BOARD MEETING DATE: April 6, 2018 AGENDA NO. 24

PROPOSAL: Determine that Proposed Amendments to Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities and Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II Are Exempt from CEQA; and Amend Rules 1178 and 219

SYNOPSIS: PAR 1178 will incorporate provisions that allow the use of a flexible enclosure for slotted guidepoles for petroleum storage tanks under certain conditions. Additionally, PAR 219 will exempt from permitting slotted guidepoles that meet specific emission control configurations that are specified in PAR 1178.

COMMITTEE: Stationary Source, February 16, 2018, Reviewed

RECOMMENDED ACTIONS:
Adopt the attached Resolution:
1. Determining that the proposed amendments to Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities and Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, are exempt from the requirements of the California Environmental Quality Act; and
2. Amending Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities; and Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II.

Wayne Nastri
Executive Officer

PF:SN:DD:MM:KE

Background

Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities, was adopted in 2001 to further reduce emissions of volatile organic compounds (VOC) from storage tanks located at petroleum facilities. The requirements of the rule apply to aboveground storage tanks that have a capacity of greater than 75,000 liters (or 19,815 gallons), are used to store organic liquids, and are located at any petroleum facility that emits more than 20 tons per year of VOC. Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, was adopted in 1976 and is an

administrative rule that identifies equipment, processes and operations that emit small amounts of air contaminants that do not require written permits, except for equipment, processes and operations subject to subdivision (s) – Exceptions.

During the May 2017 rule development process to amend Rule 219 stakeholders requested consideration for exempting Flexible Enclosure Systems used to control emissions from slotted guidepoles. The adoption Resolution for Proposed Amended Rule (PAR) 219 directed staff to work with stakeholders to amend Rule 1178 to incorporate VOC control technologies for guidepoles in floating roof tanks as recognized by the U.S.EPA in its 2000 Storage Tank Emission Reduction Partnership Program (STERPP) agreement. The Board also directed staff to explore mechanisms to minimize permitting impacts when addressing VOC control technologies for guidepoles in floating roof tanks that are subject to Rule 1178.

Proposal

PAR 1178 will incorporate the use of a Flexible Enclosure System as a VOC emission reduction option for floating roof tanks with slotted guidepoles. This option specifically allows facilities to replace a pole float and a pole float wiper (or pole float seal) with a Flexible Enclosure System that completely encloses the slotted guidepole in internal and domed external floating roof tanks. For external floating roof tanks, the proposed amendment will allow the optional replacement of a pole float with a pole sleeve or a pole sleeve in combination with a Flexible Enclosure System. PAR 1178 also includes clarifications, including the inspection procedures and entries to compliance report forms that facilitate the inclusion of the Flexible Enclosure System as a control option.

PAR 219 provides an exemption from permitting the replacement of a pole float used to control emissions from a slotted guidepole in floating roof storage tanks, provided there is a pole sleeve or a pole sleeve in combination with a Flexible Enclosure System.

Public Process

During the rulemaking process two working group meetings were held, on December 12, 2017 and February 14, 2018. A public workshop was held on January 11, 2018.

Key Issues

Staff is not aware of any key issues.

California Environmental Quality Act

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, the SCAQMD, as lead agency for the proposed project, has reviewed the proposed amendments to Rules 1178 and 219 in accordance with: 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. SCAQMD staff has determined that it can be seen with certainty that there is no possibility that the proposed amendments to Rules 1178 and 219 may have a significant adverse effect on the environment. Therefore, the project is considered to be exempt

from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Activities Covered by General Rule. A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 – Notice of Exemption. If the project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties.

Socioeconomic Analysis

PAR 1178 clarifies rule requirements and provides additional regulatory flexibility. Specifically, the proposed amendments will allow facilities to replace a pole float and float wiper/seal with a Flexible Enclosure System, which completely encloses the slotted guidepole in floating roof tanks. The cost of installing a Flexible Enclosure System for a 48-foot tall tank is estimated at $5,500 with an additional cost of $2,200 for an optional transition box. The proposed amendment that allows the use of the Flexible Enclosure System is completely voluntary and as such will have no adverse socioeconomic impacts. Proposed amendments to Rule 219 will provide cost savings to affected facilities by not requiring permits for slotted guidepole Flexible Enclosure Systems.

AQMP and Legal Mandates

Pursuant to Health & Safety Code Section 40460(a), the SCAQMD is required to adopt an Air Quality Management Plan (AQMP) demonstrating compliance with all state and federal regulations and standards. The SCAQMD is required to adopt rules and regulations that carry out the objectives of the AQMP.

The proposed amendments to Rule 1178 will incorporate VOC control technologies for guidepoles in floating roof tanks as recognized by U.S. EPA in their 2000 STERPP agreement. In addition, the proposed amendments to Rule 219 will minimize permitting impacts when addressing VOC control technologies for guidepoles in floating roof tanks that are subject to Rule 1178.

Implementation and Resource Impacts

Existing SCAQMD resources will be used to implement Proposed Amended Rules 1178 and 219.

Attachments

A. Summary of Proposal
B. Key Issues and Responses
C. Rule Development Process
D. Key Contacts List
E. Resolution
F. Proposed Amended Rule 1178
G. Proposed Amended Rule 219
H. Final Staff Report for Proposed Amended Rules 1178 and 219
I. Notice of Exemption
J. Board Meeting Presentation

ATTACHMENT A

SUMMARY OF PROPOSAL

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

Proposed Amended Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II

PAR 1178

Added provision to allow the following Flexible Enclosure System configuration options when a (slotted guidepole) pole float is removed:

- Internal Floating and Domed External Floating Roof Tanks
  - Replace with Flexible Enclosure System
- External Floating Roof Tanks
  - Replace with combination of Flexible Enclosure System and pole sleeve

Added requirements for Flexible Enclosure System:

- Completely enclose the slotted guidepole
- Free of holes, tears, slots or rips
- Double clamped tightly at the top and secured to the tank roof with no visible gaps

Amended existing rule language to:

- Require that repairs or replacements be conducted within 72 hours after an inspection (including one conducted by operator) where a defect, visible gap or non-vapor tight condition determines non-compliance;
- Clarify that semiannual inspection reports for floating roof tanks be submitted on January 1 and July 1, upon completion of two (2) consecutive quarterly inspections; and
- Require visual inspections of flexible enclosure systems and reporting of data compiled

PAR 219

Paragraph (m)(25):

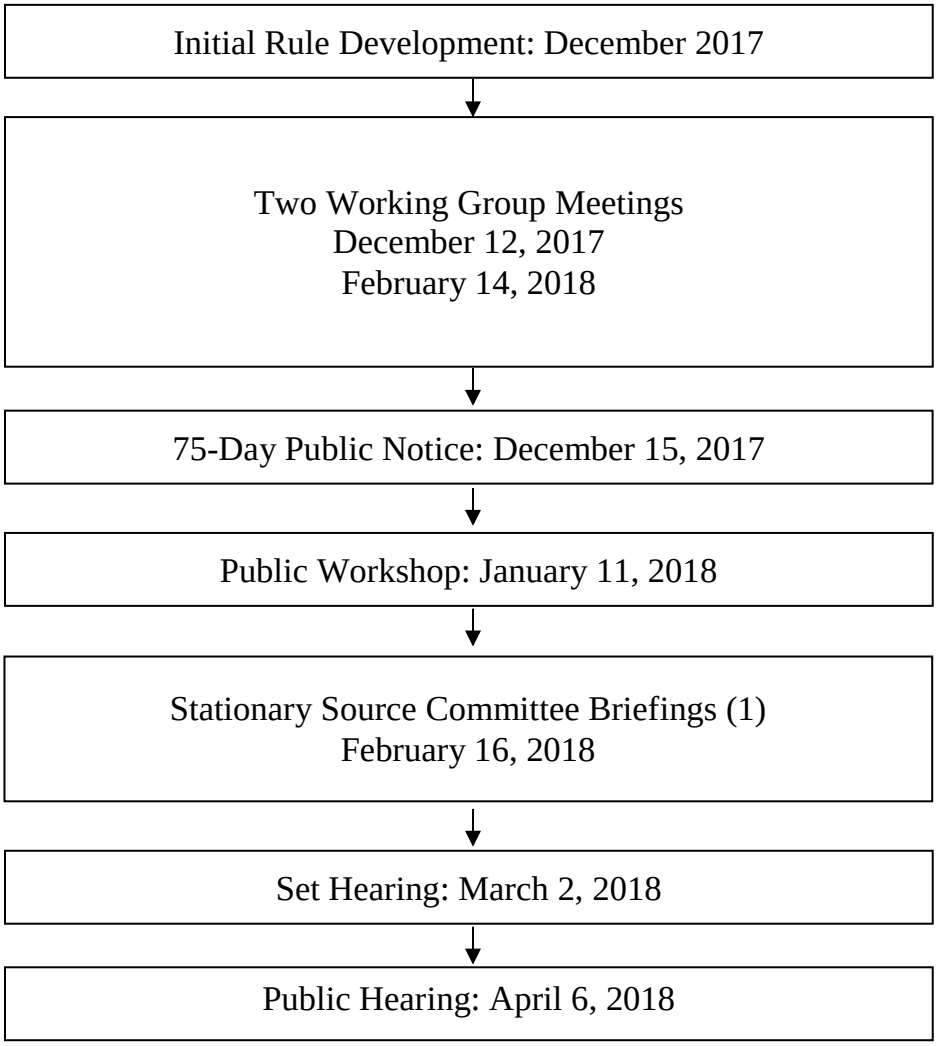
- Allows a floating roof tank pole float to be replaced with:
  - A pole sleeve; or
  - A pole sleeve in combination with a Flexible Enclosure System
- Overrides paragraph (s)(1) – No Exemption from Written Permits; but still requires compliance with applicable NSPS or NESHAPS requirements
- Does not limit or excuse the duty to comply with separately applicable permit revision requirements of Reg. XXX – Title V permits

ATTACHMENT B
KEY ISSUES AND RESPONSES

Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities Proposed Amended Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II
Key Issues Staff is not aware of any key issues.

ATTACHMENT C

RULE DEVELOPMENT PROCESS
Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities
Proposed Amended Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II



4 months spent in rule development
1 Public Workshop
2 Working Group Meetings

ATTACHMENT D

KEY CONTACTS LIST

ALG Corporation

Andeavor

Andeavor Logistics

Beacon Energy Services

Chemoil

Chevron Corporation

California Independent Petroleum Association (CIPA)

Equilon

Edgington Oil

Global Oil

Greka Oil and Gas Company

Kinder Morgan

Medallion California Properties

M & C Technology Group

NuStar Energy

Paramount Petroleum Corporation

Phillips 66

Plains West Coast Terminals/Pacific Pipelines

Signal Hill Petroleum

Torrance Refining Company

Valero

Vopak

World Oil

Western States Petroleum Association (WSPA)

ATTACHMENT E

RESOLUTION NO. 18-_____

A Resolution of the Governing Board of the South Coast Air Quality Management District (SCAQMD) determining that the proposed amendments to Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities and Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II are exempt from the requirements of the California Environmental Quality Act (CEQA).

A Resolution of the SCAQMD Governing Board amending Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities and Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II.

WHEREAS, the SCAQMD Governing Board finds and determines that Proposed Amended Rules 1178 and 219 are considered a "project" pursuant to CEQA Guidelines, Section 15002 (k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA; and

WHEREAS, the SCAQMD 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 of Proposed Amended Rules 1178 and 219, pursuant to such program (SCAQMD Rule 110); and

WHEREAS, SCAQMD Governing Board finds and determines that it can be seen with certainty that there is no possibility that the proposed project may have any significant effects on the environment, and is therefore, exempt from CEQA pursuant to CEQA Guidelines Section 15061 (b)(3) – Activities Covered By General Rule; and

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

WHEREAS, Proposed Amended Rules 1178 and 219, and supporting documentation, including but not limited to the Notice of Exemption, the Socioeconomic Impact Assessment, the Final Staff Report, and this April 6, 2018 Board letter were presented to the SCAQMD Governing Board and the SCAQMD Governing Board has reviewed and considered the entirety of this information, as well as has taken and considered staff testimony and public comment prior to approving the project; and

WHEREAS, Proposed Amended Rules 1178 and 219 are not control measures in the 2016 Air Quality Management Plan (AQMP) and thus, were not ranked by cost-effectiveness relative to other AQMP control measures in the 2016 AQMP; and

WHEREAS, California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD 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 SCAQMD Governing Board has determined that a need exists to amend Rules 1178 and 219 in order to clarify existing rule requirements and provide additional regulatory flexibility; and

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

WHEREAS, the SCAQMD Governing Board obtains its authority to adopt, amend or repeal rules and regulations from Sections 39002, 39650 et seq., 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41511, 41700, and 41706 of the California Health and Safety Code; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Amended Rules 1178 and 219, as proposed to be adopted, are written and displayed so that their meaning can be easily understood by persons directly affected by them; and

WHEREAS, the SCAQMD Governing Board has determined that Rules 1178 and 219, as proposed to be amended, are in harmony with, and not in conflict with, or contradictory to, existing statutes, court decisions, or state or federal regulations; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Amended Rules 1178 and 219, as proposed to be adopted, 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 SCAQMD; and

WHEREAS, the SCAQMD Governing Board, in adopting this regulation, references the following statutes which the SCAQMD hereby implements, interprets or makes specific: the provisions of California Health and Safety Code Sections 39002 (local and state agency responsibilities), 40001 (rules to achieve and maintain ambient air quality standards) and Sections 40506 and 42300 (rules to establish permit system); and

WHEREAS, California Health and Safety Code Section 40727.2 requires the SCAQMD 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 SCAQMD's comparative analysis of Proposed Amended Rule 1178 is included in the staff report; and

WHEREAS, the SCAQMD Governing Board has determined that the Socioeconomic Impact Assessment, as contained in the Final Staff Report, of Proposed Amended Rules 1178 and 219 is consistent with the March 17, 1989 Governing Board Socioeconomic Resolution for rule adoption; and

WHEREAS, the SCAQMD Board has actively considered the Socioeconomic Impact Assessment, as contained in the Final Staff Report, and has found that the proposed amendments will have no adverse socioeconomic impacts; and

WHEREAS, the SCAQMD Governing Board has determined that the Socioeconomic Impact Assessment, as contained in the Final Staff Report, is consistent with the provisions of California Health and Safety Code Sections 40440.8, 40728.5, and 40920.6; and

WHEREAS, the SCAQMD staff conducted a public workshop regarding Proposed Amended Rules 1178 and 219 on January 11, 2018; and

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

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

WHEREAS, the SCAQMD Governing Board specifies the Manager overseeing the rule development for Proposed Amended Rules 1178 and 219 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed project 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 SCAQMD Governing Board does hereby determine, pursuant to the authority granted by law, that the proposed amendments to Rules 1178 and 219 are exempt from CEQA pursuant to CEQA Guidelines Section 15061 (b)(3) – Activities Covered by General Rule. This information was presented to the SCAQMD Governing Board, whose members reviewed, considered and approved the information therein prior to acting on the proposed amendments to Rules 1178 and 219; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Amended Rules 1178 and 219 as set forth in the attached, and incorporated herein by this reference; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board requests that Proposed Amended Rule 1178 be submitted into the State Implementation Plan; and

BE IT FURTHER RESOLVED, that the Executive Officer is hereby directed to forward a copy of this Resolution and Proposed Amended Rule 1178 to the California Air Resources Board for approval and subsequent submittal to the U.S. Environmental Protection Agency for inclusion into the State Implementation Plan.

DATE: _____ _____

CLERK OF THE BOARDS

ATTACHMENT F

(Adopted December 21, 2001)(Amended April 7, 2006)(PAR 1178 April 6, 2018)

PROPOSED AMENDED 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 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 in any emission inventory year starting with the emission inventory year 2000.

(c) Definitions

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

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

(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.

(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.

(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.

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

(10) 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.

(11) 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.

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

(13) <u>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.</u>

(1~~3~~4) 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.

(~~14~~15) 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.

(~~15~~16) 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.

(~~16~~17) 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.

(~~17~~18) INTERNAL FLOATING ROOF TANK is a storage tank equipped with a fixed roof and a floating roof which rests on the liquid being contained.

(~~18~~19) 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.

(~~19~~20) 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.

(2~~0~~1) 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.

(2~~1~~2) ORGANIC LIQUID is any liquid containing VOC.

(2~~2~~3) 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).

(2~~3~~4) 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.

(2~~4~~5) 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.

(2~~5~~6) 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.

(2~~6~~7) PRESSURE-VACUUM VENT is a vent that is used to minimize tank emissions due to breathing effects.

(2~~7~~8) 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.

(2~~8~~9) 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.

(~~29~~30) 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.

(3~~0~~1) 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.

(3~~1~~2) 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.

(3~~2~~3) 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.

(3~~3~~4) 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.

(3~~4~~5) 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.

(3~~5~~6) 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.

(3~~6~~7) 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.

(3~~7~~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.

(3~~8~~8) STORAGE TANK is a stationary aboveground container that 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.

(~~39~~40) TRUE VAPOR PRESSURE is the vapor pressure of a liquid at actual storage conditions.

(4~~0~~1) 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.

(4~~1~~2) 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.

(4~~2~~3) 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.

(4~~3~~4) 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).

(4~~4~~5) VOLATILE ORGANIC COMPOUNDS (VOC) as defined in Rule 102.

(4~~5~~46) 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.

(4~~6~~47) 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 ~~a~~ gasketed cover, a pole wiper, and a pole sleeve ~~The 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) ~~Equip each slotted guidepole having a pole float with a gasketed cover, a pole wiper, and a pole float wiper.~~ 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.

~~(xii) 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.~~

(xiii~~v~~) 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), the operator who is subject to Phase I shall accept permit conditions to limit the true vapor pressure of the organic liquids stored in the tanks to lower than 3 psia by the end of Phase I.

(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 ~~any~~ one conducted by the operator ~~inspection~~ 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 ~~within thirty working days of~~ 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 ~~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-.
   - 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, ~~and~~ 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.

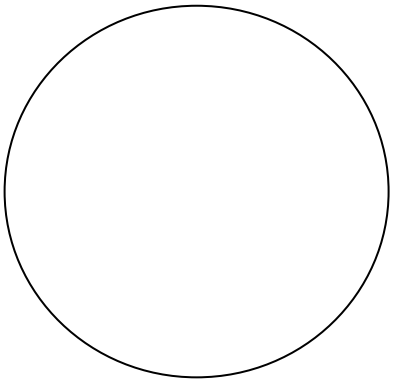
e) (all seal types) does 1/8" probe drop past seal? No ☐ Yes ☐ if yes, measure (length(s) and show on diagram.

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: _____
(sSignature) (Certification ID #)

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

Company Representative: _____ Date: _____
(sSignature) (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_____
(sSignature) (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 G

PROPOSED AMENDED RULE 219 EQUIPMENT NOT REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II

INDEX OF EXEMPTION CATEGORIES

(Adopted Jan. 9, 1976)(Amended Oct. 8, 1976)(Amended February 2, 1979)
(Amended Oct. 5, 1979)(Amended Sept. 4, 1981)(Amended June 3, 1988)
(Amended September 11, 1992)(Amended August 12, 1994)
(Amended December 13, 1996)(Amended September 11, 1998)
(Amended August 13, 1999)(Amended May 19, 2000)
(Amended November 17, 2000)(Amended July 11, 2003)
(Amended December 3, 2004)(Amended May 5, 2006)(Amended July 14, 2006)
(Amended June 1, 2007)(Amended May 3, 2013)
(Amended May 5, 2017)(PAR 219 April 6, 2018)

PROPOSED AMENDED RULE 219. - EQUIPMENT NOT REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II

Purpose

The purpose of this rule is to identify equipment, processes, or operations that emit small amounts of air contaminants that shall not require written permits, unless such equipment, process or operation is subject to subdivision (s) – Exceptions. In addition, exemption from written permit requirements in this rule is only applicable if the equipment, process, or operation is in compliance with subdivision (t).

Written permits are not required for:

(a) Mobile Equipment

(1) motor vehicle or vehicle as defined by the California Vehicle Code; or

(2) marine vessel as defined by Health and Safety Code Section 39037.1; or

(3) a motor vehicle or a marine vessel that uses one internal combustion engine to propel the motor vehicle or marine vessel and operate other equipment mounted on the motor vehicle or marine vessel; or

(4) equipment which is mounted on a vehicle, motor vehicle or marine vessel if such equipment does not emit air contaminants;

(5) asphalt pavement heaters (which are any mobile equipment used for the purposes of road maintenance and new road construction) provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

This subdivision does not apply to air contaminant emitting equipment which is mounted and operated on motor vehicles, marine vessels, mobile hazardous material treatment systems, mobile day tankers [except those carrying solely fuel oil with an organic vapor pressure of 5 mm Hg (0.1 psi) absolute or less at 21.1 ^{o}C (70 ^{o}F)].

(b) Combustion and Heat Transfer Equipment

(1) Internal combustion engines with a manufacturer's rating of 50 brake horsepower or less; or internal combustion engines, used exclusively for electrical generation at remote two-way radio transmission towers where no utility, electricity or natural gas is available within a ½ mile radius, with a manufacturer's rating of 100 brake horsepower or less and are fired exclusively on diesel #2 fuel, compressed natural gas (CNG) or liquefied petroleum gas (LPG); or stationary gas turbine engines including micro-turbines, with a rated maximum heat input capacity of 3,500,000 British thermal units (Btu) per hour or less, provided that the cumulative power output of all such engines at a facility is less than two megawatts, and that the engines are certified at the time of manufacture with the state of California or were in operation prior to May 3, 2013 provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

(2) Boilers, process heaters, or any combustion equipment that has a rated maximum heat input capacity of 2,000,000 Btu per hour (gross) or less and are equipped to be heated exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof; or diesel fueled boilers that have a rated maximum heat input capacity of 2,000,000 Btu per hour or less, are fueled exclusively with diesel #2 fuel, and are located more than 4,000 feet above sea level or more than 15 miles offshore from the mainland, and where the maximum NOx emission output of the equipment is less than one pound per day and uses less than 50 gallons of fuel per day, and have been in operation prior to May 3, 2013 provided a filing pursuant to Rule 222 is submitted to the Executive Officer. This exemption does not apply to internal combustion engines or turbines. This exemption does not apply whenever there are emissions other than products of combustion, except for food ovens with a rated maximum heat input capacity of 2,000,000 Btu/hour or less, that are fired exclusively on natural gas and where the process VOC emissions are less than one pound per day, and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

(3) Portable diesel fueled heaters, with a rated maximum heat input capacity of 250,000 Btu per hour or less, and that are equipped with burner(s) designed to fire exclusively on diesel fuel only provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

(4) Power pressure washers and hot water or steam washers and cleaners, that are equipped with a heater or burner that is designed to be fired on diesel

fuel, has a rated maximum heat input capacity of 550,000 Btu per hour or less, is equipped with non-resettable chronometer, and the maximum NOx emission output of the equipment is less than one pound per day and uses no more than 50 gallons of fuel per day provided a filing pursuant to Rule 222 is submitted to the Executive Officer. This exemption does not apply to internal combustion engines or turbines.

(5) Fuel cells, which produce electricity in an electro-chemical reaction and use phosphoric acid, molten carbonate, proton exchange membrane, or solid oxide technologies; and associated heating equipment, provided the heating equipment:

(A) does not use a combustion source; or

(B) notwithstanding paragraph (b)(2), is fueled exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof, including heaters that have a rated maximum heat input capacity of greater than 2,000,000 Btu per hour, provided that the supplemental heat used is 90,000 therms per year or less and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

(6) Test cells and test stands used for testing burners or internal combustion engines provided that the equipment uses less than 800 gallons of diesel fuel and 3,500 gallons of gasoline fuel per year, or uses other fuels with equivalent or less emissions.

(7) Internal combustion engines used exclusively for training at educational institutions.

(8) Portable combustion equipment, pursuant to subdivision (r).

(c) Structures and Equipment - General

(1) Structural changes which cannot change the quality, nature or quantity of air contaminant emissions.

(2) Repairs or maintenance not involving structural changes to any equipment for which a permit has been granted.

(3) Identical replacement in whole or in part of any equipment where a permit to operate had previously been granted for such equipment under Rule 203, except seals for external or internal floating roof storage tanks.

(4) Replacement of floating roof tank seals provided that the replacement seal is of a type and model which the Executive Officer has determined is capable of complying with the requirements of Rule 463.

(5) Equipment utilized exclusively in connection with any structure which is designed for and used exclusively as a dwelling for not more than four families, and where such equipment is used by the owner or occupant of such a dwelling. .

(6) Laboratory testing and quality control testing equipment used exclusively for chemical and physical analysis, non-production bench scale research equipment, and control equipment exclusively venting such equipment. Laboratory testing equipment does not include engine test stands or test cells unless such equipment is also exempt pursuant to paragraph (b)(4).

(7) Vacuum-producing devices used in laboratory operations or in connection with other equipment not requiring a written permit.

(8) Vacuum-cleaning systems used exclusively for industrial, commercial, or residential housekeeping purposes.

(9) Hoods, stacks, or ventilators.

(10) Passive and intermittently operated active venting systems used at and around residential structures to prevent the accumulation of naturally occurring methane and associated gases in enclosed spaces.

(11) Sub-slab Ventilation systems including associated air pollution control equipment with an aggregate flow rate of less than 200 standard cubic feet per minute (scfm) where vacuum suction pits do not penetrate more than 18 inches below the bottom of the slab, provided the inlet total organic compounds concentration does not exceed 15 ppmv, measured as hexane, and provided the ventilations system is connected to air pollution control equipment consisting of a carbon adsorber sized to handle at least 200 scfm, or equivalent air pollution control.

(d) Utility Equipment - General

(1) Comfort air conditioning or ventilating systems which are not designed or used to remove air contaminants generated by, or released from, specific equipment units, provided such systems are exempt pursuant to paragraph (b)(2).

(2) Refrigeration units except those used as or in conjunction with air pollution control equipment.

(3) Water cooling towers and water cooling ponds, both not used for evaporative cooling of process water or used for evaporative cooling of

water from barometric jets or from barometric condensers and in which no chromium compounds are contained, including:

(A) Cooling towers used for comfort cooling; and

(B) Industrial cooling towers located in a chemical plant, refinery or other industrial facility, provided a filing pursuant to Rule 222 is submitted to the Executive Officer.(4) Equipment used exclusively to generate ozone and associated ozone destruction equipment for the treatment of cooling tower water or for water treatment processes.

(5) Equipment used exclusively for steam cleaning provided such equipment is also exempt pursuant to paragraph (b)(2).

(6) Equipment used exclusively for space heating provided such equipment is exempt pursuant to paragraph (b)(2).

(7) Equipment used exclusively to compress or hold purchased quality natural gas, except internal combustion engines not exempted pursuant to paragraph (b)(1).

(8) Emergency ventilation systems used exclusively to scrub ammonia from refrigeration systems during process upsets or equipment breakdowns.

(9) Emergency ventilation systems used exclusively to contain and control emissions resulting from the failure of a compressed gas storage system.

(10) Passive carbon adsorbers, with a maximum vessel capacity of no more than 120 gallons, without mechanical ventilation, and used exclusively for odor control at wastewater treatment plants, food waste slurry storage tanks, or sewer collection systems, including sanitary sewers, manholes, and pump stations.

(11) Refrigerant recovery and/or recycling units. This exemption does not include refrigerant reclaiming facilities.

(12) Carbon arc lighting equipment provided such equipment is exempt pursuant to paragraph (b)(1).

(e) Glass, Ceramic, Metallurgical Processing, and Fabrication Equipment

(1) Crucible-type or pot-type furnaces with a brimful capacity of less than 7400 cubic centimeters (452 cubic inches) of any molten metal and control equipment exclusively venting the equipment.

(2) Crucible furnaces, pot furnaces, or induction furnaces with a capacity of 450 kilograms (992 pounds) or less each, and control equipment used to

exclusively vent the equipment where no sweating or distilling is conducted and where only the following materials are poured or held in a molten state:

(A) Aluminum or any alloy containing over 50 percent aluminum,

(B) Magnesium or any alloy containing over 50 percent magnesium,

(C) Tin or any alloy containing over 50 percent tin,

(D) Zinc or any alloy containing over 50 percent zinc,

(E) Copper or any alloy containing over 50 percent copper,

(F) Precious metals, and

(G) Ceramic materials, including glass and porcelain.

Provided these materials do not contain alloying elements of arsenic, beryllium, cadmium, chromium and/or lead and such furnaces are exempt pursuant to paragraph (b)(2).

(3) Molds used for the casting of metals and control equipment used to exclusively vent the equipment.

(4) Inspection equipment used exclusively for metal, plastic, glass, or ceramic products and control equipment used to exclusively vent such equipment.

(5) Ovens used exclusively for curing potting materials or castings made with epoxy resins, provided such ovens are exempt pursuant to paragraph (b)(2).

(6) Hand-held or automatic brazing and soldering equipment, and control equipment that exclusively vents such equipment, provided that the equipment uses one quart per day or less or 22 quarts per calendar month or less of material containing VOC. This exemption does not include hot oil, hot air, or vapor phase solder leveling equipment and related control equipment.

(7) Brazing ovens where no volatile organic compounds (except flux) are present in the materials processed in the ovens, provided such ovens are exempt pursuant to paragraph (b)(2).

(8) Welding equipment, oxygen gaseous fuel-cutting equipment, hand-held plasma-arc cutting equipment, hand-held laser cutting equipment, laser etching or engraving equipment and associated air pollution control equipment. This exemption does not include cutting equipment described in this paragraphthat is used to cut stainless steel, or alloys containing 0.1% by weight or more of chromium, nickel, cadmium or lead, unless the equipment is used exclusively for maintenance or repair operations. In addition this exemption does not include laser cutting, etching and engraving equipment that are rated more than 400 watts,.

(9) Sintering equipment used exclusively for the sintering of metal (excluding lead) or glass where no coke or limestone is used, and control equipment exclusively venting such equipment, provided such equipment is exempt pursuant to paragraph (b)(2).

(10) Mold forming equipment for foundry sand to which no heat is applied, and where no volatile organic materials are used in the process, and control equipment used to exclusively vent such equipment.

(11) Metal forming equipment or equipment used for heating metals for forging, rolling, pressing, or drawing of metals provided that any lubricants used have 50 grams or less of VOC per liter of material or a VOC composite partial pressure of 20 mm Hg or less at 20 ^{o}C (68 ^{o}F) provided such heaters are exempt pursuant to paragraph (b)(2) and control equipment exclusively venting the equipment.

(12) Heat treatment equipment and associated water quench tanks used exclusively for heat treating glass or metals (provided no volatile organic compound materials are present), or equipment used exclusively for case hardening, carburizing, cyaniding, nitriding, carbonitriding, siliconizing or diffusion treating of metal objects, provided any combustion equipment involved is exempt pursuant to paragraph (b)(2).

(13) Ladles used in pouring molten metals.

(14) Tumblers used for the cleaning or deburring of solid materials, and associated air pollution control equipment.

(15) Die casting machines, except those used for copper base alloys, those with an integral furnace having a brimful capacity of more than 450 kg (992 lbs.), or those using a furnace not exempt pursuant to paragraph (b)(2).

(16) Furnaces or ovens used for the curing or drying of porcelain enameling, or vitreous enameling provided such furnaces or ovens are exempt pursuant to paragraph (b)(2).

(17) Wax burnout kilns where the total internal volume is less than 0.2 cubic meter (7.0 cubic feet) or kilns used exclusively for firing ceramic ware, provided such kilns are exempt pursuant to paragraph (b)(2) and control equipment used to exclusively vent the equipment.

(18) Shell-core and shell-mold manufacturing machines.

(19) Furnaces used exclusively for melting titanium materials in a closed evacuated chamber where no sweating or distilling is conducted, provided such furnaces are exempt pursuant to paragraph (b)(2).

(20) Vacuum metallizing chambers which are electrically heated or heated with equipment that is exempt pursuant to paragraph (b)(2), and control equipment used to exclusively vent such equipment, provided the control equipment is equipped with a mist eliminator or the vacuum pump used with control equipment demonstrates operation with no visible emissions from the vacuum exhaust.

(21) Notwithstanding the exemptions in paragaraph (e)(12), equipment existing as of May 5, 2017 that is subject to the exemption in paragraph (e)(12) that is an integral part of an operation requiring a written permit shall continue to be exempt, provided the equipment is identified, described in detail and submitted for inclusion into the permit equipment description with any associated application for Permit to Construct or Permit to Operate. Equipment described in this paragraph includes, but is not limited to quench tanks that are part of a heat treating operation.

(f) Abrasive Blasting Equipment

(1) Blast cleaning cabinets in which a suspension of abrasive in water is used and control equipment used to exclusively vent such equipment.

(2) Manually operated abrasive blast cabinet, vented to a dust-filter where the total internal volume of the blast section is 1.5 cubic meters (53 cubic feet) or less, and any dust filter exclusively venting such equipment.

(3) Enclosed equipment used exclusively for shot blast removal of flashing from rubber and plastics at sub-zero temperatures and control equipment exclusively venting such equipment.

(4) Shot peening operations, flywheel type and control equipment used to exclusively vent such equipment.

(5) Portable sand/water blaster equipment and associated internal combustion engine provided the water in the mixture is 66 percent or more by volume is maintained during operation of such equipment. Internal combustion engines must be exempt pursuant to paragraph (b)(1).

(g) Mechanical Equipment

(1) Equipment used exclusively for buffing (except tire buffers), polishing, carving, mechanical cutting, drilling, machining, pressing, routing, sanding, stamping, surface grinding or turning provided that any lubricants, coolants, or cutting oils used have 50 grams or less of VOC per liter of material or a

VOC composite partial pressure of 20 mm Hg or less at 20 ^{o}C (68 ^{o}F) and control equipment used to exclusively vent such equipment. This exemption does not include asphalt pavement grinders, or portable asphalt recycling equipment.

(2) Wood Products: Equipment used exclusively for shredding of wood, or the extruding, handling, or storage of wood chips, sawdust, or wood shavings and control equipment used to exclusively vent such equipment, provided the source of the wood does not include wood that is painted or treated for exterior exposure, or wood that is comingled with other construction and demolition materials. This exemption does not include internal combustion engines over 50 bhp, which are used to supply power to such equipment. In addition, this exemption does not include the shredding, extruding, handling or storage of any organic waste material generated from gardening, agricultural, or landscaping activities including, but not limited to, leaves, grass clippings, tree and shrub trimmings and plant remains.

(3) Equipment used exclusively to mill or grind coatings or molding compounds where all materials charged are in the paste form.

(4) Equipment used for separation or segregation of plastic materials intended for recycling, provided there is no mechanical cutting, shredding or grinding and where no odors are emitted.

(h) Printing and Reproduction Equipment

(1) Printing and related coating and/or laminating equipment and associated dryers and curing equipment, as well as associated air pollution control equipment, provided such dryers and curing equipment are exempt pursuant to paragraph (b)(2), and air pollution control equipment is not required for source specific rule compliance, and provided that:

(A) the VOC emissions from such equipment (including clean-up) are three pounds per day or less or 66 pounds per calendar month or less; or

(B) the total quantity of plastisol type inks, coatings and adhesives and associated VOC containing solvents (including clean-up) used is six (6) gallons per day or less or 132 gallons per calendar month or less; or

(C) the total quantity of UV/EB/LED (non-solvent based and non-waterborne) inks, coatings, and adhesives, fountain solutions (excluding water) and associated VOC containing solvents (including clean-up) is six (6) gallons per day or less, or 132 gallons per calendar month or less; or

(D) the total quantity of inks, coatings and adhesives not specified in (B) or (C) above, fountain solutions (excluding water) and associated VOC containing solvents (including clean-up) used is two (2) gallons per day or less or 44 gallons per calendar month or less; or

(E) all inks, coatings and adhesives, fountain solutions, and associated VOC containing solvents (excluding cleanup solvents) contain fifty (50) grams or less of VOC per liter of material and all cleanup solvents contain twenty five (25) grams or less of VOC per liter of material, and the total quantity of VOC emissions do not exceed one ton per calendar year, and provided that either:

(i) a filing pursuant to Rule 222 is submitted to the Executive Officer; or

(ii) within 60 days after start-up for new, relocated, or modified facilities, or by March 1, 2018 for facilities existing as of May 5, 2017, a low-VOC verification is submitted to the Executive Officer, in a format approved by the Executive Officer, to demonstrate compliance with material and cleanup solvent VOC concentration limits and the annual VOC emission limit.

If combination of the inks, coatings, and adhesives identified in (B), (C) and/or (D) are used in any equipment, this exemption is only applicable if the operations meet the criteria specified in (A) or (E), or the total usage of inks, coatings, adhesives, fountain solutions (excluding water) and associated VOC containing solvents (including cleanup) meets the most stringent applicable limit in (B) (C) or (D). For exemptions based on usage, solvent based UV and waterborne UV materials are subject to the usage limits in (D). VOC emissions shall be determined using test methods approved by the District, CARB and U.S. EPA. In the absence of approved test methods, the applicant can submit VOC calculation procedures acceptable to the District.

(2) Photographic process equipment by which an image is reproduced upon material sensitized by radiant energy and control equipment exclusively

venting such equipment, excluding wet gate printing utilizing perchloroethylene and its associated control equipment.

(3) Lithographic printing equipment which uses laser printing.

(4) Printing equipment used exclusively for training and non-production at educational institutions.

(5) Flexographic plate making and associated processing equipment.

(6) Corona treating equipment and associated air pollution control equipment used for surface treatment in printing, laminating and coating operations.

(7) Hand application of materials used in printing operations including but not limited to the use of squeegees, screens, stamps, stencils, any hand tools, and associated air pollution control equipment used to exclusively vent the hand application of materials in printing operations unless such air pollution control equipment is required for source specific rule compliance.

(i) Pharmaceuticals, Cosmetics, and Food Processing and Preparation Equipment

(1) Smokehouses for preparing food in which the maximum horizontal inside cross-sectional area does not exceed 2 square meters (21.5 square feet) and control equipment exclusively venting the equipment.

(2) Smokehouses exclusively using liquid smoke, and which are completely enclosed with no vents to either a control device or the atmosphere.

(3) Confection cookers where products are edible and intended for human consumption, provided such equipment is exempt pursuant to (b)(2).

(4) Grinding, blending, or packaging equipment used exclusively for tea, cocoa, roasted coffee, flavor, fragrance extraction, dried flowers, or spices, provided that the facility uses less than one gallon per day or twenty-two (22) gallons per month of VOC containing solvents, and control equipment used to exclusively vent such equipment.

(5) Equipment used in eating establishments for the purpose of preparing food for human consumption.

(6) Equipment used to convey or process materials in bakeries or used to produce noodles, macaroni, pasta, food mixes, and drink mixes where products are edible and intended for human consumption provided that the facility uses less than one gallon per day or twenty-two (22) gallons per month of VOC containing solvents, and control equipment exclusively venting such equipment. This exemption does not include storage bins

located outside buildings, or equipment not exempt pursuant to paragraph (b)(2).

(7) Cooking kettles where the entire product in the kettle is edible and intended for human consumption. This exemption does not include deep frying equipment used in facilities other than eating establishments.

(8) Coffee roasting equipment with a maximum capacity of 15 kilograms or less, and control equipment used to exclusively vent the equipment.

(9) Equipment used exclusively for tableting, or packaging vitamins, or coating vitamins, herbs, or dietary supplements provided that the equipment uses waterborne solutions that contain a maximum VOC content of no more than 25 grams per liter, or the facility uses less than one gallon per day or twenty-two (22) gallons per month of VOC containing solvents, and control equipment used exclusively to vent such equipment.

(10) Equipment used exclusively for tableting or packaging pharmaceuticals and cosmetics, or coating pharmaceutical tablets, provided that the equipment uses waterborne solutions that contain a maximum VOC content of no more than 25 grams per liter, or the facility uses less than one gallon per day or twenty-two (22) gallons per month of VOC containing solvents, and control equipment used exclusively to vent such equipment.

(11) Modified atmosphere food packaging equipment using mixture of gases of no more than 0.4% of carbon monoxide by volume.

(12) Charbroilers, barbecue grills, and other underfired grills fired on solid or gaseous fuels used in multi-family residential units only if used by the owner or occupant of such dwelling for non-commercial purposes.

(13) Equipment used to brew beer for human consumption at breweries that produce less than 1,000,000 gallons of beer per calendar year and associated equipment cleaning, provided all equipment used in the manufacturing operation is exempt pursuant to paragraph (b)(2). This exemption does not apply to boilers.

(14) Equipment used to manufacture dehydrated meat for human or pet consumption, provided non-combustion VOC and PM emissions, including emissions from materials used for cleaning are each one pound per day or less, and the operating temperature is less than 190 degrees Fahrenheit for dehydrating ovens, and provided such equipment is either fired exclusively on natural gas with a maximum heat input capacity of 2,000,000 Btu/hour or less, or is electric.

(j) Plastics, Composite, and Rubber Processing Equipment

(1) Presses or molds used for curing, post curing, or forming composite products and plastic products where no VOC or chlorinated blowing agent is present, and control equipment is used exclusively to vent these presses or molds.

(2) Presses or molds with a ram diameter of less than or equal to 26 inches used for curing or forming rubber products and composite rubber products excluding those operating above 400 °F.

(3) Ovens used exclusively for the forming of plastics or composite products, where no foam forming or expanding process is involved.

(4) Equipment used exclusively for softening or annealing plastics, provided such equipment is exempt pursuant to paragraph (b)(2). This exemption does not include equipment used for recycling of expanded polystyrene.

(5) Extrusion equipment used exclusively for extruding rubber products or plastics where no organic plasticizer is present, or for pelletizing polystyrene foam scrap, except equipment used to extrude or to pelletize acrylics, polyvinyl chloride, polystyrene, and their copolymers.

(6) Injection or blow molding equipment for rubber or plastics where no blowing agent is used, or where only compressed air, water or carbon dioxide is used as a blowing agent, and control equipment used to exclusively vent such equipment.

(7) Mixers, roll mills and calendars for rubber or plastics where no material in powder form is added and no VOC containing solvents, diluents or thinners are used.

(8) Ovens used exclusively for the curing of vinyl plastisols by the closed-mold curing process, provided such ovens are exempt pursuant to paragraph (b)(2).

(9) Equipment used exclusively for conveying and storing plastic materials, provided they are not in powder form and control equipment exclusively venting the equipment.

(10) Hot wire cutting of expanded polystyrene foam and woven polyester film.

(11) Photocurable stereolithography equipment and associated post curing equipment.

(12) Laser sintering equipment used exclusively for the sintering of nylon or plastic powders and control equipment exclusively venting such equipment, provided such equipment is exempt pursuant to paragraph (b)(2).

(13) Roller to roller coating systems that create 3-dimensional images provided:

(A) the VOC emissions from such equipment (including cleanup) are three (3) pounds per day or less or 66 pounds per calendar month or less; or

(B) the coatings contain twenty five (25) grams or less of VOC per liter of material provided that the coating used on such equipment is 12 gallons per day or less or 264 gallons per calendar month or less; or

(C) the coatings contain fifty (50) grams or less of VOC per liter of material, and using exclusively cleanup solvents containing twenty five (25) grams or less of VOC per liter of material, and the total quantity of VOC emissions do not exceed one ton per calendar year, and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

VOC emissions shall be determined using test methods approved by the District, CARB and U.S. EPA. In the absence of approved test methods, the applicant can submit VOC calculation procedures acceptable to the District.

(k) Mixing, Blending, and Packaging Equipment

(1) Batch mixers, which have a brimful capacity of 55 gallons or less (7.35 cubic feet) and control equipment used exclusively to vent the equipment, and associated filling equipment.

(2) Equipment used exclusively for mixing and blending of materials where no VOC containing solvents are used and no materials in powder form are added, and associated filling equipment.

(3) Equipment used exclusively for mixing and blending of materials to make water emulsions of asphalt, grease, oils, or waxes where no materials in powder or fiber form are added.

(4) Equipment used to blend, grind, mix, or thin liquids to which powders may be added, with a capacity of 950 liters (251 gallons) or less, where no supplemental heat is added and no ingredient charged (excluding water) exceeds 135 ^{o}F and control equipment exclusively venting the equipment.

(5) Cosmetics filling stations where the filling equipment is hard piped to the cosmetics mixer or the holding tank feeding the filling equipment provided that the mixer and holding tank is exempt under this rule.

(6) Concrete mixers, with a rated working capacity of one cubic yard or less and control equipment used exclusively to vent the equipment.

(7) Equipment used exclusively for the packaging of lubricants or greases.

(8) Equipment used exclusively for the packaging of sodium hypochlorite-based household cleaning or sodium hypochlorite-based pool products and control equipment used exclusively to vent the equipment.

(9) Foam packaging equipment using twenty (20) gallons per day or less or 440 gallons per calendar month or less of liquid foam material or containing fifty (50) grams of VOC per liter of material, or less.

(l) Coating and Adhesive Process/Equipment

(1) Equipment used exclusively for coating objects with oils, melted waxes or greases which contain no VOC containing materials, including diluents or thinners.

(2) Equipment used exclusively for coating objects by dipping in waxes or natural and synthetic resins which contain no VOC containing materials including, diluents or thinners.

(3) Batch ovens with 1.5 cubic meters (53 cubic feet) or less internal volume where no melting occurs, provided such equipment is exempt pursuant to paragraph (b)(2). This exemption does not include ovens used to cure vinyl plastisols or debond brake shoes.

(4) Ovens used exclusively to cure 30 pounds per day or less or 660 pounds per calendar month or less of powder coatings, provided that such equipment is exempt pursuant to paragraph (b)(2).

(5) Spray coating equipment operated within control enclosures.

(6) Coating or adhesive application or laminating equipment such as air, airless, air-assisted airless, high volume low pressure (HVLP), air brushes, electrostatic spray equipment, roller coaters, dip coaters, vacuum coaters, flow coaters and spray machines provided that:

(A) the VOC emissions from such equipment (including clean-up) are three (3) pounds per day or less or 66 pounds per calendar month or less; or

(B) the total quantity of UV/EB/LED (non-solvent based and non-waterborne) coatings adhesives and associated VOC containing solvents (including clean-up) used in such equipment is six (6) gallons per day or less or 132 gallons per calendar month or less; or

(C) the total quantity of organic solvent based coatings and adhesives and associated VOC containing solvents (including clean-up) used in such equipment is one (1) gallon per day or less or 22 gallons per calendar month or less; or

(D) the total quantity of water reducible or waterborne coatings and adhesives and associated VOC containing solvents (including clean-up) used in such equipment is three (3) gallons per day or less or 66 gallons per calendar month or less; or

(E) the total quantity of polyester resin and gel coat type materials and associated VOC containing solvents (including clean-up) used in such equipment is one (1) gallon per day or less or 22 gallons per calendar month or less; or

(F) all coatings, adhesives, polyester resin and gel coat type materials and associated VOC containing solvents (excluding cleanup solvents) contain fifty (50) grams or less of VOC per liter of material and all cleanup solvents contain twenty five (25) grams or less of VOC per liter of material, and the total quantity of VOC emissions do not exceed one ton per calendar year, and provided that:

(i) a filing pursuant to Rule 222 is submitted to the Executive Officer; or

(ii) within 60 days after start-up for new, relocated, or modified facilities, or by March 1, 2018 for facilities existing as of May 5, 2017, a low-VOC verification is submitted to the Executive Officer, in a format approved by the Executive Officer, to demonstrate compliance with material and cleanup solvent VOC concentration limits and the annual VOC emission limit.

If combination of the coatings, adhesives and polyester resin and gel coat type materials identified in (B), (C), (D) and/or (E) are used in any equipment, this exemption is only applicable if the operations meet the criteria specified in (A) or (F), or the total usage of coatings, adhesives, polyester resin and gel coat type materials and associated VOC containing solvents (including cleanup) meets the most stringent applicable limit in (B), (C), (D) or (E). For exemptions based on usage, solvent-based UV and waterborne UV materials are subject to the usage limits in (C) and (D), respectively. VOC emissions shall be determined using test methods

approved by the District, CARB and U.S. EPA. In the absence of approved test methods, the applicant can submit VOC calculation procedures acceptable to the District.

(7) Spray coating and associated drying equipment and control enclosures used exclusively for educational purposes in educational institutions.

(8) Control enclosures with an internal volume of 27 cubic feet or less, provided that aerosol cans, air brushes, or hand applications are used exclusively.

(9) Portable coating equipment and pavement stripers used exclusively for the application of architectural coatings, and associated internal combustion engines provided such equipment is exempt pursuant to subdivision (a) or paragraph (b)(1), and provided no supplemental heat is added during pavement striping operations.

(10) Hand application of resins, adhesives, dyes, and coatings using devices such as brushes, daubers, rollers, and trowels.

(11) Drying equipment such as flash-off ovens, drying ovens, or curing ovens associated with coating or adhesive application or laminating equipment provided the drying equipment is exempt pursuant to paragraph (b)(2), and provided that:

(A) the total quantity of VOC emissions from all coating and/or adhesive application, and laminating equipment that the drying equipment serves is three (3) pounds per day or less or 66 pounds per calendar month or less; or

(B) the total quantity of UV/EB/LED (non-solvent based and non-waterborne) coatings and adhesives, and associated VOC containing solvents (including clean-up) used in all coating and/or adhesive application, and laminating equipment that the drying equipment serves is six (6) gallons per day or less or 132 gallons per calendar month or less; or

(C) the total quantity of solvent based coatings and adhesives and associated VOC containing solvents (including clean-up) used in all coating and/or adhesive application, and laminating equipment that the drying equipment serves is one (1) gallon per day or less or 22 gallons per calendar month or less; or

(D) the total quantity of water reducible or waterborne coating and adhesives and associated VOC containing solvents (including clean-up) used in all coating and/or adhesive application, and laminating

equipment that the drying equipment serves is three (3) gallons per day or less or 66 gallons per calendar month or less; or

(E) the total quantity of polyester resin and gel coat type materials and associated VOC containing solvents (including clean-up) used in all coating, adhesive application, and laminating equipment that the drying equipment serves is one (1) gallon per day or less or 22 gallons per calendar month or less; or

(F) all coatings, adhesives, polyester resin and gel coat type materials and associated VOC containing solvents (excluding cleanup solvents) contain fifty (50) grams or less of VOC per liter of material and all cleanup solvents contain twenty five (25) grams or less of VOC per liter of material, and the total quantity of VOC emissions do not exceed one ton per calendar year, and provided that either:

(i) a filing pursuant to Rule 222 is submitted to the Executive Officer; or

(ii) within 60 days after start-up for new, relocated, or modified facilities, or by March 1, 2018 for facilities existing as of May 5, 2017, a low-VOC verification is submitted to the Executive Officer, in a format approved by the Executive Officer, to demonstrate compliance with material and cleanup solvent VOC concentration limits and the annual VOC emission limit.

If combination of the coatings, adhesives and polyester resin and gel coat type materials identified in (B), (C), (D) and/or (E) are used in any equipment, this exemption is only applicable if the operations meet the criteria specified in (A) or (F), or the total usage of coatings, adhesives, polyester resin and gel coat type materials and associated VOC containing solvents (including cleanup) meets the most stringent applicable limit in (B), (C), (D) or (E). For exemptions based on usage, solvent-based UV and waterborne UV materials are subject to the usage limits in (C) and (D), respectively. VOC emissions shall be determined using test methods approved by the District, CARB and US EPA. In the absence of approved test methods, the applicant can submit VOC calculation procedures acceptable to the District.

(m) Storage and Transfer Equipment

(1) Equipment used exclusively for the storage and transfer of fresh, commercial or purer grades of:

(A) Sulfuric acid or phosphoric acid with an acid strength of 99 percent or less by weight.

(B) Nitric acid with an acid strength of 70 percent or less by weight.

(C) Water based solutions of salts or sodium hydroxide.

(2) Equipment used exclusively for the storage and/or transfer of liquefied gases, not including:

(A) LPG greater than 10,000 pounds.

(B) Hydrogen fluoride greater than 100 pounds.

(C) Anhydrous ammonia greater than 500 pounds.

(3) Equipment used exclusively for the transfer of less than 75,700 liters (20,000 gallons) per day of unheated VOC containing materials, with an initial boiling point of 150 ^{o}C (302 ^{o}F) or greater, or with an organic vapor pressure of 5 mm Hg (0.1 psi) absolute or less at 21.1 ^{o}C (70 ^{o}F).

(4) Equipment used exclusively for the storage including dispensing of unheated VOC containing materials with an initial boiling point of 150 ^{o}C (302 ^{o}F) or greater, or with an organic vapor pressure of 5 mm Hg (0.1 psi) absolute or less at 21.1 ^{o}C (70 ^{o}F). This exemption does not include liquid fuel storage greater than 160,400 liters (40,000 gallons).

(5) Equipment used exclusively for transferring VOC containing liquids, materials containing VOCs, or compressed gases into containers of less than 225 liters (60 gallons) capacity, except equipment used for transferring more than 4,000 liters (1,057 gallons) of materials per day with a vapor pressure greater than 25.8 mm Hg (0.5 psia) at operating conditions.

(6) Equipment used exclusively for the storage and transfer of liquid soaps, liquid detergents, vegetable oils, fatty acids, fatty esters, fatty alcohols, waxes and wax emulsions.

(7) Equipment used exclusively for the storage and transfer of refined lubricating or hydraulic oils and control equipment used to exclusively vent such equipment.

(8) Equipment used exclusively for the storage and transfer of crankcase drainage oil and control equipment used to exclusively vent such equipment.

(9) Equipment used exclusively for VOC containing liquid storage or transfer to and from such storage, of less than 950 liters (251 gallons) capacity or equipment used exclusively for the storage of odorants for natural gas, propane, or oil with a holding capacity of less than 950 liters (251 gallons) capacity and associated transfer and control equipment used exclusively for such equipment provided a filing pursuant to Rule 222 is submitted to the Executive Officer. This exemption does not include asphalt. In addition, this exemption does not apply to a group of more than one VOC-containing liquid or odorant tank where a single product is stored, where the combined storage capacity of all tanks exceeds 950 liters (251 gallons), and where the tanks are mounted on a shared mobile platform and stored at a facility.

(10) Equipment used exclusively for the storage and transfer of "top white" (i.e., Fancy) or cosmetic grade tallow or edible animal fats intended for human consumption and of sufficient quality to be certifiable for United States markets.

(11) Equipment, including tar pots (or tar kettles), used exclusively for the storage, holding, melting and transfer of asphalt or coal tar pitch with a maximum holding capacity of less than 600 liters (159 gallons); or equipment, including tar pots (or tar kettles), used exclusively for the storage, holding, melting and transfer of asphalt or coal tar pitch with a maximum holding capacity of no more than 3,785 liters (1,000 gallons), is equipped with burner(s) designed to fire exclusively on liquefied petroleum gases, and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

(12) Pumps used exclusively for pipeline transfer of liquids.

(13) Equipment used exclusively for the unheated underground storage of 23,000 liters (6,077 gallons) or less, and equipment used exclusively for the transfer to or from such storage of organic liquids with a vapor pressure of 77.5 mm Hg (1.5 psi) absolute or less at actual storage conditions.

(14) Equipment used exclusively for the storage and/or transfer of an asphalt-water emulsion heated to 150 ^{o}F or less.

(15) Liquid fuel storage tanks piped exclusively to emergency internal combustion engine-generators, turbines or pump drivers.

(16) Bins used for temporary storage and transport of material with a capacity of 2,080 liters (550 gallons) or less.

(17) Equipment used for material storage where no venting occurs during filling or normal use.

(18) Equipment used exclusively for storage, blending, and/or transfer of water emulsion intermediates and products, including latex, with a VOC content of 5% by volume or less or a VOC composite partial pressure of 5 mm Hg (0.1 psi) or less at 20 ^{o}C (68 ^{o}F).

(19) Equipment used exclusively for storage and/or transfer of sodium hypochlorite solution.

(20) Equipment used exclusively for the storage of VOC containing materials which are stored at a temperature at least 130 ^{o}C (234 ^{o}F) below its initial boiling point, or have an organic vapor pressure of 5 mm Hg (0.1 psia) absolute or less at the actual storage temperature. To qualify for this exemption, the operator shall, if the stored material is heated, install and maintain a device to measure the temperature of the stored VOC containing material. This exemption does not include liquid fuel storage greater than 160,400 liters (40,000 gallons), asphalt storage, or coal tar pitch storage.

(21) Stationary equipment used exclusively to store and/or transfer organic compounds that do not contain VOCs.

(22) Unheated equipment including associated control equipment used exclusively for the storage and transfer of fluorosilicic acid at a concentration of 30% or less by weight and a vapor pressure of 24 mm Hg or less at 77 ^{o}F (25 ^{o}C). The hydrofluoric acid concentration within the fluorosilicic acid solution shall not exceed 1% by weight.

(23) Equipment, including asphalt day tankers, used exclusively for the storage, holding, melting, and transfer of asphalt or coal tar pitch, that is mounted on a motor vehicle with a maximum holding capacity of less than 600 liters (159 gallons); or equipment, including asphalt day tankers, used exclusively for the storage, holding, melting, and transfer of asphalt or coal tar pitch, that is mounted on a motor vehicle, with a maximum holding capacity of no more than 18,925 liters (5,000 gallons), is equipped with burner(s) designed to fire exclusively on liquefied petroleum gases only, and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

(24) Tanks for aqueous urea solutions with a capacity of 6,500 gallons or less, provided a filing pursuant to Rule 222 is submitted to the Executive Officer. This exemption does not include tanks used for blending powdered urea and water.

(25) Replacement of a pole float used to control emissions from slotted guidepoles in floating roof storage tanks with a pole sleeve or a pole sleeve in combination with a flexible enclosure system. Paragraph (s)(1) does not apply to equipment utilizing this provision, but this does not excuse the duty to comply with any requirements of regulations listed in paragraph (s)(1) as those requirements may separately apply to the equipment.

(n) Natural Gas and Crude Oil Production Equipment

(1) Well heads and well pumps, provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

(2) Crude oil and natural gas pipeline transfer pumps, provided a filing pursuant to Rule 222 is submitted to the Executive Officer for natural gas pipeline transfer pumps.

(3) Gas, hydraulic, or pneumatic repressurizing equipment, provided a filing pursuant to Rule 222 is submitted to the Executive Officer for natural gas repressurizing equipment

(4) Equipment used exclusively as water boilers, water or hydrocarbon heaters, and closed heat transfer systems (does not include steam generators used for oilfield steam injection) that have:

(A) a maximum heat input rate of 2,000,000 Btu per hour or less, and

(B) been equipped to be fired exclusively with purchased quality natural gas, liquefied petroleum gas, produced gas which contains less than 10 ppm hydrogen sulfide, or any combination thereof.

(5) The following equipment used exclusively for primary recovery, and not associated with community lease units:

(A) Gas separators and boots.

(B) Initial receiving, gas dehydrating, storage, washing and shipping tanks with an individual capacity of 34,069 liters (9,000 gallons) or less.

(C) Crude oil tank truck loading facilities (does not include a loading rack), and gas recovery systems exclusively serving tanks exempted under subparagraph (n)(5)(B).

(D) Produced gas dehydrating equipment.

(6) Gravity-type oil water separators with a total air/liquid interfacial area of less than 45 square feet and the oil specific gravity of 0.8251 or higher (40.0 API or lower).

The following definitions will apply to subdivision (n) above:

PRIMARY RECOVERY - Crude oil or natural gas production from "free-flow" wells or from well units where only water, produced gas or purchased quality gas is injected to repressurize the production zone.

COMMUNITY LEASE UNITS - Facilities used for multiple-well units (three or more wells), whether for a group of wells at one location or for separate wells on adjoining leases.

SHIPPING TANKS - Fixed roof tanks, which operate essentially as "run down" tanks for separated crude oil where the holding time is 72 hours or less.

WASH TANKS - Fixed roof tanks which are used for gravity separation of produced crude oil/water, including single tank units, and which are used concurrently for receipt, separation, storage and shipment.

(o) Cleaning

The exemptions in this subdivision do not include any equipment using solvents that are greater than 5 percent by weight of perchloroethylene, methylene chloride, carbon tetrachloride, chloroform, 1,1,1-trichloroethane, trichloroethylene, or any combination thereof, with either a capacity of more than 7.6 liters (2 gallons) or was designed as a solvent cleaning and drying machine regardless of size. In addition, the exemptions specified in this subdivision apply only if the equipment is also exempt pursuant to paragraph (b)(2) of this rule.

(1) Cleaning equipment and associated waste storage tanks used exclusively to store the solutions drained from this equipment:

(A) unheated batch, provided:

(i) the volume of the solvent reservoir is one (1) gallon or less, or

(ii) the VOC emissions from the equipment are not more than 3 pounds per day or 66 pounds per calendar month.

(B) devices used for cleaning of equipment used for the application of inks, adhesives, and coatings provided:

(i) the volume of the solvent reservoir is five (5) gallons or less, or

(ii) the VOC emissions from the equipment are not more than three (3) pounds per day or 66 pounds per calendar month.

(C) remote reservoir cleaners, provided the solvent from the sink-like area immediately drains into an enclosed solvent container while the parts are being cleaned.

(2) Vapor degreasers with an air/vapor interface surface area of 1.0 square foot or less, provided such degreasers have an organic solvent loss of 3 gallons per day or less excluding water or 66 gallons per calendar month or less excluding water.

(3) Cleaning equipment using materials with a VOC content of twenty-five (25) grams of VOC per liter of material, or less, and associated dryers exclusively serving these cleaners, provided such equipment is also exempt pursuant to paragraph (b)(2). This exemption does not include equipment used for cleaning of diesel particulate filters (DPF) or associated control equipment used to vent such equipment.

(4) Hand application of solvents for cleaning purposes including but not limited to the use of rags, daubers, swabs, and squeeze bottles as well as associated air pollution control equipment, unless air pollution control equipment is required for source specific rule compliance.

(p) Miscellaneous Process Equipment

(1) Equipment, including dryers, used exclusively for dyeing, stripping, or bleaching of textiles where no VOC containing materials, including diluents or thinners are used, provided such equipment is also exempt pursuant to paragraph (b)(2) and control equipment exclusively venting the equipment.

(2) Equipment used exclusively for bonding lining to brake shoes, where no VOC containing materials are used and control equipment exclusively venting such equipment.

(3) Equipment used exclusively to liquefy or separate oxygen, nitrogen, or the rare gases from air, except equipment not exempt pursuant to paragraph (b)(1) or (b)(2).

(4) Equipment used exclusively for surface preparation, including but not limited to paint stripping, pickling, desmutting, de-scaling, passivation, and/or deoxidation, and any water and associated rinse tanks and waste storage tanks exclusively to store the solutions drained from the equipment, that exclusively uses any one or combination of the materials in subparagraphs (p)(4)(A) through (p)(4)(H). This exemption does not

include any tank that contains chromium, or contains nickel, lead or cadmium and is rectified, sparged or heated.

(A) organic materials containing 50 grams or less of VOCs per liter of material;

(B) formic acid, acetic acid, boric acid, citric acid, phosphoric acid, and sulfuric acids;

(C) hydrochloric acid in concentrations of 12 percent by weight or less;

(D) alkaline oxidizing agents;

(E) hydrogen peroxide;

(F) salt solutions, except for air-sparged, heated or rectified processes with salt solutions containing hexavalent chromium, chromates, dichromates, nickel, cadmium, or lead;

(G) sodium hydroxide, provided the process is not sparged or rectified; or

(H) nitric acid, hydrochloric acid, or hydrofluoric acid, provided that the equipment in which it is used has an open surface area of one square foot or less, is unheated, and produces no visible emissions.

This exemption does not include chemical milling or circuit board etching using ammonia-based etchants.

(5) Equipment used exclusively for the plating, stripping, or anodizing of metals as described in subparagraphs (p)(5)(A) through (p)(5)(G). This exemption does not include any tank that contains chromium, or contains nickel, lead or cadmium and is rectified, sparged or heated.

(A) electrolytic plating of exclusively brass, bronze, copper, iron, tin, zinc, and precious metals;

(B) electroless nickel plating, provided that the process is not air-sparged and no electrolytic reverse plating occurs;

(C) the electrolytic stripping of brass, bronze, copper, iron, tin, zinc, and precious metals, provided no chromic, hydrochloric, nitric or sulfuric acid is used;

(D) the non-electrolytic stripping of metals, provided the stripping solution is not sparged and does not contain nitric acid.

(E) anodizing using exclusively sulfuric acid and/or boric acid with a total bath concentration of 20 percent acids or less by weight and using 10,000 amp-hours per day or less of electricity;

(F) anodizing using exclusively phosphoric acid with a bath concentration of 15 percent or less phosphoric acid by weight and using 20,000 amp-hours per day or less of electricity; or

(G) water and associated rinse tanks and waste storage tanks used exclusively to store the solutions drained from equipment used for the plating, stripping, or anodizing of metals.

(6) Closed loop solvent recovery systems used for recovery of waste solvent generated on-site using refrigerated or liquid-cooled condenser, or air-cooled (where the solvent reservoir capacity is less than 10 gallons) condenser.

(7) Equipment used exclusively for manufacturing soap or detergent bars, including mixing tanks, roll mills, plodders, cutters, wrappers, where no heating, drying or chemical reactions occur.

(8) Inert gas generators, except equipment not exempt pursuant to paragraph (b)(2).

(9) Hammermills used exclusively to process aluminum and/or tin cans, and control equipment exclusively venting such equipment.

(10) Paper shredding and carpet and paper shearing, fabric brushing and sueding as well as associated conveying systems, baling equipment, and control equipment venting such equipment. This exemption does not include carpet and fabric recycling operations.

(11) Chemical vapor type sterilization equipment where no Ethylene Oxide is used, and with a chamber volume of two (2) cubic feet or less used by healthcare facilities and control equipment exclusively venting the equipment. This exemption does not include equipment used for incineration.

(12) Hot melt adhesive equipment.

(13) Pyrotechnic equipment, special effects or fireworks paraphernalia equipment used for entertainment purposes, provided such equipment is exempt pursuant to subdivision (b).

(14) Ammunition or explosive testing equipment.

(15) Fire extinguishing equipment using halons.

(16) Industrial wastewater treatment equipment which only does pH adjustment, precipitation, gravity separation and/or filtration of the wastewater, including equipment used for reducing hexavalent chromium and/or destroying cyanide compounds. This exemption does not include treatment

processes where VOC and/or toxic materials are emitted, or where the inlet concentration of cyanide salts through the wastewater treatment process prior to pH adjustment exceeds 200 mg/liter.

(17) Rental equipment operated by a lessee and which is not located more than twelve consecutive months at any one facility in the District provided that the owner of the equipment has a permit to operate issued by the District and that the lessee complies with the terms and conditions of the permit to operate.

(18) Industrial wastewater evaporators treating water generated from on-site processes only, where no VOC and/or toxic materials are emitted and provided that the equipment is exempt pursuant to paragraph (b)(2).

(19) Foam application equipment using two-component polyurethane foam where no VOC containing blowing agent is used, excluding chlorofluorocarbons or methylene chloride, and control equipment exclusively venting this equipment.

(20) Toner refilling and associated control equipment.

(21) Evaporator used at dry cleaning facilities to dispose of separator wastewater and control equipment exclusively venting the equipment.

(22) Equipment used to recycle aerosol cans by puncturing the can in an enclosed system which is vented through an activated carbon filter. This exemption shall only apply to aerosol recycling systems where the aerosol can to be recycled was used as part of their operation at the facility or from facilities under common ownership.

(23) Notwithstanding the exemptions in subdivision (p), equipment existing as of May 5, 2017 that is subject to the aforementioned exemptions and that is an integral part of an operation requiring a written permit shall continue to be exempt, provided the equipment is identified, described in detail and submitted for inclusion into the permit equipment description with any associated application for Permit to Construct or Permit to Operate. Equipment described in this paragraph includes, but is not limited to, rinse tanks, dye tanks and seal tanks that are part of a metal finishing operation, including but not limited to plating, anodizing and surface preparation.

(q) Agricultural Sources

(1) Notwithstanding the exemption under this subdivision, any internal combustion engines, or gasoline transfer and dispensing equipment purchased or modified after July 7, 2006 that are not exempt pursuant to

paragraphs (b)(1), (b)(6), and (m)(9) of this rule shall be subject to permit requirements. Emergency internal combustion engines are exempt from permit requirements for these agricultural sources.

(2) Except as provided in paragraph (q)(1), agricultural permit units at agricultural sources not subject to Title V with actual emissions less than the amounts listed in the following table:

Table

Pollutant (Tons/Year)	South Coast Air Basin	Riverside County Portion of Salton Sea Air Basin	Riverside County Portion of Mojave Desert Air Basin
VOC	5.0	12.5	50.0
NOx	5.0	12.5	50.0
SOx	35.0	35.0	50.0
CO	25.0	50.0	50.0
PM10	35.0	35.0	50.0
Single Hazardous Air Pollutant	5.0	5.0	5.0
Combination Hazardous Air Pollutants	12.5	12.5	12.5

Emissions of fugitive dust and emissions from soil amendments and fertilizers are not to be counted when evaluating emissions for purposes of this subdivision.

(3) Orchard wind machines powered by an internal combustion engine with a manufacturer's rating greater than 50 brake horsepower provided the engine is operated no more than 30 hours per calendar year.

(4) Orchard heaters approved by the California Air Resources Board to produce no more than one gram per minute of unconsumed solid carbonaceous material.

(r) Registered Equipment and Filing Program

(1) Any portable equipment, including any turbines qualified as military tactical support equipment under Health and Safety Code Section 41754 registered in accordance with the Statewide Portable Equipment Registration Program (PERP) adopted pursuant to California Health and Safety Code Section 41750 et seq.

(2) PERP registered engines used in the Outer Continental Shelf (OCS), provided that:

(A) notification is submitted to the Executive Officer via submittal of a filing pursuant to Rule 222;

(B) the equipment shall not reside at one location for more than 12 consecutive months; and

(C) notwithstanding the exemption applicability under Health and Safety Code §2451 of the Statewide Portable Equipment Registration Program (PERP) for engines operating in the OCS, all operators using this permit exemption shall comply with PERP and with California Air Resources Board-issued registration requirements.

(3) PERP registered equipment operated at a RECLAIM Facility shall be classified as Major Source, Large Source or Process Units in accordance with Rule 2011 (c) and (d) for SOx emissions and Rule 2012 (c), (d) and (e) for NOx emissions for purposes of determining the applicable requirements for Monitoring, Reporting and Recordkeeping (MRR). Use of RECLAIM MRR Protocols for Rule 219 equipment as specified in Rule 2011 (Rule 2011 Protocol, Appendix A, Chapter 3, Subsection F) and Rule 2012 (Rule 2012 Protocol, Appendix A, Chapter 4, Subsection F is only allowed if the registered PERP equipment also qualifies for an exemption from permit under a separate provision of this Rule.

(4) Any equipment listed in Rule 222 – Filing Requirements for Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation II.

(s) Exceptions

Notwithstanding equipment identified in (a) through (r) of this rule, written permits are required pursuant to paragraphs (s)(1), (s)(2), and (s)(4), and filings are required under Rule 222 pursuant to paragraph (s)(3):

(1) Equipment, process materials or air contaminants subject to:

(A) Regulation IX – Standards of Performance for New Stationary Sources (NSPS); or

(B) Regulation X – National Emission Standards for Hazardous Air Pollutants (NESHAP - Part 61, Chapter I, Title 40 of the Code of Federal Regulations); or

(C) Emission limitation requirements of either the state Air Toxic Control Measure (ATCM) or NESHAP - Part 63, Title 40 of the Code of Federal Regulations; or

(2) Equipment when the Executive Officer has determined that:

(A) the risk will be greater than identified in subparagraph (d)(1)(A), or paragraphs (d)(2) or (d)(3) in Rule 1401 – New Source Review of Toxic Air Contaminants; or,

(B) the equipment may not operate in compliance with all applicable District Rules and Regulations, including but not limited to SCAQMD Rule 402 – Nuisance.

Once the Executive Officer makes such a determination and written notification is given to the equipment owner or operator, the equipment shall thereafter be subject to Rules 201 and 203 for non-RECLAIM sources, Rule 2006 for RECLAIM sources, and Regulation XXX – Title V Permits for major sources.

(3) The following equipment, processes or operations that are located at a single facility, which does not hold a written permit for any other equipment, processes or operations, and emit four (4.0) tons or more of VOCs in any Fiscal Year (July 1 to June 30) beginning July 1, 2007 or emitted four (4.0) tons or more of VOCs in the Fiscal Year July 1, 2006 – June 30, 2007. The four (4.0) ton per Fiscal Year threshold shall be calculated cumulatively for all categories of equipment, processes or operations listed in subparagraphs (A) through (C) below. One filing shall be required for all of the categories of equipment, processes or operations subject to this provision as listed in subparagraphs (A) through (C) below. Associated VOC emissions shall be reported under the Annual Emissions Reporting program and fees shall be paid pursuant to Rule 301, subdivision (u).

(A) Printing operations individually exempted under paragraph (h)(1) and (h)(7).

(B) Coating or adhesive application or laminating equipment and devices individually exempted under paragraphs (l)(6) and (l)(10).

(C) Hand applications of VOC containing materials individually exempted under paragraph (o)(4).

(4) Equipment or control equipment subject to permitting requirements pursuant to Regulation XIV - Toxics and Other Non-criteria Pollutants.

(t) Recordkeeping

Any person claiming exemptions under the provisions of this Rule shall provide adequate records pursuant to Rule 109 and any applicable Material Safety Data Sheets (MSDS), to verify and maintain any exemption. Any test method used to verify the percentages, concentrations, vapor pressures, etc., shall be the approved test method as contained in the District's Test Method Manual or any method approved by the Executive Officer, CARB, and the EPA.

(u) Compliance Date

(1) The owner/operator of equipment previously not requiring a permit pursuant to Rule 219 shall comply with Rule 203 – Permit to Operate within one year from the date the rule is amended to remove the exemption unless compliance is required before this time by written notification by the Executive Officer. Effective on or after July 11, 2003 for purpose of Rule 301(e), emissions from equipment that has been removed from an exemption shall be considered "permitted" beginning January 1 or July 1, whichever is sooner, after Rule 219 is amended to remove the exemption, even if an application has not been submitted to obtain a permit.

(2) Agricultural sources constructed or operating prior to January 1, 2004 requiring Title V permits shall submit Title V permit applications on or before June 29, 2004.

(3) Existing agricultural permit units constructed or operating prior to January 1, 2004 at agricultural sources requiring Title V permits and requiring written permits pursuant to paragraph (q)(1) shall submit applications for a Permit to Operate by December 17, 2004. For the purpose of Rule 301(e), emissions from agricultural permit units subject to this paragraph shall be considered "permitted" July 1, 2005.

(4) Existing agricultural permit units constructed or operating prior to January 1, 2004 at agricultural sources not subject to Title V with actual emissions equal to or greater than the amounts listed in the table in subdivision (q) and requiring written permits pursuant to paragraph (q)(2) shall submit applications for a Permit to Operate by June 30, 2005. For the purpose of Rule 301(e), emissions from agricultural permit units subject to this paragraph shall be considered "permitted" July 1, 2005.

(5) Agricultural permit units built, erected, altered, modified, installed or replaced after January 1, 2004, but prior to January 1, 2005 if written

permits are required pursuant to subdivision (q), shall submit applications for a Permit to Operate by March 5, 2005. For the purpose of Rule 301(e), emissions from agricultural permit units subject to this paragraph shall be considered "permitted" July 1, 2005.

(6) Agricultural permit units built, erected, altered, modified, installed or replaced on or after January 1, 2005, if written permits are required pursuant to subdivision (q) shall comply with Rule 201. For the purpose of Rule 301(e), emissions from agricultural permit units subject to this paragraph shall be considered "permitted" July 1, 2005.

(7) Notwithstanding paragraph (u)(1), effective July 5, 2017, an owner/operator submitting an application for Permit to Construct or Permit to Operate pursuant to Rules 201 or 203 shall comply with paragraphs (e)(21) and (p)(23).

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report

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

Proposed Amended Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II

April 2018

Deputy Executive Officer
Planning, Rule Development, and Area Sources
Philip M. Fine, Ph.D.

Assistant Deputy Executive Officer
Planning, Rule Development, and Area Sources
Sarah Rees

Planning and Rules Manager
Planning, Rule Development, and Area Sources
David DeBoer

Author:	Kennard Ellis – Air Quality Specialist
Contributors:	Ryan Banuelos – Air Quality Specialist Bahareh Brumand – Air Quality Engineer II Paul Caballero – Air Quality Inspector III Rudy Chacon – Supervising Air Quality Inspector Shah Dabirian – Program Supervisor Robert Gottschalk – Air Quality Specialist Andrew Lee – Senior Air Quality Engineering Manager Tom Liebel – Senior Air Quality Engineer Danny Luong – Senior Enforcement Manager Mike Morris – Program Supervisor Paul Park – Senior Air Quality Engineer Barbara Radlein – Program Supervisor Rafael Reynoso – Senior Enforcement Manager Tran Vo – Supervising Air Quality Engineer Casey Williams – Air Quality Inspector II
Reviewed by:	Teresa Barrera – Senior Deputy District Counsel Brian Tomasovic - Senior Deputy District Counsel

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD

Chairman: DR. WILLIAM A. BURKE.
Speaker of the Assembly Appointee

Vice Chairman: DR. CLARK E. PARKER, SR.
Senate Rules Committee Appointee

MEMBERS:

MARION ASHLEY
Supervisor, Fifth District
County of Riverside

BEN BENOIT
Mayor, Wildomar
Cities of Riverside County

JOE BUSCAINO
Council Member, 15th District
City of Los Angeles Representative

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

JOSEPH K. LYOU, Ph. D.
Governor's Appointee

LARRY MCCALLON
Mayor, Highland
Cities of San Bernardino County

JUDITH MITCHELL
Mayor Pro Tem, Rolling Hills Estates
Cities of Los Angeles County/Western Region

SHAWN NELSON
Supervisor, Fourth District
County of Orange

DWIGHT ROBINSON
Council Member, Lake Forest
Cities of Orange County

JANICE RUTHERFORD
Supervisor, Second District
County of San Bernardino

HILDA SOLIS
Supervisor, First District
County of Los Angeles

EXECUTIVE OFFICER:

WAYNE NASTRI

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities, was adopted in 2001 to further reduce emissions of volatile organic compounds (VOC) from storage tanks located at petroleum facilities. The requirements of the rule apply to aboveground storage tanks that have a capacity of greater than 75,000 liters (or 19,815 gallons), are used to store organic liquids with a true vapor pressure greater than 5 mm of mercury (Hg) absolute under actual storage conditions, and are located at any petroleum facility that emits more than 20 tons per year of VOC in any emission year starting with emission inventory year 2000. Since the 2001 adoption, the rule has been amended only once (in 2006) to include a provision that allowed the use of alternatives to a slotted membrane fabric drain cover for external floating roofs.

Proposed Amended Rule (PAR) 1178 will incorporate a flexible enclosure system that encloses the entire surface of the slotted guidepole and serves as a VOC emission reduction option as outlined in the 2000 U.S. EPA Storage Tank Emission Reduction Partnership Program (STERPP) Agreement. This rule amendment will make this option available for application in certain configurations of floating roof tanks, including those ~~that~~ where the operator has chosen to conduct radar depth gauging. Other clarifications to the rule, including the inspection procedures and entries to compliance report forms, facilitate the inclusion of the flexible enclosure system option. The proposed amendments will provide tank operators with more flexibility, but these amendments are expected to have negligible impacts on emissions and are not expected to increase costs.

Rule 219 – Equipment Not Requiring A Written Permit Pursuant to Regulation II was adopted in 1976 and is an administrative rule that identifies equipment, processes, and operations that emit small amounts of air contaminants that do not require written permits, except for equipment, processes, and operations subject to subdivision (s) - Exceptions. Proposed Amended Rule 219 – is an administrative amendment that exempts from permit the replacement of a pole float used to control emissions from a slotted guidepole in floating roof storage tanks with a pole sleeve or a pole sleeve in combination with a flexible enclosure system. The proposed amended rule would also make paragraph (s)(1) of Rule 219 inapplicable for storage vessels that change from a pole float to a pole sleeve or to a pole sleeve in combination with a flexible enclosure system.

CHAPTER 1: BACKGROUND

INTRODUCTION

PUBLIC PROCESS

CONTROL TECHNOLOGY

INTRODUCTION

Rule 1178 – Further Reductions of Fugitive VOC Emissions from Storage Tanks at Petroleum Facilities was adopted on December 21, 2001, with the purpose of further reducing emissions of volatile organic compounds (VOCs) from storage seals and fittings on storage tanks at petroleum facilities with annual VOC emissions of more than 40,000 pounds (20 tons). Rule 1178 was adopted to implement Phase 1 of the 1999 Air Quality Management Plan (AQMP) Control Measure FUG-05 – Further Emission Reductions from Large Fugitive VOC Sources, Control Measure FUG-03 – Further Emission Reductions from Floating Roof Tanks, and portions of Control Measure FUG-04 – Further Emission Reductions from Fugitive Sources of the 1999 AQMP.

The rule was amended in ~~March~~April 2006 to include a provision that allowed the use of alternatives to a slotted membrane fabric drain cover for an external floating roof, provided that it had the equivalent control efficiency. The amendment also clarified the definition of mechanical shoe primary seal by requiring the use of VOC-impervious fabric to serve as a seal in the vapor space between the shoe seal and the roof. In addition, the amendment also specified guidelines for the distances which internal floating roof tank seals were allowed to be extended into the liquid and outside the liquid stored.

The provisions of the rule apply to petroleum facilities operating storage tanks with a design capacity equal to or greater than 75,000 liters (19,815 gallons) that are used to store organic liquids with a true vapor pressure of greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions. The petroleum facilities subject to the Proposed Amended Rule 1178 include facilities engaged in the production, refining, storage, transfer or distribution of crude petroleum or petroleum products and staff estimates that there are approximately 40 facilities and more than 1,000 storage tanks that will be affected.

During the May 2017 rule development process to amend Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, stakeholders requested consideration ~~of~~ for exempting flexible enclosures for slotted guidepoles. The adoption resolution for Proposed Amended Rule 219 directed staff to work with stakeholders to introduce proposed amendments to Rule 1178 to incorporate VOC control technologies for guidepoles in floating roof tanks as recognized by the EPA in its 2000 STERPP agreement. The Governing Board also directed staff to explore mechanisms to minimize permitting impacts when addressing VOC control technologies for guidepoles in floating roof tanks that are subject to Rule 1178.

PUBLIC PROCESS

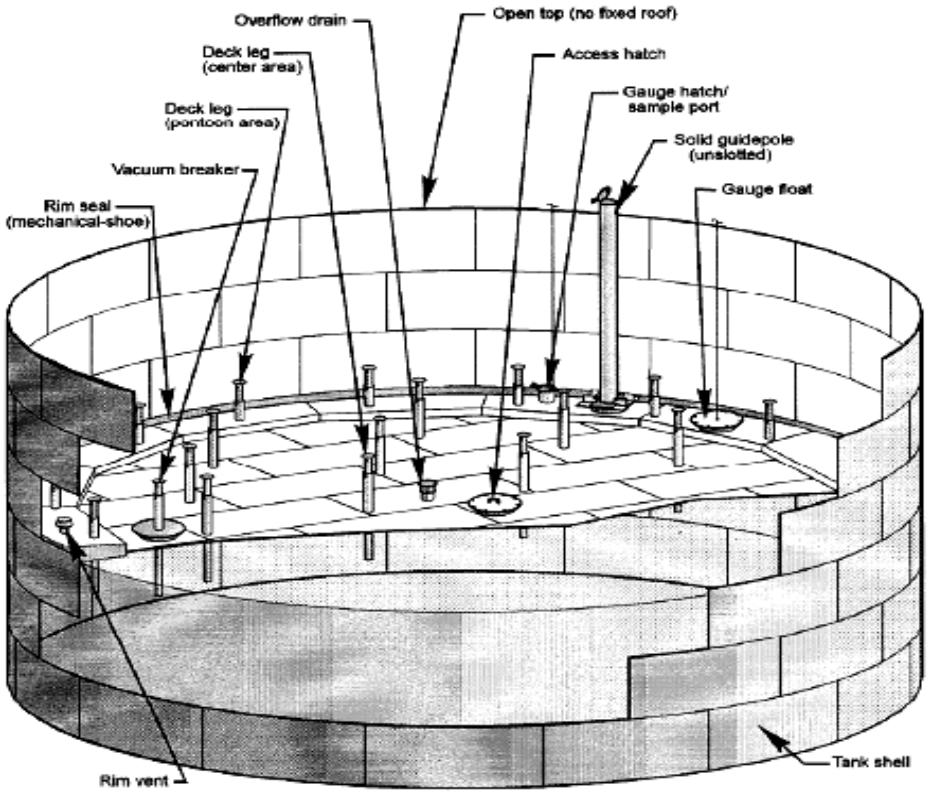
PAR 1178 is being developed through a public process. Two site visits were conducted to examine the flexible enclosure technology. A working group was formed to provide the public and stakeholders an opportunity to discuss the proposed rule amendment and provide the SCAQMD staff with important input during the rule development process. The working group and interested parties are comprised of a variety of stakeholders including representatives from industry, consultants, environmental groups, community groups, and public agency representatives. A Public Workshop was held on January 11, 2018 to present PAR 1178, the preliminary draft staff report, and receive public comment. The working group met on December 12, 2017 and on February 14, 2018. During the second working group, the proposed amendments to Rule 219 were

discussed. Comments that were received from the Public Workshop and subsequent communications have been incorporated into Appendix A of this draft staff report document.

CONTROL TECHNOLOGY

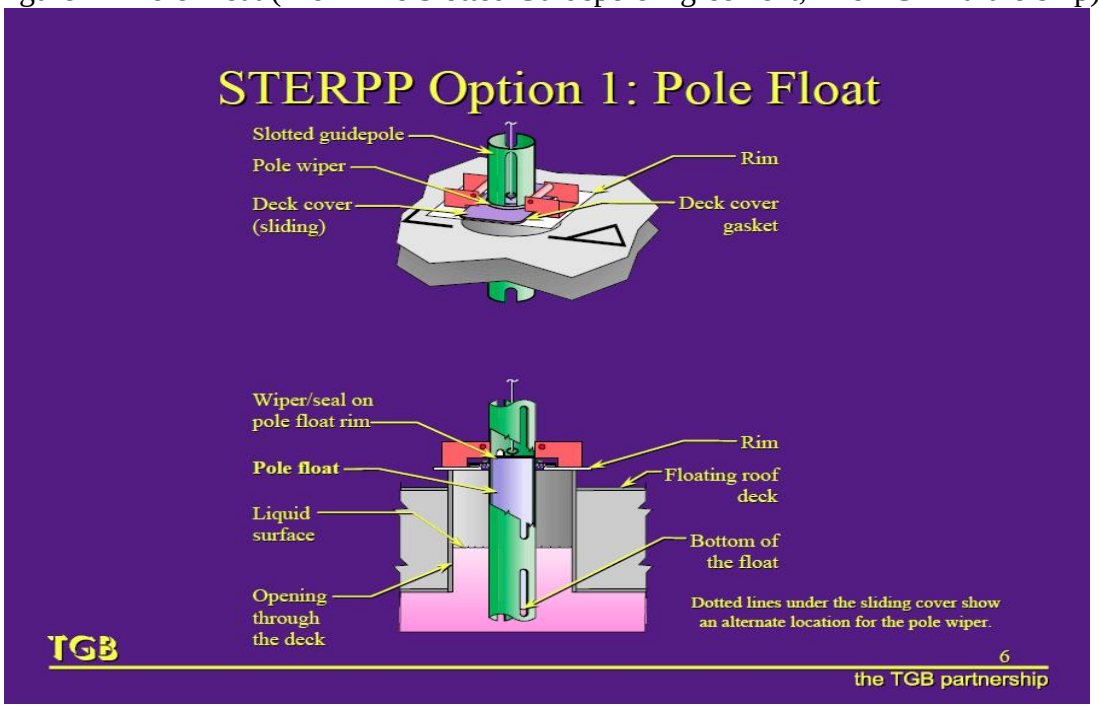
Floating roof storage tanks have fugitive VOC emissions caused by the evaporation of organic liquids stored. These emissions come from the annular space between the floating roof and the tank wall or from any deck openings. Seals are used to control emissions from the space between the walls and the roof; access hatches and deck openings are covered, gasketed and/or bolted. One such opening is from slotted guidepoles. A slotted guidepole is a cylindrical hollow shaft used in storage tanks as an anti-rotational device to guide the motion of the roof as it floats on the liquid surface of the storage tank contents. The slots allow the fluid to fill the shaft up to the liquid level which accommodates level depth gauging and sampling. Level depth gauging is often conducted by attaching a float to an incrementally marked cable or tape measure. The float is lowered through a hatch at the top of the slotted guidepole. Similarly, sampling is conducted by lowering a liquid sampler via a cable down the slotted guidepole hatch. Level depth gauging and liquid sampling are often conducted on a daily basis. Without emission controls, these slotted guidepoles allow significant VOC emissions.

Figure 1 –Floating Roof Tank (From AP-42, Section 7.1, U.S. EPA)



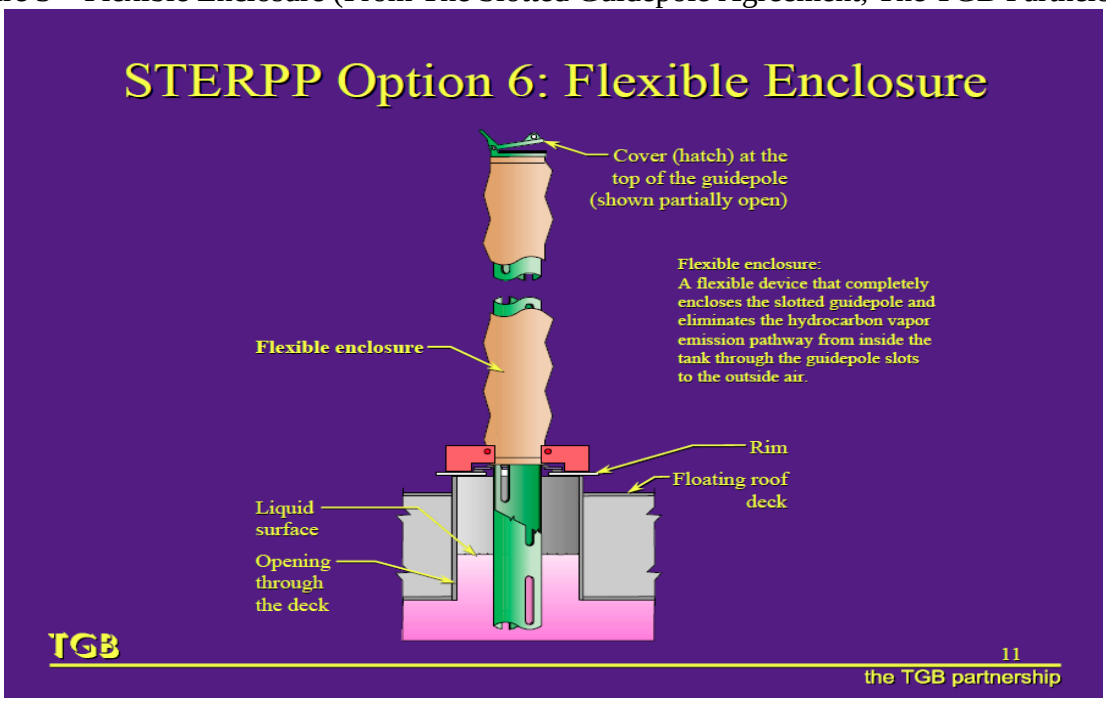
In 2001, Rule 1178 addressed this emission source by requiring a gasketed cover, a pole wiper, and a pole float wiper as depicted below in Figure 2 for a storage tank with a slotted guidepole that is equipped with a pole float. For a slotted guidepole that did not have a pole float the rule included a provision that allowed the operator to control guidepole emissions by equipping it with a gasketed cover, a pole wiper and a pole sleeve. These were recognized as acceptable options to control slotted guidepole emissions by the U.S. EPA in its 2000 Storage Tank Emission Reduction Partnership Program (STERPP) agreement, notice of which was published at 65 Fed. Reg. 19891 (April 13, 2000).

Figure 2 – Pole Float (From The Slotted Guidepole Agreement, The TGB Partnership)



Another acceptable option in the STERPP Agreement is a flexible enclosure system as depicted in Figure 3 below. The amendments being proposed for Rule 1178 would provide a facility the option to remove the pole float and the pole float wiper, and replace them with a pole sleeve and flexible enclosure system from external floating roof tanks. The amendments also propose that facility has the option to replace a pole float and pole float wiper on internal floating roof tanks and external domed floating roof tanks with a flexible enclosure system.

Figure 3 – Flexible Enclosure (From The Slotted Guidepole Agreement, The TGB Partnership)



The flexible enclosure system is a fabric cover that completely encloses the slotted guidepole. The cover is made of material that is impervious to petroleum vapors and is clamped to the floating roof and the hatch. The emission pathway from liquid inside the tank to the atmosphere is blocked by the flexible enclosure system. With the pole float removed, radar level gauging systems may be used while still minimizing emissions. The radar level gauging system works by using a non-contact radar measurement system with no moving parts and only an antenna that is placed inside the tank atmosphere. The signal sent by the radar provides a measurement with high accuracy. This would reduce the need to conduct manual level depth gauging which requires the hatch to be opened, with subsequent fugitive VOC losses. However, sampling practices are expected to remain unchanged when the slotted guidepole is equipped with either the pole float or the flexible enclosure system.

CHAPTER 2: SUMMARY OF PROPOSED AMENDED RULES 1178 AND 219

PROPOSED AMENDED RULE 1178

PROPOSED AMENDED RULE 219

~~PAR 1178 FACILITIES~~

PROPOSED AMENDED RULE 1178

PAR 1178 will incorporate the Flexible Enclosure System (FES) as a VOC emission reduction option for floating roof tanks that employ slotted guidepoles as outlined in the U.S. EPA STERPP Agreement. This option will specifically allow facilities to replace a pole float and pole float wiper (or pole float seal) with an FES which completely encloses the slotted guidepole in internal floating roof tanks or domed floating roof tanks. For external floating roof tanks, the proposed amendment will allow the replacement of a pole float with a pole sleeve in combination with a flexible enclosure system.

Definitions - Subdivision (c)

PAR 1178 will include the definition for the term Flexible Enclosure System. This VOC reduction system ~~shall be~~is constructed of a VOC impervious material that is resistant to ultraviolet light to prevent degradation. The system ~~shall~~ completely encloses the slotted guidepole, thus controlling the vapor emission pathway from the organic liquid inside the storage tank to the air outside.

Requirements - Subdivision (d)

The proposed rule has been modified to provide the operator with additional combinations of configurations that are acceptable for controlling emissions from slotted guidepoles. Previously, clauses (d)(1)(A)(ix) and (d)(1)(A)(x) provided the operator with the option of operating an external floating roof tank with either a gasketed cover, a pole wiper and a pole sleeve, or a gasketed cover, a pole wiper and a pole float wiper. PAR 1178 now incorporates these two provisions with a new provision [into clause (d)(1)(A)(ix)] that allows the use of a flexible enclosure system when a pole float is replaced, provided a pole sleeve is in place. Clause (d)(1)(A)(x) is language that was formerly in clause (d)(1)(A)(xii). Clause (d)(1)(A)(xi) replaces the previous provision to address the specific conditions under which the FES may be operated. It must completely enclose the slotted guidepole such that it minimizes the transfer of VOC emissions from the liquid in the storage tank to the atmosphere by being free of holes, tears, slots, or rips; and be tightly double-clamped at the top of the guidepole and be secured to the tank roof with no visible gaps.

While paragraph (d)(1) refers directly to external floating roof tanks, its provisions are also referenced for domed external floating roof tanks and internal floating roof tanks. As such, modifications made to the provisions in paragraph (d)(1) would also be applicable to these two tank categories as well, including storage tanks having slotted guidepoles equipped with an FES.

Subparagraphs (d)(2)(D) and (d)(3)(C) have also been amended to recognize flexible enclosure systems as an acceptable option for controlling VOC emissions from slotted guidepoles in domed external floating roof tanks and internal floating roof tanks, respectively. Subparagraphs (d)(2)(D) and (d)(3)(C) outline the combination of components that are required to be used on a slotted guidepole similar to subparagraph (d)(1)(A)(ix) with the only difference being that when a pole float is removed, it may be replaced by a flexible enclosure system. The specific conditions under which the FES must be operated as outlined in clause (d)(1)(A)(xi) also apply.

Maintenance Requirements - Subdivision (g)

Language has been added to subdivision (g) for clarification indicating that repairs or replacement shall occur within 72 hours after any inspection where a defect, visible gap, or non-vapor tight condition specified in subdivision (f) determines that the equipment is not operating in compliance.

Record Keeping and Reporting Requirements - Paragraph (h)(3)

Language has been added to paragraph (h)(3) to clarify that semiannual reports for ~~fixed~~floating roof tanks are due on January 31 and July 31, ~~respectively,~~ upon completion of two (2) consecutive quarterly inspections.

Attachment A – Inspection Procedures and Compliance Report Forms

The inspection procedure for ~~internal floating roof and external domed~~ floating roof tanks has been updated to require a visual inspection of the slotted guidepole flexible enclosure system if so equipped. Additionally, the language has been clarified that measurement of the organic vapor concentration in the vapor space above the roof applies to both internal floating roof and external domed floating roof tanks.

Rule 1178 Compliance Report

A provision has been included in the Compliance Report to include a visual inspection of the slotted guidepole flexible enclosure system, if applicable, at the same time as conducting the visual inspection of the roofs and secondary seals.

PROPOSED AMENDED RULE 219

Proposed Amended Rule (PAR) 219 is an administrative amendment ~~made to Rule 1178~~ to provide for the use of a Flexible Enclosure System (FES) as a VOC emission control option for floating roof storage tanks that have slotted guidepoles.

PAR 219 seeks to add paragraph (m)(25) as follows:

(m)(25) Storage and Transfer Equipment

~~(25)~~ Replacement of a pole float used to control emissions from slotted guidepoles in floating roof storage tanks with a pole sleeve or a pole sleeve in combination with a flexible enclosure system. Paragraph (s)(1) does not apply to equipment utilizing this provision, but this does not excuse the duty to comply with any requirements of regulations listed in paragraph (s)(1) as those requirements may separately apply to the equipment.

The amended rule would make paragraph (s)(1) of Rule 219 inapplicable for storage vessels that change from a pole float to a pole sleeve or to a pole sleeve in combination with a flexible enclosure system. While older storage vessels are not necessarily subject to more recent federal and state requirements, it is estimated that most storage vessels are subject to NSPS, a NESHAP, or both. If subparagraph (s)(1) were made to apply as it does for other equipment and processes listed, it would, by its terms, provide no exemption from the requirement for a written permit pursuant to Regulation II when an NSPS or NESHAP does apply to the storage vessel. The proposed language of (m)(25) would override this. However, the language also explains that nothing proposed in paragraph (m)(25) should be construed to limit or excuse the duty to comply with applicable requirements of NSPS or NESHAPs, as those requirements may separately apply. Of additional note, many storage vessels are part of a source that may also be a Title V permitted facility. Nothing in proposed paragraph (m)(25) should be construed to limit or excuse the duty to comply with separately applicable permit revision requirements of ~~Title V and~~ Regulation XXX

– Title V Permits. While proposed paragraph (m)(25) would not require a permit pursuant to Regulation II, revision of a Title V permit, if applicable, may be needed and appropriate. It is expected that the minor permit revision process ~~may beis~~will be needed and used in many cases unless case specific circumstances would dictate the need for a significant permit revision, but at minimum, all appropriate Title V permit changes should be incorporated at the time of renewal.

It should be noted that there is a slight difference between the acceptable slotted guidepole configurations as proposed in PAR 1178 and the exemption provision proposed in PAR 219. For internal floating roof tanks and domed external floating roof tanks, PAR 1178 allows the use of an FES without a pole sleeve. However, the exemption from a permit under PAR 219 requires that the FES be utilized in combination with a pole sleeve. Thus internal floating roof tanks and domed external floating roof tanks using an FES without a pole sleeve would be required to modify their permit prior to making any changes to the guidepole. Internal floating roof tanks and domed external floating roof tanks using an FES in combination with a pole sleeve would not require a written permit pursuant to Regulation II, although, when applicable, permit revision under Regulation XXX may remain a consideration. The proposed exemption would apply when the only change made to the floating roof tank was to incorporate a pole sleeve or a pole sleeve in combination with the FES. Other physical changes made to the tank or changes to the process or contents of the tank may trigger the need for a written permit pursuant to Regulation II.

CHAPTER 3: IMPACT ASSESSMENT

AFFECTED FACILITIES

The petroleum facilities subject to PAR 1178 include facilities 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). Staff estimates that there are approximately 40 facilities and 1,000 storage tanks that may be affected by this amendment of Rule 1178. While the proposed amendments provide additional regulatory flexibility and also clarify rule requirements, the option of removing a pole float from a slotted guidepole and replacing it with an FES may only be exercised by operators at some facilities to facilitate activities, including automatic radar gauging that may more accurately measure the organic liquid depth in storage tanks. This option is ~~not~~ expected to provide options for ~~adversely impact applicable facilities~~facility operators and will not have any adverse impacts. PAR 219 will provide a cost savings by not requiring a permit for slotted guidepole flexible enclosure systems.

EMISSION IMPACT

The proposed amendments recognize an acceptable emission control option identified by the 2000 U.S. EPA STERPP Agreement and are expected to have negligible emission impacts. Specifically, the proposed amendment will allow facilities to replace a pole float and float wiper/seal with a Flexible Enclosure System (FES), which completely encloses the slotted guidepole, in internal floating tanks or domed floating tanks. For external floating tanks, the proposed amendment will allow the same replacement provided pole sleeves are also employed.

Emission calculations were performed using US EPA's TANKS 4.0.9d program which estimates volatile organic compound (VOC) emissions from different types of storage tanks based on the emission estimation procedures from Chapter 7 of EPA's Compilation of Air Pollutant Emission Factors (AP-42). Although ~~T~~the TANKS 4.09d program does not provide an option to estimate emissions from the use of the FES, certain conclusions can nonetheless be drawn based on the nature of the FES, the nature of the tanks at issue, and what is known about the emissions associated with other options allowed under the rule. For external floating roof tanks, emissions associated with a pole sleeve are comparable to that of a pole float with float wiper/seal. Thus, it can be seen with reasonable certainty that a pole sleeve with a FES will provide equivalent or better emissions control as that of a pole float with float wiper/seal for external floating roof tanks. (It should be noted that the STERPP agreement does not require the inclusion of a pole sleeve with a FES for external floating roofs.) For internal or domed external floating roof tanks, pole sleeves will not be required with a FES. Even so, based on the nature of these tanks, the use of a FES in these circumstances is expected to yield comparable emission reduction estimates. In sum,~~. Based on the results of the calculations, the emission reductions estimates are comparable for all three slotted guidepole control configurations for domed external or internal floating roof tanks. Estimates indicate that there may be a negligible increase (less than one percent) when an FES is utilized. In the case of an external floating roof tank, there may be a more significant emission increase when replacing a pole float with an FES. Based on these emission reduction estimates, staff believes that a pole sleeve with a FES will provide equivalent emissions control as that of a pole float with float wiper/seal for external floating roof tanks, which are required under the existing rule requirements. However, for internal or domed external floating roof tanks, pole~~

~~sleeves will not be required with FES given the minimal emission reduction difference. It should be noted that the STERPP agreement does not require the inclusion of a pole sleeve with a FES for external floating roofs. T~~the proposed amendment seeks to make the proposed options equivalent in emissions to the options allowed under the existing rule and provides greater emission control than the 2000 U.S. EPA STERPP Agreement.

However, if it is determined that a modification that employs the FES option results in emission increases, Best Available Control Technology (BACT) will be required, pursuant to Regulation XIII – New Source Review.

SOCIOECONOMIC IMPACT ASSESSMENT

The proposed amendments to Rule 1178 clarify rule requirements and provide additional regulatory flexibility. Specifically, the proposed amendments will allow facilities to replace a pole float and float wiper/seal with a flexible enclosure system, which completely encloses the slotted guidepole in floating roof tanks. The cost of installing a flexible enclosure system for a 48 foot tall tank is estimated at $5,500 with an additional cost of $2,200 for an optional transition box. (https://www.mesaetp.com/tank-products/vapor-guard-gauge-pole-cover/). The proposed amendment that allows the use of the flexible enclosure system is completely voluntary and as such will have no adverse socioeconomic impacts. Proposed amendments to Rule 219 will provide a cost savings by not requiring a permit for slotted guidepole flexible enclosure systems.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, the SCAQMD, as lead agency for the proposed project, has reviewed the proposed amendments to Rules 1178 and 219 in accordance with: 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. SCAQMD staff has determined that it can be seen with certainty that there is no possibility that the proposed amendments to Rules 1178 and 219 may have a significant adverse effect on the environment. Therefore, the project is considered to be exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Activities Covered by General Rule. A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 – Notice of Exemption. If the project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD 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.

Necessity
Proposed Amended Rule 1178 and Proposed Amended Rule 219 are needed to clarify existing rule requirements and provide additional regulatory flexibility.

Authority
The SCAQMD Governing Board has authority to adopt Proposed Amended Rule 1178 and Proposed Amended Rule 219 pursuant to the California Health and Safety Code Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41700, and 41706.

Clarity
Proposed Amended Rule 1178 and Proposed Amended Rule 219 are written or displayed so that ~~its~~ their meaning can be easily understood by the persons directly affected by ~~it~~them.

Consistency
Proposed Amended Rule 1178 and Proposed Amended Rule 219 are in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication
Proposed Amended Rule 1178 and Proposed Amended Rule 219 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 SCAQMD.

Reference
By adopting PAR 1178 and PAR 219, the SCAQMD Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 40001 (rules to achieve and maintain ambient air quality standards), 41700 (nuisance), 41706(b) (emission standards for lead compounds from non-vehicular sources), Federal Clean Air Act (CAA) Section 112 (Hazardous Air Pollutants), and CAA Section 116 (more stringent state standards).

COMPARATIVE ANALYSIS

Health and Safety Code 40727.2 requires a comparative analysis of the proposed rule with any Federal or SCAQMD rules and regulations applicable to the same source. This analysis has been prepared with respect to PAR 1178. See Table 3-1.

The proposed amendments to Rule 219 allow replacement of a pole float used to control emissions with a pole sleeve or a pole sleeve in combination with a flexible enclosure system without requiring a permit. ~~These emissions are expected to be negligible. In addition, t~~There are no federal rules or regulations that exempt facilities from requiring a permit for equipment. Therefore, a comparative analysis ~~would~~ is not ~~be~~ required for PAR 219.

Table 3-1: Comparison of PAR 1178 with Rule 463 and 40CFR60 K, Ka and Kb and BAAQMD Regulation 8, Rule 5

Applicability			
PAR 1178	Rule 463	40CFR60	BAAQMD Regulation 8, Rule 5
Above ground storage tanks at petroleum facilities emitting 20tpy or more as of inventory year 1999, equal to or greater than 19,815 gallons, that are used to store petroleum liquids with a vapor pressure of 0.1 psia or greater.	Storage tanks from 19,815 gallons to 39,630 gallons containing organic liquids with a vapor pressure of 1.5 psia or greater. Storage tanks from 39,630 gallons containing organic liquids with a vapor pressure of 0.5 psia or greater. Storage tanks from 251 gal to 19,815 gal storing gasoline.	**Subpart K** Storage tanks from 40,000 gallons to 65,000 gallons built after 3/8/74, but before 5/19/78, containing petroleum liquids with a vapor pressure of 1.5 psia to 11.1 psia. Storage tanks from 40,000 gallons to 65,000 gallons built after 3/8/74, but before 5/19/78, containing petroleum liquids with a vapor pressure of 1.5 psia to 11.1 psia. Storage tanks from 65,000 gallons built after 6/11/73 but before 5/19/78, containing petroleum liquids with a true vapor pressure of 1.5 psia up to 11.1 psia. **Subpart Ka** Storage tanks from 40,000 gallons built after 5/18/78 and prior to 7/23/84, containing petroleum liquids with a true vapor pressure of 1.5 psia up to 11.1 psia. **Subpart Kb** Storage tanks built after 7/23/84, containing volatile organic liquids (including petroleum liquids) from 19,185 gallons up to 39,889 gallons with a vapor pressure between 4 psia and 11.1 psia and storage tanks greater than 39,889 gal with a maximum vapor pressure between 0.75 psia and 11.1 psia.	Storage Tanks between 9,906 gallons and 19,803 gallons storing a liquid with a true vapor pressure greater than 1.5 psia. Storage Tanks between 19,803 gallons and 39,626 gallons storing a liquid with true vapor pressure greater than 1.5 psia. Storage Tanks with a capacity less than or equal to 39,626 gallons storing a liquid with a true vapor pressure greater than 0.5 psia. Storage Tanks with capacity equal to or greater than 39,626 gallons with a true vapor pressure greater than 0.5 psia. Gasoline Storage Tanks less than or equal to 19,813 gallons. Storage tanks with a true vapor pressure greater than 11 psia.

External Floating Roof Tank Requirements (Seals/Gaps)

PAR 1178	Rule 463	40CFR60	BAAQMD Regulation 8, Rule 5
Rim seal system consisting of two seals, covering the annular space between the floating roof and the tank wall in a continuous fashion. Liquid mounted primary seals for both welded and riveted tanks. Secondary seals shall be rim-mounted. Rim seal system to cover the annular space between the floating roof and the wall in a continuous fashion. Primary Seal Gaps between the tank shell and the primary seal shall not exceed 1.3 cm (1/2 in.) for a cumulative length of 30% of the tank circumference and 0.32 cm (1/8 in.) for 60% of the tank circumference. No gap b/w the tank shell and the primary seal shall exceed 3.8 cm (1-1/2 in.). No continuous gap b/w the tank shell and the primary seal shall exceed 10% of the tank circumference. Mechanical shoe primary seals shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 61 cm (24 in.) above the stored organic liquid. Secondary Seal Gaps between the tank shell and the secondary seal shall not exceed 0.32 cm (1/8 in.) for a cumulative length of 95% of the tank circumference. No gap between the tank shell and the secondary seal shall exceed 1.3 cm (1/2 in.). The secondary seal shall be installed in a way that permits the insertion of probes up to 3.8 cm (1-1/2 in.) in width to measure gaps in the primary seal.	Two seals, one above the other. Metallic shoe-type primary 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. No specification for other types of primary seals. **(Gap requirements for primary and secondary seals same as Proposed Rule 1178).** Secondary seals shall not be attached to the primary seal. Both seals may be removed for preventive maintenance upon notification of the E.O. for a period of up to 72 hours. 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.	**Subpart K** No seal specs. given **Subpart Ka** The closure device has to consist of 2 seals, one above the other. The floating roof has to be floating on the liquid at all times, except during emptying or refilling. The primary seal can either be a metallic shoe seal, a liquid-mounted or a vapor mounted seal. For tanks with metallic shoe, one end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 61 cm (24 in) above the stored liquid surface. There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope The secondary seal type is not specified. **Subpart Kb** The closure device consists of 2-seals, one above the other. The floating roof has to float on the liquid at all times, except during emptying or refilling. Primary seals may be metallic shoe or liquid mounted. Secondary seals must cover the annular space between the rim and the tank wall in a continuous fashion. Primary and secondary seals need to meet certain gap criteria. There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.	An external floating roof tank shall be equipped with a primary and secondary seal. Primary Seal The primary seal fabric shall have no holes, tears or other openings, which would allow the emission of organic vapors. The primary seal may be liquid-mounted or may be of the metallic shoe type. Metallic shoe type seals shall be installed so that one end of the shoe extends a minimum vertical distance of 61 cm (24 in.). For welded tanks, no gap between the tank shell and the primary seal shall exceed 3.8 cm (1-1/2 in.); No continuous gap greater than 0.32 cm (1/8 in.) shall exceed 10% of the circumference of the tank. The cumulative length of all primary seal gaps exceeding 1.3 cm (1/2 in.) shall not be more than 10% of the circumference. The cumulative length of all primary seal gaps exceeding 0.32 cm (1/8 in.) shall not be more than 40% of the circumference. For riveted tanks, no gap between the tank shell and the primary seal shall exceed 6.4 cm (2-1/2 in). The cumulative length of all primary seal gaps exceeding 3.8 cm (1-1/2 in.) shall not be more than 10% of the circumference. Secondary Seals The secondary seal shall allow easy insertion of probes up to 3.8 cm (1-1/2 in.) in width in order to measure gaps in the primary seal.

External Floating Roof Tank Requirements (Seals/Gaps continued)			
PAR 1178	Rule 463	40CFR60	BAAQMD Regulation, Rule 5
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 the secondary seal.			For welded tanks, no gap between the tank shell and the secondary seal shall exceed 1/3 cm (1/2 in.). The cumulative length of all secondary seal gaps exceeding 0.32 cm (1/2 in.) shall not be more than 5% of the circumference of the tank. For welded external floating roof tanks with seals installed after 9/4/85, no gap between the tank shell and the secondary seal shall exceed 1.5 mm (0.06 in.). The cumulative length of all secondary seal gaps exceeding 0.5 mm (0.02 in.) shall be no more than 5% of the circumference of the tank, excluding gaps less than 5 cm (1.79 in.) from vertical weld seams. For riveted tanks, the secondary seal shall consist of at least two sealing surfaces, such that the sealing surfaces prevent the emission of organic compounds around the rivets. Serrated surfaces are allowed if the length of the serration does not exceed 15.2 cm (6 in.). No gap between the tank shell and the secondary seal shall exceed 1.3 cm (1/2 in.). The cumulative length of all secondary seal gaps exceeding 0.32 cm (1/8 in.) shall be not more than 5% of the circumference.

External Floating Roof Tank Requirements (Fittings)			
PAR 1178	Rule 463	40CFR60	BAAQMD Regulation 8, Rule 5
Access hatches, gauge float. Wells shall be equipped with covers that are gasketed and bolted, with no visible gaps. Gauge hatch/sample wells shall be equipped with covers that are gasketed and bolted, with no visible gaps. Adjustable roof legs wells shall be equipped with gaskets or the legs shall be covered with VOC impervious socks whenever the roof is floating. Floating roof rim vents and vacuum breakers shall be gasketed and closed at all times except when the tank roof is floated off or landed on its leg supports. Unslotted guidepoles shall be equipped with gasketed covers at the end of the poles. The covers shall be closed at all times, with no visible gaps, except when sampling. Unslotted guidepole wells shall be equipped with gasketed sliding covers and flexible fabric sleeves or wipers. Slotted guidepoles shall be equipped with: - A gasketed cover, a pole wiper, and a pole float with a wiper or seal; or - A gasketed cover, a pole wiper and a pole sleeve that extends into the liquid; or - A gasketed cover, a pole wiper, a pole sleeve and a flexible enclosure system	All openings in the roof except pressure-vacuum (PV) 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. PV valves shall be set to within 10 percent of the maximum allowable working pressure of the roof		Except for the pressure vacuum valves, all openings shall meet the following conditions: The opening shall provide a projection below the liquid surface to prevent belching of liquid and reduce escaping of organic vapors. The view ports and other openings, except floating roof legs, shall be equipped with a gasketed cover, seal or lid, which shall remain in a closed position at all times, except when the opening is in use. Effective 6/1/93, view ports and other openings, except floating roof legs shall be equipped with a gasketed cover, seal or lid. For inaccessible openings on internal floating roof tanks, there shall be no visible gaps as viewed from the fixed roof manway, except when the opening is in use. Pressure-vacuum valves shall be set to within 10% of the maximum allowable working pressure of the roof or at least 25 mm Hg (0.5 psig) and shall be properly installed, maintained, and in good operating order and shall remain in a gas tight condition (10,000 ppm, as methane), above background, except when the operating pressure exceeds the valve set pressure. Solid sampling and gauge wells shall be equipped with a cover, seal or lid, which shall be in a closed position with no gap exceeding 0.32 cm (1/8 in.) except when in use.

External Floating Roof Tank Requirements (Fittings continued)			
PAR 1178	Rule 463	40CFR60	BAAQMD, Regulation 8, Rule 5
Roof drains shall be equipped with a slotted membrane fabric that covers 90 percent of the roof drain opening or other device with an equivalent control efficiency	Roof drains shall be equipped with a slotted membrane fabric that covers at least 90% of the roof drain area opening	**Subpart Ka** Roof drains to be equipped with slotted fabric membranes covering at least 90% of the opening. **Subpart Kb** Roof drains to be equipped with slotted fabric membranes covering at least 90% of the roof drain opening.	As of 6/1/2000, the well on an EFRT shall be equipped with the following: a sliding cover, well gasket, pole sleeve, pole wiper and an internal float and float wiper designed to minimize the gap between the float and the well, provided that the gap shall in no case exceed 1/2 in. or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. Any emergency roof drain shall be provided with a slotted membrane fabric cover, or equivalent, that covers at least 90% of the area of the opening.

Domed External Floating Roof Tanks (Seals and Fittings)			
PAR 1178	Rule 463	40CFR60	BAAQMD, Regulation 8, Rule 5
Rim seal system must consist of a primary and a secondary seal. Rim seal specifications must be the same as those for External Floating Roof Tanks Slotted guidepoles shall be equipped with: - A gasketed cover, a pole wiper, and a pole float with a wiper or seal; or - A gasketed cover, a pole wiper and a pole sleeve that extends into the liquid; or - A gasketed cover, a pole wiper and a flexible enclosure system	Rule has no requirements for Domed External Floating Roof Tanks	Rule has no requirements for Domed External Floating Roof Tanks	Rule has no requirements for Domed External Floating Roof Tanks

Internal Floating Roof Tanks (Fittings)			
PAR 1178	Rule 463	40CFR60	BAAQMD, Regulation 8, Rule 5
As of 7/1/2004: Same requirements for roof fittings as external floating roof tanks. - Support columns and wells shall be equipped with sliding covers that are gasketed or with flexible fabric sleeves. As of 7/1/2003, tank roof openings shall be in a vapor tight condition (500 ppm per Method 21). Slotted guidepoles shall be equipped with: - A gasketed cover, a pole wiper, and a pole float with a wiper or seal; or - A gasketed cover, a pole wiper and a pole sleeve that extends into the liquid; or - A gasketed cover, a pole wiper and a flexible enclosure system	After 6/1/84: May have a single liquid-mounted primary seal or primary/secondary seals. (Organic) vapor space above the roof must be: 1. < 50% of LEL for tanks installed prior to 6/1/84 2. < 30% of LEL for tanks installed after 6/1/84 All fittings and openings shall be gasketed and controlled.	**Subpart Ka** Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal, or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Each opening in the cover except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface. **Subpart Kb** May have single foam or liquid filled liquid mounted seal, a mechanical shoe seal or double seal of which the primary may be vapor mounted. Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal, or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Each opening in the cover except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface	The internal floating roof shall be either : (a) A liquid mounted primary seal, mounted in full contact with the liquid in the annular space b/w the tank shell and the floating roof or (b) A vapor mounted primary and secondary seal. Metallic shoe-type seals shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. For welded external floating roof tanks installed after 2/1/93, no gap b/w the tank shell and secondary seal shall exceed 1.5 mm (0.06 in.).

Inspection and Maintenance Requirements			
PAR 1178	Rule 463	40CFR60	BAAQMD, Regulation 8, Rule 5
Semiannual inspections of primary and secondary seals and each time the tank is emptied and degassed done by certified person. All piping, valves, pressure-vacuum valves and other openings shall be inspected on an annual basis and each time the tank is emptied and degassed. All defects shall be repaired within 72 hours after an inspection determines that equipment is not operating in compliance or prior to putting a tank that has been emptied and degassed back in service. Slotted guidepoles with a flexible enclosure system (FES) to be visually inspected for holes, tears, slots, rips or gaps to ensure FES is properly secured to the top of the guidepole and to the tanks cover at the bottom	Semiannual inspections of primary and secondary seals and each time the tank is emptied and degassed done by certified person All defects shall be repaired within 72 hours or prior to putting the tank back in service	**Subpart K** Records of products stored, period of storage and maximum vapor pressure of the liquid stored. **Subpart Ka** Records of products stored, period of storage and maximum vapor pressure of the liquid stored. **Subpart Kb** Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter. Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.	**Primary Seal Inspection** For welded EFRTs with seals installed after 9/4/85 and welded IFRTs with seals installed after 2/1/93, the seal shall be inspected for compliance by the operator once every 10 years. After 12/1/93, once every 10 years, for IFRTs. Once every 5 years for all other tanks. **Secondary Seal Inspection** For welded EFRTs with seals installed after 9/4/85 and welded IFRTs with seals installed after 2/1/93, the seal shall be inspected for compliance by the operator once every 10 years. After 12/1/93, once every 10 years, for IFRTs. Annually for all other tanks. The primary and secondary seals of all IFRTs shall be visually inspected for holes, tears, or other openings in the seal fabric which allow the emission of organic vapors.

Recordkeeping and Reporting			
PAR 1178	Rule 463	40CFR60	BAAQMD Regulation 8, Rule 5
Inspection reports filled out on District approved forms and mailed to the District within 5 working days of completion of inspections and on January 31 and July 31, respectively, upon completion of 2 consecutive quarterly inspections. Records to be kept for 5 years	Inspection reports filled out on District approved forms and mailed to the District within 5 working days or 120 hours if violations are found. All compliance inspection reports to be submitted electronically or by hard copy within 5 working days. Inspection and repair records to be maintained for 3 years. Emission data records to be maintained for most recent 2-year period. Written violation reports to be submitted within 120 hours of the violation determination.	**Subpart Kb** Inspection reports of floating roof tanks submitted within 30 days. For fixed roof tanks vented to vapor recovery a report an operating plan shall be kept, indicating the parameter monitored. For fixed roofs vented to a flare or incinerator a report shall be submitted indicating any period of pilot flame out within 6 months of initial start-up and on a semi-annual basis thereafter Records to be kept for a minimum of 2 years.	An accurate record of liquids stored and their true vapor pressure ranges of such liquids shall be maintained. For primary seals, certification of actual gap measurements shall be submitted upon installation of such primary seal, replacement of such seal or prior to installation of secondary seals, and at least every 5 years following such installation or replacement, unless the secondary seal is for: An Internal Floating Roof Tank (IFRT) or a welded floating roof tank installed after 9/4/85 (for External Floating Roof Tanks - EFRTs) and after 2/1/93 (for IFRTs), respectively. Then it shall be done every 10 years. For secondary seals, **EFRT** - Annual certification of gap measurement. Time interval between certification not to exceed 15 months. **IFRT** - At least once every 10 years.

Test Methods			
PAR 1178	Rule 463	40CFR60	BAAQMD Regulation 8, Rule 5
For VOC leaks EPA Method 21 Efficiency of a vapor recovery system shall be determined according to EPA Methods 25 or 25A; District Method 25.1 or 25.3. Vapor pressure determination of liquids stored determined by flash point (ASTM Method D-93) and 10% evaporation (ASTM Method D86).	For VOC leaks EPA Method 21. Efficiency of a vapor recovery system shall be determined according to SCAQMD Test Method 501.1 for the determination of total organic compound emissions. EPA Methods 25 or 25A may be used, as applicable, in place of SCAQMD Test Method 25.1 specified in Method 501.1. The Reid vapor pressure specified in paragraph (b)(3) and the Reid vapor pressure used in determining the true vapor pressure limit specified in paragraph (d)(5) shall be determined according to ASTM D-323-82 or California Code of Regulations, Title 13, Section 2297	**Subpart Ka** The true vapor pressure of materials stored is determined using available data on typical Reid Vapor Pressure from API Bulletin 2517 and maximum expected storage temperature **Subpart Kb** Vapor Pressure of crude and distillates is determined from monographs in API Bulletin 2517 or ASTM Method D2879-83 or is calculated or measured by an equivalent method.	For VOC leaks: EPA Method 21. RVP: Manual of Procedures; Vol. III, Lab. Method 13 Analysis of Samples, Total Vapor Pressure: Vol. IV, Lab. Method 28 Determination of Emissions: Manual of Procedures, Vol. IV, ST-4 Vol. IV, ST-7

Rule Exemptions			
PAR 1178	Rule 463	40CFR60	BAAQMD Regulation 8, Rule 5
1. Pressurized storage tanks designed to operate in excess of 15 psig without any emissions to the atmosphere under emergency conditions. 2. Domed external floating roof tanks installed prior to 1/1/02 shall be exempt from rim seal system and other doming requirements outlined in this rule. 3. Facilities with an emissions cap equal to or less than 40,000 pounds (20 tons) per year of VOC shall be exempt from the requirements of the rule. 4. External floating roof tanks with permit conditions limiting the true vapor pressure of the stored organic liquids in the tanks to 3 psia or lower shall be exempt from the doming requirements of the rule. 5. Portable Baker tanks storing liquids with true vapor pressure of between 0.1 and 0.5 psia and equipped with carbon canisters meeting the 500 ppmv outlet concentration shall be exempt from performance testing, provided the operator conducts periodic EPA Method 21 measurement to ensure the 500 ppmv system standard is maintained.	Oil production tanks with a capacity of between 19,815 gallons and 42,008 gallons, which have a properly maintained vapor-tight roof and are equipped with a pressure-vacuum valve, which is set to within 10% of the maximum allowable working pressure of the tank, are exempt from the control requirements of the rule when: 1. The liquid contents do not comply with paragraph (c) only when heated for shipment, and such heating occurs for no more than 48 hours and not more than once in any 20-day period or the tank has a monthly average throughput of no more than 30 barrels of oil per day and was constructed prior to 6/1/84. 2. Tanks being brought into compliance within the 72-hr period from the determination of non-compliance.	**Subpart K** Storage vessels for petroleum or condensate stored, processed, and/or treated at a drilling and production facility prior to custody transfer. **Subpart Ka** Petroleum liquid storage vessels with a capacity of less than 420,000 gallons used for petroleum or condensate stored, processed, or treated prior to custody transfer is exempt from the requirements of this subpart. **Subpart Kb** 1. Vessels at coke oven by-product plants 2. Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere. 3. Vessels permanently attached to mobile vehicles such as trucks, railcars, barges or ships. 4. Vessels with a design capacity less than or equal to 1589.874 cubic meters (420,045 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer. 5. Vessels located at bulk gasoline plants. 6. Storage vessels located at gasoline service stations. 7. Vessels used to store beverage alcohol	1. Underground gasoline storage tanks at gasoline dispensing facilities are exempt from this rule. 2. The rule does not apply to tanks storing organic liquids with a true vapor pressure of less than or equal to 0.5 psia as determined by the test methods outlined in the rule.

REFERENCES

Ferry, R. 2000. *Slotted Guidepole Agreement*. Prepared by R. Ferry, the TGB Partnership

U.S. Environmental Protection Agency, Slotted Guidepoles at Certain Petroleum and Organic Liquid Storage Vessels, Federal Register 65 FR 19891, April 13, 2000

SCAQMD, Staff Report - Proposed Amended Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, May 2017,

APPENDIX A: COMMENTS AND RESPONSES

Definitions

Comment 1-1:

The definition of Flexible Enclosure System (FES) includes the material being resistant to ultraviolet radiation. Since the FES that is installed on internal floating and a domed external floating roof tanks will not be exposed to sunlight/ultraviolet (UV) radiation since they will be installed below the fixed roof portion of the tank, the material of the FES in these circumstances should not be required to be UV resistant. Only the FES for the external floating roof tank should be required to be manufactured from UV resistant material.

Response to Comment 1-1:

Based on manufacturer information Flexible Enclosure Systems are manufactured from a standard material that is resistant to ultraviolet radiation and there is no distinction of material based on the type of tank. In addition, having an FES that is made of ultraviolet resistant material may add useful life to the FES and as such may result in cost savings for the operator of internal floating and domed external floating roof tanks.

Slotted Guidepole Requirements

Comment 1-2:

When a Flexible Enclosure System (FES) is installed on a slotted guidepole, the use of a wiper and a pole sleeve will not provide additional emission reductions. In addition, during a visual inspection, there will be no way to confirm whether or not the slotted guidepole is actually equipped with either a wiper or a pole sleeve.

Response to Comment 1-2:

A slotted guidepole that has had its pole float removed will no longer have a float wiper associated with the guidepole and this requirement has not been proposed in the rule amendment. In the case of an internal floating and a domed external floating roof tank, PAR 1178 requires installation of a gasketed cover, a pole wiper and a FES on a slotted guidepole when the pole float is removed. However, based on Tank 4:09 VOC sample emission calculations, removal of a pole float from an external floating roof tank slotted guidepole would ~~significantly~~ increase emissions and based on the lack of specific emissions calculations for the FES replacement, ~~therefore there would be a need for a~~ pole sleeve is being required in order to ensure comparable reductions in emissions. ~~to be installed in order to mitigate these emissions.~~ The inability to ~~limitation that there is no~~

confirm~~ation~~ whether or not a slotted guidepole is actually equipped with either a wiper or a pole sleeve during a visual inspection does not invalidate the need for the device.

Comment 1-3:

The rule provision that requires the Flexible Enclosure System (FES) be tightly double-clamped and secured at both the top and the bottom of the slotted guidepole should be amended to require the FES being double-clamped and secured at the top of the guidepole, while the bottom of the FES should be secured tightly by a single clamp to the top of the floating roof of the storage tank since the bottom of the guidepole will be submerged and under the floating roof.

Response to Comment 1-3:

Staff agrees with this comment and will incorporate these suggestions into PAR 1178.

Comment 1-4:

The provisions of the rule amendment limit the use of an FES only in conjunction with radar gauging. However, currently industry uses the FES/slotted guidepole configuration, not only for gauging, but also for other purposes such as sample collection. In some cases storage tanks are equipped with multiple slotted guidepoles which are not all equipped with radar gauges. Therefore, limiting the use of an FES to be only in conjunction with radar gauging could result in non-compliance.

Response to Comment 1-4:

Staff agrees with this comment and will incorporate these suggestions into PAR 1178.

Comment 1-5:

When an FES is used on a slotted guidepole, PAR 1178 requires that pole wipers be required for all categories of storage tanks and pole sleeves be required for external floating roof tanks. Logically, it would seem that since the FES provides a vapor barrier, there is no pathway to atmosphere and the addition of wipers and sleeves would not provide additional control and in addition, 65 FR 19891 establishes equivalent control when EPA states that the FES can reduce emissions to a level comparable to that achievable with a pole float system.

Response to Comment 1-5:

Although the U.S. EPA recognizes the FES as an emission control option, in the absence of data that shows the extent to which emissions would be reduced, staff is unable to quantify any emission reductions that may be achieved by the FES. As such, staff believes that PAR 1178 should maintain the existing rule requirements that call for pole wipers and pole sleeves in order to eliminate the chance of creating emission increases. Additionally, while the STERPP agreement announced acceptable options for slotted guidepoles for NSPS Subpart Ka/Kb tanks, PAR 1178 is

not intended to authorize inconsistencies with any potential applicable requirements in 40 CFR Part 61 and 63. For example, when a storage vessel may be subject to 40 CFR Part 63, Subpart WW, the pole wiper may be a required component.

Comment 1-6:

There is some concern that some facilities may have FES installed, but may have done so without a wiper or a pole sleeve to be consistent with the STERPP agreement, thereby creating a non-compliance issue. In addition, retrofitting a tank with the FES may also require that the tank be drained which may create additional emissions which may be required to be controlled per Rule 1149.

Response to Comment 1-6:

Staff agrees that there is a possibility that this scenario may occur. However, in the event that this situation may arise, staff will work with facility operators on a case-by-case basis to address this issue to ensure compliance with PAR 1178.

Inspections

Comment 1-7:

Will the scope of the current visual inspection technique for internal floating roof and domed external floating roof tanks, which includes visual inspections of gaskets, seals and other fittings be expanded to include the inspection of the FES on these categories of storage tanks where they apply with no physical contact with the FES?

Response to Comment 1-7:

The scope of the current visual inspection will be expanded to include visual inspections for the FES where they exist on slotted guidepoles associated with internal floating roof and domed external floating roof tanks. Based on current practice, a visual inspection may be conducted from the platform.

Rule 219 Exemptions

Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Bridget McCann
Manager, Southern California Region

February 12, 2018

David De Boer
Planning and Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Via e-mail at: ddeboer@aqmd.gov

Re: Proposed Amended Rule 1178, Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

Dear Mr. DeBoer:

Western States Petroleum Association (WSPA) appreciates this opportunity to provide feedback on Proposed Amended Rule 1178, Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities. 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.

On May 5, 2017, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the following resolution language on amendments to Rule 219, Equipment Not Requiring a Written Permit Pursuant to Regulation II:

> "BE IT FURTHER RESOLVED, that the Governing Board directs staff to work with the United States Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB) and interested stakeholders to introduce proposed amendments to Rule 1178 - Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities within the first quarter of 2018 to incorporate VOC emission control technologies for guidepoles in a floating roof tank, as recognized by U.S. EPA including the Storage Tank Emission Reduction Partnership Program (STERPP). The Governing Board also directs staff to explore various mechanisms to minimize permitting impacts when addressing VOC control technologies for guidepoles in a floating roof tank that are recognized in any amendment to Rule 1178, including a possible Rule 219 exemption;"[1]

In accordance with the May 2017 SCAQMD Governing Board resolution, and as recognized by the U.S. EPA STERPP, WSPA requests that the District minimize permitting impacts and allow facilities to utilize the various VOC control technologies for guidepoles currently permissible under Rule 1178, and that flexible enclosure systems (vapor socks) be allowed under a Rule 219 exemption. 2-1

[1] SCAQMD Board Hearing Agenda No. 27 Proposal: Amend Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II; and Amend Rule 222 – Filing Requirements for Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation II, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-may5-027.pdf?sfvrsn=12

970 W. 190th Street, Suite 304, Torrance, California 90502
(310) 808-2146 Fax: (310) 324-9063
bmccann@wspa.org www.wspa.org

If you have any questions, please contact me at (310) 808-2146 or by email at bmccann@wspa.org.

Sincerely,

cc: Michael Morris, SCAQMD
Kennard Ellis, SCAQMD
Patty Senecal, WSPA

970 W. 190th Street, Suite 304, Torrance, California 90502
(310) 808-2146 Fax: (310) 324-9063
bmccann@wspa.org www.wspa.org

Rule 219 Exemptions

andeavor

2350 E. 223rd Street
Carson, CA 90810

310-847-3630
andeavor.com

February 6, 2018

Mr. Michael Morris
Program Supervisor
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

Via e-mail at: mmorris@aqmd.gov

Re: Proposed Amended Rule 1178, Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

Andeavor appreciates the opportunity to submit comments on the draft proposed amendments to Rule 1178 as well as the Preliminary Draft Staff Report that were discussed at the January 10, 2018 Working Group meeting.

May 5, 2017 Board Resolution Language
As a preface to our comments, the following SCAQMD Board Resolution language, from the May 5, 2017, adoption hearing on amendments to Rule 219, provides context.

> **BE IT FURTHER RESOLVED**, that the Governing Board directs staff to work with the United States Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB) and interested stakeholders to introduce proposed amendments to Rule 1178 - Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities within the first quarter of 2018 to incorporate VOC emission control technologies for guidepoles in a floating roof tank, as recognized by U.S. EPA including the Storage Tank Emission Reduction Partnership Program (STERPP). The Governing Board also directs staff to explore various mechanisms to minimize permitting impacts when addressing VOC control technologies for guidepoles in a floating roof tank that are recognized in any amendment to Rule 1178, including a possible Rule 219 exemption; and

The genesis of this resolution language was the Andeavor (at the time Tesoro) request to streamline any permitting requirements for the simple replacement of a pole float on a slotted guidepole of a floating roof tank with a "vapor sock" or flexible enclosure, an equivalent emissions control technology as recognized by USEPA.

219 Exemption
Andeavor believes that the best and most straightforward approach to addressing the substitution of vapor socks for pole floats is via a Rule 219 exemption. We do not believe that amendments to Rule 1178 are a necessary prerequisite to including such a provision in Rule 219. Rule 1178 already requires

any opening associated with slotted guidepoles to be covered. We suggest wording similar to the existing exemption in 219 regarding floating tank seal replacement.

> Replacement of floating roof tank seals, provided that the replacement seal is of a type and model which the Executive Officer has determined is capable of complying with the requirements of Rule 463.

Specifically, Andeavor recommends the following Rule 219 language:

> Substitution of pole floats with flexible enclosures if the flexible enclosure is of a type and model which the Executive Officer has determined is capable of complying with the requirements of Rule 1178.

Alternatively, Rule 1178 could be amended to specifically mention flexible enclosures can be substituted for pole floats on slotted guidepoles, but indicate that permit modifications are not necessary to allow this substitution.

2-2

Given that the Board directed staff to minimize permitting impacts associated with flexible enclosures, we strongly believe that requiring permit modifications would be contrary to Board direction.

Equivalent or better emission reductions
Andeavor has been pleased to host two separate site visits for SCAQMD personnel to view a tank that replaced its pole float with a vapor sock / flexible enclosure to enable use of radar gauging to test for fluid level in the tank. On both occasions, no VOCs were detected with a FLIR camera. Our experience is consistent with USEPA's STERRP agreement conclusions, that substituting a pole float with a vapor sock will result in equivalent emissions, if not even lower emissions.

SCAQMD Permit Streamlining Objective
Andeavor's recommendation for Rule 219 treatment for flexible enclosures is consistent with SCAQMD's objective to reduce the permitting backlog and streamline the permitting experience. Although emissions will be equivalent, and possibly even less, than the current technology of pole floats, Andeavor's experience has been that the process to permit flexible enclosures has been lengthy, taking almost two years to complete. Of course, in the give and take of permitting, Andeavor's responses to questions from SCAQMD has factored into the length of time necessary to obtain the permits. However, we submit that the replacement of flexible enclosures for pole floats is in keeping with permit streamlining objectives and should be eligible for Rule 219 Exemption treatment so that no lag time is necessary in making this replacement.

Conclusion
Andeavor appreciates staff's willingness to consider ways to minimize permitting impacts for flexible enclosures, as directed by the SCAQMD Board's resolution. We believe a Rule 219 exemption is the best approach to implement the Board's direction. We are committed to continuing to work with SCAQMD on this issue.

Please let me know if you have any questions.

Sincerely,

Susan R. Stark

Susan R. Stark
Senior Manager, Regulatory Affairs
682.465.1925

cc: David DeBoer, Planning and Rules Manager, SCAQMD
Robert Nguyen, Tesoro Los Angeles Refinery
Donna DiRocco, Tesoro Logistics
Ruthanne Walker, Tesoro Logistics

Responses to Comments 2-1 and 2-2:

Staff has amended Rule 219 to incorporate the exemption for Flexible Enclosure Systems as requested by stakeholders.

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 1178 – FURTHER REDUCTION OF VOC EMISSIONS FROM STORAGE TANKS AT PETROLEUM FACILITES; AND PROPOSED AMENDED RULE 219 – EQUIPMENT NOT REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (SCAQMD) is the Lead Agency and has prepared a Notice of Exemption for the project identified above.

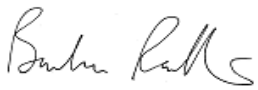
SCAQMD staff has reviewed the proposed project to amend Rule 1178 - Further Reduction of VOC Emissions from Storage Tanks at Petroleum Facilities, and Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II in accordance with: 1) CEQA Guidelines Section 15002(k) - General Concepts, 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.

The proposed project is comprised of amendments to Rules 1178 and 219 which would provide storage tank operators with an additional option for controlling volatile organic compound (VOC) emissions from aboveground floating roof tanks. The proposed amendments are consistent with the 2000 United States Environmental Protection Agency (U.S. EPA) Storage Tank Emission Reduction Partnership Program (STERPP) Agreement. Specifically, the proposed amendments to Rule 1178 would: 1) allow the installation of a Flexible Enclosure System on a slotted guidepole of any internal, external, or domed floating roof tank provided that the applicable combination of components is used to replace a pole float and float wiper/seal; 2) clarify that repairs or replacements shall occur within 72 hours after an inspection determines equipment is not operating in compliance; 3) clarify that inspection reports and related documents are due on January 31 and July 31, respectively, after completion of two consecutive quarterly inspections; and 4) update inspection procedures and compliance report forms to incorporate data observed from visual inspections of slotted guidepoles equipped with a Flexible Enclosure System. Note that for an external floating roof tank, the proposed amendments to Rule 1178 also require installation of a pole sleeve in conjunction with a Flexible Enclosure System. The purpose of the proposed amendments to Rule 219 are to exempt certain installations of a Flexible Enclosure System that occur in accordance with the proposed amendments to Rule 1178 from the requirement to obtain a written permit. Specifically, the proposed amendments to Rule 219 would add new paragraph (m)(25) to exempt storage and transfer equipment from the requirement to obtain a written permit when a pole float used to control emissions from slotted guidepoles in floating roof storage tanks is replaced with a pole sleeve or a pole sleeve in combination with a Flexible Enclosure System. If these optional replacements occur for external floating roof tanks, VOC emissions associated with a pole sleeve will be comparable to those of a pole float with float wiper/seal; thus, it can be

seen with reasonable certainty that a pole sleeve with a Flexible Enclosure System will provide equivalent or better VOC emissions control as that of a pole float with float wiper/seal for external floating roof tanks. Similarly, if these optional replacements occur for internal or domed external floating roof tanks, even though a pole sleeve will not be required with a Flexible Enclosure System, the use of a Flexible Enclosure System in these circumstances is also expected to yield comparable VOC emissions control.

SCAQMD staff has determined that it can be seen with certainty that there is no possibility that the proposed amendments to Rules 1178 and 219 may have a significant adverse effect on the environment. Therefore, the project is considered to be exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Activities Covered by General Rule. A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 – Notice of Exemption. If the project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties.

Any questions regarding this Notice of Exemption should be sent to Ryan Bañuelos (c/o Planning, Rule Development and Area Sources) at the above address. Mr. Bañuelos can also be reached at (909) 396-3479. Mr. Kennard Ellis is also available at (909) 396-2457 to answer any questions regarding the proposed amended rules.

Date: March 22, 2018 **Signature:** 

Barbara Radlein
Program Supervisor, CEQA Section
Planning, Rules, and Area Sources

Reference: California Code of Regulations, Title 14

NOTICE OF EXEMPTION

To:	County Clerks Counties of Los Angeles, Orange, Riverside, and San Bernardino	**From:**	South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765

Project Title: Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities; and Proposed Amended Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II

Project Location: The SCAQMD has jurisdiction over 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 portions of the Salton Sea Air Basin (SSAB) and Mojave Desert Air Basin (MDAB). The SCAQMD's jurisdiction includes the federal nonattainment area known as the Coachella Valley Planning Area, which is a sub-region of Riverside County and the SSAB.

Description of Nature, Purpose, and Beneficiaries of Project: The proposed project is comprised of amendments to Rules 1178 and 219 which would provide storage tank operators with an additional option for controlling volatile organic compound (VOC) emissions from aboveground floating roof tanks. The proposed amendments are consistent with the 2000 United States Environmental Protection Agency (U.S. EPA) Storage Tank Emission Reduction Partnership Program (STERPP) Agreement. Specifically, the proposed amendments to Rule 1178 would: 1) allow the installation of a Flexible Enclosure System on a slotted guidepole of any internal, external, or domed floating roof tank provided that the applicable combination of components is used to replace a pole float and float wiper/seal; 2) clarify that repairs or replacements shall occur within 72 hours after an inspection determines equipment is not operating in compliance; 3) clarify that inspection reports and related documents are due on January 31 and July 31, respectively, after completion of two consecutive quarterly inspections; and 4) update inspection procedures and compliance report forms to incorporate data observed from visual inspections of slotted guidepoles equipped with a Flexible Enclosure System. Note that for an external floating roof tank, the proposed amendments to Rule 1178 also require installation of a pole sleeve in conjunction with a Flexible Enclosure System. The purpose of the proposed amendments to Rule 219 are to exempt certain installations of a Flexible Enclosure System that occur in accordance with the proposed amendments to Rule 1178 from the requirement to obtain a written permit. Specifically, the proposed amendments to Rule 219 would add new paragraph (m)(25) to exempt storage and transfer equipment from the requirement to obtain a written permit when a pole float used to control emissions from slotted guidepoles in floating roof storage tanks is replaced with a pole sleeve or a pole sleeve in combination with a Flexible Enclosure System. If these optional replacements occur for external floating roof tanks, VOC emissions associated with a pole sleeve will be comparable to those of a pole float with float wiper/seal; thus, it can be seen with reasonable certainty that a pole sleeve with a Flexible Enclosure System will provide equivalent or better VOC emissions control as that of a pole float with float wiper/seal for external floating roof tanks. Similarly, if these optional replacements occur for internal or domed external floating roof tanks, even though a pole sleeve will not be required with a Flexible Enclosure System, the use of a Flexible Enclosure System in these circumstances is also expected to yield comparable VOC emissions control.

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) – Activities Covered by General Rule

Reasons why project is exempt: SCAQMD staff has reviewed the proposed amendments to Rules 1178 and 219 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. To comply with the proposed amendments to Rules 1178 and 219 storage tank operators would have the option of controlling VOC emissions from a slotted guidepole with a Flexible Enclosure System. The construction activities associated with the optional installation and operation of a Flexible Enclosure System due to implementation of the proposed amendments to Rules 1178 and 219 requirements are minimal. Further, if these optional replacements occur for external floating roof tanks, VOC emissions associated with a pole sleeve will be comparable to those of a pole float with float wiper/seal; thus, it can be seen with reasonable certainty that a pole sleeve with a Flexible Enclosure System will provide equivalent or better VOC emissions control as that of a pole float with float

wiper/seal for external floating roof tanks. Similarly, if these optional replacements occur for internal or domed external floating roof tanks, even though a pole sleeve will not be required with a Flexible Enclosure System, the use of a Flexible Enclosure System in these circumstances is also expected to yield comparable VOC emissions control. Therefore, SCAQMD staff has determined that it can be seen with certainty that there is no possibility that the amendments to Rules 1178 and 219 may have a significant adverse effect on the environment. Therefore, the project is considered to be exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Activities Covered by General Rule.

Date When Project Will Be Considered for Approval (subject to change):
SCAQMD Governing Board Hearing: April 6, 2018; SCAQMD Headquarters

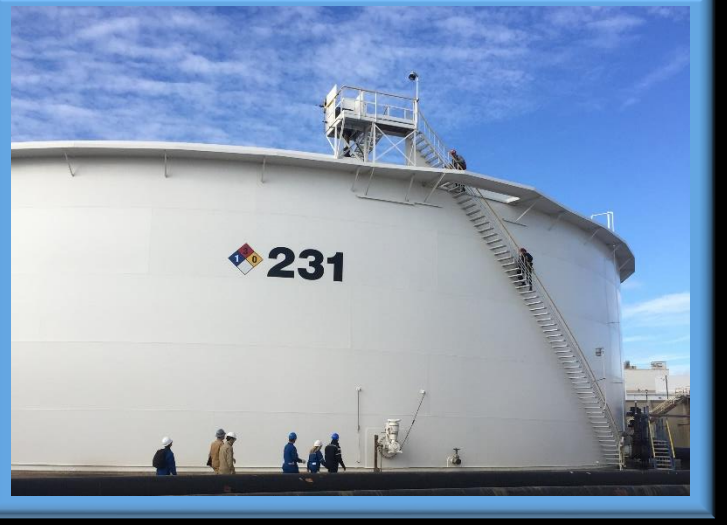
CEQA Contact Person:	**Phone Number:**	**Email:**	**Fax:**
Mr. Ryan Bañuelos	(909) 396-3479	rbanuelos@aqmd.gov	(909) 396-3982
Rule Contact Person:	**Phone Number:**	**Email:**	**Fax:**
Mr. Kennard Ellis	(909) 396-2457	kellis@aqmd.gov	(909) 396- 3324

Date Received for Filing: _____ **Signature:** *(Signed Upon Board Approval)*

Barbara Radlein
Program Supervisor, CEQA Section
Planning, Rule Development & Area Sources

ATTACHMENT J

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



Proposed Amended Rule 219 -
Equipment Not Requiring a Written Permit Pursuant to Regulation II

South Coast AQMD

Public Hearing
April 6, 2018

Background

- Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II
  - Amended in May 2017; adoption Resolution directed staff to work with stakeholders to amend Rule 1178 to:
    - Incorporate VOC control technologies for guidepoles in floating roof storage tanks as recognized by U.S. EPA; and
    - Explore mechanisms to minimize permitting impacts of VOC control technologies for guidepoles in floating roof tanks subject to Rule 1178

PAR 1178 Proposal

PAR 1178 will provide the option for facilities to utilize the Flexible Enclosure System technology identified in EPA's Storage Tank Emission Reduction Partnership (STERPP) agreement

Tank Type	Option to Replace (Guidepole) Pole Float with
Internal Floating Roof and Domed External Floating Roof	▪ Flexible Enclosure System
External Floating Roof Tank	▪ Flexible Enclosure System and Pole Sleeve

PAR 219 Proposal

- Exempts from permit the replacement of a pole float with a pole sleeve or a pole sleeve used in combination with a Flexible Enclosure System

Tank Type	Replace (Guidepole) Pole Float with
All Floating Roof Tanks	▪ Pole Sleeve OR ▪ Pole Sleeve and Flexible Enclosure System

- Paragraph (m)(25):
  - Overrides paragraph (s)(1); but should not be construed to limit or excuse the duty to comply with applicable requirements of NSPS or NESHAPS
  - Does not exempt operators from complying with Title V or Reg. XXX permit revision requirements

Staff Recommendation

Adopt the attached Resolution:

- Determining that proposed amendments to Rules 1178 and 219 are exempt from the requirements of CEQA
- Amending Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities
- Amending Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II