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(Amended December 6, 2002)(Amended June 1, 2007)(Amended February 6, 2009)
(Amended TBD)

PROPOSED AMENDED RULE 1173 CONTROL OF VOLATILE ORGANIC COMPOUND LEAKS AND RELEASES FROM COMPONENTS AT PETROLEUM FACILITIES AND CHEMICAL PLANTS

[Rule index to be added after Amendment]

(a) Purpose

This rule is intended to control ~~v~~Volatile ~~o~~Organic ~~c~~Compound (VOC) ~~l~~Leaks from ~~c~~Components~~, and~~ ~~r~~Releases from ~~a~~Atmospheric ~~p~~Process ~~p~~Pressure ~~r~~Relief ~~d~~Devices (PRDs), and establish Contingency Measures for applicable ozone standards for the reduction of VOC.

(b) Applicability

This rule applies to ~~components at r~~Refineries, ~~c~~Chemical ~~p~~Plants, ~~l~~Lubricating ~~o~~Oil and ~~g~~Grease ~~r~~Re-refiners, ~~m~~Marine ~~t~~Terminals, ~~o~~Oil and ~~g~~Gas ~~p~~Production ~~f~~Fields, ~~n~~Natural ~~g~~Gas ~~p~~Processing ~~p~~Plants, and ~~p~~Pipeline ~~t~~Transfer ~~s~~Stations.

(c) Definitions:

For the purpose of this rule the following definitions shall apply:

(1) ATMOSPHERIC PROCESS PRD is a PRD located on process equipment other than storage tanks or pipelines used to transport material and that vents to atmosphere.

~~(2)~~(1) BACKGROUND is the ambient concentration of total organic compounds (TOC) in the air at least one (1) meter upwind of the Component to be inspected, determined according to the test method in paragraph (j)(1).

~~(3)~~(2) CHEMICAL PLANT is a~~ny~~ facility engaged in producing chemicals~~,~~ and~~/or~~ manufacturing products by chemical processes, as described by North American Industry Classification System (NAICS) subsector 325 – Chemical Manufacturing or similar. ~~Any facility or operation that has 282 as the first three digits in its Standard Industrial Classification Code as defined in the Standard Industrial Classification Manual is included in this definition.~~

~~(4)~~(3) COMMERCIAL NATURAL GAS is a mixture of hydrocarbons, with at least 80 percent methane by volume and less than ten (10) percent by weight VOC, determined according to test methods specified in paragraph (j)(2).

~~(5)~~(4) COMPONENT is a~~ny~~ ~~v~~Valve, ~~f~~Fitting, ~~p~~Pump, ~~c~~Compressor, PRD~~pressure relief device~~, or other device (diaphragm, ~~h~~Hatch, sight-glass, ~~and~~ meter) in VOC service. Components~~They~~ are further classified as:

(A) MAJOR COMPONENT is a~~ny~~ 4-inch or larger ~~v~~Valve, a~~ny~~ 5-hp or larger ~~p~~Pump, a~~ny~~ ~~c~~Compressor, or~~and~~ a~~ny~~ 4-inch or larger PRD~~pressure relief device~~.

(B) MINOR COMPONENT is a~~ny~~ ~~c~~Component which is not a ~~m~~Major ~~c~~Component.

(6)~~(5)~~ COMPRESSOR is a device used to compress gas/~~es and/or~~ vapor~~s~~ by the addition of energy, and includes all associated Connectors, Flanges, and Compressor Seals~~components used for connecting and sealing purposes~~.

(7) COMPRESSOR SEAL is associated with a Compressor and is used to prevent escape of gas/vapor and introduction of atmosphere.

(8) CONNECTOR is a nonwelded connection to, from, or between pipes or piping details without flanged ends, typically threaded and screwed together.

(9) CONTINGENCY MEASURE (CM) is a control strategy to further reduce VOC emissions if the South Coast Air Basin fails to make reasonable further progress (RFP), or to attain the applicable National Ambient Air Quality Standard (NAAQS) for ozone by a specified attainment date.

~~(6) FACILITY is a refinery, chemical plant, lubricating oil and grease re-refiner, marine terminal, oil and gas production field, natural gas processing plant, or pipeline transfer station.~~

~~(7) FIELD GAS means feed stock gas entering the natural gas processing plant.~~

(10)~~(8)~~ FITTING is a device used to terminate, attach, or connect pipes~~, or~~ piping details, or other devices~~, including but not limited to flanges and threaded connections~~. Fittings include piping couplings (Flange or Connector), blind Flanges, plugs, and caps.

(11) FLANGE is a nonwelded connection between pipes or piping details with flanged ends, joined by bolting and equipped with a gasket, seal, or other means that provides a barrier to potential leakage.

(12)~~(9)~~ HATCH is a~~ny~~ covered opening system that provides access to a tank, container, or vessel.

(13)~~(10)~~ HEAVY LIQUID is a~~ny~~ liquid with ten (10) percent or less VOC by volume evaporated at 150°C (302°F), determined according to test methods specified in paragraph (j)(2)~~ or (j)(3)~~.

(14)~~(11)~~ INACCESSIBLE COMPONENT is a~~ny~~ ~~c~~Component located over five (5) meters above ground when access is required from the ground; or a~~ny~~ ~~c~~Component located over two (2) meters away from a platform when access is required from the

platform; or a~~ny~~ ~~c~~Component which would require the elevation of a monitoring personnel higher than two (2) meters above permanent support surfaces.

(15)~~(12)~~ INSPECTION is a survey of ~~c~~Components~~, using an appropriate analyzer, according to the test method in paragraph (j)(1), for the purpose of determining compliance with this rule, and may be either of the following~~ and is further classified as:

(A) AUDIO-VISUAL-OLFACTORY (AVO)~~OPERATOR~~ INSPECTION is a survey of ~~c~~Components by the owner or operator, or their contractor, by hearing, by sight, and by smell.

(B) OPTICAL GAS IMAGING (OGI) INSPECTION is a survey of Components using an OGI Device by the owner or operator, or their contractor.

(C) ANALYZER INSPECTION is a survey of Components using an appropriate analyzer in accordance with the test method in paragraph (j)(1) by the owner or operator, or their contractor.

(D)~~(B)~~ SOUTH COAST AQMD~~DISTRICT~~ INSPECTION is a survey of ~~c~~Components using an appropriate analyzer, OGI Device, or other means by South Coast AQMD~~District~~ personnel, or their authorized representatives.

(16)~~(13)~~ LEAK is ~~the dripping of either heavy or light liquid; or~~ the emission and detection of a concentration of TOC above ~~b~~Background, determined according to the test method in paragraph (j)(1).

(17)~~(14)~~ LIGHT LIQUID is a~~ny~~ liquid with more than ten (10) percent VOC by volume evaporated at 150ºC (302ºF), determined according to the test method specified in paragraph (j)(2).

(18)~~(15)~~ LUBRICATING OIL AND GREASE RE-REFINER is a facility engaged in the blending, compounding, and re-refining of lubricating oils and greases from ~~purchased~~ mineral, animal, and vegetable materials, as described by NAICS code 324191 – Petroleum Lubricating Oil and Grease Manufacturing or similar.~~defined in Standard Industrial Classification Code 2992. Petroleum refineries engaged in the production of lubricating oils and greases are classified in Standard Industrial Classification Code 2911 and therefore are not included in this definition.~~

(19)~~(16)~~ MARINE TERMINAL is a facility engaged in~~, equipment or structure constructed to handle~~ the loading or unloading of organic liquid into or out of marine tank vessels, as described by NAICS code 424710 – Petroleum Bulk

Stations and Terminals, NAICS code 488320 – Marine Cargo Handling, or similar.~~defined as in Standard Industrial Classification Codes 4226 and 5171.~~

(20)~~(17)~~ NATURAL GAS PROCESSING PLANT is a facility engaged in the separation of natural gas liquids from ~~field~~ feed stock gas ~~and/~~or fractionation of the liquids into natural gas products, such as ethane, propane, butane, and natural gasoline, as described by NAICS code 211130 – Natural Gas Extraction or similar. Excluded from the definition are compressor stations, dehydration units, sweetening units, field treatment, underground storage facilities, liquefied natural gas units, and ~~field~~ feed stock gas gathering systems unless these ~~facilities~~entities are located at a ~~n~~Natural ~~g~~Gas ~~p~~Processing ~~p~~Plant.

(21)~~(18)~~ OIL AND GAS PRODUCTION FIELD is a facility engaged in~~on which~~ crude petroleum and natural gas production and handling ~~are conducted~~, as described by NAICS subsector 211 – Oil and Gas Extraction or similar.~~defined in the Standard Industrial Classification Manual as Industry No. 1311, Crude Petroleum and Natural Gas.~~

(22) OPTICAL GAS IMAGING (OGI) DEVICE is an infrared camera with a detector capable of visualizing gases in the 3.2-3.4 micrometer waveband.

(23)~~(19)~~ PIPELINE TRANSFER STATION is a facility which handles the transfer and storage of petroleum products or crude petroleum in pipelines as described by NAICS code 486110 – Pipeline Transportation of Crude Oil, NAICS code 486910 – Pipeline Transportation of Refined Petroleum Products, or similar.

(24)~~(20)~~ PLATFORM is a~~ny~~ raised, permanent, horizontal surface for the purpose of gaining access to ~~c~~Components.

(25)~~(21)~~ PRESSURE RELIEF DEVICE (PRD) is a pressure relief valve (PRV) or a ~~r~~Rupture ~~d~~Disc, and includes all associated Connectors or Flanges.

(26)~~(22)~~ PRESSURE RELIEF VALVE (PRV) is associated with a PRD and~~a device which~~ is automatically actuated by upstream static pressure to the atmosphere (atmospheric PRV) or to a control device, and used for safety or emergency purposes.

~~(23) PROCESS PRD is a PRD located on process equipment other than storage tanks or pipelines used to transport material.~~

(27)~~(24)~~ PUMP is a device used to transport Light Liquids or Heavy Liquids ~~fluids~~ by the addition of energy, and includes all associated Connectors, Flanges, and Pump Seals~~components used for connecting or sealing purposes~~.

(28) PUMP SEAL is associated with a Pump and is used to prevent escape of Light Liquids or Heavy Liquids and to prevent introduction of atmosphere.

(29)~~(25)~~ REFINERY is a facility engaged in producing gasoline, aviation gasoline, kerosene, distillate fuel oils, residual fuel oils, biofuels, asphalt, and lubricants and also producing aliphatic and aromatic chemicals as by-products, through fractionation or straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes, as described by NAICS code 324110 – Petroleum Refineries, NAICS code 324199 – All Other Petroleum and Coal Products Manufacturing, or NAICS code 325199 – All Other Basic Organic Chemical Manufacturing, or similar.~~that processes petroleum, as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.~~

(30)~~(26)~~ RELEASE is a~~ny~~ VOC emission to the atmosphere from a~~n atmospheric~~ PRD caused by an increase in upstream pressure. A ~~l~~Leak caused by improper reseating of ~~the~~ a PRV~~PRD~~ is not a Release~~release~~.

(31)~~(27)~~ REPAIR is corrective action for the purpose of eliminating or reducing ~~l~~Leaks, Visible Leaks, or Visible Vapors and includes washing, tightening, repacking, lubricating, resealing, or replacing Components, piping, or other devices. Repair~~that~~ may involve the temporary removal or taking out of service of a ~~c~~Component ~~or PRV~~.

(32)~~(28)~~ RUPTURE DISC is associated with a PRD and is a diaphragm held between ~~f~~Flanges for the purpose of isolating VOC from the atmosphere or from a downstream PRV~~pressure relief valve~~.

(33) SOUTH COAST AIR BASIN is the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County as defined in California Code of Regulations, Title 17, Section 60104.

(34)~~(29)~~ TAMPER-PROOF is~~means that~~ all ~~the~~ data collected is~~shall be~~ encrypted such that it cannot be modified.

(35)~~(30)~~ TELLTALE INDICATOR is a device installed in conjunction with a PRD, indicating whether a ~~r~~Release has occurred.

(36)~~(31)~~ TOTAL ORGANIC COMPOUNDS (TOC) is the concentration of gaseous organic compounds determined according to the test method in paragraph (j)(1).

(37)~~(32)~~ TURNAROUND is a scheduled shutdown of a process unit for maintenance and ~~r~~Repair work.

(38)~~(33)~~ VALVE is a device that regulates or isolates the fluid flow in a pipe, tube, or conduit by means of an external actuator, and includes all associated Connectors and Flanges.

(39) VISIBLE LEAK is the dripping of either Light Liquid or Heavy Liquid at a rate of more than three (3) drops per minute.

(40) VISIBLE VAPORS is TOC vapor leakage detected with an OGI Device, when operated and maintained in accordance with manufacturer training or certification, or equivalent California Air Resources Board (CARB) training, user manuals, specifications, and recommendations.

(41)~~(34)~~ VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(d) South Coast AQMD Inspection Procedures~~Leak Standards~~

(1) Effective October 1, 2025, the owner or operator of a facility shall be in violation of this rule if South Coast AQMD personnel detect using an appropriate analyzer in accordance with the test method in paragraph (j)(1) a Component exceeding the applicable standard listed in Table 1 – Violation Standards:

TABLE 1 – VIOLATION STANDARDS

Component Service	Violation Standard
Light Liquid and Gas/Vapor	10,000 ppm
Heavy Liquid	500 ppm

(2) The owner or operator of a facility shall be in violation of this rule if South Coast AQMD personnel detect a Component with a Visible Leak.

(3) Effective October 1, 2025, the owner or operator of a facility shall be in violation of this rule if South Coast AQMD personnel detect a Component with Visible Vapors, unless the owner or operator concurrently demonstrates using an appropriate analyzer in accordance with the test method in paragraph (j)(1) to the satisfaction of South Coast AQMD personnel that the Component is not exceeding the applicable standard listed in Table 1 – Violation Standards.

~~(1) The operator of a facility subject to this rule shall be in violation of this rule if District inspection detects any:~~

~~(A) Light liquid leak of more than three drops per minute;~~

~~(B) Leak greater than 50,000 ppm from a component in light liquid/gas/vapor service;~~

~~(C) Leak greater than 500 ppm from a component in heavy liquid service; or~~

~~(D) Leak within any continuous 24-hour period and numbering in excess of the Leak Thresholds for that component listed below in Table 1, if it is:~~

~~(i) A leak from a component in light liquid /gas/vapor service, greater than 10,000 ppm; or~~

~~(ii) A leak from an atmospheric PRD, greater than 200 ppm; or~~

~~(iii) A leak from a pump in heavy liquid service, greater than 100 ppm.~~

~~**TABLE 1. LEAK THRESHOLDS**~~

~~Component Type~~	~~Max. No. of Leaks for 200 or less components inspected~~	~~Max No. of Leaks for > 200 components inspected~~
~~Valves~~	~~1~~	~~0.5% of number inspected~~
~~Pumps~~	~~2~~	~~1% of number inspected~~
~~Compressors~~	~~1~~	~~1~~
~~Atmospheric PRDs~~	~~1~~	~~1~~
~~Threaded Pipe Connectors~~	~~1~~	~~0.5% of number inspected~~
~~Other Components~~	~~1~~	~~1~~

~~The maximum number of leaks in Table 1 shall be rounded upwards to the nearest integer, where required.~~

(4)~~(E)~~ The owner or operator of a facility shall be in violation of this rule if South Coast AQMD personnel detect o~~O~~pen-ended lines and ~~v~~Valves located at the end of lines that are not sealed with a blind ~~f~~Flange, plug, cap, or a second closed ~~v~~Valve at all times, except during operations requiring process fluid flow through the open-ended line.

~~(2) For the purpose of determining an oil and gas production facility's compliance with the leak standards specified in subparagraphs (d)(1)(B), (d)(1)(C), and (d)(1)(D), the operator of the facility may request a written approval from the Executive Officer to adjust a leak measurement to exclude methane and ethane, provided:~~

~~(A) The operator submits a plan identifying the components to be included under paragraph (d)(2);~~

~~(B) The operator demonstrates the methane and ethane content of the line product is 50 percent or more by volume, as determined by a District approved laboratory, according to the test method in paragraph (j)(2);~~

~~(C) The demonstration is based on a sampling and analysis of a representative sample obtained on a semiannual basis in accordance with the schedule and sample size approved by the Executive Officer; and~~

~~(D) A copy of the analysis results with laboratory analysis is provided upon request by the Executive Officer.~~

~~(E) The operator of a Title V facility shall submit an application for permit modification to incorporate the approval under paragraph (d)(2) in the Title V permit.~~

(e) Identification Requirements

The owner or operator shall:

(1) Physically identify clearly and visibly all ~~m~~Major ~~c~~Components ~~in light liquid/gas/vapor service and pumps in heavy liquid service~~ for ~~i~~Inspection, ~~r~~Repair~~, replacement~~, and recordkeeping purposes.

(2) Clearly identify all ~~major components in heavy liquid service other than pumps subject to paragraph (e)(1), and m~~Minor ~~c~~Components~~,~~ in ~~P~~piping and ~~I~~instrumentation ~~(P&I)~~ flow diagrams~~, and~~/or group them together functionally for ~~i~~Inspection, ~~r~~Repair~~, replacement~~, and recordkeeping purposes.

~~(3) Submit the information required to identify components in heavy liquid service, as required by paragraphs (e)(1) and (e)(2), for approval by the Executive Officer on or before September 1, 2003.~~

~~(4) Any change(s) in major component identification shall require prior written approval from the Executive Officer.~~

(f) Self~~Operator~~ Inspection Requirements

(1) The owner or operator of a facility, except for unmanned Oil and Gas Production Fields and unmanned Pipeline Transfer Stations, shall conduct an AVO Inspection of all accessible Pumps, Compressors, and atmospheric PRDs at least once per operating shift, and no more than 12 hours between AVO Inspections. The owner or operator of an unmanned Oil and Gas Production Field or an unmanned Pipeline Transfer Station shall conduct an AVO Inspection of all accessible Pumps, Compressors, and atmospheric PRDs at least once per calendar week.

~~(1) The operator shall:~~

~~(A) Audio-visually inspect all accessible pumps, compressors, and atmospheric PRDs once during every eight-hour operating period, except for unmanned oil and gas production fields and unmanned pipeline transfer stations.~~

(2) Effective October 1, 2025, the owner or operator of a facility shall conduct an OGI Inspection of each Component at least once per calendar month, unless a

Component will be out of service for more than 14 calendar days of the calendar month due to Turnaround.

(A) The owner or operator conducting an OGI Inspection shall complete a manufacturer's certification or training program, or equivalent CARB training for the OGI Device used to conduct the Inspection.

(B) The owner or operator conducting an OGI Inspection shall operate and maintain the OGI Device in accordance with the manufacturer's specifications and recommendations.

(C) In lieu of an OGI Inspection, the owner or operator may elect to use an alternative Inspection method approved in writing by U.S. EPA that is equivalent or more stringent than an OGI Inspection. The owner or operator seeking to use an alternative Inspection method shall submit the written approval from U.S. EPA to the Executive Officer for their review and independent approval.

(3) The owner or operator of a facility shall conduct an Analyzer Inspection:

(A)~~(B) Inspect~~ Quarterly, of all accessible ~~c~~Components ~~in light liquid/gas/vapor service and pumps in heavy liquid service quarterly, with pumps in heavy liquid service beginning July 1, 2003~~.

(B)~~(C) Inspect~~ Annually, of all ~~i~~Inaccessible ~~c~~Components ~~in light liquid/gas/vapor service annually~~.

~~(D) At any refinery with more than 25,000 components:~~

~~(i) At the time of operator inspection, simultaneously record in an electronic format all component inspections beginning January 1, 2004, and~~

~~(ii) Operate and maintain the electronic recording instrument according to manufacturer's specifications.~~

(C)~~(E)~~ After every Release~~Inspect an atmospheric~~ from a PRD within one (1) calendar day and an additional Analyzer Inspection~~reinspect it~~ within 14 calendar days ~~after every release~~.

(D)~~(F)~~ After every Repair of a Component~~Inspect all repaired or replaced components~~ within 30 days of Repair~~the repair or replacement~~.

(E) Using an electronic recording instrument, operated and maintained according to manufacturer's specifications, to simultaneously record all readings in an electronic format, at a Refinery with more than 25,000 Components.

(4)~~(2)~~ The owner or operator may apply for written approval from the Executive Officer to change the Analyzer ~~i~~Inspection frequency for each type of accessible ~~c~~Component ~~other than PRD in light liquid/gas/vapor service at a facility, except pumps and compressors,~~ as required in subparagraph (f)(3)(A)~~(1)(B)~~ from quarterly to annually~~,~~ provided that all accessible ~~c~~Components of that type at the~~that~~ facility have been successfully operated and maintained for five consecutive calendar quarters with no Visible ~~liquid~~ ~~l~~Leaks, no Visible Vapors, ~~of more than three drops per minute,~~ and ~~with~~ no ~~l~~Leaks ~~greater than 10,000 ppm not~~ exceeding the applicable standard~~Leak Thresholds, by component type,~~ listed in Table 1– Violation Standards..

~~(3) The operator may apply for written approval from the Executive Officer to change the inspection frequency for all accessible atmospheric PRDs in light liquid/gas/vapor at a facility, as required in subparagraph (f)(1)(B), from quarterly to annually, provided that all atmospheric PRDs at that facility have been successfully operated and maintained for five consecutive quarters with no liquid leaks of more than three drops per minute and with leaks greater than 200 ppm not exceeding the Leak Thresholds listed in Table 1.~~

~~(4) The operator may apply for written approval from the Executive Officer to change the inspection frequency for pumps in heavy liquid service at a facility, as required in subparagraph (f)(1)(B), from quarterly to annually, provided that all pumps in heavy liquid service at that facility have been successfully operated and maintained for five consecutive quarters, with leaks greater than 100 ppm not exceeding the Leak Thresholds listed in Table 1 for pumps.~~

(5) The owner or operator shall submit documentation prior to the change in ~~i~~Inspection frequency, as per paragraph~~s (f)(2), (f)(3) and~~ (f)(4)~~,~~ for written approval from the Executive Officer.

(6) The owner or operator shall revert to a quarterly ~~i~~Analyzer Inspection frequency for a ~~c~~Component type~~,~~ should AVO Inspection, OGI Inspection, the annual Analyzer~~operator~~ ~~i~~Inspection, or South Coast AQMD~~District~~ ~~i~~Inspection detect~~show~~ any of the following, ~~leaks in excess of the thresholds~~ applicable to the ~~c~~Component type, listed below, either:

(A) ~~Light liquid~~ A Visible ~~l~~Leak~~; of more than three drops per minute, or~~

(B) Visible Vapors; or

(C)~~(B)~~ A Leak~~s~~ exceeding the applicable standard~~maximum number of leaks, by component type,~~ listed in Table 1 – Violation Standards.~~for:~~

~~(i) Components in light liquid/gas/vapor service, greater than 10,000 ppm,~~

~~(ii) Pumps in heavy liquid service, greater than 100 ppm,~~

~~(iii) Atmospheric PRDs, greater than 200 ppm.~~

(g) Leak Standards and Repair~~Maintenance~~ Requirements

(1) Effective October 1, 2025, the owner or operator of a facility shall Repair all Components exceeding the applicable standard listed in Table 2 – Component Leak Standards:

TABLE 2 - COMPONENT LEAK STANDARDS

Component Type	Leak Standard
Compressor or Pump (Light Liquid)	400 ppm
Pressure Relief Device (PRD)	200 ppm
Pump (Heavy Liquid)	100 ppm
Valve, Fitting, or other device (diaphragm, Hatch, sight-glass, meter)	100 ppm

(2) For a Component exceeding the applicable standard listed in Table 2 – Component Leak Standards, the owner or operator shall:

(A) If the Component exceeds the applicable standard listed in Table 1 – Violation Standards, no later than one (1) calendar day after detection, either:

(i) Demonstrate the Component does not emit Visible Vapors using an OGI Device; or

(ii) Demonstrate the Component does not exceed the applicable standard listed in Table 1 – Violation Standards using an appropriate analyzer in accordance with the test method in paragraph (j)(1); and

(B) Within 14 calendar days of detection, complete Repair below the applicable standard listed in Table 2 – Component Leak Standards.

(3) For a Visible Leak from an accessible Component, the owner or operator shall, no later than one (1) calendar day after detection, eliminate the Visible Leak:

(4) For a Visible Leak from an Inaccessible Component, the owner or operator shall:

(A) Before the end of the operating shift, not to exceed 12 hours, the Visible Leak was detected, notify the Executive Officer electronically; and

(B) Within 14 calendar days of detection, eliminate the Visible Leak.

(5) Effective October 1, 2025, for Visible Vapors from an accessible Component, the owner or operator shall, no later than one (1) calendar day after detection, eliminate the Visible Vapors:

(6) Effective October 1, 2025, for Visible Vapors from an Inaccessible Component, the owner or operator shall:

(A) Before the end of the operating shift, not to exceed 12 hours, the Visible Vapors were detected, notify the Executive Officer electronically; and

(B) Within 14 calendar days of detection, eliminate the Visible Vapors.

~~The operator shall:~~

~~(1) Repair, replace or remove a leaking component as soon as practicable but no later than the time period specified in Table 2, Repair Periods. For each calendar quarter, the operator may extend the repair period, as specified in Table 2, for a total number of leaking components, not to exceed 0.05 percent of the number of components inspected during the previous quarter, by type, rounded upward to the nearest integer where required.~~

~~TABLE 2. REPAIR PERIODS~~

~~Type of Leak~~	~~Time Period~~	~~Extended Repair Period~~
~~Light liquid/gas/vapor component leaks greater than 500 ppm but no more than 10,000 ppm~~	~~7 Calendar Days~~	~~7 Calendar Days~~
~~Heavy liquid component leaks greater than 100 ppm but no more than 500 ppm~~	~~7 Calendar Days~~	~~7 Calendar Days~~
~~Heavy liquid leak greater than 3 drops per minute and greater than 100 ppm but no more than 500 ppm~~	~~7 Calendar Days~~	
~~Any leak greater than 10,000 ppm but no more than 25,000 ppm~~	~~2 Calendar Days~~	~~3 Calendar Days~~
~~Atmospheric PRD leaks greater than 200 ppm but no more than 25,000 ppm~~	~~2 Calendar Days~~	~~3 Calendar Days~~
~~Any leak greater than 25,000 ppm~~	~~1 Calendar Day~~	
~~Heavy liquid component leaks greater than 500 ppm~~	~~1 Calendar Day~~	
~~Light liquid leaks greater than 3 drops per minute~~	~~1 Calendar Day~~	

~~(2) Replace a component or parts thereof with Best Available Control or Retrofit Technology (BACT or BARCT), or vent it to an air pollution control device~~

~~approved by the Executive Officer, after it has been subjected to five repair actions within a continuous twelve month period for:~~

~~(A) A light liquid leak of greater than three drops per minute,~~

~~(B) A leak greater than 10,000 ppm or~~

~~(C) A leak greater than 200 ppm for an atmospheric PRD.~~

~~(3) The reporting provisions of Rule 430 shall not be applicable to components being repaired or replaced under the provisions of this rule, except compressors.~~

(h) Atmospheric Process PRD Requirements

(1) The owner or operator of a ~~r~~Refinery shall continuously monitor ~~a~~Atmospheric Process PRDs ~~located on process equipment~~ by installing ~~t~~Tamper-proof electronic ~~valve~~ monitoring devices capable of recording the duration of each ~~r~~Release and quantifying the amount of VOC~~the compounds~~ released. ~~according to the following schedule:~~

~~(A) For a refinery with less than 50 atmospheric process PRDs:~~

~~(i) Install monitoring devices on 50 percent of all atmospheric process PRDs by January 1, 2009; and~~

~~(ii) Install monitoring devices on the remaining atmospheric process PRDs by July 1, 2009.~~

~~(B) For a refinery with more than 50 atmospheric process PRDs:~~

~~(i) Install monitoring devices on 20 percent of all atmospheric process PRDs by January 1, 2009,~~

~~(ii) Install monitoring devices on 40 percent of all atmospheric process PRDs by July 1, 2009; and~~

~~(iii) Install monitoring devices on the remaining atmospheric process PRDs by July 1, 2010.~~

~~(C) In conjunction with the requirements of subparagraphs (h)(1)(A) and (h)(1)(B), the operator of a refinery shall continue to monitor all atmospheric process PRDs by use of electronic process control instrumentation that allows for real time continuous parameter monitoring or telltale indicators until such time that the operator of a refinery has demonstrated compliance with subparagraphs (h)(1)(A) and (h)(1)(B).~~

~~(D) Notwithstanding the requirements of subparagraphs (h)(1)(A) and (h)(1)(B), the operator of a refinery may delay the installation of the tamper-proof electronic valve monitoring devices to no later than the next scheduled turnaround following June 1, 2007 for that process unit PRD(s), provided that the operator demonstrates~~

~~to the satisfaction of the Executive Officer that the installation at an earlier date is not feasible or constitutes a safety hazard.~~

~~(E) Notwithstanding the requirements of subparagraphs (h)(1)(A) and (h)(1)(B), for any atmospheric process PRD, the operator of a refinery may use tamper-proof electronic valve monitoring devices in combination with continuous parameter monitoring or tamper-proof electronic valve monitoring devices and telltale indicators that in combination can record the duration of each release and quantify the amount of the compounds released, provided that the operator demonstrates on or before the compliance dates in subparagraphs (h)(1)(A) and (h)(1)(B) to the satisfaction of the Executive Officer that the combination of tamper-proof electronic valve monitoring devices, continuous parameter monitoring or telltale indicators represents the actual process conditions at the location of the process PRD release to the atmosphere.~~

~~(F) The requirements of subparagraphs (h)(1)(A) and (h)(1)(B) do not apply to atmospheric process PRDs that will be connected in such a manner as to direct all gases and vapors that can be released by an atmospheric process PRD to a VOC vapor recovery or control system no later than the next scheduled turnaround after December 31, 2008, for that process equipment or unit associated with those atmospheric process PRD(s). The operator of a refinery must submit a revised compliance plan no later than December 31, 2008, that identifies the applicable atmospheric process PRD(s) and the schedule for connecting the atmospheric process PRD(s) to a VOC recovery or control system. Until such time that the atmospheric process PRD(s) are connected to a VOC vapor recovery or control system, the operator shall monitor all atmospheric process PRDs by use of electronic process control instrumentation that allows for real time continuous parameter monitoring or telltale indicators.~~

~~(G) The requirements of subparagraphs (h)(1)(A) through (h)(1)(F)~~ This requirement do<u>es</u> not apply to ~~a~~<u>A</u>tmospheric ~~p~~<u>P</u>rocess PRDs in <u>Heavy</u> ~~l~~<u>L</u>iquid service that ~~r~~<u>R</u>elease to drains <u>subject to</u>~~and are regulated under~~ Rule 1176, provided that the <u>owner or</u> operator demonstrates to the satisfaction of the Executive Officer that all ~~r~~<u>R</u>elease<u>s</u>~~d material~~ meets the definition of ~~h~~<u>H</u>eavy ~~l~~<u>L</u>iquid.

(2) The <u>owner or</u> operator of a ~~c~~<u>C</u>hemical ~~p~~<u>P</u>lant shall monitor ~~a~~<u>A</u>tmospheric ~~p~~<u>P</u>rocess PRDs ~~located on process equipment~~ by <u>either</u>~~one~~ of the following options:

(A) Install <u>and maintain</u> ~~t~~<u>T</u>amper-proof electronic ~~valve~~ monitoring devices capable of recording the duration of each ~~r~~<u>R</u>elease and quantifying the amount of <u>VOC</u>~~compounds~~ released on twenty percent of the ~~a~~<u>A</u>tmospheric

~~p~~Process PRD inventory~~. The operator shall install the electronic valve monitoring devices during the first turnaround after December 31, 2003~~; or

(B) Use of electronic process control instrumentation that allows for real time continuous parameter monitoring~~, starting July 1, 2004,~~ and ~~t~~Telltale ~~i~~Indicators for the ~~a~~Atmospheric ~~p~~Process PRDs where parameter monitoring is not feasible.~~ The telltale indicators shall be installed no later than December 31, 2004.~~

(3) The owner or operator of a ~~l~~Lubricating ~~o~~Oil and ~~g~~Grease ~~r~~Re-refiner or a ~~m~~Marine ~~t~~Terminal shall monitor ~~a~~Atmospheric ~~p~~Process PRDs by use of either electronic process control instrumentation that allows for real time continuous parameter monitoring~~, starting January 1, 2009,~~ or~~and~~ ~~t~~Telltale indicators for the ~~a~~Atmospheric ~~p~~Process PRDs where parameter monitoring is not feasible.~~ The telltale indicators shall be installed no later than December 31, 2007.~~

~~(4) By December 31, 2007, the operator shall submit to the District a compliance plan or a revised compliance plan, containing the inventory of atmospheric process PRDs by size, set pressure and location, and indicate the option(s) chosen to comply with paragraphs (h)(1), (h)(2) and (h)(3). If applicable, the operator shall indicate the process parameter selected for continuous monitoring and the justification for such selection.~~

(4)~~(5)~~ Following a~~ny~~ ~~r~~Release from an ~~a~~Atmospheric ~~p~~Process PRD~~ in excess of 500 pounds of VOC in a continuous 24-hour period~~, the owner or operator shall conduct a failure analysis and implement corrective actions within 30 days to prevent the reoccurrence of similar ~~r~~Releases.

(5)~~(6)~~ At a ~~r~~Refinery with ~~a crude oil~~ throughput greater than 20,000 barrels per day, the owner or operator shall, as soon as practicable but no later than the next~~first~~ ~~t~~Turnaround~~ following the requirement to connect becomes effective~~, connect all ~~a~~Atmospheric ~~p~~Process PRDs serving that equipment to a vapor recovery or control system following either:

(A) Two (2)~~a second~~ ~~r~~Releases, each in excess of 500 pounds of VOC in a continuous 24-hour period, within any five (5) year period from any ~~a~~Atmospheric ~~p~~Process PRD serving the same piece or pieces of equipment; or

(B) One (1)~~any~~ ~~r~~Release in excess of 2,000 pounds of VOC in a continuous 24-hour period~~,~~ from any ~~a~~Atmospheric ~~p~~Process PRD serving the same piece or pieces of equipment.

(6)~~(7)~~ In lieu of complying with paragraph (h)(5)~~(6)~~, an owner or operator may elect to pay a mitigation fee of $625,000~~$350,000~~ to the Executive Officer~~District~~ for ~~any~~ ~~r~~Releases described by ~~exceeding the thresholds in~~ subparagraphs (h)(5)~~(6)~~(A) or (h)(5)(B) and any subsequent ~~r~~Release in excess of 500 pounds of VOC in a continuous 24-hour period within a five (5) year period. Within 90 days of the release, the owner or operator shall notify the Executive Officer, in writing, of the election to pay a mitigation fee and submit payment as requested by the Executive Officer.

(i) Recordkeeping and Reporting Requirements

(1) The owner or operator shall record all ~~l~~Leaks, Visible Leaks, Visible Vapors, ~~r~~Repairs, and ~~rei~~Inspections~~, as required in subdivision (f),~~ in an electronic format approved by the Executive Officer and submit those records electronically as quarterly or annual ~~i~~Inspection reports to the Executive Officer no later than 30 days after the end of each calendar quarter or no later than 60 days after the end of the calendar year, respectively. ~~Upon request by the Executive Officer, the operator shall include in the report the reason for extending the repair period for any component, as allowed in paragraph (g)(1). The operator shall submit the records in an electronic format approved by the Executive Officer and they shall be certified in writing by the facility official responsible for the inspection and repair program.~~

(2) The owner or operator shall include in all records of ~~operator i~~Inspection ~~and repair~~, at a minimum, the ~~c~~Component identification and type, Repair~~service~~, location, ~~l~~Leak rate, and date and time of ~~i~~Inspection. The owner or operator shall maintain these records ~~at the facility~~ for a period of at least ~~two (2) years or~~ five (5) years ~~for a Title V facility~~ and make them~~made~~ available to the Executive Officer, upon request.

(3) The owner or operator of a ~~r~~Refinery, ~~c~~Chemical ~~p~~Plant, ~~l~~Lubricating ~~o~~Oil and ~~g~~Grease ~~r~~Re-refiner, or ~~m~~Marine ~~t~~Terminal shall:

(A) Notify the Executive Officer, by telephone to 800-CUT-SMOG or ~~any~~ another ~~District approved~~ method approved by the Executive Officer, of any ~~atmospheric process PRD~~ ~~r~~Release ~~in excess of the reportable quantity limits as stipulated in 40 CFR, Part 117, Part 302 and Part 355, including any release~~ in excess of 100 pounds of VOC~~,~~ within one (1) hour of such occurrence or within one (1) hour of the time the owner or operator~~said person~~ knew or reasonably should have known of its occurrence;

(B) Submit a written failure analysis report to the Executive Officer within 30 days following notification of a~~n atmospheric process PRD r~~Release, providing the following information:

(i) PRD type, size and location.

(ii) Date, time, and duration of the ~~PRD r~~Release ~~event~~.

(iii) Types of VOC released and individual amounts, in pounds, including supporting calculations.

(iv) Cause of the ~~atmospheric process PRD r~~Release ~~event~~.

(v) Corrective actions taken to prevent a subsequent ~~PRD r~~Release.

(C) Submit electronically quarterly reports for all monitored ~~a~~Atmospheric ~~p~~Process PRDs to comply with paragraphs (h)(1), (h)(2), and (h)(3), if applicable, in an electronic format approved by the Executive Officer, indicating the parameter~~(s)~~ monitored as a function of time, no later than 30 days after the end of each calendar quarter.

(D) ~~Keep~~ Maintain records of the process parameter~~(s)~~ monitored ~~for a period of five years, where elected~~ to comply with paragraphs (h)(1), (h)(2), and (h)(3), if applicable, for a period of at least five (5) years and make them available to the Executive Officer, upon request.

(j) Test Methods

(1) Measurements of ~~l~~Leak concentrations shall be conducted according to the United States Environmental Protection Agency (U.S. EPA) Reference Method 21 using an appropriate analyzer calibrated with methane. The analyzer shall be calibrated before ~~i~~Analyzer Inspection each day.

(2) The VOC content shall be determined according to ASTM Method D 1945 for gases, South Coast ~~SC~~AQMD Method 304-91 for liquids. The percent VOC of a liquid evaporated at 150°C (302°F) shall be determined according to ASTM Method D 86.

(3) The flash point of ~~h~~Heavy ~~l~~Liquids shall be determined according to ASTM Method D 93.

~~(4) Equivalent Test Methods~~

(4) The~~A~~ owner or operator ~~person~~ may use another method to determine compliance with this rule provided it is demonstrated to be equivalent and approved in writing by the Executive Officers ~~of the District~~, ~~the California Air Resources Board (~~CARB~~)~~, and ~~the Regional Administrator of the~~ U.S. EPA~~, Region IX, or their designees~~.

(k) Ozone Contingency Measures~~Other Rules and Regulation Applicability~~

~~In case of conflict between the provisions of this rule and any other rule, the provisions of the rule which more specifically applies to the subject shall prevail.~~

(1) The applicable CM specified in paragraph (k)(2) shall be implemented upon the issuance of a final determination by U.S. EPA that the South Coast Air Basin has failed to comply with any of the following:

(A) Meet an RFP requirement in an approved attainment plan for the 2008 or 2015 ozone NAAQS; or

(B) Attain the 2008 or 2015 ozone NAAQS by the applicable date.

(2) CMs shall be implemented sequentially, effective 60 days after issuance of each final determination:

Stage 1 CM

(A) The owner or operator of a facility within the South Coast Air Basin shall Repair a Compressor or Pump (Light Liquid) detected above 300 ppm, instead of 400 ppm as listed in Table 2 – Component Leak Standards.

Stage 2 CM

(B) The owner or operator of a facility within the South Coast Air Basin shall conduct an OGI Inspection of each Component at least once every two (2) calendar weeks, instead of at least once per calendar month as specified in paragraph (f)(2), unless a Component will be out of service for more than seven (7) calendar days of the two (2) calendar week period due to Turnaround.

Stage 3 CM

(C) The owner or operator of a facility within the South Coast Air Basin shall Repair a Valve, Fitting, or other device (diaphragm, Hatch, sight-glass, meter) detected above 50 ppm, instead of 100 ppm as listed in Table 2 – Component Leak Standards.

(l) Exemptions

(1) The requirements~~provisions~~ of this rule shall not apply to the following Components if~~to the following cases, where~~ the owner or operator~~person seeking the exemption shall~~ supplies~~y the~~ proof ~~of the applicable criteria~~ of the applicable criteria to the satisfaction, upon request, of the Executive Officer for the following cases:

(A) Components which present a safety hazard for ~~i~~Inspection, as documented and established in a safety manual or policy~~,~~ previously~~,~~ or with the prior

written approval of the Executive Officer, except that the owner or operator shall inspect~~monitor~~ these ~~c~~Components for ~~l~~Leaks when it is safe to do so. Upon detection of a ~~l~~Leak exceeding the applicable standard listed in Table 2 – Component Leak Standards, the owner or operator shall ~~r~~Repair ~~or replace~~ the ~~c~~Component~~(s)~~ as soon as Repair~~the repairs or replacement~~ can be carried out safely.

(B) Components being ~~r~~Repaired ~~or replaced~~ during~~within~~ the specified ~~repair or replacement~~ time period~~,~~ as given in subdivision (g)~~Table 2~~.

(C) Components exclusively handling ~~c~~Commercial ~~n~~Natural ~~g~~Gas.

~~(D) Components exclusively handling fluids with a VOC content of ten percent by weight or less, determined according to test methods specified in paragraph (j)(2).~~

(D)~~(E)~~ Components incorporated in lines, while operating under negative pressures.

(E)~~(F)~~ Components totally contained or enclosed such that there are no VOC emissions into the atmosphere.

(F)~~(G)~~ Components buried below ground.

(G)~~(H)~~ Pressure/-vacuum vent ~~v~~Valves on storage tanks.

(H)~~(I)~~ Storage tank ~~h~~Hatches subject to Rule 1178.

(2) The requirements~~provisions~~ of subdivisions (h) and (i)~~and paragraphs (i)(2) and (i)(3)~~ shall not apply to PRD~~V~~s installed for protection from overpressure due to variation in ambient temperature provided that they are vented to drains or back into the pipeline. The owner or operator~~A person~~ seeking ~~an~~ exemption ~~under this paragraph~~ shall supply proof of the applicable criteria to the satisfaction, upon request, of the Executive Officer.

~~(3) The provisions of Rules 466, 466.1, and 467 shall not apply to facilities subject to this rule.~~

~~(4) The provisions of paragraph (e)(1) and subdivision (f) shall not apply to components handling liquids with a flash point greater than 121°C (250°F), as determined according to the test method specified in paragraph (j)(3).~~

(3)~~(5)~~ The requirements of paragraphs (h)(5) and (h)(6) shall not apply to ~~Atmospheric PRD r~~Releases from Refineries ~~demonstrated to the satisfaction of the Executive Officer~~ that resulted from natural disasters, acts of war or terrorism, or external power curtailment beyond the ~~r~~Refinery's control, excluding power curtailment due to an interruptible service agreement~~, shall not be subject to the provisions of paragraphs (h) (6) and (h)(7)~~. The owner or operator of the Refinery seeking

exemption shall supply proof of the applicable criteria to the satisfaction, upon request, of the Executive Officer.

~~(6) Except for the requirements of subdivision (e), the requirements of this rule shall not become effective as to lubricating oil and grease re-refiners and to marine terminals until December 31, 2007. Lubricating oil and grease re-refiners and marine terminals shall comply with the requirements of subdivision (e) no later than September 30, 2007.~~

(4) The requirements of paragraph (f)(2) and subparagraph (g)(2)(B) to conduct an OGI Inspection shall not apply on days the owner or operator determines that it is unsafe to conduct an OGI Inspection from a Platform or vantage point capable of inspecting Components, provided that the reasons and dates the OGI Inspection was not conducted is documented. The owner or operator shall resume OGI Inspection on the first day determined to be safe. The owner or operator seeking exemption shall supply proof of the applicable criteria to the satisfaction, upon request, of the Executive Officer.

(m) Interim Procedures and Requirements

(1) Prior to October 1, 2025, the owner or operator of a facility shall be in violation of this rule if South Coast AQMD personnel detect using an appropriate analyzer in accordance with the test method in paragraph (j)(1) a Component exceeding the applicable standard listed in Table 3 – Interim Violation Standards:

TABLE 3 – INTERIM VIOLATION STANDARDS

Component Service	Interim Violation Standard
Light Liquid and Gas/Vapor	50,000 ppm
Heavy Liquid	500 ppm

(2) Prior to October 1, 2025, the owner or operator of a facility shall Repair all Components exceeding the applicable standard listed in Table 4 – Interim Leak Standards:

TABLE 4 - INTERIM LEAK STANDARDS

Component Type	Interim Leak Standard
Compressor or Pump (Light Liquid)	500 ppm
Pressure Relief Device (PRD)	200 ppm
Pump (Heavy Liquid)	100 ppm
Valve, Fitting, or other device (diaphragm, Hatch, sight-glass, meter)	500 ppm