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

PROPOSED AMENDED RULE 463. ORGANIC LIQUID STORAGE

(a) Purpose ~~and Applicability~~

The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOC) from the storage of ~~o~~Organic L~~l~~iquids in stationary above-ground ~~t~~Tanks and establish contingency measures for applicable ozone standards for the reduction of VOCs. ~~This rule applies to any above-ground stationary tank with a capacity of 75,000 liters (19,815 gallons) or greater used for storage of organic liquids, and any above-ground tank with a capacity between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) used for storage of gasoline. This rule also applies to any stationary tank with a Potential For VOC Emissions of 6 tons per year or greater used in Crude Oil And Natural Gas Production Operations.~~

(b) Applicability

This rule applies to any above-ground stationary Tank with a capacity of 75,000 liters (19,815 gallons) or greater used for storage of Organic Liquids, and any above-ground Tank with a capacity between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) used for storage of Gasoline. This rule also applies to any stationary Tank with a Potential For VOC Emissions of 6 tons per year or greater used in Crude Oil And Natural Gas Production Operations.

(~~b~~c) Definitions

For purposes of this rule, the following definitions 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.

(~~1~~2) ACTUAL STORAGE CONDITIONS means the temperature at which a product is stored in an above-~~-~~ground stationary ~~t~~Tank.

(~~2~~3) AMBIENT TEMPERATURE is the temperature of an ~~o~~Organic ~~l~~Liquid within a storage ~~t~~Tank that has been influenced by atmospheric conditions only and is not elevated by a non-atmospheric means of heating at the ~~t~~Tank which includes but is not limited to steam, hot water, heaters, heat exchangers, ~~t~~Tank insulation, or ~~t~~Tank jacketing.

(~~b~~c) (~~3~~4) CERTIFIED PERSON is ~~an individual~~ a person who has successfully completed the ~~District~~ South Coast AQMD ~~t~~Tank self-inspection program and a South Coast AQMD approved fugitive emissions compliance inspection program, and who holds a certificate issued by the Executive Officer evidencing that such ~~individual~~ person is in good standing in this program.

(5) CLEANING is the process of washing or rinsing a stationary Tank, reservoir, pipelines, or other container or removing vapor, sludge, or rinsing liquid from a stationary Tank, reservoir, or other container.

(6) COMPONENT is any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, Roof Opening, Rim Seal System, pressure vacuum vents, Guidepoles, Roof Legs, or meter in VOC service.

(7) COMPONENT INSPECTION is monitoring for Visible Vapors with a handheld Optical Gas Imaging Device of a Storage Tank roof and individual Components, including but not limited to Roof Openings and Rim Seal Systems, viewable from the Tank platform or a vantage point capable of seeing the Tank roof, and ground for Components not viewable from the Tank platform or vantage point but viewable at ground level.

(~~4~~8) CRUDE OIL AND NATURAL GAS PRODUCTION OPERATIONS are any operations from a crude oil well to the point of custody transfer to a refinery and any operations from a natural gas well to the natural gas customer.

(9) DOMED ROOF is a self-supporting Fixed Roof attached to the top of an External Floating Roof Tank to reduce evaporative losses. An External Floating Roof Tank equipped with a Domed Roof is a Domed External Floating Roof Tank.

(~~5~~10) DRAIN-DRY BREAKOUT TANK is an above-ground ~~s~~Storage ~~t~~Tank designed such that the floating roof rests on support legs no higher than one foot along the ~~t~~Tank shell with a bottom sloped to a sump or sumps such that no product or sludge remains on the ~~t~~Tank bottom and walls after emptying except clingage and is primarily used to receive product from pipelines and to distribute product back into pipelines.

(11) EMISSION INVENTORY YEAR is the annual emission-reporting period specified by the Annual Emission Reporting (AER) Program requirements for a given year.

(~~6~~12) EXEMPT COMPOUND is as defined in Rule 102.

(13) 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 and is not equipped with a Fixed Roof above the floating roof.

(c)

(14) FACILITY is any equipment or group of equipment or other VOC-emitting activities, which are located on one or more contiguous properties within the South Coast AQMD, 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.

(15) 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.

(16) FIXED ROOF TANK is a Storage Tank with a permanently affixed roof.

(17) 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.

(18) 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.

(~~7~~19) GASOLINE means any petroleum distillate having a Reid vapor pressure of 200 mm Hg (3.9 pounds per square inch), or greater.

(20) 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.

(21) 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.

(22) 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.

(c)

(~~8~~23) HEAVY CRUDE OIL means a crude oil with American Petroleum Institute (API) gravity 20 degrees or less.

(24) INTERNAL FLOATING ROOF TANK is a Storage Tank equipped with a fixed roof and a floating roof which rests on the liquid being contained.

(25) 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.

(26) 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.

(27) 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.

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

(~~9~~29) ORGANIC LIQUID is any liquid containing VOC.

(30) 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.

(31) 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.

(32) 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.

(~~10~~33) POTENTIAL FOR VOC EMISSIONS means emissions calculated using a generally accepted model or calculation methodology, based on permitted throughput limits or, when permitted throughput limits are not available,

based on the maximum throughput in a calendar month, where at least 30-days of production occurred, in years 2019 to 2022.

(~~11~~34) PRESSURE RELIEF VALVE (PRV) is a valve which is automatically actuated by upstream static pressure, and used for safety or emergency purposes.

(c) (35) 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 a Seal with multiple wipers, drip curtain and weight.

(36) PRODUCT CHANGE is the process of changing the Tank contents from one Organic Liquid to another Organic Liquid that has different characteristics i.e. vapor pressure, viscosity, etc.

(37) 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.

(38) 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.

(39) 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.

(40) 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.

(41) 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.

(42) 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.

(c)

(43) 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.

(~~12~~44) SEAL is a closure device between the ~~t~~Tank wall and the floating roof edge that controls emissions of VOCs. Approved floating roof Tank ~~s~~Seals are categorized as follows:

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

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

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

(45) SECONDARY SEAL is a Seal mounted above the Primary Seal of a Rim Seal System that consists of two Seals.

(46) 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.

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

(47) STORAGE TANK or TANK is a stationary container primarily constructed of non-earthen materials that meets the applicability criteria of this rule.

(48) TANK FARM INSPECTION is monitoring for Visible Vapors with a handheld Optical Gas Imaging Device of all applicable Storage Tanks at a Facility where the person conducting the inspection views the top of the

Tank shell, and fixed roof or dome if applicable. Tank Farm Inspections may be conducted from an elevated position and/or from ground level.

(49) TRUE VAPOR PRESSURE is the vapor pressure of a liquid at Actual Storage Conditions.

(c) (50) 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.

(~~14~~51) VAPOR TIGHT is a condition that exists when the reading on a portable hydrocarbon meter is less than 500 parts per million (ppm), expressed as methane, above background.

(52) VISIBLE GAP is a gap of more than 1/8 inch between any gasket or Seal and the opening that it is intended to control. Visible Gap for Primary and Secondary Seals is a gap that does not meet the requirements specified in subdivision (d).

(53) VISIBLE VAPORS are any VOC vapors detected with an Optical Gas Imaging Device, when operated and maintained in accordance with manufacturer training or certification, or equivalent California Air Resources Board (CARB) training, user manuals, specifications, and recommendations.

(~~15~~54) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(55) 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.

(~~16~~56) WORKING DAY is Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

(~~c~~d) Tank Roof Requirements

No person shall place, store or hold in any ~~t~~Tank with a capacity of 150,000 liters (39,630 gallons) or greater, any ~~o~~Organic ~~l~~Liquid having a ~~t~~True ~~v~~Vapor ~~p~~Pressure of 25.8 mm Hg (0.5 psi) absolute or greater under ~~a~~Actual ~~s~~Storage

(~~c~~d) ~~c~~Conditions, in any ~~t~~Tank of more than 75,000 liters (19,815 gallons) capacity, any ~~o~~Organic ~~l~~Liquid having a ~~t~~True ~~v~~Vapor ~~p~~Pressure of 77.5 mm Hg (1.5 psi) absolute or greater under ~~a~~Actual ~~s~~Storage ~~c~~Conditions, or any ~~t~~Tank with a Potential For VOC Emissions of 6 tons per year or greater used in Crude Oil And Natural Gas Production Operations, unless such ~~t~~Tank is a pressure ~~t~~Tank maintaining working pressures sufficient at all times to prevent organic vapor loss to the atmosphere, or is designed and equipped with one of the following vapor control devices, or other vapor control device that has been determined to be equivalent after review by ~~the staffs of~~ the ~~District~~South Coast AQMD, ~~the Air Resources Board (ARB)~~CARB, and the United States Environmental Protection Agency (U.S. EPA), and approved in writing by the ~~District~~ Executive Officer, ~~ARB~~CARB, and U.S. EPA, which is properly installed and continuously maintained in good operating condition:

(1) External Floating Roof

An external floating roof shall consist of a pontoon-type or double deck-type cover that continuously rests on the surface of the ~~o~~Organic ~~l~~Liquid and is equipped with a closure device between the ~~t~~Tank shell and roof edge. The closure device shall consist of two ~~s~~Seals, with one ~~s~~Seal placed above the other. The ~~s~~Seal below shall be designated as the ~~p~~Primary ~~s~~Seal, and the ~~s~~Seal above shall be designated as the ~~s~~Secondary ~~s~~Seal. An owner or operator shall not install or use ~~A~~ a ~~s~~Seal which is not identified on the current list of ~~s~~Seals approved by the Executive Officer ~~shall not be installed or used~~ unless the Executive Officer determines that such ~~s~~Seal meets the applicable criteria of subparagraphs (~~c~~d)(1)(A) through (~~c~~d)(1)(C). The owner or operator of an External Floating Roof Tank shall equip the tank with a Rim Seal System meeting the following requirements:

(A) A closure device on a welded or a riveted ~~t~~Tank shell which uses a ~~metallic shoe-type seal as its primary seal~~ Mechanical Shoe Primary Seal shall comply with the following requirements:

(i) Gaps between the ~~t~~Tank shell and the ~~p~~Primary ~~s~~Seal shall not exceed 1.3 centimeters (1/2 inch) for a cumulative length of 30 percent of the circumference of the ~~t~~Tank, and 0.32 centimeter (1/8 inch) for 60 percent of the circumference of the ~~t~~Tank. No gap between the ~~t~~Tank shell and the P~~p~~rimary ~~s~~Seal shall exceed 3.8 centimeters

(1-1/2 inches). No continuous gap between the ~~t~~Tank shell and the ~~p~~Primary ~~s~~Seal greater than 0.32 centimeter (1/8 inch) shall exceed 10 percent of the circumference of the ~~t~~Tank.

(ii) Gaps between the ~~t~~Tank shell and the ~~s~~Secondary ~~s~~Seal shall not exceed 0.32 centimeter (1/8 inch) for a cumulative length of 95 percent of the circumference of the ~~t~~Tank. No gap between the ~~t~~Tank shell and the ~~s~~Secondary ~~s~~Seal shall exceed 1.3 centimeters (1/2 inch).

(~~c~~d) (iii) ~~Metallic shoe-type seals~~ Mechanical Shoe Primary Seals installed on or after August 1, 1977 shall be installed so that one end of the shoe extends into the stored ~~o~~Organic ~~l~~Liquid and the other end extends a minimum vertical distance of 61 centimeters (24 inches) above the stored ~~o~~Organic ~~l~~Liquid surface.

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

(v) Primary and Secondary Seals for Tanks subject to U.S. EPA CFR 40 Part 60 Subpart Kb must meet the Seal gap requirements specified in U.S. EPA CFR 40 Part 60 Subpart Kb.

(B) A closure device which uses a resilient toroid-type ~~s~~Seal as its ~~p~~Primary ~~s~~Seal shall comply with the applicable requirements of subparagraph (~~c~~d)(1)(A).

(C) The ~~p~~Primary and ~~s~~Secondary ~~s~~Seals shall comply with the following requirements:

(i) The ~~p~~Primary ~~s~~Seal envelope shall be made available for unobstructed inspection by the Executive Officer along its circumference. In the case of riveted ~~t~~Tanks with resilient toroid-type seals, at least eight such locations shall be made available; for all other types of ~~s~~Seals, at least four such locations shall be made available. If the Executive Officer deems it necessary, further unobstructed inspection of the

~~p~~Primary ~~s~~Seal may be required to determine the ~~s~~Seal's condition along its entire circumference.

(ii) The ~~s~~Secondary ~~s~~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 ~~p~~Primary ~~s~~Seal.

(iii) The ~~s~~Secondary ~~s~~Seal shall extend from the roof to the ~~t~~Tank shell and shall not be attached to the ~~p~~Primary ~~s~~Seal.

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

(D) The owner or operator shall ensure that ~~All~~ all ~~openings in the roof~~ Roof Openings except pressure-vacuum valves, ~~shall~~ provide a projection below the liquid surface to prevent belching, escape, or entrainment of ~~o~~Organic ~~l~~Liquid, and shall be equipped with a cover, ~~s~~Seal or lid. The cover, ~~s~~Seal, or lid shall at all times be in a closed position, with no ~~v~~Visible ~~g~~Gaps, and maintained in a Vapor Tight condition except when the device or appurtenance is in use. Pressure vacuum valves shall be set to within 10 percent of the maximum allowable working pressure of the roof.

(E) The owner or operator shall ensure that ~~There~~ there ~~shall be~~are no holes, tears or openings in the ~~s~~Secondary ~~s~~Seal or in the ~~p~~Primary ~~s~~Seal envelope surrounding the annular vapor space enclosed by the roof edge, ~~s~~Seal fabric, and ~~s~~Secondary ~~s~~Seal.

(F) The owner or operator shall equip ~~Any~~ any emergency ~~r~~Roof ~~d~~Drain ~~shall be provided~~ with a slotted membrane fabric cover, or equivalent device, that covers at least nine-tenths (9/10) of the area of the opening.

(G) Tank Condition Requirements

The owner or operator shall maintain the Tank in a condition free of Visible Vapors resulting from a defect in equipment.

(i) In the event that Visible Vapors are detected and an owner or operator states the Tank is in compliance with the

provisions in paragraphs (d)(1), (d)(2), (d)(3), or (d)(4), the owner or operator must demonstrate that the Visible Vapors are not the result of a defect in the equipment.

(H) Doming Requirements

Beginning three years after [*Date of Adoption*] the owner or operator shall install a Domed Roof on External Floating Roof Tanks used to store Organic Liquid with a True Vapor Pressure of 3 psia or greater as demonstrated pursuant to subparagraph (d)(1)(I) at the time of the next internal API 653 inspection or the next time the Tank is cleaned and degassed, whichever is sooner. The owner or operator shall install domes no later than twenty-three years after a test specified in subparagraph (d)(1)(I) verifies that the Organic Liquid stored has a True Vapor Pressure of 3 psia or greater.

(I) Verification of True Vapor Pressure

Effective January 1, 2025, an owner or operator of an External Floating Roof Tank shall demonstrate the True Vapor Pressure of the Organic Liquid stored using an initial test completed by July 1, 2025, with one representative sample. External Floating Roof Tanks storing Organic Liquids with True Vapor Pressure below 3 psia shall conduct subsequent tests at least once every six calendar months pursuant to the requirements of subdivision (i).

(i) In lieu of the semi-annual subsequent TVP tests specified in subparagraph (d)(1)(I), an owner or operator may elect to conduct monthly TVP tests beginning January 2025 and calculate an average every six months.

(J) In lieu of complying with the requirements in subparagraph (d)(1)(H), the owner or operator of a waste water Tank where the conversion to a Domed External Floating Roof Tank may create a hazard due to the accumulation of pyrophoric material, as confirmed by the Executive Officer, shall accept permit conditions to limit the True Vapor Pressure of the Organic Liquid stored in a Tank to less than 3 psia.

(2) Internal Floating-Type Cover

An owner or operator of ~~A~~ a ~~f~~Fixed ~~r~~Roof ~~t~~Tank equipped with an internal floating-type cover shall comply with the following requirements:

(~~c~~d)

~~(A) A fixed roof tank with an existing internal floating-type cover approved by the Executive Officer on or before June 1, 1984, shall comply with the requirements applicable at the time such approval was givn.~~

(d)

(~~B~~A) A ~~f~~Fixed ~~r~~Roof ~~t~~Tank which has an internal floating-type cover ~~installed, modified, or replaced after June 1, 1984,~~ shall have a closure device which consists of ~~either~~ a ~~single~~ ~~l~~Liquid ~~m~~Mounted ~~p~~Primary ~~s~~Seal ~~or a primary~~ and a ~~s~~Secondary ~~s~~Seal. All Roof ~~o~~Openings and fittings shall be fully gasketed and maintained in a Vapor Tight condition or controlled in a manner specified by the Executive Officer, except for when in operation or opened for access. The closure device shall control vapor loss with an effectiveness equivalent to a closure device which meets the requirements of subparagraph (~~c~~d)(1)(A), 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). Seal designs not identified on the current list of ~~s~~Seals approved by the Executive Officer shall not be installed or used unless the Executive Officer has given ~~his~~their prior written approval to its installation or use. ~~For purposes of this paragraph, modification includes an identical replacement.~~

~~(d)~~

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

(C) The owner or operator shall comply with the requirements of subparagraph (d)(1)(G).

(D) Beginning two years after [*Date of Adoption*], the owner or operator shall comply with the Primary and Secondary Seal requirements for Internal Floating Roof Tanks specified in subparagraph (d)(2)(A) at the time of the next internal API 653 inspection or the next time the Tank is cleaned and degassed, whichever is sooner. The owner or operator shall install Secondary Seals no later than twenty-two years after [*Date of Adoption*].

(3) ~~Vapor Recovery System~~Fixed Roof Tanks

An owner or operator of ~~A~~ a ~~f~~Fixed ~~r~~Roof ~~t~~Tank not using an internal floating-type cover shall ~~be equipped~~equip the Tank with a vapor recovery system ~~shall comply~~that complies with the following requirements:

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

(B) All piping, valves and fittings shall be constructed and maintained in a ~~v~~Vapor~~-~~ ~~t~~Tight condition, in accordance with requirements of other ~~District~~South Coast AQMD rules for such equipment.

(~~e~~d) (C) For ~~purposes of this paragraph~~Fixed Roof Tanks, the efficiency of a vapor recovery system shall be determined by making a comparison of controlled emissions to those emissions which would occur from a fixed cone roof ~~t~~Tank holding the same ~~o~~Organic ~~l~~Liquid without a vapor control or vapor recovery system. The vapor recovery system shall have an efficiency of at least ~~95~~98 percent by weight, or vent ~~t~~Tank emissions to a ~~f~~Fuel ~~g~~Gas ~~s~~System.

(D) The owner or operator shall comply with the requirements of subparagraph (d)(1)(G).

(4) Domed External Floating Roof Tanks

The owner or operator of a Domed External Floating Roof Tank shall:

(A) Equip and maintain all Roof Openings and Rim Seal Systems and in accordance with the specifications listed in paragraph (d)(1), except for Slotted Guidepoles. 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.

(B) Ensure that the concentration of organic vapor in the vapor space above the floating roof does not exceed 30 percent of its lower explosive limit (LEL).

(C) Comply with the requirements of subparagraph (d)(1)(G).

(D) Maintain the Domed Roof in a condition that is free of gaps, cracks, punctures, and other openings, except where vents and access points are located.

(~~d~~e) Other Performance Requirements

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

(2) An owner or operator shall float ~~The~~ the roof of any ~~i~~Internal or ~~e~~External ~~f~~Floating ~~r~~Roof ~~t~~Tank ~~shall float~~ on the ~~o~~Organic ~~l~~Liquid at all times (i.e., free of the ~~r~~Roof ~~l~~Leg supports) except when the ~~t~~Tank is being completely emptied for ~~c~~Cleaning, ~~or~~ repair, or during a Product Change. The process of emptying or refilling, when the roof is resting on leg supports, shall be continuous.

(3) If a ~~t~~Tank has been gas-freed and is to be refilled with ~~g~~Gasoline, the owner or operator ~~roof~~ shall ~~be refloated~~ refloat the roof with water or by an equivalent procedure approved by the Executive Officer. Paragraphs (~~d~~e)(2) and (~~d~~e)(3) shall be inapplicable to ~~g~~Gasoline ~~s~~Storage ~~t~~Tanks at bulk ~~g~~Gasoline distribution terminals which do not have:

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

(B) facilities for equivalent emission control when refloating the roof with ~~o~~Organic ~~l~~Liquid.

(4) An owner or operator shall not use ~~A~~ a ~~f~~Fixed ~~r~~Roof ~~t~~Tank with an internal floating-type cover or a ~~t~~Tank with an external floating roof cover ~~shall not be used~~ for storing ~~o~~Organic ~~l~~Liquids having a ~~t~~True ~~v~~Vapor ~~p~~Pressure of 11 psia (569 mm Hg) or greater under ~~a~~Actual ~~s~~Storage ~~c~~Conditions.

(e)

(5) The owner or operator shall not replace ~~Replacement of~~ a ~~s~~Seal on a floating roof ~~t~~Tank ~~shall be allowed only if~~unless the replacement ~~s~~Seal is chosen from the current list of ~~s~~Seals approved by the Executive Officer. Category "A" ~~s~~Seals shall be replaced only by Category "A" ~~s~~Seals. Category "B" ~~s~~Seals shall be replaced only by Category "A" or Category "B" ~~s~~Seals. Category "C" ~~s~~Seals shall be replaced only by Category "A" or Category "B" ~~s~~Seals. Seal designs not identified on the current list of Seals approved by the Executive Officer shall not be installed or used unless the Executive Officer has given their prior written approval to its installation or use.

(6) ~~Organic liquids listed on the addendum to this rule shall be deemed to be in compliance with~~The addendum to this rule can be used as a guide for compliance with the appropriate vapor pressure limits for the ~~t~~Tank in which ~~it~~the corresponding Organic Liquid is stored provided the actual storage temperature does not exceed the corresponding maximum temperature listed.

(~~e~~f) ~~Self-Inspection of Floating Roof Tanks~~Monitoring Requirements

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

(1) Inspection and Maintenance Plan

(f)

(A) Each owner or operator shall maintain a current or revised Inspection and Maintenance Plan approved by the Executive Officer. Each owner or operator constructing floating roof ~~t~~Tank(s) subject to this rule shall submit an Inspection and Maintenance Plan, or a revision of its current Inspection and Maintenance Plan, to the Executive Officer prior to the completion of construction. The Inspection and Maintenance Plan shall include an inventory of floating roof ~~t~~Tanks subject to this rule, the proposed self-inspection schedule, the number of ~~c~~Certified ~~p~~Persons to be dedicated to the program, any self-inspection procedures proposed in addition to those required by the ~~District~~South Coast AQMD, and a copy of the owner or operator's safety procedures used for floating roof ~~t~~Tanks. The ~~t~~Tank inventory shall include ~~t~~Tank identification number, maximum

design capacity, product, shell type, dimensions, ~~s~~Seal type and manufacturer, floating roof type, date of construction and location.

(2) Identification Requirements

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

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

(3) Owner or Operator Inspection Requirements

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

(B) The ~~p~~Primary and ~~s~~Secondary ~~s~~Seals shall be inspected by a ~~c~~Certified ~~p~~Person each time a floating roof ~~t~~Tank is emptied and degassed. Gap measurements shall be performed on an ~~e~~External F~~f~~loating ~~r~~Roof T~~t~~ank when the liquid surface is still but not more than ~~24~~48 hours after the ~~t~~Tank roof is refloated.

(C) The Executive Officer shall be notified electronically in writing to the Executive Officer via Rule463ComplianceReports@aqmd.gov at least ~~2 weeks~~2 days prior to the start of any tank-emptying or roof-refloating operation for planned maintenance of a ~~t~~Tank.

(D) Optical Gas Imaging Inspections

(f) Effective July 1, 2025, the owner or operator shall demonstrate compliance with subparagraphs (d)(1)(G), (d)(2)(C), (d)(3)(D) and (d)(4)(C) for Tanks with a capacity greater than 75,000 liters (19,815 gallons) storing Organic Liquid with a True Vapor Pressure of 1.5 psi or greater, Tanks with a capacity of 150,000 liters (39,630 gallons) and above storing Organic Liquid with a True Vapor Pressure of 0.5 psi or greater, Tanks with a capacity of 950 liters (251 gallons) to 75,000 liters (19,815 gallons) used to store Gasoline, and any Tank with a Potential For VOC Emissions of 6 tons per year or greater used in Crude Oil And Natural Gas Production Operations by conducting OGI inspections in accordance with the following requirements:

(i) The person conducting an OGI inspection shall:

(A) Complete a manufacturer's certification or training program, or equivalent CARB training for the OGI Device used to conduct the inspection; and

(B) Operate and maintain the OGI Device in accordance with the manufacturer's specifications and recommendations.

(ii) Tank Farm Inspections

A person meeting the requirements of clause (f)(3)(D)(i) shall:

(A) Conduct a Tank Farm Inspection at least once every two calendar weeks; and

(B) When Visible Vapors are detected from a Tank, conduct an inspection from the Tank's platform or a vantage point capable of seeing the top of the tank roof if there is no platform available to identify Components and/or equipment emitting Visible Vapors.

(1) If determined that Visible Vapors are emitted from Components required to be maintained in a Vapor Tight condition or in a condition with no Visible Gaps, the owner or operator shall make necessary repairs or adjustments pursuant to paragraph (f)(4), or demonstrate compliance with a Vapor Tight condition or a condition with no Visible Gaps for the Component from which Visible Vapors are emitted within 3 days.

(~~h~~f)

(2) If determined that Visible Vapors are emitted from equipment not specified in item (f)(3)(D)(ii)(B)(1), a visual inspection for defects in equipment shall be conducted, which may include the use of the OGI Device. The owner or operator shall make necessary repairs or adjustments pursuant to paragraph (f)(4) for any defects identified.

(iii) Component Inspections

A person that meets the requirements of clause (f)(3)(D)(i) shall:

(A) Conduct a Component Inspection for each floating roof Tank at least twice per year at 4 to 8 month intervals; and

(B) When Visible Vapors are detected, and are not emitted from the Rim Seal System, the owner or operator shall make any necessary repairs or adjustments pursuant to paragraph (f)(4), or demonstrate compliance with the applicable rule requirements for the Components or equipment from which Visible Vapors are detected within 3 days; and

(C) When the Visible Vapors are detected from the Rim Seal System, the owner or operator shall identify any defects in the equipment and make any necessary repairs or adjustments pursuant to paragraph (f)(4). If no defects are identified, an inspection from ground level shall be conducted. If Visible Vapors are detected at the top of the Tank shell or roof vents, the owner or operator shall demonstrate compliance with the Rim Seal requirements of this rule, or make any necessary repairs, within 3 days.

(f)

(E) In lieu of the required OGI inspections specified in subparagraph (f)(3)(D), an owner or operator may elect to use an alternative monitoring method approved in writing by the U.S. EPA that is equivalent or more stringent than the monitoring requirements specified in subparagraph (f)(3)(D).

(i) An owner or operator seeking to use the alternative monitoring method specified in subparagraph (f)(3)(E) shall submit written documentation of the U.S. EPA approved method to the South Coast AQMD for approval.

(4) Maintenance Requirements

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

(5) Vapor Recovery Systems

No later than one year after [*Date of Adoption*], the owner or operator of a Facility who operates a vapor recovery system to comply with the requirements in subparagraph (d)(3)(C) shall conduct an initial performance test to determine the overall efficiency of the vapor recovery system. The performance testing of the vapor recovery 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 within 180 days after the modification. Subsequent to the initial performance test, the operator shall conduct a performance test at least once every ten years, and shall monitor and record applicable operating parameters on a weekly basis to ensure that the vapor recovery system is achieving 98% overall control efficiency.

(~~f~~g) Reporting and Recordkeeping Requirements

(1) The following shall apply to an owner or operator ~~activities~~ subject to the provisions of subdivision (~~e~~f):

(A) All inspections shall be recorded on compliance inspection report forms approved by the Executive Officer as described in Attachment B - "Inspection Procedures and Compliance Report Form." An owner or operator may use an electronic compliance inspection report form provided that all required information specified in Attachment B is contained in the electronic report form.

(B) All compliance inspection reports and documents shall be submitted to the Executive Officer either electronically or by hard copy within 5 ~~w~~Working ~~d~~Days of completion of the self-inspection. Electronic reports shall be submitted to the Executive Officer via Rule463ComplianceReports@aqmd.gov.

(C) If a ~~t~~Tank is determined to be in violation of the requirements of this rule, a written report shall be submitted electronically to the

(~~f~~g) Executive Officer via Rule463ComplianceReports@aqmd.gov within 120 hours of the determination of non-compliance, indicating corrective actions taken to achieve compliance.

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

(2) Emissions Reporting

(A) An owner or operator shall provide emissions information, to the Executive Officer upon request, based on the parameters listed in Attachment C using AQMD's Annual Emissions Reporting Program. ~~or U.S. EPA's most recent version of TANKS 4.0 Program~~. The requirement shall apply to all ~~o~~Organic ~~l~~Liquid ~~s~~Storage ~~t~~Tanks without regard to exemptions specified in subdivision (~~g~~h).

(B) An owner or operator shall provide all upset emissions information associated with ~~p~~Product ~~c~~Change, repair, and turnover or any other excess emission incidents.

(C) An owner or operator shall maintain records of emissions data for all ~~o~~Organic ~~l~~Liquid ~~s~~Storage ~~t~~Tanks for the most recent two (2) year period.

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

(4) For OGI inspections required by subparagraph (f)(3)(D), the owner or operator shall:

(A) Report Visible Vapors detected during a Tank Farm Inspection requiring a demonstration with rule requirements or a repair pursuant to subclause (f)(3)(D)(ii)(B) to the Executive Officer by phone (1-800-CUT-SMOG or 1- 800-288-7664) within 24 hours after the inspection is completed;

(~~h~~g) (B) Keep written records and digital recordings of Visible Vapors detected during a Tank Farm Inspection resulting from a defect or emitted from a Component required to be maintained in a Vapor Tight condition or a condition with no Visible Gaps. Written records shall include Tank identification, date of inspection, and

findings. Findings shall include identification of Tanks from which Visible Vapors were identified and any repairs or determinations made pursuant to clause (f)(3)(D)(ii). Digital recordings shall be accurately time-stamped and capture the Visible Vapors for a minimum of 5 seconds; and

(C) Keep written records of Component Inspections that include Tank identification, date of inspection and findings. Findings shall include identification of Storage Tanks from which Visible Vapors were identified, any repairs or determinations made pursuant to clause (f)(3)(D)(iii).

(5) An owner or operator shall keep records of all True Vapor Pressure results from tests specified in subparagraph (d)(1)(I) for the most recent 20 year period and records shall be made available to the Executive Officer upon request.

(6) An owner or operator shall report any tests specified in subparagraph (d)(1)(I) that result in a True Vapor Pressure of 3.0 psia or greater to the Executive Officer via Rule463ComplianceReports@aqmd.gov within 14 days. The report shall include the year of the next internal API 653 inspection and the next planned tank cleaning and degassing.

(7) The owner or operator of a vapor recovery system shall submit all performance test reports to the Executive Officer via Rule463ComplianceReports@aqmd.gov no later than 60 days after conducting the test.

(g) Exemptions

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

(h)

(A) Oil production ~~t~~Tanks with a capacity of between 75,000 liters (19,815 gallons) and 159,000 liters (42,008 gallons) which have a ~~properly maintained vapor-tight~~ roof maintained in a Vapor Tight condition and are equipped with a pressure-vacuum valve which is set within 10 percent of the maximum allowable working pressure

of the ~~t~~Tank, are exempt from the control requirements of this rule when:

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

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

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

(2) The provisions of paragraph (~~d~~e)(2) shall not apply to ~~d~~Drain-~~d~~Dry ~~b~~Breakout ~~t~~Tanks that are subject to the provisions of Rule 1149 - Storage Tank And Pipeline Cleaning And Degassing.

(3) The provisions of this rule shall not apply to Storage Tanks that are subject to Rule 1178, except for subdivision (e) and paragraphs (c)(36) and (c)(44).

(4) Any tank that is out of service, where the tank has been emptied or has been opened to the atmosphere pursuant to the requirements of Rule 1149, shall be exempt from the requirements of subparagraphs (f)(3)(D) and (f)(3)(E) until the tank is refilled.

(5) An owner or operator shall be exempt from the requirements of clause (f)(3)(D)(iii) if a determination is made that it is unsafe to conduct an inspection from a Tank platform or vantage point capable of seeing the Tank roof, provided that the reason(s) and date(s) the inspection was not conducted is documented. The inspections shall resume on the first day determined to be safe.

(~~h~~i) Test Methods

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

(i) (1) Efficiency of a vapor recovery system specified in subparagraph (~~c~~d)(3)(C) shall be determined according to ~~SC~~South Coast AQMD

Method 501.1 for the determination of total organic compound emissions. EPA Reference Methods 25 or 25A may be used, as applicable, in place of ~~SC~~South Coast AQMD Method 25.1 specified in Method 501.1. An efficiency determined to be less than established by this rule through the use of any of the above-referenced test methods shall constitute a violation of the rule. Baseline emissions shall be calculated by using the criteria outlined in American Petroleum Institute Bulletin 2518.

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

(3) The Reid vapor pressure specified in paragraph (~~b~~c)(~~6~~18) and the Reid vapor pressure used in determining the ~~t~~True ~~v~~Vapor ~~p~~Pressure limit specified in paragraph (~~d~~e)(4) and subparagraph (d)(1)(I) shall be determined according to the following test methods and converted to True Vapor Pressure using applicable nomographs in U.S. EPA AP-42, or nomographs approved by the Executive Officer and U.S. EPA:

(A) ASTM D-323-82 – Vapor Pressure of Petroleum Products (Reid Method)~~,~~;

(B) ASTM D-6377 Standard Test Method for Determination of Vapor Pressure of Crude Oil: VPCRx (Expansion Method);

(C) ASTM D-6378 Standard Test Method for Determination of Vapor Pressure (VPX) of Petroleum Products, Hydrocarbons, and Hydrocarbon-Oxygenate Mixtures (Triple Expansion Method); or

(D) California Code of Regulations, Title 13, Section 2297.~~,~~ ~~and converted to tTrue vVapor pPressure using applicable nomographs in U.S. EPA AP-42, Fifth Edition, Volume 1, Chapter 7, or nomographs approved by the Executive Officer and U.S. EPA.~~

(4) Notwithstanding the provisions of paragraph (~~h~~i)(3), if a permit condition or ~~District~~South Coast AQMD rule requires a demonstration of ~~t~~True

~~v~~Vapor ~~p~~Pressure of less than 5 mm Hg (0.1 psi) absolute, either of the following test methods may be used:

(i)

(A) Organic liquids that are stored at ~~a~~Ambient ~~t~~Temperatures with a ~~t~~True ~~v~~Vapor ~~p~~Pressure of greater than 5 mm Hg (0.1 psi) absolute under ~~a~~Actual ~~s~~Storage ~~c~~Conditions shall be determined as those with a flash point of less than 100 °F as determined by ASTM Method D-93 – 10a - Flash Point by Pensky-Martens Closed Cup Tester.

(B) Organic liquids that are stored at above ~~a~~Ambient ~~t~~Temperatures with a ~~t~~True ~~v~~Vapor ~~p~~Pressure greater than 5 mm Hg (0.1 psi) absolute under ~~a~~Actual ~~s~~Storage ~~c~~Conditions shall be determined as those whose volume percent evaporated is greater than ten percent at an adjusted temperature T_{Adj} as determined by ASTM Method D-86 – 11a - Distillation of Petroleum Products at Atmospheric Pressure of:

$$T_{Adj} = 300\ °F + T_1 - T_a$$

Where:

T_1 = Liquid Storage Temperature (°F)

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

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

(6) Vapor ~~t~~Tight condition specified in subparagraphs (d)(1)(D), (d)(2)(A), (~~c~~d)(3)(A)~~ and~~, (~~c~~d)(3)(B), and (h)(1)(A) shall be determined according to U.S. EPA's Reference Method 21 using an appropriate analyzer calibrated with methane.

(7) API gravity is determined using the following:

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

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

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

(j) Ozone Contingency Measure

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

(A) meet a Reasonable Further Progress (RFP) requirement in an approved attainment plan for the 2008 or 2015 ozone National Ambient Air Quality Standard (NAAQS); or

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

(2) No later than 60 days after the final determination as specified in paragraph (j)(1), any owner or operator of a South Coast Air Basin Tank subject to the requirements of this rule, storing product with a TVP of 5.0 psi or greater pursuant to the requirements of subdivision (i), is required to increase the frequency of inspections specified in subclause (f)(3)(D)(ii)(A) to every calendar week.

(3) The applicable contingency measure(s) specified in paragraph (j)(4) shall be implemented upon the issuance of a final determination by U.S. EPA that the Coachella Valley has failed to comply with any of the following requirements:

(A) meet a RFP requirement in an approved attainment plan for the 1997, 2008, or 2015 ozone NAAQS; or

(B) attain the 1997, 2008, or 2015 ozone NAAQS by the applicable date.

(4) No later than 60 days after the final determination as specified in paragraph (j)(3), any owner or operator of a Coachella Valley Tank subject to the requirements of this rule, storing product with a TVP of 5.0

psi or greater pursuant to the requirements of subdivision (i), is required to increase the frequency of inspections specified in subclause (f)(3)(D)(ii)(A) to every calendar week.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 - ADDENDUM

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

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

RULE 463 - ADDENDUM- (Cont.)

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

ATTACHMENT A

FLOATING ROOF TANK SEAL CATEGORIES

PRIMARY SEALS

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

SECONDARY SEALS

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

Criteria used for categorization of floating roof ~~t~~Tank ~~s~~Seals:

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

ATTACHMENT B

INSPECTION PROCEDURES AND COMPLIANCE REPORT FORM

Equipment Needed:

Explosimeter (for ~~i~~Internal ~~f~~Floating ~~r~~Roof ~~t~~Tanks), liquid resistant measuring tape or device, ~~t~~Tank probe (to measure gaps in ~~t~~Tank ~~s~~Seals - 1/8 inch, 1/2 inch, 1-1/2 inch), flashlight.

Inspection Procedures:

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

2. During compliance inspection, the person(s) conducting the inspection must have a copy of the Permit to Operate or Permit to Construct pertinent to the ~~t~~Tank being inspected. Any discrepancies between the permit equipment description and the existing ~~t~~Tank or the permit conditions and the actual operating conditions of the ~~t~~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 ~~t~~Tank for possible leaks in the ~~t~~Tank shell. Complete the ~~t~~Tank information section (D) on the report.

4. For floating roof ~~t~~Tanks containing ~~o~~Organic ~~l~~Liquid not subject to the provisions of subdivision (~~c~~d) of Rule 463, conduct only steps 1 through 3 of this attachment. For all other floating roof ~~t~~Tanks, conduct steps 5 through 7 as applicable.

5. For ~~e~~External ~~f~~Floating ~~r~~Foof ~~t~~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 ~~r~~Roof ~~l~~Legs, open hatches, open emergency ~~r~~Roof ~~d~~Drains or ~~v~~Vacuum ~~b~~Breakers and record the findings on the report accordingly. Indicate presence of any tears in the fabric of both ~~s~~Seals.
   - o After the visual inspection, conduct an inspection of the entire ~~s~~Secondary ~~s~~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 ~~p~~Primary ~~s~~Seal using the 1/8", 1/2", and 1 1/2" probes. Inspect the ~~p~~Primary ~~s~~Seal by holding back the ~~s~~Secondary ~~s~~Seal. Record the gap data in section F(5) of the report.

- 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 ~~p~~Primary and ~~s~~Secondary ~~s~~Seals in section G of the report. Secondary ~~s~~Seal gaps greater than 1/2 inch should be measured for length and width, and recorded in Comments under section (J) of the report.

6. For ~~i~~Internal ~~f~~Floating ~~r~~Roof ~~t~~Tanks:

   - 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.
   - Conduct a visual inspection of the ~~r~~Roof ~~o~~Openings and the ~~s~~Secondary ~~s~~Seal, if applicable, and record findings on the report.

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

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 COMPLIANCE REPORT

~~**PLEASE COMPLETE FORM LEGIBLY IN BLACK INK**~~

Tank No. _____ ~~SC~~South Coast AQMD Permit No. _____ Inspection Date _____ Time _____

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

A. COMPANY INFORMATION:

Company Name _____

Location Address _____ City _____ Zip _____

Mailing Address _____ City _____ Zip _____

Contact Person _____ Title _____

Phone _____

B. INSPECTION CONDUCTED BY:

Name _____ Title _____

Company Name _____ Phone _____

Mailing Address _____ City _____ Zip _____

C. TANK INFORMATION:

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

Product Type _____ Product RVP _____

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

Color of Shell _____ Color of Roof _____

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

External floating roof ☐ Internal floating roof ☐

D. GROUND LEVEL INSPECTION:

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

3) List type and location of leaks found in ~~t~~Tank shell.

_____

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

_____

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

_____

_____

E. INTERNAL FLOATING ROOF TANK:

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

2) Conduct visual inspection of roofs and ~~s~~Secondary ~~s~~Seals, if applicable.

3) Are all ~~r~~Roof ~~o~~Openings covered? No ☐ Yes ☐ If no, explain in Comments section (J) and proceed to part (H)(6).

F. EXTERNAL FLOATING ROOF TANK:

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

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

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

4) Secondary Seal Inspection

a) Type of Secondary Seal: _____

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

c) Does 1/8" probe drop past ~~s~~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 ~~s~~Seal) does 1-1/2" probe drop past ~~s~~Seal? No ☐ Yes ☐; if yes, measure length(s) and show on diagram.

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

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

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

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

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

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

NOTE: Show defects using symbols. Show ~~s~~Seal gaps and lengths.

N

LEGEND:

Equipment:

☐	Antirotational device
O	Gauge well
⊤	Leg stand
⊗	Roof ~~d~~Drain
*	Emergency ~~r~~Roof ~~d~~Drain
∞	Vacuum breaker
σ	Vent
▭	Platform & ladder

Defects:

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

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 COMPLIANCE REPORT

~~**PLEASE COMPLETE FORM LEGIBLY IN BLACK INK**~~

Tank No. _____ ~~SC~~South Coast AQMD Permit No. _____

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

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

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

Gaps in ~~p~~Primary ~~s~~Seal between 1/8 and 1/2 inch: _____

Gaps in ~~p~~Primary ~~s~~Seal between 1/2 and 1-1/2 inch: _____

Gaps in ~~p~~Primary ~~s~~Seal greater than 1-1/2 inches: _____

Gaps in ~~s~~Secondary ~~s~~Seal between 1/8 and 1/2 inch: _____

Gaps in ~~s~~Secondary ~~s~~Seal greater than 1/2 inch: _____

Multiply diameter (ft) of ~~t~~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 ~~s~~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 ~~s~~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 ~~s~~Seal?	No ☐	Yes ☐
		Did cumulative 1/2" - 1-1/2" gap exceed 30% circumference length, and		
		Did cumulative 1/8 - 1/2" gap exceed 60% circumference length?	No ☐	Yes ☐
		Did any <u>single continuous</u> 1/8" - 1-1/2" gap exceed 10% circ. length?	No ☐	Yes ☐
	Tube	Did 1/2" probe drop between shell and ~~s~~Seal	No ☐	Yes ☐
		Did cumulative 1/8" - 1/2" gap exceed 95% circumference length?	No ☐	Yes ☐
6)	Internal floating roof (installed before 6/1/84) did LEL exceed 50%		No ☐	Yes ☐
		(installed after 6/1/84) did LEL exceed 30%?	No ☐	Yes ☐
7)	Does ~~t~~Tank have permit conditions?		No ☐	Yes ☐
		Does ~~t~~Tank comply with these conditions?	No ☐	Yes ☐

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

_____

_____

J. COMMENTS:

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

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

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

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

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

SEND COMPLETED REPORT (Both Sheets) TO:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive

FAX: (909) 396-3341

Diamond Bar, CA 91765
Attn: Rule 463 Program Supervisor

FOR ~~SC~~South Coast AQMD USE ONLY: Date received_____

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

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

DATA REPORTING REQUIREMENT FOR ROOF TANKS

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

A. External Floating Roof Tank

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

B. Internal Floating Roof Tank

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

C. Fixed Roof Tank

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

*** Default values are available from the ~~District~~South Coast AQMD**

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