for sale, sell or install within the District,

any Phase I or Phase II vapor recovery equipment unless such equipment is CARB certified, meets the performance specifications required by the CARB certification procedures and this rule, and is installed in accordance with the most recent applicable CARB Executive Order.

*(Amended and Renumbered 11/30/83; Amended 10/17/90; 11/17/99)*

**8-7-305 Deleted October 17, 1990**

**8-7-306 Prohibition of Use:** Whenever the APCO determines that a Phase II vapor recovery system, or any component thereof, contains a defect specified by CARB pursuant to Section 41960.2(c) of the Health and Safety Code or California Code of Regulations, title 17, section 94006, the APCO shall mark such system or component "Out of Order." No person shall use or permit the use of such marked component or system until it has been repaired, replaced, or adjusted, as necessary, and the APCO has reinspected it or has authorized its use pending reinspection.

*(Amended Novermber 6, 2002)*

**8-7-307 Posting of Operating Instructions:** Each gasoline dispensing facility utilizing a Phase II system shall conspicuously post operating instructions specific to the system in use in the gasoline dispensing area. The instructions shall clearly describe how to fuel vehicles correctly with the vapor recovery nozzles utilized at the station. The instructions shall also include a warning that topping off is prohibited, and may result in spillage or recirculation of gasoline. Additionally, the instructions shall include a prominent display of the District's or the CARB's toll free telephone number for complaints.

*(Amended 11/30/83; 11/17/99)*

**8-7-308 Operating Practices:** Gasoline shall not be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation to the atmosphere.

*(Adopted November 30, 1983)*

**8-7-309 Contingent Vapor Recovery Requirement:** Facilities which are equipped with Phase II vapor recovery must also be equipped with Phase I vapor recovery.

*(Adopted 3/4/87; Amended 10/17/90)*

**8-7-310 Deleted November 17, 1999**

**8-7-311 Exempt Tank Requirements:** Any tank with a capacity greater than 0.95 cubic meter (250 gallons) where Phase I vapor recovery equipment is not required must be equipped with a submerged fill pipe.

*(Adopted 10/17/90; Amended 11/17/99)*

**8-7-312 Deleted November 17, 1999**

**8-7-313 Requirements for New or Modified Phase II Installations:** Effective June 1, 2000 or effective as prescribed by California Code of Regulations, title 17, section 94011, whichever is later, no person shall install or modify a Phase II vapor recovery system unless all new equipment is CARB-certified to meet the following emission limitations without any maintenance being performed on that equipment for 90 days prior to the certification test:

313.1 The total emissions of organic compounds from the nozzle/fill pipe interface, storage tank vent pipes, and pressure-related fugitives shall not exceed 0.42 pounds per 1000 gallons gasoline dispensed.

313.2 The emissions of organic compounds from spillage shall not exceed 0.42 pounds per 1000 gallons gasoline dispensed.

313.3 The emissions of organic compounds from liquid retain and spitting shall not exceed 0.42 pounds per 1000 gallons gasoline dispensed.

*(Adopted 11/17/99; Amended 11/6/02)*

**8-7-314 Hold Open Latch Requirements:** A person shall not operate a nozzle that dispenses gasoline at a retail gasoline dispensing facility or a gasoline dispensing facility operated by the state or any county, city and county, or city unless the nozzle is equipped with an operating hold open latch. Any hold open latch determined to be inoperative may be repaired or replaced by the owner or operator within 48 hours of notification by the APCO or fire marshal without any fines or penalty action.

*(Adopted November 17, 1999)*

**8-7-315 Pressure Vacuum Valve Requirements, Underground Storage Tanks:** No person shall operate an underground tank dispensing gasoline unless it is equipped with a CARB certified pressure vacuum (P/V) valve on the vent pipe(s). The valve settings shall be three inches of water column plus or minus one-half inch on the pressure side and eight inches of water column plus or minus two inches on the vacuum side or as otherwise specified in the applicable CARB

vapor recovery certification.

*(Adopted 11/17/99; Amended 11/6/02)*

**8-7-316 Pressure Vacuum Valve Requirements, Aboveground Storage Tanks and Vaulted Below-Grade Storage Tanks:** No person shall operate a stationary aboveground storage tank or vaulted below-grade storage tank dispensing gasoline unless it is equipped with a pressure vacuum (P/V) valve on the vent pipe(s). The valve settings shall be either as specified in the applicable CARB Executive Order or, for uncertified tanks, at least 90% of the tank's maximum allowable working pressure or 25.8 mm Hg (.5 psig).

*(Adopted11/17/99; Amended 11/6/02)*

**8-7-400 ADMINISTRATIVE REQUIREMENTS**

**8-7-401 Equipment Installation and Modification:** A person shall not install or modify Phase I or Phase II gasoline vapor recovery equipment unless an Authority to Construct has been obtained pursuant to Section 301 of Regulation 2, Rule 1. An Authority to Construct shall not be required for the replacement of existing hoses and/or nozzles, or for other repairs or replacements of like parts, unless the APCO determines that testing is necessary to verify proper installation of the vapor recovery system.

*(Adopted 11/30/83; Amended 11/17/99)*

**8-7-402 Deleted October 17, 1990**

**8-7-403 Deleted March 4, 1987**

**8-7-404 Deleted November 17, 1999**

**8-7-405 Deleted November 17, 1999**

**8-7-406 Testing Requirements, New and Modified Installations:** No person shall operate new or modified gasoline dispensing equipment without complying with the testing and notification requirements of an Authority to Construct. Installations performed without obtaining an Authority to Construct remain subject to performance testing and prompt submission of applicable data. This requirement may be waived in whole or part for equipment installed at sites for the purposes of performance testing by the District or CARB to establish a new or modified executive order.

*(Adopted November 17, 1999)*

**8-7-407 Periodic Testing Requirements:** No person shall operate gasoline dispensing equipment equipped with Phase I or Phase II vapor recovery equipment without complying with the applicable periodic testing requirements of Sections 8-7-301 and 302.

*(Adopted November 6, 2002)*

**8-7-408 Periodic Testing Notification and Submission Requirements:** District Source Test staff shall be notified by phone, FAX, or email at least 48 hours prior to testing. Test results shall be submitted to the District Source Test Manager no later than 30 days after the test date and include all necessary data and equipment specifications to determine compliance with the applicable standards.

*(Adopted November 6, 2002)*

**8-7-500 MONITORING AND RECORDS**

**8-7-501 Burden of Proof:** The burden of proof of eligibility for exemption from any section of this rule is on the applicant. Persons seeking such an exemption shall maintain adequate records and furnish them to the APCO upon request.

*(Adopted 11/30/83; Amended 11/17/99)*

**8-7-502 Right of Access:** Any facility subject to this rule shall maintain on site the means to provide access to any and all components as necessary to determine compliance with the provisions of this rule. Access shall be furnished to the APCO upon request.

*(Adopted October 17, 1990)*

**8-7-503 Record Keeping Requirements:**

503.1 All gasoline dispensing facilities shall maintain records of the quantity of gasoline dispensed from the storage tanks during the last 12 month period.

503.2 All gasoline dispensing facilities shall maintain maintenance records detailing the nature and the date of all maintenance activities, including results of all required

testing, during the last 12 month period.

503.3 All records required pursuant to subsections 8-7-503.1 and 503.2 shall be retained for 24 months and made available at the gasoline dispensing facility for inspection by the APCO.

*(Adopted 11/17/99; Amended 11/6/02)*

**8-7-600 MANUAL OF PROCEDURES**

**8-7-601 Determination of Equipment In Compliance with Dynamic Backpressure Requirements:** Compliance with the dynamic back pressure standard shall be determined as prescribed in the Manual of Procedures, under the pertinent sections of Volume IV, ST-27 or as prescribed by CARB Test Procedure TP-201.4.

*(Amended 11/30/83; 10/17/90; 11/17/99; 11/6/02)*

**8-7-602 Determination of Equipment in Compliance with Vapor Tightness Requirements:** Compliance with the vapor tightness standards shall be determined as prescribed in the Manual of Procedures, Volume IV, ST-30 (underground storage tanks) or ST-38 (vaulted storage tanks) or as prescribed by CARB Test Procedure TP-201.3 (underground tanks) or CARB Test Procedure TP-201.3B (vaulted storage tanks).

*(Adopted 11/17/99; Amended 11/6/02)*

**8-7-603 Determination of Equipment in Compliance with Phase I Vapor Recovery Efficiency:** Compliance with subsection 8-7-301.2 shall be determined as prescribed in the Manual of Procedures, Volume IV, ST-36 or as prescribed by CARB Test Procedure TP-201.1.

*(Adopted 10/17/90; Renumbered, Amended 11/17/99; Amended 11/6/02)*

**8-7-604 Determination of Equipment in Compliance with Liquid Removal Requirements:** Compliance with subsection 8-7-302.8 shall be determined as prescribed in the Manual of Procedures, Volume IV, ST-37.

*(Adopted November 17, 1999)*

**8-7-605 Determination of Equipment in Compliance with Air to Liquid Volume Ratio (A/L) Requirements:** Compliance with the air to liquid volume ratio requirements shall be determined as prescribed in the Manual of Procedures, Volume IV, ST-39 or CARB Test Procedure TP-201.5.

*(Adopted11/17/99; Amended 11/6/02)*

**8-7-606 Determination of Applicability**: To determine the applicability of this Rule, samples of gasoline shall be analyzed as prescribed in the Manual of Procedures, Volume III, Method 13 or any other method approved by the APCO.

*(Adopted 10/17/90; Renumbered, Amended 11/17/99)*

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 8
# WASTEWATER COLLECTION AND SEPARATION SYSTEMS

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# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 8
# WASTEWATER COLLECTION AND SEPARATION SYSTEMS

(Adopted January 17, 1979)

**8-8-100 GENERAL**

**8-8-101 Description**: The purpose of this Rule is to limit the emissions of organic compounds from wastewater collection and separation systems that handle liquid organic compounds from industrial processes.

*(Amended 11/1/89; 9/15/04)*

**8-8-110 Exemption, Less Than 760 Liters:** The requirements of Section 8-8-301 shall not apply to any wastewater separator which processes less than 760 liters (200 gals.) per day of wastewater containing organic liquids. This exemption shall not apply to wastewater separators at ~~petroleum~~ refinery complexes after March 1, 1980.

**8-8-111 Deleted November 1, 1989**

**8-8-112 Exemption, Wastewater Critical Organic Compound Concentration Or Temperature:** The requirements of Sections 8-8-301, 302, 306, 307, and 308 shall not apply to any wastewater separation system that processes influent wastewater with a temperature of less than 20 degrees C (68 $^{o}$F) except at ~~petroleum~~ refineries. Wastewater having a concentration of less than 1.0 ppm (volume) critical organic compounds, as defined in Section 8-8-210, dissolved in the water samples, is exempt from the requirements of Sections 8-8-301, 302, 306, 307, 308, 312 and 313. The requirements of Section 8-8-502 must be met.

*(Adopted 11/1/89; Amended 9/15/04)*

**8-8-113 Exemption, Secondary Wastewater Treatment Processes And Stormwater Sewer Systems:** The requirements of Sections 8-8-301, 302, 306, and 308 shall not apply to any secondary wastewater treatment processes or stormwater sewer systems, as defined in Sections 8-8-208 and 216, that are used as a wastewater polishing step or for collection of stormwater that is segregated from the process wastewater collection system.

*(Adopted 11/1/89; Amended 9/15/04)*

**8-8-114 Exemption, Bypassed Oil-Water Separator or Air Flotation Influent:** The requirements of Sections 8-8-301, 302, and 307 shall not apply for wastewater which bypasses either the oil-water separator or air flotation unit provided that: (1) the requirements of Section 8-8-501 are met; and (2) on that day the District did not predict an excess of the Federal Ambient Air Quality Standard for ozone.

*(Adopted November 1, 1989)*

**8-8-115 Exemption, Municipal Wastewater Collection, Separation and Treatment Facilities:** The requirements of Sections 8-8-301, 302, 303, 304, 305, 306, 307, 308, 312, 313 and 314 shall not apply to any publicly owned municipal wastewater treatment facility.

*(Adopted 11/1/89; Amended 9/15/04)*

**8-8-116 Limited Exemption, Oil-Water Separation Trenches:** The requirements of Sections 8-8-312, 313 or 314 shall not apply to oil-water separation trenches used as part of maintenance or turnaround activities.

*(Adopted September 15, 2004)*

**8-8-200 DEFINITIONS**

**8-8-201 Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

*(Amended 11/1/89; 9/15/04)*

**8-8-202 Wastewater (Oil-Water) Separator:** Any device used to separate liquid organic compounds from oil-water waste streams (excluding wastewater separator forebays, air flotation (AF) units, sludge-dewatering units, oil-water separator and /or AF Unit slop oil vessels, and junction boxes).

*(Amended November 1, 1989)*

**8-8-203** **Wastewater Separator Forebay:** That section of a gravity-type separator which (a) receives the untreated, contaminated wastewater from the preseparator flume, and (b) acts as a header which distributes the influent to the separator channels.

*(Amended November 1, 1989)*

**8-8-204** **Vapor-tight:** A leak of less than 500 ppm (expressed as methane) above background, measured at the interface of the component in accordance with Section 8-8-603.

*(Amended 11/1/89; 9/15/04)*

**8-8-205** **Oil-Water Separator Slop Oil:** Floating oil, flocculant sludge, and solids which accumulate in an oil-water separator or air flotation unit.

*(Adopted November 1, 1989)*

**8-8-206** **Oil-Water Separator Effluent Channel/Pond:** An open channel, trench, pond, or basin which handles wastewater downstream of an oil-water separator that has not been treated by an air flotation unit (usually located between the separator and the air flotation unit).

*(Adopted November 1, 1989)*

**8-8-207** **Full Contact Fixed Cover:** A stationary separator cover which is always in full contact with the liquid surface of the oil-water separator.

*(Adopted November 1, 1989)*

**8-8-208** **Secondary Treatment Processes:** Any wastewater treatment process which is downstream of the air flotation unit, any other biological treatment process at a refinery, or any treatment process which is regulated by the EPA National Categorical Pretreatment Standards. These treatment processes are considered to be wastewater polishing steps and include: activated sludge tanks/basins, trickling or sand filters, aerated lagoons, oxidation ponds, rotating biological contactors, and other biological wastewater treatment processes.

*(Adopted November 1, 1989)*

**8-8-209** **Air Flotation Unit:** Any device, equipment, or apparatus in which wastewater is saturated with air or gas under pressure and removes floating oil, floating emulsified oil, or other floating liquid precursor organic compounds by skimming. Also included in this definition are: induced air flotation units and pre-air flotation unit flocculant sumps, tanks, or basins.

*(Adopted November 1, 1989)*

**8-8-210** **Critical Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate emitted during separation, processing, transportation or storage of wastewater, and having a carbon number of C-14 or less (excluding phenolic compounds).

*(Adopted 11/1/89; Amended 9/15/04)*

**8-8-211** **Wastewater:** Any process water which contains oil, emulsified oil, or other organic compounds which is not recycled or otherwise used within a facility.

*(Adopted November 1, 1989)*

**8-8-212** **Pre-Air Flotation Unit Flocculation Sump, Basin, Chamber, or Tank:** Any facility which pretreats the air flotation unit's influent with chemical coagulants, and/or adjusts the influent's pH.

*(Adopted November 1, 1989)*

**8-8-213** **Oil-Water Separator Slop Oil Vessel:** Any vessel which, as its sole function, treats or dewaters oil-water separator slop oil.

*(Adopted November 1, 1989)*

**8-8-214** **Oil-Water Separator Effluent:** Any process wastewater downstream of the oil-water separator that has not been treated by an air flotation unit.

*(Adopted November 1, 1989)*

**8-8-215** **Sludge-dewatering Unit:** Any device which, as its sole function, is used to dewater oil-water separator and air flotation slop oil/sludge.

*(Adopted November 1, 1989)*

**8-8-216** **Stormwater Sewer System:** A drain and collection system that is designed and operated for the sole purpose of collecting stormwater and is segregated from the wastewater collection system.

*(Adopted 11/1/89; Amended 9/15/04)*

**8-8-217** **Junction Box:** Any structure where sewer lines meet and one or more wastewater streams are co-mingled.

*(Amended September 15, 2004)*

**8-8-218** **Sewer Line:** A lateral, trunk line, branch line, ditch, channel, or other conduit used to convey

wastewater to downstream oil-water separators.

*(Adopted November 1, 1989)*

**8-8-219** **Leak Minimization:** Reducing the leak to the lowest achievable level using best modern practices and without shutting down the process the equipment serves.

*(Adopted September 15, 2004)*

**8-8-220** **Leak Repair:** The tightening, adjustment, or addition of material, or the replacement of the equipment, which reduces leakage to the atmosphere below 500 ppm.

*(Adopted September 15, 2004)*

**8-8-221** **Lift Stations:** Any structure whose function is to take water from a low point on a gradient and transport it to the treatment system via a pumping mechanism.

*(Adopted September 15, 2004)*

**8-8-222** **Manholes:** Any service entrance into sewer lines that allows access for inspection and cleaning.

*(Adopted September 15, 2004)*

**8-8-223** **Oil-Water Separation Trench:** Any grated open topped culvert used to separate debris from oil-water during equipment washing or steaming associated with maintenance or turnaround.

*(Adopted September 15, 2004)*

~~**8-8-224** **Petroleum Refinery:** A facility that processes petroleum, as defined in the North American Industrial Classification Standard No. 32411 (1997).~~

~~*(Adopted September 15, 2004)*~~

**8-8-225** **Process Drains:** Any point in the wastewater collection system where streams from a source or sources enter the collection system. A process drain may be connected to the main process sewer line or to trenches, sumps, or ditches.

*(Adopted September 15, 2004)*

**8-8-226** **Reaches:** Any segments of sewer pipe that convey wastewater between two manholes or other sewer components such as lift stations or junction boxes.

*(Adopted September 15, 2004)*

**8-8-227** **Sumps:** Any below-grade structure typically used as a collection point for wastewater from multiple sewer lines prior to pumping or overflow to wastewater treatment.

*(Adopted September 15, 2004)*

**8-8-228** **Trenches:** Any open-topped culvert used to transport wastewater from the point of process discharge to subsequent wastewater collection system components, such as junction boxes and lift stations.

*(Adopted September 15, 2004)*

**8-8-229** **Vent Pipes:** Any piping used to ventilate a wastewater collection system component or a wastewater separation system.

*(Adopted September 15, 2004)*

**8-8-230** **Wastewater Collection System Components:** Any structure or part of structures used to collect and transport wastewater prior to any treatment. These structures are usually located before oil/water separators and may include but are not limited to process drains, sewer lines, trenches, manholes, junction boxes, reaches, sumps and lift stations (including vent pipes).

*(Adopted September 15, 2004)*

**8-8-231** **Wastewater Separation System:** Any structure used to remove oil from water via a physical process including but not limited to oil-water separators, dissolved air flotation units or dissolved gas flotation units.

*(Adopted September 15, 2004)*

**8-8-232** **Water Seal or Equivalent Control:** Any seal pot, p-leg trap, or other type of trap filled with a liquid not containing organic compounds in order to create a barrier between the sewer and the atmosphere, or an equivalent physical seal, enclosed piping, pollution prevention measure or abatement device that meets the criteria of Regulation 2, Rule 1.

(Adopted September 15, 2004)

**8-8-233** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**8-8-234** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock, to produce more usable products such

as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

*(Adopted XXX XX, XXXX)*

**8-8-300 STANDARDS**

**8-8-301 Wastewater Separators Greater than 760 Liters per Day and Smaller than 18.9 Liters per Second:** A person shall not operate any wastewater separator and/or forebay with a design rated or maximum allowable capacity greater than 760 liters per day and smaller than 18.9 liters per second (oil-water separators and/or forebays between 200 gals per day to 300 gals per min.) unless such wastewater separator and/or forebay is operated within its design rated or maximum allowable capacity and is equipped with one of the following:

301.1 A solid, gasketed, fixed cover totally enclosing the separator tank, chamber, or basin (compartment) liquid contents, with all cover openings closed, except when the opening is being used for inspection, maintenance, or wastewater sampling. Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps greater than 0.32 cm (0.125 inch) occur in the roof or between the roof and wall; and that the access doors and other openings are closed and gasketed properly; or

301.2 A floating pontoon or double-deck vapor-tight type cover. All floating roofs must rest entirely on the liquid surface. The floating roof shall consist of two seals, one above the other, the one below shall be referred to as the primary seal, while the other seal shall be referred to as the secondary seal.

2.1 Oil-Water Separator Liquid-Mounted Primary Seal Gap Criteria: No gap between the separator wall and the liquid-mounted primary seal shall exceed 3.8 cm (1.5 inch). No continuous gap greater than 0.32 cm (0.125 inch) shall exceed 10 percent of the perimeter of the separator. The cumulative length of all primary seal gaps exceeding 1.3 cm (0.5 inch) shall be not more than 10 percent of the perimeter and the cumulative length of all primary seal gaps exceeding 0.32 cm (0.125 inch) shall be not more than 40 percent of the perimeter.

2.2 Oil-Water Separator Secondary And Wiper Seals Gap Criteria: No gap between the separator wall and the secondary and wiper seals shall exceed 1.5 mm (0.06 inch). The cumulative length of all secondary and wiper seals gaps exceeding 0.5 mm (0.02 inch) shall be not more than 5 percent of the perimeter of the separator. The secondary and wiper seals must exert a positive pressure against the separator such that the seal surface in contact with the separator wall does not pull away from the separator wall more than the gaps allowed.

2.3 Primary And Secondary Seal Gap Inspection: The primary seal shall be inspected within 60 calendar days after initial installation of the floating roof and once every 5 years thereafter in accordance with the requirements of Section 8-8-301.2.1. The secondary seal shall be inspected within 60 calendar days after initial installation of the floating roof and once every year thereafter in accordance with the requirements of Section 8-8-301.2.2. The owner or operator shall make necessary repairs within 30 calendar days of identification of seals not meeting the requirements listed in Sections 8-8-301.2.1 and 301.2.2; or

301.3 An organic compound vapor recovery system with a combined collection and destruction efficiency of at least 95 percent, by weight.

301.4 Deleted October 6, 1993

*(Amended 11/1/89; 10/6/93; 9/15/04)*

**8-8-302 Wastewater Separators Larger than or Equal to 18.9 Liters per Second:** A person shall not operate any wastewater separator and/or forebay with a rated or maximum allowable capacity larger than or equal to 18.9 liters per second (300 gals per min.) unless such wastewater separator and/or forebay is operated within its design rated or maximum allowable capacity and is equipped with one of the following:

302.1 A solid, vapor-tight, full contact fixed cover which totally encloses the separator tank, chamber, or basin (compartment) liquid contents, with all cover openings closed and sealed, except when the opening is being used for inspection, maintenance, or wastewater sampling; or

302.2 A floating pontoon or double-deck vapor-tight type cover. All floating roofs must rest on the liquid surface. The floating roof shall consist of two seals, one above the other, the one below shall be referred to as the primary seal, while the other seal shall be referred to as the secondary seal.

2.1 Oil-Water Separator Liquid-Mounted Primary Seal Gap Criteria: No gap between the separator wall and the liquid-mounted primary seal shall exceed 3.8 cm (1.5 inch). No continuous gap greater than 0.32 cm (0.125 inch) shall exceed 10 percent of the perimeter of the separator. The cumulative length of all primary seal gaps exceeding 1.3 cm (0.5 inch) shall be not more than 10 percent of the perimeter and the cumulative length of all primary seal gaps exceeding 0.32 cm (0.125 inch) shall be not more than 40 percent of the perimeter.

2.2 Oil-Water Separator Secondary And Wiper Seals Gap Criteria: No gap between the separator wall and the secondary and wiper seals shall exceed 1.5 mm (0.06 inch). The cumulative length of all secondary and wiper seals gaps exceeding 0.5 mm (0.02 inch) shall be not more than 5 percent of the perimeter of the separator. The secondary and wiper seals must exert a positive pressure against the separator such that the seal surface in contact with the separator wall does not pull away from the separator wall more than the gaps allowed; or

2.3 Primary And Secondary Seal Gap Inspection: The primary seal shall be inspected within 60 calendar days after initial installation of the floating roof and once every 5 years thereafter in accordance with the requirements of Section 8-8-302.2.1. The secondary seal shall be inspected within 60 calendar days after initial installation of the floating roof and once every year thereafter in accordance with the requirements of Section 8-8-302.2.2. The owner or operator shall make necessary repairs within 30 calendar days of identification of seals not meeting the requirements listed in Sections 8-8-302.2.1 and 302.2.2.; or

302.3 A vapor-tight fixed cover with an organic compound vapor recovery system which has a combined collection and destruction efficiency of at least 95 percent, by weight, inspection and access hatches shall be closed except when the opening is being used for inspection, maintenance, or wastewater sampling, or

302.4 A solid, sealed, gasketed, fixed cover which totally encloses the separator tank, chamber, or basin (compartment) liquid contents, with all cover openings closed and sealed, except when the opening is being used for inspection, maintenance, or wastewater sampling. The cover may include a pressure/vacuum valve. The concentration of organic compounds, measured at the interface of the roof seals, fixed cover, access doors, pressure/vacuum valve, and other openings shall not exceed 1,000 ppm (expressed as methane) above background. Roof seals, fixed cover, access doors, and other openings shall be inspected initially and semiannually thereafter to ensure that there are no emission leaks greater than 1,000 ppm. Any emission leak greater than 1,000 ppm must be reported to the APCO and repaired within 15 days.

302.5 Deleted October 6, 1993

302.6 Roof seals, fixed covers, access doors, and other openings at ~~petroleum~~ refineries shall be inspected initially and semiannually thereafter to ensure that they are vapor tight. A leak in any component that is not vapor tight must be minimized within 24 hours and repaired within 7 days.

*(Adopted 1/1/89; Amended 10/6/93; 9/15/04)*

**8-8-303 Gauging and Sampling Devices:** Any compartment or access hatch shall have a vapor tight cover. Any gauging and sampling device in the compartment cover shall be equipped with a vapor tight cover, seal, or lid. The compartment cover and gauging or sampling device cover shall at all times be in a closed position, except when the device is in use for inspection, maintenance, or wastewater sampling.

*(Amended, Renumbered November 1, 1989)*

**8-8-304 Sludge-dewatering Unit**: Any sludge-dewatering unit, equipment, machinery, apparatus, or device shall be totally enclosed and vented to a control device which has a minimum combined collection and destruction efficiency of 95 percent by weight; or shall have vapor-tight covers on the unit, conveyer belts, and storage bins or tanks except during inspection, maintenance or when the solids storage bin is in use. Sludge must be maintained in vapor tight containers during storage.

*(Adopted 11/1/89; Amended 10/6/93; 9/15/04)*

**8-8-305 Oil-Water Separator And/Or Air Flotation Unit Slop Oil Vessels:** A person shall not store any oil-water separator and/or air flotation unit sludges in an oil-water separator slop oil vessel unless such oil-water separator slop oil vessel is equipped with one of the following:

305.1 A solid, gasketed, fixed cover totally enclosing the vessel liquid contents, with all cover openings closed, except when the opening is being used for inspection, maintenance, or wastewater sampling. The cover may include an atmospheric vent or a pressure/vacuum valve. Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps greater than 0.32 cm (0.125 inch) occur in the roof or between the roof and wall; and that the access doors and other openings are closed and gasketed properly; or

305.2 An organic compound vapor recovery system with a combined collection and destruction efficiency of at least 70 percent, by weight.

305.3 Deleted October 6, 1993

*(Adopted 11/1/89; Amended 10/6/93; 9/15/04)*

**8-8-306 Oil-Water Separator Effluent Channel, Pond, Trench, or Basin:** A person shall not operate any oil-water separator effluent channel, pond, trench, or basin a design rated or maximum allowable capacity greater than 25.2 liters per second (any oil-water separator effluent channel, pond, trench, or basin greater than 400 gals per min) unless such oil-water separator effluent channel, pond, trench, or basin is operated within its design rated or maximum allowable capacity and is equipped with one of the following:

306.1 A solid, gasketed, fixed cover totally enclosing the oil-water separator effluent channel, pond, trench, or basin (compartment) liquid contents, with all cover openings closed, except when the opening is being used for inspection, maintenance, or wastewater sampling. Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps greater than 0.32 cm (0.125 inch) occur in the roof or between the roof and wall; and that the access doors and other openings are closed and gasketed properly; or

306.2 An organic compound vapor recovery system with a combined collection and destruction efficiency of at least 70 percent, by weight.

306.3 Deleted October 6, 1993

*(Adopted 11/1/89; Amended 10/6/93; 9/15/04)*

**8-8-307 Air Flotation Unit:** A person shall not operate any air flotation unit and/or pre-air flotation unit flocculation sump, basin, chamber, or tank with a design rated or maximum allowable capacity greater than 25.2 liters per second (air flotation units and/or pre-air flotation unit flocculation sump, basin, chamber, or tank greater than 400 gals per min.) unless such air flotation unit and/or pre-air flotation unit flocculation sump, basin, chamber, or tank is operated within its design rated or maximum allowable capacity and is equipped with one of the following:

307.1 A solid, gasketed, fixed cover totally enclosing the air flotation and pre-air-flotation-unit flocculation tank, chamber, or basin (compartment) liquid contents, with all cover openings closed, except when the opening is being used for inspection, maintenance, or wastewater sampling. The cover may include an atmospheric vent or

pressure/vacuum valve. Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps greater than 0.32 cm (0.125 inch) occur in the roof or between the roof and wall; and that the access doors and other openings are closed and gasketed properly; or

307.2 An organic compound vapor recovery system with a combined collection and destruction efficiency of at least 70 percent, by weight.

307.3 Deleted October 6, 1993

*(Adopted 11/1/89; Amended 10/6/93; 9/15/04)*

**8-8-308** **Junction Box:** Any junction box shall be equipped with either a solid, gasketed, fixed cover totally enclosing the junction box or a solid manhole cover. Junction boxes may include openings in the covers and vent pipes if the total open area of the junction box does not exceed 81.3 $cm^2$ (12.6 $in^2$) and all vent pipes are at least 3 feet in length.

*(Adopted 11/1/89; Amended10/6/93)*

**8-8-309** **Deleted October 6, 1993**

**8-8-310** **Deleted October 6, 1993**

**8-8-311** **Deleted October 6, 1993**

**8-8-312** **Controlled Wastewater Collection System Components at ~~Petroleum~~ Refineries:** Effective January 1, 2006, all controlled wastewater collection system components at ~~petroleum~~ refineries shall be vapor tight except when in use for active inspection, maintenance, repair or sampling. A leak in any controlled wastewater collection system component that is not vapor tight must be minimized within 24 hours and repaired within 7 days.

*(Adopted September 15, 2004)*

**8-8-313** **Uncontrolled Wastewater Collection System Components at ~~Petroleum~~ Refineries:** ~~Petroleum~~ refineries shall comply with either Section 8-8-313.1 or 313.2 below:

313.1 Each uncontrolled wastewater collection system component must be equipped with a water seal or equivalent control according to the schedule in Section 8-8-403. Any uncontrolled collection system component that is not vapor tight must be minimized. Upon installation of a water seal or equivalent control, the provisions of Section 8-8-312 will apply; **or**

313.2 Effective January 1, 2006 and until January 1, 2007, each uncontrolled wastewater collection system component must be inspected bi-monthly. Effective January 1, 2007, each uncontrolled wastewater system component must be inspected semi-annually. Any uncontrolled wastewater collection system component that is not vapor tight shall be identified, minimized within 24 hours and re-inspected every 30 days. The component may be returned to a semi-annual inspection schedule if it is vapor tight during three consecutive 30-day inspections. Any uncontrolled wastewater collection system component that is not vapor tight during any three inspections in a five-year period must be equipped with a water seal or equivalent control within 30 days after the third inspection. Upon installation of the water seal or equivalent control, the provisions of Section 8-8-312 shall apply. Unless previously identified by the refinery, any wastewater system component discovered by the APCO not to be vapor tight must be minimized within 24 hours and repaired within 7 days.

*(Adopted September 15, 2004)*

**8-8-314** **New Wastewater Collection System Components at ~~Petroleum~~ Refineries:** Effective January 1, 2005, any new wastewater collection system component at a ~~petroleum~~ refinery shall be equipped with a water seal or equivalent control.

*(Adopted September 15, 2004)*

**8-8-400** **ADMINISTRATIVE REQUIREMENTS**

**8-8-401Deleted October 6, 1993**

**8-8-402** **Wastewater Inspection and Maintenance Plan at ~~Petroleum~~ Refineries:** All ~~petroleum~~ refineries must implement an inspection and maintenance plan that meets all of the following requirements:

402.1 By October 1, 2005, all wastewater collection system components must be identified and the APCO must be provided with lists, diagrams or other information sufficient to locate all components. It shall not be violation of this requirement if the refinery discovers that a component has been omitted from the list, diagram, or other information and submits information to the APCO regarding the component. Effective October 1, 2005, any wastewater collection system component found by the APCO that was not identified pursuant to the provisions of this section shall constitute a violation.

402.2 By October 1, 2005, an initial inspection of all wastewater collection system components must be completed by the refinery. The results of the initial inspection shall be made available to the APCO, but any wastewater collection system component that is not vapor tight shall not trigger the requirements of Section 8-8-313 before the effective date of that Section.

402.3 Effective January 1, 2006, for ~~petroleum~~ refineries that elect to comply with Section 8-8-313.2, the plan must provide for the identification and minimization of leaking components and a re-inspection within 30 days of discovery. The plan must also provide for re-inspections every thirty days until the affected component is either controlled or is returned to the inspection schedule in Section 8-8-313.2.

402.4 Effective January 1, 2006, each controlled component shall be inspected semi-annually.

402.5 Records must be maintained pursuant to Section 8-8-505.

*(Adopted September 15, 2004)*

**8-8-403** ~~**Petroleum**~~ **Refinery Compliance Schedule:** Any ~~petroleum~~ refinery electing to comply with Section 8-8-313.1 shall install controls on uncontrolled wastewater collection system components according to the following schedule:

403.1 By October 31, 2005, install controls on 25% of wastewater collection system components that were uncontrolled as of January 1, 2005.

403.2 By April 30, 2006, install controls on 50% of wastewater collection system components that were uncontrolled as of January 1, 2005.

403.3 By October 31, 2006, install controls on 75% of wastewater collection system components that were uncontrolled as of January 1, 2005.

403.4 By April 30, 2007, install controls on 100% of wastewater collection system components that were uncontrolled as of January 1, 2005.

*(Adopted September 15, 2004)*

**8-8-404** **Uncontrolled Wastewater Collection System Components Election:** By November 1, 2004, each ~~petroleum~~ refinery shall choose a compliance option from Section 8-8-313 and notify the APCO in writing indicating which option has been chosen.

*(Adopted September 15, 2004)*

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

**8-8-501** **API Separator or Air Flotation Bypassed Wastewater Records:** Any person who bypasses wastewater past their API Separator or Air Flotation unit shall maintain records on the amount of bypassed wastewater, duration, date, causes for bypasses, and dissolved critical organic compound concentration (volume). These records shall be retained and available for inspection by the APCO for at least 24 months.

*(Adopted 11/1/89; Amended 9/15/04)*

**8-8-502** **Wastewater Critical Organic Compound Concentration Or Temperature Records:** Any person who exempts their wastewater separator because of either wastewater critical organic compound concentration or temperature shall sample and test the wastewater initially and semiannually thereafter and maintain records on the date, time of test, location, and wastewater temperature and/or critical organic compound concentration (volume). These records shall be

retained and available for inspection by the APCO for at least 24 months.

*(Adopted 11/1/89; Amended 9/15/04)*

**8-8-503** **Inspection and Repair Records:** Records of inspections and repairs as required by Sections 8-8-301, 302, 305, 306 or 307 shall be retained and made available for inspection by the APCO for at least 24 months.

*(Adopted October 6, 1993)*

**8-8-504** **Portable Hydrocarbon Detector:** Any instrument used for the measurement of 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 June 15, 1994)*

**8-8-505** **Records for Wastewater Collection System Components at ~~Petroleum~~ Refineries:** Any person subject to the requirements of this rule shall:

505.1 Maintain records of the type and location of each wastewater collection system component.

505.2 Record the date of each wastewater collection system component inspection, and re-inspection and leak concentration measured for each inspection or re-inspection.

505.3 Record a description of the minimization or repair efforts on each leaking component that is not vapor tight.

505.4 Maintain required records for at least 5 years and make them available to the APCO for inspection at any time.

*(Adopted September 15, 2004)*

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

**8-8-601** **Wastewater Analysis for Critical Organic Compounds:** Samples of wastewater as specified in this rule shall be taken at the influent stream for each unit and analyzed for the concentration of dissolved critical organic compounds as prescribed in the Manual of Procedures, Volume III, Lab Method 33.

*(Amended 11/1/89; 10/6/93; 9/15/04)*

**8-8-602** **Determination of Emissions:** Emissions of organic compounds as specified in Sections 8-8-301.3, 8-8-302.3, 8-8-304, 8-8-305.2, 8-8-306.2, and 8-8-307.2 shall be measured as prescribed by any of the following methods: 1) BAAQMD Manual of Procedures, Volume IV, ST-7, 2) EPA Method 25, or 25A), 3) or any other method approved by the APCO. A source shall be considered in violation if the organic compound emissions measured by any of the referenced test methods exceed the standards of this rule.

*(Amended 11/1/89; 10/6/93; 6/15/94; 9/15/04)*

**8-8-603** **Inspection Procedures:** For the purposes of Sections 8-8-301, 302, 303, 304 312, 313 and 402, leaks shall be measured using a portable gas detector as prescribed in EPA Reference Method 21 (40 CFR 60, Appendix A).

*(Adopted 6/15/94; Amended 9/15/04)*

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 9
# VACUUM PRODUCING SYSTEMS

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 9
# VACUUM PRODUCING SYSTEMS

**8-9-100 GENERAL**

**8-9-101 Description:** The purpose of this Rule is to limit emission of precursor organic compounds from vacuum producing systems. (Amended 3/17/82, 7/20/83)

**8-9-110 Exemption, Vacuum Tank Trucks:** The requirements of Section 8-9-301 shall not apply to vacuum tank trucks which are governed by the requirements of Rule 2 - Miscellaneous, of this Regulation 8.

**8-9-111 Exemption, Chemical Plants:** The provisions of Section 8-9-301 shall not apply to chemical plants until January 1, 1985. (Adopted 7/20/83)

**8-9-200 DEFINITIONS**

**8-9-201 Chemical Plants:** Any facility engaged in producing organic or inorganic chemicals and/or manufacturing products by chemical processes. Any facility or operation that has 28 as the first two digits in their Standard Industrial Classification Code as determined from the Standard Industrial Classification manual published in 1972 by the Executive Office of the President, Office of Management and Budget. Chemical plants may include, but are not limited to the manufacture of: industrial inorganic and organic chemicals; plastic and synthetic resins, synthetic rubber, synthetic and other man made fibers; drugs, soap, detergents and cleaning preparations, perfumes, cosmetics and other toilet preparations; paints, varnishes, lacquers, enamels and allied products; agricultural chemicals; safflower and sunflower oil extracts; re-refining. (Adopted 7/20/83)

~~**8-9-202 Petroleum Refinery:** Any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants or other products through distillation of petroleum or through redistillation, cracking, rearrangement or reforming of unfinished petroleum derivatives. (Adopted 7/20/83)~~

**8-9-203 Vacuum Producing Systems:** Vacuum producing systems include, but are not limited to, steam ejectors with contact (barometric) condensers, steam ejectors with surface condensers, and mechanical vacuum pumps.

**8-9-204 Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**8-9-205 Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any organic feedstock, to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**8-9-300 STANDARDS**

**8-9-301 Vacuum Producing Systems:** The control of precursor organic compound emissions from vacuum producing systems at ~~petroleum~~ refineries and chemical plants shall be accomplished

by employing the following equipment and/or strategies:

301.1 Non-Condensable precursor organic emissions from vacuum producing systems must either be controlled and piped to an appropriate firebox or incinerator for combustion, or be collected, compressed, and added to the fuel gas system, or be contained and treated so as to prevent their emission into the atmosphere.

301.2 Hot wells and/or accumulators associated with vacuum system condensers must be covered and the precursor organic vapors must either be incinerated or contained and treated so as to prevent their emission into the atmosphere.

*(Amended 7/20/83)*

**8-9-400 ADMINISTRATIVE REQUIREMENTS**

**8-9-401 Increments of Progress:** A person at a chemical plant who must modify existing sources or install new control equipment to comply with the requirements of this Rule shall comply with the following compliance schedule:

401.1 January 1, 1984: Submit to the APCO a final control plan which describes, as a minimum, the steps, including a construction schedule, that will be taken to achieve compliance with such requirements.

401.2 July 1, 1984: Submit a completed application for any Authority to Construct necessary to achieve compliance with such requirements.

401.3 January 1, 1985: Be in compliance with all the requirements of this Rule.

*(Amended 7/20/83)*

**8-9-600 MANUAL OF PROCEDURES**

**8-9-601 Determination of Emissions:** Emissions of organic compounds as specified in Section 8-9-301 shall be measure as prescribed in the Manual of Procedures, Volume IV, ST-7 or any other method approved by the APCO. (Adopted 3/17/83)

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# REGULATION 8
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# PROCESS VESSEL DEPRESSURIZATION

**8-10-100 GENERAL**

**8-10-101 Description:** The purpose of this Rule is to limit emissions of organic compounds from depressurizing and opening of process vessels at ~~petroleum~~ refineries and chemical plants.

*(Amended 3/17/82; 7/20/83; 1/21/04)*

**8-10-110 Exemption, Equipment Subject to Other Rules:** The provisions of this rule shall not apply to vessels that are subject to the following Regulation 8 rules:

110.1 Regulation 8, Rule 5: Storage of Organic Liquids
110.2 Regulation 8, Rule 24: Pharmaceutical and Cosmetic Manufacturing Operations
110.3 Regulation 8, Rule 35: Coating, Ink and Adhesive Manufacturing
110.4 Regulation 8, Rule 36: Resin Manufacturing
110.5 Regulation 8, Rule 41: Vegetable Oil Manufacturing Operations
110.6 Regulation 8, Rule 50: Polyester Resin Operations
110.7 Regulation 8, Rule 52: Polystyrene, Polypropylene, and Polyethylene Foam Product Manufacturing Operations

*(Amended January 21, 2004)*

**8-10-111 Deleted January 21, 2004**

**8-10-112 Limited Exemption, Measurement Periods:** The provisions of Section 8-10-301 shall not apply while a process vessel is opened for a period of time reasonably necessary for measurements to determine compliance with the concentration and mass emission limits of this rule.

*(Adopted January 21, 2004)*

**8-10-113 Exemption, Small Vessels:** The provisions of this Rule shall not apply to any process vessel with a volume of less than 100 cubic feet ($ft^3$).

*(Adopted January 21, 2004)*

**8-10-114 Exemption, Batch Processes:** The provisions of this rule shall not apply to any process vessel used in a batch process operation that requires periodic vessel opening as part of the routine operation of the vessel, including but not limited to delayed coking vessels.

*(Adopted January 21, 2004)*

**8-10-200 DEFINITIONS**

**8-10-201 Chemical Plant:** Any facility engaged in producing organic or inorganic chemicals and/or manufacturing products by chemical processes. Any facility or operation that has 325 as the first three digits in the North American Industrial Classification Standard (NAICS) code. Chemical plants may include, but are not limited to the manufacture of: industrial inorganic and organic chemicals; plastic and synthetic resins, synthetic rubber, synthetic and other man made fibers; drugs; soap, detergents and cleaning preparations, perfumes, cosmetics and other toilet preparations; paints, varnishes, lacquers, enamels and allied products; agricultural chemicals; safflower and sunflower oil extracts; re-refining.

*(Adopted 7/20/83; Amended 1/21/04)*

~~**8-10-202 Petroleum Refinery:** Any facility that processes petroleum, as defined in the North American Industrial Classification Standard No. 32411 (1997).~~

~~*(Adopted 7/20/83; Amended 1/21/04)*~~

**8-10-203 Process Unit:** A manufacturing process which is independent of other processes and is continuous when supplied with a constant feed of raw materials and sufficient storage facilities for the final product.

*(Adopted 7/20/83)*

**8-10-204 Process Vessel:** Any vessel in which organic compounds are fractionated, chemically reacted, washed or purified. These vessels shall include but are not limited to reactors, columns, accumulator vessels, knockout pots, surge/settling drums and other similar devices.

*(Renumbered 7/20/83; Amended 1/21/04)*

**8-10-205** **Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

*(Adopted January 21, 2004)*

**8-10-206** **Total Organic Compound:** All organic compounds of carbon including methane, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

*(Adopted January 21, 2004)*

**8-10-207** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**8-10-208** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any organic feedstock, to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**8-10-300 STANDARDS**

**8-10-301** **Process Vessel Depressurizing:** Emissions of organic compounds from depressurizing any process vessel at a ~~petroleum~~ refinery or a chemical plant shall be controlled by venting them to a fuel gas system, firebox, incinerator, thermal oxidizer, flare, or otherwise containing and treating them so as to prevent their emissions to the atmosphere. Such procedures shall continue until the pressure within the process vessel is as close to atmospheric pressure as practicably possible, in no case shall a process vessel be vented to the atmosphere until the partial pressure of organic compounds in that vessel is less than 1000 mm Hg (4.6 psig).

*(Amended 3/17/82; 7/20/83; 1/21/04)*

**8-10-302** **Opening of Process Vessels:** Effective July 1, 2004, no process vessel may be opened to the atmosphere except as provided below:

302.1 No process vessel may be opened to the atmosphere unless the internal concentration of total organic compounds has been reduced prior to release to atmosphere to less than 10,000 parts per million (ppm), expressed as methane ($C_1$) except as provided in Section 8-10-302.2.

302.2 A process vessel at a refinery or chemical plant may be opened when the internal concentration of total organic compounds is 10,000 ppm or greater provided that the total number of such vessels opened with such concentration during any consecutive five year period does not exceed 10% of the total process vessel population as documented pursuant to section 8-10-401, and the organic compound emissions from the opening of these vessels shall not exceed 15 pounds per day. Vessels with an internal concentration of total organic compounds of 10,000 ppm or greater shall not be opened on any day on which the APCO predicts an exceedance of a National Ambient Air Quality Standard for ozone or declares a Spare the Air Day.

*(Adopted January 21, 2004)*

**8-10-400 ADMINISTRATIVE REQUIREMENTS**

**8-10-401** **Reporting:** Any facility subject to the provisions of this rule shall submit an annual report to the Air Pollution Control Officer (APCO) containing the elements of Section 8-10-503. The

annual report shall be submitted by February 1 of each year. By April 1, 2004, any facility subject to the provisions of this rule shall submit an initial report that lists all process vessels, it's volume in cubic feet, and it's service type. The list shall be updated yearly, as necessary, and submitted with the annual report.

*(Amended 3/17/82, 7/10/83; 1/21/04)*

**8-10-402 Deleted January 21, 2004**

**8-10-500 MONITORING AND RECORDS**

**8-10-501 Monitoring:** Any vessel subject to this rule shall be monitored for the concentration of total organic compounds prior to opening and once per day during the time the vessel is open to the atmosphere. The sample shall be a representative sample of the internal atmosphere of the vessel. This section shall not apply if it can be demonstrated that the concentration of total organic compounds has been reduced to a concentration equal to or less than 100 ppm for three consecutive days.

*(Adopted January 21, 2004)*

**8-10-502 Concentration Measurement:** The meter used to measure the concentration of total organic compound emissions shall meet the accuracy requirements specified in EPA Method 21.

*(Adopted January 21, 2004)*

**8-10-503 Records:** Any facility subject to the provisions of this rule shall keep records of each vessel depressurization. The records shall include the following information:

503.1 The date, time, type of activity, and duration of depressurization and vessel opening,

503.2 The type of service, size and name or vessel identification number,

503.3 The measured total organic compound concentration and calculated mass emissions from each depressurized vessel, including the sample location and any assumptions made in calculating the mass emissions, and

503.4 The number and size of any air movers used to assure compliance with confined space entry requirements.

503.5 Records shall be maintained for at least 5 years and shall be made available to the APCO for inspection at any time.

*(Adopted January 21, 2004)*

**8-10-600 MANUAL OF PROCEDURES**

**8-10-601 Monitoring Procedures:** The procedures used to monitor emissions are set forth in EPA Method 21 (40 CFR Part 60, Appendix A).

*(Adopted January 21, 2004)*

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**REGULATION 8**
**ORGANIC COMPOUNDS**
**RULE 18**
**EQUIPMENT LEAKS**

(Adopted October 1, 1980)

**8-18-100 GENERAL**

**8-18-101 Description:** The purpose of this Rule is to limit emissions of total organic compounds from equipment leaks at ~~petroleum~~ refineries, chemical plants, bulk plants and bulk terminals including, but not limited to: valves, connectors, pumps, compressors, pressure relief devices, diaphragms, hatches, sight-glasses, fittings, sampling ports, meters, pipes, and vessels.

*(Amended 3/17/82; 3/4/92; 1/7/98; 1/21/04, 9/15/04, 12/16/15)*

**8-18-110 Exemption, Controlled Seal Systems and Pressure Relief Devices:** The provisions of this Rule shall not apply to seal systems and pressure relief devices vented to a vapor recovery or disposal system which reduces the emissions of organic compounds from the equipment by 95% or greater as determined according to Section 8-18-603.

*(Amended, Renumbered 1/7/98; Amended 1/21/04)*

**8-18-111 Exemption, Small Facilities:** The provisions of this rule shall not apply to facilities which have less than 100 valves or less than 10 pumps and compressors. Such facilities are subject to the requirements of Regulation 8, Rule 22.

*(Adopted 3/4/92; Amended, Renumbered 1/7/98)*

**8-18-112 Exemption, Bulk Plant and Terminal Loading Racks:** The provisions of this rule shall not apply to those connections at the interface between the loading rack and the vehicle being loaded.

*(Adopted 3/4/92; Amended, Renumbered 1/7/98)*

**8-18-113 Limited Exemption, Initial Boiling Point:** Until January 1, 2018, the provisions of Sections 8-18-400 shall not apply to equipment which handle organic liquids having an initial boiling point greater than 302° F.

*(Adopted 3/4/92; Amended, Renumbered 1/7/98, Amended 12/16/15)*

**8-18-114 Limited Exemption, Research and Development:** The provisions of Sections 8-18-401, 402 and 502 shall not apply to research and development plants which produce only non-commercial products solely for research and development purposes.

*(Adopted 3/4/92; Amended, Renumbered 1/7/98)*

**8-18-115 Limited Exemption, Storage Tanks:** The provisions of this rule shall not apply to appurtenances on storage tanks including pressure relief devices, which are subject to requirements contained in Regulation 8, Rule 5: Storage of Organic Liquids.

*(Adopted January 7, 1998)*

**8-18-116 Limited Exemption, Vacuum Service:** The provisions of Sections 8-18-400 and 502 shall not apply to equipment in vacuum service.

*(Amended January 7, 1998)*

**8-18-117 Limited Exemption, Visual Inspection:** The provisions of Section 8-18-403 shall not apply to days when a facility is not staffed.

*(Amended, Renumbered January 7, 1998)*

**8-18-118 Deleted January 7, 1998**

**8-18-119 Limited Exemption, Open-Ended Valve or Line:** The provisions of Section 8-18-309 shall not apply to the following:

119.1 Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset.

119.2 Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system.

*(Adopted December 16, 2015)*

**8-18-120 Limited Exemption, Non-repairable Equipment:** The provisions of Sections 8-18-306 and 311 shall not apply to equipment added to the non-repairable equipment list prior to December 16, 2015 except that:

120.1 The equipment must be counted toward the total number of pieces of equipment

allowed by Section 8-18-306.2.

120.2 Any connection on the list must be counted as two valves toward the total number of non-repairable valves allowed by Section 8-18-306.2.

120.3 Any valve on the list with a leak that cannot be minimized below a concentration of 10,000 parts per million (ppm), expressed as methane, may not remain on the list for more than 45 days after leak discovery unless the mass emission rate has been measured in accordance with Section 8-18-604 and has been determined to be less than 15 pounds per day.

120.4 The equipment must be repaired or replaced within five years or at the next scheduled turnaround, whichever date comes first.

*(Adopted December 16, 2015)*

**8-18-200 DEFINITIONS**

**8-18-201 Background:** The ambient concentration of total organic compounds determined at least 3 meters (10 feet) upwind from the equipment to be inspected and not influenced by any specific emission point as indicated by a hydrocarbon analyzer specified by Section 8-18-501.

*(Amended March 4, 1992)*

**8-18-202 Bulk Plants and Terminals:** A distribution facility that is subject to Regulation 8, Rule 6, 33 or 39.

*(Amended, Renumbered 1/7/98, Amended 12/16/15)*

**8-18-203 Chemical Plant:** Any facility engaged in producing organic or inorganic chemicals and/or manufacturing products by chemical processes, including (1) any facility or operation that has 325 as the first three digits in the North American Industrial Classification Standard (NAICS) code, (2) any facility that manufactures industrial inorganic and organic chemicals; plastic and synthetic resins, synthetic rubber, synthetic and other manmade fibers; drugs; soap, detergents and cleaning preparations; perfumes, cosmetics, and other toilet preparations; paints, varnishes, lacquers, enamels, and allied products; agricultural chemicals; safflower and sunflower oil extracts; and (3) any facility engaged in re-refining.

*(Amended, Renumbered 1/7/98; Amended 1/21/04, 12/16/15)*

**8-18-204 Connection:** Flanged, screwed, or other joined fittings used to connect any piping or equipment, including any fitting connecting equipment to piping or other equipment, such as a valve bonnet flange or pump flange

*(Amended, Renumbered 1/7/98; Amended 1/21/04, 12/16/15)*

**8-18-205 Equipment:** All components including, but not limited to: valves, connections, pumps, compressors, pressure relief devices, diaphragms, hatches, fittings, sampling ports, pipes, plugs, gauges or sight-glasses.

*(Amended, Renumbered 1/7/89, Amended 12/16/15)*

**8-18-206 Inaccessible Equipment:** Any equipment located over 13 feet above the ground when access is required from the ground; or any equipment located over 6.5 feet away from a platform when access is required from a platform.

*(Amended, Renumbered January 7, 1998)*

**8-18-207 Inspection:** The determination of the concentration of total organic compounds leaking from equipment using EPA Reference Method 21 as required by Section 8-18-501.

*(Amended, Renumbered January 7, 1998)*

**8-18-208 Leak:** The concentration of total organic compounds above background, expressed as methane, as measured in accordance with Section 8-18-602.

*(Amended, Renumbered 1/7/98; 1/21/04, Amended 12/16/15)*

**8-18-209 Leak Minimization:** Reducing the leak to the lowest achievable level using best modern practices and without shutting down the process the equipment serves. Leak minimization is the most common method for repair. Leak minimization includes but is not limited to tightening of packing gland nuts, injecting lubricant into lubricated packing, tightening bonnet bolts, tightening flange bolts, or installing plugs or caps into open ended lines or valves. Cleaning, scrubbing, or washing equipment alone is not considered best modern practice.

*(Renumbered 3/17/82; Amended 3/4/92, 1/7/98, 12/16/15)*

**8-18-210 Leak Repair:** The tightening, adjustment, addition of material, or the replacement of the equipment using best modern practices, which reduces the leakage to the atmosphere below the applicable standard in Section 8-18-300.

*(Renumbered 3/17/82; Amended 3/4/92; 1/7/98, 12/16/15)*

**8-18-211** **Liquid Leak:** Dripping of liquid at a rate of greater than 3 drops per minute and a concentration of total organic compounds greater than the applicable leak standard in Section 8-18-300.

*(Amended, Renumbered January 7, 1998)*

**8-18-212** **Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

*(Amended, Renumbered January 7, 1998)*

~~**8-18-213** **Petroleum Refinery:** For the purposes of this rule, a Petroleum Refinery is an establishment that is located on one or more contiguous or adjacent properties that processes 10,000 BPD or more of crude oil, renewable material, or any other feedstock to produce products such as propane, butane, gasoline, blendstock, naphtha, diesel fuel, aviation fuel, fuel of distillate oil, lubricating oils, asphalt, coke, chemical feedstocks, petrochemical feedstocks or any other organic product marketed for sale. Any establishment that was previously permitted to process crude oil, and converts or converted the facility operation to process renewable or any other feedstock, in any proportion, with similar or different processes, is considered a Petroleum Refinery. Petroleum Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), petroleum conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), petroleum treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants). Processes included in the conversion of renewable or any other feedstock to produce marketable products may include (but are not limited to) isomerization, esterification, hydrodeoxygenation, fermentation, feedstock pretreatment and product treatment.~~

*(Amended, Renumbered January 7, 1998; Amended mm/dd/yyyy)*

**8-18-214** **Pressure Relief Device:** The automatic pressure-relieving device actuated by the static pressure upstream of the device including, but not limited to, pressure relief valves and rupture disks.

*(Amended, Renumbered January 7, 1998)*

**8-18-215** **Process Unit:** A manufacturing process which is independent of other processes and is continuous when supplied with a constant feed or raw materials and has sufficient storage facilities for product.

*(Amended, Renumbered January 7, 1998)*

**8-18-216** **Quarter:** One of the four consecutive 3-month divisions of the calendar year beginning on January 1.

*(Amended, Renumbered January 7, 1998)*

**8-18-217** **Reinspection:** Any inspection following the minimization or repair of leaking equipment.

*(Amended, Renumbered January 7, 1998)*

**8-18-218** **Rupture Disc:** The thin metal diaphragm held between flanges.

*(Amended, Renumbered January 7, 1998)*

**8-18-219** **Total Organic Compounds:** The concentration of organic compounds and methane as indicated by a hydrocarbon analyzer as specified by Section 8-18-501.

*(Amended, Renumbered 1/7/98; Amended 1/21/04)*

**8-18-220** **Turnaround:** The scheduled shutdown of a process unit for maintenance and repair work.

*(Amended, Renumbered January 7, 1998)*

**8-18-221** **Valve:** Any device that regulates the flow of process material by means of an external actuator acting to permit or block passage of liquids or gases.

*(Amended, Renumbered January 7, 1998)*

**8-18-222** **Weephole:** A drain hole in the discharge horn of a pressure relief device.

*(Adopted January 7, 1998)*

**8-18-223** **Deleted January 7, 1998**

**8-18-224** **Deleted January 7, 1998**

**8-18-225** **Deleted December 16, 2015**

**8-18-226** **Essential Equipment:** Any valve, connection, pressure relief device, pump or compressor that cannot be taken out of service without shutting down the process unit that it serves.

*(Adopted December 16, 2015)*

**8-18-227** **Open-Ended Valve or Line:** Any valve, except a safety relief valve, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

*(Adopted December 16, 2015)*

**8-18-228** **Double Block Bleed System:** Two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

*(Adopted December 16, 2015)*

**8-18-229** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**8-28-218** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**8-18-300** **STANDARDS**

**8-18-301** **General:** Except for valves, pumps and compressors, connections and pressure relief devices subject to the requirements of Sections 8-18-302, 303, 304, 305 and 306, a person shall not use any equipment that leaks total organic compounds in excess of 100 ppm unless the leak has been discovered by the operator, minimized within 24 hours and repaired within 7 days.

*(Amended 7/15/81; 3/17/82; 9/6/89; 3/4/92; 1/7/98)*

**8-18-302** **Valves:** Except as provided in Section 8-18-306, a person shall not use any valve that leaks total organic compounds in excess of 100 ppm unless one of the following conditions is met:

302.1 If the leak has been discovered by the operator, minimized within 24 hours and repaired within 7 days; or

302.2 If the leak has been discovered by the APCO, the leak must be repaired within 24 hours.

*(Adopted 3/4/92; Amended 1/7/98, 1/21/04, 12/16/15)*

**8-18-303** **Pumps and Compressors:** Except as provided in Section 8-18-306, a person shall not use any pump or compressor that leaks total organic compounds in excess of 500 ppm unless one of the following conditions is met:

303.1 If the leak has been discovered by the operator, minimized within 24 hours and repaired within 7 days; or

303.2 If the leak has been discovered by the APCO, the leak must be repaired within 24 hours.

*(Adopted 3/4/92; Amended 1/7/98, 1/21/04, 12/16/15)*

**8-18-304** **Connections:** Except as provided in Section 8-18-306, a person shall not use any connection that leaks total organic compounds in excess of 100 ppm unless one of the following conditions is met:

304.1 If the leak has been discovered by the operator, minimized within 24 hours and repaired within 7 days; or

304.2 If the leak has been discovered by the APCO, the leak must be repaired within 24 hours.

*(Adopted 3/4/92; Amended 1/7/98, 1/21/04, 12/16/15)*

**8-18-305** **Pressure Relief Devices:** Except as provided in Section 8-18-306, a person shall not use any pressure relief device that leaks total organic compounds in excess of 500 ppm unless the leak has been discovered by the operator, minimized within 24 hours and repaired within 15 days;

or if the leak has been discovered by the APCO, minimized within 24 hours and repaired within 7 days.

*(Amended 1/7/98, 12/16/15)*

**8-18-306 Non-repairable Equipment:** Any essential equipment leak that cannot be repaired as required by Section 8-18-302, 303, 304 or 305 may be placed on a non-repairable list provided the operator complies with the following conditions:

306.1 Any essential equipment leak must be less than 10,000 ppm and mass emissions must be determined within 30 days of placing on the non-repairable list. The APCO must be notified no less than 96 hours prior to conducting mass emissions measurements.

306.2 The number of individual pieces of equipment awaiting repair does not exceed that portion of the total population for each equipment type expressed in the table below, rounded to the next higher whole number.

| Equipment | Total Number of Non-repairable Equipment Allowed (%) |
|---|---|
| Valves and Connections as allowed by Section 8-18-306.3 | 0.15% of total number of valves |
| Pressure Relief Devices | 0.5% of total number of pressure relief devices |
| Pumps and Compressors | 0.5% of total number of pumps and compressors |

306.3 A connection can be considered non-repairable equipment pursuant to Section 8-18-306 provided each non-repairable connection is counted as two valves toward the total number of non-repairable valves allowed.

306.4 The essential equipment is repaired or replaced within five years or at the next scheduled turnaround, whichever date comes first.

*(Adopted 3/4/92; Amended 1/7/98, 1/21/04, 12/16/15)*

**8-18-307 Liquid Leak:** A person shall not use any equipment that leaks liquid as defined in Section 8-18-211, unless the leak has been discovered by the operator, minimized within 24 hours and repaired within 7 days.

*(Adopted 3/4/92; Amended 1/7/98)*

**8-18-308 Alternate Compliance:** The requirements of Sections 8-18-301, 302, 303, 304, 305, 306 and 307 shall not apply to any facility which complies with an alternative emission reduction plan that satisfies all the requirements in Sections 8-18-405 and 406.

*(Adopted January 7, 1998)*

**8-18-309 Open-Ended Valve or Line:** Open-ended valves or lines shall be equipped with a cap, blind flange, plug or second valve which shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

309.1 When a double block and bleed system is installed, the second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

309.2 When a double block and bleed system is in use, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall comply with Sections 8-18-309 and 309.1 at all times.

309.3 When a double block and bleed system is not in use, the open end of the second valve shall not leak greater than 100 ppm.

*(Adopted December 16, 2015)*

**8-18-310 Recurrent Leaks:** If a valve, pump, compressor or PRD is found leaking more than 3 consecutive quarters, the inspection frequency shall change from quarterly to monthly pursuant to Section 8-18-407.

*(Adopted December 16, 2015)*

**8-18-311 Mass Emissions:** A person shall not use any equipment that emits total organic compounds in excess of five pounds per day except during any repair periods allowed by Sections 8-18-301, 302, 303, 304, and 305.

*(Adopted December 16, 2015)*

**8-18-400 ADMINISTRATIVE REQUIREMENTS**

**8-18-401 Inspection:** Any person subject to this Rule shall comply with the following inspection requirements:

401.1 All equipment that has been opened during a turnaround shall be inspected for leaks within 90 days after start-up is completed following a turnaround.

401.2 Except as provided under Subsection 8-18-401.3, 404, 405, and 406 all valves, pressure relief devices, pumps or compressors subject to this Rule shall be inspected quarterly.

401.3 Inaccessible valves and pressure relief devices subject to this Rule shall be inspected at least once a year unless found leaking pursuant to Subsection 8-18-403.

401.4 Any equipment subject to this Rule may be inspected at any time by the APCO.

401.5 Any equipment found to have a leak in excess of the standard in Section 8-18-300 shall be reinspected within 24 hours after any leak repair or minimization.

401.6 Any connections subject to this rule shall be inspected annually or be part of an APCO and EPA approved connection inspection program.

401.7 Any pressure relief device equipped with a weephole shall be inspected quarterly at the outlet of the weephole if the horn outlet is inaccessible.

401.8 Any pressure relief device that releases to the atmosphere shall be inspected within 5 working days after the release event.

401.9 Any essential equipment placed on the non-repairable list shall be inspected at least once per quarter.

401.10 The mass emission rate of any essential equipment placed on the non-repairable list in accordance with Section 8-18-306 shall be determined at least once per calendar year. The APCO shall be notified no less than 96 hours prior to conducting the measurements required by this section.

401.11 The owner/operator shall identify the equipment and/or source of any background reading greater than 50 ppm.

*(Amended 12/16/15)*

**8-18-402 Identification:** Any person subject to this Rule shall comply with the following identification requirements:

402.1 All valves, pressure relief devices, pumps and compressors, and, effective January 1, 2017, connectors shall be identified with a unique permanent identification code approved by the APCO. This identification code shall be used to refer to the valve, connector, pressure relief device, pump or compressor location. Records for each valve, connector, pressure relief device, pump or compressor shall refer to this identification code.

402.2 All equipment with a leak in excess of the applicable leak limitation in Section 8-18-300 shall be tagged with a brightly colored weatherproof tag indicating the date the leak was detected.

*(Amended 3/4/92, 1/7/98, 12/16/15)*

**8-18-403 Visual Inspection Schedule:** All pumps and compressors shall be visually inspected daily for leaks. If a leak is observed, the concentration shall be determined within 24 hours of discovery pursuant to Section 8-18-602.

*(Renumbered 1/7/98; Amended 12/16/15)*

**8-18-404 Alternative Inspection Schedule:** The inspection frequency for valves or pumps may change from quarterly to annually provided all of the conditions in Subsection 404.1 and 404.2 are satisfied.

404.1 The valve or pump has been operated leak free for five consecutive quarters; and

404.2 Records are submitted to the District and approved by the APCO.

404.3 The valve or pump remains leak free pursuant to the Sections 8-18-302 and 303. If a leak is discovered, the inspection frequency will revert back to quarterly.

*(Adopted 1/7/98; Amended 12/16/15)*

**8-18-405 Alternate Emission Reduction Plan:** Any person may comply with Section 8-18-308 by developing and submitting an alternate emission reduction plan to the APCO that satisfies all of the following conditions:

405.1 The plan shall contain all information necessary to establish, document, measure progress and verify compliance with an emission reduction level set forth in this rule.
405.2 All emission reductions must be achieved solely from equipment and connections subject to this rule.
405.3 Public notice and a 60-day public comment period shall be provided.
405.4 Following the public comment period, the plan shall be submitted to and approved in writing by the EPA, Region IX prior to the APCO approval of the plan.
405.5 An alternate emission reduction plan must provide for emission reductions equal to or greater than required by the specific limits in this rule.

*(Adopted 1/7/98; Amended 11/27/02)*

**8-18-406 Interim Compliance:** A facility is subject to the limits contained in Sections 8-18-301, 302, 303, 304, 305, 306 and 307 until receipt of the written approvals of both the APCO and the EPA of an Alternate Emission Reduction Plan that complies with Section 8-18-405.

*(Adopted1/7/98; Amended 11/27/02)*

**8-18-407 Recurrent Leak Schedule:** For **a**ny valve, pump, compressor or pressure relief device found leaking in more than three consecutive quarters, a person subject to this Rule shall comply with the following requirements:
407.1 The inspection frequency shall be changed from quarterly to monthly; and
407.2 Records of each valve, pump, compressor and pressure relief device changed to monthly monitoring shall be submitted to the District each quarter pursuant to Section 8-18-503.1.
407.3 If the valve, pump, compressor or pressure relief device remains leak free for four consecutive months pursuant to Sections 8-18-302, 303 and 305 the inspection frequency will revert back to quarterly upon request and after APCO approval.

*(Adopted December 16, 2015)*

**8-18-500 MONITORING AND RECORDS**

**8-18-501 Portable Hydrocarbon Detector:** Any instrument used for the measurement of total organic compounds shall be a combustible gas indicator that has been approved by the APCO and meets the specifications and performance criteria of and has been calibrated in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A).

*(Amended 3/17/82, 9/6/89, 3/4/92, 12/16/15)*

**8-18-502 Records:** Any person subject to the requirements of this rule shall maintain records that provided the following information:
502.1 For equipment subject to Section 8-18-402.1, the equipment identification code, equipment type and the location of the equipment.
502.2 The date, time, type of repairs and corresponding leak concentrations measured on all inspections and reinspections as specified by Section 8-18-401.
502.3 Records shall be maintained for at least 5 years and shall be made available to the APCO for inspection at any time.
502.4 Records of all non-repairable equipment subject to the provisions of Section 8-18-306 shall be maintained and contain the equipment identification code, equipment type, equipment location, initial leak concentration measurement and date, quarterly leak concentration measurements and dates, the duration the equipment has been on the non-repairable list, date of any repair attempts made to equipment, mass emission rate determinations, date the determination was made, last process unit turnaround date, total number of non-repairable equipment awaiting repair, and explanation why equipment was deemed essential equipment.
502.5 Records of all equipment and/or sources identified as a result of background readings greater than 50 ppm.
502.6 Effective January 1, 2018, Piping and Instrumentation Diagrams (P&IDs) with all components in heavy liquid service clearly identified.

*(Adopted 3/4/92; Amended 1/7/98, 12/16/15)*

**8-18-503 Reports:** Any person subject to the requirements of this rule shall submit the following information to the District:
503.1 Effective July 1, 2016, a report shall be submitted to the APCO quarterly that includes the following information:

3.1.1 The equipment identification code, equipment type, stream service, equipment location, leak concentration measurement and date, leak repair method and concentration measurements of any valves, pumps, compressors and PRDs found leaking in more than 3 consecutive quarters pursuant to Section 8-18-310.

3.1.2 Records of all non-repairable equipment subject to the provisions of Section 8-18-306 shall be submitted to the District quarterly and contain the equipment identification code, equipment type, equipment location, initial leak concentration measurement and date, the duration the equipment has been on the non-repairable list, any repair attempts made to equipment, mass emission rate determination, date the determination was made, last process unit turnaround date, total number of non-repairable equipment awaiting repair and explanation why equipment was deemed essential equipment.

503.2 Effective July 1, 2016, a person subject to this rule shall submit to the District an inventory identifying the total numbers of valves, pressure relief devices, pumps and compressors and connections to which this rule applies broken down per unit or other grouping if component is not associated with an individual unit. After review and approval of the initial inventory by the APCO, annual inventory updates shall be submitted to the District every January 1st.

503.4 Inspection records of all equipment opened during a turnaround shall be submitted to the District the first month following completion of the 90-day startup up leak inspections pursuant to Section 8-18-401.1.

503.5 By January 1, 2018, submit records required by Section 8-18-502.6 and annually thereafter for information that has changed since last submittal.

*(Adopted 1/21/04; Amended 12/16/15)*

**8-18-600 MANUAL OF PROCEDURES**

**8-18-601 Analysis of Samples:** Samples of organic compounds as defined in Section 8-18-113 shall be analyzed for Initial Boiling Point as prescribed in ASTM D-1078- 98 or ASTM D-86.

*(Adopted 3/17/82; Amended 3/4/92; 1/7/98)*

**8-18-602 Inspection Procedure:** Inspections of equipment shall be conducted as prescribed by EPA Reference Method 21 (40 CFR 60, Appendix A).

*(Adopted 9/6/89; Amended 3/4/92; 1/7/98)*

**8-18-603 Determination of Control Efficiency:** The control efficiency as specified by Section 8-18-110 shall be determined by any of the following methods: 1) BAAQMD Manual of Procedures, Volume IV, ST-7, 2) EPA Method 25 or 25A. A source shall be considered in violation if the emissions of organic compounds measured by any of the referenced test methods exceed the standards of this rule.

*(Amended, Renumbered 1/7/98; Amended 1/21/04)*

**8-18-604 Determination of Mass Emissions:** The mass emission determination as specified by Section 8-18-306 and Section 8-18-311 shall be made using any of the following methods: 1) EPA Protocol for Equipment Leak Emission Estimates, Chapter 4, Mass Emission Sampling, (EPA-453/R-95-017) November, 1995 or 2) or a mass emission monitoring method determined to be equivalent by the EPA and approved by the APCO.

*(Adopted 1/7/98; Amended 1/21/04, 12/16/15)*

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 28
# EPISODIC RELEASES FROM PRESSURE RELIEF DEVICES AT ~~PETROLEUM~~ REFINERIES AND CHEMICAL PLANTS

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 28
# EPISODIC RELEASES FROM PRESSURE RELIEF DEVICES AT PETROLEUM REFINERIES AND CHEMICAL PLANTS

(Adopted July 16, 1980)

**8-28-100 GENERAL**

**8-28-101 Description**: The purpose of this Rule is to prevent the episodic emissions of organic compounds from pressure relief devices on equipment handling gaseous organic compounds at ~~petroleum~~ refineries, and to collect information on episodic organic and inorganic compound emissions from pressure relief devices at ~~petroleum~~ refineries and chemical plants.

*(Amended 3/17/82; 7/20/83; 12/17/97; 12/21/05)*

**8-28-110 Deleted September 6, 1989**

**8-28-111 Exemption, Evaporation Point:** The provisions of this rule shall not apply to pressure relief devices that exclusively handle organic compounds exhibiting a 10% evaporation point greater than 150 degrees Celsius (302 degrees Fahrenheit) when using ASTM D-86 and/or inorganic compounds not listed in Section 8-28-401.5.

*(Amended 9/6/89; 12/17/97; 3/18/98; 12/21/05)*

**8-28-112 Exemption, Storage Tanks:** The requirements of this rule shall not apply to any pressure relief devices on storage tanks.

*(Amended December 17, 1997)*

**8-28-113 Exemptions, Research and Development Facilities:** The provisions of this Rule shall not apply to research or development facilities that produce only non-commercial products for research and development purposes.

*(Adopted 6/1/94; Amended 12/21/05)*

**8-28-114 Limited Exemption, Small Refineries:** Section 8-28-304.2 shall not apply to ~~petroleum~~ refineries processing less than 20,000 barrels per stream day of crude, unless the District's evaluation of the Process Hazards Analysis in Section 8-28-304.1 determines that it is cost-effective and technologically feasible for the refinery to control the pressure relief devices.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-115 Exemption, Thermal Relief Valves:** The provisions of this rule shall not apply to thermal relief valves that are vented to process drains or back to the pipeline.

*(Renumbered December 21, 2005)*

**8-28-200 DEFINITIONS**

**8-28-201 Chemical Plant:** Any facility engaged in producing organic or inorganic chemicals and/or manufacturing products by chemical processes. Any facility or operation that has 325 as the first three digits in the North American Industrial Classification Standard (NAICS) Code. Chemical plants may include, but are not limited to the manufacture of: industrial inorganic and organic chemicals; plastic and synthetic resins, synthetic rubber, synthetic and other man-made fibers; drugs; soap, detergents and cleaning preparations, perfumes, cosmetics and other toilet preparations; paints, varnishes, lacquers, enamels and allied products; agricultural chemicals; safflower and sunflower oil extracts; and re-refining, not including ~~petroleum~~ refineries.

*(Adopted 7/20/83; Amended12/17/97; 12/21/05)*

**8-28-202 Pressure Relief Valve:** The automatic pressure-relieving device actuated by the static pressure upstream of the valve.

*(Renumbered July 20, 1983)*

**8-28-203 Rupture Disk:** The thin metal diaphragm held between flanges.

*(Renumbered July 20, 1983)*

**8-28-204 Deleted December 17, 1997**

**8-28-205 Deleted December 17, 1997**

**8-28-206** **Deleted December 17, 1997**

**8-28-207** **Modified Source:** The same definition contained in District Regulation 2, Rule 1.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-208** **Parallel Service:** Additional pressure relief devices which protect a common piece or pieces of equipment. These additional pressure relief devices may be installed as spares to facilitate maintenance or because the design relieving capacity cannot be obtained with a single pressure relieving device. The pressure relieving devices do not need to have the same pressure setting to be considered parallel.

~~*(Adopted December 17, 1997)*~~

~~**8-28-209** **Petroleum Refinery:** Any facility that processes petroleum as defined in the North American Industrial Classification Standard No. 32411 (1997).~~

~~(Adopted 12/21/97; Amended 12/21/05)~~

**8-28-210** **Pressure Relief Device:** The automatic pressure-relieving device for discharges of material that prevents safety hazards, prevents pressures from exceeding the maximum allowable working pressure of the operating process equipment, or prevents equipment damage. Such devices include, but are not limited to, pressure relief valves, emergency de-pressuring vents and rupture disks.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-211** **Prevention Measure:** A reliable component, system, or program that will prevent releases from pressure relief devices. Examples of prevention measures include, but are not limited to: (1) flow, temperature, level and pressure indicators with interlocks, deadman switches, monitors, or automatic actuators, (2) documented and verified routine inspection and maintenance programs, (3) inherently safer designs, (4) deluge systems. Operator training and documented and verified routine inspection and maintenance programs may count as only one of the 3 Prevention Measures required by Section 8-28-304.1 and 405. A component, system or program with a high probability for failure shall not be considered a Prevention Measure.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-212** **Process Hazards Analysis (PHA):** An organized effort to identify and analyze the significance of hazardous scenarios associated with a process or activity. For the purposes of this rule, PHA's are used to pinpoint weaknesses in the design and operation of facilities that could lead to releases from pressure relief devices and to provide the facility with information to aid in making decisions for preventing such releases.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-213** **Qualified Person:** An APCO-approved person who is qualified to attest to the validity of the Process Safety Requirements and who is a registered professional engineer in the State of California with expertise in chemical, mechanical or safety engineering.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-214** **Release Event:** Any release of organic or inorganic pollutants greater than 10 pounds from a pressure relief device, subject to this Rule, to the atmosphere. These events do not include releases that are vented to a vapor recovery or disposal system with at least 95% by weight organic compound control efficiency.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-215** **Responsible Manager:** A person who is an employee of the facility or business entity that owns or operates the facility who possesses sufficient authority to ensure the implementation of Process Safety Requirements.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-216** **Tell-tale Indicator:** A physical non-electronic device installed on a pressure relief device that can visually indicate whether or not that pressure relief device has had a release. Tell-tale indicators include, but are not limited to, socks, rupture disks, and flags.

*(Adopted December 21, 2005)*

**8-28-217** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**8-28-218** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**8-28-300 STANDARDS**

**8-28-301 Deleted December 17, 1997**

**8-28-302 Pressure Relief Devices at New or Modified Sources at ~~Petroleum~~ Refineries:** Any person installing a new refinery source or modifying an existing refinery source, that is equipped with at least one pressure relief device in organic compound service, shall meet all applicable requirements of Regulation 2, Rule 2, including Best Available Control Technology.

*(Adopted 12/17/97; Amended 12/21/05)*

**8-28-303 Existing Pressure Relief Devices at ~~Petroleum~~ Refineries:** Use of a pressure relief device in organic compound service on any equipment at a ~~Petroleum~~ Refinery is prohibited, except when the device meets at least one of the following conditions:

303.1 The pressure relief device is vented to a vapor recovery or disposal system with at least a 95 percent by weight organic compounds control efficiency, and the control system is properly sized per manufacturer's recommendations to handle the material from all devices it is intended to serve, or

303.2 The facility has implemented the Process Safety Requirements specified in Section 8-28-405 for the pressure relief device.

*(Adopted 12/17/97; Amended 3/18/98; 12/21/05)*

**8-28-304 Repeat Release – Pressure Relief Devices at ~~Petroleum~~ Refineries:** After the next scheduled turnaround following July 1, 1998, any ~~petroleum~~ refinery source that has at least one reportable Release Event from a pressure relief device in organic compound service, including those in parallel service, in any consecutive five calendar year period shall meet the following conditions:

304.1 Within 90 days of the first Release Event from a pressure relief device, the facility shall conduct and submit to the APCO an additional, separate Process Hazard Analysis and meet the Prevention Measures Procedures specified in Section 8-28-405; and conduct a failure analysis of the incident, to prevent recurrence of similar incidents. Within 120 days of the first Release Event, the facility shall equip each pressure relief device of that source with a tamperproof tell-tale indicator that will show that a release has occurred since the last inspection. The Process Hazards Analysis shall include an evaluation of the cost-effectiveness and technical feasibility of control devices to remedy the incident. This evaluation of control devices shall include, but shall not be limited to, the following: (1) installing additional flare gas compressor recovery capacity and (2) venting the pressure relief device that causes the Release Event to existing vapor recovery or disposal systems, and

304.2 Within one year of the second Release Event from a pressure relief device in organic compound service on the same source, including those in parallel service, the facility shall vent all the pressure relief devices that vent the second Release Event, including those in parallel service, to a vapor recovery or disposal system with at least 95 percent by weight organic compounds control efficiency, and the control system shall be properly sized per manufacturer's recommendations to handle the material from all devices it is intended to serve.

The five calendar year period of this section shall begin at the time that the District receives a Prevention Measure Plan as specified in Section 8-28-304.1.

*(Adopted 12/17/97; Amended 3/18/98; 12/21/05)*

**8-28-400 ADMINISTRATIVE REQUIREMENTS**

**8-28-401 Reporting at ~~Petroleum~~ Refineries and Chemical Plants:** Any indication of a Release Event at a ~~petroleum~~ refinery or chemical plant shall be reported to the APCO no later than the next working day following the venting. In addition, the following information shall be submitted in writing to the APCO within 30 days following the Release Event:

401.1 Date, time, and duration of the Release Event in minutes.

401.2 The pressure relief device involved, identified by its unique number as required in Section 8-28-404 as well as its name and service commonly referred to by the facility.

401.3 The incident number assigned by the APCO for the Release Event.

401.4 Type and size of device.

401.5 Type and amount of material released in pounds, accurate to two significant digits. Reportable materials are: total organic compounds, ammonia, hydrogen sulfide, chlorine, sulfur dioxide, sulfur trioxide, hydrofluoric acid, and difluoroethane.

401.6 Information and assumptions used to report the duration and amount released during the event.

401.7 Cause of the event.

401.8 A schedule for action to prevent re-occurrence of the event.

401.9 Results of fugitive emission inspection of the device done in accordance with the requirements of section 8-28-402.2.

*(Amended 2/18/81; 12/17/97; 3/18/98; 12/21/05)*

**8-28-402 Inspection:** Any person subject to this Rule shall comply with the following inspection requirements:

402.1 Any pressure relief device subject to this Rule that is equipped with a telltale indicator shall be inspected at least once per day to determine if a release has been indicated, unless and until the pressure relief device has been equipped with a monitoring system pursuant to Section 8-28-503 and the facility has submitted a monitoring system demonstration report pursuant to Section 8-28-406.

402.2 Any pressure relief device in organic compound service that has a Release Event and is subject to this Rule shall be inspected within 5 working days after the release to confirm compliance with Regulation 8, Rule 18 and the results reported in accordance with Regulation 8-28-401.9.

*(Amended 9/6/89; 6/1/94; 12/17/97; 12/21/05)*

**8-28-403 Deleted December 21, 2005**

**8-28-404 Identification:** Any pressure relief device subject to this rule shall be identified with a unique permanent identification code approved by the APCO. This identification code shall be used to refer to the pressure relief device location. Records and reports for each pressure relief device shall refer to this identification code.

*(Adopted 6/1/94; Amended 12/17/97; 12/21/05)*

**8-28-405 Process Safety Requirements:** All facilities using pressure relief devices in organic compound service that are subject to the standards in Section 8-28-300 that have a potential for a Release Event shall comply with the following process safety requirements:

405.1 Explicitly establish training, equipment, inspection, maintenance and monitoring requirements such that the pressure relief device releases are minimized;

405.2 Using a Process Hazards Analysis, implement at least 3 redundant Prevention Measures before a release. Until July 1, 2007, as an alternative method of complying with this Section 8-28-405.2, a facility may operate a pressure relief device with only one or two Prevention Measures in place, but if such a device experiences a Release Event then the facility shall vent all devices on the source served by the device to a vapor recovery or disposal system with at least 95% by weight organic compound control efficiency. By July 1, 2007, all atmospheric pressure relief devices must be equipped with at least three redundant Prevention Measures;

405.3 The Process Safety Requirements must be approved and signed by a Qualified Person and a Responsible Manager; and

405.4 The Process Safety Requirements must be submitted for review to the APCO to determine if the plan meets the requirements of subsections 8-28-405.1 through 405.3. The APCO shall provide a 30-day public comment period and will consider all comments received during this period prior to approval or disapproval of the procedures.

*(Adopted 12/17/97; Amended 3/18/98; 12/21/05)*

**8-28-406 Monitoring System Demonstration Report:** No later than June 1, 2007, each facility shall submit to the APCO a Monitoring System Demonstration Report that demonstrates that each pressure relief device subject to this Rule that has the potential to release to the atmosphere is monitored by a monitoring system that satisfies the requirements of Section 8-28-503. The Monitoring System Demonstration Report shall include the following elements:

406.1 A listing of each pressure relief device covered by the report, including the nominal set pressure for each device and the range of pressures over which each device could reasonably be expected to release;

406.2 A description of the monitoring system for each pressure relief device covered by the Report, including a narrative description and diagrams or charts, that clearly identifies all elements of the system and how they operate to monitor releases as required under Section 8-28-503;

406.3 A listing of all operating parameters that are directly monitored by the system (*e.g.* temperature, pressure, flowrates, *etc.*) with a description of (i) the sensitivity and accuracy of the device(s) monitoring each parameter and the frequency with which each parameter is monitored, and (ii) how the sensitivity and frequency of monitoring is sufficient to allow the Monitoring system to detect releases of 10 pounds;

406.4 A listing of any calculations that are used to derive Release Event emissions information from data on operating parameters, including any assumptions on which such calculations are based and the basis for those assumptions;

406.5 A description of the alarms or other indication that the system provides to alert operators that a Release Event has or may have occurred; and

406.6 A description of how the information obtained by the monitoring system is recorded and maintained;

*(Adopted December 21, 2005)*

**8-28-407 Process Unit Identification Report:** No later than March 1, 2006, each ~~petroleum~~ refinery shall submit to the APCO a report listing all process units equipped with atmospheric PRDs, a listing of all associated pressure relief devices subject to this Rule identified in accordance with Section 8-28-404, and the date of the first turnaround following July 1, 1998, for each of the process units.

*(Adopted December 21, 2005)*

**8-28-500 MONITORING AND RECORDS**

**8-28-501 Deleted December 17, 1997**

**8-28-502 Records**: Any person subject to this Rule shall maintain the following records for a period of no less than two years and make them available to the APCO upon request:

502.1 Prevention measure records to demonstrate compliance with the standards in Sections 8-28-303 and 8-28-405;

502.2 Records of all of the pressure relief devices in accordance with Section 8-28-404 including a description of all equipment served by those devices;

502.3 Records of daily inspection of pressure relief devices subject to this Rule that are equipped with telltale indicators, including the time of inspection, and the identity of operator conducting the inspection;

502.4 Records of monitoring of any pressure relief device subject to this Rule as required by Section 8-28-503.

*(Adopted 9/6/89; Amended 6/1/94; 12/17/97; Renumbered, Amended 12/21/05)*

**8-28-503 Monitoring:** Effective June 1, 2007, any person subject to this Rule shall monitor all atmospheric pressure relief devices using a Monitoring System that satisfies the following requirements:

503.1 The Monitoring System shall be designed, installed, maintained, and operated so that it is capable of detecting any Release Event and notifying operators that the Release Event has occurred;

503.2 The Monitoring System shall be designed, installed, maintained and operated so that it is capable of determining the date and time at which a Release Event occurred, the duration of the Release Event and the type and amount of material released;

503.3 The Monitoring System shall include a mechanism for ensuring that all elements of the system are functioning properly by checking the components of the system at least once per day. Such mechanisms may include equipment inspections, instrument calibrations or other means to ensure that equipment, personnel, and systems are operating properly.

*(Adopted December 21, 2005)*

**8-28-600 MANUAL OF PROCEDURES**

**8-28-601 Deleted December 17, 1997**

**8-28-602 Determination of Control Efficiency:** The control efficiency as specified in Sections 8-28-214, 8-28-303.1, 8-28-304.2, and 8-28-405.2 (with the exception of non-enclosed flares) shall be determined as prescribed by any of the following methods: 1) BAAQMD Manual of Procedures, Volume IV, ST-7; 2) EPA Method 25 or 25A; 3) Flare control efficiency calculations approved by the APCO and EPA in writing; or 4) other methods to demonstrate control efficiency approved by the APCO and EPA in writing. A source shall be considered in violation if the VOC emissions measured by any of the referenced test methods exceed the standards of this rule.

*(Adopted 6/1/94; Amended 12/17/97; 12/21/05)*

**8-28-603 Deleted December 17, 1997**

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 33
# GASOLINE BULK TERMINALS AND GASOLINE CARGO TANKS

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 33
# GASOLINE BULK TERMINALS AND GASOLINE CARGO TANKS

(Adopted November 30, 1983)

**8-33-100 GENERAL**

**8-33-101 Description:** The purpose of this Rule is to limit emissions of organic compounds associated with gasoline transfer operations at gasoline bulk terminals and organic compounds from gasoline cargo tanks.

*(Amended 10/7/87; 6/1/94; 4/15/09)*

**8-33-110 Deleted April 15, 2009**

**8-33-111 Exemption, Cargo Tanks:** The requirements of Sections 8-33-304.1, 304.2 and 304.6 do not apply to cargo tanks that deliver exclusively to:

111.1 Storage tanks with an actual capacity of less than 250 gallons.

111.2 Storage tanks installed prior to February 18, 1987, with an annual throughput of less than 60,000 gallons, provided the storage tanks are exempt from Phase I requirements pursuant to Regulation 8, Rule 7.

111.3 Storage tanks with a capacity of less than 550 gallons used primarily for the refueling of implements of husbandry as defined in Division 16, Chapter 1, of the California Vehicle Code, provided such tanks are equipped with a submerged fill pipe.

111.4 Storage tanks, where the APCO determines that the Phase I gasoline vapor recovery requirements identified in Regulation 8, Rule 7 are not feasible.

*(Amended 1/9/85; 10/7/87; 6/1/94; 4/15/09)*

**8-33-112 Exemption, Tank Gauging and Inspection:** Any gasoline cargo tank may be opened for gauging or inspection, provided that the tank is not pressurized or being loaded.

*(Amended and Renumbered 10/7/87; Amended 4/15/09)*

**8-33-113 Exemption, Maintenance and Repair:** The requirements of Section 8-33-304.4, 304.5, and 306 shall not apply to liquid gasoline spills and vapor leaks resulting from maintenance or repair operations provided proper operating practices are employed to minimize evaporation of gasoline into the atmosphere to the greatest extent practicable.

*(Renumbered 10/7/87; Amended 4/15/09)*

**8-33-114 Exemption, CARB Certification:** CARB certification requirements in this Rule do not apply to vapor recovery equipment or systems where the gasoline bulk terminal owner or operator demonstrates that CARB has determined that such equipment or systems are not required to be CARB certified.

*(Adopted April 15, 2009)*

**8-33-115 Limited Exemption, Aviation Gasoline:** The distribution of aviation gasoline to and from bulk terminals:

115.1 Is exempt from this Rule's CARB certification requirements of the vapor recovery system.

115.2 Is exempt from the requirements of Sections 8-33-304.5 and 306 when sampling is required for quality assurance.

*(Adopted April 15, 2009)*

**8-33-116 Limited Exemption, Source Test Requirements:** Any gasoline bulk terminal vapor processing unit that collects organic vapors and routes them to a fuel gas system for combustion shall be exempt from the emission factor source test requirement in 8-33-309.4, provided the gasoline bulk terminal control device has a source test requirement in an EPA approved Title V permit and provided that the terminal conducts an annual source test on its vapor recovery system which demonstrates that the system complies with the leakage requirements outlined in Sections 8-33-309.5 and 8-33-309.6, pursuant to the procedures set forth in CARB Test Procedures TP-203.1 and TP-204.3.

*(Adopted April 15, 2009)*

**8-33-200 DEFINITIONS**

**8-33-201 CARB Certified Vapor Recovery System:** A gasoline bulk terminal vapor recovery system that has a valid certification issued by the California Air Resources Board (CARB), pursuant to Section 41954 of the California Health and Safety Code.

*(Amended 10/7/87; 4/15/09)*

**8-33-202 Gasoline:** Any distillate, including aviation gasoline and additives, that has a Reid vapor pressure of four (4.0) pounds or greater.

**8-33-203 Gasoline Bulk Terminal:** A gasoline storage and distribution facility that receives gasoline by marine tanker, barge, pipeline, or rail car, and loads it into gasoline cargo tanks for delivery to gasoline bulk plants, service stations, and other distribution points.

*(Amended 10/7/87; 6/1/94; Amended and Renumbered 4/15/09)*

**8-33-204 Gasoline Cargo Tank:** Any container, including its associated pipes and fittings, that is attached to a vehicle used to transport gasoline and is required to be certified in accordance with Section 41962 of the California Health and Safety Code.

*(Adopted April 15, 2009)*

**8-33-205 Liquid Leak Free:** A liquid fill connector or vapor hose connector that does not leak liquid in excess of three drops per minute, or 10 milliliters per disconnect averaged over three consecutive disconnects, as set forth in CARB CP-203, *Certification Procedure for Vapor Recovery Systems of Terminals* for gasoline bulk terminal connectors, or CARB CP-204, *Certification Procedure for Vapor Recovery Systems of Cargo Tanks* for gasoline cargo tank connectors.

*(Amended and Renumbered April 15, 2009)*

**8-33-206 Loading Event:** Transferring liquid gasoline into and receiving vapors from a gasoline delivery vehicle, including all individual cargo tanks and compartments.

*(Adopted April 15, 2009)*

**8-33-207 Non-Methane Organic Compound (NMOC):** Any compound of carbon, excluding methane, carbon monoxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

*(Adopted 6/1/94; Amended and Renumbered 4/15/09)*

**8-33-208 Portable Maintenance Container:** A portable vessel or tank with a capacity of less than 250 gallons, equipped with liquid and vapor hose connectors that temporarily stores gasoline.

*(Adopted April 15, 2009)*

**8-33-209 Reid Vapor Pressure:** The vapor pressure of an organic liquid at 100 degrees Fahrenheit, except liquefied ~~petroleum~~ gases, as determined in accordance with the Manual of Procedures, Volume III, Method 13, the most current version of ASTM D323, or the equivalent method described in California Code of Regulations Title 13, Section 2297.

*(Adopted April 15, 2009)*

**8-33-210 Slop Tank:** Any permanent or fixed container that has the primary function of temporarily storing ~~petroleum~~ product and other liquids that have been collected during maintenance or loading operations and are not loaded into a gasoline cargo tank.

*(Amended mm/dd/yyyy))*

**8-33-211 Submerged Fill Pipe:** Any storage tank fill pipe which meets one of the following conditions:

210.1 If the tank is filled from the top, the end of the discharge pipe is totally submerged when the liquid level is six (6) inches above the bottom of the tank.

210.2 If the tank is filled from the side, the discharge pipe is totally submerged when the liquid level is 18 inches above the bottom of the tank.

*(Amended and Renumbered April 15, 2009)*

**8-33-212 Switch Loading:** The loading of an organic liquid with a Reid vapor pressure of less than 4.0 pounds into a gasoline cargo tank where the previous load was gasoline.

*(Amended and Renumbered April 15, 2009)*

**8-33-213 Total Organic Compound (TOC):** Any compound of carbon including methane, excluding carbon monoxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

*(Adopted April 15, 2009)*

**8-33-214 Vapor Processing Unit:** Equipment designed to dispose of hydrocarbon vapors to prevent their emission into the atmosphere.

*(Adopted April 15, 2009)*



**Commented [GHN3]:** Is this changed? Should be formatted as new, right?

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**8-33-215** **Vapor Recovery System:** A system capable of collecting and disposing of hydrocarbon vapors to prevent their emission into the atmosphere.

*(Adopted April 15, 2009)*

**8-33-216** **Vapor Leak Free (Terminal):** Until July 1, 2009, a leak of less than 100 percent of the lower explosive limit on a combustible gas detector measured at a distance of 2.5 cm (l in.) from the source or no visible evidence of air entrainment in the sight glasses of liquid delivery hoses. Effective July 1, 2009, a gasoline bulk terminal liquid fill connector, vapor hose connector, or pressure/vacuum (P/V) valve that does not leak vapor in excess of 3,000 parts per million (ppm) (expressed as methane) or 6% of the Lower Explosive Limit (LEL), measured according to the procedure set forth in CARB TP-204.3, *Determination of Leak(s)*.

*(Adopted 6/1/94; Amended and Renumbered 4/15/09)*

**8-33-217** **Vapor Leak Free (Gasoline Cargo Tank):** A gasoline cargo tank liquid fill connector, vapor hose connector or other fitting that does not leak vapor in excess of 100% of Lower Explosive Limit (LEL), measured according to the procedure set forth in CARB TP-204.3, *Determination of Leak(s)*.

*(Adopted April 15, 2009)*

**8-33-218** **Vapor Tight (Gasoline Cargo Tank):** A gasoline cargo tank that does not leak vapor in excess of the pressure decay and vapor leak standards set forth in CARB CP-204, *Certification Procedure for Vapor Recovery Systems of Cargo Tanks*.

*(Adopted 1/9/85; Amended and Renumbered 4/15/09)*

**8-33-300 STANDARDS**

**8-33-301 Gasoline Bulk Terminal Emission Limitations:**

301.1 Effective April 1, 1989, a person shall not load, or permit the loading of gasoline into or out of a gasoline bulk terminal unless a CARB certified vapor recovery system is properly connected and used. Such systems shall not emit into the atmosphere more than 9.6 grams of organic compounds per cubic meter (0.08 lbs per 1000 gallons) of organic liquid loaded. Switch loading shall be subject to this standard. Where multiple vapor processing units are used, each vapor processing unit shall be subject to this standard.

301.2 Effective January 10, 2011, emissions of non-methane organic compounds from a vapor recovery system shall not exceed 0.04 pound (lb) per 1,000 gallons of organic liquid loaded. Switch loading operations are subject to this standard. Where multiple vapor processing units are used, each vapor processing unit shall be subject to this standard.

*(Amended 10/7/87; 7/20/88; 6/1/94; 4/15/09)*

**8-33-302 Deleted April 15, 2009**

**8-33-303** **Bottom Fill Requirement:** Gasoline cargo tank loading operations at gasoline bulk terminals shall be accomplished by bottom fill.

*(Amended 10/7/87; 4/15/09)*

**8-33-304** **Gasoline Cargo Tank Requirements:** An owner or operator of a gasoline cargo tank must comply with the following requirements:

304.1 Vapor Integrity Requirement: An owner or operator of a gasoline cargo tank shall only operate, or allow the operation of, a gasoline cargo tank that displays a valid State of California decal, as required by Section 41962 of the Health and Safety Code, and attests to the vapor integrity of the cargo tank.

304.2 Vapor Recovery Requirement: Any gasoline cargo tank loading into or out of a gasoline bulk terminal shall be equipped with and use a vapor recovery system certified pursuant to Section 41962 of the California Health and Safety Code.

304.3 Deleted October 7, 1987.

304.4 Purging Requirement: An owner or operator of a gasoline cargo tank shall not purge gasoline vapor from the cargo tank to the atmosphere, at any time.

304.5 Drainage Requirement: An owner or operator of a gasoline cargo tank shall not drain or spill liquid gasoline from the cargo tank, discard it in sewers, store it in open containers, or handle it in any other manner that would result in its evaporation to the

atmosphere.

304.6 Vapor Tight Requirement: The gasoline cargo tank shall be vapor tight (gasoline cargo tank).

304.7 Vapor Leak Requirement: Gasoline cargo tank liquid fill and vapor return connectors shall be vapor leak free (gasoline cargo tank). The cargo tank owner or operator must notify the bulk terminal personnel immediately if the product or vapor connectors do not meet these vapor leak requirements.

304.8 Liquid Leak Requirements: Gasoline cargo tank liquid fill and vapor return connectors shall be liquid leak free. The cargo tank owner or operator must notify the bulk terminal personnel immediately if the product or vapor connectors do not meet these liquid leak requirements.

304.9 Compatible Connectors Requirement: Effective July 1, 2009, an owner or operator of a gasoline cargo tank shall only load the gasoline cargo tank at a gasoline bulk terminal if the gasoline cargo tank product and vapor connectors are compatible with the associated fittings of the gasoline bulk terminal.

304.10 Vapor Hose Storage Requirement: Effective January 10, 2011, an owner or operator of a gasoline cargo tank shall return the bulk terminal's vapor recovery hose to its hanger when not in use.

304.11 Maintenance Requirement: An owner or operator of a gasoline cargo tank shall maintain all equipment associated with the gasoline cargo tank in good working order.

*(Renumbered, Amended 1/9/85; 10/7/87; Amended 4/15/09)*

**8-33-305 Gasoline Bulk Terminal Maintenance and Repair:** An owner or operator of a gasoline bulk terminal shall comply with the following requirements:

305.1 All gasoline bulk terminal equipment associated with delivery, loading and vapor recovery operations shall be in good working order.

305.2 Effective January 10, 2012, prior to any operational procedure, maintenance and/or repair on the product or vapor hoses that requires opening the hoses to the atmosphere, a gasoline bulk terminal owner or operator shall transfer any retained liquid gasoline in these hoses to either a portable maintenance container equipped with liquid and vapor hose connectors or to a slop tank through fixed piping or a liquid hose connector. The cover, seal, lid, or connector shall be in a closed position at all times except when the device is in use for liquid transfer, inspection, maintenance, or repairs.

305.3 Any portable maintenance container or slop tank hose connectors shall be vapor leak free (terminal) and liquid leak free.

305.4 Backpressure monitors installed pursuant to Section 8-33-309.10 and 309.11 shall be serviced following the manufacturer's specifications and maintained in good working order. Backpressure monitors shall be calibrated as specified by the manufacturer or annually, whichever is more frequent.

*(Amended April 15, 2009)*

**8-33-306 Operating Practices:** An owner or operator of a gasoline bulk terminal shall not drain or spill liquid gasoline, discard it in sewers, store it in open containers, or handle it in any other manner that would result in its evaporation to the atmosphere.

*(Amended April 15, 2009)*

**8-33-307 Loading Practices:**

307.1 Compatible Connectors Requirement: Effective July 1, 2009, an owner or operator of a gasoline bulk terminal shall inform all gasoline cargo tank owners or operators allowed to load at their facility of the liquid and vapor hose connectors required, that each cargo tank shall be allowed to only use compatible connectors, and that use of compatible connectors is necessary for continued access to the bulk terminal.

307.2 An owner or operator of a gasoline bulk terminal shall not load, or permit the loading of gasoline into or out of a gasoline bulk terminal unless a CARB-certified vapor recovery system, or a vapor recovery system for which a complete application for certification has been submitted to CARB, is properly connected and used.

*(Amended April 15, 2009)*

**8-33-308 Vapor Storage Tank Requirements:** An owner or operator of a vapor storage tank at a gasoline bulk terminal is subject to the following requirements:

308.1 Diaphragms used in vapor storage tanks shall be maintained such that the concentration of total organic compound emissions in the airspace above the diaphragm is less than 3,000 parts per million (ppm) expressed as methane, or 6% of the Lower Explosive Limit.

308.2 Effective January 10, 2011, total organic compound concentrations in the airspace above the diaphragm shall be monitored and recorded with a hydrocarbon analyzer weekly when the vapor storage tank is in service, during a period when gasoline loading is in progress.

*(Amended 10/7/87; 4/15/09)*

**8-33-309 Gasoline Bulk Terminal Vapor Recovery System Requirements:** Vapor recovery systems are subject to the following requirements:

309.1 Organic compound emissions from each delivery and loading operation shall be captured and controlled by a CARB Certified Vapor Recovery System.

309.2 Vapor recovery systems shall be operated and maintained such that the gauge pressure at the cargo tank / vapor hose interface does not exceed 18.0 inches of water column during product loading operations.

309.3 Vapor recovery systems shall be operated and maintained in good working order pursuant to the operating conditions specified in the system's CARB certification.

309.4 Vapor recovery systems shall be tested annually to ensure compliance with Section 8-33-301.

309.5 Vapor Leak Requirement: Gasoline bulk terminal liquid fill connectors, vapor return connectors, and pressure/vacuum valves shall be vapor leak free (terminal).

5.1 A violation of this section shall not occur if a connector leak is discovered by the terminal owner or operator and, within 8 hours of discovery of the leak, the connector is either (1) repaired and re-inspected to be leak-free (terminal), or (2) taken out of service. A connector taken out of service shall not be returned to service until it is repaired and re-inspected to be leak-free (terminal).

5.2 A violation of this section shall not occur if a P/V valve leak is discovered by the terminal owner or operator and, within 72 hours of discovery of the leak, the P/V valve is either (1) repaired and re-inspected to be leak free (terminal) or (2) taken out of service. A P/V valve taken out of service shall not be returned to service until it is repaired and re-inspected to be leak-free (terminal).

309.6 Liquid Leak Requirements: Gasoline bulk terminal liquid fill and vapor return connectors shall be liquid leak free.

6.1 A violation of this section shall not occur if a leak is discovered by the terminal owner or operator and, within 8 hours of discovery of the leak, the connector is either (1) repaired and re-inspected to be liquid leak-free, or (2) taken out of service. A connector taken out of service shall not be returned to service until it is repaired and re-inspected to be liquid leak-free.

309.7 Effective January 10, 2011, vapor recovery system piping must include a block valve or vapor check valve on the bulk terminal piping connection to each vapor hose, and a poppet valve connector at the end of each vapor hose.

309.8 Effective January 10, 2011, the liquid fill hose connector and vapor hose connector seals and P/V valves shall be inspected daily using sight, sound and smell, and checked with a hydrocarbon analyzer weekly to ensure each connector and P/V valve is liquid leak free and vapor leak free (terminal). Any leaks requiring repair shall be re-inspected to ensure they are vapor leak free (terminal). All visual and hydrocarbon analyzer inspection, corrective actions and re-inspection results shall be recorded.

309.9 Effective January 10, 2011, each vapor hose shall have a hanger available to hang the vapor return hose off of the ground out of the driveway path when not in use.

309.10 Effective January 10, 2011, a backpressure monitor shall be installed on the vapor collection piping of each loading rack. The backpressure monitors shall be located on the fixed vapor piping as close to the vapor hose connectors as feasible. Alternate locations may be utilized subject to prior approval by the APCO. Backpressure monitors shall be correlation tested annually, with pressure measured at the loading rack / cargo tank interface. The APCO (Attention: Source Test) shall be notified at

least seven (7) days prior to the correlation test.

309.11 Effective January 10, 2011, each gasoline bulk terminal shall install one of the following devices on each loading rack:

11.1 An alarm system that activates an audio or visual alarm, and records the event when any backpressure monitor indicates a pressure exceeding 16.0 inches of water column at the cargo tank/vapor hose interface. If the pressure exceeds 18.0 inches of water column at the cargo tank/vapor hose interface, the alarm system shall activate an additional audio or visual alarm and record the event.

11.2 An automatic lockout system that deactivates product loading at the conclusion of any loading event during which the backpressure monitor indicates a pressure exceeding 18.0 inches of water column at the cargo tank/vapor hose interface.

11.3 An alternate system that provides equivalent assurance that backpressures are monitored and limited to 18 inches water column at the cargo tank/vapor hose interface.

309.12 Effective January 10, 2011, if the backpressure exceeds 18.0 inches of water column at any vapor return hose/cargo tank interface, the terminal operator shall finish the loading event, then shutdown the affected loading arm(s) and affected portion(s) of the vapor recovery system, and notify the APCO of the pressure event within 24 hours. The affected loading arm(s) and portion(s) of the vapor recovery system shall remain shutdown, or operated at a reduced rate until the cause of the pressure event has been determined and corrective actions have been completed. All excess backpressure events, responses, results of investigations, and corrective actions taken shall be recorded.

309.13 Effective January 10, 2011, each gasoline bulk terminal shall implement parametric monitoring to ensure proper performance of its vapor processing unit(s) to meet the mass emission limit in 8-33-301.2, or permit limit, whichever is lower, using one of the following approaches:

13.1 Non-methane organic compound concentrations at the outlet of the vapor recovery system shall be continuously monitored and recorded. The monitor shall be maintained and operated in accordance with Regulation 1, Section 523: Parametric Monitoring and Recordkeeping Procedures, §523.1, §523.2, §523.4 and §523.5. The sample must be analyzed at least every 60 seconds, with results averaged over four hours. The owner or operator shall calculate a parametric concentration limit for the monitor to provide an early indication that the vapor recovery system may not be performing adequately. The parametric concentration limit shall be based on the most recent source test results and the applicable gasoline bulk terminal mass emission limit and shall be calculated within 60 days of the source test. The following equation shall be utilized to calculate the parametric concentration limit:

$$C_{\max} = \frac{(PM_L)}{(MW_S)}(3183800)$$

Where:
$C_{max}$ = Parametric concentration limit expressed as the instrument span gas utilized, parts per million (ppm)
$PM_L$ = Permitted mass emission limit expressed as pounds per thousand gallons loaded, (lb/1000 gal)
$MW_S$ = Molecular weight of the span gas utilized, pounds per pound mole
(3183800) is a multiplying factor that represents a combination of terms consisting of conversion factors for decimal fraction to percent, percent to parts per million, the molar volume, gallons to cubic feet, pounds per thousand gallons and a 10% tolerance.

13.2 An alternate parametric monitoring protocol that satisfies 40 CFR Part 63, Subpart R, §63.427(a), (b), and (c), and/or 40 CFR Part 63, Subpart BBBBBB, §63.11092(b), (c), and (d), as applicable; and meets the requirements in Regulation 1, Section 523: Parametric Monitoring and Recordkeeping Procedures, §523.1, §523.2, §523.4 and §523.5; and is submitted to the APCO for approval by October 1, 2010.

309.14 Effective January 10, 2011, the owner or operator of the gasoline bulk terminal shall monitor the parametric limits of the vapor processing system pursuant to 8-33-309.13, and notify the APCO within 24 hours if any parameter exceeds (or goes below) the operating parameter limit. The owner or operator shall initiate an investigation into the cause of the exceedance of the parameter limit, and record the event, the results of investigation and corrective actions taken.

309.15 Effective January 10, 2011, all pressure / vacuum (P/V) valves connected to vapor recovery systems shall be accessible or equipped with permanent sample lines of at least 0.25 inches inside diameter that are situated one (1.0) centimeter (cm) from potential leakage sources at both the pressure and vent openings of the P/V valves. The sample lines shall terminate less than five feet above grade or platform access point and be equipped with sample valves. Samples shall be measured using a hydrocarbon analyzer for a duration adequate to ensure sample displacement through the sample tubing.

*(Adopted 1/9/85; Amended 4/15/09)*

**8-33-310 Deleted April 15, 2009**

**8-33-400 ADMINISTRATIVE REQUIREMENTS**

**8-33-401 Equipment Installation and Modification:** An owner or operator of a gasoline bulk terminal who installs or modifies vapor recovery system equipment at a gasoline bulk terminal shall meet the following requirements:

401.1 Comply with the requirements of Regulation 2, Rule 1.

401.2 Submit a complete application to CARB for certification or recertification pursuant to Section 41954 of the California Health and Safety Code before undertaking any of the following activities:

2.1 Operation of a new or replacement vapor recovery system.

2.2 Replacement or modification of equipment that would result in a greater gasoline loading capacity than the gasoline bulk terminal's CARB certified throughput limits. CARB throughput limits shall not be exceeded unless a new CARB certification is issued that permits these higher throughput limits.

2.3 Operation of a vapor recovery system in a mode not certified by CARB.

2.4 Submittal of an application for a revised District Permit to Operate.

*(Amended April 15, 2009)*

**8-33-402 Deleted April 15, 2009**

**8-33-403** **Bulk Terminal Monitoring, Inspection, Notification and Reporting Requirements:** An owner or operator of a gasoline bulk terminal shall develop and submit for APCO approval by October 1, 2010 a monitoring, inspection, notification and reporting plan that meets the following requirements, as applicable, and implement the approved plan on or before January 10, 2011:

403.1 40 CFR Part 60, Subpart XX, §60.502.

403.2 40 CFR Part 63, Subpart R, §63.424, §63.425, §63.427 and §63.428.

403.3 40 CFR Part 63, Subpart BBBBBB, §63.11087, §63.11088, §63.11089, §63.11092, §63.11093, §63.11094 and §63.11095.

403.4 Sections 8-33-309.8, 309.11, 309.12, and 309.14.

*(Adopted April 15, 2009)*

**8-33-500 MONITORING AND RECORDS**

**8-33-501** **Burden of Proof:** The burden of proof of eligibility for exemptions from this rule is on the applicant. Persons seeking an exemption under this rule shall maintain adequate records and furnish them to the APCO upon request.

*(Amended April 15, 2009)*

**8-33-502** **Vapor Storage Tank Emissions Records:** Any person subject to the requirements of Section 8-33-308.2 shall maintain for a period of at least five (5) years a record of the weekly vapor storage tank emission checks.

*(Adopted April 15, 2009)*

**8-33-503** **Annual Source Test:** The gasoline bulk terminal owner or operator shall conduct an annual source test pursuant to Section 8-33-309.4 not less than 9 months, but less than 15 months from the previous source test, in accordance with the provisions in Section 8-33-601. Prior to conducting an annual source test, the APCO (Attention: Source Test) shall be notified at least seven (7) days prior to the test. A copy of the final report including raw data sheets shall be submitted to the APCO (Attention: Source Test) within 60 days of the completed test. The gasoline bulk terminal owner or operator shall retain on the site for a period of at least five (5) years a copy of the final report for each annual source test.

*(Adopted April 15, 2009)*

**8-33-504** **Pressure/Vacuum Valve, Liquid Fill and Vapor Hose Connector Leak Check Records:** Any person subject to the requirements of Section 8-33-309.8 shall maintain for a period of at least five (5) years a record, including date and time, of the P/V valve and hose connector leak checks, repairs made and re-inspection results.

*(Adopted April 15, 2009)*

**8-33-505** **Loading Rack Backpressure Records:** Any person subject to the requirements of Section 8-33-309.11 and 309.12 shall maintain for a period of at least five (5) years a record of the date and time of high-pressure events that exceed the standards or any P/V valve release. The records shall identify the affected vapor arm(s) and the pressure or alarm status each time the high-pressure alarm system activates. The records shall also include a description of the actions taken by the gasoline bulk terminal owner or operator to cease each release or high pressure event, results of investigations to determine causes, and corrective actions taken.

*(Adopted April 15, 2009)*

**8-33-506** **Parametric Correlation Records:** The gasoline bulk terminal owner or operator shall retain on site for a period of at least five (5) years of records of vapor recovery system pressure correlation tests and vapor processing unit parametric variable limits and their derivation, as required by Sections 8-33-309.10 and 8-33-309.13.

*(Adopted April 15, 2009)*

**8-33-507** **Parametric Variable Monitoring Records:** The gasoline bulk terminal owner or operator shall retain on site for a period of at least five (5) years a record of events where parametric limits were exceeded (or not met), results of investigations to determine causes of such events, and corrective actions taken, as required by 8-33-309.14.

*(Adopted April 15, 2009)*

**8-33-600 MANUAL OF PROCEDURES**

**8-33-601 Emission Rate Determination:** Emissions of non-methane organic compounds from vapor recovery systems shall be determined in accordance with the Manual of Procedures, Volume IV, ST-34, CARB Test Procedure TP-203.1, EPA Method 25, or any other method approved by the APCO.

*(Amended 10/7/87; 6/1/94; 4/15/09)*

**8-33-602 Deleted April 15, 2009**

**8-33-603 Back Pressure Determination from Vapor Recovery Systems:** The back pressure from vapor recovery systems during loading of gasoline cargo tanks shall be determined in accordance with the Manual of Procedures, Volume IV, ST-34.

*(Adopted 1/9/85; Amended 6/1/94; 4/15/09)*

**8-33-604 Vapor Tight (Gasoline Cargo Tanks):** The determination of vapor tight status for gasoline cargo tanks shall be in accordance with the Manual of Procedures, Volume IV, ST-33 (or CARB Procedure TP-204.1 or TP-204.2), and CARB Procedure TP-204.3.

*(Adopted 10/7/87; Amended 4/15/09)*

**8-33-605 Analysis of Samples:** Reid vapor pressure analyses shall be conducted in accordance with the Manual of Procedures, Volume III, Method 13, the most current version of ASTM D323, an equivalent method described in California Code of Regulations Title 13, Section 2297, or any other method approved by the APCO.

*(Renumbered 1/9/85; 10/7/98; Amended 4/15/09)*

**8-33-606 Vapor Leak Concentration Determination:** Determination of the concentration of vapor leaks shall be conducted in accordance with the procedure set forth in CARB TP-204.3, Determination of Leak(s).

*(Adopted April 15, 2009)*

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 39
# GASOLINE BULK PLANTS
# AND GASOLINE CARGO TANKS

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 39
# GASOLINE BULK PLANTS AND GASOLINE CARGO TANKS

(Adopted October 7, 1987)

**8-39-100 GENERAL**

**8-39-101 Description:** The purpose of this Rule is to limit emissions of organic compounds associated with gasoline transfer operations at gasoline bulk plants and organic compounds from gasoline cargo tanks.

*(Amended 6/1/94; 4/15/09)*

**8-39-110 Deleted April 15, 2009**

**8-39-111 Exemption, Cargo Tanks:** The requirements of Sections 8-39-304.1, 304.2, 304.3, and 304.6 do not apply to gasoline cargo tanks that deliver exclusively to:

111.1 Storage tanks with an actual capacity of less than 250 gallons.

111.2 Storage tanks installed prior to February 18, 1987, with an annual throughput of less than 60,000 gallons, provided the storage tanks are exempt from Phase I requirements pursuant to Regulation 8, Rule 7.

111.3 Storage tanks with a storage capacity of less than 550 gallons used primarily for the refueling of implements of husbandry as defined in Division 16, Chapter 1, of the California Vehicle Code, provided such tanks are equipped with a submerged fill pipe.

111.4 Storage tanks where the APCO determines that the Phase I gasoline vapor recovery requirements identified in Regulation 8, Rule 7 are not feasible.

*(Amended 6/1/94; 4/15/09)*

**8-39-112 Exemption, Gasoline Bulk Plants Without Phase I Vapor Recovery:** Bulk gasoline plants that load exclusively to gasoline cargo tanks servicing stationary tanks without Phase I vapor recovery unit(s) pursuant to Section 8-39-111.2 are exempt from the requirements of Sections 8-39-302, 307.2, 308.1 and 401.2.

*(Amended April 15, 2009)*

**8-39-113 Exemption, Tank Gauging and Inspection:** Any gasoline cargo tank may be opened for gauging or inspection provided that the tank is not pressurized or being loaded.

*(Amended April 15, 2009)*

**8-39-114 Exemption, Maintenance and Repair:** The requirements of Sections 8-39-304.4, 304.5, and 306 shall not apply to liquid gasoline spills and vapor leaks resulting from maintenance or repair operations provided proper operating practices are employed to minimize evaporation of gasoline into the atmosphere to the greatest extent practicable.

*(Amended April 15, 2009)*

**8-39-115 Exemption, CARB Certification:** CARB certification requirements in this Rule do not apply to vapor recovery equipment or systems where the gasoline bulk plant owner or operator demonstrates that CARB has determined that such equipment or systems are not required to be CARB certified.

*(Adopted April 15, 2009)*

**8-39-116 Limited Exemption, Aviation Gasoline:** The distribution of aviation gasoline to and from bulk plants:

115.1 Is exempt from this Rule's CARB certification requirements of the vapor recovery system.

115.2 Is exempt from the requirements of Sections 8-39-304.5 and 306 when sampling is required for quality assurance.

*(Adopted April 15, 2009)*

**8-39-200 DEFINITIONS**

**8-39-201 CARB Certified Vapor Recovery System:** A gasoline bulk plant vapor recovery system that has a valid certification issued by the California Air Resources Board (CARB), pursuant to Section 41954 of the California Health and Safety Code.

*(Amended April 15, 2009)*

**8-39-202 Gasoline:** Any distillate, including aviation gasoline and additives, that has a Reid vapor pressure of four (4.0) pounds or greater.

*(Amended mm/dd/yyyy)*

**8-39-203 Gasoline Bulk Plant:** A storage and distribution facility that receives gasoline by gasoline cargo tanks, and loads it into gasoline cargo tanks for delivery to service stations and other distribution points.

*(Amended and Renumbered April 15, 2009)*

**8-39-204 Gasoline Cargo Tank:** Any container, including its associated pipes and fittings, that is attached to a vehicle used to transport gasoline and is required to be certified in accordance with Section 41962 of the California Health and Safety Code.

*(Adopted April 15, 2009)*

**8-39-205 Liquid Leak Free:** A liquid fill connector or vapor hose connector that does not leak liquid in excess of three drops per minute, or 10 milliliters per disconnect averaged over three consecutive disconnects, as set forth in CARB CP-202, Certification Procedure for Vapor Recovery Systems of Bulk Plants for gasoline bulk plant connectors, or CARB CP-204, Certification Procedure for Vapor Recovery Systems of Cargo Tanks for gasoline cargo tank connectors.

*(Amended and Renumbered April 15, 2009)*

**8-39-206 Loading Event:** Transferring liquid gasoline into and receiving vapors from a gasoline delivery vehicle, including all individual cargo tanks and compartments.

*(Adopted April 15, 2009)*

**8-39-207 Non-Methane Organic Compound (NMOC):** Any compound of carbon, excluding methane, carbon monoxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

*(Adopted 6/1/94; Amended and Renumbered 4/15/09)*

**8-39-208 Portable Maintenance Container:** A portable vessel or tank with a capacity of less than 250 gallons, equipped with liquid and vapor hose connectors that temporarily stores gasoline.

*(Adopted April 15, 2009)*

**8-39-209 Reid Vapor Pressure:** The vapor pressure of an organic liquid at 100 degrees Fahrenheit, except liquefied ~~petroleum~~ gases, as determined in accordance with the Manual of Procedures, Volume III, Method 13, the most current version of ASTM D323, or the equivalent method described in California Code of Regulations Title 13, Section 2297.

*(Adopted April 15, 2009)*

**8-39-210 Slop Tank:** Any permanent or fixed container that has the primary function of temporarily storing ~~petroleum~~ product and other liquids that have been collected during maintenance or loading operations and are not loaded into a gasoline cargo tank.

*(Amendedmm/dd/yyyy)*

**8-39-211 Submerged Fill Pipe:** Any storage tank fill pipe that meets either of the following conditions:

209.1 If the tank is filled from the top, the end of the discharge pipe is totally submerged when the liquid level is six (6) inches above the bottom of the tank.

209.2 If the tank is filled from the side, the discharge pipe is totally submerged when the liquid level is 18 inches above the bottom of the tank.

*(Amended and Renumbered April 15, 2009)*

**8-39-212 Switch Loading:** The loading of an organic liquid with a Reid vapor pressure of less than 4.0 pounds into a gasoline cargo tank where the previous load was gasoline.

*(Amended and Renumbered April 15, 2009)*

**8-39-213 Total Organic Compound (TOC):** Any compound of carbon, including methane, excluding carbon monoxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

*(Adopted April 15, 2009)*

**8-33-214 Vapor Processing Unit:** Equipment designed to dispose of hydrocarbon vapors to prevent their emission into the atmosphere.

*(Adopted April 15, 2009)*

**8-39-215** **Vapor Recovery System:** A system capable of collecting and disposing of hydrocarbon vapors to prevent their emission into the atmosphere.

*(Adopted April 15, 2009)*

**8-39-216** **Vapor Leak Free (Bulk Plant):** Until July 1, 2009, a leak of less than 100 percent of the lower explosive limit on a combustible gas detector measured at a distance of 2.5 cm (l in.) from the source or no visible evidence of air entrainment in the sight glasses of liquid delivery hoses. Effective July 1, 2009, a gasoline bulk plant liquid fill connector, vapor hose connector, or pressure/vacuum (P/V) valve that does not leak vapor in excess of 3,000 parts per million (ppm) (expressed as methane) or 6 % of the Lower Explosive Limit (LEL), measured according to the procedure set forth in CARB TP-204.3, *Determination of Leak(s)*.

*(Amended and Renumbered April 15, 2009)*

**8-39-217** **Vapor Leak Free (Gasoline Cargo Tank):** A gasoline cargo tank liquid fill connector, vapor hose connector or other fitting that does not leak vapor in excess of 100% of Lower Explosive Limit (LEL), measured according to the procedure set forth in CARB TP-204.3, *Determination of Leak(s)*.

*(Amended and Renumbered April 15, 2009)*

**8-39-218** **Vapor Tight** (**Gasoline Cargo Tank**)**:** A gasoline cargo tank that does not leak vapor in excess of the pressure decay and vapor leak standards set forth in CARB CP-204, *Certification Procedure for Vapor Recovery Systems of Cargo Tanks*.

*(Amended and Renumbered April 15, 2009)*

**8-39-300 STANDARDS**

**8-39-301 Deleted April 15, 2009**

**8-39-302** **Gasoline Bulk Plant Emission Limitations:** Emissions of non-methane organic compounds from a gasoline bulk plant vapor recovery system shall not exceed 0.50 pounds per l,000 gallons of organic liquid loaded. Switch loading operations are subject to this standard. Where multiple vapor processing units are used, each vapor processing unit shall be subject to this standard.

*(Amended 6/1/94; 4/15/09)*

**8-39-303 Deleted April 15, 2009**

**8-39-304** **Gasoline Cargo Tank Requirements:** An owner or operator of a gasoline cargo tank shall comply with the following requirements:

304.1 Vapor Integrity Requirement: An owner or operator of a gasoline cargo tank shall only operate, or allow the operation of, a gasoline cargo tank that displays a valid State of California decal, as required by Section 41962 of the Health and Safety Code, and which attests to the vapor integrity of the cargo tank.

304.2 Vapor Recovery Requirement: Any gasoline cargo tank loading at a gasoline bulk plant shall be equipped with and use a vapor recovery system certified pursuant to Section 41962 of the California Health and Safety Code.

304.3 Vapor Return Requirement: An owner or operator of a gasoline cargo tank shall not load at a gasoline bulk plant that is exempt from the Section 8-39-302 gasoline bulk plant emission limitation pursuant to Section 8-39-112 if any portion of the gasoline cargo tank's prior load was delivered to a storage tank equipped with a Phase I vapor recovery system.

304.4 Purging Requirement: An owner or operator of a gasoline cargo tank shall not purge gasoline vapor from the cargo tank to the atmosphere, at any time.

304.5 Drainage Requirement: An owner or operator of a gasoline cargo tank shall not drain or spill liquid gasoline from the cargo tank, discard it in sewers, store it in open containers, or handle it in any other manner that would result in its evaporation to the atmosphere.

304.6 Vapor Tight Requirement: The gasoline cargo tank shall be vapor tight.

304.7 Vapor Leak Requirement: Gasoline cargo tank liquid fill and vapor return connectors shall be vapor leak free (gasoline cargo tank). The cargo tank owner or operator must

notify the bulk plant personnel immediately if the product or vapor connectors do not meet these vapor leak requirements.

304.8 Liquid Leak Requirements: Gasoline cargo tank liquid fill and vapor return connectors shall be liquid leak free. The cargo tank owner or operator must notify the bulk plant personnel immediately if the product or vapor connectors do not meet these liquid leak requirements.

304.9 Compatible Connectors Requirement: Effective July 1, 2009, an owner or operator of a gasoline cargo tank shall only load the gasoline cargo tank at a gasoline bulk plant if the gasoline cargo tank product and vapor connectors are compatible with the associated fittings of the gasoline bulk plant.

304.10 Maintenance Requirement: An owner or operator of a gasoline cargo tank shall maintain all equipment associated with the gasoline cargo tank in good working order.

*(Amended April 15, 2009)*

**8-39-305 Gasoline Bulk Plant Maintenance and Repair:** An owner or operator of a gasoline bulk plant shall comply with the following requirements:

305.1 All equipment associated with gasoline delivery, loading and vapor recovery operations shall be in good working order.

305.2 Effective January 10, 2012, prior to any operational procedure, maintenance and/or repair on the product or vapor hoses that requires opening the hoses to the atmosphere, a gasoline bulk plant owner or operator shall transfer any retained liquid gasoline in these hoses to either a portable maintenance container equipped with liquid and vapor hose connectors or to a slop tank through fixed piping or a liquid hose connector. The cover, seal, lid, or connector shall be in a closed position at all times except when the device is in use for liquid transfer, inspection, maintenance, or repairs.

305.3 Any portable maintenance container or slop tank hose connectors shall be vapor leak free (bulk plant) and liquid leak free.

*(Amended April 15, 2009)*

**8-39-306 Operating Practices:** An owner or operator of a gasoline bulk plant shall not drain or spill liquid gasoline, discard it in sewers, store it in open containers, or handle it in any other manner that would result in its evaporation to the atmosphere.

*(Amended April 15, 2009)*

**8-39-307 Loading Practices:**

307.1 Compatible Connectors Requirement: Effective July 1, 2009, an owner or operator of a gasoline bulk plant shall inform all gasoline cargo tank owners or operators allowed to load at their facility of the liquid and vapor hose connectors required, that each cargo tank shall be allowed to only use compatible connectors, and that use of compatible connectors is necessary for continued access to the bulk plant.

307.2 An owner or operator of a gasoline bulk plant shall not load, or permit the loading of gasoline into or out of a gasoline bulk plant unless a CARB-certified vapor recovery system, or a vapor recovery system for which a complete application for certification has been submitted to CARB, is properly connected and used.

*(Amended April 15, 2009)*

**8-39-308 Gasoline Bulk Plant Vapor Recovery System Requirements:** Vapor recovery systems are subject to the following requirements:

308.1 Organic compound emissions from each delivery and loading operation shall be captured and controlled by a CARB Certified Vapor Recovery System.

308.2 Vapor recovery systems shall be operated and maintained such that the gauge pressure at the cargo tank / vapor hose interface does not exceed 18.0 inches of water column during product loading operations.

308.3 Vapor Leak Requirement: Gasoline bulk plant liquid fill connectors, vapor return connectors, and pressure/vacuum valves shall be vapor leak free (bulk plant).

3.1 A violation of this section shall not occur if a connector leak is discovered by the bulk plant owner or operator and, within 8 hours of discovery of the leak, the connector is either (1) repaired and re-inspected to be leak-free (bulk plant), or (2) taken out of service. A connector taken out of service shall not be returned to service until it is repaired and re-inspected to be leak-free (bulk plant).

3.2 A violation of this section shall not occur if a P/V valve leak is discovered by the bulk plant owner or operator and, within 72 hours of discovery of the leak, the P/V valve is either (1) repaired and re-inspected to be leak free (bulk plant) or (2) taken out of service. A P/V valve taken out of service shall not be returned to service until it is repaired and re-inspected to be leak-free (bulk plant).

308.4 Liquid Leak Requirements: Gasoline bulk plant liquid fill and vapor return connectors shall be liquid leak free.

4.1 A violation of this section shall not occur if a leak is discovered by the bulk plant owner or operator and, within 8 hours of discovery of the leak, the connector is either (1) repaired and re-inspected to be liquid leak-free, or (2) taken out of service. A connector taken out of service shall not be returned to service until it is repaired and re-inspected to be liquid leak-free.

308.5 Effective January 10, 2011 a pressure gauge shall be installed on the vapor collection piping as close to the vapor hose connector as feasible. For bulk plants that utilize top loading arms, a pressure gauge shall be installed on the fixed vapor piping as close to the end or the top loading arm, as feasible.

308.6 Gauge pressure of each vapor hose shall be maintained below the CARB-certified set pressure of the pressure/vacuum valve(s) of the vapor recovery system at all times.

*(Amended April 15, 2009)*

**8-39-400 ADMINISTRATIVE REQUIREMENTS**

**8-39-401 Equipment Installation and Modification:** An owner or operator of a gasoline bulk plant who installs or modifies vapor recovery system equipment at a gasoline bulk plant shall meet the following requirements:

401.1 Comply with the requirements of Regulation 2, Rule 1.

401.2 Submit a complete application to CARB for certification or recertification pursuant to Section 41954 of the California Health and Safety Code before undertaking any of the following activities:

2.1 Operation of a new or replacement vapor recovery system.

2.2 Replacement or modification of equipment that would result in a greater gasoline loading capacity than the gasoline bulk plant's CARB certified throughput limits. CARB throughput limits shall not be exceeded unless a new CARB certification is issued that permits these higher throughput limits.

2.3 Operation of a vapor recovery system in a mode not certified by CARB.

2.4 Submittal of an application for a revised District Permit to Operate.

*(Amended April 15, 2009)*

**8-39-402 Deleted April 15, 2009**

**8-39-403 Deleted April 15, 2009**

**8-39-404 Bulk Plant Monitoring, Inspection, Notification and Reporting Requirements:** An owner or operator of a gasoline bulk plant shall develop and submit for APCO approval by October 1, 2010 a monitoring, inspection, notification and reporting plan that meets the following requirements, as applicable, and implement the approved plan on or before January 10, 2011:

404.1 40 CFR Part 63, Subpart R, §63.424, §63.425, and §63.428.

404.2 40 CFR Part 63, Subpart BBBBBB, §63.11087, §63.11088, §63.11089, §63.11092, §63.11093, §63.11094 and §63.11095.

*(Adopted April 15, 2009)*

**8-39-500 MONITORING AND RECORDS**

**8-39-501 Burden of Proof:** The burden of proof of eligibility for exemptions from this rule is on the applicant. Persons seeking an exemption under this rule shall maintain adequate records and furnish them to the APCO upon request.

*(Amended April 15, 2009)*

**8-39-502 Biennial Source Test:** The gasoline bulk plant owner or operator shall conduct a biennial source test not less than 18 months, but less than 30 months from the previous source test, in accordance with the provisions in Section 8-39-601. A copy of the final report including raw data sheets shall be submitted to the APCO (Attention: Source Test) within 60 days of the completed test. The gasoline bulk plant owner or operator shall retain on the site for a period of at least five (5) years a copy of the final report for each biennial source test.

*(Adopted April 15, 2009)*

**8-39-600 MANUAL OF PROCEDURES**

**8-39-601 Emission Rate Determination for Vapor Recovery Systems:** Emissions of non-methane organic compounds from gasoline bulk plant vapor recovery system(s) shall be determined in accordance with the Manual of Procedures, Volume IV, ST-34, CARB Test Procedure TP-202.1, EPA Method 25 or any other method approved by the APCO.

*(Amended 6/1/94; 4/15/09)*

**8-39-602 Emission Rate Determination for Vapor Balance System:** The emission rates from vapor balance systems at gasoline bulk plants shall be determined in accordance with the Manual of Procedures, Volume IV, ST-3 or any other method approved by the APCO.

*(Amended April 15, 2009)*

**8-39-603 Back Pressure Determination from Vapor Recovery System:** The back pressure from vapor recovery systems during unloading or loading of gasoline cargo tanks shall be determined in accordance with the Manual of Procedures, Volume IV, ST-34.

*(Amended 6/1/94; 4/15/09)*

**8-39-604 Vapor Tight (Gasoline Cargo Tanks):** The determination of vapor tight status for gasoline cargo tanks shall be in accordance with the Manual of Procedures, Volume IV, ST-33 or CARB Procedure TP-204.1 or TP-204.2.

*(Amended April 15, 2009)*

**8-39-605 Analysis of Samples:** Reid vapor pressure analyses shall be conducted in accordance with the the Manual of Procedures, Volume III, Method 13, the most current version of ASTM D323, the equivalent method described in California Code of Regulations Title 13, Section 2297 or any other method approved by the APCO.

*(Amended April 15, 2009)*

**8-39-606 Vapor Leak Concentration Determination:** Determination of the concentration of vapor leaks shall be conducted in accordance with the procedure set forth in CARB TP-204.3, *Determination of Leak(s)*.

*(Adopted April 15, 2009)*

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 44
# MARINE TANK VESSEL OPERATIONS

## INDEX

# REGULATION 8
# ORGANIC COMPOUNDS
# RULE 44
# MARINE TANK VESSEL OPERATIONS

(Adopted January 4, 1989)

**8-44-100 GENERAL**

**8-44-101 Description:** The purpose of this rule is to limit emissions of organic compounds into the atmosphere from marine tank vessel operations.

*(Amended December 7, 2005)*

**8-44-110 Exemption, Small Loading Events:** Sections 8-44-301 through 305 of this rule shall not apply to loading events of less than 159 cubic meters (1,000 barrels).

*(Amended December 7, 2005)*

**8-44-111 Exemption, Marine Vessel Fueling:** Sections 8-44-301 through 305 of this rule shall not apply to the loading of organic liquids associated with the fueling (bunkering) of marine vessels.

*(Amended December 7, 2005)*

**8-44-112 Deleted December 7, 2005**

**8-44-113 Deleted December 7, 2005**

**8-44-114 Deleted December 7, 2005**

**8-44-115 Exemption, Safety/Emergency Operations:** Nothing in this rule shall be construed to:

115.1 Require any act or omission that would be in violation of any regulation or other requirement of the United States Coast Guard; or

115.2 Prevent any act or omission that is necessary to secure the safety of a vessel or for saving life at sea.

*(Amended, Renumbered December 7, 2005)*

**8-44-116 Limited Exemption, Equipment Leaks:** The requirements of Section 8-44-305 shall not apply to any source that is subject to the leak standards of Regulation 8, Rule 18.

*(Adopted December 7, 2005)*

**8-44-200 DEFINITIONS**

**8-44-201 Aviation Gas:** Gasoline suitable for use in piston-driven aircraft.

*(Adopted December 7, 2005)*

**8-44-202 Background**: The ambient concentration of total organic compounds determined at least 3 meters (10 feet) from the equipment to be inspected and not influenced by any specific emission point.

*(Adopted December 7, 2005)*

**8-44-203 Ballasting**: To load seawater into a marine tank vessel cargo tank to obtain proper propeller, rudder and hull immersion or to provide clearance under bridges or other potential obstacles.

*(Adopted December 7, 2005)*

**8-44-204 California Coastal Waters:** That area between the California coastline and a line starting at the California-Oregon border at the Pacific Ocean:

| | |
|---|---|
| thence to 42.0°N | 125.5°W |
| thence to 41.0°N | 125.5°W |
| thence to 40.0°N | 125.5°W |
| thence to 39.0°N | 125.0°W |
| thence to 38.0°N | 124.5°W |
| thence to 37.0°N | 123.5°W |
| thence to 36.0°N | 122.5°W |
| thence to 35.0°N | 121.5°W |
| thence to 34.0°N | 120.5°W |
| thence to 33.0°N | 119.5°W |
| thence to 32.5°N | 118.5°W |

and ending at the California-Mexico border at the Pacific Ocean.

*(Adopted December 7, 2005)*

**8-44-205** **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.

*(Amended, Renumbered December 7, 2005)*

**8-44-206** **District Waters**: The water bodies within the District's boundaries, including San Francisco Bay, San Pablo Bay, Suisun Bay, and Grizzly Bay and, in addition, the Pacific Ocean area beginning at the intersection of the Pacific Ocean and the Marin-Sonoma County boundary; and extending three miles westward to the California coastal boundary as defined in Article XXI of the California Constitution and Government Code section 170; then southeasterly along said California coastal boundary to a point due west of the intersection of the Pacific Ocean and the San Mateo-Santa Cruz boundary; then easterly to said intersection.

*(Adopted December 7, 2005)*

**8-44-207** **Emission Control Equipment**: Any equipment, machinery, apparatus or device used to recover or reduce emissions of organic vapors from escaping into the atmosphere.

*(Renumbered December 7, 2005)*

**8-44-208** **Gas Freeing:** The introduction of fresh air into a tank to lower the level of any flammable, toxic, or inert gas to that required for a specific purpose such as tank entry or hot work.

*(Adopted December 7, 2005)*

**8-44-209** **Gasoline:** Any distillate, including aviation gasoline and additives, that has a Reid vapor pressure of four (4.0) pounds or greater.

*(Adopted December 7, 2005)*

**8-44-210** **Gasoline Blending Stocks:** 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.

*(Adopted December 7, 2005)*

**8-44-211** **Inert Gas:** A gas or a mixture of gases, such as flue gas, containing insufficient oxygen to support the combustion of hydrocarbons.

*(Adopted December 7, 2005)*

**8-44-212** **Inerting:** The introduction of inert gas into a tank to lower the level of oxygen throughout the atmosphere of a tank below that necessary to support the combustion of hydrocarbons.

*(Adopted December 7, 2005)*

**8-44-213** **JP-4 Fuel:** A naphtha and kerosene-based fuel used primarily as a military fuel that meets the specifications of MIL-T-5624, MIL-PRF-5624, MIL-DTL-5624.

*(Adopted December 7, 2005)*

**8-44-214** **Lightering:** The loading of organic liquid into a marine tank vessel from another marine tank vessel.

*(Adopted December 7, 2005)*

**8-44-215** **Loading Event**: An incident or occurrence beginning with the connecting of a marine terminal storage tank or a marine tank vessel cargo tank to a receiving marine tank vessel by means of piping or hoses, the transferring of organic liquid cargo from the storage or cargo tank into the receiving marine tank vessel and ending with the disconnecting of the pipes or hoses.

*(Amended, Renumbered December 7, 2005)*

**8-44-216** **Marine Tank Vessel**: Any marine vessel that transports or stores liquid bulk cargo in tanks.

*(Amended, Renumbered December 7, 2005)*

**8-44-217** **Marine Terminal**: Any facility or structure constructed to load or unload organic liquid bulk cargo into marine tank vessels.

*(Renumbered December 7, 2005)*

**8-44-218** **Marine Vessel**: Any tugboat, tanker, freighter, passenger ship, barge or other boat, ship or watercraft (as defined in Section 39037.1 of the California Health and Safety Code) except those used primarily for recreation.

*(Renumbered December 7, 2005)*

**8-44-219** **Organic Compound**: Any organic compound as defined in Regulation 1.

*(Amended, Renumbered December 7, 2005)*

**8-44-220** **Prior Cargo:** The last cargo that was held in a marine tank vessel cargo tank before the current loading event. A cargo tank is no longer considered to have held a prior cargo of a regulated

organic liquid once it has been vented of organic gases and cleaned with an unregulated organic liquid or with an inorganic liquid.

*(Adopted December 7, 2005)*

**8-44-221 Purging:** The introduction of inert gas into a tank already in the inert condition with the object of (1) further reducing the existing oxygen content, or (2) reducing the existing hydrocarbon gas content to a level below which combustion cannot be supported if air is subsequently introduced into the tank, or (3) accomplishing both of the foregoing objects.

*(Adopted December 7, 2005)*

**8-44-222 Regulated Organic Liquid**: For the purpose of this rule, regulated organic liquid is:

222.1 Until January 1, 2007: all gasoline, gasoline blending stocks, aviation gas, JP-4 fuel and crude oil.

222.2 Effective January 1, 2007: all gasoline, gasoline blending stocks, aviation gas, JP-4 fuel, crude oil, and any other organic compound or mixture of organic compounds that exists as a liquid at actual conditions of use or storage that has a flash point less than 100 degrees F.

*(Amended, Renumbered December 7, 2005)*

**8-44-223 Tank Cleaning:** The process of removing hydrocarbon vapors, liquid, or residue from a tank, generally to allow entry for inspection or hot work or to allow a change of cargo.

*(Adopted December 7, 2005)*

**8-44-224 Unregulated Organic Liquid:** Any organic compound or mixture of organic compounds that exists as a liquid at actual conditions of use or storage and that is not a regulated organic liquid.

*(Adopted December 7, 2005)*

**8-44-225 Vent**: To release hydrocarbon gases from a marine tank vessel cargo tank through the manual or automatic opening of tank vents, hatches, or other openings for the purpose of reducing tank internal pressure or in connection with inerting, purging, tank cleaning, or gas freeing.

*(Adopted December 7, 2005)*

**8-44-300 STANDARDS**

**8-44-301 Limitations on Marine Tank Vessel Loading and Lightering:** A person shall not conduct either of the following loading operations within the District or District Waters unless emissions from the loading event are controlled in accordance with the requirements of Section 8-44-304:

301.1 Loading a regulated organic liquid into a cargo tank of a marine tank vessel; or

301.2 Loading any liquid into a cargo tank of a marine tank vessel when the tank's prior cargo was a regulated organic liquid.

*(Amended December 7, 2005)*

**8-44-302 Limitations on Marine Tank Vessel Ballasting:** Within District waters, a person shall not ballast into a cargo tank for which the prior cargo was a regulated organic liquid unless either of the following requirements is met:

302.1 Emissions are controlled in accordance with the requirements of Section 8-44-304; or

302.2 Emissions are limited to the extent possible through the use of any combination of segregated ballast tanks, dedicated clean ballast tanks, internal vapor balancing, and compression ballasting.

*(Amended December 7, 2005)*

**8-44-303 Limitations on Marine Tank Vessel Venting:** Within the District or District Waters, a person shall not vent a cargo tank containing a regulated organic liquid or for which the prior cargo was a regulated organic liquid unless either of the following requirements is met:

303.1 Emissions are controlled in accordance with the requirements of Section 8-44-304; or

303.2 The venting occurs through (1) the automatic operation of a pressure relief valve (PRV), or other pressure relieving device intended to protect the integrity of the tank, set at the highest setpoint approved by the United States Coast Guard, or (2) manual venting to avoid an automatic release through such a PRV or device with such a setpoint when tank pressure has reached 90% of such setpoint and an automatic release is imminent.

*(Amended December 7, 2005)*

**8-44-304 Emission Control Requirements:** A person conducting an operation from which emissions must be controlled pursuant to Section 8-44-301, 302 or 303 shall:

304.1 Limit emissions of organic compounds to 5.7 grams per cubic meter (2 lbs per 1000 bbls) of organic liquid loaded, or reduce emissions by at least 95 percent by weight from uncontrolled conditions; and

304.2 Use emission control equipment that is designed and operated to collect and process all organic compound emissions from the loading, ballasting, or venting operation.

*(Amended December 7, 2005)*

**8-44-305 Equipment Leaks:** The following requirements apply to any loading or lightering operation subject to Section 8-44-301, and, if conducted at a marine terminal, any ballasting operation subject to Section 8-44-302 or venting operation subject to Section 8-44-303.1:

305.1 Except as allowed by Section 8-44-305.4, the owner or operator of a marine terminal shall maintain all equipment associated with the operation up to, but not including, the first connection at the vessel being loaded such that the following limits are not exceeded:

1.1 Three drops per minute for any liquid leak; and

1.2 1,000 ppm (expressed as methane, above background) for any gaseous leak as determined pursuant to Section 8-44-603.

305.2 Except as allowed by Section 8-44-305.4, the owner or operator of a marine vessel shall maintain all hatches, pressure relief valves, connections, gauging ports and vents, and any other equipment associated with the operation up to and including the first connection at the vessel to a loading terminal or to another vessel such that the following limits are not exceeded:

2.1 Three drops per minute for any liquid leak; and

2.2 10,000 ppm (expressed as methane, above background) for any gaseous leak as determined pursuant to Section 8-44-603.

305.3 Effective January 1, 2007, the owner or operator of any marine terminal or marine tank vessel engaging in an operation subject to Section 8-44-305 shall inspect the marine terminal equipment or marine tank vessel equipment for compliance with the applicable requirements of Section 8-44-305.1 or 305.2 during the operation. Vessels shall be inspected prior to loading more than 20% of the cargo.

305.4 If an owner or operator discovers a leak that exceeds the limits of Section 8-44-305.1 or 305.2, the owner or operator shall immediately tag the liquid or gas leak, shall minimize the leak within 4 hours of discovery, and shall repair the leak prior to commencement of the next operation subject to the control requirements of Section 8-44-304. If the APCO discovers a leak that exceeds the limits of Section 8-44-305.1 or 305.2, the leak shall constitute a violation of this rule.

*(Amended December 7, 2005)*

**8-44-400 ADMINISTRATIVE REQUIREMENTS**

**8-44-401 Deleted December 7, 2005**

**8-44-402 Deleted December 7, 2005**

**8-44-403 Notifications Regarding Safety/Emergency Exemption:** Effective January 1, 2007, whenever the owner or operator of a marine terminal or marine tank vessel determines that compliance with this rule would (1) require an act or omission that would be in violation of any regulation or other requirement of the United States Coast Guard or (2) prevent an act or omission that is necessary to secure the safety of a vessel or for saving life at sea and therefore invokes the exemption in Section 8-44-115, the APCO shall be notified in writing within 48 hours. The notification shall include a complete description of the circumstances that require the use of the exemption.

*(Adopted December 7, 2005)*

**8-44-404 Notifications for Operations Conducted Other Than at Marine Terminals:** Effective January 1, 2007, the owner or operator of a marine tank vessel that will conduct (1) a lightering operation subject to Section 8-44-301, (2) a ballasting operation subject to Section 8-44-302, or (3) cleaning within District Waters of tanks that contain a regulated organic liquid or had a prior cargo of a regulated organic liquid, shall provide written notice to the APCO no less than 24 hours prior to beginning the operation and, in addition, shall provide the following

information:

404.1 The name of the marine tank vessel:

404.2 The San Francisco Bay Area agent for the vessel;

404.3 A description of the operation;

404.4 The location of the operation;

404.5 For lightering, the type (common name and trade designation), the amount of each organic liquid cargo to be loaded and the means to be used to comply with Section 8-44-301.

404.6 For ballasting, the amount of ballast water to be loaded into cargo tanks, the prior cargo (common name and trade designation) in the tanks, and the means to be used to comply with Section 8-44-302.

404.7 For tank cleaning, the approximate combined capacity of the tanks to be cleaned, the prior cargo (common name and trade designation) of each tank, and a description of the method to be used to clean each tank.

*(Adopted December 7, 2005)*

**8-44-500 MONITORING AND RECORDS**

**8-44-501 Record Keeping – Marine Terminals**: The owner or operator of a marine terminal subject to this rule shall maintain the following records. The records shall be maintained at the terminal for at least five years and shall be made available to the APCO upon request.

501.1 For each loading event of any organic liquid, records that include the following information:

1.1 The name of the vessel loaded;

1.2 The owner, country of registration, operator or charterer (if applicable), and San Francisco Bay Area agent for the vessel;

1.3 The arrival and departure dates and times for the vessel;

1.4 For each cargo tank loaded, the tank identifying number or designation, the type (common name and trade designation) and amount of each organic liquid cargo loaded;

1.5 Effective January 1, 2007, for each cargo tank loaded with an organic liquid cargo other than gasoline, gasoline blending stocks, aviation gas, JP-4 fuel, or crude oil, the flash point of the organic liquid cargo loaded and the temperature of the liquid as loaded;

1.6 For each cargo tank loaded, the prior cargo (common name and trade designation) carried by the tank and, for prior cargo other than gasoline, gasoline blending stocks, aviation gas, JP-4 fuel, or crude oil, the flash point of the prior cargo;

1.7 For any required flash point data, the source of the data and a copy of the source document or analysis;

1.8 The condition of each tank prior to being loaded (inerted, gas freed, crude oil washed, water washed, organic liquid flushed (including flushing liquid), etc.)

1.9 The means used to comply with Section 8-44-304;

1.10 Effective January 1, 2007, date and time of inspections required by Section 8-44-305.3, and identification of equipment discovered to have a liquid or gas leak in excess of the limits in Section 8-44-305.1, including time of discovery, measured liquid leak rate or organic concentration, measures taken to minimize or repair the leak, repaired leak rate and the time these measures were completed.

501.2 For each ballasting operation subject to Section 8-44-302 conducted at a marine terminal, records that include the following information:

2.1 The information specified in Sections 8-44-501.1.1 through 501.1.3;

2.2 For each cargo tank loaded with ballast water, the tank identifying number or designation, and amount of ballast water loaded;

2.3 For each cargo tank loaded with ballast water, the prior cargo (common name

and trade designation) carried by the tank;

2.4 The means used to comply with Section 8-44-302.

2.5 Effective January 1, 2007, date and time of inspections required by Section 8-44-305.3, and identification of equipment discovered to have a liquid or gas leak in excess of the limits in Section 8-44-305.1, including time of discovery, measured liquid leak rate or organic concentration, measures taken to minimize or repair the leak, repaired leak rate and the time these measures were completed.

501.3 For each venting operation subject to Section 8-44-303.1 conducted at a marine terminal, records that include the following information:

3.1 The information specified in Sections 8-44-501.1.1 through 501.1.3;

3.2 For each cargo tank vented, the tank identifying number or designation and the prior cargo (common name and trade designation) carried by the tank;

3.3 For each cargo tank vented, the activity leading to the venting (inerting, purging, gas freeing, tank cleaning, or other specified activity);

3.4 The means used to comply with Section 8-44-303.

3.5 Effective January 1, 2007, date and time of inspections required by Section 8-44-305.3, and identification of equipment discovered to have a liquid or gas leak in excess of the limits in Section 8-44-305.1, including time of discovery, measured liquid leak rate or organic concentration, measures taken to minimize or repair the leak, repaired leak rate and the time these measures were completed.

*(Amended December 7, 2005)*

**8-44-502 Record Keeping – Marine Tank Vessels:** Effective January 1, 2007, the San Francisco Bay Area owner, operator, or agent for a marine tank vessel shall maintain the following records. The records shall be maintained by the owner, operator, or agent for at least five years and shall be made available to the APCO upon request.

502.1 For each lightering operation subject to Section 8-44-301, records that include the following information:

1.1 The name of the vessels involved;

1.2 The owner, country of registration, operator or charterer (if applicable), and San Francisco Bay Area agent for each vessel;

1.3 The beginning and ending dates and times for operation;

1.4 The location of the operation;

1.4 For each cargo tank loaded, the tank identifying number or designation, the type (common name and trade designation) and amount of each organic liquid cargo loaded;

1.5 For each cargo tank loaded, the prior cargo (common name and trade designation) carried by the tank;

1.6 The condition of each tank prior to being loaded (inerted, gas freed, crude oil washed, water washed, organic liquid flushed (including flushing liquid), etc.)

1.7 The means used to comply with Section 8-44-301;

1.8 Date and time of inspections required by Section 8-44-305.3, and identification of equipment discovered to have a liquid or gas leak in excess of the limits in Section 8-44-305.2, including time of discovery, measured liquid leak rate or organic concentration, measures taken to minimize or repair the leak, repaired leak rate and the time these measures were completed.

502.2 For each ballasting operation subject to Section 8-44-302, records that include the following information:

2.1 The name of the vessel;

2.2 The owner, country of registration, operator or charterer (if applicable), for the vessel;

2.3 The beginning and ending dates and times for operation;

2.4 The location of the operation;

2.5 The amount of ballast water loaded into cargo tanks and the prior cargo (common name and trade designation) for the tanks;

2.6 The means used to comply with Section 8-44-302.
2.7 Date and time of inspections required by Section 8-44-305.3, and identification of equipment discovered to have a liquid or gas leak in excess of the limits in Section 8-44-305.2, including time of discovery, measured liquid leak rate or organic concentration, measures taken to minimize or repair the leak, repaired leak rate and the time these measures were completed.

502.3 For each venting operation subject to Section 8-44-303.1, records that include the following information:
3.1 The name of the vessel;
3.2 The owner, country of registration, operator or charterer (if applicable), for the vessel;
3.3 A description of the venting operation;
3.4 The beginning and ending dates and times for operation;
3.5 The location of the operation;
3.6 The prior cargo (common name and trade designation) for the tanks;
3.7 The means used to comply with Section 8-44-303.
3.8 Date and time of inspections required by Section 8-44-305.3, and identification of equipment discovered to have a liquid or gas leak in excess of the limits in Section 8-44-305.2, including time of discovery, measured liquid leak rate or organic concentration, measures taken to minimize or repair the leak, repaired leak rate and the time these measures were completed.

502.4 For each tank cleaning operation involving tanks that contain a regulated organic liquid or that had a prior cargo of a regulated organic liquid and that was conducted (1) within District Waters or (2) within California Coastal Waters by a vessel on a voyage that involved a call at a port or marine terminal within the District or District Waters:
4.1 The name of the vessel;
4.2 The owner, country of registration, operator or charterer (if applicable), for the vessel;
4.3 The beginning and ending dates and times for operation;
4.4 The location of the operation;
4.5 The designation or number of each tank cleaned, the volume of each tank, the prior cargo (common name and trade designation) of each tank, and a description of the method used to clean each tank.

*(Adopted December 7, 2005)*

**8-44-503 Record Keeping - Exemptions**: Effective January 1, 2007, a person that performs an operation and that seeks exemption for that operation under Sections 8-44-110 or 111 shall maintain the following records. These records shall be retained for at least five years and shall be made available to the APCO upon request.

503.1 For Section 8-44-110: The date of the loading event, names of loading and receiving vessels, location of the event, type of material loaded (common name and trade designation), and volume of load.
503.2 For Section 8-44-111: The date of the loading event, names of loading and receiving vessels, location of the event, type of material loaded (common name and trade designation), and volume of load.
503.3 For Section 8-44-115: The date of the operation, names of any vessels involved, location of the operation, and description of the operation.

*(Adopted December 7, 2005)*

**8-44-504 Burden of Proof:** Persons seeking to demonstrate compliance with Section 8-44-304 must maintain adequate test data and provide verification opportunities to the APCO on request.

*(Amended, Renumbered December 7, 2005)*

**8-44-600 MANUAL OF PROCEDURES**

**8-44-601 Determination of Emission Factors and Emission Control Equipment Efficiencies:** Emission factors of organic compounds, or the emission reduction efficiency of a control device, as specified in Section 8-44-304.1, shall be determined during the final 50% of the loading

event, or for at least 6 hours during the final 50% of the loading event. Emissions shall be determined in accordance with one of the following methods: 1) BAAQMD Manual of Procedures, Volume IV, ST-34; 2) U.S. EPA Method 25; 3) U.S. EPA Method 25A; 4) an alternate method approved in writing by the APCO and U.S. EPA.

*(Amended December 7, 2005)*

**8-44-602 Deleted December 7, 2005**

**8-44-603 Leak Determinations:** Measurements of organic compounds leaking in violation of Section 8-44-305.1 or 305.2 shall be made in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A), or by an alternate method approved in writing by the APCO and U.S. EPA.

*(Amended December 7, 2005)*

**8-44-604 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.

*(Adopted December 7, 2005)*

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

## INDEX

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

(Adopted April 18, 2012)

**8-53-100 GENERAL**

**8-53-101 Description:** The purpose of this rule is to limit the emissions of organic compounds from the use of vacuum trucks to move materials at ~~petroleum~~ refineries, bulk plants, bulk terminals, marine terminals, and organic liquid pipeline facilities.

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

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 spills, equipment failures, and other emergency situations shall be exempt from the requirements of this rule, provided that (1) use of equipment capable of complying with the rule would delay the response, and (2) the delay would pose a risk of significant harm to facility equipment, personnel, the public, or the environment.

**8-53-104 Limited Exemption, Positive Displacement Pump or Gravity Feed Loading:** A loading event in which gravity or a positive displacement pump is used to move regulated materials into a vacuum truck shall be exempt from the requirements of Sections 8-53-301 and 8-53-501.

**8-53-105 Exemption, Secondary Treatment Processes:** Vacuum truck activities at secondary treatment processes, as defined in Regulation 8, Rule 8, Section 208, shall be exempt from this rule.

**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 8-53-301 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 distillate, including aviation gasoline and additives, that has a Reid vapor pressure of four (4.0) pounds or greater.

**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 a single location within an affected facility of regulated materials into a vacuum truck or other container through a vacuum truck operation. The resumption of loading at the same location after an interruption shall not be considered a separate loading event.

**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** **Naphtha**: A general term for a variety of crude oil fractions in the gasoline boiling range that are used as feeds and products including but not limited to straight run naphtha, coker naphtha, cat cracked naphtha, and hydrocracked naphtha.

**8-53-214** **Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

**8-53-215** **Organic Liquid Pipeline Facility:** Any pipeline used to transport ~~petroleum, petroleum~~ products, or ~~petroleum~~ product blending stock, along with any associated breakout stations.

~~**8-53-216** **Petroleum Refinery:** Any facility that processes petroleum products as defined in North American Industry Classification System code number 32411, Petroleum Refineries.~~

**8-53-217** **Positive Displacement Pump:** Equipment that, for each cycle of operation, draws in fluid at a constant volume and then forces that exact volume of fluid into a discharge line. For the purposes of this rule, a diaphragm pump is considered to be a positive displacement pump.

**8-53-218** **Regulated Material:** A regulated material is any of the following:

218.1 Gasoline, aviation gasoline, gasoline blending stock, naphtha;

218.2 Transmix, slop, or any other hydrocarbon mixture that includes a material listed in Section 8-53-218.1 if

2.1 For a mixture without significant water content, the true vapor pressure of the mixture is greater than 25.8 mmHg (0.5 psia) as determined pursuant to Section 8-53-602, or

2.2 For a mixture with significant water content, the water content is less than 90% as determined pursuant to Section 8-53-603.

Crude oil is not a regulated material.

**8-53-219** **Slop:** Any mixture of ~~petroleum~~ materials that does not meet product specifications and may not be used or distributed without further processing.

**8-53-220** **Total Organic Compounds (TOC):** Organic compounds and methane.

**8-53-221** **Transmix:** A mixture of hydrocarbons resulting from (1) the sequential transmission of batches of materials through a pipeline and mixing at the interface between different materials, or (2) the collection for re-refining of material that is not loaded, typically because it does not meet a fuel specification or has become contaminated.

**8-53-222** **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.

**8-53-223** **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.

**8-53-224** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**8-53-225** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal,

and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**8-53-300 STANDARDS**

**8-53-301 Emission Limit:** Effective April 1, 2013, for any loading event, the owner or operator of a facility subject to this rule shall control emissions to meet the requirements of Section 8-53-301.1 or, as an alternative, the requirements of Section 8-53-301.2.

301.1 The TOC concentration does not exceed 500 ppmv, expressed as methane (C1), above background, as measured at the exhaust outlet of a vacuum truck operation or, if an auxiliary control device is used to control emissions from a vacuum truck operation, at the exhaust outlet of the control device unless:

1.1 A second concentration reading taken within 60 seconds fails to confirm the exceedance, or

1.2 A second concentration reading taken within 60 seconds confirms a TOC concentration in excess of 500 ppmv, but the loading event is shut down within 3 minutes after the second reading.

301.2 TOC emissions are controlled with an abatement device with an abatement efficiency of at least 95 percent.

**8-53-302 Liquid Leaks:** Effective April 1, 2013, for any loading event, the owner or operator of a facility subject to this rule shall not use a vacuum truck or associated equipment that leaks liquid at a rate in excess of three drops per minute unless the leak is discovered by the operator and eliminated within 3 minutes of discovery or unless the loading event is shut down within 3 minutes of the discovery of the leak. This does not apply to disconnect leaks provided procedures for minimizing disconnect leaks are used.

**8-53-303 Vapor Leaks:** Effective April 1, 2013, for any loading event, the owner or operator of a facility subject to this rule shall not use a vacuum truck or associated abatement device that leaks organic vapor in excess of 500 ppmv, expressed as methane ($C_1$), above background unless the leak is discovered by the operator and minimized to a concentration below 500 ppmv within 3 minutes after discovery or unless the loading event is shut down within 3 minutes after the discovery of the leak.

**8-53-304 Unloading of Regulated Material:** Effective April 1, 2013, the owner or operator of a facility subject to this rule shall meet the following requirements for unloading of regulated material from a vacuum truck at the facility where the vacuum truck was loaded:

304.1 Regulated material shall be unloaded into a tank, vessel or sump that meets the control requirements in Regulation 8, Rule 5 or Regulation 8, Rule 8, or

304.2 If regulated material is unloaded into a tank, vessel or sump that does not meet the control requirements of Regulation 8, Rule 5 or Regulation 8, Rule 8, regulated material shall be unloaded using a submerged fill pipe that complies with the submerged fill pipe discharge requirements of Regulation 8, Rule 5, Section 302 and promptly pumped into storage.

**8-53-400 ADMINISTRATIVE REQUIREMENTS**

**8-53-401 Loading Event Schedule Reporting Requirements:** Effective April 1, 2013, 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, if available at the time of request, 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 and type of material to be loaded.

The list shall include loading events that are scheduled within thirty (30) days. The list shall be provided to District staff within three (3) 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 24 hours prior to loading events.

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

**8-53-501 Emissions Monitoring Requirement:** Effective April 1, 2013, the owner or operator of an affected facility using a vacuum truck operation shall monitor and record emissions as follows:

501.1 To demonstrate compliance with Section 8-53-301.1 when controlling TOC emissions from a vacuum truck operation with technology other than a carbon adsorption system, emission concentrations from the control device shall be measured using the method specified in Section 8-53-601 and recorded as follows:

1.1 Conduct one measurement for each loading event before the vacuum truck is approximately 20% full. Conduct an additional measurement before the vacuum truck is approximately 60% full. If a vacuum truck is already 20% full prior to a loading event, conduct an initial measurement as soon as possible after the start of the loading event and an additional measurement before the vacuum truck is approximately 60% full. If a vacuum truck is already 60% full prior to a loading event, conduct one measurement as soon as possible after the start of the loading event.

1.2 Record the information required by Section 8-53-502.

501.2 To demonstrate compliance with Section 8-53-301.1 when controlling TOC emissions from a vacuum truck operation with a carbon adsorption system, emission concentrations from the control device shall be measured using the method specified in Section 8-53-601 and recorded as follows:

2.1 Commence emission measurements within 2 minutes of startup for each loading event. Additional measurements shall be performed approximately every 10 minutes during loading thereafter;

2.2 When a TOC stream is switched to a back-up or replacement carbon vessel, a new TOC emission measurement must occur within 2 minutes of the carbon vessel replacement.

2.3 Record the information required by Section 8-53-502.

501.3 To demonstrate compliance with Section 8-53-301.2, the owner or operator of an affected facility shall perform a source test verifying the required abatement efficiency during the vacuum truck operation or, for abatement devices that combust emissions to achieve the required efficiency, the owner or operator may instead show that a source test on the abatement device verifying the required abatement efficiency was completed within the 12 months prior to the commencement of the vacuum truck operation.

501.4 An alternative monitoring plan may be submitted and approved by the APCO.

501.5 The owner or operator of an affected facility shall retain records and lists required by this Section for two years and shall make them available for inspection by the APCO upon request.

**8-53-502 Recordkeeping Requirement:** A person subject to this rule shall keep the following records:

502.1 Effective April 1, 2013, record the following information for each loading event:

1.1 The date, time of commencement, and duration of the loading event;

1.2 The type and volume of regulated materials loaded;

1.3 Whether loading was by vacuum, positive displacement pump, or gravity;

1.4 Where vacuum truck control equipment or external control equipment is used,

record the make and model of the control equipment, the results of the emission measurements required by Section 8-53-501, and the make, model, and serial number of the device used to measure the TOC concentrations;

1.5 Where loading was by positive displacement pump, the make and model of the pump.

502.2 Effective April 1, 2013, record the daily volume of crude oil and oil recovered from centrifuging that is loaded into vacuum trucks.

502.3 Effective April 1, 2013, keep records if the owner or operator of an affected facility chooses to perform a true vapor pressure analysis or a percent volume analysis to determine whether material loaded is a regulated material pursuant to Section 8-53-218.

502.4 The owner or operator of an affected facility shall maintain complete copies of source test reports required by Section 8-53-501.3.

502.5 The owner or operator of an affected facility shall retain records required by this Section for two years and shall make them available for inspection by the APCO upon request.

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

**8-53-601 Measurement of TOC Concentrations:** Measurements of TOC concentration for determining compliance with the limit set forth in Section 301 of this rule shall be conducted in accordance with USEPA Reference Methods 21 or 25A; BAAQMD Manual of Procedures, Volume IV, ST-7, Non-methane Organic Carbon Sampling; or any other method approved by the APCO.. If USEPA Reference Method 21 is used to determine compliance, 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). Noncompliance established by any one of the specified test methods shall constitute a violation of this rule.

**8-53-602 Analysis of Materials, True Vapor Pressure:** Materials sampled pursuant to Section 8-53-218.2.1, shall be analyzed for true vapor pressure at loading temperature as prescribed in the Manual of Procedures, Volume III, Lab Method 28: Determination of Vapor Pressure of Organic Liquids from Storage Tanks or any other method approved by the APCO.

**8-53-603 Analysis of Materials, Percent Water Volume:** Materials sampled pursuant to Section 8-53-218.2.2 shall be analyzed as prescribed in ASTM D96: Test Methods for Water and Sediment in Crude Oil by Centrifuge Method (Field Procedure), ASTM D1796: Water and Sediment in Fuel Oils by the Centrifuge Method (Laboratory Procedure) or ASTM D6304: Karl Fisher Water in Petroleum Products. Alternatively, percent water volume may be observed and calculated from a mixed, representative sample collected as specified by ASTM D4057: Standard Practice for Manual Sampling of Petroleum and Petroleum Products and allowed to settle in a graduated cylinder.

**8-53-604 Determination of Abatement Efficiency:** Abatement efficiency of an abatement device shall be determined as specified in the Manual of Procedures, Volume IV, ST-7, by EPA Method 25 or 25A or any other method approved by the APCO. Noncompliance established by any one of the specified test methods shall constitute a violation of the rule.

# REGULATION 9
# INORGANIC GASEOUS POLLUTANTS
# RULE 1
# SULFUR DIOXIDE

## INDEX

# REGULATION 9
# INORGANIC GASEOUS POLLUTANTS
# RULE 1
# SULFUR DIOXIDE

**9-1-100 GENERAL**

**9-1-101 Description:** This Rule establishes emission limits for sulfur dioxide from all sources including ships, and limits ground level concentrations of sulfur dioxide.

**9-1-110 Conditional Exemption, Area Monitoring:** The 300 ppm limitation of Section 9-1-302 shall not apply to a person who meets the requirements of subsections 9-1-110.1 and 110.2, provided such person has complied with those requirements prior to January 1, 1980.

110.1 A person shall be subject to the monitoring, records and reporting requirements contained in Regulation 1, including Sections 1-510, 530, 540, 542, 543, and 544.

110.2 A person shall not emit sulfur dioxide in quantities which result in ground level concentrations of sulfur dioxide in excess of the limits specified in Section 9-1-301. This subsection shall not apply to ground level concentrations occurring on the property from which such emission occurs, provided such property, from the emission point to the point where the excess occurs, is physically secured against public access by the person responsible for the emission. (Amended May 20, 1992)

**9-1-200 DEFINITIONS**

**9-1-201 Deleted May 20, 1992**

**9-1-202 Deleted May 20, 1992**

**9-1-203 Deleted May 20, 1992**

**9-1-204 Start-up:** For the purposes of Section 9-1-605, start-up begins at the time the feed stock is introduced into the process and may proceed for a period not to exceed four consecutive hours. (Amended May 20, 1992)

**9-1-205 Fresh Fruit Sulfuring Operation:** Any operation where freshly cut fruit is placed in a sulfur house in order to come into contact with sulfur dioxide.

*(Adopted February 16, 1983)*

**9-1-206 Sulfur Removal and Recovery System:** A set of process units which remove $H_2S$ from refinery gas streams and the reduced sulfur compounds and ammonia from process water streams. The reduced sulfurous compounds are recovered as sodium hydrosulfide (NaSH), elemental sulfur, sulfuric acid, or other sulfate compounds. The sulfurous compounds are recovered as elemental sulfur or as sulfuric acid. The process units consist of a sour water stripper, regenerative gas treatment system, and a sulfur recovery plant, a sulfuric acid plant, or other process units and facilities which achieve removal efficiencies as required by Section 9-1-313.2.

*(Adopted July 18, 1990; Amended March 15, 1995)*

**9-1-207 Sour Water Stripper:** A process unit which removes reduced sulfur compounds from process water using a distillation (stripping) process. (Adopted July 18, 1990)

**9-1-208 Regenerative Gas Treatment System:** A regenerative process system that removes $H_2S$ from refinery gas streams and recovers the $H_2S$ as $H_2S$ or sulfur.

*(Adopted July 18, 1990)*

**9-1-209 Sulfur Recovery Plant:** A process unit which processes sulfur and ammonia containing material and produces a final product of elemental sulfur.

*(Adopted July 18, 1990)*

**9-1-210 Sulfuric Acid Plant:** A process unit which processes sulfur containing material and produces a final product of sulfuric acid or oleum. (Adopted July 18, 1990)

**9-1-211 Shutdown:** For the purposes of Section 9-1-605, shutdown begins at the time the feed stock is discontinued. (Adopted May 20, 1992)

**9-1-212 Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that

contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**9-1-213** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock, to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

*(Adopted mm/dd/yyyy)*

**9-1-300 STANDARDS**

**9-1-301** **Limitations on Ground Level Concentrations:** A person shall not emit from sources other than ships, sulfur dioxide in quantities which result in ground level concentrations in excess of 0.5 ppm continuously for 3 consecutive minutes or 0.25 ppm averaged over 60 consecutive minutes, or 0.05 ppm averaged over 24 hours. This section shall not apply to ground level concentrations occurring on the property from which such emission occurs, provided such property, from the emission point to the point where the excess occurs, is physically secured against public access by the person responsible for the emission.(Amended May 20, 1992)

**9-1-302** **General Emission Limitation:** A person shall not emit from any source, other than a ship, a gas stream containing sulfur dioxide in excess of 300 ppm (dry). This section shall not apply to the following sources:

302.1 Any source which is subject to any of the limitations in Sections 9-1-304 through 9-1-312.

302.2 Any source which satisfies the conditions in Sections 9-1-110.

*(Amended February 16, 1983)*

**9-1-303** **Emissions from Ships:** A person shall not emit a gas stream containing sulfur dioxide in excess of 2000 ppm from any ship, except when the ship is entering the port from outside the District. Emissions resulting only from the combustion of liquid fuel with a sulfur content less than or equal to 3.34% by weight shall be considered in compliance with this Section.

**9-1-304** **Fuel Burning (Liquid and Solid Fuels):** A person shall not burn any liquid fuel having a sulfur content in excess of 0.5% by weight, or solid fuel of such sulfur content as would result in the emission of a gas stream containing more than 300 ppm (dry) of sulfur dioxide. This section shall not apply to:

304.1 The burning of sulfur, hydrogen sulfide, acid sludge or other compounds used in the manufacture of sulfur compounds;

304.2 The use of liquid or solid fuels to propel any motor vehicle, aircraft, missile, boat or ship;

304.3 The use of liquid or solid fuels which do not result in the emission of a gas stream containing more than 300 ppm (dry) of sulfur dioxide.

**9-1-305** **Deleted May 20, 1992**

**9-1-306** **Deleted May 20, 1992**

**9-1-307** **Emission Limitations for Sulfur Recovery Plants:** A person shall not emit, from any source in a sulfur recovery plant, effluent process gas containing sulfur dioxide in excess of 250 ppm by volume (dry) calculated at zero percent oxygen. Plants which emit less than 45 kg (100 lbs.) per day of sulfur dioxide shall not be subject to this limitation.(Amended February 16,

1983; May 20, 1992)

**9-1-308 Deleted May 20, 1992**

**9-1-309 Emission Limitations for Sulfuric Acid Plants:** A person shall not emit, from any source in a sulfuric acid plant, effluent process gas containing sulfur dioxide in excess of 300 ppm by volume calculated at 12% oxygen.

*(Amended February 16, 1983; May 20, 1992)*

**9-1-310 Emission Limitations for Fluid Catalytic Cracking Units, Fluid Cokers, and Coke Calcining Kilns:**

310.1 A person shall not emit, from any source in a fluid catalytic cracking unit or fluid coker, effluent process gas containing sulfur dioxide in excess of 1,000 ppm by volume.

310.2 A person shall not emit, from any coke calcining kiln, effluent process gas containing sulfur dioxide in excess of 400 ppm by volume or in excess of 113 kg (250 pounds) per hour, whichever is more restrictive.

310.3 A person subject to subsections 9-1-310.1 or 310.2 shall comply with the requirements in subsections 9-1-110.1 and 110.2.

**9-1-311 Emission Limitations for Catalyst Manufacturing Plants:**

311.1 Deleted May 20, 1992

311.2 A person shall not emit, from any source in a catalyst manufacturing plant, effluent process gas containing sulfur dioxide in excess of 22 kg (50 pounds) per hour.

(Adopted May 21, 1980; Amended May 20, 1992)

**9-1-312 Emission Limitations for Fresh Fruit Sulfuring Operations:**

312.1 A person shall not operate any fresh apricot sulfuring operation which uses greater than 4.5 kg (10 pounds) of elemental sulfur or 9.0 kg (20 pounds) of gaseous $SO_2$ per 9.0 metric ton (1 short ton) of fresh apricots.

312.2 A person shall not operate any fresh peach sulfuring operation which uses greater than 5.5 kg (12 pounds) of elemental sulfur or 10.9 kg (24 pounds) of gaseous $SO_2$ per 9.0 metric ton (1 short ton) of fresh peaches.

312.3 A person shall not operate any fresh pear sulfuring operation which uses greater than 6.8 kg (15 pounds) of elemental sulfur or 13.6 kg (30 pounds) of gaseous $SO_2$ per 9.0 metric ton (1 short ton) of fresh pears.

*(Adopted February 16, 1983; Amended May 20, 1992)*

**9-1-313 Sulfur Removal Operations at ~~Petroleum~~ Refineries:** Effective September 1, 1990, a person shall not operate a ~~petroleum~~ refinery processing more than 20,000 barrels per stream day of crude oil or other alternative feedstock unless one of the following is met:

313.1 The sulfur content of the crude oil or other alternative feedstock does not exceed 0.10 percent by weight, or

313.2 There is a sulfur removal and recovery system that removes and recovers, on a refinery wide basis, 95% of the $H_2S$ from the refinery fuel gas, that removes and recovers, on a refinery wide basis, 95% of the $H_2S$ from the process water streams, and removes 95% of the ammonia from the process water streams, provided, however, any refinery which removes sulfurous compounds containing sulfur equivalent of 16.5 tons or more of elemental sulfur in any one day shall install a sulfur recovery plant or a sulfuric acid plant.

313.3 A binding, legally enforceable agreement or court order exists which mandates the construction of a sulfur removal and recovery system pursuant to a schedule set forth therein; provided, however, that the sulfur removal and recovery system must be constructed by October 1, 1993, unless, in the judgment of the Air Pollution Control Officer, failure to complete construction by that date results from circumstances beyond the reasonable control of the refinery operator in which case the Air Pollution Control Officer may grant a reasonable extension of the October 1, 1993 deadline. The Air Pollution Control Officer may grant such extension, however, only if the refinery operator has made substantial progress in completing construction of its sulfur removal and recovery system by October 1, 1993.

*(Adopted July 18, 1990; Amended March 15, 1995)*

**9-1-400 ADMINISTRATIVE REQUIREMENTS**

**9-1-401 Deleted May 20, 1992**
**9-1-402 Deleted May 20, 1992**
**9-1-403 Deleted May 20, 1992**
**9-1-404 Deleted May 20, 1992**

**9-1-500 MONITORING AND RECORDS**

**9-1-501 Area Monitoring Requirements:** Upon request of the APCO, a person subject to Section 9-1-301 shall comply with the monitoring, maintenance, records, and reporting requirements of Regulation 1, including Sections 1-510, 1-530, 1-540, 1-542, 1-543 and 1-544.

**9-1-502 Emission Monitoring Requirements:** A person subject to Section 9-1-304, 307, 309 or 310 (with the exception of coke calcining kilns), shall comply with the monitoring requirements of 1-520 and 522. (Amended March 17, 1982; May 20, 1992)

**9-1-503 Fresh Fruit Sulfuring Recordkeeping Requirements:** Any persons subject to Section 9-1-312 of this Rule shall record the daily weight of elemental sulfur burned or gaseous $SO_2$ used per unit weight of fresh fruit for each sulfuring operation. Records of the weights used shall be kept for the length of the specific fruit season and shall be made available to the APCO upon request. (Adopted February 16, 1983)

**9-1-600 MANUAL OF PROCEDURES**

**9-1-601 Sampling and Analysis of Gas Streams:** The method of sampling and analysis of gas streams of sulfur dioxide concentrations is described in the Manual of Procedures, Volume IV, ST-19 A or B, or any other method approved by the APCO.(Amended March 17, 1982)

**9-1-602 Sulfur Content of Fuels:** The sulfur content of solid and liquid fuels shall be determined as specified in the Manual of Procedures, Volume III, Method 10 or any other method approved by the APCO.

*(Amended March 17, 1982)*

**9-1-603 Averaging Times:** The averaging times for production determination and emission analysis are specified in the Manual of Procedures, Volume IV.

*(Amended March 17, 1982)*

**9-1-604 Ground Level Monitoring:** The monitoring requirements for ground level concentrations of sulfur dioxide, including siting procedures and instrument specifications, calibration and maintenance procedures, are described in the Manual of Procedures, Volume VI, Section 1. (Amended March 17, 1982)

**9-1-605 Emission Monitoring:** The emission monitoring requirements, including instrument placement, specifications, calibration, and maintenance procedures are described in the Manual of Procedures, Volume V. (Amended March 17, 1982).

**9-1-606 Analysis of Gas Streams for $H_2S$:** The method for analyzing refinery fuel gas streams for $H_2S$ before and after control shall be as prescribed in the Manual of Procedures, Volume III, LAB 32 or any other method approved by the APCO. Adopted July 18, 1990; Amended May 20, 1992)

**9-1-607 Analysis of Water Streams for $H_2S$:** The method for analyzing refinery process water streams for $H_2S$ before and after control shall be as prescribed in the Manual of Procedures, Volume III, LAB 32 or any other method approved by the APCO.

*(Adopted July 18, 1990; Amended May 20, 1992)*

**9-1-608 Analysis of Water Streams for $NH_3$:** The method for analyzing refinery process water streams for $NH_3$ before and after control shall be as prescribed in the Manual of Procedures, Volume III, LAB 1 or any other method approved by the APCO.

*Adopted July 18, 1990; Amended May 20, 1992)*

**9-1-609 Analysis of Sulfur Content of Crude Oil and Other Feedstock:** The method for analyzing the sulfur content of the crude oil or other feedstock shall be as prescribed in the Manual of

Procedures, Volume III, Method LAB 10 or any other method approved by the APCO.

*(Adopted July 18, 1990; Amended May 20, 1992)*

# REGULATION 9
# INORGANIC GASEOUS POLLUTANTS
# RULE 10
# NITROGEN OXIDES AND CARBON MONOXIDE FROM BOILERS, STEAM GENERATORS AND PROCESS HEATERS IN ~~PETROLEUM~~ REFINERIES

## INDEX

# REGULATION 9
# INORGANIC GASEOUS POLLUTANTS
# RULE 10
# NITROGEN OXIDES AND CARBON MONOXIDE FROM BOILERS, STEAM GENERATORS AND PROCESS HEATERS IN ~~PETROLEUM~~ REFINERIES

(Adopted January 5, 1994)

**9-10-100 GENERAL**

**9-10-101** Description: This rule limits the emissions of nitrogen oxides and carbon monoxide from boilers, steam generators, and process heaters, including CO boilers, in ~~petroleum~~ refineries.

*(Amended December 15, 2010)*

**9-10-110 Exemptions:** The requirements of this rule shall not apply to the following:

110.1 Boilers, steam generators and process heaters with a rated heat input less than 2 million BTU/hour, if fired exclusively with natural gas, liquefied ~~petroleum~~ gas, or any combination thereof.

110.2 Boilers, steam generators and process heaters with a rated heat input less than 1 million BTU/hour fired with any fuel.

110.3 Waste heat recovery boilers that are used to recover sensible heat from the exhaust of combustion turbines or reciprocating internal combustion engines.

110.4 Boilers, steam generators and process heaters processing hydrogen sulfide process flue gas in sulfur recovery plants and their tail-gas treating units, or sulfuric acid manufacturing plants.

110.5 Boilers, steam generators and process heaters fired on non-gaseous fuel when natural gas is unavailable for use.

110.6 Boilers, steam generators and process heaters, including CO boilers, that receive an Authority to Construct subject to BACT requirements for NOx on or after January 5, 1994.

*(Amended December 15, 2010)*

**9-10-111 Limited Exemption, Small Units:** The requirements of Sections 9-10-301, 303, 305 and 308 shall not apply to the use of any small units, provided the requirements of Section 9-10-306 are satisfied.

*(Amended 7/17/02; 12/15/10; 10/16/13)*

**9-10-112 Limited Exemption, Low Fuel Usage:** The requirements of Sections 9-10-301, 303, 305 and 308 shall not apply to the use of any boiler, steam generator or process heater that has an annual heat input less than 90,000 therms during each consecutive 12-month period or that accepts a condition in its Permit to Operate limiting the annual heat input to less than 90,000 therms, provided the requirements for small units in Section 9-10-306 are satisfied and a fuel-flow meter as described in Section 9-10-502.2 is maintained and operated.

*(Amended 7/17/02; 12/15/10; 10/16/13)*

**9-10-113 Limited Exemption, Alternate NOx Compliance Plan:** The requirements of Section 9-10-301 shall not apply to the use of any boiler, steam generator or process heater at a refinery subject to Section 9-10-308.

*(Adopted October 16, 2013)*

**9-10-200 DEFINITIONS**

**9-10-201 Deleted December 15, 2010**

**9-10-202 Boiler or Steam Generator:** Any combustion equipment used to produce steam or heat water.

**9-10-203 British Thermal Unit (BTU):** The amount of heat required to raise the temperature of one pound of water from 59° F to 60° F at one atmosphere.

**9-10-204 CO Boiler:** A CO boiler is any boiler or furnace that processes the off-gases from a catalytic cracking unit (CCU) regenerator or a coker burner. A partial-burn CO boiler normally processes off-gases from a CCU regenerator that is operated in a partial-burn mode such that the off-gases normally have a CO concentration exceeding 2% by volume.

**Commented [GHN5]:** Do we need a definition of "liquified gas" in this rule?

**Commented [EG6R5]:** Done

*(Amended December 15, 2010)*

**9-10-205** **Deleted December 15, 2010**

**9-10-206** **Heat-Input**: The heat of combustion released due to burning a fuel in a source, using higher heating value of the fuel. This does not include the sensible heat of incoming combustion air. In the case of carbon monoxide boilers, the heat input includes the sensible heat of regenerator off-gases and the heat of combustion of the incoming carbon monoxide and of the auxiliary fuel.

**9-10-207** **Higher Heating Value (HHV):** The total heat liberated per mass of fuel burned (BTU per pound) when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to their standard states at standard conditions per Section 9-10-604.

**9-10-208** **Natural Gas:** Any mixture of gaseous hydrocarbons containing at least 80 percent methane by volume, as determined according to Standard Method ASTM D1945-64.

**9-10-209** **Nitrogen Oxides (NOx):** The sum of nitric oxide (NO) and nitrogen dioxide ($NO_2$) in the flue gas, collectively expressed as nitrogen dioxide.

**9-10-210** **Non-Gaseous Fuel:** Any fuel that is not a gas at 68° F and one atmosphere.

*(Amended December 15, 2010)*

**9-10-211** **Operating Day:** 24 hours from midnight to midnight.

**9-10-212** **Out of Service:** The period of time during which a unit is in an inactive state following shutdown.

~~**9-10-213** **Petroleum Refinery:** Any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants or other products through distillation of petroleum or through redistillation, cracking, or reforming of unfinished petroleum derivatives.~~

**9-10-214** **Process Heater:** Any combustion equipment that transfers heat from combustion gases to water or process streams.

**9-10-215** **Rated Heat Input:** The heat input capacity specified on the nameplate of the combustion source. If the combustion source has been physically modified and/or operated in such a manner that its maximum heat input is different from the heat input capacity specified on the nameplate, then the modified maximum heat input per Section 9-10-503 shall be considered as the rated heat input.

**9-10-216** **Refinery-wide Emission Rate:** The ratio of the total mass of discharge into the atmosphere of nitrogen oxides, in pounds, to the sum of the actual heat input, in million BTU, calculated over a twenty-four (24) hour operating day.

*(Amended December 15, 2010)*

**9-10-217** **Small Unit:** Any refinery boiler, steam generator or process heater with a rated heat input less than 10 million BTU/hour.

*(Amended December 15, 2010)*

**9-10-218** **Startup or Shutdown:** Startup is that period of time, not to exceed twelve (12) hours unless specifically extended by a Permit to Operate, during which a unit is brought up to its normal operating temperature from a cold start, initially at zero fuel flow, by following a prescribed series of separate steps or operations. Shutdown is that period of time, not to exceed nine (9) hours unless specifically extended by a Permit to Operate, during which a unit is taken out of service from a normal operating mode to an inactive status following a prescribed series of separate steps or operations.

*(Amended 12/15/10; 10/16/13)*

**9-10-219** **Therm:** One hundred thousand (100,000) BTUs.

**9-10-220** **Deleted December 15, 2010**

**9-10-221** **Best Available Control Technology (BACT):** As defined in Regulation 2, Rule 2.

*(Adopted December 15, 2010)*

**9-10-222** **Curtailed Operation:** Operation of a boiler, steam generator or process heater at no more than 30% of its rated heat input.

*(Adopted December 15, 2010)*

**9-10-223** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**9-10-224** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**9-10-225** **Liquefied Gas:** A compressed gas composed of one or more of the following flammable hydrocarbons (propane, n-butane, isobutane, propylene, and butylenes), which is used especially as a fuel or as raw material for chemical synthesis, including hydrocarbons that are obtained, originate or manufactured from non-petroleum materials.

**9-10-300 STANDARDS**

**9-10-301 Refinery-wide NOx Emission Limit:** A person shall not exceed a refinery-wide emission rate from boilers, steam generators and process heaters, excluding CO boilers, of 0.033 pounds NOx per million BTU of heat input, based on an operating day average. Boilers, steam generators and process heaters that are test-fired on non-gaseous fuel, that are undergoing startup or shutdown, that are temporarily out of service, or that are in curtailed operation shall be included in the refinery-wide emission rate as follows:

301.1 Deleted December 15, 2010

301.2 Deleted December 15, 2010

301.3 Units Test-Fired On Non-Gaseous Fuel: For the purposes of determining compliance with the emission limit of Section 9-10-301, the emission contribution of each boiler, steam generator or process heater that is fired on non-gaseous fuel for equipment testing shall be taken as the operating day average of NOx emissions at the average heat input over the previous thirty (30) day period. Equipment testing shall not exceed a total of forty-eight (48) hours during any calendar year for any one unit.

301.4 Units in Start-up or Shutdown or in Curtailed Operation: For the purposes of determining compliance with the emission limit of Section 9-10-301, the emission contribution of each boiler, steam generator or process heater that is undergoing startup or shutdown, or that is in Curtailed Operation shall be one of the following:

4.1 The operating day average NOx emissions (either from a continuous emission monitoring system (CEMS) or from an equivalent parametric monitoring system developed in accordance with a Permit to Operate and Section 9-10-502.1), and the operating day heat input.

4.2 The operating day average NOx emissions (either from a CEMS or from an equivalent parametric monitoring system developed in accordance with a Permit to Operate and Section 9-10-502.1), and the operating day heat input averaged over the previous thirty (30) day period or, subject to the approval of the APCO, an alternate 30-day period representative of normal operation.

301.5 Units Temporarily Out of Service: For the purposes of determining compliance with the emission limit of Section 9-10-301, the emission contribution of each boiler, steam generator or process heater that is temporarily out of service shall be the operating day average NOx emissions (either from a continuous emission monitoring system (CEMS) or from an equivalent parametric monitoring system developed in accordance with a Permit to Operate and Section 9-10-502.1), and the operating day heat input, averaged over the previous thirty (30) day period or, subject to the approval of the APCO, an alternate 30-day period representative of normal operation.

*(Amended 12/15/10; 10/16/13)*

**9-10-302 Deleted July 17, 2002**

**9-10-303 Federal Refinery-wide and CO Boiler NOx Emission Limits:** A person shall not exceed a refinery-wide emission rate from boilers, steam generators or process heaters, excluding CO boilers, of 0.20 pounds NOx per million BTU of heat input, based on an operating day average.

303.1 Except during startup and shutdown, a person shall not operate a CO boiler unless the emissions of nitrogen oxides (NOx) do not exceed 300 ppmv, dry at 3% oxygen, based on an operating day average.

*(Amended 7/17/02; 12/15/10)*

**9-10-304 Interim NOx Emission Limit For CO Boilers:** Until Section 9-10-307 is effective, and except during startup and shutdown, a person shall not operate a CO boiler unless at least one of the following is met:

304.1 Emissions of nitrogen oxides (NOx) do not exceed 150 ppmv, dry at 3% oxygen, based on an operating day average; or

304.2 Emissions of nitrogen oxides (NOx) are controlled by an emission control system with a NOx control efficiency of at least 50 percent by weight.

*(Amended December 15, 2010)*

**9-10-305 CO Emission Limit:** Except during start-up, shutdown or curtailed operation, a person shall not operate a boiler, steam generator or process heater, including CO boilers, unless carbon monoxide emissions of 400 ppmv, dry at 3% oxygen, based on an operating day average, are not exceeded.

*(Amended December 15, 2010)*

**9-10-306 Small Unit Requirements:** A person shall not operate a small unit unless at least one of the following is met:

306.1 Operate in a manner that maintains stack-gas oxygen concentrations at less than or equal to 3 percent by volume on a dry basis; or

306.2 Tune at least once every twelve (12) months, or within two weeks of unit startup if not operated in the last twelve (12) months, by a technician in accordance with the procedure specified in Section 9-10-605; or

306.3 Meet the applicable emission limits in Sections 9-10-301, 303 and 305.

*(Amended December 15, 2010)*

**9-10-307 Final NOx Emission Limits For CO Boilers:** Effective January 1, 2015, and except during start-up or shutdown, a person shall not operate a CO boiler unless it meets the applicable NOx emission limits in Sections 9-10-307.1 and 307.2.

307.1 A person shall not operate a non-partial-burn CO boiler, unless the following NOx limits are not exceeded:

| Averaging Period | NOx (ppmv, dry at 3% $O_2$) |
|---|---|
| 1.1 Operating day | 150 |
| 1.2 Calendar year (excluding periods when the CO boiler does not process CCU regenerator offgas) | 45 |

307.2 A person shall not operate a partial-burn CO boiler, unless the following NOx limits are not exceeded:

| Averaging Period | NOx (ppmv, dry at 3% $O_2$) |
|---|---|
| 2.1 Operating day | 125 |
| 2.2 Calendar year | 85 |

*(Adopted 12/15/10; Amended 10/16/13)*

**9-10-308 Alternate NOx Compliance Plan:** A person at a refinery with an Alternate NOx Compliance Plan that has been approved in accordance with Section 9-10-405, shall not exceed the refinery-wide daily NOx limit from boilers, steam generators and process heaters, excluding CO boilers, as specified in the Plan. The boilers, steam generators and process heaters that are covered by the Alternate NOx Compliance Plan shall be referred to as devices in this Section.

308.1 A daily NOx limit shall apply to all devices at a refinery with an approved Alternate NOx

Compliance Plan. The limit shall be the sum of the baseline NOx daily emissions for each device, expressed in pounds of NOx. The baseline NOx daily emissions for each device shall be the average of the daily emissions on any ten (10) different days during the 3-year period immediately preceding the date of the application for an Alternate Compliance Plan, on which the refinery operator was in compliance with Section 9-10-301. The same 10 days shall be used for all devices at a refinery. The APCO may consider allowing 10 days within a different time period, if the APCO finds that a different period allows the selection of operating days that better represent maximum daily emission levels for these devices.

1.1 At any refinery that used Interchangeable Emission Reduction Credits (IERC) to comply with Section 9-10-301 on any of the 10 baseline days, the average difference between actual operating emissions, in pounds NOx/day, and the emissions that would meet the 0.033 pounds NOx/million BTU NOx limit in Section 9-10-301 shall be calculated for the 10 days used to develop the daily NOx limit, and the daily NOx limit shall be reduced by this difference. NOx Emission Reduction Credits (ERC) generated in accordance with Regulation 2, Rule 2 may be surrendered on a one-time basis at a 1.15 to 1 ratio to make up all or part of the difference, and the daily NOx emissions limit will be adjusted accordingly.

1.2 At any refinery with an Authority to Construct application submitted before the date of approval of an Alternate Compliance Plan described in Section 9-10-405, if the actions permitted in the Authority to Construct would reduce the number of devices subject to Section 9-10-301 and require additional NOx emissions reductions to comply with Section 9-10-301, the daily NOx emissions limit shall be reduced by the amount of reductions required. NOx ERC generated in accordance with Regulation 2, Rule 2 may be surrendered on a one-time basis at a 1.15 to 1 ratio to offset all or part of the NOx emissions reductions required, and the daily NOx emissions limit will be adjusted accordingly.

308.2 A person operating under a daily NOx limit shall determine compliance with that limit on a daily basis.

308.3 For any device for which baseline NOx emissions have been permanently reduced, a permit application may be submitted to modify the baseline daily NOx emissions for that device.

308.4 The daily NOx limit shall be reduced when a device is no longer subject to this rule. The amount of reduction shall be equal to the baseline NOx daily emissions for that device.

*(Adopted October 16, 2013)*

**9-10-400 ADMINISTRATIVE REQUIREMENTS**

**9-10-401 Deleted December 15, 2010**

**9-10-402 Deleted December 15, 2010**

**9-10-403 Deleted December 15, 2010**

**9-10-404 Final Control and Monitoring Plan:** A person subject to Section 9-10-307 shall comply with the following increments of progress:

404.1 No later than twenty-four (24) months prior to the effective date of Section 9-10-307, submit to the APCO a control plan detailing the proposed measures, if any, to be taken in order to meet the requirements of Section 9-10-307, as well as proposed measures, if any, to be taken to continue to meet the requirements of Section 9-10-301.

404.2 No later than eighteen (18) months prior to the effective date of Section 9-10-307, submit applications for all Authorities to Construct required for compliance with Section 9-10-307.

404.3 No later than 30 days after the effective date of Section 9-10-307, perform testing for nitrogen oxide and carbon monoxide emissions at each CO boiler subject to Section

9-10-307 at the rated heat input or as near thereto as practicable. This requirement may be satisfied by monitoring nitrogen oxide and carbon monoxide emissions with a continuous emission monitoring system (CEMS).

*(Adopted December 15, 2010)*

**9-10-405 Application for an Alternate NOx Compliance Plan:** An application for an Alternate NOx Compliance Plan may be submitted by a person who operates a refinery where a boiler, steam generator or process heater is subject to Section 9-10-301. The Alternate NOx Compliance Plan shall apply to all boilers, steam generators and process heaters that are subject to the NOx limit in Section 9-10-301 at the time the Alternate NOx Compliance Plan is approved, and only to these boilers, steam generators and process heaters. The application shall be submitted and processed in accordance with Regulation 2, Rule 1. The fees for the application shall be as specified in Regulation 3 for an alternate compliance plan. The application shall include the following information, which shall be included in the Permit to Operate for the boiler, steam generator or process heater:

405.1 The proposed effective date of the Alternate NOx Compliance Plan.

405.2 A list of the boilers, steam generators and process heaters that will be subject to a daily NOx limit, as specified in Section 9-10-308, and for each:

2.1 The baseline NOx daily emissions determined in accordance with Section 9-10-308.1, including the data used to establish the baseline NOx daily emissions and the source(s) of the data. To the extent possible, the baseline NOx daily emissions shall be based on CEMS data.

2.2 One or two substitute emission factors to be used in the absence of CEMS data and determined from representative source test data measured in accordance with District Manual of Procedures, Volume IV, ST-13A (nitrogen oxides) and ST-14 (oxygen), including the source test report.

2.3 The amount of the required reductions to the daily NOx limit described in Sections 9-10-308.1.1 and 308.1.2 and any proposed mitigation to these reductions.

405.3 The amount of any ERC use allowed by Sections 9-10-308.1.1 and 308.1.2 shall be calculated as follows: (average difference between actual operating emissions, in pounds NOx/day, and the pounds NOx emissions/day that would meet the 0.033 pounds NOx/million BTU NOx limit in Section 9-10-301 for the 10 days used to develop the baseline NOx emissions)(365 days/year)(1.15) = NOx ERC surrendered. Any ERC use shall be surrendered before the application for the Alternate NOx Compliance Plan is considered complete. If an Authority to Construct that meets the conditions described in Section 9-10-308.1.2 is cancelled, any ERC surrendered shall be returned to the applicant.

*(Adopted October 16, 2013)*

**9-10-406 Determination of Compliance**: Compliance with the daily limit in Section 9-10-301 or 308 shall be determined by CEMS data and, for those boilers, steam generators and process heaters subject to parametric monitoring, the emission factor established according to Section 9-10-502.1.2 and the heat input rate as measured for each boiler, steam generator and process heater.

*(Adopted October 16, 2013)*

**9-10-407 Boiler, Steam Generator and Process Heater Status Report**: Any person who operates a boiler, steam generator or process heater that is subject to Section 9-10-301 or 308 shall, no later than April 16, 2013, submit information on the make, model and emission rates for all burners in each boiler, steam generator or process heater. Information shall be submitted in a format as specified by the APCO. The information shall be updated no later than 30 days after any non-identical burner change or replacement.

*(Adopted October 16, 2013)*

**9-10-500 MONITORING AND RECORDS**

**9-10-501 Deleted December 15, 2010**

**9-10-502 Monitoring:** A person subject to Sections 9-10-301, 303, 304, 305, 307 or 308 shall maintain

in good working order, and operate the following equipment:

502.1 An in-stack nitrogen oxide (NOx), carbon monoxide (CO), and oxygen ($O_2$) continuous emission monitoring system (CEMS), or equivalent parametric monitoring system as specified in a Permit to Operate. The CEMS shall meet the requirements of the District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures.

1.1 No later than April 16, 2014, a person who operates boilers, steam generators or process heaters that are subject to Section 9-10-301 or 308 shall submit a monitoring plan to the APCO for the installation of NOx CEMS on these boilers, steam generators or process heaters such that no less than 95% of the NOx emissions, by weight, subject to either 9-10-301 or 308 is monitored with a NOx CEMS. The monitoring plan shall consider the actual NOx emission contribution from each boiler, steam generator or process heater subject to Section 9-10-301 or 308 during the most recent calendar year for which complete data are available at the time of the submittal of the monitoring plan. No later than October 16, 2014, the APCO shall approve each submitted monitoring plan, or else shall specify additional NOx CEMS that must be installed, and notify the affected refinery. The date of plan approval or notification shall serve as the "date of notification" specified in the District Manual of Procedures (MOP), Volume V, Continuous Emission Monitoring, Policy and Procedures. The installation of CEMS shall then be in accordance with the schedule and other provisions of MOP, Volume V, except that the completion of installation in Section 4.3 of Volume V shall be within 12 months of submittal of the Intent to Purchase.

1.2 Any person who operates a boiler, steam generator or process heater that uses a parametric monitoring system to monitor compliance with Section 9-10-301 or 308 shall estimate the NOx emission contribution of the boiler, steam generator or process heater based on one or two NOx emission factors (expressed as lb NOx / MM BTU) and on actual fuel input for all operating conditions, except as allowed by Section 9-10-301.3, 301.4 or 301.5. The emission factor shall be based on one or more District-approved source tests and included in a Permit to Operate. The operator shall conduct periodic monitoring of boilers, steam generators and process heaters that use a parametric monitoring system as follows:

2.1 Boilers, steam generators and process heaters rated less than 25 MM BTU/hr shall have one source test per consecutive 12 month period. The time interval between source tests shall not exceed 16 months. A boiler, steam generator or process heater that is out of service need not be placed into service for the purposes of conducting a source test. Notwithstanding the time limits specified above, a source test for a boiler, steam generator or process heater that is out of service may be delayed until it returns to service.

2.2 Boilers, steam generators and process heaters rated 25 MM BTU/hr or more shall have two source tests per consecutive 12 month period. The time interval between source tests shall be no less than 5 months and no more than 8 months. Notwithstanding the time limits specified above, a source test for a boiler, steam generator or process heater that is out of service may be delayed until it returns to service.

If a source test measures an emission factor higher than the emission factor in the Permit to Operate, then the higher emission factor shall become the new emission factor for determining compliance with Section 9-10-301 and 308. An operator may re-test at operating conditions substantially similar to those during the original test and appeal the change in emission factor to the APCO within 60 days. An operator may submit source test data with a permit application to establish a lower emission factor for a device that has been

altered in a way that reduces the emission rate. The APCO may require that a source test be performed at a specific operating condition if the APCO determines that such a condition is a representative operating condition that has not been previously tested. Source test results shall be submitted to the APCO within 60 days of any test.

502.2 A fuel-flow meter in each fuel line for each boiler, steam generator and process heater, including each CO boiler.

*(Amended 7/17/02; 12/15/10; 10/16/13)*

**9-10-503 Modified Maximum Heat Input:** Any unit that has been physically modified such that its maximum heat input is different than the heat input specified on the nameplate shall demonstrate to the APCO the maximum heat input while operating the source at maximum capacity.

**9-10-504 Records:** The owner/operator of a source subject to this rule shall keep the following records, in a form suitable for inspection for a period of at least five (5) years. Such records shall be retained for a minimum of sixty (60) months from date of entry and made available to the APCO upon request. These records shall include, but are not limited to the following:

504.1 For all sources subject to the requirements of Sections 9-10-301, 303, 304, 305, 307, 308 or 404.3:

1.1 The continuous emission monitoring system (CEMS) measurements for NOx and CO (ppmv corrected to 3% oxygen) and $O_2$ (percent by volume on a dry basis) or equivalent parametric monitoring system parameters; and hourly (lb/hour) and daily (lb/day) NOx emissions for each source. Measurements shall be submitted in a digital format that can be readily imported into standard database tools as specified by the APCO. The APCO shall provide a reasonable amount of time to implement any required changes in data format.

1.2 The type, heat input (BTU/hr and BTU/day), and higher heating value of each fuel burned, and the injection rate for any reactant chemicals used by the emission control system(s) on a daily basis.

1.3 The date, time, and duration of any startup, shutdown or malfunction in the operation of any unit, emission control equipment or emission monitoring equipment.

1.4 The results of performance testing, evaluations, calibrations, checks, adjustments, and maintenance of any CEMS required by this rule.

1.5 A list of all sources subject to the NOx refinery-wide emission rate limits in Sections 9-10-301 and 303.

1.6 Total NOx emissions and total heat input for all sources listed in Section 9-10-504.1.5, on a daily basis.

1.7 The date, time and duration of all start-up and shutdown periods.

1.8 The results of source tests required by Section 9-10-404.3.

504.2 For all sources subject to Section 9-10-306.2, records of annual tune-ups.

*(Amended 7/17/02; 12/15/10; 10/16/13)*

**9-10-505 Reporting Requirements:** A person subject to the requirements of Sections 9-10-301, 303, 304, 305, 306, 307 or 308 shall meet the following reporting requirements:

505.1 Report to the APCO any violation of Section 9-10-301, 303, 304, 305, 306, 307 or 308 in accordance with the requirements of Regulation 1-522 for continuous emission monitoring systems (CEMS) and Regulation 1-523 for parametric monitoring systems.

505.2 Submit a written report for each calendar quarter to the APCO. The report shall be due on the 30th day following the end of the calendar quarter and shall include:

2.1 A summary of the data obtained from the CEMS or equivalent parametric monitoring system and the fuel meters installed pursuant to Section 9-10-502; and

2.2 The date, time, duration, and magnitude of emissions in excess of the appropriate standards; the nature and cause of the excess (if known); the corrective actions taken; and the preventive measure adopted.

505.3 A person subject to the requirements of Section 9-10-308 shall submit to the APCO a permit application to amend the Alternate NOx Compliance Plan whenever Section 9-

10-308.4 is triggered. The application shall be submitted within 30 days of the event that triggers Section 9-10-308.4.

*(Amended 7/17/02; 12/15/10; 10/16/13)*

**9-10-600 MANUAL OF PROCEDURES**

**9-10-601 Determination of Nitrogen Oxides:** Compliance with the nitrogen oxide emission requirements of Sections 9-10-301, 303, 304, 307 and 308 shall be determined by a continuous emission monitoring system (CEMS) that meets the requirements of Regulation 1-522, or by an equivalent parametric monitoring system that is authorized in a Permit to Operate and that meets the requirements of Regulation 1-523. CEMS operation and compliance with Section 9-10-404.3 shall be verified by source test as set forth in the District Manual of Procedures, Volume IV, ST-13A (nitrogen oxides) and ST-14 (oxygen), or any other method approved by the APCO..

*(Amended 7/17/02; 12/15/10; 1016/13)*

**9-10-602 Determination of Carbon Monoxide and Stack-Gas Oxygen:** Compliance with the carbon monoxide emission requirements of Section 9-10-305 shall be determined by a continuous emission monitoring system (CEMS) that meets the requirements of Regulation 1-522, or by an equivalent parametric monitoring system that is authorized in a Permit to Operate and that meets the requirements of Regulation 1-523. CEMS operation and compliance with Section 9-10-404.3 shall be verified by source test as set forth in the District Manual of Procedures, Volume IV, ST-6 (carbon monoxide) and ST-14 (oxygen), or any other method approved by the APCO..

*(Amended 12/15/10; 10/16/13)*

**9-10-603 Compliance Determination:** All emission determinations shall be made in the as-found operating condition, except during periods of start-up or shutdown.

*(Amended December 15, 2010)*

**9-10-604 Determination of Higher Heating Value:** If certification of the higher heating value is not provided by the third-party fuel supplier, it shall be determined by one of the following test methods: (1) ASTM D2015-85 for solid fuels; (2) ASTM D240-87 or ASTM D2382-88 for liquid hydrocarbon fuels; or (3) ASTM D1826-88 or ASTM D1945-81 in conjunction with ASTM D3588-89 for gaseous fuels, or any other method approved by the APCO.

**9-10-605 Tune-Up Procedures:** The tuning procedure required by Section 9-10-306.2 shall be performed in accordance with the procedure set forth in the District Manual of Procedures, Volume I, Chapter 5.

**REGULATION 11**
**HAZARDOUS POLLUTANTS**
**RULE 10**
**HEXAVALENT CHROMIUM EMISSIONS FROM ALL COOLING TOWERS AND TOTAL HYDROCARBON EMISSIONS FROM ~~PETROLEUM~~ REFINERY COOLING TOWERS**

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**REGULATION 11**
**HAZARDOUS POLLUTANTS**
**RULE 10**
**HEXAVALENT CHROMIUM EMISSIONS FROM ALL COOLING TOWERS AND TOTAL HYDROCARBON EMISSIONS FROM ~~PETROLEUM~~ REFINERY COOLING TOWERS**

(Adopted November 15, 1989)

**11-10-100 GENERAL**

**11-10-101 Description:** The purpose of this Rule is to reduce emissions of hexavalent chromium from all cooling towers and reduce total hydrocarbon emissions from cooling towers at ~~petroleum~~ refineries.

*(Amended December 16, 2015)*

**11-10-102 Deleted December 16, 2015**

**11-10-103 Limited Exemption, Fin-Fan Coolers and HVAC Systems:** Fin-Fan Coolers and HVAC Systems associated with ~~petroleum~~ refinery cooling towers are exempt from the total hydrocarbon emission requirements of this rule.

*(Adopted December 16, 2015)*

**11-10-104 Limited Exemption, Continuous Hydrocarbon Analyzers:** When a continuous hydrocarbon analyzer, as defined in Section 11-10-201, is installed pursuant to Section 11-10-602 and is used to detect total hydrocarbon concentrations in cooling tower water, the cooling tower return line (s), and/or the heat exchanger exit line(s) monitored by the analyzer(s) are exempt from the requirements of Section 11-10-402.

*(Adopted December 16, 2015)*

**11-10-105 Limited Exemption, Recirculation Rates Less Than 500 Gallons Per Minute:** ~~Petroleum~~Refinery cooling towers with a water recirculation rate less than 500 gallons per minute may demonstrate compliance with the requirements in Section 11-10-304 by monitoring for leaks at least once every week with any of the Air District approved total hydrocarbon detection methods outlined in Section 11-10-304. A ~~petroleum~~ refinery may elect to move to a monthly monitoring schedule for a cooling tower as follows:

**105.1** If weekly sampling or monitoring results at a particular cooling tower do not exceed the applicable leak action level for four consecutive weeks, the ~~petroleum~~ refinery may demonstrate compliance with the requirements in Section 11-10-304 by monitoring for leaks at least once every month at the cooling tower;

**105.2** In the event that the monthly sampling or monitoring identifies a result above the applicable leak action level, the ~~petroleum~~ refinery must revert to a weekly sampling or monitoring schedule for the relevant cooling tower; and

**105.3** The relevant cooling tower shall be again eligible for a monthly sampling schedule after four consecutive weeks of sampling or monitoring results below the applicable leak action level.

*(Adopted 12/16/15, Amended 12/19/18)*

**11-10-106 Limited Exemption, Recirculation Rates Less Than 2,500 Gallons Per Minute:** ~~Petroleum~~ Refinery cooling towers with a water recirculation rate less than 2,500 gallons per minute may demonstrate compliance with the requirements in Section 11-10-304 by monitoring for leaks at least once every week with any of the Air District approved total hydrocarbon detection methods outlined in Section 11-10-304. A ~~petroleum~~ refinery may elect to move to a monthly monitoring schedule for a cooling tower as follows:

**106.1** If weekly sampling or monitoring results at a particular cooling tower do not exceed the applicable leak action level for four consecutive weeks, the ~~petroleum~~ refinery may demonstrate compliance with the requirements in Section 11-10-304 by monitoring for leaks at least once every month at the cooling tower;

**106.2** In the event that the monthly sampling or monitoring identifies a result above the applicable leak action level, the ~~petroleum~~ refinery must revert to a weekly sampling or monitoring schedule for the relevant cooling tower; and

**106.3** The relevant cooling tower shall be again eligible for a monthly sampling schedule after four consecutive weeks of sampling or monitoring results below the applicable leak action level.

*(Adopted 12/16/15, Amended 12/19/18)*

**11-10-107 Limited Exemption, Cooling Towers Servicing Hydrogen Production, Carbon Dioxide Recovery and Power Generation Facilities:** Cooling towers that are not in ~~petroleum~~ refining process service are excluded from the total hydrocarbon emission requirements of this rule. Refining process service is limited to refinery process units that handle ~~petroleum~~ hydrocarbons. Specific examples of cooling towers not in ~~petroleum~~ refining process service are those that serve power generation operations, hydrogen production facilities and carbon dioxide recovery facilities located at ~~petroleum~~ refineries, provided they are not involved with the refining of crude oil or alternative feedstocks and their cooling systems are separate from those used in ~~petroleum~~ refining or processing operations. Cooling towers serving sulfur plants, lube oil streams, and amine streams will be evaluated on a case-by-case basis, and the APCO shall determine if the cooling tower is subject to the total hydrocarbon requirements of this rule.

*(Adopted 12/16/15, Amended 12/19/18)*

**11-10-200 DEFINITIONS**

**11-10-201 Continuous Hydrocarbon Analyzer:** An Air District-approved parametric monitoring device that measures total hydrocarbon concentration to detect leaks in a heat exchanger system.

*(Adopted December 16, 2015)*

**11-10-202 Cooling Tower:** A device used to remove heat from circulating cooling water systems by transferring heat to the atmosphere using either a natural or mechanical draft.

*(Renumbered, Amended December 16, 2015)*

**11-10-203 Hexavalent Chromium/Chromate:** Hexavalent chromium is a cancer-causing (toxic) substance existing as part of various inorganic chromate compounds, for example, sodium dichromate or lead chromate.

*(Prior Section 11-10-203 Deleted 12/16/15; Current Section 11-10-203 Adopted 12/16/15)*

**11-10-204 Leak Action Level:** A total hydrocarbon concentration greater than any one of the following:

**204.1** 84 ppbw (as methane) as measured in cooling tower water prior to exposure to air for cooling towers in operation prior to July 1, 2016, or 42 ppbw (as methane) as measured in cooling tower water prior to exposure to air for new or modified cooling towers

operating on or after July 1, 2016.

**204.2** 6 ppmv (as methane) as measured in stripped air by a continuous hydrocarbon analyzer or an APCO approved alternative method.

*(Adopted December 16, 2015)*

**11-10-205 Leak Repair:** A leak repair shall reduce the concentration of total hydrocarbon in cooling tower water to comply with the applicable leak action level and may include but not be limited to the following actions:

**205.1** Permanent physical repair of leaking equipment, replacement of equipment, and/or blocking or plugging equipment.

**205.2** Replacing the leaking heat exchanger or heat exchanger bundle; or permanently isolating, bypassing, or otherwise removing the leaking heat exchanger from service until it is repaired.

*(Adopted December 16, 2015)*

~~**11-10-206 Petroleum Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes crude oil to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks. Petroleum refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), petroleum conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking) petroleum treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants). An establishment that is located on one or more contiguous or adjacent properties that processes crude oil to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks. Petroleum refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), petroleum conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking) petroleum treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).~~

*(Adopted December 16, 2015)*

**11-10-207 Heat Exchange System:** A device or series of devices used to transfer heat from process fluids to water without intentional direct contact of the process fluid with the water (i.e., non-contact heat exchanger) and to transport and/or cool the water in a closed-loop recirculation system (cooling tower system). For closed-loop recirculation systems, the heat exchange system consists of a cooling tower, all ~~petroleum~~ refinery process unit heat exchangers that are serviced by that cooling tower, and all water lines to and from the ~~petroleum~~ refinery process unit heat exchanger(s).

*(Adopted December 16, 2015)*

**11-10-208 Heat Exchanger:** A device consisting of fins and/or tubes used to transfer heat from process equipment or process fluid streams to cooling water.

*(Adopted December 16, 2015)*

**11-10-209 Total Hydrocarbon:** Any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

*(Adopted December 16, 2015)*

**11-10-210 Cooling Tower Return Line**: The main water trunk lines at the inlet to the cooling tower before exposure to the atmosphere.

*(Adopted December 16, 2015)*

**11-10-211 Heat Exchanger Exit Line:** A cooling water line from the exit of one or more heat exchangers (where cooling water leaves the heat exchangers) to the entrance of the cooling tower return line.

*(Adopted December 16, 2015)*

**11-10-212 Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that

contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**11-10-213** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock, to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**11-10-300 STANDARDS**

**11-10-301** **Hexavalent Chromium Removal:** Effective March 1, 1990, a person shall not operate any cooling tower in the District that uses hexavalent chromium chemicals.

**11-10-302** **Deleted December 16, 2015**

**11-10-303** **Deleted December 16, 2015**

**11-10-304** **Total Hydrocarbon Leak Monitoring Requirement:** Effective January 1, 2019, the owner/operator of a cooling tower located at a ~~petroleum~~ refinery shall use one of three options to monitor for total hydrocarbon leaks from cooling towers:

**304.1** Sample and analyze cooling tower water at each cooling tower return line(s), and/or at each heat exchanger exit line(s) prior to exposure to air to demonstrate compliance with the leak action level in Subsection 11-10-204.1 (84 ppbw in the cooling water for existing units and 42 ppbw for new/modified units) at least once every week (52 samples per year) pursuant to the requirements of Sections 11-10-603, 11-10-604 and the BAAQMD Manual of Procedures. A ~~petroleum~~ refinery may elect to move to a bi-monthly sampling schedule (two samples every month) for a cooling tower provided weekly sampling results at a particular cooling tower do not exceed the applicable leak action level for six consecutive months (26 consecutive weekly samples):

4.1.1 In the event that sampling identifies a result above the applicable leak action level, the refinery must revert to a weekly sampling or monitoring schedule for the relevant cooling tower; and

4.1.2 The relevant cooling tower shall be again eligible for a bi-monthly sampling schedule (two samples every month) after six consecutive months of sampling results below the applicable leak action level.

**304.2** Install a continuous hydrocarbon analyzer(s) at each cooling tower return line(s), and/or at each heat exchanger exit line(s) prior to exposure to air to demonstrate compliance with the leak action level in Subsection 11-10-204.2 (6 ppmv in the stripped air). The owner/operator shall ensure that the continuous hydrocarbon analyzer(s) is capable of taking at least 4 measurements every hour (96 measurements per day).

**304.3** Employ an alternative APCO-approved method to monitor each cooling tower return line(s), and/or each heat exchanger exit line(s) prior to exposure to air to demonstrate compliance with the leak action level in Subsection 11-10-204.2 (6 ppmv in the stripped air). Monitoring of cooling towers using an alternative APCO-approved method must meet the monitoring frequency requirements as described in Subsection 11-10-304.1. Cooling tower owner/operators must receive prior approval from the APCO to use an alternative monitoring method.

*(Adopted 12/16/15, Amended 12/19/18)*

**11-10-305** **Leak Action Requirement:** Effective January 1, 2019, if any of the hydrocarbon leak detection methods in Section 11-10-304 result in cooling tower water containing total hydrocarbon

concentrations greater than the applicable leak action level in Section 11-10-204, the cooling tower owner/operator shall minimize the leak as soon as practicable or within seven calendar days, whichever is sooner, and conduct a leak repair and/or remove the defective piece of equipment from service within 21 calendar days of first detecting the leak. Any delay in completion of the leak repair beyond 21 days must meet the criteria cited in 40 C.F.R. 63.654(f)-(g). The owner/operator shall also speciate and quantify the Toxic Air Contaminants (TACs) associated with the leak within 72 hours of discovering the leak, using water sampling pursuant to the requirements of Sections 11-10-603, 11-10-604 and the BAAQMD Manual of Procedures. The TACs requiring speciation and quantification are defined in Regulation 2, Rule 5, Section 2-5-222 and are summarized in Table 2-5-1 of Regulation 2, Rule 5.

*(Adopted 12/16/15, Amended 12/19/18)*

**11-10-400 ADMINISTRATIVE REQUIREMENTS**

**11-10-401** ~~**Petroleum**~~ **Refinery Cooling Tower Reporting Requirements:** When the sampling of cooling tower water exceeds the applicable leak action level the cooling tower owner/operator shall:

**401.1** Conduct sampling of total hydrocarbon concentration and chlorine concentration in the cooling water as soon as feasible, and no later than 24 hours from the time and date of leak discovery. Within 72 hours of the time and date of leak discovery, the owner/operator shall notify the APCO of the total hydrocarbon concentration and chlorine concentration in the cooling water.

**401.2** If the leak has not been repaired after 21 days, the owner/operator shall notify the APCO regarding the magnitude of the leak, the specific repairs performed to date, whether the leaking component was reinspected for leaks following the repair, the cause of the leak, whether further repair or replacement of equipment will be required at the next turnaround, whether the hydrocarbons associated with the leak were speciated and quantified. The owner/operator shall notify the APCO if the delay in completion of the leak repair beyond 21 days meets the criteria cited in 40 C.F.R. 63.654(f)-(g).

*(Adopted 12/16/15, Amended 12/19/18)*

**11-10-402 Deleted December 19, 2018**

**11-10-500 MONITORING AND RECORDS**

**11-10-501 Deleted December 16, 2015**

**11-10-502 Deleted December 16, 2015**

**11-10-503 Deleted December 16, 2015**

**11-10-504 Operating Records:** Owner/operators subject to the requirements of Sections 11-10-301, 304, 305, 401, 601, 602, 603 and/or 604 shall retain records of the results of all sampling and/or monitoring conducted, leak minimizations and repairs made, and other required data on site for at least five years from the date of entry. Owner/operators claiming any of the limited exemptions from ~~petroleum~~ refinery cooling tower requirements in this rule shall keep records on site for at least five years to demonstrate qualification for exemption.

*(Adopted 12/16/15, Amended 12/19/18)*

**11-10-600 MANUAL OF PROCEDURES**

**11-10-601 Determination of Hexavalent Chromium in Circulating Water:** Samples of circulating water shall be analyzed for hexavalent chromium as prescribed by American Public Health Method 312B or an equivalent method, as approved by the APCO.

**11-10-602 Total Hydrocarbon Analyzer Location:** Effective July 1, 2016, if the owner/operator of a cooling tower at a ~~petroleum~~ refinery installs one or more Air District-approved total hydrocarbon analyzers in a cooling tower to demonstrate compliance with Subsections 11-10-304.2 and 304.3, such analyzers shall be installed at: A) each cooling tower return line to continuously measure the total hydrocarbon concentration in the cooling tower water prior to exposure to air, or B) the exit line for each heat exchanger or group of heat exchangers within

that heat exchanger system prior to exposure to air. Location of analyzer installations shall be subject to APCO approval. Analyzer sensitivity shall respond to the compounds being processed. Analyzers shall be maintained and operated in accordance with Regulation 1, Section 523.

*(Adopted December 16, 2015)*

**11-10-603 Cooling Tower Water Lab Analysis Methodology:** Effective July 1, 2016, when the owner/operator of a cooling tower located at a ~~petroleum~~ refinery performs cooling water sampling and analysis for hydrocarbon concentration in cooling tower water pursuant to Subsection 11-10-304.1, the laboratory analysis shall follow EPA Method 8015D, or any other method approved by the APCO.

*(Adopted December 16, 2015)*

**11-10-604 Cooling Tower Water Sampling Methodology:** Effective July 1, 2016, when the owner/operator of a cooling tower located at a ~~petroleum~~ refinery performs cooling water sampling and analysis for total hydrocarbon concentration in cooling tower water pursuant to Subsection 11-10-304.1, the cooling water shall be sampled at each cooling tower return line(s) and/or each heat exchanger exit line(s) prior to exposure to air. Sampling methodology shall follow the BAAQMD Manual of Procedures, or any other method approved by the APCO..

*(Adopted December 16, 2015)*

# REGULATION 12
# MISCELLANEOUS STANDARDS OF PERFORMANCE
# RULE 11
# FLARE MONITORING AT ~~PETROLEUM~~ REFINERIES

## INDEX

# REGULATION 12
# MISCELLANEOUS STANDARDS OF PERFORMANCE
# RULE 11
# FLARE MONITORING AT ~~PETROLEUM~~ REFINERIES

(Adopted June 4, 2003)

**12-11-100 GENERAL**

**12-11-101 Description:** The purpose of this rule is to require monitoring and recording of emission data for flares at ~~petroleum~~ refineries.

**12-11-110 Exemption, Organic Liquid Storage and Distribution:** The provisions of this rule shall not apply to flares or thermal oxidizers used to control emissions exclusively from organic liquid storage vessels subject to Regulation 8, Rule 5 or exclusively from loading racks subject to Regulation 8 Rules 6, 33, or 39.

**12-11-111 Exemption, Marine Vessel Loading Terminals:** The provisions of this rule shall not apply to flares or thermal oxidizers used to control emissions exclusively from marine vessel loading terminals subject to Regulation 8, Rule 44.

**12-11-112 Exemption, Wastewater Treatment Systems:** The provisions of this rule shall not apply to thermal oxidizers used to control emissions exclusively from wastewater treatment systems subject to Regulation 8, Rule 8.

**12-11-113 Exemption, Pumps:** The provisions of this rule shall not apply to thermal oxidizers used to control emissions exclusively from pump seals subject to Regulation 8, Rule 18. This exemption does not apply when emissions from a pump are routed to a flare header.

**12-11-114 Limited Exemption, Total Hydrocarbon and Methane Composition Monitoring and Reporting:** The provisions of Sections 12-11-401.2, 401.3, 401.5, 502.2 and 502.3 that require monitoring and reporting of total hydrocarbon and methane composition shall not apply to a flare that exclusively burns flexicoker gas with or without supplemental natural gas, provided that the owner or operator demonstrates by weekly sampling and analysis, verified by the APCO, that the methane content and the non-methane content of the vent gas flared are less than 2 percent and 1 percent by volume, respectively.

**12-11-200 DEFINITIONS**

**12-11-201 Flare:** A combustion device that uses an open flame to burn combustible gases with combustion air provided by uncontrolled ambient air around the flame. Flares may be either continuous or intermittent and are not equipped with devices for fuel-air mix control or for temperature control. This term includes both ground and elevated flares.

**12-11-202 Flare Monitoring System:** All sample systems, transducers, transmitters, data acquisition equipment, data recording equipment, video monitoring equipment, and video recording equipment involved in flare monitoring.

**12-11-203 Flaring:** A high-temperature combustion process used to burn vent gases.

**12-11-204 Gas:** The state of matter that has neither independent shape nor volume, but tends to expand indefinitely. For the purposes of this rule, “gas” includes aerosols and the terms “gas” and “gases” are interchangeable.

~~**12-11-205 Petroleum Refinery:** A facility that processes petroleum, as defined in the North American Industrial Classification Standard No. 32411, and including any associated sulfur recovery plant.~~

**12-11-206 Pilot Gas:** The gas used to maintain the presence of a flame for ignition of vent gases.

**12-11-207 Purge Gas:** The gas used to prevent air backflow in the flare system when there is no vent gas.

**12-11-208 Sulfur Recovery Plant:** A process unit that processes sulfur and ammonia containing material and produces a final product of elemental sulfur.

**12-11-209 Thermal Oxidizer:** An enclosed or partially enclosed combustion device that is used to oxidize combustible gases, that generally comes equipped with controls for combustion chamber

temperature and often with controls for air/fuel mixture, and that exhausts all combustion products through a vent, duct, or stack so that emissions can be measured directly.

**12-11-210** **Vent Gas:** Any gas directed to a flare excluding assisting air or steam, flare pilot gas, and any continuous purge gases.

**12-11-211** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil, product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**12-11-212** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes petroleum or alternative feedstocks, to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**12-11-400 ADMINISTRATIVE REQUIREMENTS**

**12-11-401** **Flare Data Reporting Requirements:** The owner or operator of a flare shall submit a monthly report to the APCO on or before 30 days after the end of each month for each flare subject to this rule. Only one report is required for a staged or cascading flare system if all flares in the system serve the same header or headers. The report shall be in an electronic format approved by the APCO. Each monthly report shall include all of the following:

401.1 The total volumetric flow of vent gas in standard cubic feet for each day and for the month, and, effective for the first full month after the commencement of the monitoring required by Section 12-11-501, for each hour of the month.

401.2 If vent gas composition is monitored using sampling or integrated sampling, total hydrocarbon content as propane by volume, methane content by volume, and, hydrogen sulfide content by volume, for each sample or integrated sample required by Section 12-11-502. If the content of any additional compound or compounds is determined by the analysis of a sample or integrated sample, the content by volume of each additional compound.

401.3 If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 12-11-502, average total hydrocarbon content as propane by volume, average methane content by volume, and, depending upon the analytical method used pursuant to Section 12-11-601, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month. If the content of any additional compound or compounds is determined by the continuous analyzer or analyzers, the average content by volume for each additional compound for each hour of the month.

401.4 If the flow monitor installed pursuant to Section 12-11-501 measures molecular weight, the average molecular weight for each hour of the month.

401.5 For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for the month, and the means used to determine flow.

401.6 For any 24-hour period during which more than 1 million standard cubic feet of vent gas was flared, a description of the flaring including the cause, time of occurrence and duration, the source or equipment from which the vent gas originated, and any measures taken to reduce or eliminate flaring.

401.7 Flare monitoring system downtime periods, including dates and times.

401.8 The archive of images recorded for the month pursuant to Section 12-11-507.

401.9 For each day and for the month provide calculated methane, non-methane and sulfur

dioxide emissions. For the purposes of emission calculations only, a flare control efficiency of 98 percent shall be used for hydrocarbon flares, and a flare control efficiency of 93 percent shall be used for flexi-gas flares or if, based on the composition analysis specified in Section 12-11-502, the calculated lower heating value of the vent gas is less than 300 British Thermal Units/Standard Cubic Foot (BTU/SCF).

**12-11-402 Flow Verification Report:** Effective twelve months after adoption of this rule and every six months thereafter, the owner or operator of a flare shall submit a flow verification report to the APCO for each flare subject to the rule. The flow verification report shall be included in the corresponding monthly report required by Section 12-11-401. Only one report is required for a staged or cascading flare system if all flares in the system serve the same header or headers. The report shall compare flow as measured by the flow monitoring equipment required by Section 12-11-501 and a flow verification pursuant to Section 12-11-602 for the same period or periods of time. The owner or operator shall demonstrate that the flow verification was performed using good engineering practices. If there are no flaring events as described in Section 12-11-401.6 during the preceding six-month period, a flow verification report is not required for that period.

## 12-11-500 MONITORING AND RECORDS

**12-11-501 Vent Gas Flow Monitoring:** Effective 180 days after adoption of this rule, the owner or operator of a ~~petroleum~~ refinery shall not operate a flare unless vent gas to the flare is continuously monitored for volumetric flow by a device that meets the following requirements:

501.1 The minimum detectible velocity shall be 0.1 foot per second.

501.2 The device shall continuously measure the range of flow rates corresponding to velocities from 0.5 to 275 feet per second in the header in which the device is installed.

501.3 The device shall have a manufacturer's specified accuracy of ±5% over the range of 1 to 275 feet per second.

501.4 The device shall be installed at a location where measured volumetric flow is representative of flow to the flare or to the flare system in the case of a staged or cascading flare system consisting of more than one flare.

501.5 Effective 180 days after adoption of this rule, the owner or operator shall provide access for the APCO to verify proper installation and operation of the flare monitoring system.

501.6 Effective 18 months after adoption of this rule, the flow monitoring system shall be maintained to be accurate to within ±20% as demonstrated by the flow verification report specified in Section 12-11-402.

**12-11-502 Vent Gas Composition Monitoring:** The owner or operator of a ~~petroleum~~ refinery shall not operate a flare unless the following requirements are met:

502.1 Requirements applicable to all vent gas composition monitoring:

1.1 Vent gas monitored for composition, whether by sampling, integrated sampling or continuous monitoring, shall be taken from a location at which samples are representative of vent gas composition. If flares share a common header, a sample from the header will be deemed representative of vent gas composition for all flares served by the header.

1.2 Effective 90 days after the adoption of this rule, the monitoring system shall provide access for the APCO to collect vent gas samples to verify the analyses required by Section 12-11-502.

502.2 Effective 90 days after adoption of this rule and until the requirements of Section 12-11-502.3 are met, the owner or operator shall monitor vent gas composition through sampling that meets the following requirements:

2.1 For each day on which flaring occurs, one sample shall be taken within 30 minutes of the commencement of flaring.

2.2 Samples may be taken from the flare header or from an alternate location at which samples are representative of vent gas composition.

2.3 Samples shall be analyzed pursuant to Section 12-11-601.

502.3 Effective 270 days after adoption of this rule, the owner or operator shall monitor vent gas composition using one of the following four methods:

3.1 Sampling that meets the following requirements:

a. If the flow rate of vent gas flared in any consecutive 15-minute period continuously exceeds 330 standard cubic feet per minute (SCFM), a sample shall be taken within 15 minutes, except that, for flares exclusively serving sulfur or ammonia plants, a sample shall be taken within 1 hour or composition data representing worst-case conditions shall be provided by the owner or operator and verified by the APCO. The sampling frequency thereafter shall be one sample every three hours and shall continue until the flow rate of vent gas flared in any consecutive 15-minute period is continuously 330 SCFM or less. In no case shall a sample be required more frequently than once every 3 hours.

b. Samples shall be analyzed pursuant to Section 12-11-601.

3.2 Integrated sampling that meets the following requirements:

a. If the flow rate of vent gas flared in any consecutive 15 minute period continuously exceeds 330 standard cubic feet per minute (SCFM), integrated sampling shall begin within 15 minutes and shall continue until the flow rate of vent gas flared in any consecutive 15 minute period is continuously 330 SCFM or less.

b. Integrated sampling shall consist of a minimum of one aliquot for each 15-minute period until the sample container is full. If sampling is still required pursuant to Section 12-11-502.3.2a, a new sample container shall be placed in service within one hour after the previous container was filled. A sample container shall not be used for a sampling period that exceeds 24 hours.

c. Samples shall be analyzed pursuant to Section 12-11-601.

3.3 Continuous analyzers that meet the following requirements:

a. The analyzers shall continuously monitor for total hydrocarbon, methane, and, depending upon the analytical method used pursuant to Section 12-11-601, hydrogen sulfide or total reduced sulfur.

b. The hydrocarbon analyzer shall have a full-scale range of 100% total hydrocarbon.

c. Each analyzer shall be maintained to be accurate to within 20% when compared to any field accuracy tests or to within 5% of full scale.

3.4 A continuous analyzer employing gas chromatography that meets the following requirements:

a. The gas chromatography system shall monitor for total hydrocarbon, methane, and hydrogen sulfide.

b. The gas chromatography system shall be maintained to be accurate to within 5% of full scale.

**12-11-503 Pilot Monitoring:** Any flare subject to this rule must be equipped and operated with an automatic igniter or a continuous burning pilot, which must be maintained in good working order. If a pilot flame is employed, the flame shall be monitored with a device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the system shall pulse on detection of loss of pilot flame and until the pilot flame is reestablished.

**12-11-504 Pilot and Purge Gas Monitoring:** The owner or operator of a ~~petroleum~~ refinery shall not operate a flare unless (1) volumetric flows of purge and pilot gases are monitored by flow measuring devices, or (2) other parameters are monitored so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored.

**12-11-505 Recordkeeping Requirements:** Except as provided in Section 12-11-507, the owner or operator of a flare shall maintain records for all the information required to be monitored for a period of five years and make such records available to the APCO upon request.

**12-11-506 General Monitoring Requirements:** Persons responsible for monitoring subject to this rule shall comply with the following:

506.1 Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Adequate proof of expeditious repair shall be furnished to the APCO for downtime in excess of fifteen consecutive days. Periods of inoperation of the vent gas flow monitoring required by Section 12-11-501 shall not exceed 30 days per calendar year. Periods of inoperation of vent gas composition monitoring specified in Sections 12-11-502.3.2 (integrated sampling) and 12-11-502.3.4 (gas chromatography) shall not exceed 30 days per calendar year. Effective 450 days after the adoption of this rule, periods of inoperation of the vent gas composition monitoring specified in Section 12-11-502.3.3 (continuous analyzers) shall not exceed 30 days per calendar year per analyzer. Periods of inoperation of video monitoring specified in Section 12-11-507 shall not exceed 30 days per calendar year.

506.2 During periods of inoperation of continuous analyzers or auto-samplers installed pursuant to Section 12-11-502, persons responsible for monitoring shall take samples as required by Section 12-11-502.2.1. During periods of inoperation of flow monitors required by Section 12-11-501, flow shall be calculated using good engineering practices.

506.3 The person(s) responsible for monitors subject to this rule shall maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure.

506.4 Data Recording System: All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages.

**12-11-507 Video Monitoring:** For each flare equipped with video monitoring capability as of January 1, 2003, the owner or operator of a flare subject to this rule shall, effective 180 days after adoption of this rule, install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than 1 frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. Effective 180 days after adoption of this rule, for any flare for which the report required by Section 12-11-401 shows that more than 1 million standard cubic feet of vent gas was flared in any 24-hour period, the owner or operator of the flare shall, within 90 days after the end of the month covered by the report, meet the same requirements as those imposed by this Section for flares with existing video monitoring capability.

**12-11-600 MANUAL OF PROCEDURES**

**12-11-601 Testing, Sampling, and Analytical Methods:**

601.1 Samples and integrated samples shall be analyzed using the following test methods, or latest revision, where applicable:

1.1 Total hydrocarbon content and methane content of vent gas shall be determined

using ASTM Method D1945-96, ASTM Method UOP 539-97, or EPA Method 18.

1.2 Hydrogen sulfide content of vent gas shall be determined using ASTM Method D1945-96 or ASTM Method UOP 539-97.

1.3 Any alternative method to the above methods if approved by the APCO and EPA.

601.2 Except as provided in Section 12-11-601.3, if vent gas composition is monitored using continuous analyzers, the analyzers shall employ the following methods, or latest revision, where applicable:

2.1 Total hydrocarbon content and methane content of vent gas shall be determined using EPA Method 25A or 25B.

2.2 Total reduced sulfur content of vent gas shall be determined using ASTM Method D4468-85.

2.3 Hydrogen sulfide content shall be determined using ASTM Method D4084-94.

2.4 Any alternative method to the above methods if approved by the APCO and EPA.

601.3 If vent gas composition is monitored with a continuous analyzer employing gas chromatography, the following requirements shall be met:

3.1 ASTM Method D1945-96 or latest revision, or ASTM Method UOP 539-97 or latest revision shall be used.

3.2 The system shall analyze samples for total hydrocarbon content, methane content, and hydrogen sulfide content.

3.3 The minimum sampling frequency shall be one sample every 30 minutes.

3.4 Any alternative method to the above methods if approved by the APCO and EPA.

**12-11-602 Flow Verification Test Methods:** For purposes of the semi-annual verification required by Section 12-11-402, vent gas flow shall be determined using one or more of the following methods:

602.1 District Manual of Procedures, Volume IV, ST-17 and ST-18;

602.2 EPA Methods 1 and 2;

602.3 Other flow monitoring devices or process monitors.

602.4 Any verification method recommended by the manufacturer of the flow monitoring equipment installed pursuant to Section 12-11-501.

602.5 Tracer gas dilution or velocity.

602.6 Any alternative method approved by the APCO and EPA.

# REGULATION 12
# MISCELLANEOUS STANDARDS OF PERFORMANCE
# RULE 12
# FLARES AT ~~PETROLEUM~~ REFINERIES

## INDEX

# REGULATION 12
# MISCELLANEOUS STANDARDS OF PERFORMANCE
# RULE 12
# FLARES AT ~~PETROLEUM~~ REFINERIES

(Adopted July 20, 2005)

**12-12-100 GENERAL**

**12-12-101 Description:** The purpose of this rule is to reduce emissions from flares at ~~petroleum~~ refineries by minimizing the frequency and magnitude of flaring. Nothing in this rule should be construed to compromise refinery operations and practices with regard to safety.

**12-12-110 Exemption, Organic Liquid Storage and Distribution:** The provisions of this rule shall not apply to flares or thermal oxidizers used to control emissions exclusively from organic liquid storage vessels subject to Regulation 8, Rule 5 or exclusively from loading racks subject to Regulation 8 Rules 6, 33, or 39.

**12-12-111 Exemption, Marine Vessel Loading Terminals:** The provisions of this rule shall not apply to flares or thermal oxidizers used to control emissions exclusively from marine vessel loading terminals subject to Regulation 8, Rule 44.

**12-12-112 Exemption, Wastewater Treatment Systems:** The provisions of this rule shall not apply to thermal oxidizers used to control emissions exclusively from wastewater treatment systems subject to Regulation 8, Rule 8.

**12-12-113 Exemption, Pumps:** The provisions of this rule shall not apply to thermal oxidizers used to control emissions exclusively from pump seals subject to Regulation 8, Rule 18. This exemption does not apply when emissions from a pump are routed to a flare header.

**12-12-200 DEFINITIONS:** For the purposes of this rule, the following definitions apply:

**12-12-201 Emergency:** A condition at a ~~petroleum~~ refinery beyond the reasonable control of the owner or operator requiring immediate corrective action to restore normal and safe operation that is caused by a sudden, infrequent and not reasonably preventable equipment failure, natural disaster, act of war or terrorism or external power curtailment, excluding power curtailment due to an interruptible power service agreement from a utility.

**12-12-202 Feasible:** Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

**12-12-203 Flare:** A combustion device that uses an open flame to burn combustible gases with combustion air provided by uncontrolled ambient air around the flame. This term includes both ground-level and elevated flares. When used as a verb, the term "flare" means the combustion of vent gas in a flare.

**12-12-204 Flare Minimization Plan (FMP):** A document intended to meet the requirements of Section 12-12-401.

**12-12-205 Gas:** The state of matter that has neither independent shape nor volume, but tends to expand indefinitely. Gas includes aerosols and the terms "gas" and "gases" are interchangeable.

~~**12-12-206 Petroleum Refinery:** A facility that processes petroleum, as defined in the North American Industrial Classification Standard No. 32411 and including any associated sulfur recovery plant.~~

**12-12-207 Prevention Measure:** A component, system, procedure or program that will minimize or eliminate flaring.

**12-12-208 Reportable Flaring Event:** Any flaring where more than 500,000 standard cubic feet per calendar day of vent gas is flared or where sulfur dioxide ($SO_2$) emissions are greater than 500 pounds per day. For flares that are operated as a backup, staged or cascade system, the volume is determined on a cumulative basis; the total volume equals the total of vent gas flared at each flare in the system. For flaring lasting more than one calendar day, each day of flaring constitutes a separate flaring event unless the owner or operator demonstrates to the satisfaction of the APCO that the cause of flaring is the same for two or more consecutive days.

A reportable flaring event ends when it can be demonstrated by monitoring required in Section 12-12-501 that the integrity of the water seal has been maintained sufficiently to prevent vent gas to the flare tip. For flares without water seals or water seal monitors as required by Section 12-12-501, a reportable flaring event ends when the rate of flow of vent gas falls below 0.5 feet per second.

*(Amended April 5, 2006)*

**12-12-209 Responsible Manager:** An employee of the facility or corporation who possesses sufficient authority to take the actions required for compliance with this rule.

**12-12-210 Shutdown:** The intentional cessation of a ~~petroleum~~ refining process unit or a unit operation within a ~~petroleum~~ refining process unit due to lack of feedstock or the need to conduct periodic maintenance, replacement of equipment, repair or other operational requirements. A process unit includes subsets and components of the unit operation. Subsets and components includes but are not limited to reactors, heaters, vessels, columns, towers, pumps, compressors, exchangers, accumulators, valves, flanges, sample stations, pipelines or sections of pipelines.

**12-12-211 Startup:** The setting into operation of a ~~petroleum~~ refining process unit for purposes of production. A process unit includes subsets and components of the unit operation. Subsets and components includes but are not limited to reactors, heaters, vessels, columns, towers, pumps, compressors, exchangers, accumulators, valves, flanges, sample stations, pipelines or sections of pipelines.

**12-12-212 Thermal Oxidizer:** An enclosed or partially enclosed combustion device, other than a flare, that is used to oxidize combustible gases.

**12-12-213 Vent Gas:** Any gas directed to a flare excluding assisting air or steamflare pilot gas, and any continuous purge gases.

**12-12-214 Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**12-12-215 Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock, to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

*(Adopted mm/dd/yyyy)*

## 12-12-300 STANDARDS

**12-12-301 Flare Minimization:** Effective November 1, 2006, flaring is prohibited unless it is consistent with an approved FMP and all commitments due under that plan have been met. This standard shall not apply if the APCO determines, based on an analysis conducted in accordance with Section 12-12-406, that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere.

## 12-12-400 ADMINISTRATIVE REQUIREMENTS

**12-12-401 Flare Minimization Plan Requirements:** The owner or operator of a ~~petroleum~~ refinery with one or more flares subject to this rule shall submit to the APCO a FMP in accordance with the

schedule in Section 12-12-402. The FMP shall be certified and signed by a Responsible Manager and shall include, but not be limited to:

**401.1 Technical Data:** A description and technical information for each flare that is capable of receiving gases and the upstream equipment and processes that send gas to the flare including:

1.1 A detailed process flow diagram accurately depicting all pipelines, process units, flare gas recovery systems, water seals, surge drums and knock-out pots, compressors and other equipment that vent to each flare. At a minimum, this shall include full and accurate as-built dimensions and design capacities of the flare gas recovery systems, compressors, water seals, surge drums and knockout pots.

1.2 Full and accurate descriptions including locations of all associated monitoring and control equipment.

**401.2 Reductions Previously Realized:** A description of the equipment, processes and procedures installed or implemented within the last five years to reduce flaring. The description shall specify the year of installation.

**401.3 Planned Reductions:** A description of any equipment, processes or procedures the owner or operator plans to install or implement to eliminate or reduce flaring. The description shall specify the scheduled year of installation or implementation.

**401.4 Prevention Measures:** A description and evaluation of prevention measures, including a schedule for the expeditious implementation of all feasible prevention measures, to address the following:

4.1 Flaring that has occurred or may reasonably be expected to occur during planned major maintenance activities, including startup and shutdown. The evaluation shall include a review of flaring that has occurred during these activities in the past five years, and shall consider the feasibility of performing these activities without flaring.

4.2 Flaring that may reasonably be expected to occur due to issues of gas quantity and quality. The evaluation shall include an audit of the vent gas recovery capacity of each flare system, the storage capacity available for excess vent gases, and the scrubbing capacity available for vent gases including any limitations associated with scrubbing vent gases for use as a fuel; and shall consider the feasibility of reducing flaring through the recovery, treatment and use of the gas or other means.

4.3 Flaring caused by the recurrent failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. The evaluation shall consider the adequacy of existing maintenance schedules and protocols for such equipment. For purposes of this Section, a failure is recurrent if it occurs more than twice during any five year period as a result of the same cause as identified in accordance with Section 12-12-406.

**401.5** Any other information requested by the APCO as necessary to enable determination of compliance with applicable provisions of this rule.

Failure to implement and maintain any equipment, processes, procedures or prevention measures in the FMP is a violation of this section.

**12-12-402 Submission of Flare Minimization Plans**: On or before August 1, 2006, the owner or operator of a ~~petroleum~~ refinery with one or more flares subject to this rule shall submit a FMP as required by Section 12-12-401. On or before November 1, 2005 and every three months thereafter until a complete FMP is submitted, the owner or operator shall provide a status report detailing progress towards fulfilling the requirements of Section 12-12-401. Upon the submission of each status report, the APCO may require a consultation regarding the

development of the plan to ensure that the plan meets the requirements of Section 12-12-401.

**12-12-403 Review and Approval of Flare Minimization Plans:** The procedure for determining whether the FMP meets the applicable requirements of this regulation is as follows:

**403.1 Completeness Determination:** Within 45 days of receipt of the FMP, the APCO will deem the plan complete if he determines that it includes the information required by Section 12-12-401. If the APCO determines that the proposed FMP is not complete, the APCO will notify the owner or operator in writing. The notification will specify the basis for this determination and the required corrective action.

**403.2 Corrective Action:** Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the proposed FMP within 45 days. If the APCO determines that the owner or operator failed to correct any deficiency identified in the notification, the APCO will disapprove the FMP.

**403.3 Public Comment:** The complete FMP (with exception of confidential information) will be made available to the public for 60 days. The APCO will consider any written comments received during this period prior to approving or disapproving the FMP.

**403.4 Final Action:** Within 45 days of the close of the public comment period, the APCO will approve the FMP if he determines that the plan meets the requirements of Section 12-12-401, and shall provide written notification to the owner or operator. This period may be extended if necessary to comply with state law. If the APCO determines that the FMP does not meet the requirements of Section 12-12-401, the APCO will notify the owner or operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the FMP within 45 days. If the APCO determines that the owner or operator failed to correct any deficiency identified in the notification, the APCO will disapprove the FMP.

If the owner or operator submitted a complete FMP in accordance with Section 12-12-402, and the APCO has not disapproved the FMP under this section, the FMP shall be considered an approved FMP for the purposes of Section 12-12-301 until the APCO takes final action under Section 12-12-403.4.

**12-12-404 Update of Flare Minimization Plans:** The FMP shall be updated as follows:

**404.1** No more than 12 months following approval of the original FMP and annually thereafter, the owner or operator of a flare subject to this rule shall review the FMP and revise the plan to incorporate any new prevention measures identified as a result of the analyses prescribed in Sections 12-12-401.4 and 12-12-406. The updates must be approved and signed by a Responsible Manager.

**404.2** Prior to installing or modifying any equipment described in Section 12-12-401.1.1 that requires a District permit to operate, the owner or operator shall obtain an approved updated FMP addressing the new or modified equipment.

**404.3** Annual FMP updates (with exception of confidential information) shall be made available to the public for 30 days. The APCO shall consider any written comments received during this period prior to approving or disapproving the update.

**404.4** Within 45 days of the close of the public comment period, the APCO shall approve the FMP update if he determines that the update meets the requirements of Section 12-12-401, and shall provide written notification to the owner or operator. The previously approved FMP together with the approved update constitutes the approved plan for purposes of Section 12-12-301. This period may be extended if necessary to comply with state law. If the APCO determines that the FMP update does not meet the requirements of Section 12-12-401, the APCO will notify the owner or operator in writing. The notification will specify the basis for this determination and the required corrective action. Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the FMP update within 30 days. If the APCO determines that the owner or operator failed to correct the deficiencies identified in the notification, the APCO will disapprove the FMP update. For purposes of Section 12-12-301, disapproval of the update constitutes disapproval of the existing FMP, unless otherwise specified by the APCO.

**404.5** If the owner or operator fails to submit a plan update as required by this Section, the APCO shall provide written notification of the lapse. If the owner or operator fails to submit an update within 30 days of receipt of the notification, the existing FMP shall no longer be considered an approved plan for purposes of Section 12-12-301.

*(Amended April 5, 2006)*

**12-12-405 Notification of Flaring:** Effective August 20, 2005, the owner or operator of a flare subject to this rule shall notify the APCO as soon as possible, consistent with safe operation of the refinery, if the volume of vent gas flared exceeds 500,000 standard cubic feet per calendar day. The notification, either by phone, fax or electronically, shall be in a format specified by the APCO and include the flare source name and number, the start date and time, and the end date and time.

**12-12-406 Determination and Reporting of Cause:** The owner or operator of a flare subject to this rule shall submit a report to the APCO within 60 days following the end of the month in which a reportable flaring event occurs. The report shall include, but is not limited to, the following:

**406.1** The results of an investigation to determine the primary cause and contributing factors for the flaring event.

**406.2** Any prevention measures that were considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented.

**406.3** If appropriate, an explanation of why the flaring is consistent with an approved FMP.

**406.4** Where applicable, an explanation of why the flaring was an emergency and necessary to prevent an accident, hazard or release of vent gas to the atmosphere or where, due to a regulatory mandate to vent to a flare, it cannot be recovered, treated and used as fuel gas at the refinery.

**406.5** The volume of vent gas flared, the calculated methane, non-methane hydrocarbon and sulfur dioxide emissions associated with the reportable flaring event.

*(Amended April 5, 2006)*

**12-12-407 Deleted April 5, 2006**

**12-12-408 Designation of Confidential Information:** When submitting the initial FMP, any updated FMP or any other report required by this Rule, the owner or operator shall designate as confidential any information claimed to be exempt from public disclosure under the California Public Records Act, Government Code section 6250 et seq. If a document is submitted that contains information designated confidential in accordance with this Section, the owner or operator shall provide a justification for this designation and shall submit a separate copy of the document with the information designated confidential redacted.

**12-12-500 MONITORING AND RECORDS**

**12-12-501 Water Seal Integrity Monitoring:** Effective August 1, 2006, the owner or operator of a flare subject to this rule with a water seal shall continuously monitor and record the water level and pressure of the water seal that services each flare. Any new installation of a water seal shall be subject to this requirement immediately. Records of these measurements shall be retained for one year. Monitoring devices required pursuant to this section shall be subject to the reporting and record keeping requirements of Regulation 1, Section 523: Parametric Monitors.

# REGULATION 12
# MISCELLANEOUS STANDARDS OF PERFORMANCE
# RULE 15
# ~~PETROLEUM~~ REFINING EMISSIONS TRACKING

## INDEX

# REGULATION 12
# MISCELLANEOUS STANDARDS OF PERFORMANCE
# RULE 15
# ~~PETROLEUM~~ REFINING EMISSIONS TRACKING

(Adopted April 20, 2016)

**12-15-100 GENERAL**

**12-15-101 Description:** The purpose of this rule is to track air emissions and crude oil composition characteristics from ~~Petroleum~~ Refineries and Support Facilities over time and to establish air monitoring systems to provide air quality data along refinery boundaries.

**12-15-102 Exemption, Small Refineries:** The requirements of this rule shall not apply to refineries processing less than 20,000 barrels per stream day of any organic feedstock.

**12-15-200 DEFINITIONS**

**12-15-201 Accidental Air Release:** An unanticipated emission of a criteria pollutant, toxic air contaminant, and/or greenhouse gas into the atmosphere required to be reported in a Risk Management Plan (RMP) under 40 CFR §68.168.

**12-15-202 Ambient Air:** The portion of the atmosphere external to buildings to which the general public has access.

**12-15-203 Annual Emissions Inventory:** An emissions inventory at a ~~Petroleum~~ Refinery covering a calendar year period.

***12-15-204 Criteria Pollutant:*** *An air pollutant for which an ambient air quality standard has been established, or that is an atmospheric precursor to such an air pollutant. For the purposes of this rule, criteria pollutants are carbon monoxide (CO), oxides of nitrogen (NOx), particulate matter with an aerodynamic diameter of 10 micrometers or less ($PM_{10}$), particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), precursor organic compounds (POC), and sulfur dioxide ($SO_2$).*

**12-15-205 Crude Oil / Crude Oil Blends:** Unblended crude oil or blended crude oil at the first stage of processing at a ~~Petroleum~~ Refinery (typically at a crude distillation unit).

*(Amended December 19, 2018)*

**12-15-206 Emissions Inventory:** For purposes of this rule, an emissions inventory is a comprehensive and accurate accounting of the types and quantities of criteria pollutants, toxic air contaminants, and greenhouse gases that are released into the atmosphere based on current measurement technologies and estimation methodologies. It is intended to represent the actual emissions to the best precision possible based on those measurement technologies and estimation methodologies. For the purposes of this rule, emissions inventory data are data that are collected or calculated by the ~~Petroleum~~ Refinery for all continuous, intermittent, predictable, and accidental air releases resulting from ~~Petroleum~~ Refinery processes at stationary sources at a ~~Petroleum~~ Refinery.

*(Amended December 19, 2018)*

**12-15-207 Fence-line Monitoring System:** Equipment that measures and records air pollutant concentrations at or near the property boundary of a facility, and which may be useful for detecting and/or estimating the quantity of fugitive emissions, gas leaks, and other air emissions from the facility.

**12-15-208 Greenhouse Gases (GHGs)**: The air pollutant that is defined in 40 CFR § 86.1818-12(a), which is a single air pollutant made up of a combination of the following six constituents: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For the purposes of this rule, GHG emissions should be calculated in manner consistent with California Air Resources Board requirements as contained in §95113 of the Mandatory Greenhouse Gas Emissions Reporting Rule.

**12-15-209 Monthly Crude Slate Report:** Summaries of the volume and certain properties of crude oil / crude oil blends at the first stage of processing at a ~~Petroleum~~ Refinery (typically at a crude distillation unit). The summary shall consist of the total volume of crude oil / crude oil blends

processed in the calendar month, and single average value for each of the properties of the total volume of crude oil / crude oil blends processed for the calendar month, as listed in Section 12-15-408, Table 2.

209.1 The non-crude oil feedstock summary shall consist of the total volume and certain properties of non-crude oil feedstock / non-crude oil feedstock blends that are non-gaseous at Standard Temperature and Pressure fed to a fluidized catalyst processing unit. On a calendar month basis, the ~~Petroleum~~ Refinery shall document the volume of all imported feedstocks to a fluidized catalyst process unit. The ~~Petroleum~~ Refinery will provide a single averaged representative value for the imported feedstock to a fluidized catalyst process unit for API, sulfur, iron, nickel, and vanadium if total imported feedstocks exceed one of the following conditions in the calendar month:

209.1.1 The volume of all imported feedstocks with an API equal to or greater than 15 is greater than 20 percent of the annualized daily limit listed within a Title V permit multiplied by 30; or

209.1.2 The volume of all imported feedstocks with an API less than 15 is greater than 50,000 bbls.

209.1.3 For non-petroleum feedstocks, the reported API gravity is to be replaced with the feedstock density in lb/gal.

209.2 Based upon the five-year monitoring results, an owner or operator of a ~~Petroleum~~ Refinery may request that this provision terminate with respect to that ~~Petroleum~~ Refinery and, in the District's sole discretion, the provision will terminate as to the specific ~~Petroleum~~ Refinery. The owner or operator of the ~~Petroleum~~ refinery must submit the request in writing. The District must grant or deny the request within 30 days of receipt of the request. If the District fails to deny the request within 30 days, such failure will be deemed approval and the provision will sunset immediately with respect to that ~~Petroleum~~ Refinery.

209.3 By March 1, 2023, the District will evaluate the requirement for the non-crude oil feedstock summary based on the frequency of sampling, and will propose removing this requirement unless it finds that the frequency of sampled events justifies its continuation. The District will consult with affected ~~Petroleum~~ Refineries prior to reaching a decision.

209.4 Supporting data maintained by a ~~Petroleum~~ Refinery shall be made available for inspection and audit by the APCO at the ~~Petroleum~~ Refinery upon request in order to verify the summary data required in Section 12-15-408, Table 2. To ensure the protection of Confidential Information and prevent its inadvertent release, the District agrees to not remove the data described in this paragraph from the ~~Petroleum~~ Refinery or copy any source information or supporting data as described above. The District further agrees to use the supporting data only to verify the monthly cumulative statistical analysis of the summarized information found in Table 2. If the District creates its own notes based on review of the supporting data, it will ensure that its notes will not depict the supporting data in any form or manner such that a third party could deduce or reconstruct the supporting data (sometimes colloquially referred to as "reverse-engineering"). If the District finds a discrepancy between the monthly reports and supporting data, the District shall allow the ~~Petroleum~~ Refinery a reasonable opportunity to correct the discrepancy. If the discrepancy is not corrected, the District may use its notes (which are and shall be treated as confidential) and previous notification to correct the discrepancy as needed to document non-compliance with this Rule. The District will treat its notes as Confidential Information unless and until the source of the information affirmatively and in writing indicates to the District that the information contained in the notes is no longer Confidential Information (or a court of competent jurisdiction issues a final judgment ordering release of the information).

*(Amended 12/19/18; 12/4/19)*

~~**12-15-210 Petroleum Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes crude oil to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks. Petroleum refinery~~

~~processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), petroleum conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), petroleum treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, blending, loading, and unloading), auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants), and support facilities (e.g., hydrogen plants, sulfuric acid plants, and electrical generation).~~

**12-15-211** **Source:** As defined in BAAQMD Regulation 2, Rule 1, Section 221.

**12-15-212** **Support Facility:** For purposes of this rule, a hydrogen plant, sulfuric acid plant or electrical generation plant that is not owned or operated by a ~~Petroleum~~ Refinery, and that provides more than 50% of its production output to a ~~Petroleum~~ Refinery.

**12-15-213** **Toxic Air Contaminant (TAC):** An air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a present or potential hazard to human health. For the purposes of this rule, TACs consist of the substances listed in the most recent health risk assessment guidelines adopted by OEHHA.

**12-15-214** **Third-Party Verified Greenhouse Gas Annual Emissions Inventory:** For purposes of this rule, an Annual Emissions Inventory for Greenhouse Gases prepared pursuant to California Air Resources Board requirements as contained in Subarticle 4 of the Mandatory Greenhouse Gas Emissions Reporting Rule.

*(Adopted December 4, 2019)*

**12-15-215** **Alternative Feedstock:** Any feedstock, intermediate, product or byproduct material that contains organic material that is not derived from crude oil product, coal, natural gas, or any other fossil-fuel based organic material.

*(Adopted mm/dd/yyyy)*

**12-15-216** **Refinery:** An establishment that is located on one or more contiguous or adjacent properties that processes any petroleum or alternative feedstock, to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks, or any other similar product. Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), treating processes (e.g., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

**12-15-400 ADMINISTRATIVE REQUIREMENTS**

**12-15-401** **Annual Emissions Inventory**: A ~~Petroleum~~ Refinery or Support Facility owner/operator shall obtain and maintain APCO approval of an Annual Emissions Inventory. Timely submittal as described in Table 1 shall constitute compliance with this requirement unless and until there is a determination of disapproval by the APCO pursuant to Section 12-15-402.

**Table 1 - Submission Deadlines to Air District for Previous Calendar Year Annual Emissions Inventories**

| Pollutant | Effective January 1, 2020 |
|---|---|
| Criteria | April 15 |
| Toxic | April 15 |
| Greenhouse Gas | April 15 |
| Third-Party Verified Greenhouse Gas | August 15 |

This report shall be submitted electronically in an APCO-approved format and include, at a minimum, the following:

**401.1** Identification of the calendar year that the Annual Emissions Inventory covers.

**401.2** A summary of the total quantity of each criteria pollutant, TAC, and GHG that was emitted from the ~~Petroleum~~ Refinery or Support Facility during the Annual Emission Inventory period, including a table for each source and each pollutant listing whether the pollutant was (a) continuously monitored, (b) monitored by direct measurement, (c) not monitored and estimated by some other method, or (d) not monitored and estimated to be zero. For those ~~Petroleum~~ Refineries using a "common pipe" calculation method for GHGs based on the fuel gas system configuration, the following approach shall be used in the calculation method:

2.1 Identify the total GHG emissions associated with the common pipe sources.

2.2 Identify in the summary all common pipe sources.

2.3 Prorate the total GHG emissions to each source based on that source's actual fuel consumed.

2.4 The calculation will conclude and be deemed sufficient when 95% or more of the total GHG emissions associated with the common pipe sources are allocated.

**401.3** A detailed listing of the annual emissions of each criteria pollutant, TAC, and GHG emitted from each source at the ~~Petroleum~~ Refinery or Support Facility, and a complete description of the methodology used for monitoring and determining these emissions, any changes made, and including documentation of the basis for any assumptions used. Any methodologies that are unchanged from a previously submitted Annual Emissions Inventory under this section may instead be noted as such. Emissions resulting from accidental releases and flaring events addressed in Regulation 12, Rules 11 and 12 shall be identified, included and quantified as such, along with the date(s) and time(s) that the release occurred.

**401.4** Beginning with the Annual Emissions Inventory for the calendar year 2017 (due on or before June 30, 2018), and for every subsequent calendar year Annual Emissions Inventory, a table that shows, on a ~~Petroleum~~ Refinery-wide or Support Facility-wide basis for each applicable air pollutant, the change in emissions that occurred between the current and most recent previous Annual Emissions Inventory. Emission changes do not need to be shown for any newly-listed air pollutants in the current Annual Emissions Inventory.

*(Amended 12/19/18; 12/4/19)*

**12-15-402 Review and Approval of Annual Emissions Inventory:** The procedure for determining whether an Annual Emissions Inventory meets the requirements of this rule is as follows:

**402.1 Preliminary Review:** Within 45 days of receipt of the report, the APCO will complete a preliminary review of the report to identify any deficiencies that need to be corrected. If the APCO determines that the submitted report does not meet the requirements of Rule 12-15, the APCO will notify the owner/operator in writing. The notification will specify the basis for this determination and the required corrective action. The APCO shall provide the owner/operator with the opportunity to meet and confer to discuss any objections to the APCO's preliminary determinations before they become final. If a notification containing specific deficiencies is not sent by the APCO to the owner/operator within 45 days after the APCO's receipt of the report, the Preliminary Review shall be deemed complete.

*(Amended December 19, 2018)*

**402.2** **Corrective Action:** Upon receipt of such notification, the owner/operator shall correct the identified deficiencies and resubmit the report within 21 days. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will disapprove the report, or the APCO may make the necessary corrections to the emissions inventory report with a designation that the report includes Air District revisions.

*(Amended December 4, 2019)*

**402.3** **APCO Action:** Within 21 days of the completion of preliminary review, or of resubmittal of a corrected report, the APCO will approve the report if the APCO determines that the report meets the requirements of Rule 12-15, and shall provide written notification to the owner/operator. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will determine that the owner/operator has failed to meet the requirements of this rule, and will disapprove the report, or the APCO may make the necessary corrections and approve the report with a designation that the report was approved with Air District revisions. If a notification is not sent by the APCO to the owner/operator within 21 days after the APCO's receipt of the corrected report, the Annual Emissions Inventory shall be deemed complete.

*(Amended December 4, 2019)*

**402.4** **Public Inspection:** Within 15 days of the approval or disapproval of a report under Section 12-15-402.3, the APCO shall post the approved or disapproved report on the Air District's website. The Air District shall consider any written comments submitted by the public or regulated community regarding this report and will make any corrections needed to ensure accuracy and completeness of the report. The public versions of these reports will not include detailed calculation methodologies for individual sources, but a short methodological description will be provided. In addition, the public versions of these reports will provide aggregated, rather than source specific emissions information for GHG.

*(Amended December 19, 2018)*

**12-15-403** **Air Monitoring Plans:** A ~~Petroleum~~ Refinery owner/operator, but not a Support Facility owner/operator, shall obtain and maintain APCO approval of a plan for establishing and operating a fence-line monitoring system. Timely submittal as described in the next sentence shall constitute compliance with this requirement unless and until there is a determination of disapproval by the APCO pursuant to Section 404. On or before April 20, 2017, the owner/operator shall submit to the APCO a site-specific plan for establishing and operating a fence-line monitoring system to aid in determining specified pollutants that cross the refinery fence-line(s) in real-time. The plan shall include detailed information describing the equipment to be used to monitor, record, and report air pollutant levels, the siting, operation, and maintenance of this equipment, and procedures for implementing data quality assurance and quality control. The District will allow for a tailored implementation date for each ~~Petroleum~~ Refinery's initial site-specific plan. Tailored implementation dates may be affected by factors beyond the refinery's control, including timing considerations for the design, permitting, sourcing, installation, testing, and start-up of fence-line monitoring systems, and other potential delays that are explained and supported in the site-specific plan. Within one year of approval by the District Board of Directors of updated air monitoring guidelines published by the APCO under Section 12-15-406, the refinery owner/operator shall submit to the APCO an updated site-specific air monitoring plan. The District will allow for a tailored implementation date for each ~~Petroleum~~ Refinery's updated site-specific air monitoring plan.

*(Amended December 19, 2018)*

**12-15-404** **Review and Approval of Air Monitoring Plans:** The procedure for determining whether an air monitoring plan submitted under Section 12-15-403 meets the applicable requirements of this rule is as follows:

**404.1** **Preliminary Review:** Within 45 days of receipt of the air monitoring plan, the APCO will complete a preliminary review of the plan to identify any deficiencies that need to be corrected. If the APCO determines that the submitted plan is deficient, the APCO will notify the owner/operator in writing. The notification will specify the basis for this

determination and the required corrective action. If a notification containing specific deficiencies is not sent by the APCO to the owner/operator within 45 days after the APCO's receipt of the air monitoring plan, the Preliminary Review shall be deemed complete.

**404.2** **Corrective Action:** Upon receipt of such notification, the owner/operator shall correct the plan and resubmit the proposed plan within 45 days. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will disapprove the plan.

**404.3** **Public Comment:** The plan, including any revisions made to correct deficiencies, will be made available for public review within 45 days (with the exception of information designated confidential). The APCO will consider any written comments received during this period prior to approving or disapproving the final plan.

**404.4** **Final Action:** Within 45 days of the close of the public comment period under Section 12-15-404.3, the APCO will approve the air monitoring plan if the APCO determines that the plan meets the requirements of Section 12-15-403, and shall provide written notification to the owner/operator. This period may be extended by 45 days if necessary as determined by the APCO. If the APCO determines that the plan does not meet the requirements of Section 12-15-403, the APCO will notify the owner/operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner/operator shall correct the identified deficiencies and resubmit the air monitoring plan within 45 days. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will determine that the owner/operator has failed to meet the requirements of Sections 12-15-403 and will disapprove the plan. If a notification containing specific deficiencies is not sent by the APCO to the owner/operator within 45 days after the APCO's receipt of the corrected air monitoring plan, the air monitoring plan shall be deemed complete.

**404.5** **Public Inspection:** Within 15 days of the approval or disapproval of an air monitoring plan under Section 12-15-404.4, the APCO shall post the plan on the Air District's website, and shall notify any member of the public who submitted comments under Section 12-15-404.3, or who otherwise has requested such notification of this action in writing. In making information available for public inspection, the confidentiality of trade secrets, as designated by the owner/operator, shall be handled in accordance with Section 6254.7 of the Government Code.

*(Amended December 19, 2018)*

**12-15-405** **Emissions Inventory Guidelines:** The APCO shall publish, and periodically update, emissions inventory guidelines describing best practices to be used when calculating emissions required to be reported in accordance with Rule 12-15. Emission factors and emission estimation methodologies included in these guidelines may include, but are not limited to, continuous monitoring to measure emissions, applying the results of emissions source tests to known activity levels, combining published emission factors with known activity levels, material balances, or empirical formulae. The District shall request comments from affected facilities at least 60 days in advance of making changes to the Emissions Inventory Guidelines. The District shall respond to comments received. Affected facilities shall be allowed at least 90 days to implement the changes in the Emissions Inventory Guidelines. The District will use these guidelines as criteria to determine whether a Petroleum Refinery and Support Facility emissions inventory meets the requirements of Rule 12-15.

*(Amended December 19, 2018)*

**12-15-406** **Air Monitoring Guidelines:** The APCO shall publish air monitoring guidelines for ~~Petroleum~~ Refineries that describe the factors that the District will apply in reviewing fence-line monitoring systems required under this rule. These guidelines may include, but are not limited to, specifications for pollutant coverage, siting, instrumentation, operation, maintenance, quality assurance, quality control, and data reporting. The guidelines shall be reviewed by the APCO within five years of initial issuance in consideration of advances in air monitoring technology, updated information regarding the health effects of air pollutants, and review of data collected by existing fence-line air monitoring systems established under this rule. The District shall request comments from affected facilities at least 60 days in advance of making changes to

the Air Monitoring Guidelines. The District shall respond to comments received.

*(Amended December 19, 2018)*

**12-15-407 Designation of Confidential Information:** Except as stated in Sections 12-15-209 and 12-15-408, when providing any documents or records required by this rule to the District, the ~~Petroleum~~ Refinery or Support Facility owner/operator shall designate as confidential any information claimed to be exempt from public disclosure under the California Public Records Act, Government Code Section 6250 et seq.

*(Amended December 19, 2018)*

**12-15-408 Availability of Monthly Crude Slate Reports:** A ~~Petroleum~~ Refinery owner/operator, but not a Support Facility owner/operator, shall make available to the APCO, upon request, in an APCO-approved format, the following information:

**408.1 Historical Monthly Crude Slate Reports:** For each month of the years 2013, 2014, 2015 and 2016, summarized information as described in Table 2, to the extent such information is available based on the records maintained in the normal course of business. Detailed supporting data, based on records maintained by the ~~Petroleum~~ Refinery in the normal course of business, shall be made available at the ~~Petroleum~~ Refinery upon APCO request for verification of the monthly summaries described in Section 12-15-209, effective April 20, 2017. To ensure the protection of Confidential Information and prevent its inadvertent release, the District will not remove or make copies of the detailed supporting data. The District shall use the supporting data only to verify the monthly cumulative statistical analysis of the summarized information found in Table 2. Any notes the District creates based on review of the supporting data will not depict the supporting data in any form or manner such that a third party could deduce or reconstruct the supporting data (sometimes colloquially referred to as "reverse-engineering"). If the District finds a discrepancy between the monthly reports and supporting data, the District shall allow the ~~Petroleum~~ Refinery a reasonable opportunity to correct the discrepancy. If the discrepancy is not corrected, the District may use its notes and previous notification to correct the discrepancy (which are and shall be treated as confidential) as needed to document non-compliance with this Rule. The District will treat its notes and information it generates as Confidential Information unless and until the source of the information affirmatively and in writing indicates to the District that the information contained in the notes is no longer Confidential Information (or a court of competent jurisdiction issues a final judgment ordering release of the information).

*(Amended 12/19/18; 12/4/19)*

**408.2 Ongoing Monthly Crude Slate Reports:** Beginning with January 2017, summarized information as described in Table 2. Detailed supporting data, based on records maintained by the ~~Petroleum~~ Refinery shall be made available at the ~~Petroleum~~ Refinery upon APCO request for verification of the monthly summaries, no later than 30 days after the end of each calendar month. To ensure the protection of Confidential Information, the District will not remove the data from the Refinery or make any type of copies of the source information. Any information the District generates and takes possession of during its review of this detailed supporting data will not depict the supporting data in any form or manner such that a third party could deduce or reconstruct the supporting data (sometimes colloquially referred to as "reverse-engineering"). The District will treat any such information that it generates as Confidential Information unless and until the source of the information indicates otherwise.

| **Table 2 - Summarized Information Required in Monthly Crude Slate Report** |
|---|
| Processed Volume (thousand barrels)<br><br>a. Total volume of crude oils / crude oil blends as fed to all crude units.<br>b. Total volume of non-crude oil feedstocks / feedstock blends fed to all other process |

| |
|---|
| units. |
| API gravity (degrees)<br><br>a. Average API gravity of total volume of crude oils / crude oil blends as fed to all crude units.<br>b. Average API gravity or density of total volume of non-crude oil feedstocks / feedstock blends fed to all other process units as defined in Section 12-15-209. |
| Sulfur content (weight percent)<br><br>a. Average sulfur content of total volume of crude oils / crude oil blends as fed to all crude units.<br>b. Average sulfur content of total volume of non-crude oil feedstocks / feedstock blends fed to all other process units as defined in Section 12-15-209. |
| Vapor pressure (psia)<br><br>a. Average vapor pressure of total volume of crude oils / crude oil blends as fed to all crude units. |
| Metals (iron, nickel and vanadium content in ppmw)<br><br>a. Average metals content of total volume of crude oils / crude oil blends as fed to all crude units.<br>b. Average metals content of total volume of non-crude oil feedstocks / feedstock blends fed to all other process units as defined in Section 12-15-209. |

*(Amended 12/19/18; 12/4/19)*

**12-15-500 MONITORING AND RECORDS**

**12-15-501 Fence-line Monitoring System:** Once the fence-line monitoring system is installed and operational pursuant to Section 12-15-403, the ~~Petroleum~~ Refinery owner/operator will ensure that the fence-line monitoring system is operated in accordance with the approved air monitoring plan. Fence-line monitoring system data shall also be reported as specified in the approved plan.

*(Amended December 19, 2018)*

**12-15-502 Recordkeeping:** The ~~Petroleum~~ Refinery or Support Facility owner/operator shall maintain records of all information required under this rule. Such records shall be maintained for a period of five years after the date of the records, and shall be made available to the APCO upon request.