

VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT

RULE 71 - CRUDE OIL AND REACTIVE ORGANIC COMPOUND LIQUIDS

(Adopted 6/20/78; Revised 3/27/79, 7/10/79, 10/4/88, 9/26/89, 9/11/90, 6/8/93, 12/13/94, 5/11/21, XX/XX/XX)

A. Applicability

The provisions of this rule shall apply to the production, gathering, separation and processing of crude oil and natural gas, and the storage and transfer of petroleum material and reactive organic compound (ROC) liquids.

B. Definitions

The following definitions apply to Rules 71.1, 71.2, 71.3, 71.4, and 71.5.

1. "Appropriate analyzer": A hydrocarbon analyzer that meets the requirements of EPA Reference Method 21, Determination of Volatile Organic Compound Leaks, and is calibrated with methane.
2. "Automatic Bleeder Vent": A floating roof vent that automatically vents air only during initial filling operations and during subsequent landings of the roof.
3. "Background": A reading expressed as methane on a portable EPA Method 21 instrument that is taken at least three meters upwind from any components to be inspected and that is not influenced by any specific emission point.
4. "Bottom-Loaded": An ROC liquid delivery vessel shall be considered to be bottom-loaded when the liquid transfer and vapor return lines have separate, independent, and dedicated attachments on the truck or tank, when the inlet is flush with the container bottom, and when the truck and trailer hatches remain closed during liquid transfer.
5. "Component": Including, but not limited to, any valve, polished rod stuffing box, dump lever arm, open ended line, fitting, threaded connection, flange, manway, pump seal, compressor seal, pressure relief valve, ~~pressure-vacuum relief valve~~, diaphragm, hatch, sight glass, pipe, pipeline, or meter and includes components associated with wellheads or idle wells.
6. "Containment berm": A structure used solely as secondary containment for emergency spills from a tank or other device.
7. "Crude oil": A mixture of hydrocarbons that exists in liquid or semi-solid phase in natural underground reservoirs and remains liquid or semisolid at atmospheric pressure after passing through surface separating facilities.

8. "Custody transfer": The transfer of produced crude oil and/or condensate, after separation and/or treatment in production operations, from storage tanks or automatic transfer facilities to pipelines or any other form of transportation.
89. "Drilling operations pit": A pit used to receive rock cuttings, waste drilling fluids, and water run off from around a drilling rig (DOP Reserve Pit) or a pit used to accept well production for up to 48 hours until the well is brought on stream (DOP Temporary Pit).
910. "Emergency Pit": A pit used less than thirty (30) days per year to contain emergency releases of petroleum material. An emergency pit is dry when not in use.
1011. "EPA Method 21 Instrument/Instrumentation": An instrument that meets the specifications and performance criteria contained in Section 6.0 of EPA Method 21, Determination of Volatile Organic Compound Leaks and measures total hydrocarbons in units of parts per million volume (ppmv) calibrated as methane in accordance with EPA Method 21, Determination of Volatile Organic Compound Leaks. Photo Ionization Detector (PID) instruments are not included in this definition.
12. "First stage production sump": A sump that receives a stream of petroleum material directly from wells or a field gathering system.
1413. "Fitting": A component used to attach or connect pipes or piping details, including but not limited to flanges and threaded connections.
14. "Flash tank": A flash tank or separator is used in a gas dehydration unit to desorb hydrocarbon gases from the rich glycol stream by changing the pressure and temperature. The hydrocarbon gases separated by the flash tank are mostly methane, ethane, and propane.
1415. "Gasoline": Any petroleum distillate having a Reid vapor pressure of 4.0 pounds per square inch or greater, which is sold or intended for sale for use in motor vehicles or engines and is commonly or commercially known or sold as gasoline.
1416. "Glycol dehydrator": A glycol dehydrator consists of equipment which uses a type of glycol to dehydrate natural gas. The glycol contacts and absorbs the water vapor in the gas and becomes "rich" glycol. This glycol is then regenerated by distilling the water. The distilled or "lean" glycol is then recycled back to the absorber.
1417. "Glycol regenerator vent": The glycol regenerator vent exhausts the water vapor, aromatic hydrocarbons and other ~~reactive organic compounds~~ ROCs from the rich glycol distillation unit. This unit is called a regenerator because it regenerates the

rich glycol into lean glycol so that the glycol can be used in the absorber to dehydrate the gas.

1518. "Leak":

- ~~a. On or before December 31, 2022, a leak exists when a reading in excess of 10,000 ppm, as methane, above background, is obtained using an appropriate portable hydrocarbon analyzer and when sampling is performed according to the procedures specified in EPA Method 21 Appendix A 40 CFR, or~~
- ~~b. On or before December 31, 2022, a leak exists when the dripping of liquid containing reactive organic compounds at a rate of more than three (3) drops per minute is observed, or~~
- ~~c. On or after January 1, 2023, any~~Any major gas leak, minor gas leak, major liquid leak, or minor liquid leak.

A "leak" is not a gaseous emission from pressure relief devices on tanks or ROC delivery vessels when the process pressure exceeds the limit specified for the device. Any equipment with a ~~minor gas~~ leak identified by the ~~source facility or~~ Ventura County Air Pollution Control District (District) personnel that is not regulated by Rule 74.10 shall be tagged and repaired within ~~105~~ days. If the repair is not completed within the ~~105~~-day period, a ~~breakdown~~ notification shall be submitted to the District.

1619. "Lean glycol": Lean glycol is glycol that has been regenerated in a distillation unit and has a low moisture content.

1720. "Loading Facility": Any aggregation or combination of organic liquid loading equipment which is located so that all the organic liquid loading outlets for such aggregation or combination of loading equipment can be encompassed within any circle of 300 feet in diameter.

1821. "Major Gas Leak": The detection of total gaseous hydrocarbons equal to or ~~in excess greater than~~ 10,000 ppmv as methane above background measured using EPA Method 21, Determination of 10,000 ppm as methane above background measured using EPA Method 21. Volatile Organic Compound Leaks.

A major gas leak from a pressure relief valve means the detection of a continuous reading of total gaseous organic compounds equal to or ~~in excess of 10 greater than~~ 10,000 ppmv, as methane above background measured using EPA Method 21, Determination of Volatile Organic Compound Leaks, unless the process pressure exceeds the limit setting specified for the device. If the process pressure exceeds the limit setting of the pressure relief valve, then this emission to the atmosphere is considered to be a "pressure release."

- ~~19~~22. "Major Liquid Leak": A visible mist or a continuous flow of liquid that is not seal oil or other similar lubricant. Sampling of process fluids into containers shall not be considered a leak.
- ~~20~~23. "Minor Gas Leak": The detection of total gaseous hydrocarbons equal to or ~~in excess of~~ greater than 500 ppmv but less than 10,000 ppmv as methane above background measured using EPA Method 21, Determination of Volatile Organic Compound Leaks.
- ~~21~~24. "Minor Liquid Leak": Any liquid leak, except seal oil or other similar lubricant, that is not a major leak and drips liquid at a rate of more than three drops per minute. Sampling of process fluids into containers shall not be considered a leak.
- ~~22~~25. "Modified Reid vapor pressure": The Reid vapor pressure measured at tank storage temperatures using Test Method for Vapor Pressure for Petroleum Products, ASTM D 323-82.
- ~~23~~26. "Natural gas": ~~Any produced~~ A naturally occurring mixture or marketed process derivative of hydrocarbon and non-hydrocarbon gases. Its constituents include the greenhouse gases methane and carbon dioxide, as well as heavier hydrocarbons. Natural gas may be field quality (which contains the following: methane, varies widely) or pipeline quality.
27. "Natural Gas Processing Facility": A facility engaged in the separation of natural gas liquids from field gas and/or fractionation of the liquids into natural gas products, such as ethane, propane, butane, or other petroleum-related gases and natural gasoline. Excluded from the definition are compressor stations, dehydration units, sweetening units, field treatment, underground storage facilities, liquefied natural gas units unless these facilities are located at a natural gas processing plant.
- ~~24~~28. "Optical Gas Imaging (OGI)": An instrument that makes emissions visible that may otherwise be invisible to the naked eye.
29. "Petroleum material": Liquids resulting from petroleum production operations that contain more than 5 milligrams per liter of ~~reactive organic compound (ROC)~~ ROC material. This definition does not include refined petroleum liquids such as lube oils or gasoline.
- ~~25~~30. "Petroleum production permit unit": Any aggregation of equipment used exclusively for the production, gathering and separation of crude oil and natural gas which is included on a single Permit to Operate issued by the Air Pollution Control Officer or is defined as a single stationary source.
- ~~26~~31. "Pit": A receptacle, formed primarily of earthen materials, although it may be lined with artificial materials, used to receive intermittent flows of petroleum

material or crude oil. Neither a sample box of less than two (2) square feet in horizontal surface area nor a containment berm shall be considered a pit.

- ~~2732.~~ "Pond": A receptacle, formed primarily of earthen materials, although it may be lined with artificial materials, used to contain produced water from petroleum production processes for disposal or re-use. Ponds are not used for oil/water separation or evaporation.
- ~~2833.~~ "Produced water": Water ~~associated with the~~recovered from an underground reservoir as a result of crude oil, condensate, or natural gas production, gathering, separation and processing of crude oil, which may be recycled, disposed, or re-injected into an underground reservoir.
- ~~2934.~~ "Reactive organic compound (ROC) liquid": Any reactive organic compound as defined in Rule 2 of these Rules.
- ~~3035.~~ "Rich glycol": Rich glycol is glycol which has absorbed water in the absorber or contactor of a dehydration unit prior to being distilled in the regenerator.
- ~~3136.~~ "ROC Liquid Delivery Vessel": A truck, trailer or railroad car with a storage container carrying ROC liquid or ROC liquid vapors used to transport ROC liquids including petroleum products. A vacuum truck that transfers less than 7,000 gallons of ROC liquid per load using a vacuum created by a pump permanently installed on the truck tractor or trailer shall not be considered to be an ROC delivery vessel.
- ~~3237.~~ "Second and third stage sump": A sump that receives a stream from one or more previous stage separation processes.
- ~~33.~~ ~~"Separator": A device, unit, or equipment used to separate a gas, liquid, or solid stream from a multicomponent stream.~~
- ~~3438.~~ "Separator": Any tank or pressure separator used for the primary purpose of separating crude oil, produced water, and natural gas or for separating natural gas, condensate, and produced water. In crude oil production a separator may be referred to as a Wash Tank or as a three-phase separator. In natural gas production a separator may be referred to as a heater/separator.
- ~~39.~~ "Smokeless flare": A smokeless flare is one which does not have any visible smoke.
- ~~3540.~~ "Storage tank": Any storage container, reservoir or tank used for the storage of organic liquids
- ~~3641.~~ "Submerged fill pipe": Any fill pipe or discharge nozzle which meets any of the following conditions:

- a. The discharge opening is entirely submerged when the liquid level is six (6) inches above the bottom of the container.
- b. When applied to a container which is loaded from the side, the discharge opening is entirely submerged when the liquid level is 18 inches above the bottom of the container.
- c. When applied to a container which is loaded from the bottom, the discharge opening is entirely submerged when the liquid level is six (6) inches above the bottom of the container.

3742. "Sump": A ~~receptacle, formed primarily of earthen materials, although it may be lined with artificial materials, or unlined surface impoundment or excavated depression in continuous use for separating oil, water, sand or other material in petroleum production~~ the ground which, during normal operations, is used to separate, store, or hold emulsion, crude oil, condensate, or produced water.

3843. "Tank": A container, constructed primarily of nonearthen materials, used for the purpose of storing or holding petroleum material, or for the purpose of separating water and/or gas from petroleum material.

3944. "Tank battery": Any tank, or any aggregation of tanks. An aggregation of tanks will be considered a tank battery only if the tanks are located so that no one tank is more than 150 feet from any other tank, edge to edge.

4045. "Vapor loss control efficiency": A comparison of controlled emissions to those emissions which would occur from a geometrically similar fixed or cone roof tank in the same product service without a vapor control system. Base line emissions shall be calculated by using the criteria outlined in EPA document AP-42.

4146. "Vapor recovery system": Any ~~reactive organic compound~~ ROC vapor control system which is designed to prevent the release or venting of ~~reactive organic compound~~ ROC gases to the atmosphere under normal operating conditions.

4247. "Wash tank": Any tank used for the purpose of the primary separation of crude oil from petroleum material.

4348. "Wastewater separator": Any mechanical device used to separate crude oil and other material from produced water in petroleum production operations.

4449. "Well" means a boring in the earth for the purpose of the following:

- a. Exploring for or producing oil or gas.
- b. Injecting fluids or gas for stimulating oil or gas recovery.
- c. Re-pressuring or pressure maintenance of oil or gas reservoirs.

d. Disposing of oil field waste gas or liquids.

e. Injection or withdraw of gas from an underground storage facility.

For the purpose of this rule, wells do not include active observation wells as defined in Public Resources Code Section 3008 subdivision (c), or wells that have been properly abandoned in accordance with Public Resources Code Section 3208.

50. "Well cellar": A lined or unlined area around one or more oil wells, allowing access to the wellhead components for servicing and/or installation of blowout prevention equipment.