BOARD MEETING DATE: May 5, 2023 AGENDA NO. 26

PROPOSAL: Determine That Proposed Amended Rule 463 – Organic Liquid Storage and Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities, Are Exempt from CEQA; and Amend Rule 463 and Amend Rule 1178.

SYNOPSIS: Proposed Amended Rules 463 and 1178 address U.S. EPA's limited disapproval of CARB's Oil and Gas Methane Rule. Proposed amendments to Rules 463 and 1178 are required to align the applicability threshold for storage tanks to demonstrate compliance with Reasonably Available Control Technology determination pursuant to U.S. EPA's 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry.

COMMITTEE: Stationary Source, March 17, 2023, Reviewed

RECOMMENDED ACTIONS:
Adopt the attached Resolution:

1. Determining that Proposed Amended Rule 463 – Organic Liquid Storage and Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities, are exempt from the requirements of CEQA;
2. Amending Rule 463 – Organic Liquid Storage; and
3. Amending Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

Wayne Nastri
Executive Officer

PMF:MK:MM:RC:MG

Background

On September 30, 2022, U.S. EPA disapproved CARB's Oil and Gas Methane Rule that partially relies on South Coast AQMD Rules 463 – Organic Liquid Storage and 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities. The disapproval stated that Rules 463 and 1178 did not demonstrate Reasonably Available Control Technology (RACT) for the 2008 and 2015 ozone National Ambient Air Quality Standards (NAAQS) for sources covered by U.S. EPA's 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry (Oil and Gas CTG). U.S.

EPA identified RACT deficiencies in Rules 463 and 1178 for storage tanks covered by the Oil and Gas CTG.

CARB requested that Rules 463 and 1178 be amended to address the RACT deficiencies prior to CARB's Public Hearing in June 2023 so that CARB's regulation can be approved by U.S. EPA to avoid potential sanctions. Rules 463 and 1178 currently require RACT for storage tanks, however, the Oil and Gas CTG potentially applies to storage tanks not currently subject to Rules 463 and 1178. Proposed Amended Rule 463 (PAR 463) and Proposed Amended Rule 1178 (PAR 1178) will align with the applicability of the Oil and Gas CTG, by including storage tanks covered by the Oil and Gas CTG. Separate from these proposed amendments, staff is also working on a BARCT assessment for Rule 1178 which will be addressed later at a separate Public Hearing.

Public Process
PAR 463 and PAR 1178 were developed through a public process. A Public Workshop was held on March 1, 2023, where staff presented the proposed amended rules to the general public and stakeholders and solicited comments.

Proposal
The Oil and Gas CTG applies to storage tanks with a potential to emit of six tons per year or greater used in the oil and natural gas industry. Rule 463 and Rule 1178 applicability is based on tank capacity and the true vapor pressure of the liquid stored. PAR 463 and PAR 1178 will align applicability with the applicability of the Oil and Gas CTG by including tanks with a potential to emit of 6 tons per year or greater used in the oil and natural gas industry. The proposed amendments will provide definitions to clarify which operations are considered part of the oil and natural gas industry and describe the methodology for determining a storage tank's potential to emit.

Emission Reductions
Staff has not identified any current storage tanks that potentially meet the proposed applicability threshold that would require additional controls to meet RACT. Tanks identified that potentially meet the proposed applicability threshold are already equipped with controls that meet RACT. Implementation of PAR 463 and PAR 1178 is expected to result in zero emission reductions.

Key Issues
Throughout the rulemaking process, staff has worked with stakeholders to resolve issues regarding the applicability. Staff is not aware of any remaining key issues.

California Environmental Quality Act
Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project (PAR 463 and PAR 1178) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 and is included as

Attachment I of this Board Letter. If the proposed project is approved, 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.

Socioeconomic Analysis

The proposed amendments to Rule 463 and Rule 1178 are not expected to impose any additional costs since tanks that potentially meet the proposed applicability are already equipped with controls that meet RACT. Therefore, no socioeconomic analysis is required under Health and Safety Code Sections 40440.8 and 40728.5.

Implementation and Resource Impacts

Existing staff resources are adequate to implement the proposed amendments.

Attachments

A. Summary of Proposal
B. Key Issues and Responses
C. Rule Development Process
D. Key Contacts List
E. Resolution
F. Proposed Amended Rule 463
G. Proposed Amended Rule 1178
H. Final Staff Report
I. Notice of Exemption from CEQA
J. Board Meeting Presentation

ATTACHMENT A

SUMMARY OF PROPOSAL

Proposed Amended Rule 463 – Organic Liquid Storage; and Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities
Applicability Applies to: • In addition to existing applicability, storage tanks with a potential for VOC emissions of 6 tons per year or greater used in crude oil and natural gas production operations will be subject to the rules *Definitions* • Crude Oil And Natural Gas Production Operations – includes operations from the crude oil well to the custody transfer to a refinery and operations from the natural gas well to natural gas customer • Potential For VOC Emissions – emissions calculated using a generally accepted model and permitted throughputs, or when permitted throughputs are unavailable, based on maximum throughput in a calendar month, where 30 days of production occurred, in years 2019 through 2022 • The definitions of "Tank" (Rule 463) and "Storage Tank" (Rule 1178) were modified to include tanks proposed to be included in the applicability. Other subdivisions where current tank applicability was specified or re-stated were modified to include tanks in the proposed applicability.

ATTACHMENT B

KEY ISSUES AND RESPONSES

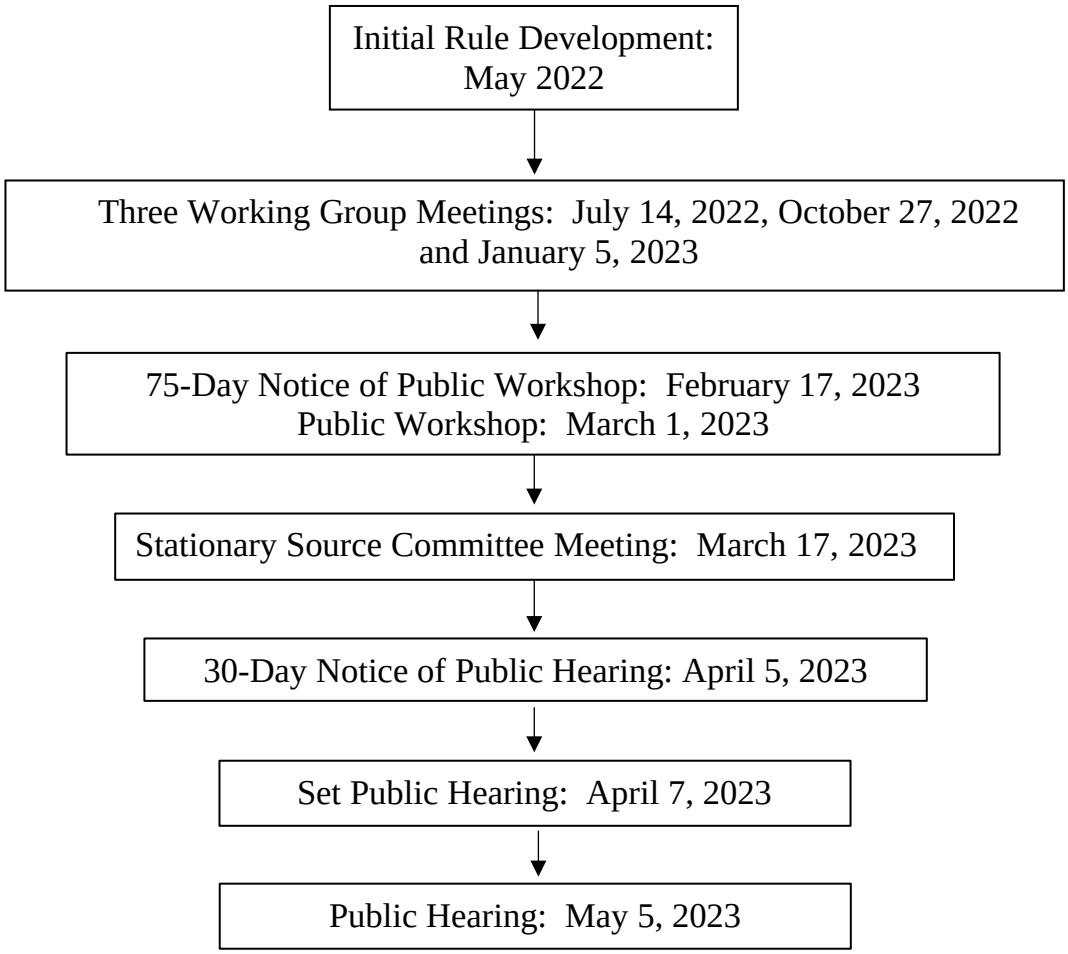
Proposed Amended Rule 463 – Organic Liquid Storage; and
Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

Throughout the rulemaking process, staff worked with stakeholders to address their comments and have resolved all key issues. Staff is not aware of any remaining key issues.

ATTACHMENT C

RULE DEVELOPMENT PROCESS

Proposed Amended Rule 463 – Organic Liquid Storage; and Proposed Amended Rule 1178 – Further Emission Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities



Twelve (12) months spent in rule development.

Three (3) Working Group Meetings

One (1) Public Workshop

One (1) Stationary Source Committee Meeting

ATTACHMENT D

KEY CONTACTS LIST

Altair Paramount, LLC
California Air Resources Board
Center for Biological Diversity
Chevron Products Company
Communities for a Better Environment
Earth Justice
East Yard Communities for Environmental Justice
Edgington Oil Company
Equilon Enterprises LLC
Kinder Morgan Liquids Terminal
Petro Diamond Terminal Company
Phillips 66
R.A. Nichols Engineering
Sierra Club
Shell Oil Products
Tank and Environmental Technologies
Tesoro
Torrance Refining Company LLC
Ultramar Inc Wilmington Refinery
United States Environmental Protection Agency
Valero Energy Corporation
Western States Petroleum Association

ATTACHMENT E

RESOLUTION NO. 23-____

A Resolution of the Governing Board of the South Coast Air Quality Management District (South Coast AQMD) determining that Proposed Amended Rule 463 – Organic Liquid Storage and Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities, are exempt from the requirements of the California Environmental Quality Act (CEQA).

A Resolution of the South Coast AQMD Governing Board amending Rule 463 – Organic Liquid Storage and Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities.

WHEREAS, the South Coast AQMD Governing Board finds and determines that Proposed Amended Rule 463 and Proposed Amended Rule 1178 are considered a "project" as defined by CEQA; and

WHEREAS, the South Coast AQMD has had its regulatory program certified pursuant to Public Resources Code Section 21080.5 and CEQA Guidelines Section 15251(l) and has conducted a CEQA review and analysis of the proposed project pursuant to such program (South Coast AQMD Rule 110); and

WHEREAS, the South Coast AQMD Governing Board finds and determines after conducting a review of the proposed project in accordance with CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA, and CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA, that Proposed Amended Rule 463 and Proposed Amended Rule 1178, are exempt from CEQA; and

WHEREAS, the South Coast AQMD Governing Board finds and determines that because Proposed Amended Rule 463 and Proposed Amended Rule 1178 contain minor revisions and clarifications to the applicability provisions and will not require physical modifications, it can be seen with certainty that implementing the proposed project would not cause any significant adverse effects on the environment, and is therefore, exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption; and

WHEREAS, the South Coast AQMD staff has prepared a Notice of Exemption for the proposed project that is completed in compliance with CEQA Guidelines Section 15062 – Notice of Exemption; and

WHEREAS, Proposed Amended Rule 463, Proposed Amended Rule 1178, and the May 5, 2023 Governing Board letter, including the Notice of Exemption, Final Staff Report, and other supporting documentation, were presented to the South Coast AQMD Governing Board and the South Coast AQMD Governing Board has reviewed and considered this information, as well as has taken and considered staff and testimony and public comment prior to approving the project; and

WHEREAS, the South Coast AQMD Governing Board finds and determines, taking into consideration the factors in section (d)(4)(D) of the Governing Board Procedures (codified as section 30.5(4)(D)(i) of the Administrative Code), that any modifications to Proposed Amended Rule 463 and Proposed Amended Rule 1178 since the Notice of Public Hearing was published, are not so substantial as to significantly affect the meaning of Proposed Amended Rule 463 and Proposed Amended Rule 1178 within the meaning of Health and Safety Code section 40726 because the changes to Proposed Amended Rule 463 paragraphs (b)(4) and (b)(10) and subdivision (c), and Proposed Amended Rule 1178 paragraphs (c)(5) and (c)(28), are to clarify rule language and: (a) the changes do not impact emission reductions, (b) the changes do not affect the number or type of sources regulated by the rule, (c) the changes are consistent with the information contained in the Notice of Public Hearing, and (d) the consideration of the range of CEQA alternatives is not applicable because Proposed Amended Rule 463 and Proposed Amended Rule 1178 are exempt from CEQA; and

WHEREAS, Proposed Amended Rule 463 and Proposed Amended Rule 1178 will be submitted to the California Air Resources Board (CARB) and the United States Environmental Protection Agency (U.S. EPA) for inclusion into the State Implementation Plan; and

WHEREAS, Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the Final Staff Report; and

WHEREAS, the South Coast AQMD Governing Board has determined that a need exists to amend Rule 463 and Rule 1178 to address reasonably available control technology (RACT) deficiencies identified by U.S. EPA, where RACT is required for all storage tanks subject to U.S. EPA's 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry (Oil and Gas CTG) and the amendments to Rule 463 and Rule 1178 will align the applicability with the applicability of the Oil and Gas CTG for storage tanks; and

WHEREAS, the South Coast AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Sections 39002, 40000, 40001, 40440, 40702, 40725 through 40728, and 41508 of the Health and Safety Code; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 463 and Proposed Amended Rule 1178 are written and displayed so that their meaning can be easily understood by the persons directly affected by it; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 463 and Proposed Amended Rule 1178 are in harmony with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions, or regulations; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 463 and Proposed Amended Rule 1178 do not impose the same requirements as any existing state or federal regulations, and the proposed amended rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 463 and Proposed Amended Rule 1178 reference the following statutes which the South Coast AQMD hereby implements, interprets or makes specific: Health and Safety Code Sections 40001(a) and (b) (air quality standards and air pollution episodes), 40440 (adoption of rules and regulations), 40701 (rules regarding district's authority to collect information), 40702 (adoption of rules and regulations), and 40440 (rules and regulations to carry out the air quality management plan and to require regarding South Coast AQMD's authority to collect information), 41508 (authority over non-vehicular sources), 41511 (rules for determination of emissions), 42300 et. seq. (authority for permit system); and

WHEREAS, Health and Safety Code Section 40727.2 requires the South Coast AQMD to prepare a written analysis of existing federal air pollution control requirements applicable to the same source type being regulated whenever it adopts, or amends a rule, and the South Coast AQMD's comparative analysis of Proposed Amended Rule 463 and Proposed Amended Rule 1178 is included in the Final Staff Report; and

WHEREAS, the South Coast AQMD Governing Board has determined that no socioeconomic assessment is required under Health and Safety Code Section 40440.8(a) because there are no adverse socioeconomic impacts; and further that the proposed amended rules do not "significantly affect air quality or emissions limitations;" and

WHEREAS, the South Coast AQMD staff conducted a public workshop meeting on March 1, 2023 regarding Proposed Amended Rule 463 and Proposed Amended Rule 1178; and

WHEREAS, the public hearing has been properly noticed in accordance with all provisions of Health and Safety Code Section 40725; and

WHEREAS, the South Coast AQMD Governing Board has held a public hearing in accordance with all provisions of law; and

WHEREAS, the South Coast AQMD specifies the Planning and Rules Manager overseeing the rule development of the proposed amendments to Rule 463 and Rule 1178 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of the proposed amended rules is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

NOW, THEREFORE BE IT RESOLVED, that the South Coast AQMD Governing Board does hereby determine, pursuant to the authority granted by law, that the proposed project (Proposed Amended Rule 463 and Proposed Amended Rule 1178) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption. This information was presented to the South Coast AQMD Governing Board, whose members exercised their independent judgement and reviewed, considered and approved the information therein prior to acting on the proposed project; and

BE IT FURTHER RESOLVED, that the South Coast AQMD Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Amended Rule 463 and Proposed Amended Rule 1178 as set forth in the attached, and incorporated herein by reference; and

BE IT FURTHER RESOLVED, that the South Coast AQMD Governing Board requests that Proposed Amended Rule 463 and Proposed Amended Rule 1178 be submitted for inclusion in the State Implementation Plan; and

BE IT FURTHER RESOLVED, that the Executive Officer is hereby directed to forward a copy of this Resolution, Proposed Amended Rule 463 and Proposed Amended Rule 1178 to CARB for approval and subsequent submittal to U.S. EPA for inclusion into the State Implementation Plan**.**

DATE: _____ _____

CLERK OF THE BOARDS

(Adopted August 15, 1977)(Amended June 1, 1984)(Amended December 7, 1990)
(Amended March 11, 1994)(Amended May 6, 2005)
(Amended November 4, 2011)(PAR 463 May 5, 2023)

PROPOSED AMENDED RULE 463. ORGANIC LIQUID STORAGE

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile ~~o~~Organic ~~c~~Compounds (VOC) from the storage of organic liquids in stationary above-ground tanks. -This rule applies to any above-ground stationary tank with a capacity of 75,000 liters (19,815 gallons) or greater used for storage of organic liquids, and any above-ground tank with a capacity between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) used for storage of gasoline. This rule also applies to any stationary tank with a Potential For VOC Emissions of 6 tons per year or greater used in Crude Oil And Natural Gas Production Operations.

(b) Definitions

For purposes of this rule, the following definitions apply:

(1) ACTUAL STORAGE CONDITIONS means the temperature at which a product is stored in an above ground stationary tank.

(2) AMBIENT TEMPERATURE is the temperature of an organic liquid within a storage tank that has been influenced by atmospheric conditions only and is not elevated by a non-atmospheric means of heating at the tank which includes but is not limited to steam, hot water, heaters, heat exchangers, tank insulation, or tank jacketing.

(3) CERTIFIED PERSON is an individual who has successfully completed the District tank self-inspection program, and who holds a certificate issued by the Executive Officer evidencing that such individual is in good standing in this program.

(4) CRUDE OIL AND NATURAL GAS PRODUCTION OPERATIONS are any operations from a ~~the~~ crude oil well to the point of custody transfer to a refinery and any operations from a natural gas well to the natural gas customer.

(5~~4~~) DRAIN-DRY BREAKOUT TANK is an above-ground storage tank designed such that the floating roof rests on support legs no higher than one foot along the tank shell with a bottom sloped to a sump or sumps such that no product or sludge remains on the tank bottom and walls after

emptying except clingage and is primarily used to receive product from pipelines and to distribute product back into pipelines.

(6~~5~~) EXEMPT COMPOUND is as defined in Rule 102.

(6~~7~~) GASOLINE means any petroleum distillate having a Reid vapor pressure of 200 mm Hg (3.9 pounds per square inch), or greater.

(7~~8~~) HEAVY CRUDE OIL means a crude oil with American Petroleum Institute (API) gravity 20 degrees or less.

(8~~9~~) ORGANIC LIQUID is any liquid containing VOC.

(10) POTENTIAL FOR VOC EMISSIONS means emissions calculated using a generally accepted model or calculation methodology, based on permitted throughput limits or, when permitted throughput limits are not available, based on the maximum ~~average daily~~ throughput in a~~ny~~ calendar month, where at least 30 days ~~period~~ of production occurred, in years 2019 to 2022.

(11~~9~~) PRESSURE RELIEF VALVE (PRV) is a valve which is automatically actuated by upstream static pressure, and used for safety or emergency purposes.

(12~~0~~) SEAL is a closure device between the tank wall and the floating roof edge that controls emissions of VOCs. Approved floating roof tank seals are categorized as follows:

(A) Category "A" seals are seals approved by the Executive Officer as most effective in the control of VOCs and are deemed Best Available Control Technology (BACT) according to the criteria set forth in Attachment A - "Floating Roof Tank Seal Categories."

(B) Category "B" seals are seals approved by the Executive Officer that are considered more effective than Category "C" seals based on the criteria set forth in Attachment A - "Floating Roof Tank Seal Categories."

(C) Category "C" seals are seals approved by the Executive Officer which are currently in service but are considered least effective in the control of VOCs.

(13~~1~~) TANK is any stationary ~~above ground~~ reservoir or any other stationary ~~above ground~~ container used for storage of an organic liquid primarily constructed of non-earthen materials.

(142) VAPOR TIGHT is a condition that exists when the reading on a portable hydrocarbon meter is less than 500 parts per million (ppm), expressed as methane, above background.

(153) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(164) WORKING DAY is Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

(c) Tank Roof Requirements

No person shall place, store or hold in any tank with a capacity of 150,000 liters (39,630 gallons) or greater, any organic liquid having a true vapor pressure of 25.8 mm Hg (0.5 psi) absolute or greater under actual storage conditions, and in any tank of more than 75,000 liters (19,815 gallons) capacity, any organic liquid having a true vapor pressure of 77.5 mm Hg (1.5 psi) absolute or greater under actual storage conditions, or any tank with a Potential For VOC Emissions of 6 tons per year or greater used in Crude Oil Andor Natural Gas Production Operations, unless such tank is a pressure tank maintaining working pressures sufficient at all times to prevent organic vapor loss to the atmosphere, or is designed and equipped with one of the following vapor control devices, or other vapor control device that has been determined to be equivalent after review by the staffs of the District, the Air Resources Board (ARB), and the United States Environmental Protection Agency (U.S. EPA), and approved in writing by the District Executive Officer, ARB, and U.S. EPA, which is properly installed and continuously maintained in good operating condition:

(1) External Floating Roof

An external floating roof shall consist of a pontoon-type or double deck-type cover that continuously rests on the surface of the organic liquid and is equipped with a closure device between the tank shell and roof edge. The closure device shall consist of two seals, with one seal placed above the other. The seal below shall be designated as the primary seal, and the seal above shall be designated as the secondary seal. A seal which is not identified on the current list of seals approved by the Executive Officer shall not be installed or used unless the Executive Officer determines that such seal meets the applicable criteria of subparagraphs (c)(1)(A) through (c)(1)(C).

(A) A closure device on a welded or a riveted tank shell which uses a metallic shoe-type seal as its primary seal shall comply with the following requirements:

(i) Gaps between the tank shell and the primary seal shall not exceed 1.3 centimeters (1/2 inch) for a cumulative length of 30 percent of the circumference of the tank, and 0.32 centimeter (1/8 inch) for 60 percent of the circumference of the tank. No gap between the tank shell and the primary seal shall exceed 3.8 centimeters (1-1/2 inches). No continuous gap between the tank shell and the primary seal greater than 0.32 centimeter (1/8 inch) shall exceed 10 percent of the circumference of the tank.

(ii) Gaps between the tank shell and the secondary seal shall not exceed 0.32 centimeter (1/8 inch) for a cumulative length of 95 percent of the circumference of the tank. No gap between the tank shell and the secondary seal shall exceed 1.3 centimeters (1/2 inch).

(iii) Metallic shoe-type seals installed on or after August 1, 1977 shall be installed so that one end of the shoe extends into the stored organic liquid and the other end extends a minimum vertical distance of 61 centimeters (24 inches) above the stored organic liquid surface.

(iv) The geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria specified in clause (c)(1)(A)(i) for a length of at least 46 centimeters (18 inches) in the vertical plane above the liquid surface.

(B) A closure device which uses a resilient toroid-type seal as its primary seal shall comply with the applicable requirements of subparagraph (c)(1)(A).

(C) The primary and secondary seals shall comply with the following requirements:

(i) The primary seal envelope shall be made available for unobstructed inspection by the Executive Officer along its circumference. In the case of riveted tanks with resilient toroid-type seals, at least eight such locations shall be made

available; for all other types of seals, at least four such locations shall be made available. If the Executive Officer deems it necessary, further unobstructed inspection of the primary seal may be required to determine the seal's condition along its entire circumference.

(ii) The secondary seal shall be installed in a way that permits the Executive Officer to insert probes up to 3.8 centimeters (1-1/2 inches) in width to measure gaps in the primary seal.

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

(iv) Notwithstanding the secondary and the primary seal requirements of paragraph (c)(1), a secondary or primary seal may be loosened or removed for preventive maintenance, inspection or repair for a period not exceeding 72 hours with prior notification to the Executive Officer.

(D) All openings in the roof except pressure-vacuum valves, shall provide a projection below the liquid surface to prevent belching, escape, or entrainment of organic liquid, and shall be equipped with a cover, seal or lid. The cover, seal, or lid shall at all times be in a closed position, with no visible gaps, except when the device or appurtenance is in use. Pressure vacuum valves shall be set to within 10 percent of the maximum allowable working pressure of the roof.

(E) There shall be no holes, tears or openings in the secondary seal or in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal.

(F) Any emergency roof drain shall be provided with a slotted membrane fabric cover, or equivalent device, that covers at least nine-tenths (9/10) of the area of the opening.

(2) Internal Floating-Type Cover

A fixed roof tank equipped with an internal floating-type cover shall comply with the following requirements:

(A) A fixed roof tank with an existing internal floating-type cover approved by the Executive Officer on or before June 1, 1984, shall

comply with the requirements applicable at the time such approval was given.

(B) A fixed roof tank which has an internal floating-type cover installed, modified, or replaced after June 1, 1984, shall have a closure device which consists of either a single liquid mounted primary seal or a primary and a secondary seal. All openings and fittings shall be fully gasketed or controlled in a manner specified by the Executive Officer. The closure device shall control vapor loss with an effectiveness equivalent to a closure device which meets the requirements of subparagraph (c)(1)(A). Seal designs not identified on the current list of seals approved by the Executive Officer shall not be installed or used unless the Executive Officer has given his prior written approval to its installation or use. For purposes of this paragraph, modification includes an identical replacement.

(C) The concentration of organic vapor in the vapor space above the internal floating-type cover shall not exceed 50 percent of its lower explosive limit (LEL) for those installed prior to June 1, 1984 and 30 percent of its LEL for those installed after June 1, 1984. Compliance shall be verified by the use of an explosimeter.

(3) Vapor Recovery System

A fixed roof tank equipped with a vapor recovery system shall comply with the following requirements:

(A) Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a vapor-tight cover which shall be closed at all times except during gauging or sampling. The roof of such tank shall be properly maintained in a vapor tight condition with no holes, tears or uncovered openings.

(B) All piping, valves and fittings shall be constructed and maintained in a vapor-tight condition, in accordance with requirements of other District rules for such equipment.

(C) For purposes of this paragraph, the efficiency of a vapor recovery system shall be determined by making a comparison of controlled emissions to those emissions which would occur from a fixed cone roof tank holding the same organic liquid without a vapor control or vapor recovery system. The vapor recovery system shall have

an efficiency of at least 95 percent by weight, or vent tank emissions to a fuel gas system.

(d) Other Performance Requirements

(1) A person shall not place, store or hold gasoline in any tank, with a capacity of between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) unless such tank is equipped with a pressure-vacuum valve which is set to within 10 percent of the maximum allowable working pressure of the container, or is equipped with a vapor loss control device which complies with the requirements set forth in subdivision (c).

(2) The roof of any internal or external floating roof tank shall float on the organic liquid at all times (i.e., free of the roof leg supports) except when the tank is being completely emptied for cleaning, or repair. The process of emptying or refilling, when the roof is resting on leg supports, shall be continuous.

(3) If a tank has been gas-freed and is to be refilled with gasoline, the roof shall be refloated with water or by an equivalent procedure approved by the Executive Officer. Paragraphs (d)(2) and (d)(3) shall be inapplicable to gasoline storage tanks at bulk gasoline distribution terminals which do not have:

(A) existing facilities for treatment of waste water used to refloat the tank roof; or

(B) facilities for equivalent emission control when refloating the roof with organic liquid.

(4) A fixed roof tank with an internal floating-type cover or a tank with an external floating roof cover shall not be used for storing organic liquids having a true vapor pressure of 11 psia (569 mm Hg) or greater under actual storage conditions.

(5) Replacement of a seal on a floating roof tank shall be allowed only if the replacement seal is chosen from the current list of seals approved by the Executive Officer. Category "A" seals shall be replaced only by Category "A" seals. Category "B" seals shall be replaced only by Category "A" or Category "B" seals. Category "C" seals shall be replaced only by Category "A" or Category "B" seals.

(6) Organic liquids listed on the addendum to this rule shall be deemed to be in compliance with the appropriate vapor pressure limits for the tank in

which it is stored provided the actual storage temperature does not exceed the corresponding maximum temperature listed.

(e) Self-Inspection of Floating Roof Tanks

Any owner or operator of a floating roof tank(s) shall conduct self-inspections of its tank(s) according to the following procedures:

(1) Inspection and Maintenance Plan

(A) Each owner or operator shall maintain a current or revised Inspection and Maintenance Plan approved by the Executive Officer. Each owner or operator constructing floating roof tank(s) subject to this rule shall submit an Inspection and Maintenance Plan, or a revision of its current Inspection and Maintenance Plan, to the Executive Officer prior to the completion of construction. The Inspection and Maintenance Plan shall include an inventory of floating roof tanks subject to this rule, the proposed self-inspection schedule, the number of certified persons to be dedicated to the program, any self-inspection procedures proposed in addition to those required by the District, and a copy of the owner or operator's safety procedures used for floating roof tanks. The tank inventory shall include tank identification number, maximum design capacity, product, shell type, dimensions, seal type and manufacturer, floating roof type, date of construction and location.

(2) Identification Requirements

(A) All floating roof tanks subject to this rule shall be clearly and visibly identified by a sign on the outside wall for inventory, inspection and recordkeeping purposes.

(B) Any change(s) in floating roof tank identification shall require prior written approval by the Executive Officer.

(3) Owner or Operator Inspection Requirements

(A) All floating roof tanks subject to this rule shall be inspected by a certified person twice per year at 4 to 8 months intervals according to the procedures and guidelines set forth in Attachment B - "Inspection Procedures and Compliance Report Form."

(B) The primary and secondary seals shall be inspected by a certified person each time a floating roof tank is emptied and degassed. Gap measurements shall be performed on an external floating roof

tank when the liquid surface is still but not more than 24 hours after the tank roof is refloated.

(C) The Executive Officer shall be notified in writing at least 2 weeks prior to the start of any tank-emptying or roof-refloating operation for planned maintenance of a tank.

(4) Maintenance Requirements

Any floating roof tank which does not comply with any provision of this rule shall be brought into compliance within 72 hours of the determination of non-compliance.

(f) Reporting and Recordkeeping Requirements

(1) The following shall apply to activities subject to the provisions of subdivision (e):

(A) All inspections shall be recorded on compliance inspection report forms approved by the Executive Officer as described in Attachment B - "Inspection Procedures and Compliance Report Form."

(B) All compliance inspection reports and documents shall be submitted to the Executive Officer either electronically or by hard copy within 5 working days of completion of the self-inspection.

(C) If a tank is determined to be in violation of the requirements of this rule, a written report shall be submitted to the Executive Officer within 120 hours of the determination of non-compliance, indicating corrective actions taken to achieve compliance.

(D) All records of owner or operator inspection and repair shall be maintained at the facility for a period of 3 years and shall be made available to the Executive Officer upon request.

(2) Emissions Reporting

(A) An owner or operator shall provide emissions information, to the Executive Officer upon request, based on the parameters listed in Attachment C using AQMD's Annual Emissions Reporting Program or U.S. EPA's most recent version of TANKS 4.0 Program. The requirement shall apply to all organic liquid storage tanks without regard to exemptions specified in subdivision (g).

(B) An owner or operator shall provide all upset emissions information associated with product change, repair, and turnover or any other excess emission incidents.

(C) An owner or operator shall maintain records of emissions data for all organic liquid storage tanks for the most recent two (2) year period.

(3) A person whose tanks are subject to this rule shall keep an accurate record of liquids stored in such containers, the vapor pressure ranges, the API gravity, the temperature, and the initial boiling points referenced.

(g) Exemptions

(1) The provisions of this rule shall not apply to the following tanks, unless the tank has a Potential For VOC Emissions of 6 tons per year or greater and is used in Crude Oil And Natural Gas Production Operations, provided the person seeking the exemption supplies proof of the applicable criteria sufficient to satisfy the Executive Officer:

(A) Oil production tanks with a capacity of between 75,000 liters (19,815 gallons) and 159,000 liters (42,008 gallons) which have a properly maintained vapor-tight roof and are equipped with a pressure-vacuum valve which is set within 10 percent of the maximum allowable working pressure of the tank, are exempt from the control requirements of this rule when:

(i) The organic liquid contents fail to comply with subdivision (c) only when heated for shipment, and such heating occurs for not more than 48 hours and not more than once in any 20-day period; or

(ii) The tank has a monthly average throughput of not more than 30 barrels of oil per day and was constructed prior to June 1, 1984.

(B) Tanks being brought into compliance within the time period specified in paragraph (e)(4).

(2) The provisions of (d)(2) shall not apply to drain-dry breakout tanks that are subject to the provisions of Rule 1149 - Storage Tank And Pipeline Cleaning And Degassing.

(h) Test Methods

The following test methods and procedures shall be used to determine compliance with this rule. Other test methods determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the U.S. EPA, and approved in writing by the District Executive Officer may also be used.

(1) Efficiency of a vapor recovery system specified in subparagraph (c)(3)(C) shall be determined according to SCAQMD Method 501.1 for the determination of total organic compound emissions. EPA Reference Methods 25 or 25A may be used, as applicable, in place of SCAQMD Method 25.1 specified in Method 501.1. An efficiency determined to be less than established by this rule through the use of any of the above-referenced test methods shall constitute a violation of the rule. Baseline emissions shall be calculated by using the criteria outlined in American Petroleum Institute Bulletin 2518.

(2) Exempt compounds shall be determined according to SCAQMD Method 303. For the purpose of testing the efficiency of a vapor recovery system, exempt compounds shall be determined according to EPA Reference Method 18 or ARB Method 422. Any test method(s) for exempt compounds which cannot be identified through these referenced test methods shall be specified by the owner or operator seeking an exemption and shall be subject to approval in accordance with the procedures set forth above in this subdivision.

(3) The Reid vapor pressure specified in paragraph (b)(6) and the Reid vapor pressure used in determining the true vapor pressure limit specified in paragraph (d)(4) shall be determined according to ASTM D-323-82 Vapor Pressure of Petroleum Products (Reid Method) or California Code of Regulations, Title 13, Section 2297, and converted to true vapor pressure using applicable nomographs in U.S. EPA AP-42, Fifth Edition, Volume 1, Chapter 7, or nomographs approved by the Executive Officer and U.S. EPA.

(4) Notwithstanding the provisions of paragraph (h)(3), if a permit condition or District rule requires a demonstration of true vapor pressure of less than 5 mm Hg (0.1 psi) absolute, either of the following test methods may be used:

(A) Organic liquids that are stored at ambient temperatures with a true vapor pressure of greater than 5 mm Hg (0.1 psi) absolute under

actual storage conditions shall be determined as those with a flash point of less than 100 °F as determined by ASTM Method D-93 – 10a - Flash Point by Pensky-Martens Closed Cup Tester.

(B) Organic liquids that are stored at above ambient temperatures with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those whose volume percent evaporated is greater than ten percent at an adjusted temperature T_{Adj} as determined by ASTM Method D-86 – 11a - Distillation of Petroleum Products at Atmospheric Pressure of:

$$T_{Adj} = 300\ °F + T_1 - T_a$$

Where:

T_1 = Liquid Storage Temperature (°F)

T_a = Ambient Temperature (°F) = 70 °F

(5) Notwithstanding the provisions of paragraph (h)(3), the true vapor pressure of crude oils and distillates shall be determined, at actual storage conditions, by converting Reid vapor pressure using the appropriate API nomograph found in U.S. EPA AP-42, Fifth Edition, Volume 1, Chapter 7, or API nomograph found in API Publication 2517, Second Edition, February 1980. The true vapor pressure of crude oils with an API gravity of 26.0 or less, may be measured using the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatography.", May 28, 2002.

(6) Vapor tight condition specified in subparagraphs (c)(3)(A) and (c)(3)(B) shall be determined according to U.S. EPA's Reference Method 21 using an appropriate analyzer calibrated with methane.

(7) API gravity is determined using the following:

(A) ASTM D-1298-99e2 Standard Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum Products by Hydrometer Method; or

(B) ASTM D-6822-02 Standard Test Method for Density, Relative Density, and API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermohydrometer Method; or

(C) ASTM D-287-92(2000)e1 Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method).

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 - ADDENDUM

Storage Temperatures Versus Actual Vapor Pressure
(Gravity/Initial Boiling Points Referenced)

	Reference Property A - °API B - IBP, °F		Temperature, °F Not to Exceed Vapor Pressure	
Organic Liquids	A	B	0.5 psia	1.5 psia
Crude Oils	12	--	--	--
	13	--	120	180
	14	--	85	145
	16	--	60	107
	18	--	55	93
	20	--	52	84
	22	--	49	77
	24	--	45	73
	26	--	42	70
	28	--	40	67
	30	--	38	64
Middle Distillates				
Kerosene	42.5	350	195	250
Diesel	36.4	372	230	290
Gas Oil	26.2	390	249	310
Stove Oil 23	421	275	340	
Jet Fuels				
JP-1	43.1	330	165	230
JP-3	54.7	110	--	25
JP-4	51.5	150	20	68
JP-5	39.6	355	205	260
JP-7	44-50	360	205	260
Fuel Oil				
No. 1	42.5	350	195	250
No. 2	36.4	372	230	290
No. 3	26.2	390	249	310
No. 4	23	421	275	340
No. 5	19.9	560	380	465
No. 6	16.2	625	450	--

RULE 463 - ADDENDUM (Cont.)

Organic Liquids	Reference Property A - °API B - IBP, °F		Temperature, °F Not to Exceed Vapor Pressure	
	A	B	0.5 psia	1.5 psia
Asphalts				
60 - 100 pen.	--	--	490	550
120 - 150 pen.	--	--	450	500
200 - 300 pen.	--	--	360	420
Acetone	47.0	133	--	35
Acrylonitrile	41.8	173	30	60
Benzene	27.7	176	35	70
Carbon Disulfide	10.6	116 (lb/gal)	--	10
Carbon Tetrachloride	13.4	170	30	60
Chloroform	12.5	142 (lb/gal)	--	40
Cylohexane	49.7	177	35	70
1,2 Dichloroethane	10.5	180 (lb/gal)	35	77
Ethyl Acetate	23.6	171	35	70
Ethyl Alcohol	47.0	173	45	83
Isopropyl Alcohol	47.0	181	45	87
Methyl Alcohol	47.0	148	--	50
Methylene Chloride	11.1	104 (lb/gal)	--	70
Methylethyl Ketone	44.3	175	30	70
1,1,1-Trichloroethane	11.2	165 (lb/gal)	60	100
Trichloroethylene	12.3	188 (lb/gal)	50	91
Toluene	30.0	231	73	115
Vinyl Acetate	19.6	163	--	60

ATTACHMENT A

FLOATING ROOF TANK SEAL CATEGORIES

PRIMARY SEALS

Category A	Category B	Category C
1. Liquid mounted multiple wipers with drip curtain and weight	1. Liquid mounted single wiper with drip curtain and weight	1. Liquid mounted single wiper
2. Liquid mounted mechanical shoe	2. Liquid mounted double foam wipers with vapor curtain	2. Liquid mounted foam log
	3. Vapor mounted primary wiper	3. Liquid mounted foam log with vapor curtain
	4. Vapor mounted E wiper	4. Liquid mounted resilient toroid type liquid filled log
	5. Vapor mounted double wipers	5. Vapor mounted foam log/bag
	6. Vapor mounted double foam wipers	6. Vapor mounted foam wiper
	7. Vapor mounted multiple wipers	

SECONDARY SEALS

Category A	Category B	Category C
1. Multiple wipers	1. Single wiper	1. Liquid mounted wiper
		2. Foam log/bag
		3. Maloney

Criteria used for categorization of floating roof tank seals:

1. Emission control effectiveness design
2. Ability to maintain contact with tank wall
3. Longevity in service

ATTACHMENT B

INSPECTION PROCEDURES AND COMPLIANCE REPORT FORM

Equipment Needed:

Explosimeter (for internal floating roof tanks), liquid resistant measuring tape or device, tank probe (to measure gaps in tank seals - 1/8 inch, 1/2 inch, 1-1/2 inch), flashlight.

Inspection Procedures:

1. The findings of all tank self-inspections, whether completed or not, shall be recorded on the Rule 463 Compliance Report form prescribed by the Executive Officer and submitted to the District's Refinery Section in accordance with the rule's requirements. If an inspection is stopped before completion, indicate the reason for this action in the Comments section of the compliance report form.

2. During compliance inspection, the person(s) conducting the inspection must have a copy of the Permit to Operate or Permit to Construct pertinent to the tank being inspected. Any discrepancies between the permit equipment description and the existing tank or the permit conditions and the actual operating conditions of the tank as verified during inspection must be recorded in the Comments section of the compliance report form.

3. Inspect the ground level periphery of each tank for possible leaks in the tank shell. Complete the tank information section (D) on the report.

4. For floating roof tanks containing organic liquid not subject to the provisions of subdivision (c) of Rule 463, conduct only steps 1 through 3 of this attachment. For all other floating roof tanks, conduct steps 5 through 7 as applicable.

5. For external floating roof tanks:

    - o From the platform, conduct an overall visual inspection of the roof and check for obvious permit or rule violations. Record the information as shown under section F of the compliance report form.
    - o During visual inspection of the roof, check for unsealed roof legs, open hatches, open emergency roof drains or vacuum breakers and record the findings on the report accordingly. Indicate presence of any tears in the fabric of both seals.
    - o After the visual inspection, conduct an inspection of the entire secondary seal using the 1/8" and 1/2" probes. Record the gap data in section F(4) of the report.
    - o Conduct an inspection of the entire primary seal using the 1/8", 1/2", and 1 1/2" probes. Inspect the primary seal by holding back the secondary seal. Record the gap data in section F(5) of the report.

- o Record all cumulative gaps between 1/8 inch and 1/2 inch; between 1/2 inch and 1-1/2 inch; and in excess of 1-1/2 inches, for both primary and secondary seals in section G of the report. Secondary seal gaps greater than 1/2 inch should be measured for length and width, and recorded in Comments under section (J) of the report.

6. For internal floating roof tanks:

   - o Using an explosimeter, measure the concentration of the vapor space above the internal floating roof in terms of lower explosive limit (LEL), and record the reading in section (E) of the report.
   - o Conduct a visual inspection of the roof openings and the secondary seal, if applicable, and record findings on the report.

7. Complete all necessary calculations and record all required data accordingly on the report.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 COMPLIANCE REPORT

PLEASE COMPLETE FORM LEGIBLY IN BLACK INK

Tank No. _____ SCAQMD Permit No. _____ Inspection Date _____ Time _____

Is This a Follow-up Inspection? No ☐ Yes ☐ If yes, Date of Previous Inspection _____

A. COMPANY INFORMATION:

Company Name _____

Location Address _____ City _____ Zip _____

Mailing Address _____ City _____ Zip _____

Contact Person _____ Title _____

Phone _____

B. INSPECTION CONDUCTED BY:

Name _____ Title _____

Company Name _____ Phone _____

Mailing Address _____ City _____ Zip _____

C. TANK INFORMATION:

Capacity _____ (bbls) Installation Date _____ Tank Diameter _____ (ft) Tank Height _____ (ft)

Product Type _____ Product RVP _____

Type of Tank: Riveted ☐ Welded ☐ Other ☐ (describe) _____

Color of Shell _____ Color of Roof _____

Roof Type: Pontoon ☐ Double Deck ☐ Other(describe) _____

External floating roof ☐ Internal floating roof ☐

D. GROUND LEVEL INSPECTION:

1) Product Temperature _____ ° F 2) Product level _____ (ft)

3) List type and location of leaks found in tank shell.

_____

4) List any discrepancies between the existing equipment and the equipment description on the Permit.

_____

5) Is tank in compliance with Permit conditions? No ☐ Yes ☐ If no, explain _____

_____

_____

E. INTERNAL FLOATING ROOF TANK:

1) Check vapor space between floating roof and fixed roof with expiosimeter. _____ % LEL

2) Conduct visual inspection of roofs and secondary seals, if applicable.

3) Are all roof openings covered? No ☐ Yes ☐ If no, explain in Comments section (J) and proceed to part (H)(6).

F. EXTERNAL FLOATING ROOF TANK:

1) On the diagram (below) indicate the location of the ladder, roof drain(s), anti-rotation device(s), platform, gauge well, and vents or other appurtenances. *Note information in relation to North (to the top of the worksheet).*

2) Describe any uncovered openings found on the roof in the Comments section (J).

3) Identify any tears in the seal fabric. Describe and indicate on diagram (below):

_____

_____

_____

4) Secondary Seal Inspection

a) Type of Secondary Seal: _____

b) Does 1/2" probe drop past seal? No ☐ Yes ☐ if yes, measure length(s) and show on diagram

c) Does 1/8" probe drop past seal? No ☐ Yes ☐ if yes, measure length(s) and show on diagram.

d) Record dimensions of gap for gaps > 1/8" _____ >1/2" _____

NOTE: Record the actual width and cumulative length of gaps in feet and inches.

(Do not include gaps > 1/2" in 1/8" measurements)

5) Primary Seal Inspection

a) Type of Primary Seal: ☐ Shoe; ☐ Tube; ☐ Other _____

b) (shoe seal) does 1-1/2" probe drop past seal? No ☐ Yes ☐; if yes, measure length(s) and show on diagram.

c) (shoe seal) does 1/2" probe drop past seal? No ☐; Yes ☐; if yes, measure length(s) and show on diagram.

d) (tube seal) does 1/2" probe drop past seal? No ☐ Yes ☐ if yes, measure (length(s) and show on diagram.

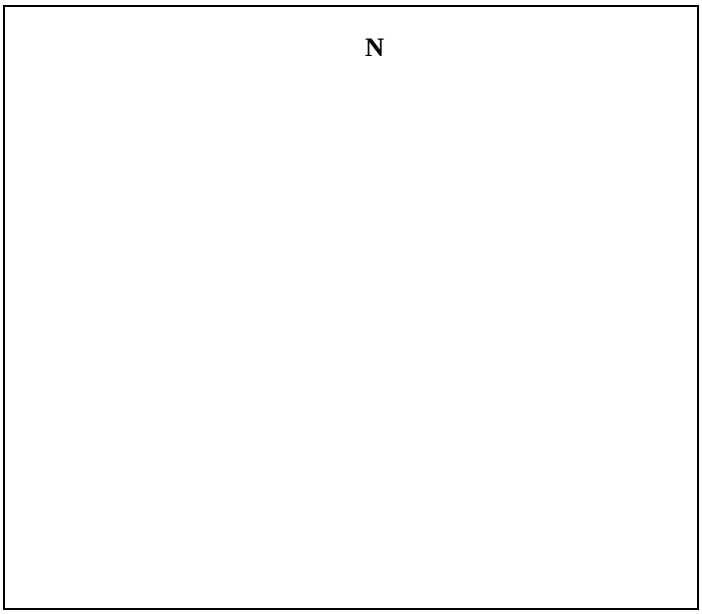
e) (all seal types) does 1/8" probe drop past seal? No ☐ Yes ☐ if yes, measure (length(s) and show on diagram.

f) Record dimensions of gaps for gaps >1/8" _____ > 1/2" _____

>1-1/2" _____ *NOTE: Record the actual width and cumulative length of gaps in feet and inches.*

(Do not include gaps > 1/2" in 1/8" measurements, or gaps > 1-1/2" in 1/2" measurements)

NOTE: Show defects using symbols. Show seal gaps and lengths.



LEGEND:

Equipment:

⊓	Antirotational device
O	Gauge well
⊤	Leg stand
⊗	Roof drain
*	Emergency roof drain
∞	Vacuum breaker
σ	Vent
▭	Platform & ladder

Defects:

ϴ	Leg top
╫	Leg pin
ơ	Open hatch
\/\	Torn seal
|-P-|	Primary seal gap
|-S-|	Secondary seal gap

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 COMPLIANCE REPORT

PLEASE COMPLETE FORM LEGIBLY IN BLACK INK

Tank No. _____ SCAQMD Permit No. _____

IF INTERNAL FLOATING ROOF TANK, PROCEED TO PART H(6).

G. CALCULATIONS - complete all applicable portions of the following:

Record dimensions of indicated gaps [from F(4)(d), F(5)(b), and F(5)(f)]. Record in feet and inches.

Gaps in primary seal between 1/8 and 1/2 inch: _____

Gaps in primary seal between 1/2 and 1-1/2 inch: _____

Gaps in primary seal greater than 1-1/2 inches: _____

Gaps in secondary seal between 1/8 and 1/2 inch: _____

Gaps in secondary seal greater than 1/2 inch: _____

Multiply diameter (ft) of tank to determine appropriate gap limits:

5% circumference = diameter X 0.157 = _____ 60% circ. = diam. X 1.88 = _____

10% circumference = diameter X 0.314 = _____ 90% circ. = diam. X 2.83 = _____

30% circumference = diameter X 0.942 = _____ 95% circ. = diam. X 2.98 = _____

H. DETERMINE COMPLIANCE STATUS OF TANK:

1)	Were any openings found on the roof?		No ☐	Yes ☐
2)	Were any tears in the seals found:		No ☐	Yes ☐
3)	Is the product level lower than the level at which the roof would be floating?		No ☐	Yes ☐
4)	Secondary Seal:			
		Did 1/2" probe drop between shell and seal?	No ☐	Yes ☐
		Did cumulative 1/8" - 1/2" gap exceed 95% circumference length?	No ☐	Yes ☐
5)	Primary Seal			
	Shoe	Did 1-1/2" probe drop between shell and seal?	No ☐	Yes ☐
		Did cumulative 1/2" - 1-1/2" gap exceed 30% circumference length, and		
		Did cumulative 1/8 - 1/2" gap exceed 60% circumference length?	No ☐	Yes ☐
		Did any <u>single continuous</u> 1/8" - 1-1/2" gap exceed 10% circ. length?	No ☐	Yes ☐
	Tube	Did 1/2" probe drop between shell and seal	No ☐	Yes ☐
		Did cumulative 1/8" - 1/2" gap exceed 95% circumference length?	No ☐	Yes ☐
6)	Internal floating roof (installed before 6/1/84) did LEL exceed 50%		No ☐	Yes ☐
		(installed after 6/1/84) did LEL exceed 30%?	No ☐	Yes ☐
7)	Does tank have permit conditions?		No ☐	Yes ☐
		Does tank comply with these conditions?	No ☐	Yes ☐

I. IF INSPECTION WAS TERMINATED PRIOR TO COMPLETION FOR ANY REASON, PLEASE EXPLAIN:

_____

_____

J. COMMENTS:

Use this section to complete answers to above listed items and to describe repairs made to the tank; include date and time repairs were made.

K. ***I(We) certify the foregoing information to be correct and complete to the best of my(our) knowledge.***

Inspection completed by: _____ Date: _____
(signature) (Certification ID #)

Compliance status by: _____ Date: _____
(signature) (Certification ID #)

Company Representative: _____ Date: _____
(signature) (Certification ID #)

SEND COMPLETED REPORT (Both Sheets) TO:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive

FAX: (909) 396-3341

Diamond Bar, CA 91765
Attn: Rule 463 Program Supervisor

FOR SCAQMD USE ONLY: Date received_____

Reviewed by:_____ Date reviewed_____
(signature) (Certification ID #)

Tank Status: [ ] in compliance [ ] in violation, Rule(s)_____
Comments:_____

DATA REPORTING REQUIREMENT FOR ROOF TANKS

The data items shall include, but not be limited to, the following:

A. External Floating Roof Tank

1. **Tank I.D.**
2. **Product Code**
3. **Type of Floating Roof Seal**
4. **Shell Construction**
5. **Reid Vapor Pressure**
*6. **Average Stock Storage Temperature**
7. **True Vapor pressure**
8. **Tank Diameter**
*9. **Wind Speed Exponent**
*10. **Average Wind Velocity**
*11. **Seal Factor**
*12. **Product Factor**
*13. **Vapor Molecular Weight**
*14. **Clingage Factor**
15. **Throughput**
*16. **Density of Liquid Stock**
17. **Total Number of Different Type of Fitting**
18. **Total Roof Fitting Loss Factor**
19. **Vapor Pressure Function**
20. **Roof Fitting Loss**
21. **Standing Loss**
22. **Withdrawal Loss**
23. **Total Loss**
24 **Number of Excess Upset Emissions Incidents**
25. **Total excess Upset Emissions**

B. Internal Floating Roof Tank

1. **Tank I.D.**
2. **Product Code**
3. **Type of Floating Roof Seal**
4. **Shell Construction**
5. **Reid Vapor Pressure**
*6. **Average Stock Storage Temperature**
7. **True Vapor Pressure**
8. **Tank Diameter**
*9. **Wind Speed Exponent**
*10. **Average Wind Velocity**
*11. **Seal Factor**
*12. **Product Factor**
*13. **Vapor Molecular Weight**
*14. **Clingage Factor**
15. **Throughput**
*16. **Density of Liquid Stock**
*17. **Number of Columns**
*18. **Effective Column Diameter**
19. **Total Number of Different Types of Fittings**
*20. **Total Deck Fitting Loss Factor**
21. **Vapor Pressure Function**
*22. **Deck Seam Length Factor**
*23. **Deck Seam Loss per Unit**
24. **Deck Seam Loss**
25. **Deck Fitting Loss**
26. **Standing Loss**
27. **Withdrawal Loss**
28. **Total Loss**
29. **Number of Excess Upset Emissions Incidents**
30. **Total Excess Upset Emissions**

C. Fixed Roof Tank

1. **Tank I.D.**
2. **Product Code**
3. **Vent Type to Vapor Recovery System**
*4. **Average Stock Storage Temperature**
5. **True Vapor Pressure**
6. **Tank Diameter**
*7. **Vapor Molecular Weight**
8. **Average Outage**
*9. **Average Daily Temperature Change**
10. **Throughput**
11. **Turnover Factor**
*12. **Turnovers Per Year**
*13. **Adjustment Factor for Small Tank**
*14. **Paint Factor**
*15. **Crude-Oil Factor (Breathing)**
*16. **Crude-Oil Factor (Working)**
17. **Breathing Loss**
18. **Working Loss**
19. **Total Loss (Without Vapor Recovery)**
*20. **Vapor Recovery System Efficiency**
21. **Total Loss (With Vapor Recovery)**
22. **Number of Excess Upset Emissions Incidents**
23. **Total Excess Upset Emissions**

* **Default values are available from the District**

The Data format and order shall be specified and approved by the Executive Officer.

ATTACHMENT G

(Adopted December 21, 2001)(Amended April 7, 2006)(Amended April 6, 2018)
(Amended November 6, 2020)(PAR 1178 May 5, 2023)

RULE 1178 FURTHER REDUCTIONS OF VOC EMISSIONS FROM STORAGE TANKS AT PETROLEUM FACILITIES

(a) Purpose

The purpose of this rule is to further reduce emissions of volatile organic compounds (VOC) from storage tanks located at petroleum facilities.

(b) Applicability

The rule applies to the ~~all~~ following storage tanks used to store organic liquid ~~aboveground storage tanks that have capacity equal to or greater than 75,000 liters (19,815 gallons), are used to store organic liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions and are~~ located at any Ppetroleum Ff~~f~~acility that emits more than 40,000 pounds (20 tons) per year of VOC in any emission inventory year starting with the emission inventory year 2000.

(1) Aboveground storage tanks with capacity equal to or greater than 75,000 liters (19,815 gallons) storing organic liquid with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions; and

(2) Storage tanks with a Potential For VOC Emissions of 6 tons per year used in Crude Oil And Natural Gas Production Operations.

(c) Definitions

(1) ACCESS HATCH is an opening in the roof with a vertical well and a cover attached to it. Access hatch provides passage for workers and materials through the roof for construction or maintenance.

(2) AMBIENT TEMPERATURE is the temperature of an organic liquid within a storage tank that has been influenced by atmospheric conditions only and is not elevated by a non-atmospheric means of heating at the tank which includes but is not limited to steam, hot water, heaters, heat exchangers, tank insulation, or tank jacketing.

(3) CERTIFIED PERSON is a person who has successfully completed the District tank self-inspection program and a District approved fugitive emissions compliance inspection program, and who holds a certificate issued by the

Executive Officer evidencing that such person is in good standing in this program.

(4) CONTINUOUS SEAL is a seal that forms a continuous closure that completely covers the annular space between the wall of the storage vessel and the edge of the floating roof. A continuous seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

(5) CRUDE OIL AND NATURAL GAS PRODUCTION OPERATIONS are any operations from a ~~the~~ crude oil well to the point of custody transfer to a refinery and any operations from a natural gas well to the natural gas customer.

(6~~5~~) DOMED ROOF is a self-supporting fixed roof attached to the top of an external floating roof tank to reduce evaporative losses.

(7~~6~~) EMISSION CONTROL SYSTEM is a combination of capture system(s) and control equipment used to recover, reduce, remove or control the release of VOC to the atmosphere. Such equipment includes, but is not limited to, absorbers, adsorbers, compressors, condensers, incinerators, flares, boilers, and process heaters.

(8~~7~~) EMISSION INVENTORY YEAR is the annual emission-reporting period beginning from July 1 of the previous year through June 30 of a given year. For example, emission inventory year 2000 covers the period from July 1, 1999 through June 30, 2000.

(9~~8~~) EXTERNAL FLOATING ROOF TANK is a storage tank with a roof consisting of a double deck or pontoon single deck which rests or floats on the liquid being contained.

(10~~9~~) EXEMPT COMPOUNDS are as defined in Rule 102.

(11~~0~~) FACILITY is any equipment or group of equipment or other VOC-emitting activities, which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above- described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility.

(12~~1~~) FIXED ROOF SUPPORT COLUMN AND WELL is a column made of round pipe or of structural shape with an irregular cross section that passes through the

floating roof via a peripheral vertical well and is used to support the roof of an internal floating roof tank.

(13) FIXED ROOF TANK is a storage tank with a permanently affixed roof

(14) FLEXIBLE ENCLOSURE SYSTEM is a VOC emission reduction system made of a VOC impervious material which is resistant to ultraviolet radiation, completely enclosing a slotted guidepole and controls the vapor emission pathway from inside the storage vessel through the guidepole slots to the outside air.

(15) FUEL GAS SYSTEM is the piping and control system that gathers gaseous stream(s) generated by onsite operations and transports the gaseous stream for sale or for use as fuel gas in combustion devices, or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

(16) GAUGE FLOAT is a device that is used to indicate the level of liquid within the tank. The float rests on the liquid surface and is housed inside a well that is closed by a removable cover.

(17) GAUGE HATCH/SAMPLE PORT is an opening in the roof that provides access for gauging or sampling. A gauge hatch/sample port is usually equipped with a closing cover or a funnel and slit-fabric seal to cover the opening.

(18) GUIDEPOLE is an anti-rotation device that is fixed to the top and bottom of the tank, passing through a well that is equipped with a sliding cover. The guidepole is used to prevent adverse movement of the roof and subsequent damage to the roof fittings and rim seals, or as access for level gauging or sampling of the liquid stock. The guidepole can be solid or equipped with slots or holes for gauging purpose.

(19) INTERNAL FLOATING ROOF TANK is a storage tank equipped with a fixed roof and a floating roof which rests on the liquid being contained.

(20) LADDER AND WELL is a ladder that passes through a well, and is used to access the tank bottom of an internal floating roof tank.

(21) LIQUID MOUNTED PRIMARY SEAL is a primary seal that is mounted in full contact with the liquid in the annular space between the tank shell and the floating roof.

(22) MECHANICAL SHOE PRIMARY SEAL is a metallic band attached to the floating roof sliding in contact with the tank shell. The shoes are supported and held against the tank shell by a mechanical device, and are joined together to form a ring. The vapor space between the shoe and the roof is sealed from the atmosphere by a primary seal of coated or VOC impervious fabric.

(232) ORGANIC LIQUID is any liquid containing VOC.

(243) PETROLEUM FACILITY is any facility primarily engaged in the production, refining, storage, transfer or distribution of crude petroleum or petroleum products as defined in the Standard Industrial Classification for crude petroleum and natural gas (SIC code 1311), petroleum refining (SIC code 2911), petroleum bulk stations and terminals (SIC code 5171), or other related industries (e.g., SIC codes 4226, 4612, 4613, 4923 and 5541).

(254) POLE FLOAT is a device located inside a guidepole that floats on the surface of the stored liquid, and is used to indicate the liquid level inside the tank.

(265) POLE SLEEVE is a device that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.

(276) POLE WIPER is a seal that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.

(28) POTENTIAL FOR VOC EMISSIONS means emissions calculated using a generally accepted model or calculation methodology, based on permitted throughput limits or, when permitted throughput limits are not available, based on the maximum throughput in a calendar month, where ~~consisting of~~ at least 30 days of production occurred, in years 2019 to 2022.

(297) PRESSURE-VACUUM VENT is a vent that is used to minimize tank emissions due to breathing effects.

(3028) PRIMARY SEAL is a seal mounted below a secondary seal of a rim seal system that consists of two seals. A primary seal, which is in contact with the floating roof tank shell, can be either mechanical shoe, resilient filled, or wiper type.

(3129) RESILIENT FILLED PRIMARY SEAL is an envelope filled with resilient foam (non-metallic polyurethane) mounted at the rim of the floating roof that makes contact with the shell. A resilient filled nonmetallic primary seal can be liquid-mounted or vapor-mounted.

(320) RIM MOUNTED SECONDARY SEAL is a secondary seal mounted on the rim of the floating roof of a storage tank. Rim mounted secondary seals are effective at reducing losses from the primary seal fabric.

(331) RIM SEAL SYSTEM is a closure device between the shell of the storage tank and the floating roof edge. A rim seal system may consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal.

(342) RIM VENT is a device consisting of a weighted pallet that rests on a valve seat. Rim vents are used to release any excess pressure or vacuum present in the vapor pocket between the seal and the rim area of a floating roof tank.

(353) ROOF DRAIN is a drain on the roof of a floating roof tank that is used to remove rainwater from the floating roof. There are two types of roof drains. A closed roof drain removes the rainwater from the surface of the roof through a flexible hose through the stored liquid prior to exiting the tank. With a closed roof drain, the rainwater does not come in contact with the liquid stored in the tank. An open roof drain is any drain other than the closed roof drain. An open roof drain is typically used only during an emergency.

(364) ROOF LEG is a device that holds the floating roof at a predetermined distance from the tank bottom to allow for tank cleaning or repair. There are two types of roof legs, adjustable or fixed. Fixed legs are attached to the floating roof or hangers suspended from the roof, whereas adjustable legs pass through a well or sleeve, and penetrate the roof.

(375) ROOF OPENING is any opening through a floating roof of a storage tank for any roof fitting including but not limited to access hatch, fixed roof support column and well, gauge float, gauge hatch, sample port, guidepole, ladder and well, rim vent, roof drain, roof leg, and vacuum breaker, and excluding rim seal system.

(386) SECONDARY SEAL is a seal mounted above the primary seal of a rim seal system that consists of two seals. Secondary seals can be shoe mounted or rim-mounted.

(397) SHOE MOUNTED SECONDARY SEAL is a secondary seal mounted on the primary mechanical shoe. Shoe mounted secondary seals are effective at reducing vapor losses from the gaps between the shoe and the tank shell.

(403 8) SLOTTED GUIDEPOLE is a guidepole that has slots or holes through the wall of the guidepole. The slots or holes allow the stored liquid to flow into the pole at liquid levels above the lowest operating level.

(413 8) STORAGE TANK is a stationary ~~aboveground~~ container primarily constructed of non-earthen materials that meets the applicability criteria of this rule~~has capacity equal to or greater than 75,000 liters (19,815 gallons) and is used to store organic liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions~~.

(420) TRUE VAPOR PRESSURE is the vapor pressure of a liquid at actual storage conditions.

(431) VACUUM BREAKER is a device used to equalize the pressure of the vapor space across the deck as the floating roof is either being landed on or floated off its legs. A vacuum breaker consists of a well with a cover. Attached to the underside of the cover is a guided leg long enough to contact the tank bottom as the floating roof is being landed. When in contact with the tank bottom, the guided leg mechanically lifts the cover off the well.

(442) VAPOR MOUNTED PRIMARY SEAL is a primary seal that does not come in contact with the liquid in the annular space between the tank shell and the floating roof.

(453) VAPOR TIGHT CONDITION is a condition that exists when the reading on a portable hydrocarbon analyzer is less than 500 parts per million (ppm), expressed as methane, above background, measured using EPA Reference Method 21.

(464) VISIBLE GAP is a gap of more than 1/8 inch between any gasket or seal and the opening that it is intended to seal. Visible gap for primary and secondary seals is a gap that does not meet the requirements specified in subdivision (d).

(475) VOLATILE ORGANIC COMPOUNDS (VOC) as defined in Rule 102.

(486) WASTE STREAM TANK is a storage tank containing at least 75% water by volume, and some liquid waste stream generated in a manner which contains petroleum liquid, emulsified oil, VOC or other hydrocarbons. For the purpose of this rule, waste stream tanks include waste water tanks and recovered oil (or slop oil) tanks.

(497) WIPER PRIMARY SEAL is a continuous annular blade of flexible material (e.g. rubber, urethane, or foam filled) fastened to a mounting bracket on the deck perimeter that spans the annular rim space and contacts the tank shell. A wiper seal system may consist of a single primary seal, or dual (multiple) seals where one seal is mounted above the other.

(d) Requirements

(1) External Floating Roof Tanks

(A) No later than July 1, 2003, the operator of an external floating roof tank ~~containing organic liquids having true vapor pressure of less than 3 psia at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000~~ shall:

(i) Equip each access hatch and gauge float well with a cover that is gasketed and bolted. The cover shall be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.

(ii) Equip each gauge hatch/sample well with a cover that is gasketed. The cover shall be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.

(iii) Gasket or cover each adjustable roof leg with a VOC impervious sock at all times when the roof is floating.

(iv) Gasket each rim vent. Rim vents shall be closed at all times, with no visible gaps, when the roof is floating; and shall be set to open only when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(v) Gasket each vacuum breaker. Vacuum breakers shall be closed at all times, with no visible gaps, when the roof is floating; and shall be set to open only when the roof is being floated off or is being landed on the roof leg supports.

(vi) Equip each open floating roof drain with a slotted membrane fabric cover or other device with an equivalent control efficiency that covers at least 90 percent of the area of the opening.

(vii) Equip each unslotted guidepole well with a gasketed sliding cover and a flexible fabric sleeve or wiper.

(viii) Equip each unslotted guidepole with a gasketed cover at the end of the pole. The cover shall be closed at all times, with no visible gaps, except when gauging or sampling.

(ix) Equip each slotted guidepole with the following combination of components:

(A) A gasketed cover, a pole wiper, and a pole float with a wiper or seal; or

(B) A gasketed cover, a pole wiper, and a pole sleeve that shall be extended into the stored liquid; or

(C) A gasketed cover, a pole wiper, a pole sleeve that shall be extended into the stored liquid, and a flexible enclosure system.

(x) Maintain the pole float in a condition such that it floats within the guidepole at all times, except when it must be removed for sampling or when the tank is empty. The wiper or seal of the pole float shall be at or above the height of the pole wiper.

(xi) An operator that equips the slotted guidepole with a flexible enclosure system shall ensure that the flexible enclosure system:

(A) Completely encloses the slotted guidepole;

(B) Is free of holes, tears, slots, or rips; and

(C) Is double-clamped tightly at the top of the guidepole and secured to the tank roof with no visible gaps.

(xii) Cover each slotted guidepole opening with a gasketed cover at all times, with no visible gaps, except when the cover must be opened for access.

(xiii) Except for vacuum breakers and rim vents, ensure that each opening in the external floating roof shall provide a projection below the liquid surface.

(xiv) Except for vacuum breakers, rim vents, roof drains, and leg sleeves, equip all other openings in the roof with a gasketed cover or seal which is closed at all times, with no visible gaps, except when the cover or seal must be opened for access.

(B) No later than July 1, 2003, the operator of an external floating roof tank ~~containing organic liquids having true vapor pressure of less than 3 psia at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000~~ shall equip the tank with a rim seal system meeting the following requirements:

(i) The primary seal shall be a mechanical shoe or liquid mounted.

(ii) The secondary seal shall be rim mounted and shall not be attached to the primary seal.

(iii) Gaps between the tank shell and the primary seal shall not exceed 1.3 centimeters (1/2 inch) for a cumulative length of 30 percent of the circumference of the tank, and 0.32 centimeter (1/8 inch) for 60 percent of the circumference of the tank. No gap between the tank shell and the primary seal shall exceed 3.8 centimeters (1-1/2 inches). No continuous gap between the tank shell and the primary seal greater than 0.32 centimeter (1/8 inch) shall exceed 10 percent of the circumference of the tank.

(iv) Gaps between the tank shell and the secondary seal shall not exceed 0.32 centimeter (1/8 inch) for a cumulative length of 95 percent of the circumference of the tank. No gap between the tank shell and the secondary seal shall exceed 1.3 centimeters (1/2 inch).

(v) Mechanical shoe primary seals shall be installed so that one end of the shoe extends into the stored organic liquid and the other end

extends a minimum vertical distance of 61 centimeters (24 inches) above the stored organic liquid surface.

(vi) The geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria specified in clause (d)(1)(B)(iii) for a length of at least 46 centimeters (18 inches) in the vertical plane above the liquid surface.

(vii) The primary seal envelope shall be made available for unobstructed inspection by the Executive Officer along its circumference. In the case of riveted tanks with resilient filled primary seals, at least eight such locations shall be made available; for all other types of seals, at least four such locations shall be made available. If the Executive Officer deems it necessary, further unobstructed inspection of the primary seal may be required to determine the seal's condition along its entire circumference.

(viii) The secondary seal shall be installed in a way that permits the Executive Officer to insert probes up to 3.8 centimeters (1-1/2 inches) in width to measure gaps in the primary seal.

(ix) There shall be no holes, tears or openings in the secondary seal or in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal.

(x) Except during the preventive maintenance, repair, or inspection periods specified in subdivision (f) and (g) of this rule that do not exceed 72 hours with prior notification to the Executive Officer, both the primary seal and the secondary seal shall cover the annular space between the external floating roof and the wall of the storage tank in a continuous fashion, with no visible gaps.

(xi) The operator shall use a rim seal system that is identified on the current list of seals approved by the Executive Officer. The operator requesting the use of an alternative rim seal system shall submit a written application including emission test results and analysis demonstrating that the alternative rim seal system is better in performance and has a rim seal loss emission factor that is less than or equal to the current design.

(C) No later than July 1, 2003, in lieu of complying with the requirement of no visible gap in subparagraph (d)(1)(A), the operator of an external

floating roof tank shall maintain all roof openings in a vapor tight condition at all times except during preventive maintenance, repair, or inspection periods specified in subdivision (f) and (g) of this rule.

(2) Domed External Floating Roof Tanks

(A) Phase I: The operator at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000 shall install domed roofs on all external floating roof tanks that contain organic liquids having true vapor pressure greater than or equal to 3 psia as reported in the Annual Emissions Report pursuant to Rule 301 - Permit Fees for the emission inventory year 2000 according to the following schedule:

(i) At least 1/3 of the tanks subject to this provision by January 1, 2004;

(ii) At least 2/3 of the tanks subject to this provision by January 1, 2006;

(iii) All tanks subject to this provision by January 1, 2008.

(iv) As an alternative to clauses (i) through (iii) above, an operator may submit a compliance plan demonstrating that 75% of the tanks subject to this provision have domes installed by December 31, 2006, and 100% of such tanks shall have domes installed by December 31, 2008. The Executive Officer shall approve any plan which convincingly demonstrates compliance and may impose conditions of approval necessary to assure compliance. The operator shall comply with all provisions and conditions of an approved plan.

(B) Phase II: For additional external floating roof tanks that are not identified under Phase I but contain organic liquids having true vapor pressure greater than or equal to 3 psia as reported in the Annual Emissions Report pursuant to Rule 301 - Permit Fees for any emission inventory year after 2000, the operator who is subject to Phase I shall comply with the requirements specified in subparagraph (d)(2)(A) no later than two years after becoming subject to the rule. In those cases where the two-year period falls within Phase I, the operator shall complete the installation of the domes on all Phase II tanks by no later than January 1, 2010, or December 31, 2010 if choosing to comply with the alternative in clause (d)(2)(A)(iv). The applicability and compliance verification of waste stream tanks and recovered oil tanks shall be based on a monthly average

true vapor pressure greater than or equal to 3 psia. The monthly average true vapor pressure of waste stream shall be determined based on at least one representative sample or multiple samples collected from the top surface layer that is no deeper than 6 inches at a frequency committed to in writing by the affected facility no later than January 1, 2003. The facility shall monitor and keep records of sampling results and monthly average true vapor pressures on site and make them available to the Executive Officer upon request.

(C) In lieu of complying with the requirements in subparagraph (d)(2)(B):

(i) The operator who is subject to Phase I shall accept permit conditions to limit the true vapor pressure of the organic liquids stored in a tank to lower than 3 psia by the end of Phase I.

(ii) The operator of a waste water tank where the installation of a domed roof may create a hazard due to the accumulation of pyrophoric material, as confirmed by the Executive Officer, who is subject to Phase II shall accept permit conditions to limit the true vapor pressure of the organic liquids stored in a tank to lower than 3 psia.

(D) The operator of a domed external floating roof tank shall equip and maintain all roof openings in accordance with the specifications listed in subparagraph (d)(1)(A) by the applicable compliance date in subparagraph (d)(2)(A) and (d)(2)(B). Each slotted guidepole shall be equipped with the following combination of components:

(i) A gasketed cover, a pole wiper, a pole float with a wiper or seal; or

(ii) A gasketed cover, a pole wiper, and a pole sleeve that shall be extended into the stored liquid; or

(iii) A gasketed cover, a pole wiper, and a flexible enclosure system.

(E) The operator of a domed external floating roof tank shall equip the tank with a rim seal system consisting of a primary and a secondary seal meeting the specifications listed in subparagraph (d)(1)(B) by the applicable compliance date in subparagraphs (d)(2)(A) and (d)(2)(B).

(F) The operator shall ensure that the concentration of organic vapor in the vapor space above a domed external floating roof shall not exceed 30 percent of its lower explosive limit (LEL) by the applicable compliance date in subparagraph (d)(2)(A) and (d)(2)(B).

(G) The operator shall submit to the Executive Officer an annual status report including at a minimum all of the following:

(i) A list of all external floating roof tanks subject to the requirement in subparagraphs (d)(2)(A) and (d)(2)(B);

(ii) A general description of each tank including information such as tank identification, District permit number or District device identification, tank type, tank capacity, type of liquid stored, and if applicable, number of representative samples, frequency of sampling, averaging method used to determine the monthly average true vapor pressure of waste stream or recovered oil tanks, and the results.

(iii) A compliance status for each tank; and

(iv) An estimated compliance date for each external floating roof tank that is not yet in compliance with the requirement in subparagraph (d)(2)(A) and (d)(2)(B).

(3) Internal Floating Roof Tanks

When an internal floating roof tank is scheduled for emptying and degassing, but no later than January 1, 2007, the operator of an internal floating roof tank ~~at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000~~ shall:

(A) Equip each fixed roof support column and well with a sliding cover that is gasketed or with flexible fabric sleeves;

(B) Equip each ladder well with a gasketed cover. The cover shall be closed at all times, with no visible gaps, except when the well must be opened for access;

(C) Equip and maintain other roof openings according to the specifications listed in subparagraph (d)(1)(A) or (d)(1)(C). Each slotted guidepole shall be equipped with the following combination of components:

(i) A gasketed cover, a pole wiper, a pole float with a wiper or seal; or

(ii) A gasketed cover, a pole wiper, and a pole sleeve that shall be extended into the stored liquid; or

(iii) A gasketed cover, a pole wiper, and a flexible enclosure system.

(D) Equip the tank with a rim seal system consisting of either a primary seal, or a primary and a secondary seal meeting the specifications listed in subparagraph (d)(1)(B), with the exception of a mechanical shoe primary seal which shall have one end extend a minimum vertical distance of 15

centimeters (6 inches) above the liquid surface and the other end extend into the liquid a minimum of 10 centimeters (4 inches); and

(E) Ensure that the concentration of organic vapor in the vapor space above the internal floating roof shall not exceed 50 percent of its lower explosive limit (LEL) for those installed prior to June 1, 1984 and 30 percent of its LEL for those installed after June 1, 1984.

(4) Fixed Roof Tanks

(A) No later than January 1, 2007, the operator of a fixed roof tank ~~at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000~~ shall equip each fixed roof tank ~~containing organic liquids with true vapor pressure greater than 0.1 psia~~ with an emission control system meeting the following requirements:

(i) The tank emissions are vented to an emission control system with an overall control efficiency of at least 95% by weight or the tank emissions are vented to a fuel gas system.

(ii) Any tank gauging or sampling device on a tank shall be equipped with a vapor tight cover which shall be closed at all times, with no visible gaps, except during gauging or sampling. The roof of such tank shall be properly maintained in a vapor tight condition with no holes, tears or uncovered opening.

(iii) All openings on the roof shall be properly installed and maintained in a vapor tight condition at all times.

(iv) The operator shall equip each fixed roof tank with pressure-vacuum vents that shall be set to the lesser of 10% below the maximum allowable working pressure of the roof or 0.5 psig.

(v) The operator shall maintain pressure-vacuum vents in a vapor tight condition at all times except when the operating pressure of the fixed roof tank exceeds the manufacturer's recommended setting.

(B) In lieu of complying with the requirement in subparagraph (d)(4)(A), the operator may choose to convert the fixed roof tank to an external floating roof tank or an internal floating roof tank meeting the requirements specified in paragraph (d)(1) or (d)(3).

(5) The operator of any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for any emission inventory year subsequent to 2000 reporting pursuant to Rule 301 – Permit Fees shall:

(A) Comply with the requirements for external floating roof tanks specified in paragraph (d)(1) no later than one year after becoming subject to this rule.

(B) Comply with the requirements for domed external floating roof tanks specified in paragraph (d)(2) no later than six years after becoming subject to this rule . Any external floating roof tank that later becomes subject to this requirement based on any subsequent emission inventory year, shall comply with the requirements in paragraph (d)(2) no later than two years after becoming subject to this rule.

(C) Comply with the requirements for internal floating roof tanks specified in paragraph (d)(3) when the tanks are scheduled for emptying and degassing, but no later than five years after becoming subject to this rule.

(D) Comply with the requirements for fixed roof tanks specified in paragraph (d)(4) no later than five years after becoming subject to this rule.

(6) The operator of all tanks for which a permit to construct and operate has been issued by the Executive Officer on and after January 1, 2002 for new construction shall comply with the requirements of subdivision (d).

(e) Identification Requirements

(1) The operator shall permanently identify all tanks subject to the requirements of this rule by a visible sign that includes the tank number, on the outside wall of the tank for inventory, inspection and record keeping purposes.

(2) The operator shall notify the Executive Officer of any change(s) in tank identification.

(f) Monitoring Requirements

(1) External Floating Roof Tanks

To demonstrate compliance with paragraph (d)(1), the operator shall have a certified person conduct the following in accordance with the procedures and guidelines specified in Attachment A:

(A) Conduct an EPA Method 21 inspection or measure gaps of all roof openings on a semiannual basis and each time the tank is emptied and degassed.

(B) Perform complete gap measurements of the rim seal system on a semiannual basis and each time the tank is emptied and degassed.

(2) Domed External Floating Roof Tanks and Internal Floating Roof Tanks

To demonstrate compliance with paragraph (d)(2) and (d)(3), the operator shall have a certified person conduct the following in accordance with the procedures and guidelines specified in Attachment A:

(A) Visually inspect the rim seal system and roof openings and use an explosimeter to measure the lower explosive limit (LEL) on a semiannual basis.

(B) Perform complete gap measurements of the rim seal system each time the tank is emptied and degassed but no less than once every ten years.

(C) Perform complete gap measurements of all roof openings each time the tank is emptied and degassed but no less than once every ten years.

(3) Fixed Roof Tanks

(A) No later than 180 days after the effective date of the requirements, the operator of a facility who elects to install an emission control system to comply with the requirements in clause (d)(4)(A)(i) shall conduct an initial performance testing to determine the overall efficiency of the emission control system and submit a complete test report to the Executive Officer. The performance testing of the emission control system shall be repeated when the system is modified or an operating parameter is changed in a manner that affects the capture or control efficiency. In such case, the performance test shall be conducted and the test report submitted to the Executive Officer within 180 days after the modification. Subsequent to the initial performance test, the operator shall conduct annual performance tests, and shall monitor and record applicable operating parameters on a weekly basis to ensure that the emission control system is achieving 95% overall control efficiency.

(B) To demonstrate compliance with clause (d)(4)(A)(ii), (d)(4)(A)(iii) and (d)(4)(A)(v), the operator shall have a certified person conduct EPA Method 21 measurements on a quarterly basis.

(C) To demonstrate compliance with clause (d)(4)(A)(iv), the operator shall keep engineering data sheet for pressure-vacuum vents installed after January 1, 2002.

(g) Maintenance Requirements

The operator shall repair, or replace any piping, valves, vents, seals, gaskets, or covers of roof openings that are found to have defects or visible gaps, or are not vapor tight and do not meet all the requirements of this rule before filling or refilling an emptied and degassed storage tank, or within 72 hours after an inspection, including one conducted by the operator as specified in subdivision (f), determines that the equipment is not operating in compliance.

(h) Record Keeping and Reporting Requirements

(1) During the inspections specified subdivision (f), the operator shall keep records of all findings, including but not limited to the readings measured according to EPA Reference Test Method 21.

(2) The operator shall record all inspections of primary, secondary seals, a flexible enclosure system (if any), and roof openings on compliance inspection report forms approved by the Executive Officer as described in Attachment A.

(3) The operator shall submit all inspection reports and documents to the Executive Officer semiannually within five working days of completion of the inspections specified in paragraph (f)(1) and (f)(2); and on January 31 and July 31, respectively, upon the completion of two consecutive quarterly inspections conducted as specified in subparagraph (f)(3)(B).

(4) If the operator determines that a tank is in violation of the requirements of this rule during the inspections specified subdivision (f), the operator shall submit a written report to the Executive Officer within 120 hours of the determination of non-compliance, indicating corrective actions taken to achieve compliance.

(5) The operator who elects to install or modify an emission control system to comply with the requirement in clause (d)(4)(A)(i) shall conduct an initial performance test as described in clause (f)(3)(A) and submit a complete test report to the Executive Officer no later than 180 days after the effective date of the requirement for new installation; or 180 days after the modification. Subsequent annual performance test and test report shall be submitted annually within 60 days after the end of each emission inventory year.

(6) The operator shall keep all monitoring, inspection, maintenance, and repair records at the facility for a period of five years and shall make the records available to the Executive Officer upon request.

(i) Test Methods and Procedures

The following test methods and procedures shall be used to determine compliance with this rule. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(1) Measurements of gaseous volatile organic compound leaks shall be conducted according to EPA Reference Method 21 using an appropriate analyzer calibrated with methane.

(2) Organic liquids that are stored at ambient temperatures with a true vapor pressure of greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those with a flash point of less than 100 °F as determined by ASTM Method D-93.

(3) Organic liquids that are stored at above ambient temperatures with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those whose volume percent evaporated is greater than ten percent at an adjusted temperature T_{Adj} as determined by ASTM Method D-86 of:

$$T_{Adj} = 300\ ^oF + T_l - T_a$$

Where:

T_l = Liquid Storage Temperature (^oF)

T_a = Ambient Temperature (^oF) = 70 ^oF

(4) Organic liquids with a true vapor pressure of greater than or equal to 3 psia shall be determined by ASTM Method D-323 for Reid vapor pressure and converted to true vapor pressure using applicable nomographs in EPA AP-42 or District and EPA approved nomographs. The actual storage temperature used for determining true vapor pressure shall be 70 degrees Fahrenheit for organic liquids that are stored at ambient temperatures, and actual storage temperature for organic liquids that are stored at above ambient temperatures.

(5) Control efficiency of an emission control system, on a mass emissions basis, and the VOC concentrations in the exhaust gases shall be determined by U.S. EPA Test Methods 25, 25A; District Method 25.1 - Determination of Total Gaseous Non-Methane Organic Emissions as Carbon; or District Method 25.3 – Determination of Low Concentration Non-Methane Non- Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable.

(6) When more than one test method or set of test methods are specified for any testing, the application of these methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(7) The sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the District Laboratory Approval Program (LAP) for the cited District reference test methods, where LAP approval is available. For District reference test methods for which no LAP program is available, the LAP approval requirement shall become

effective one year after the date that the LAP program becomes available for that District reference test method.

(8) Tests to determine emission factors for an alternative control device for rim seal or deck opening shall accurately simulate conditions under which the device will operate, such as wind, temperature, and barometric pressure. Test methods that can be used to perform the testing required in this paragraph include, but are not limited to, the following methods, which shall be performed by a laboratory certified by American Petroleum Institute (API):

(A) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part A, Wind Tunnel Test Method for the Measurement of Deck-Fitting Loss Factors for External Floating-Roof Tanks;

(B) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part B, Air Concentration Test Method for the Measurement of Rim Seal Loss Factors for Floating-Roof Tanks.

(C) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part E; Weight Loss Test Method for the Measurement of Deck-Fitting Loss Factors for Internal Floating-Roof Tanks.

(j) Exemptions

(1) The provisions of this rule shall not apply to pressurized storage tanks designed to operate in excess of 15 pounds per square inch gauge (psig) without any emissions to the atmosphere except under emergency conditions.

(2) Domed external floating roof tanks installed prior to January 1, 2002 shall be exempt from the requirements of subparagraph (d)(2)(D) and (d)(2)(E) for secondary seals.

(3) Any facility with a facility emission cap equal to or less than 40,000 pounds (20 tons) per year of VOC shall be exempt from the requirements of this rule.

(4) Portable Baker tanks containing organic liquids having true vapor pressures from 0.1 psia to 0.5 psia equipped with carbon canisters to reduce the emissions from the storage tanks to less than 500 ppm outlet concentration shall be exempt from the performance testing requirements specified in clause (d)(4)(A)(i) and subparagraph (f)(3)(A) provided that the operator conducts EPA Reference Method 21 measurement weekly to ensure that the system achieves the emission standard of 500 ppm.

(5) External floating roof tanks having permit conditions that limit the true vapor pressure of the organic liquids stored in the tanks to lower than 3 psia shall be exempt from the requirements of paragraph (d)(2).

(6) External floating roof tanks subject to clause (d)(1)(A)(i) shall be exempt from this requirement until the next time the tank is emptied and degassed, provided that the operator has demonstrated to the satisfaction of the Executive Officer that in order to properly bolt, the covers for access hatches and gauge float wells must be welded. The operator shall use equivalent means, such as clamping, to secure the covers during the interim period.

(7) External floating roof tanks permitted to contain more than 97% by volume crude oil shall be exempt from the doming requirements of paragraph (d)(2)(A) and (d)(2)(B) but shall comply with other remaining applicable requirements of this rule.

ATTACHMENT A

INSPECTION PROCEDURES AND COMPLIANCE REPORT FORMS

Equipment Needed:

Organic Vapor Analyzer (OVA) calibrated with methane in accordance with EPA Test Method 21, explosimeter calibrated with methane (for internal floating roof tanks), liquid resistant measuring tape or device, tank probe (to measure gaps in tank seals - 1/8 inch, 1/2 inch, 1-1/2 inch), flashlight.

Inspection Procedures:

1. The findings of all tank self-inspections, whether completed or not, shall be recorded on the Rule 1178 Compliance Report forms prescribed by the Executive Officer and submitted to the District's Refinery Section in accordance with the rule's requirements. If an inspection is stopped before completion, indicate the reason for this action in the Comments section of the compliance report form.
2. During the compliance inspection, the person(s) conducting the inspection must have a copy of the Permit to Operate or Permit to Construct pertinent to the tank being inspected. Any discrepancies between the permit equipment description and the existing tank or the permit conditions and the actual operating conditions of the tank as verified during inspection must be recorded in the Comments section of the compliance report form.
3. Inspect the ground level periphery of each tank for possible leaks in the tank shell. Complete the tank information section (D) on the report.
4. For external floating roof tanks:
    - o From the platform, conduct an overall visual inspection of the roof and check for obvious permit or rule violations. Record the information as shown under section F of the compliance report form.
    - o During visual inspection of the roof, check for unsealed roof legs, open hatches, open emergency roof drains or vacuum breakers and record the findings on the report accordingly. Indicate presence of any tears in the fabric of both seals.
    - o Conduct an inspection of the roof fittings for vapor tight condition and record any leaks above 500 ppm in the fugitive emissions tank report OR conduct an inspection of the roof fittings using the 1/8" probes.

- o Conduct an inspection of the entire secondary seal using the 1/8" and 1/2" probes. Record the gap data in section F(4) of the report.
- o Conduct an inspection of the entire primary seal using the 1/8", 1/2", and 1-1/2" probes. Inspect the primary seal by holding back the secondary seal. Record the gap data in section F(5) of the report.
- o Record all cumulative gaps between 1/8 inch and 1/2 inch; between 1/2 inch and 1-1/2 inch; and in excess of 1-1/2 inches, for both primary and secondary seals in section G of the report. Secondary seal gaps greater than 1/2 inch should be measured for length and width, and recorded in Comments under section (J) of the report.
- o For slotted guidepoles with a flexible enclosure system, conduct a visual inspection of the flexible enclosure system. Record any holes, tears, slots, or rips in the flexible enclosure system and any tightening or replacement of clamps at the top and the bottom of the flexible enclosure system pursuant to clause (d)(1)(A)(xi).

5. For internal floating roof and domed tanks:
   - o Using an explosimeter, measure the concentration of the vapor space above the floating roof in terms of lower explosive limit (LEL), and record the reading in section (E) of the report.
   - o Conduct a visual inspection of the roof openings and the secondary seal, if applicable, and record findings on the report.
   - o Conduct gap measurements of the rim seal system and roof openings each time the tank is emptied and degassed but no less than once every ten years.
   - o Conduct a visual inspection of the slotted guidepole flexible enclosure system.
6. For fixed roof tanks:
   - o Conduct an inspection of the pressure relief valves, piping, valves and fittings located on the roof for vapor tight condition and record any readings in excess of 500 ppm in the fugitive emissions tank report.
7. Complete all necessary calculations and record all required data accordingly on the report.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
RULE 1178 COMPLIANCE REPORT

PLEASE COMPLETE FORM LEGIBLY IN BLACK INK

SCAQMD ID No.: _____

Tank No. _____ SCAQMD Permit No. _____ Inspection Date _____ Time _____

Is This a Follow-up Inspection? No ☐ Yes ☐ If yes, Date of Previous Inspection _____

A. COMPANY INFORMATION:

Company Name _____

Location Address _____ City _____ Zip _____

Mailing Address _____ City _____ Zip _____

Contact Person _____ Title _____

Phone _____ E-mail _____

B. INSPECTION CONDUCTED BY:

Name _____ Title _____

Company Name _____ Phone _____

Mailing Address _____ City _____ Zip _____

C. TANK INFORMATION:

Capacity _____ (bbls) Installation Date _____ Tank Diameter _____ (ft) Tank Height _____ (ft)

Product Type _____ Product RVP _____

Type of Tank: Riveted ☐ Welded ☐ Other ☐ (describe) _____

Color of Shell _____ Color of Roof _____

Roof Type: Pontoon ☐ Double Deck ☐ Other(describe) _____

External floating roof ☐ Internal floating roof or domed tank ☐ Flexible enclosure system ☐

D. GROUND LEVEL INSPECTION:

1) Product Temperature _____ ° F 2) Product level _____ (ft)

3) List type and location of leaks found in tank shell.

_____

4) List any discrepancies between the existing equipment and the equipment description on the Permit.

_____

5) Is tank in compliance with Permit conditions? No ☐ Yes ☐ If no, explain _____

_____

_____

E. INTERNAL FLOATING ROOF OR DOMED TANK:

1) Check vapor space between floating roof and fixed roof with explosimeter. _____ % LEL

2) Conduct visual inspection of roofs, secondary seals, and slotted guidepole flexible enclosure system, if applicable.

3) Are all roof openings covered? No ☐ Yes ☐ If no, explain in Comments section (J) and proceed to part (H)(6).

F. EXTERNAL FLOATING ROOF TANK (or DOMED TANK AND INTERNAL FLOATING ROOF TANK when needed)

1) On the diagram (below) indicate the location of the ladder, roof drain(s), anti-rotation device(s), platform, gauge well, and vents or other appurtenances. *Note information in relation to North (to the top of the worksheet).*

2) Describe any uncovered openings found on the roof in the Comments section (J). (Refer to Rule 463(a)(1)(F)):

3) Identify any tears in the seal fabric. Describe and indicate on diagram (below):

4) Secondary Seal Inspection

a) Type of Secondary Seal: __

b) Does 1/2" probe drop past seal? No ☐ Yes ☐ if yes, measure length(s) and show on diagram

c) Does 1/8" probe drop past seal? No ☐ Yes ☐ if yes, measure length(s) and show on diagram.

d) Record dimensions of gap for gaps > 1/8" _____ > 1/2" _____

NOTE: Record the actual width and cumulative length of gaps in feet and inches. (Do not include gaps > 1/2" in 1/8" measurements)

5) Primary Seal Inspection

a) Type of Primary Seal: ☐ Shoe; ☐ Tube; ☐ Other ___

b) (shoe seal) does 1-1/2" probe drop past seal? No ☐ Yes ☐; if yes, measure length(s) and show on diagram.

c) (shoe seal) does 1/2" probe drop past seal? No ☐; Yes ☐; if yes, measure length(s) and show on diagram.

d) (tube seal) does 1/2" probe drop past seal? No ☐ Yes ☐ if yes, measure length(s) and show on diagram.

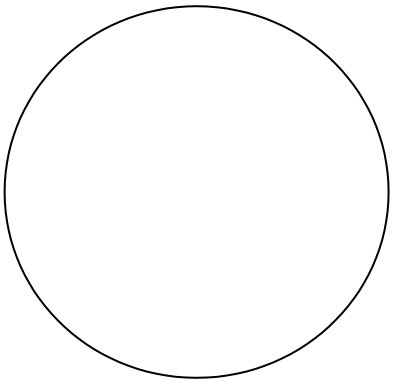
e) (all seal types) does 1/8" probe drop past seal? No ☐ Yes ☐ if yes, measure (length(s) and show on diagram.

f) Record dimensions of gaps for gaps >1/8" _ > 1/2" _____

>1-1/2" _____ *NOTE: Record the actual width and cumulative length of gaps in feet and inches. (Do not include gaps > 1/2" in 1/8" measurements, or gaps > 1-1/2" in 1/2" measurements)*

6) Deck Fitting Inspection
(circle one) does 1/8" probe drop past gasket seal or pass Method 21? No ☐ Yes ☐ if yes, identify

NOTE: Show defects using symbols. Show seal gaps and lengths.



LEGEND:

Equipment:

	Antirotational device
	Gauge well
⊤	Leg stand
	Roof drain
*	Emergency roof drain
∞	Vacuum breaker
σ	Vent
	Platform & ladder

Defects:

	Leg top
╫	Leg pin
	Open hatch
\/\	Torn seal
|-P-|	Primary seal gap
|-S-|	Secondary seal gap

Tank No. _____ SCAQMD Permit No. _____

7) Flexible Enclosure System Inspection

Does flexible enclosure system have any holes, tears, slots, or rips? If yes, identify location and approximate size:	No ☐	Yes ☐
Does the flexible enclosure system have double-clamps at the top that are fitted tightly to prevent fugitive emissions from being released to the outside?	No ☐	Yes ☐
Is the flexible enclosure system properly secured to the roof of the tank, with no visible gaps to prevent fugitive emissions from being released to the outside?	No ☐	Yes ☐

IF INTERNAL FLOATING ROOF OR DOMED TANK, PROCEED TO PART H(6) WHEN APPROPRIATE:

G. CALCULATIONS - complete all applicable portions of the following:

Record dimensions of indicated gaps [from F(4)(d), F(5)(b), and F(5)(f)]. Record in feet and inches.

Gaps in primary seal between 1/8 and 1/2 inch: _____

Gaps in primary seal between 1/2 and 1-1/2 inch: _____

Gaps in primary seal greater than 1-1/2 inches: _____

Gaps in secondary seal between 1/8 and 1/2 inch: _____

Gaps in secondary seal greater than 1/2 inch: _____

Multiply diameter (ft) of tank to determine appropriate gap limits:

5% circumference = diameter X 0.157 = _____ 60% circ. = diam. X 1.88 = _____

10% circumference = diameter X 0.314 = _____ 90% circ. = diam. X 2.83 = _____

30% circumference = diameter X 0.942 = _____ 95% circ. = diam. X 2.98 = _____

H. DETERMINE COMPLIANCE STATUS OF TANK:

1)	Were any openings found on the roof?		No ☐	Yes ☐
2)	Were any tears in the seals found:		No ☐	Yes ☐
3)	Is the product level lower than the level at which the roof would be floating?		No ☐	Yes ☐
4)	Secondary Seal:			
		Did 1/2" probe drop between shell and seal?	No ☐	Yes ☐
		Did cumulative 1/8" - 1/2" gap exceed 95% circumference length?	No ☐	Yes ☐
5)	Primary Seal			
	Shoe	Did 1-1/2" probe drop between shell and seal?	No ☐	Yes ☐
		Did cumulative 1/2" - 1-1/2" gap exceed 30% circumference length, and		
		Did cumulative 1/8 - 1/2" gap exceed 60% circumference length?	No ☐	Yes ☐
		Did any single continuous 1/8" - 1-1/2" gap exceed 10% circ. length?	No ☐	Yes ☐
	Tube	Did 1/2" probe drop between shell and seal	No ☐	Yes ☐
		Did cumulative 1/8" - 1/2" gap exceed 95% circumference length?	No ☐	Yes ☐
6)	Internal floating roof (installed before 6/1/84) did LEL exceed 50%		No ☐	Yes ☐
		(installed after 6/1/84) or domed tank did LEL exceed 30%?	No ☐	Yes ☐
7)	Does tank have permit conditions?		No ☐	Yes ☐
		Does tank comply with these conditions?	No ☐	Yes ☐

I. IF INSPECTION WAS TERMINATED PRIOR TO COMPLETION FOR ANY REASON, PLEASE EXPLAIN:

_____

_____

South Coast Air Quality
Management District
21865 East Copley Drive
Diamond Bar, CA 91765
(909) 396-2000

J. COMMENTS:

Use this section to complete answers to above listed items and to describe repairs made to the tank; include date and time repairs were made.

_____

_____

_____

_____

K. ***I(We) certify the foregoing information to be correct and complete to the best of my(our) knowledge.***

Inspection completed by: _____ Date: _____
(Signature) (Certification ID #)

Compliance status by: _____ Date: _____
(Signature) (Certification ID #)

Company Representative: _____ Date: _____
(Signature) (Certification ID #)

SEND COMPLETED REPORT (both sheets) TO: SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive
Diamond Bar, CA. 91765 FAX: (909)396 -3341
Attn: Rule 1178 Supervising Inspector

FOR SCAQMD USE ONLY: Date received_____

Reviewed by:_____ Date reviewed_____
(Signature) (Certification ID #)

Tank Status: [ ] in compliance [ ] in violation, Rule(s)_____
Comments:_____

RULE 1178 FUGITIVE EMISSIONS TANK REPORT

Company Information							
Company Name							
Address							
Contact/Phone Number							
SCAQMD ID #				Report Date			
Tank ID	**Type**	**Fitting**	**Date**	**Leak Rate**	**Type of Repair**	**Date**	**Post Repair Leak Rate**

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report

Proposed Amended Rule 463 – Organic Liquid Storage; and

Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

May 2023

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD

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Senator (Ret.)
Senate Rules Committee Appointee

Vice Chair: MICHAEL A. CACCIOTTI
Council Member, South Pasadena
Cities of Los Angeles County/Eastern Region

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County of Orange

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Mayor, Riverside
Cities of Riverside County Representative

LARRY MCCALLON
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HOLLY J. MITCHELL
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County of Los Angeles

VERONICA PADILLA-CAMPOS
Speaker of the Assembly Appointee

V. MANUEL PEREZ
Supervisor, Fourth District
County of Riverside

NITHYA RAMAN
Council Member, Fourth District
City of Los Angeles Representative

CARLOS RODRIGUEZ
Council Member, Yorba Linda
Cities of Orange County

JOSÉ LUIS SOLACHE
Council Member, Lynwood
Cities of Los Angeles County/Western Region

EXECUTIVE OFFICER:

WAYNE NASTRI

EXECUTIVE SUMMARY

On September 30, 2022, the United States Environmental Protection Agency (U.S. EPA) published its Limited Approval, Limited Disapproval of California Air Plan Revisions; California Air Resources Board that partially relies on South Coast AQMD Rules 463 – *Organic Liquid Storage* and 1178 – *Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities* to demonstrate Reasonably Available Control Technology (RACT) for the 2008 and 2015 ozone National Ambient Air Quality Standards (NAAQS) for storage tanks subject to U.S. EPA's 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry (Oil and Gas CTG). California Air Resources Board (CARB) has requested that Rules 463 and 1178 be amended to address the RACT deficiencies prior to CARB's Public Hearing in June so that CARB's rule can be reviewed and approved by U.S. EPA to avoid potential sanctions.

Rules 463 and 1178 contain requirements as stringent as RACT. However, the applicability of Rules 463 and 1178 is based on tank capacity and the true vapor pressure of the organic liquid stored. The Oil and Gas CTG applies to storage tanks in the oil and natural gas industry based instead on a storage tank's potential to emit (PTE) and may therefore conceivably apply to tanks that are not currently subject to Rule 463 or Rule 1178. The proposed amendments to Rules 463 and 1178 will align the rules' applicability with the Oil and Gas CTG. Staff has determined that no existing storage tanks will be required to install controls as a result of amending the applicability to include tanks that emit over the PTE threshold specified in the Oil and Gas CTG.

Separately, a best available retrofit control technology (BARCT) analysis for Rule 1178 is ongoing and any recommended amendments resulting from the BARCT analysis will be presented to the South Coast AQMD Governing Board for their consideration at a later date.

BACKGROUND

On September 30, 2022, U.S. EPA published its Limited Approval, Limited Disapproval of California Air Plan Revisions; California Air Resources Board. The action disapproved CARB's demonstration of RACT for the 2008 and 2015 NAAQS for tanks subject to U.S. EPA's Oil and Gas CTG. CARB's RACT demonstration partially relied on Rules 463 and 1178, and RACT deficiencies in regard to their alignment with the Oil and Gas CTG applicability requirements were identified in both rules.

Rule 463 limits VOC emissions from above-ground storage tanks that store organic liquids. Applicable storage tanks include ones that have a design capacity of 19,815 gallons or more or that have a design capacity between 251 and 19,815 gallons and are used to store gasoline. The rule requires floating roofs with seals, or fixed roofs with 95 percent (%) emission control, for storage tanks with capacity of 39,630 gallons or more used to store organic liquid with true vapor pressure (TVP) of 0.5 pound per square inch absolute (psia) or greater, and for storage tanks with capacity of 19,815 gallons used to store organic liquid with TVP of 1.5 psia or greater.

Rule 1178 limits volatile organic compounds (VOC) emissions from storage tanks at petroleum facilities that have emitted more than 20 tons of VOC in any reporting year since the rule's adoption in 2001. Applicable storage tanks have a design capacity of 19,815 gallons or more and store materials with a TVP of greater than 0.1 psia. The rule requires more stringent controls for

storage tanks at higher emitting facilities. Such controls include: gasketed and/or bolted covers, and sleeves and/or wipers on all roof components. Best available rim seal systems and domes are also required for certain tanks.

The recommendation in the Oil and Gas CTG for RACT is a 95 percent emission control standard for storage tanks. Rules 463 and 1178 require at least 95 percent emission control for all storage tanks subject to the rules. However, the Oil and Gas CTG applies to storage tanks with a potential to emit six tons per year or greater and that are used in the oil and natural gas sector. Since Rules 463 and 1178 do not apply to storage tanks based on a tank's potential to emit, but based on design capacity and the true vapor pressure of the liquid stored, the rules potentially do not cover all tanks subject to the Oil and Gas CTG. Proposed Amended Rule 463 (PAR 463) and Proposed Amended Rule 1178 (PAR 1178) will address the identified RACT deficiency by aligning the applicability of each rule with the applicability of the Oil and Gas CTG by including storage tanks covered by the Oil and Gas CTG.

PAR 463 applies to 1,594 storage tanks at 278 facilities. PAR 1178 applies to 1,072 storage tanks at 29 facilities. No additional storage tanks are expected to become subject to Rule 463 or Rule 1178 and be required to install controls as a result of the proposed amendments. Implementation of PAR 463 and PAR 1178 is expected to result in zero emission reductions.

PAR 1178 and PAR 463 were developed through a public process. A Public Workshop for PAR 463 and PAR 1178 was held on March 1, 2023, where staff presented the proposed amended rule language to the general public and to stakeholders, and solicited comments.

REGULATORY HISTORY

Rule 463 was adopted in 1977 and regulates emissions from above-ground storage tanks. Rule 463 requires tanks to have an external floating roof, internal floating roof, or fixed roof and in which the tank is vented to a fuel gas system or vapor recovery system that meets 95 percent or greater control efficiency by weight. The most recent amendments to Rule 463 include removal of the hydrogen sulfide content standard and associated test method shown to be non-reproducible and to harmonize test methods and leak standards with Rule 1178.

Rule 1178 was adopted in 2001 and requires additional emission controls for tanks with capacity of 19,815 gallons or greater used for the storage of organic liquids with a true vapor pressure of greater than 0.1 psia at any petroleum facility that emits more than 20 tons of VOC in any reporting year since 2000. The additional emission controls included domes, gasketed and/or bolted covers with sleeves or wipers on all roof opening, best available rim seal systems, and emission controls systems for fixed roof tanks.

Rule 1178 was amended on April 7, 2006 to allow an alternative for drain covers, include a modified seal requirement, update the inspection form, and clarify compliance schedules. Rule 1178 was amended again on April 6, 2018 to specify requirements for flexible enclosure systems, require repairs or replacements to be conducted within 72 hours of an identified leak, and clarify report submissions. Rule 1178 was amended again on November 6, 2020 to allow the option for an operator to apply for and accept permit conditions to limit the TVP of the organic liquid stored in waste water tanks where the installation of a domed roof may create a hazard due to the accumulation of pyrophoric material.

APPLICABLE INDUSTRIES

PAR 463 applies to 1,594 storage tanks at 278 facilities in the petroleum, natural gas, electricity, generations, and chemical manufacturing and distribution industries. PAR 1178 applies to 1,072 tanks at 29 facilities in the petroleum industry including refineries, bulk storage, terminals, and oil production sites.

PUBLIC PROCESS

PAR 463 and PAR 1178 were developed through a public process. A Public Workshop was held on March 1, 2023, where staff presented the proposed amended rules to the general public and to stakeholders and solicited comments. Staff presented draft versions of rule language in PAR 463 and PAR 1178 specific to addressing the RACT deficiency. In addition, staff presented additional draft rule language in PAR 1178 based on the results of the best available retrofit control technology (BARCT) assessment for leak detection and emission reducing technologies. Discussion on proposed amendments to Rule 1178 included requirements for doming, seals, emission control systems, optical gas imaging (OGI) inspections, recordkeeping and reporting. Stakeholders have requested additional time to work with staff on the proposed requirements pertaining to the BARCT assessment for PAR 1178.

CARB has requested that South Coast AQMD amend Rules 463 and 1178 no later than June 2023 to address the RACT deficiency. To meet CARB's request, PAR 463 and PAR 1178 is proposed to be considered by the South Coast AQMD Governing Board at the Public Hearing scheduled for May 5, 2023 and will only contain those proposed amendments specific to remedying the RACT deficiency. To allow more time for stakeholders to work with staff on the remaining issues pertaining to the BARCT assessment, additional amendments to Rule 1178 to incorporate requirements based on the BARCT assessment will be proposed at a separate Public Hearing tentatively scheduled for August 4, 2023.

SUMMARY OF PROPOSALS

The Oil and Gas CTG applies to storage tanks with a potential to emit 6 tons per year or greater used in the oil and natural gas industry. Storage tanks used in the oil and natural gas industry store organic liquid such as crude oil, condensate, intermediate hydrocarbons, and produced water.

The Oil and Gas CTG describes the oil and natural gas industry as operations involved in the extraction and production of crude oil and natural gas. The natural gas industry also includes processing, transmission, storage, and distribution. Storage tanks in the extraction and production of crude oil includes those used in any operations from the well to the point of custody transfer to a refinery, including those located at stand-alone sites where oil, condensate, produced water or gas from a well is separated, stored or treated. Storage tanks in the natural gas industry include those used in any operations from the natural gas well to the natural gas customer, including distribution. Distribution is the final operation in the natural gas industry and includes all networks that deliver natural gas to business or household customers.

The CTG also specifies how to determine the potential to emit for a storage tank. The potential to emit is based on the maximum average daily throughput in a 30-day period of production prior to a deadline established by the regulating agency. Proposed amendments to Rules 463 and 1178 will align the applicability with the Oil and Gas CTG and include definitions to specify the operations that are involved in the oil and natural gas industry and subject to the Oil and Gas CTG and the method for calculating potential to emit.

Proposed Amended Rule 463

Subdivision (a) – Purpose and Applicability
In addition to the existing applicability, PAR 463 will apply to tanks with Potential For VOC Emissions of six tons per year or greater used in Crude Oil and Natural Gas Production Operations.

Subdivision (b) – Definitions
An existing definition was modified and new definitions were added for clarity and consistency with the proposed changes to applicability.

CRUDE OIL AND NATURAL GAS PRODUCTION OPERATIONS are any operations from a ~~the~~ crude oil well to the point of custody transfer to a refinery and any operations from a natural gas well to the natural gas customer.

This is a new definition that specifies the operations in which storage tanks are used and that may be subject to the proposed amended rule if the tank's Potential For VOC Emissions is six tons per year or greater.

POTENTIAL FOR VOC EMISSIONS means emissions calculated using a generally accepted model or calculation methodology, based on permitted throughput limits or, when permitted throughput limits are not available, based on the maximum throughput in a calendar month, where ~~consisting of~~ at least 30 days of production occurred, in years 2019 to 2022.

This is a new definition that specifies how the Potential For VOC Emissions is calculated to determine applicability. For storage tanks without permitted throughput limits, the potential for VOC emissions must calculated based on the highest throughput in a calendar month where at least 30 days of production occurred, in years 2019 to 2022.

TANK is any stationary reservoir or any other stationary container used for storage of an organic liquid~~,~~ primarily constructed of non-earthen materials.

This definition was modified to include tanks subject to the Oil and Gas CTG which applies to aboveground and underground storage tanks primarily constructed of non-earthen materials.

Subdivision (c) – Tank Roof Requirements
This subdivision was modified to apply to tanks subject to the Oil and Gas CTG.

Subdivision (g) – Exemptions
This subdivision was modified so that exemptions do not apply to tanks subject to the Oil and Gas CTG.

Proposed Amended Rule 1178

Subdivision (b) – Applicability
In addition to the existing applicability, PAR 1178 will apply tanks with Potential For VOC Emissions of six tons per year or greater used in Crude Oil and Natural Gas Production Operations.

Subdivision (c) – Definitions
An existing definition was modified and new definitions were added for clarity and consistency with the proposed changes to applicability.

CRUDE OIL AND NATURAL GAS PRODUCTION OPERATIONS are any operations from a ~~the~~ crude oil well to the point of custody transfer to a refinery and any operations from a natural gas well to the natural gas customer.

This is a new definition that specifies the operations in which storage tanks are used and that may be subject to the proposed amended rule if the tank's Potential For VOC Emissions is six tons per year or greater.

POTENTIAL FOR VOC EMISSIONS means emissions calculated using a generally accepted model or calculation methodology, based on permitted throughput limits or, when permitted throughput limits are not available, based on the maximum throughput in a calendar month, where ~~consisting of~~ at least 30 days of production occurred, in years 2019 to 2022.

This is a new definition that specifies how the potential for VOC emissions is calculated to determine applicability. For storage tanks without permitted throughput limits, the potential for VOC emissions must calculated based on the highest throughput in a calendar month where at least 30 days of production occurred, in years 2019 to 2022.

STORAGE TANK is a stationary container primarily constructed of non-earthen materials that meets the applicability criteria of this rule ~~and is used to store organic liquid~~.

This definition was modified to include tanks subject to the Oil and Gas CTG which applies to aboveground and underground storage tanks primarily constructed of non-earthen materials.

Subdivision (d) – Requirements
This subdivision was modified so that the requirements apply to all tanks applicable to the rule.

EMISSION REDUCTIONS AND COST-EFFECTIVENESS

Staff has not identified any storage tanks that are used in the oil and natural gas industry with a potential to emit six tons per year or greater of VOC that are not already subject to Rule 463 or Rule 1178. Staff does not anticipate that any facilities will need to install controls on existing storage tanks as a result of the proposed amendment. Since no controls are expected to be installed, no costs or emissions reductions are assumed and a cost-effectiveness analysis is not required.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ANALYSIS

Pursuant to the California Environmental Quality Act (CEQA) Guidelines sections 15002(k) and 15061, the proposed project (PAR 463 and PAR 1178) is exempt from CEQA pursuant to CEQA Guidelines section 15061(b)(3). A Notice of Exemption has been prepared pursuant to CEQA Guidelines section 15062, and if the proposed project is approved, the Notice of Exemption will be filed for posting with the State Clearinghouse of the Governor's Office of Planning and Research, and with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino Counties.

SOCIOECONOMIC ASSESSMENT

The proposed amendments to Rules 463 and 1178 are not expected to result in emission reductions and will not significantly affect air quality or emissions limitations. Therefore, no socioeconomic impact assessment is required under California Health and Safety Code sections 40440.8 and 40728.5.

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 South Coast AQMD Governing Board shall 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. In order to determine compliance with Health and Safety Code sections 40727 and 40727.2 require a written analysis comparing the proposed amended rules with existing regulations, if the rules meet certain requirements. The following provides the draft findings.

Necessity
A need exists to amend PAR 463 and PAR 1178 to address RACT deficiencies identified by U.S. EPA.

Authority
The South Coast AQMD obtains its authority to adopt, amend, or repeal rules and regulations from Health and Safety Code sections 39002, 40000, 40001, 40440, 40506, 40510, 40702, 40725 through 40728, 41508, 41700, and 42300 et seq.

Clarity
PAR 463 and PAR 1178 are written or displayed so that their meaning can be easily understood by the persons directly affected by them.

Consistency
PAR 463 and PAR 1178 are in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication
PAR 463 and PAR 1178 will not impose the same requirements as any existing state or federal regulations. The proposed amended rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

Reference
In amending these rules, the following statutes which the South Coast AQMD hereby implements, interprets or makes specific are referenced: AB 617, Health and Safety Code sections 39002, 40001, 40406, 40506, 40702, 40440(a), 40725 through 40728.5, 40920.6, and 42300 et seq.

COMPARATIVE ANALYSIS

Health and Safety Code section 40727.2 requires a comparative analysis of each proposed amended rule with any federal or South Coast AQMD rule applicable to the same source. A comparative analysis is presented below in Table 1.

Table 1 – Comparative Analysis

Rule Element	PAR 1178	PAR 463	40 CFR 60 Subpart Ka	40 CFR 60 Subpart Kb
Applicability	• Storage tanks at facilities emitting 20 tons per year or more in any year since 2000 that: • have capacity of 19,815 gallons or more and stores organic liquid with true vapor pressure of >0.1 psia; or • have potential to emit of 6 tons per year or more and used in oil and natural gas industry	• Storage tanks from 19,815-39,630 gallons storing material with TVP of 1.5 psia or greater • Storage tanks with capacity 39,630 gallons or more storing liquids with TVP of 0.5 psia or greater • Storage tanks from 251 gal to 19,815 gal storing gasoline • Storage tank with potential to emit of 6 tons per year or more used in oil and natural gas industry	• Storage tanks constructed, reconstructed, or modified after May 1978, and prior to July 23, 1984 • Tanks with capacity greater than 40,000 gallons except for tanks with capacity less than 420,000 gallons used to store, process or treat petroleum or condensate	• Storage tanks constructed, reconstructed or modified after July 23, 1984 with capacity of 75 meters^3 (m^3) or greater • Tanks with capacity greater than 75 m^3 storing liquid with true vapor pressure greater than or equal 0.5 psia and tanks with capacity of 75 m^3 – 151 m^3storing liquid with true vapor pressure greater than or equal to 2 psia

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, carbon monoxide (CO), sulfur oxides (SOx), nitrogen oxides (NOx), and their precursors. The proposed amendments do not include new BARCT requirements; therefore, this provision is not applicable.

APPENDIX A: RESPONSES TO PUBLIC COMMENTS

Staff has received several comment letters in response to the Public Workshop for PAR 463 and PAR 1178. Staff has included the comment letters pertaining to the bifurcation of PAR 1178 and addressing the RACT deficiencies in PARs 463 and 1178 in this appendix. The comment letters pertaining to other proposed amendments to Rule 1178 will be addressed in a future Draft Staff Report for PAR 1178. All received comment letters have been posted electronically and are available in the Comment Letter section on the PAR 1178 Proposed Amended Rule Page on the following South Coast AQMD's website:
http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1178/comment-letters

1. Comment Letter from the Regulatory Flexibility Group (Latham & Watkins), received March 2, 2023

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VIA EMAIL

Michael Morris, Planning and Rules Manager
Planning, Rule Development and Implementation
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Regulatory Flexibility Group/Western States Petroleum Association Comments on PAR 1178 – Request for Additional Working Group Meetings

Dear Mr. Morris:

Thank you for the opportunity to submit these comments on the Proposed Amended Rule 1178 ("PAR 1178"). We submit these comments on behalf of the Regulatory Flexibility Group ("RFG") and the Western States Petroleum Association ("WSPA"). RFG is a coalition of California entities whose operations are subject to regulation under the Clean Air Act and corresponding state and regional air quality programs. RFG members include manufacturers, natural gas utilities, and oil and chemical companies. WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport, and market petroleum, petroleum products, natural gas, and other energy supplies in five western states, including California.

As we expressed in our January 4, 2023, letter submitted on behalf of the RFG,[1] we have been concerned with the cost-effectiveness analysis for this PAR. Between the projected doming installation costs, possible lost productivity costs, and assumptions about the useful life of the equipment, we are concerned the analysis has not undergone the stakeholder review needed to demonstrate cost-effectiveness. We previously requested the District undertake the more rigorous average cost-effectiveness, incremental cost-effectiveness, and socioeconomic impact analysis in connection with the rulemaking, as contemplated in the 2016 AQMP under which this current rulemaking was initiated. Given all of this, we were concerned to see the District schedule a Public Workshop and release the rule package ***without scheduling any additional Working Group meetings.***

1-1

Since the January 5, 2023, Working Group meeting, ***Staff has released three different versions of the PAR language***, with some potentially significant changes across those drafts. The

1-2

[1] We have attached our January 4, 2023, letter for your convenience.

regulated community has not had the time to appropriately review and understand the full implications of the changes. While we have certainly appreciated Staff making itself available to discuss these changes over the last several weeks, there simply has not been enough time, nor public process, to ensure an appropriately analyzed and balanced rule is put before the Governing Board for consideration. Based on the language put forward in the most recent draft of February 2023, we continue to have concerns in a number of areas, including:

- The cost-effectiveness analysis;
- Doming installation schedule;
- Optical Gas Imaging (OGI) device compliance timelines and implementation schedules; and
- Other compliance demonstration timelines.

To allow time for the regulated community to work through these concerns with District Staff, we respectfully request that Staff postpone bringing PAR 1178 before the Governing Board in May. Instead we ask that the District hold at least two additional Working Group meetings to work through the remaining issues identified above and any other issues that may be appropriate prior to the Governing Board's consideration.

Thank you for your attention to these comments. If you would like to discuss our concerns and proposal, please contact me at (213) 891-7395, or by email at john.heintz@lw.com.

Sincerely,

John C. Heintz

John C. Heintz
of LATHAM & WATKINS LLP

cc: Michael Krause, Assistant Deputy Executive Officer, SCAQMD
RFG Members
Ramine Cromartie, WSPA
Patty Senecal, WSPA
Christopher Norton, Latham & Watkins

Enc.

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Comment 1-1
Staff has presented costs and the cost-effectiveness analysis for doming in multiple working group meetings and has worked with facilities over several months to obtain cost information and discuss the cost-effectiveness analysis for doming. The current cost-effectiveness for doming is based solely on costs provided by facilities from past and projected doming projects. Staff has not identified more stringent control options that are cost-effective and, as a result, did not present incremental cost-effectiveness in a Working Group Meeting. Incremental cost-effectiveness was presented in the Public Workshop and as stated in the Public Workshop, the socioeconomic assessment will be made publicly available for review and comments at least 30 days prior to the Public Hearing.

Comment 1-2
Staff released initial preliminary draft rule language to allow stakeholders to comment prior to the release of the preliminary draft rule language. As a result, staff received several comments after the release of the initial preliminary draft rule language and revised the rule language based on stakeholder comments. Staff also received information requested from facilities and updated the rule language based on the information received. The intent of updating rule language prior to the release of the Preliminary Draft Rule Language was to allow facilities time to review and comment so that stakeholder input can be considered for the Public Workshop. Staff also held meetings with participating facilities to discuss the initial drafts of the rule language to consider their input for the Public Workshop. Staff continues to be available to discuss PAR 1178.

Comment 1-3
Additional amendments to Rule 1178 to incorporate requirements based on the BARCT assessment will be proposed at a separate Public Hearing tentatively scheduled for August 4, 2023. Staff encourages stakeholders to meet with staff individually to address individual concerns with PAR 1178.

2. Comment Letter from Western States Petroleum Association, Received March 15, 2023

WSPA

Patty Senecal
Director, Southern California Region

March 15, 2023

Mike Morris
Manager, Planning and Rules
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Via e-mail at: mmorris@aqmd.gov

Re: SCAQMD Proposed Amended Rule 1178, Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities, and Proposed Amended Rule 463, Organic Liquid Storage – WSPA Comments on Rulemaking Process and Preliminary Draft Rule Language

Dear Mr. Morris,

Western States Petroleum Association (WSPA) appreciates the opportunity to participate in the Working Group Meetings (WGMs) for South Coast Air Quality Management District (SCAQMD or District) Proposed Amended Rule 1178, Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities (PAR 1178). WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport, and market petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies in five western states including California. WSPA has been an active participant in air quality planning issues for over 30 years. WSPA-member companies operate petroleum refineries and other facilities in the South Coast Air Basin that will be impacted by PAR 1178 and Proposed Amended Rule 463 (PAR 463), Organic Liquid Storage.

The California Health & Safety Code (HSC) requires the District, in adopting any Best Available Retrofit Control Technology (BARCT) standard, to ensure the standard is technologically feasible, and take into account "environmental, energy, and economic impacts" and to assess the cost-effectiveness of the proposed control options.[1] Cost-effectiveness is defined as the cost, in dollars, of the control alternative, divided by the emission reduction benefits, in tons, of the control alternative.[2] If the cost per ton of emissions reduced is less than the established cost-effectiveness threshold, then the control method is considered to be cost-effective. Cost-effectiveness evaluations need to consider both capital costs (e.g., equipment procurement, shipping, engineering, construction, and installation) and operating (including expenditures associated with utilities, labor, and replacement) costs. Currently, the District is applying a cost-effectiveness threshold of $36,000 per ton of VOC emissions reduced, consistent with the 2022 Air Quality Management Plan (2022 AQMP).[3]

As discussed in previous comment letters, the cost-effectiveness analysis presented is incomplete. In estimating costs for doming of external floating roof tanks, the District has not included potential operation and maintenance (O&M) costs. When O&M costs are included, the

2-1

[1] California Health & Safety Code §40406, 40440, 40920.6.
[2] California Health & Safety Code §40920.6.
[3] SCAQMD Draft Final 2022 Air Quality Management Plan. Available at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan.

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doming of crude oil tanks exceeds the cost effectiveness threshold.[4,5] Additionally, SCAQMD has significantly overstated the potential emission reductions for doming of external floating roof crude oil tanks by assuming an RVP of 8.19 psi across all tanks modeled. WSPA believes Staff needs to consider RVP as a parameter in establishing appropriate classes and categories for the BARCT assessment and revise the emissions modeling to obtain more realistic emissions estimates.

WSPA understands from the March 17, 2023 Stationary Source Meeting presentation that Staff is now proposing a bifurcation of PAR 1178 to address EPA concerns separately from other updates related to the BARCT analysis.[6] WSPA agrees that there are a number of outstanding issues with the BARCT analysis that need to be resolved which will require additional stakeholder engagement. For this reason, WSPA supports the District's proposal to bifurcate the proposed rule. 2-1

On February 17, 2023, SCAQMD released new preliminary draft rule language for PAR 1178 and PAR 463.[7,8] WSPA offers the following comments.

1. **SCAQMD has held no additional WGMs since its release of PAR 1178 rule language. The District has held no working group meetings for PAR 463 since opening the rule for amendment. SCAQMD has stated that they are adding rule language to PAR 463 and PAR 1178 to address the EPA disapproval of the California Air Resources Board (CARB) Oil and Gas Regulation. WSPA agrees that SCAQMD needs to bifurcate the rule so CARB requirements can be addressed in a timely manner. This will also allow additional time to ensure proper analysis and provide an opportunity for stakeholders to comment on the unsettled portions of the draft rule language.**

   SCAQMD held seven working group meetings during the PAR 1178 rulemaking process, with the most recent meeting held on January 5, 2023. SCAQMD has held no working group meetings for PAR 463. 2-2

   Since the last PAR 1178 working group meeting held on January 5th, SCAQMD has released the following[9]:
   - January 11, 2023 – PAR 1178 Initial Preliminary Draft Rule Language
   - February 9, 2023 – PAR 463 Initial Preliminary Draft Rule Language
   - February 9, 2023 – Updated PAR 1178 Initial Preliminary Draft Rule Language
   - February 17, 2023 – PAR 1178 Preliminary Draft Rule Language
   - February 17, 2023 – PAR 463 Preliminary Draft Rule Language
   - February 17, 2023 – PAR 463/1178 Preliminary Draft Staff Report

   A public workshop was held for both rulemakings on March 1, 2023. It is highly unusual for the District to release draft rule language with no opportunity for stakeholder discussion at a 2-3

[4] WSPA Comment Letter dated January 19, 2023. Available in PAR 1178 Preliminary Draft Staff Report at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par-1178-preliminary-draft-staff-report.pdf?sfvrsn=6.
[5] WSPA Comment Letter dated March 1, 2023.
[6] SCAQMD Stationary Source Committee presentation, March 17, 2023. Available at: http://www.aqmd.gov/docs/default-source/Agendas/ssc/ssc-agenda-3-17-2023.pdf?sfvrsn=10.
[7] PAR1178: Preliminary Draft Rule Language. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par-1178-preliminary-draft-rule-language.pdf?sfvrsn=6/
[8] PAR 463: Preliminary Draft Rule Language. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par-463-preliminary-draft-rule-language.pdf?sfvrsn=6.
[9] PAR 1178 and PAR 463 Rulemaking Documents. Available at: http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1178/

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working group meeting. In this case, there have been significant changes in each of the draft rule language documents since the last WGM, and it has been difficult to fully review and understand the impacts of these changes. Similarly, while the District presented their incremental cost effectiveness analysis in the Preliminary Draft Staff Report (PDSR), there has been no opportunity for stakeholders to review and comment on this analysis in a working group meeting.

While the District has stated that they are open to receiving information on such items as O&M costs and timeline for inspections, SCAQMD has not conducted an organized survey to request such information from facilities subject to these rules.

SCAQMD has stated that they are adding rule language to PAR 463 and PAR 1178 to address the EPA disapproval of the California Air Resources Board (CARB) Oil and Gas Regulation. CARB has requested that the changes impacting the EPA disapproval be in place by May 2023 so that they can meet their timeline. The proposed updates to address EPA disapproval are not applicable to petroleum refinery operations and address VOC emissions in the upstream oil and natural gas industry. The current rulemaking provides a sense of urgency that is more focused on completing the rulemaking process based on CARB's timeline than providing an appropriately analyzed and factually supported rule with stakeholder input. SCAQMD needs to bifurcate the rule such that CARBs concerns can be addressed on the appropriate timeline. This would also allow stakeholders time to fully understand the impacts of the rule language and the ability to comment on appropriate changes, and for the District to make adjustments as necessary.

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2. **The District has not completed all of the cost-effectiveness analyses required under the California Health and Safety Code. Incremental cost-effectiveness of each progressively more stringent control option must be analyzed and compared to the cost-effectiveness threshold.**

HSC Section 40920.6 prescribes two different cost-effectiveness analyses for BARCT rules[10]:

- 40920.6(a)(2): "Review the information developed to assess the cost-effectiveness of the potential control option. For purposes of this paragraph, "cost-effectiveness" means the cost, in dollars, of the potential control option divided by emission reduction potential, in tons, of the potential control option."; and
- 40920.6(a)(3): "Calculate the incremental cost-effectiveness for the potential control options identified in paragraph (1). To determine the incremental cost-effectiveness under this paragraph, the district shall calculate 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."

In the Public Workshop held on March 1, 2023, the District presented estimated emission reductions from each proposed BARCT requirement.[11] Proposed requirements include:

- Weekly OGI inspections

[10] California Health and Safety Code 40920.6.
[11] PAR 1178 Public Workshop. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/pars-463-1178_public-workshop.pdf?sfvrsn=6.

- Doming for crude oil tanks
- 98% emission control for fixed roof tanks
- Secondary seals for internal floating roof tanks
- More stringent gap requirement

The District has not performed an incremental cost effectiveness analysis that evaluates each of the above control technologies against the other. Weekly OGI inspections for various types of tanks, including those that are <0.1 psi total vapor pressure, should be evaluated on an incremental basis to understand the incremental cost effectiveness of each control option. An incremental analysis on OGI inspections should be performed as follows:

1. Weekly OGI inspections for all tanks including those with less than 0.1 psia TVP;
2. Weekly OGI inspections for internal floating roof tanks greater than 0.1 psia TVP;
3. Weekly OGI inspections for domed external floating roof tanks greater than 0.1 psia TVP;
4. Weekly OGI inspections for external floating roof tanks greater than 0.1 psia TVP;
5. Weekly OGI inspections for fixed roof tanks greater than 0.1 psia TVP

Further incremental analysis should be performed to understand how the cost-effectiveness of the above OGI inspections and other proposed requirements compare, including:

6. More stringent gap requirements;
7. Secondary seals for internal floating roof tanks greater than 0.1 psia TVP; and
8. Doming for tanks storing material greater than 3 psia TVP.

Such incremental cost-effectiveness analyses are necessary to evaluate the cost per emission reduction for each progressively more stringent control option as compared to the next less expensive control option. Since the District is required to perform both cost-effectiveness evaluations to determine a BARCT standard, the District must include both analyses in its evaluation of proposed BARCT limits.

2-6

3. **PAR 1178(b), Applicability:**

The proposed rule language for the applicability section would remove the reference to true vapor pressure of organic liquids in storage tanks. Removal of this reference would result in tanks that were previously exempt from the rule (e.g., diesel or jet fuel storage tanks) becoming subject to the rule. SCAQMD has provided no technical basis for such a scope change. Absent this, the reference to true vapor pressure requirements should be re-added to the proposed rule.

The current rule language states that the rule applies to storage tanks used to store organic liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions. The applicability section in the proposed rule language removes the reference to the true vapor pressure of the organic liquid stored. Removal of this reference would cause tanks that were previously exempt from the rule, such as diesel or jet fuel storage tanks, becoming subject to the rule. SCAQMD has provided no technical basis for such a change, nor have they presented stakeholders with impacts or costs. The Preliminary Draft Staff Report also does not describe this change in the section that discusses updates made to the applicability language. Since SCAQMD has provided no information demonstrating that organic liquids with a true vapor pressure less than 5 mm Hg have the potential to cause

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considerable emissions, WSPA recommends that the PAR 1178 Applicability section be updated as follows:

(b) Applicability
The rule applies to all aboveground Storage Tanks that have capacity equal to or greater than 75,000 liters (19,815 gallons), are used to store Organic Liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions and are located at any Petroleum Facility that emits more than 40,000 pounds (20 tons) per year of VOC as reported in the Annual Emissions Report pursuant to Rule 301 - Permit Fees in any emission inventory year starting with the Emission Inventory Year 2000. This rule also applies to all aboveground Storage Tanks with Potential for VOC Emissions of 6 tons per year or greater used in Crude Oil Production.

4. PAR 1178(c), Definitions.

The District should update the definition of Emission Inventory Year to align with the District's Annual Emissions Reporting (AER) program requirements. Additionally, WSPA recommends an exemption from OGI inspections for Out of Service tanks and is therefore proposing a new definition be added for Out of Service.

(c)(7): Emission Inventory Year

2-6

Facilities within the SCAQMD are required to report emissions under the Annual Emissions Reporting (AER) Program. This program requires reporting based on a calendar year (referred to as "Data Year").[12] The definition of Emission Inventory Year should be updated to be consistent with the AER requirements.

WSPA recommends that the definition of Emission Inventory Year be updated as follows:

EMISSION INVENTORY YEAR is the annual emission-reporting period from January 1 – December 31 ~~beginning from July 1 of the previous year through June 30 December 31 of a given year. For example, Emission Inventory Year 2000 covers the period from July 1, 1999 through June 30, 2000~~.

(c): Out of Service

WSPA is proposing a new exemption from OGI inspections for tanks that are out of service. WSPA is therefore proposing a new definition be added to Section (c). The suggested definition is presented below:

[New Section]
OUT OF SERVICE means the tank has lost suction, has met the requirements of Rule 1149, and is open to the atmosphere.

5. PAR 1178(d), Requirements:

[12] SCAQMD Annual Emission Reporting Overview. Available at: https://www.aqmd.gov/home/rules-compliance/compliance/annual-emission-reporting.

SCAQMD is proposing more stringent rim seal gap requirements and more stringent control efficiency for emission control systems. Staff have not performed the analyses required by the California Health and Safety Code to demonstrate that the proposed requirements are both technically feasible and cost effective. Further, the District is taking credit for emission reductions even though they state that there are no costs associated with certain proposed requirements. If the tanks already meet the proposed requirements, as asserted in the PDSR, then there would be no creditable reductions available.

(d)(1)(C): Rim Seal Requirements

SCAQMD has proposed modifying the gap specifications in section (d)(1)(C)(iii). Staff noted that they examined gap measurement inspection reports of a "statistically significant percentage" of tanks and found that all tanks reviewed would be in compliance with more stringent gap requirements.[13] Because the 10% of tanks reviewed were found to be in compliance with the proposed requirement, SCAQMD reports it did not perform a cost-effectiveness analysis for the proposed change.

The California Health and Safety Code (HSC) states[14]:

(a) Prior to adopting rules or regulations to meet the requirement for best available retrofit control technology pursuant to Sections 40918, 40919, 40920, and 40920.5, or for a feasible measure pursuant to Section 40914, districts shall, in addition to other requirements of this division, do all of the following:

(1) Identify one or more potential control options which achieves the emission reduction objectives for the regulation.

(2) Review the information developed to assess the cost-effectiveness of the potential control option. For purposes of this paragraph, "cost-effectiveness" means the cost, in dollars, of the potential control option divided by emission reduction potential, in tons, of the potential control option.

The District has identified a potential control option. However, Staff have not performed the stringent analysis required by the HSC to ensure that the control is both technically feasible and cost-effective. Relying on results from tank inspections on only 10% of tanks, dismisses the possibility that a significant percentage of tanks may not be able to comply with the revised limits. Rim seals on existing tanks were designed and engineered to meet the gap specifications in the current rule. Because tanks are not round, if a facility adjusts the rim seal gap on one section of a tank, it could affect the rim seal gap at other parts of the tank. Thus, changing the gap specifications as proposed could potentially result in a refinery being required to completely reengineer both the floating roof and its seal.

Such a proposal would require a complete BARCT analysis, including evaluation of technical feasibility, potential compliance costs, and potential emission reductions benefits. To our knowledge, SCAQMD has not performed an evaluation on the technical feasibility or potential

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[13] PAR 1178 Working Group Meeting #5. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par1178-wgm5-final.pdf?sfvrsn=12.
[14] California Health and Safety Code §40920.6. Available at: https://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-40920-6/.

compliance cost. Interestingly, even though the District states that all tanks already meet the revised gap requirement, they are still taking credit for reductions in the amount of 0.01 tons VOC per day.[15] If all tanks are meeting the proposed requirement, which has not been shown, then there would be no reductions expected. WSPA recommends that SCAQMD remove the proposed changes to section (d)(1)(C).

(d)(4)(A)(i): Fixed Roof Tanks

SCAQMD has proposed that Fixed Roof Tank emissions be vented to a Fuel Gas System or an Emissions Control System with an overall control efficiency of 98%. The control efficiency in the current rule is 95%. In the Preliminary Draft Staff Report, SCAQMD notes that the most common type of vapor recovery system used on fixed roof tanks are combustion systems, with one supplier guaranteeing 98% control efficiency on such systems.[16] Adsorption systems have higher capital costs and are less desirable for tanks, and the same supplier guaranteed 95% control efficiency for such systems.[17] The District reviewed four initial performance tests, which all showed greater than 99% control efficiency.[18] The District has not defined the number of vapor recovery systems in the regulated community, nor have they presented information that supports their claim that existing operating emission control systems already meet the proposed control efficiency.[19] Current permits are issued based on a 95% control efficiency. If the District intends to update the control efficiency requirement, they should provide further information to support the assertion that this requirement can be met by all existing fixed roof tanks with vapor recovery systems. If the District is unable to provide technical evidence to support their assertion, such a rule change would require a complete BARCT analysis, including evaluation of technical feasibility and potential compliance costs.

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Furthermore, it is unclear why the District is claiming 0.02 tons per day of VOC emission reductions from this proposed change. If the existing emission control systems already meet the proposed control efficiency, as asserted in the PDSR, then there would be no creditable reductions available.

WSPA recommends that the language revert back to the current rule language:

The tank emissions are vented to an emission control system with an overall control efficiency of at least 95% by weight or the tank emissions are vented to a fuel gas system.

6. PAR 1178(f), Inspection and Monitoring requirements:

Section (f)(4) proposes requirements for Optical Gas Imaging (OGI) inspections and requires that a demonstration of compliance be made within 24 hours of detection of visible vapors. The proposed rule further states that if compliance with applicable requirements cannot be demonstrated or is not determined, within 24 hours, the Storage Tank is deemed non-compliant. Some tanks may show evidence of vapors

[15] SCAQMD PAR 1178 Working Group Meeting #5. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par1178-wgm5-final.pdf?sfvrsn=12.
[16] SCAQMD Preliminary Draft Staff Report. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par-1178-preliminary-draft-staff-report.pdf?sfvrsn=6.
[17] Ibid.
[18] Ibid.
[19] SCAQMD PAR 1178 Working Group Meeting #7 Presentation. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par-1178_wgm7_fin.pdf?sfvrsn=6.

during an OGI inspection, even when the tank is operating in compliance with rule requirements. The statement regarding non-compliance should therefore be stricken from the proposed rule language. Additionally, if a tank is found to have visible vapors, but is operating in compliance, no repairs or adjustments would be made. However, this same result would be expected during the next inspection. A facility would be forced to monitor, assess compliance, and monitor again in an endless cycle. A timeline should be added for tanks that are already demonstrated to be in compliance to break the cycle of re-inspecting every time visible vapors are detected.

Section (f)(4) sets forth the requirements for Optical Gas Imaging (OGI) Inspections. Section (f)(4)(C) requires that the Tank Farm Inspection be conducted at least every 7 calendar days since the previous inspection. This requirement will cause issues in planning, as the facilities will need to bring the inspection forward a day each time there is a holiday. WSPA recommends that the frequency be updated to once each calendar week.

Section (f)(4)(E) states that demonstrations of compliance with Section (d) requirements must be made within 24 hours. 24 hours is an extremely short timeframe in which to access the tank and perform an inspection. Gap measurements must be performed inside a tank. A facility would need to quiet the tank prior to entering to verify compliance. This can be difficult on a tank under high use. Three (3) days is a more reasonable time schedule to demonstrate compliance. Additionally, the rule language should specify the methodology for determining compliance with Section (d) requirements.

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More importantly, some tanks may show evidence of visible vapors during an OGI inspection, even when the tank is operating in compliance with rule requirements. If a tank is found to have visible vapors, but is operating in compliance, no repairs or adjustments would be made. However, this same result could be expected during the next OGI inspection. A facility could be forced to monitor, assess compliance, and monitor again in an endless cycle. A timeline should be added for tanks that are already demonstrated to be in compliance to break the cycle of re-inspecting every time evidence of vapors is found.

Finally, the presence of visible vapors does not necessarily indicate that a tank is not in compliance. The rule provides limits on gap length and cumulative length. It is understood that there are working and breathing losses from these tanks. Section (d)(1)(D) states:

> *(d)(1)(D) …Rim Seal Systems are not required to be free of Visible Vapors during a Component Inspection.*

The statement regarding non-compliance in (f)(4) should therefore be stricken from the proposed rule language.

WSPA recommends the proposed language be updated as follows:

> *(f)(4) Optical Gas Imaging Instrument (OGI) Inspections*
> *Effective January 1, 2024, the owner or operator shall demonstrate compliance with subparagraphs (d)(1)(D), (d)(2)(C), (d)(3)(C) and (d)(4)(C), by conducting OGI inspections in accordance with the following requirements:*

(A) Inspections shall be conducted by a person who has completed a manufacturer's certification or training program for the OGI device used to conduct the inspection.

(B) The person conducting the inspection shall operate and maintain the OGI device in accordance with the manufacturer's specifications and recommendations.

(C) Tank Farm Inspections shall be conducted at least ~~every 7 calendar days since the last Tank Farm Inspection was conducted~~ once per week.

(D) Component Inspections shall be conducted for floating roof tanks according to the following schedules:
(i) In the 3rd month after an inspection required by paragraph (f)(1) for external floating roof tanks.
(ii) Semi-annually for domed External Floating Roof Tanks and Internal Floating Roof Tanks.

(E) Demonstration of compliance with subparagraphs (d)(1)(B), (d)(1)(C), clause (d)(4)(A)(ii)-(iii) or (d)(4)(A)(v), shall be made using the methodology specified in (f)(1), (f)(2), or (f)(3), as applicable, within ~~24 hours~~ 3 days from when Visible Vapors were detected. ~~If compliance with applicable requirements cannot be demonstrated or is not determined, within 24 hours, the Storage Tank is non-compliant~~ If an inspected tank is demonstrated to be in compliance, another demonstration of compliance is not required unless evidence of Visible Vapors is found and 3 months have elapsed since the previous demonstration of compliance.

2-6

7. PAR 1178(g), Maintenance Requirements

WSPA recommends that the proposed rule language be updated to allow a facility 3 days to repair a tank instead of 72 hours. This update would make the language consistent with the requirements of Rules 1173 and 1176.

PAR 1178(g) proposes new maintenance requirements in response to deficiencies found during inspections. WSPA recommends that SCAQMD update the allowable timeframe for repairs to 3 calendar days to be consistent with Rules 1173 and 1176. WSPA proposes language be updated as follows:

(g) The owner or operator shall repair, or replace any materials or components, including but not limited to, piping, valves, vents, seals, gaskets, or covers of Roof Openings or seals that do not meet all the requirements of this rule before filling or refilling an emptied and degassed storage tank, or within ~~72 hours~~ 3 calendar days after an inspection, including one conducted by the owner or operator or the contracted third-party as specified in subdivision (f).

8. PAR 1178(h), Record Keeping and Reporting Requirements

The presence of visible vapors is not necessarily indicative of a tank being out of compliance. Therefore, a facility should not be required to notify the Executive Officer

each time visible vapors are detected. A record of such detections will be maintained on site in accordance with the rule. Additionally, SCAQMD is proposing video recordings of the OGI inspections. It is unclear how the video capture will contribute to rule compliance. WSPA recommends that this requirement be removed from the rule language.

For inspections required by subparagraph (f)(4), the proposed rule language requires that all visible vapors be reported to the Executive Officer within 8 hours of detection. As discussed in Comment 5, the presence of visible vapors is not necessarily indicative of a tank being out of compliance. A facility should not be required to notify the Executive Officer of the presence of visible vapors unless a tank is found to be non-compliant. Additionally, a facility is required to maintain records of visible vapors under Section (h)(2)(B), so there will be a record to refer back to as needed.

SCAQMD is requiring that records of leaks identified with an OGI device include a digital recording of the leak for a minimum of 5 seconds. It is unclear how this video capture will contribute to compliance. WSPA recommends this requirement be removed from the rule language.

WSPA recommends the proposed language be updated as follows:

(h) Reporting and Recordkeeping Requirements
(1) …

(2) For OGI inspections required by subparagraph (f)(4), the owner or operator shall: 2-6

~~*(A) Report all Visible Vapors to the Executive Officer by phone (1-800-CUTSMOG or 1-800-288-7664) within 8 hours of detection.*~~

(B) Keep records of Component Inspections, including tank identification, date of inspection and findings. Findings shall include identification of Storage Tanks from which Visible Vapors were identified, any determinations made pursuant to subparagraph (f)(4)(E), and corrective measures taken, if applicable.

(C) Keep records Visible Vapors detected during a Tank Farm Inspection, including tank identification, date of inspection, and findings. Findings shall include identification of tanks from which Visible Vapors were identified, any determinations made pursuant to subparagraph (f)(4)(E), and corrective measures taken, if applicable.

~~*(D) Record all Visible Vapors from tanks for a minimum of 5 seconds. Digital recordings shall be accurately time-stamped and kept on-site for a minimum of 2 years to be made available to the Executive Officer upon request.*~~

9. PAR 1178(j), Exemptions

The District has not provided a technical basis for expanding the scope of Rule 1178 to tanks with a true vapor pressure less than or equal to 5 mm Hg, nor has the District assessed the impacts for such inclusion. These tanks should continue to be exempt

from all rule requirements. Separately, tanks that are out of service should be exempt from the requirements of OGI inspections.

As discussed in Comment 2, the District has provided no technical basis for inclusion of tanks with a true vapor pressure less than or equal to 5 mm Hg in the rule, nor have they provided any analysis of the impact to the regulated community from this inclusion. Therefore, WSPA recommends that the rule language continue to exempt storage tanks with a true vapor pressure less than or equal to 5 mm Hg.

WSPA recommends the proposed language be updated as follows:

> *(j)(2) Storage Tanks that do not have a Potential For VOC Emissions of 6 tons per year or greater used in Oil Production and are storing Organic Liquid ~~with a True Vapor Pressure equal to or less than 5 mm Hg (0.1 psi) absolute under actual storage conditions~~ are exempt from the requirements of this rule, with the exception of the requirements specified in paragraphs (f)(4), (h)(1) and (h)(6), provided the owner or operator demonstrates that the Organic Liquid stored has a True Vapor Pressure of 5 mm Hg (0.1 psi) absolute or less under actual storage conditions semi-annually.*

PAR 1178(j) should also include an exemption from OGI inspections for tanks that are out of service.

WSPA recommends the PAR1178 language be updated to include the following:

[New Section]

> *(j)(6) An owner or operator of a Fixed Roof Tank, an External Floating Roof Tank, an Internal Floating Roof Tank, and Domed External Floating Roof Tank shall be exempt from OGI inspections required by subparagraph (f)(4) if the subject tank is Out of Service.*

WSPA appreciates the opportunity to provide these comments related to PAR 1178. As outlined above, there are multiple items requiring further analysis and thorough discussion prior to rule adoption. The District and stakeholders need more time to ensure the necessary changes are incorporated into the rule. The District should bifurcate the rule such that the language necessary to address the EPA disapproval of the California Air Resources Board (CARB) Oil and Gas Regulation is incorporated in a timely manner, while still allowing the necessary time for stakeholder comment, further analysis, and revisions as appropriate.

We look forward to continued discussion of this important rulemaking. If you have any questions, please contact me at (310) 808-2144 or via e-mail at psenecal@wspa.org.

Sincerely,

Patty Senecal

Western States Petroleum Association 970 West 190th Street, Suite 304, Torrance, CA 90502 310.808.2146
wspa.org

2-6

Cc: Wayne Nastri, SCAQMD
Sarah Rees, SCAQMD
Michael Krause, SCAQMD
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Comment 2-1
Staff appreciates your comments and will respond to comments regarding other proposed amendments to Rule 1178 that are not associated with addressing the RACT deficiency in the Draft Staff Report for PAR 1178 that is tentatively scheduled to be heard by the South Coast AQMD Governing Board in August 2023.

Comment 2-2
Staff has stated in Working Group Meeting #5 that U.S. EPA has identified deficiencies in Rules 463 and 1178 and that staff is working with U.S. EPA to address the deficiency. In Working Group Meeting #7, staff presented the proposed rule concepts that included how the RACT deficiency would be addressed. Staff released initial preliminary draft rule language prior to the release of the Preliminary Draft Rule Language informing stakeholders of the rule language that addresses the RACT deficiency. Subsequently, staff presented PARs 463 and 1178 in the Public Workshop.

Comment 2-3
Staff released initial preliminary draft rule language to allow stakeholders to comment prior to the release of the preliminary draft rule language. As a result, staff received several comments after the release of the initial preliminary draft rule language and revised the rule language based on stakeholder comments. Staff also received information requested from facilities and updated the rule language based on the information received. The intent of updating rule language prior to the release of the Preliminary Draft Rule Language was to allow facilities time to review and comment so that stakeholder input can be considered for the Public Workshop. Staff also held meetings with participating facilities to discuss the initial drafts of the rule language to consider their input for the Public Workshop. Staff continues to be available to discuss PAR 1178 prior to the release of the Draft Rule Language. Staff released the Preliminary Draft Staff Report for stakeholder review two weeks prior to the Public Workshop that detailed the incremental cost-effectiveness analysis.

Comment 2-4
Over several months, staff has worked with stakeholders to obtain cost information regarding controls and encourages stakeholders that want to provide information regarding O&M costs to do so.

Comment 2-5
PARs 463 and 1178 applicability has been revised to only include tanks that are subject to the U.S. EPA's 2016 CTG. The 2016 CTG includes tanks with a potential for VOC emissions of six tons per year or more that are used in the oil and natural gas production. The rule language includes a definition to define which operations are considered Crude Oil and Natural Gas Production Operations.

Comment 2-6
Staff appreciates your comments and will respond to comments regarding other proposed amendments to Rule 1178 that are not associated with addressing the RACT deficiency in the Draft Staff Report for PAR 1178 that is tentatively scheduled to be heard by the South Coast AQMD Governing Board in August 2023.

ATTACHMENT I

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SUBJECT: **NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

PROJECT TITLE: **PROPOSED AMENDED RULE 463 – ORGANIC LIQUID STORAGE, AND PROPOSED AMENDED RULE 1178 – FURTHER REDUCTIONS OF VOC EMISSIONS FROM STORAGE TANKS AT PETROLEUM FACILITIES**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (South Coast AQMD), as Lead Agency, has prepared a Notice of Exemption pursuant to CEQA Guidelines Section 15062 – Notice of Exemption for the project identified above.

If the proposed project is approved, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino Counties. The Notice of Exemption will also be electronically filed with the State Clearinghouse of the Governor's Office of Planning and Research for posting on their CEQAnet Web Portal which may be accessed via the following weblink: https://ceqanet.opr.ca.gov/search/recent. In addition, the Notice of Exemption will be electronically posted on the South Coast AQMD's webpage which can be accessed via the following weblink: http://www.aqmd.gov/nav/about/public-notices/ceqa-notices/notices-of-exemption/noe---year-2023.

NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

To:	County Clerks for the Counties of Los Angeles, Orange, Riverside and San Bernardino; and Governor's Office of Planning and Research – State Clearinghouse	**From:**	South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765

Project Title: Proposed Amended Rule 463 – Organic Liquid Storage, and Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities.

Project Location: The proposed project is located within the South Coast Air Quality Management District's (South Coast AQMD) jurisdiction, which includes the four-county South Coast Air Basin (all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties), and the Riverside County portion of the Salton Sea Air Basin and the non-Palo Verde, Riverside County portion of the Mojave Desert Air Basin.

Description of Nature, Purpose, and Beneficiaries of Project: Proposed Amended Rule (PAR) 463 and PAR 1178 contain changes to address deficiencies identified by the United States Environmental Protection Agency (U.S. EPA) in California Air Resources Board's (CARB's) Oil and Gas Methane rule which is designed to implement Reasonably Available Control Technology (RACT) requirements for sources subject to the U.S. EPA's 2016 Control Techniques Guidelines (2016 CTG) for the Oil and Gas Industry that include storage tanks, and which partially relies on Rules 463 and 1178 to achieve 95 percent emission control or greater for storage tanks subject to the 2016 CTG. PAR 463 and PAR 1178 address the RACT deficiency by modifying the applicability to include storage tanks subject to the 2016 CTG, which have a potential to emit six tons per year or greater of volatile organic compounds (VOC) and are used in crude oil production. Staff has identified certain storage tanks that are not subject to PAR 463 and PAR 1178, but in review, those storage tanks either already have adequate air pollution controls or lack the potential to emit six tons or more of VOC per year. This review did not reveal any storage tanks that would be impacted in terms of newly requiring construction due to changes to applicability. Accordingly, implementation of PAR 463 and PAR 1178 will expand the applicability of both rules to include storage tanks covered by the 2016 CTG but will not result in emission reductions or modifications to storage tanks subject to the rules.

Public Agency Approving Project:	**Agency Carrying Out Project:**
South Coast Air Quality Management District	South Coast Air Quality Management District

Exempt Status: CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption

Reasons why project is exempt: South Coast AQMD, as Lead Agency, has reviewed the proposed project (PAR 463 and PAR 1178) pursuant to: 1) CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA; and 2) CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA. Because PAR 463 and PAR 1178 contain minor revisions and clarifications to the applicability provisions in each rule and will not require physical modifications, it can be seen with certainty that implementing the proposed project would not cause a significant adverse effect on the environment. Therefore, the proposed project is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption.

Date When Project Will Be Considered for Approval (subject to change):
South Coast AQMD Governing Board Public Hearing: May 5, 2023

CEQA Contact Person:	**Phone Number:**	**Email:**	**Fax:**
Jivar Afshar	(909) 396-2040	jafshar@aqmd.gov	(909) 396-3982
PAR 463 and PAR 1178 Contact Person:	**Phone Number:**	**Email:**	**Fax:**
Melissa Gamoning	(909) 396-3115	mgamoning@aqmd.gov	(909) 396-3982

Date Received for Filing: _____ **Signature:**

(Signed and Dated Upon Board Approval)
Barbara Radlein
Program Supervisor, CEQA
Planning, Rule Development, and Implementation

ATTACHMENT J

Proposed Amended Rule 463 Organic Liquid Storage

Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

BOARD MEETING

MAY 5, 2023

Rules 463 and 1178

- Rule 463 regulates VOC emissions from organic liquid storage tanks and includes requirements for tank controls, inspections, reporting and recordkeeping
- Rule 1178 regulates VOC emissions from organic liquid storage tanks located at higher emitting petroleum facilities and contains more stringent control requirements

Need for Proposed Amendments

- U.S. EPA issued a limited disapproval of CARB's Oil and Gas Methane Rule
  - Applicable to tanks covered by U.S. EPA's 2016 Control Techniques Guidelines (CTG) for Oil and Natural Gas Industry
- Rules 463 and 1178 do not apply to same category of tanks as the CTG
- PAR 463 and PAR 1178 will align applicability with the CTG to apply to all tanks covered by the CTG
- CARB requesting amendments to address Reasonably Available Control Technology (RACT) deficiency no later than June 2023 to avoid possible sanctions

U.S. EPA's Oil and Gas CTG Applicability

- Requires at least 95 percent emission control for tanks with potential to emit of 6 tons per year or more
- Rules 463 and 1178 require 95% or better emission control for all tanks based on tank capacity and true vapor pressure of organic liquid stored
- CTG defines oil and natural gas industry operations
  - Oil industry includes operations from the well to the point of custody transfer to a refinery
  - Natural gas industry includes operations from the well to the customer

Proposed Amendments - Applicability

- PAR 463 and PAR 1178 will retain existing applicability and expand applicability to include tanks subject to the U.S. EPA's CTG
- PAR 463 and 1178 will apply to all storage tanks with potential for VOC emissions of 6 tons per year or greater used in crude oil and natural gas production operations
- Definitions added to clarify applicability

Cost-Effectiveness and Emission Reductions

- Staff has not identified any tanks that potentially meet the applicability threshold of 6 tons per year and are not already equipped with controls that meet RACT
- No emission reductions or costs expected from the implementation of PAR 463 and PAR 1178
- Staff plans to amend Rule 1178 again later this year to address actions specified in the Wilmington, Carson, and West Long Beach (WCWLB) Community Emission Reduction Plan (CERP)

Staff Recommendation

- Not aware of any key remaining issues
- Recommendation is to adopt Resolution:
  - Determines that PAR 463 and PAR 1178 are exempt from CEQA
  - Amends Rule 463
  - Amends Rule 1178