

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Preliminary Draft Staff Report Proposed Amended Rule 462 – Organic Liquid Loading

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EXECUTIVE SUMMARY

Rule 462 – Organic Liquid Loading (Rule 462) controls emissions of volatile organic compounds (VOCs) during the loading of organic liquids into transport vessels. Rule 462 applies to approximately 51 facilities that conduct organic liquid loading within South Coast AQMD's jurisdiction.

Proposed Amended Rule 462 (PAR 462) was developed to implement the 2022 Air Quality Management Plan Control Measure FUG-01: Improved Leak Detection and Repair. The objective of PAR 462 is to further reduce VOC emissions from organic liquid loading by: 1) requiring monthly optical gas imaging (OGI) inspections; 2) requiring periodic source tests on all Class A facilities' vapor control systems; and 3) reducing VOC limits for vapor control systems. Reducing the VOC limit is expected to reduce VOC emissions from vapor control systems at Class A facilities by 50% or 0.30 tons VOC per day. Introducing OGI inspections are expected to reduce VOC emissions by 14.6 tons per year or 0.04 tons per day. The combined VOC emission reductions for PAR 462 are 0.34 tons per day. The overall cost-effectiveness of PAR 462 is \$32,000 per ton of VOC reduced.

Additionally, PAR 462 will introduce a contingency measure to partially satisfy Clean Air Act contingency requirements for applicable ozone National Ambient Air Quality Standards in the South Coast AQMD's jurisdiction. The contingency measure, if triggered, is expected to further reduce VOC emissions by 18.25 tons per year or 0.05 tons per day.

Development of PAR 462 was conducted through a public process. Two Working Group meetings were held on November 6, 2024, and March 5, 2025. The Working Group is composed of representatives from businesses, environmental groups, public agencies, and consultants. A Public Workshop will be held on April 2, 2025. The purpose of the Public Workshop is to present the proposed amended rule language to the general public and stakeholders and to solicit comments. Staff also conducted multiple site visits as part of this rulemaking process.

CHAPTER 1: BACKGROUND

INTRODUCTION

BACKGROUND

REGULATORY HISTORY

AFFECTED FACILITIES

PUBLIC PROCESS

INTRODUCTION

Rule 462 – Organic Liquid Loading seeks to control emissions of volatile organic compounds (VOCs) originating from bulk terminals and other facilities that load organic liquids into tank trucks, trailers, or railroad tank cars. An example of a bulk terminal is shown in Figure 1.1. Organic liquids with a vapor pressure of 1.5 psia (77.5 mm Hg), such as gasoline or ethanol, are subject to Rule 462 while less volatile organic liquids, such as diesel or jet fuel, are not subject to Rule 462. Likewise, the transfer of organic liquids from gasoline storage and dispensing facilities, colloquially known as gas stations, to motor vehicles and their associated fuels tanks is subject to Rule 461 – Gasoline Transfer and Storage. However, some facilities both dispense gasoline to motor vehicles and transfer gasoline or other organic liquids to tank trucks for dispensing to motor vehicles or aircraft, gasoline-fired equipment, intermediate storage tanks, or other uses. For those specific types of facilities, both Rules 461 and 462 would apply.



Figure 1.1 – Tank Trucks at a Bulk Terminal

Proposed Amended Rule (PAR) 462 seeks to further reduce VOC emissions from bulk terminals by requiring advanced leak detection and repair (LDAR) technology and reducing the VOC limit of vapor control systems. Additional proposed amendments to Rule 462 include specifying source test requirements of vapor control systems at Class A facilities, establishing contingency measures, adding new and updated definitions, and implementing other minor changes for consistency and clarity.

BACKGROUND

Contingency Measure SIP Revision

The U.S. Environmental Protection Agency (U.S. EPA) requires areas that do not meet a National Ambient Air Quality Standard (NAAQS or standard) to develop and submit a State Implementation Plan (SIP) for approval. SIPs are used to show how the region will meet the standard. Regions must attain NAAQS by specific dates or face the possibility of sanctions by the federal government and other consequences under the Clean Air Act (CAA). This can result in stricter restrictions for permitting new projects and the loss of federal highway funds.

In August 2018, the U.S. EPA designated the South Coast Air Basin (Basin) as “extreme” nonattainment and the Coachella Valley as “severe-15” nonattainment for the 2015 8-hour ozone standard. The Basin includes large areas of Los Angeles, Orange, Riverside, and San Bernardino counties. The Coachella Valley is the desert portion of Riverside County in the Salton Sea Air Basin. “Extreme” nonattainment areas must attain the 2015 8-hour ozone standard by August 2038 and “severe” nonattainment areas must attain it by August 2033.

In March 2024, the South Coast AQMD Governing Board approved the Coachella Valley Contingency Measure SIP Revision for the 2008 8-Hour Ozone Standard which focused on satisfying the requirement for contingency measure elements.¹ Contingency measures are defined by CAA Section 172(c)(9) as “specific measures to be undertaken if the area fails to make reasonable further progress, or to attain the national primary ambient air quality standard by the attainment date.” CAA Section 182(c)(9) further requires that ozone nonattainment areas classified as “serious” or above provide for contingency measures to be implemented if the area fails to meet any applicable milestone.

South Coast AQMD is amending Rule 462 to introduce a contingency measure for the 2008 and 2015 8-Hour Ozone Standard that would require more frequent enhanced leak detection inspections with optical gas imaging (OGI) devices to facilitate leak detection and repair. Emission reductions would be achieved by identifying leaks more quickly and repairing them. Triggers are included if a nonattainment area fails to attain the NAAQS by the applicable attainment date or fails to meet a reasonable further progress (RFP) milestone, as identified by U.S. EPA. If such an event occurs, the contingency measure would implement a more stringent OGI inspection frequency within 60 days of the effective date of the U.S. EPA finding.

Control Measures in the 2012, 2016, and 2022 Final Air Quality Management Plans (AQMPs)

Control Measure FUG-03 – Further Reductions of Fugitive VOC Emissions in the 2012 Final AQMP identifies the implementation of advanced leak detection technologies, including OGI, as a method to reduce the emissions impact from leaks. The 2016 Final AQMP included Control Measure FUG-01 – Improved Leak Detection and Repair to utilize advanced remote sensing technologies to allow for faster identification and repair of leaks from equipment at oil and gas sites and other facilities that are currently required to maintain an LDAR program. The 2022 Final AQMP also included Control Measure FUG-01 – Improved Leak Detection and Repair to reduce VOC emissions from fugitive leaks from process and storage equipment. PAR 462 partially implements Control Measure FUG-01 that commits to improved leak detection requirements in South Coast AQMD rules, including Rule 462.

¹[https://www.aqmd.gov/home/air-quality/air-quality-management-plans/other-state-implementation-plan-\(sip\)-revisions/coachella-valley-contingency-measure-sip-revision](https://www.aqmd.gov/home/air-quality/air-quality-management-plans/other-state-implementation-plan-(sip)-revisions/coachella-valley-contingency-measure-sip-revision)

REGULATORY HISTORY

Rule 462 was originally adopted on January 9, 1976 at the South Coast AQMD's first Governing Board Meeting, signifying the importance of this rule and these sources of emissions (see Figure 1.2). Subsequently, Rule 462 was amended a total of six (6) times:



Figure 1.2 – Example of a Vapor Recovery System

1978 and 1979 Amendments

The first and second amendments to Rule 462 in May 1978 and October 1979, respectively, addressed the control efficiencies of vapor recovery and/or disposal systems. The 1979 amendment established a VOC emissions limit of 0.65 pound per 1,000 gallons transferred based on recommendations from the California Air Resources Board (CARB).

1986 Amendments

On March 2, 1984, South Coast AQMD Regulation IX, Subpart XX – Standards of Performance for Bulk Gasoline Terminals², was adopted to set a VOC emissions limit of 0.29 pounds per 1,000 gallons of organic liquid transferred for new or modified loading facilities with a daily throughput of 20,000 gallons or greater. In 1986, Rule 462 was reviewed for further VOC emission reduction potential through application of the New Source Performance Standards (NSPS) emission limit. This resulted in a subsequent amendment to Rule 462 which instituted the VOC emission limit of 0.29 pounds per 1,000 gallons for Class A facilities (20,000 gallons or more loaded per day).

² This regulation is no longer in effect and is not part of the South Coast AQMD portion of the SIP.

1990 Amendments

The 1990 amendments to Rule 462 were primarily administrative amendments to delete an outdated compliance schedule.

1995 Amendments

The 1995 amendments implemented Control Measure #94FUG-01 of the 1994 AQMP, which was adopted to comply with the California and Federal Clean Air Acts. The amendment reduced the VOC emission limit from 0.29 to 0.08 pounds VOC per thousand gallons of organic liquid transferred in Class A facilities as required under the Code of Federal Regulations (CFR) Title 40, Part 63, Subpart R (National Emission Standards for Gasoline Distribution Facilities). This amendment also clarified rule language to enhance enforceability.

1999 Amendments

The 1999 amendments addressed a vapor leak measurement issue identified by U.S. EPA by amending the definition of facility vapor leak to align with U.S. EPA Method 21. The amendments also provided a compliance mechanism for the vapor recovery systems that do not require CARB certification pursuant to Health and Safety Code Section 41954. The Approval Procedure for Vapor Recovery Systems of Bulk Plants was included as Appendix A to this rule making. Other changes included clarifying the backpressure requirement for Class A facilities and the vapor leak requirement for transfer vessels.

AFFECTED FACILITIES

PAR 462 affects approximately 51 facilities within the South Coast AQMD's jurisdiction. Of these, 20 facilities are Class A facilities. Class A facilities load 20,000 gallons or more of organic liquids on any one day. There are 20 Class A facilities subject to Rule 462 that are considered major sources of emissions and hold federally enforceable Title V facility operating permits³. The remaining 30 facilities subject to Rule 462 do not meet the applicability requirements for Title V permits and are either Class B facilities or Class C facilities. Class B facilities generally load no more than 20,000 gallons of gasoline per day⁴. Staff identified 29 Class B facilities. Class C facilities were constructed prior to January 9, 1976, and load no more than 4,000 gallons of

³ Emission thresholds for Title V applicability are specified in Rule 3001 – Applicability

⁴ Rule 462 defines Class B facility as any facility which was constructed before January 9, 1976 and loads more than 4,000 gallons (15,140 liters) but not more than 20,000 gallons (75,700 liters) of gasoline on any one day into any tank truck, trailer, or railroad tank car; or which was constructed before January 9, 1976 and loads not more than 4,000 gallons (15,140 liters) of gasoline on any one day, but more than 500,000 gallons (1,892,500 liters) of gasoline in any one calendar year, into any tank truck, trailer, or railroad tank car; or which was constructed after January 9, 1976 and loads not more than 20,000 gallons (75,700 liters) of gasoline on any one day into a tank truck, trailer or railroad tank car.

gasoline per day and no more than 500,000 gallons in any one calendar year. Staff identified one Class C facility.

PUBLIC PROCESS

The development of PAR 462 was conducted through a public process. Two (2) Working Group Meetings were held on November 6, 2024 and March 5, 2025. Stakeholders include representatives from the community, environmental organizations, industry representatives, and government agencies. Staff also met individually with industry stakeholders and visited sites affected by the rule development process. A Public Workshop meeting will be held on April 2, 2025, where staff will present the proposed amended rule to the general public and stake holders, and solicit comments.

CHAPTER 2: BARCT ASSESSMENT

INTRODUCTION

ADVANCED LEAK DETECTION AND REPAIR

VAPOR CONTROL SYSTEMS

FACILITY LEAK THRESHOLD

BARCT EMISSION LIMITS

INTRODUCTION

As part of the rule development process, staff conducted a Best Available Retrofit Control Technology (BARCT) assessment of equipment subject to PAR 462. The purpose of a BARCT assessment is to identify potential emission reductions from specific equipment and to establish an emission limit consistent with state law.

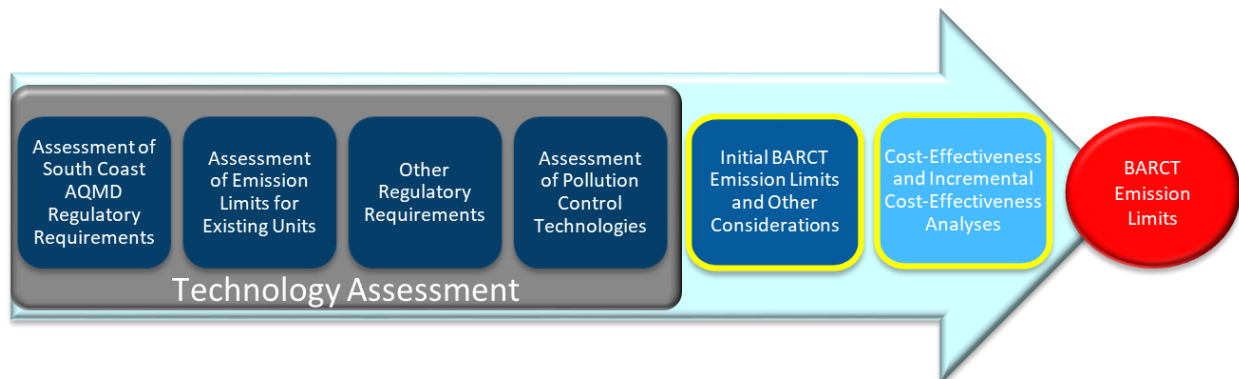
Under Health and Safety Code Section 40406, BARCT is defined as:

“... an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source.”

The BARCT assessment for this rule development consisted of a multi-step analysis. The first four steps represent the technology assessment. First, staff evaluated current South Coast AQMD regulatory requirements. Second, staff assessed emission limits for existing units. Third, staff reviewed rules and regulations of other air districts and agencies to identify emission limits that exist for similar equipment. In the final step of the technology assessment, staff assessed pollution control technologies to determine what degree of reduction could be achievable for the affected sources. Based on the technology assessment and any additional considerations, initial emission limits are proposed.

Staff then calculated the cost-effectiveness of the proposals. The calculations consider the cost to meet the initial BARCT emission limit and the emission reductions that would occur from implementing technology that could meet the initial BARCT emission limit. An incremental cost-effectiveness analysis is conducted if multiple control technology options are identified that meet the emission reduction objective. Based on the evaluation of information, BARCT emission limits are recommended. See Figure 2-1 below for a graphical representation of the BARCT assessment process.

Figure 2.1 – BARCT Assessment Process



In this rulemaking effort, staff proposed the following BARCT requirements to be incorporated into PAR 462:

- (1) Adding the use of enhanced monitoring and leak detection techniques
- (2) Reducing emission limits for vapor recovery systems and/or vapor disposal system from 0.08 pounds VOC per thousand gallons (10 grams per 1,000 liters) of organic liquid transferred to 0.04 pounds VOC per thousand gallons (5 grams per 1,000 liters)

ADVANCED LEAK DETECTION AND REPAIR

- *Assessment of Current South Coast AQMD Regulatory Requirements*

Rule 462 requires quarterly inspections with an organic vapor analyzer (OVA) calibrated with methane per U.S. EPA Reference Method 21 to inspect components and equipment (See Figure 2.2). An OVA is capable of measuring a variety of organic vapors using flame ionization detection (FID) technology and it provides a concentration value of the organic vapor.

In lieu of a quarterly OVA inspection, Rule 462 allows facilities to conduct a monthly leak inspection via sight, sound, and smell as a detection method.



Figure 2.2 – Example of an analyzer

- *Assessment of Emission Limits of Existing Units*

The use of OGI equipment does not have an emission limit relevant to this analysis. As such, no assessment of emission limits of existing units is required.

- *Other Regulatory Requirements*

Staff reviewed rules and regulations from other air districts and agencies and noted that the use of enhanced monitoring techniques was limited. One example of enhanced leak detection technology is OGI.

San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4624 – Transfer of Organic Liquid, does not require OGI inspections. However, subsection 6.3.8.1, requires that after June 30, 2024, all leaks detected with OGI be measured by U.S. EPA Method 21 within two calendar days of initial OGI leak detection.⁵ Quarterly inspections by U.S. EPA Method 21 are required.



Figure 2.3 – Example of an OGI camera

Bay Area Air Quality Management District (Bay Area AQMD) Regulation 8, Rule 33 – Gasoline Bulk Terminals and Gasoline Cargo Tanks was amended on November 3, 2021, but does not reference OGI inspection requirements. Gasoline bulk terminal owners or operators are required to develop and submit a monitoring, inspection, notification, and reporting plan for approval.

Under U.S. EPA – Title 40, Chapter 1, Subchapter C, Part 60, Subpart XXa – Standards of Performance for Bulk Gasoline Terminals that Commenced Construction, Modification, or Reconstruction After June 10, 2022, the use of an OGI camera is required quarterly for all pumps and valves, and annually for all connectors.⁶ Leak detection thresholds are quantified using a OVA or equivalent device.

- *Assessment of Pollution Control Technologies*

OGI equipment does not control pollution directly but is a tool that can be used to identify emissions. As such, no assessment of pollution control technology is required for adding the use of enhanced monitoring and leak detection techniques. However, a discussion on current enhanced monitoring and leak detection technologies is included.

Continuous monitoring solutions using open path detection and fixed gas sensor networks were assessed in 2023 for the Rule 1178 rulemaking. It was determined that the best solution for monitoring tanks is to require periodic monitoring with handheld OGI devices due to their ability to identify small and large leaks. Continuous monitoring systems are limited in their ability to detect smaller leaks because they are installed at a distance. Depending on the detection technology of the continuous monitoring system, a leak may need to be significantly large at the source to be detected and has the potential to go undetected. Another drawback to requiring continuous monitoring systems is the delayed implementation timeline due to the plan approval and installation timeframes.

⁵ San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4624 – Transfer of Organic Liquid, subsection 6.3.8.1: <https://ww2.valleyair.org/media/kgalm4y4/rule-4624.pdf>, p. 4624-12, accessed on February 24, 2025.

⁶ U.S. EPA – Title 40, Chapter 1, Subchapter C, Part 60, Subpart XXa – Standards of Performance for Bulk Gasoline Terminals that Commenced Construction, Modification, or Reconstruction After June 10, 2022: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-XXa>, accessed on February 24, 2025.

Optical Gas Imaging

An optical gas imaging camera uses infrared technology capable of visualizing vapors. OGI cameras have different detectors capable of visualizing a variety of gas wavelengths. VOC wavelengths are in the 3.2-3.4 micrometer waveband.

The cameras are widely used as a screening tool for leak detection purposes and have continuous monitoring capability. Handheld OGI cameras are used widely by leak detection service providers as well as facilities for periodic monitoring.



Figure 2.4 – OGI Camera Imaging

Open Path Sensors

Open path detection devices emit beams that detect VOCs (See Figure 2.5). For VOC to be detected with an open path device, the VOCs must contact the beam. Open path detection devices can detect gas concentrations in the parts per billion range and from distances as far as 300 meters away from a source, with some models advertised as having a range of 1,000 meters. One open path device can cover multiple paths. Open path devices can detect small concentrations of VOC in the parts per billion by volume (ppbv) range and can also speciate VOC. A significant limitation to leak detection of these devices is the requirement for VOCs to contact the emitted beam. This provides a chance for VOCs to go undetected if travelling on a path that does not intercept the beam. Another drawback to open path detection is the dilution factor. VOCs originating from a tank may need to travel hundreds of feet before contacting the emitted beam. The concentration of VOC may dilute so significantly that VOCs are undetectable by the time the VOCs reach the emitted beam.

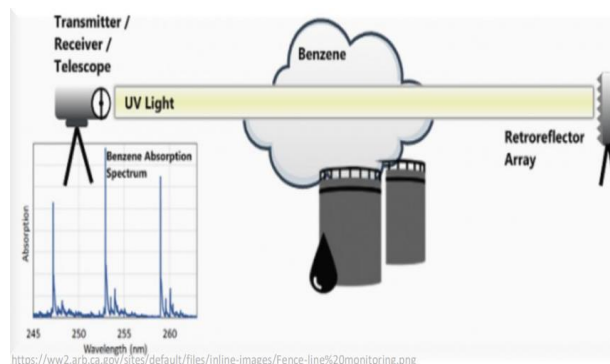


Figure 2.5 – Example of Open Path Technology

Fixed Gas Sensors

Fixed gas sensors have the capability to continuously monitor for VOC emissions and are installed as fixed applications (See Figure 2.6). Concentrations of VOC detected with fixed gas sensors are in the parts per million by volume (ppmv) range depending on the sensor and have a maximum detection range of about 50-100 ppmv. Like open path devices, gas sensors can only detect emissions when VOCs contact the fixed sensor. Leaks from a source must be significant to be detected by a fixed gas sensor due to the dilution factor. According to one supplier, it is estimated that a leak with a concentration of 72,000 ppmv is detectable by a gas sensor 100 feet away. A leak with a concentration of 18,000 ppmv is detectable by a gas sensor 50 feet away.



Figure 2.6 – Example of a Fixed Gas Sensor

- Initial BARCT Emission Limits and Other Considerations*

Staff determined that the advanced monitoring technology most suitable to identify sources of leaks at organic liquid loading facilities is handheld OGI devices. Other South Coast AQMD rules, specifically Rules 1178, 463, 1148.1, and 1173, have OGI inspection requirements summarized in the table below:

Table 2.1 Monitoring Requirements in Other South Coast AQMD Rules				
Regulation	Rule 1178	Rule 463	Rule 1148.1	Rule 1173
OGI Monitoring Requirement	Weekly	Every 2 Weeks	Monthly	Monthly

Facilities subject to Rule 462 may also be subject to Rules 1173 and 463 which have a monthly and every two week OGI inspection requirements, respectively. OGI inspections are being proposed as a PAR 462 requirement for consistency with other South Coast AQMD rule requirements and therefore can reduce cost impacts to facilities for OGI devices, training, and other costs.

- Costs and Cost-Effectiveness*

Costs were obtained from OGI camera vendors and from owners and operators of affected facilities with handheld OGI cameras. An OGI camera costs approximately \$120,000. Maintenance is estimated to cost \$1,500 per year. Staff analyzed cost-effectiveness for organic liquid loading facility inspections at increasing frequencies using OGI devices, assuming owner or operator ownership of the cameras. The results are the following:

Table 2.2 Cost-Effectiveness of OGI Inspection Frequencies		
	Monthly	Every Two Weeks
Total Cost over 10 Years (\$)	\$4,628,902	\$6,702,100
Total Emission Reductions (tons/10 years)	146	182.5
Cost-Effectiveness (\$ / ton VOC)	\$31,700	\$36,700
Incremental Cost-Effectiveness (\$ / ton VOC)	N/A	\$56,800

As shown in Table 2.2, monthly OGI inspections and OGI inspections every two weeks are below the cost-effectiveness threshold⁷, but the incremental cost-effectiveness of OGI inspections every two weeks is above the cost-effectiveness threshold. Staff proposes OGI inspections monthly, as the frequency is both cost-effective and incrementally cost-effective. Refer to Chapter 4 for details on costs and cost-effectiveness.

VAPOR CONTROL SYSTEMS

- Assessment of Current South Coast AQMD Regulatory Requirements*

Currently, Rule 462 has an emission limit of 0.08 pounds VOC per thousand gallons of organic liquid transferred for vapor recovery systems and/or vapor disposal systems at Class A facilities. Class B facilities are required to recover at least 90% of displaced vapors with a vapor recovery system and/or vapor disposal system. Class C facilities are not required to have vapor recovery and/or vapor disposal systems. Rule 462 does not require periodic demonstration of this emission limit with source testing.

- Assessment of Emission Limits for Existing Units*

Staff assessed reducing emission limits for vapor recovery systems and/or vapor disposal systems for Class A facilities from 0.08 pounds VOC per thousand gallons (10 grams per 1,000 liters) of organic liquid transferred to 0.04 pounds VOC per thousand gallons (5 grams per 1,000 liters). Initial review of source tests indicate that facilities are already meeting a proposed new limit of 0.04 pounds VOC per thousand gallons of organic liquid transferred. In addition, some facilities already have existing emission limits lower than 0.08 pounds VOC per thousand gallons organic liquid transferred in permits to operate.

⁷ The 2022 AQMP established a cost-effectiveness threshold of \$36,000 per ton of VOC reduced which is updated annually to account for inflation

- *Other Regulatory Requirements*



Figure 2.7 – Example of a vapor disposal system

During the review of current emission limits for VOC regarding vapor recovery systems and/or vapor disposal systems, staff discovered that the Bay Area AQMD has an organic compound emission limit of 0.04 pounds VOC per thousand gallons of organic liquid loaded⁸. As a component of the 2016 AQMP, South Coast AQMD was required to submit a Reasonably Available Control Technology (RACT) Demonstration to U.S. EPA. In 2014, South Coast AQMD completed this RACT Demonstration and identified BAAQMD's Reg. 8, Rule 33 VOC limit for gasoline bulk terminal and cargo tank operations as more restrictive than Rule 462.⁹ Staff assessed the feasibility of reducing this VOC limit as part of the 2016 AQMP control measure development and it was not included as a feasible control measure at that time, primarily due to it being not cost-effective.

- *Assessments of Pollution Control Technologies*



Figure 2.8 - Example of a vapor recovery system

During the rule development process, staff visited multiple sites where vapor recovery systems and/or vapor disposal systems were being used to control VOC emissions from gasoline and other organic liquid vapors (See Figure 2.7).

- *Vapor Recovery Systems*

Rule 462 defines a vapor recovery system as a vapor gathering system which is capable of collecting and returning discharged hydrocarbon vapors and gases during loading of organic liquids into transport vessels, back to a stationary storage container, or into an enclosed process system. A common vapor recovery system utilizes carbon adsorbers and scrubbers to convert organic vapors back into a liquid phase. Typically, two or more carbon beds are used with one bed used for

⁸ Bay Area Air Quality Management District Rule 33 – *GASOLINE BULK TERMINALS AND GASOLINE CARGO TANKS*, subsection 8-33-301 https://www.baaqmd.gov/~media/dotgov/files/rules/refinery-rules-definitions/rg0833_20211103-pdf p. 8-33-5, accessed on February 24, 2025.

⁹ South Coast AQMD 2016 AQMP Reasonably Available Control Technology Demonstration, <https://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2014/2014-jun6-031.pdf>, p. 16, accessed on February 24, 2025

recovery and removal of vapors and other beds in standby mode or in regenerating mode.

- *Vapor Disposal Systems*

Rule 462 defines a vapor disposal system as a control equipment designed and operated to reduce VOC emissions into the atmosphere. As opposed to vapor recovery systems which convert vapor to liquid, vapor disposal systems destroy organic vapors before entering the atmosphere. Examples of vapor disposal systems include thermal oxides, incinerators, and flares.

- *Associated Emissions*

Of the four sites visited, staff determined that all facility vapor systems, both vapor recovery systems and vapor disposal systems were emitting less than 0.04 pounds VOC per thousand gallons of organic liquid transferred and were demonstrating this standard via source testing every five (5) years. In addition, staff conducted a review of the most recent source tests and Annual Emission Reporting (AER) site-specific emission factors for Class A facilities and found that the vapor recovery systems and/or vapor disposal systems evaluated were less than 0.04 pounds VOC per thousand gallons of organic liquid transferred.

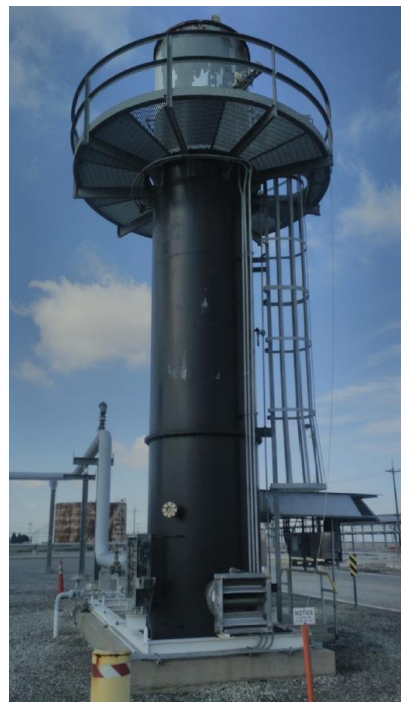


Figure 2.9 - Example of Vapor Disposal System

- *Initial BARCT Emission Limits and Other Considerations*

Based on the technology assessment, staff determined 0.04 pounds VOC per thousand gallons of organic liquid transferred to be the initial BARCT limit for vapor recovery systems and/or vapor disposal systems at Class A facilities.

- *Costs and Cost-Effectiveness*

Staff does not foresee costs associated with upgrading control devices as source test data indicates that the 0.04 pounds VOC per thousand gallons of organic liquid transferred emission limit is already achieved in practice at existing facilities, based on review of available source tests and submitted AER site-specific emission factors. However, there are costs associated with updating Title V permits early to incorporate the new VOC limit, which is accounted for in the cost-effectiveness analysis for PAR 462. Rule 3005 – Permit Revisions requires Title V permits to be reopened and revised when regulatory requirements become applicable to a Title V facility with a remaining permit term of three or more years. Title V permit renewals occur every five years. Therefore, staff assumed 60% Title V facilities will need to submit early Title V revisions to update permits conditions. Staff assumed a change of condition fee to be \$4,128.02 per permit based on Rule 301 – Permitting and Associated Fees. Since there are 18 Class A facilities that would require Title V permit modifications (2 facilities already have VOC emission limits below 0.04 pounds VOC per thousand gallons of organic liquid transferred), 60% of those facilities would amount to

approximately 11 affected facilities. Total permit costs for the estimated 11 Class A facilities needing Title V permit revisions are approximately \$45,400.

FACILITY LEAK THRESHOLD

Currently, Rule 462 defines a facility vapor leak limit as greater than 3,000 ppm VOC. Staff considered reducing the vapor leak limit but found that Rule 462 is the most stringent leak standard for organic liquid loading facilities as compared to SJVAPCD (10,000 ppm), Bay Area AQMD (3,000 ppm), and U.S. EPA (10,000 ppm). Additionally, after conducting site visits there was no new technology observed that would allow for a lower vapor leak limit. A review of online research did not produce results in finding new technology that could reduce the vapor leak limit. Based on the technology assessment staff is not proposing changes to the facility vapor leak limit.

BARCT EMISSION LIMITS

Based on the BARCT assessment, staff proposes monthly OGI inspections and reducing the VOC emission limit for vapor recovery systems and/or vapor disposal systems at Class A facilities to 0.04 pounds VOC per thousand gallons of organic liquid transferred.

CHAPTER 3: SUMMARY OF PROPOSALS

INTRODUCTION

PROPOSED AMENDED RULE STRUCTURE

PROPOSED AMENDED RULE 462

INTRODUCTION

PAR 462 adds OGI inspection requirements for organic liquid loading facilities, requires periodic source testing, and tightens emission standards on vapor control systems. PAR 462 also includes an ozone contingency measure to comply with federal requirements.

The following information describes the structure of PAR 462 and explains the provisions incorporated from other source-specific rules. New provisions and any modifications to provisions that have been incorporated are also explained. PAR 462 also includes grammatical and editorial changes for clarity.

PROPOSED AMENDED RULE STRUCTURE

PAR 462 will contain the following subdivisions:

- (a) Purpose
- (b) Applicability
- (c) Definitions
- (d) Requirements
- (e) Compliance Schedule
- (f) Compliance Determination/Test Methods
- (g) Recordkeeping Requirements
- (h) Distribution of Responsibilities
- (i) Ozone Contingency Measure
- (j) Exemptions

PROPOSED AMENDED RULE 462

Subdivision (a) *Purpose*

The purpose of this rule is expanded to establish contingency measures to fulfill federal requirements.

Subdivision (b) *Applicability*

The applicability of this rule has been reordered from subdivision (c) to subdivision (b) to align with current South Coast AQMD rule structure conventions. Additional language was added to ensure subdivision (i) - Ozone Contingency Measure is applicable upon approval by U.S. EPA.

Subdivision (c) *Definitions*

This subdivision has been reordered from subdivision (b) to subdivision (c) to align with current South Coast AQMD rule structure convention. Several definitions were added, deleted, or substantially modified for clarity and consistency. Key definition changes are discussed below:

- *Background* – updated to remove inaccurate references no longer present in reference method.
- *Contingency Measure* – added to implement federal requirements.

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- *Coupler* – added to provide clarity for new residual liquid definition. At two site visits, operators stated that occasionally couplers would contain residual liquid that would be detected by VOC analyzers. Operators expressed concern that South Coast AQMD personnel were inconsistent when allowing removal of residual liquid from the coupler. This definition was added to fully describe which component is allowed to be retested.
 - *Optical Gas Imaging (OGI) Device* – added to implement OGI inspection requirements. This definition is consistent with other recent South Coast AQMD rules that require OGI inspection, such as Rules 1178, 463, 1148.1, and 1173. Additionally, research on how OGI cameras work found that OGI cameras that operate within the 3.2 – 3.4 micrometer waveband can detect gas leaks by utilizing a special filter that only allows infrared radiation within this narrow wavelength range.
 - *Residual Liquid* – added to increase clarity and remove ambiguity during South Coast AQMD compliance inspections. After an organic liquid loading event, the liquid product line is disconnected at a coupler. The coupler may have de minimis quantities of organic liquid left as a result of the disconnection and may be detected by an analyzer using U.S. EPA Method 21 or an OGI device. PAR 462 will allow owners or operators the option to remove residual liquid once upon detection before a retest by South Coast AQMD personnel using U.S. EPA Method 21 or an OGI device, as applicable.
 - *Transfer Equipment* – updated to increase clarity that transfer equipment is the entire organic liquid pathway from any storage tanks to the transporting vessel and the returning vapor pathway.
 - *Visible Vapors* – added to implement OGI inspection requirements.

Subdivision (d) Requirements

PAR 462 includes several provisions to further reduce VOC emissions. For Class A facilities, the emission standard for vapor recovery systems and vapor disposal systems is lowered from the existing 0.08 pounds VOC per thousand gallons (10 grams per 1,000 liters) organic liquid transferred standard to a new 0.04 pounds VOC per thousand gallons (5 grams per 1,000 liters) organic liquid transferred standard as described in subparagraph (d)(1)(D). Research conducted by reviewing source tests and conducting site visits found that Class A facilities will be able to meet the new proposed emission limit of 0.04 pounds VOC per thousand gallons (5 grams per 1,000 liters) organic liquid transferred without having to do any control equipment modifications. Class A facilities will also be required to demonstrate this lower emission standard every five years by source testing as described in subparagraph (d)(1)(D). Staff found that for those Class A facility permits reviewed, periodic source test requirements are already required. PAR 462 includes five year periodic source testing to reflect existing permit requirements and to ensure periodic source testing for any new Class A facilities.

Subparagraphs (d)(1)(G), (d)(2)(F), and (d)(3)(C) require transfer equipment to be operated and maintained without visible vapors. The compliance mechanism to determine if there are visible vapors is an OGI inspection. Paragraph (d)(6) requires monthly inspections with an OGI device to detect visible vapors from organic liquid loading facilities, effective July 1, 2026. This is in

addition to the existing leak inspection requirement of monthly sight, sound, and smell method or quarterly U.S. EPA Method 21 inspection.

Staff detected an inconsistency for backpressure requirements for Class B facilities, found in subparagraph (d)(2)(C). This requirement should apply to both vapor recovery systems as well as vapor disposal systems and rule language has been updated.

Subparagraphs (d)(7)(A) and (d)(7)(B) requires the owner or operator of the OGI device to be trained to operate and maintain the device in accordance with manufacturer's specifications. In lieu of an OGI inspection, an alternative inspection method may be used if approved by U.S. EPA and the Executive Officer as described in subparagraph (d)(7)(C). Other agencies, such as the state of Colorado Department of Public Health & Environment (CDPHE), have several U.S. EPA approved alternative inspection methods. CDPHE's alternative inspection methods are referred to as an Alternative Approved Instrument Monitoring Method¹⁰ and are used by oil and gas facilities in that jurisdiction. If an alternative inspection method is approved by U.S. EPA, it may also be used in South Coast AQMD jurisdiction if approved by the Executive Officer.

Subdivision (d) also includes additional guidance regarding procedures during inspection by South Coast AQMD personnel. As referenced earlier in subdivision (c), subparagraph (d)(8)(A) standardizes retesting of couplers when residual liquid is present. The owners or operators have the option to remove residual liquid from the coupler by wiping, using compressed air, application of cotton swabs, or other means and retest if VOC is detected during a first test. The removal of residual liquid should be prompt, such as within one minute of detection of VOC by OVA or OGI device, or within another acceptable timeframe determined by South Coast AQMD personnel. The intent of subparagraph (d)(8)(A) is to allow an owner or operator to remove de minimis amounts of residual liquid prior to compliance determination by South Coast AQMD personnel, however, the removal of residual liquid cannot unduly delay a compliance inspection.

Visible vapors, if detected by South Coast AQMD personnel, are subject to Notice of Violation. However, as described in subparagraph (d)(8)(B), facility owners or operators may challenge a detected visible vapor by using an analyzer in accordance with U.S. EPA Method 21. If the visible vapor does not meet the definition of a facility vapor leak, defined as 3,000 ppm, a Notice of Violation is not appropriate.

Subdivision (e) *Compliance Schedule*

PAR 462 updates this subdivision by removing obsolete rule language with past compliance dates. Staff also added rule language to clarify that sending the 30 day written request for CARB certification of new or modified vapor recovery system and/or vapor disposal system is only required if obligated under Health and Safety Code section 41954.¹¹

¹⁰ <https://cdphe.colorado.gov/oil-and-gas-compliance-and-recordkeeping/approvedinstrument-monitoring-method-aimm-for-oil-gas>

¹¹ For additional information regarding CARB certification of vapor recovery for gasoline bulk plants and terminals please refer to: <https://ww2.arb.ca.gov/vapor-recovery-bulk-plants-and-terminals>

Subdivision (f) *Compliance Determination/Test Methods*

This subdivision now includes paragraph (f)(8) that details source testing procedures, including submitting source test protocols, reporting of a source testing schedule and changes to the source testing schedule, complying with the approved terms of a source test protocol, and submission of source testing reports. These source test requirements were based on source test requirements in Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations (Rule 1405). Rule 1405 is a recently amended rule that was updated within the past two years.

Subdivision (g) *Recordkeeping Requirements*

Formerly entitled Recordkeeping, subdivision (g) has been expanded to include records of OGI inspections and also now requires five (5) years of records to be maintained for major sources, known as Title V facilities. Title V facilities have permits that last five years between renewal and have some of the most stringent recordkeeping requirements including record retention for five years.

Subdivision (h) *Distribution of Responsibilities*

PAR 462 expands the scope of subdivision (h) to assign responsibility of OGI inspections and source testing to the owner and operator of an organic liquid loading facility.

Subdivision (i) *Ozone Contingency Measure*

To comply with federal requirements, subdivision (i) was added. This contingency measure would only be implemented in the event that the U.S. EPA determines that the South Coast AQMD has failed to meet a reasonable further progress (RFP) milestone or to attain an ozone NAAQS, after amendments to Rule 462 are approved by U.S. EPA to be included into the SIP. This contingency control measure is necessary as part of comprehensive efforts to timely attain ozone standards.

Contingency measures should provide for emission reductions approximately equivalent to either one year's worth of air quality improvement or one year's worth (OYW) of reductions needed for RFP in the years following RFP milestone and attainment years. While the proposed amendments in Rule 462 satisfy a 'triggering mechanism' requirement set by the U.S. EPA, the reductions from the rule alone are not adequate to satisfy the OYW of progress, which is calculated as the percentage of the base year emission inventory (EI) the annual rate of reductions represents of either NO_x or VOC (or combined) per year. See the equation below for an example.

$$\frac{(\text{base year EI} - \text{attainment year EI})}{(\text{attainment year} - \text{base year})} \div \text{base year EI} \times \text{attainment year EI} = \text{OYW of Progress}$$

Contingency measures are required to result in emission reductions within one year of a final action by the U.S. EPA. It would be challenging to implement more stringent requirements, achieving additional NO_x or VOC reductions, in rules involving other traditional sources within the mandated one-year time period. Retrofitting or replacement of existing equipment with newer technologies or equipment, or any permitting provisions would likely take more than one year to effectively implement. Conversely, the proposed amendments to Rule 462 to implement OGI inspections does not require permitting of units, does not require units be retrofitted or replaced,

and does not require reformulation or development of new products. Consequently, Rule 462 is well suited for contingency provisions since implementing lower leak standards or higher frequency OGI monitoring could be implemented in less than 60 days following the triggering of a contingency measure with resulting emission reductions occurring in less than one year.

Based on the above analysis, South Coast AQMD will satisfy the contingency requirements set forth in CAA section 172(c)(9) and the U.S. EPA's Ozone Implementation Rule with these proposed amendments to Rule 462. PAR 462 provides a contingency measure to be triggered if the Coachella Valley Area fails to meet RFP or attain the applicable ozone standards by the applicable date. The emission reductions anticipated from PAR 462, in conjunction with reductions from existing rules and regulations, are expected to achieve the reductions equivalent to or more than OYW of progress. PAR 462 addresses the contingency measures for RFP and attainment for the applicable ozone standards (2008 & 2015 8-hour ozone NAAQS).

Subdivision (j) *Exemptions*

Paragraph (j)(1) updates the existing exemption from Notice of Violation to include visible vapors detected by the owner or operator during a self-inspection. The exemption only applies if equipment is repaired or replaced within 72 hours pursuant to subparagraph (d)(6)(B).

CHAPTER 4: IMPACT ASSESSMENTS

INTRODUCTION

EMISSION REDUCTIONS

COST-EFFECTIVENESS

INCREMENTAL COST-EFFECTIVENESS

SOCIOECONOMIC IMPACT ASSESSMENT

CALIFORNIA ENVIRONMENTAL QUALITY ACT ANALYSIS

DRAFT FINDINGS UNDER HEALTH AND SAFETY

CODE SECTION 40727

COMPARATIVE ANALYSIS

INTRODUCTION

Impact assessments were conducted as part of PAR 462 rule development to assess the environmental and socioeconomic implications. These impact assessments include emission reduction calculations, cost-effectiveness and incremental cost-effectiveness analyses, a socioeconomic impact assessment, and a California Environmental Quality Act (CEQA) analysis. Staff prepared draft findings and will perform a comparative analysis pursuant to Health and Safety Code Sections 40727 and 40727.2, respectively.

EMISSION REDUCTIONS

PAR 462 will establish more stringent control and monitoring requirements at organic liquid loading sites that will result in emission reductions.

Reduction of VOCs for Vapor Recovery Systems and Vapor Disposal Systems

The current emission limit for vapor recovery and vapor disposal systems is 0.08 pounds VOC per thousand gallons of organic liquid transferred. As noted in Chapter 1, there are 20 Class A facilities in South Coast AQMD. Throughput data obtained during facility site visits and AER data revealed that the total throughput from all Class A facilities is approximately 5,525,599,023 gallons of organic liquid transferred per year. The average annual throughput is 276,279,951 gallons from each Class A facility, with an average of 756,931 gallons of organic liquid transferred per day per facility.

The baseline emissions at 0.08 pounds VOC per thousand gallons of organic liquid transferred at the 20 Class A facilities with a daily throughput of 756,931 gallons are calculated as follows:

$$\begin{aligned} 0.08 / 1,000 \times 20 \times 756,931 &= 1,211 \text{ pounds VOC/day} \\ 1,211 / 2,000 &= 0.605 \text{ tons VOC/day} \end{aligned}$$

Reducing the emission limit to 0.04 pounds VOC per thousand gallons of organic liquid transferred is expected to reduce VOC emissions by 50% or 0.30 tons VOC/day. As noted earlier, all units reviewed are already meeting this emission limit. Therefore, these emission reductions are not included in the cost-effectiveness analysis. However, the emission reductions associated with a lower emission limit can still be claimed for SIP credit.

OGI Monitoring

Staff is proposing the monthly use of OGI as a tool to find leaks from equipment regulated by this rule. While OGI devices are not as sensitive as OVA at detecting smaller leaks, larger leaks can be discovered and repaired sooner than through current inspection frequency and technique. Staff assumed five major leaks per year based on the average number of leaks found over the last five years, excluding year 2020, by South Coast AQMD personnel. During the September 2023 amendments to Rule 1178¹², staff determined that leaks from storage tanks contribute 8,000 pounds of VOC per day per leak. While VOC storage tanks and organic liquid loading share common products and are often connected together, the leak rate from storage tanks is different than the leak rate from organic liquid loading facilities. Staff adjusted the leak rate used for PAR 462 to be 97.5% less than the leak rate used in the September 2023 amendments to Rule 1178, or just 2.5% of the storage tank leak rate. Staff calculated that 2.5% of the 8,000 pounds VOC per day per leak rate used for storage tanks is 200 pounds of VOC per day per leak, which was the VOC leak rate assumed for PAR 462. A leak rate of 200 pounds VOC/day is also consistent with the leak rate used in the 2024 rulemaking for Rule 1148.1.

Based on the current quarterly inspection frequency, staff assumes that an undiscovered leak occurs at a midpoint between inspections of 45 days. If the inspection frequency is increased to monthly, then staff assumes that an undiscovered leak occurs at a midpoint of 15 days. Comparing the current quarterly inspection frequency using the OVA to the proposed monthly frequency using OGI equipment, staff predicts that a potential leak may be discovered and repaired approximately 30 days sooner, a difference between 45 and 15 days. While there is an optional monthly inspection using sight, sound, and smell, that option is more subjective than using an OGI device and would not monitor certain parts of the product or vapor pathways, such as elevated pipe runs that are far away from ground level.

To establish baseline emissions, staff performed the following calculation:

- Five leaks per year from the 51 affected facilities
- A leak rate of 200 lbs/day of VOC
- 45 days before a leak is identified
- Calculation – $(5 \text{ leaks/yr}) \times (200 \text{ lbs VOC/day}) \times (45 \text{ days}) \times (1 \text{ yr}/365 \text{ day}) \times (1 \text{ ton}/2000 \text{ lb}) = 0.06 \text{ ton VOC/day}$

Using these assumptions, staff estimates baseline emissions of 0.06 ton per day of VOC.

¹² South Coast AQMD Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities: <https://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par-1178-draft-staff-report--final.pdf>, p. 4-2, accessed on February 27, 2025.

With monthly OGI inspections, staff anticipates a reduction in VOC emissions compared to the baseline. To determine the emission reductions, staff performed the following calculation:

- Five leaks per year from the 51 affected facilities
- A leak rate of 200 lbs/day of VOC
- Discovery of a leak 30 days sooner
- Calculation – (5 leaks/yr) x (200 lbs VOC/day) x (30 days) x (1 yr/365 day) x (1 ton/2000 lbs) = 0.04 ton VOC/day

Using these assumptions, staff estimates emission reductions of 0.04 ton per day of VOC from monthly OGI inspections.

COST-EFFECTIVENESS

Health and Safety Code Section 40920.6 requires a cost-effectiveness analysis when establishing BARCT requirements. The cost-effectiveness of a control is measured in terms of the control cost in dollars per ton of air pollutant reduced. The costs for the control technology include purchasing, installation, operation, maintenance, and permitting. Emission reductions were calculated for each requirement and based on estimated baseline emissions. The 2022 AQMP established a cost-effectiveness threshold of \$36,000 per ton of VOC reduced, adjusted annually for inflation. A cost-effectiveness that is greater than the threshold of \$36,000 per ton of VOC reduced requires additional analysis and a hearing before the Governing Board on costs.

The cost-effectiveness is estimated based on the present value of the cost, which was calculated according to the capital cost (initial one-time equipment and installation costs) plus the annual operating cost (recurring expenses over the useful life of the equipment multiplied by a present worth factor).

$$\text{Cost-Effectiveness (CE)} = \text{Present Worth Value (PWV)} / \text{Emission Reduction (ER)}$$

$$\text{PWV} = \text{Total Install Cost (TIC)} + \text{Present Worth Factor (PWF)} \times \text{Annual Cost (AC)}$$

$$\text{Present Worth Factor} = (1 - \frac{1}{(1 + r)^n}) / r$$

- Interest rate (r) of 4%
- Life of equipment (n) of 10 years
- $\text{PWF}_{(4,10)} = 8.11$

Capital costs are one-time costs, such as equipment purchase and/or installation costs. Annual costs are any recurring costs required to operate equipment. Costs were obtained for OGI monitoring.

OGI Monitoring

Costs for OGI cameras were obtained from vendors and facilities. Capital costs for OGI cameras are conservative, as some organic liquid loading companies already purchased an OGI camera due to OGI inspection requirements in Rules 1178 and 463. Staff was able to obtain further cost information such as maintenance and labor from owners and operators as well as OGI equipment vendors. In addition, South Coast AQMD retains OGI cameras, and training and maintenance cost information was available.

The following information was used to calculate the cost-effectiveness of purchasing and using an OGI camera:

- Approximately 51 organic liquid loading facilities
- Cost of an OGI camera = \$120,000 with a 10-year life span
- 20 cameras assumed to be needed based on one per company, approximately 20 companies represent the 51 facilities
- Annual maintenance = \$1000
- Training = \$1,000 every two years (\$500 per year)
- In-House labor = 1 person working 8 hours/day at \$50/hr = \$400/day
- Monthly inspections = 12/year
- Emission reductions = 0.04 tpd VOC

- $PWF = 8.111$ for a 10-year life expectancy at 4% interest rate
- $TIC = \$120,000 \times 20 \text{ cameras} = \$2,400,000$
- $AC = (\$1000 [\text{maintenance}] + \$500 [\text{training}]) \times 20 \text{ cameras} + (1 \text{ person} \times 8 \text{ hr/day} \times \$50/\text{hr} \times 12 \text{ inspections/yr} \times 51 \text{ facilities}) [\text{labor}] = \$274,800 \text{ for 20 cameras}$
- $PWV = \$2,400,000 + 8.111 \times \$274,800 = \$4,628,902$
- $ER = (0.04 \text{ tpd VOC}) \times (365 \text{ day/yr}) \times (10 \text{ years}) = 146 \text{ tons VOC}$
- $CE = \$4,628,902 / 146 \text{ tons VOC reduced} = \$31,700/\text{ton VOC reduced}$

The cost-effectiveness for requiring monthly inspections using OGI cameras is calculated to be \$31,700/ton VOC reduced.

Table 4-1 – Summary of Cost-Effectiveness				
Proposed Requirement	Cost Over 10 Years	Annualized Cost	Annual Emission Reductions (tons/year)	Cost-Effectiveness (\$/ton)
Monthly OGI	\$4,628,902	\$462,890	14.6	\$31,700
More Stringent Vapor Recovery Emission Standard	\$45,400	\$4,540	0	N/A
5 Year Source Test	\$0	\$0	0	N/A
Overall	\$4,674,302	\$467,430	14.6	\$32,000*

*The overall rule cost-effectiveness includes the Title V permit revision costs associated with reducing the VOC limit for vapor recovery systems. Staff did not include the emission reductions from reducing the VOC limit of vapor control systems as part of the cost-effectiveness analysis as it is assumed facilities are already meeting the proposed standard. As such, the emission reductions are not included in the cost-effectiveness analysis, however, the emission reductions are being submitted for SIP credit.

INCREMENTAL COST-EFFECTIVENESS

Health and Safety Code Section 40920.6 requires an incremental cost-effectiveness analysis for BARCT rules or emission reduction strategies when there is more than one control option which would achieve the emission reduction objective of the proposed amendments, relative to ozone, CO, SO_x, NO_x, and their precursors. Since volatile organic compounds are precursors to ozone, an incremental cost-effectiveness analysis is required for controls proposed to limit VOC emissions. Incremental cost-effectiveness is the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.

Incremental cost-effectiveness is calculated as following:

$$\text{Incremental Cost-Effectiveness} = \frac{\text{Cost of Option 2} - \text{Cost of Option 1}}{\text{Benefit of Option 2} - \text{Benefit of Option 1}}$$

Incremental Cost-Effectiveness for OGI Inspections

Staff conducted an incremental cost-effectiveness for OGI inspections, with Option 1 being monthly OGI monitoring and Option 2 being every two week OGI monitoring (26 inspections per year):

$$\text{Incremental Cost-Effectiveness} = \frac{\$6,702,100 - \$4,628,900}{182.5 \text{ tons} - 146 \text{ tons}}$$

The incremental cost-effectiveness of conducting OGI inspections every two weeks compared to monthly is calculated to be \$56,800/ton VOC reduced.

Staff found that it was not incrementally cost-effective to conduct OGI inspections every two weeks and is therefore proposing monthly OGI inspections. As previously noted, OGI inspections would be required every two weeks if and when contingency measures are triggered.

SOCIOECONOMIC IMPACT ASSESSMENT

A socioeconomic impact assessment will be conducted and released for public review and comment at least 30 days prior to the South Coast AQMD Governing Board Hearing, which is scheduled for June 6, 2025 (subject to change).

CALIFORNIA ENVIRONMENTAL QUALITY ACT ANALYSIS

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project (PAR 462) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption will be prepared pursuant to CEQA Guidelines Section 15062. If PAR 462 is adopted, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor's Office of Planning and Research.

DRAFT FINDINGS UNDER HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

Health and Safety Code Section 40727 requires that prior to adopting, amending, or repealing a rule or regulation, the Governing Board make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

A need exists to amend PAR 462 to implement best available retrofit control technology, emission reduction strategies recommended in Control Measure FUG-01 in the 2022 Final AQMP, and contingency measures for the 2008 and 2015 ozone NAAQS.

Authority

The South Coast AQMD obtains its authority to adopt, amend, or repeal rules and regulations pursuant to Health and Safety Code Sections 39002, 40000, 40001, 40440, 40702, 40725 through 40728, 40920.6, and 41508.

Clarity

PAR 462 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

PAR 462 is in harmony with and not in conflict with or contradictory to existing statutes, court decisions, or state or federal regulations.

Non-Duplication

PAR 462 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

Reference

In amending this rule, the following statutes which the South Coast AQMD hereby implements, interprets, or makes specific are referenced: Health and Safety Code Sections 39002, 40001, 40406, 40702, 40440(a), and 40725 through 40728.5.

COMPARATIVE ANALYSIS

Under Health and Safety Code Section 40727.2, the South Coast AQMD is required to perform a comparative written analysis when adopting, amending, or repealing a rule or regulation. The comparative analysis is relative to existing federal requirements, existing or proposed South Coast AQMD rules and air pollution control requirements and guidelines which are applicable to organic liquid loading. The comparative analysis will be provided in a future report.