(Adopted March 5, 2004)

RULE 1148.1. OIL AND GAS PRODUCTION WELLS

(a) Purpose

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) from the wellheads, the well cellars and the handling of produced gas at oil and gas production facilities.

(b) Applicability

This rule applies to onshore oil producing wells, well cellars and produced gas handling activities at onshore facilities where petroleum and processed gas are produced, gathered, separated, processed and stored. Natural gas distribution, transmission and associated storage operations are not subject to the requirements of this rule.

(c) Definitions

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

(1) ABANDONED WELL is a well that has been certified by the California Department of Conservation, Division of Oil, Gas and Geothermal Resources as permanently closed and non-operational.

(2) 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). Such above-described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility.

(3) OIL PRODUCING WELL is a well which produces crude oil.

(4) PRODUCED GAS is organic compounds that are both gaseous at standard temperature and pressure and are associated with the production, gathering, separation or processing of crude oil.

(5) SENSITIVE RECEPTOR is a school (kindergarten through grade 12), licensed daycare center, hospital, or convalescent home.

(6) STUFFING BOX is a packing gland, chamber or “box” used to hold packing material compressed around a moving pump rod to reduce the escape of gas or liquid.

(7) TOTAL ORGANIC COMPOUNDS (TOC) is the concentration of gaseous organic compounds determined according to the test method in paragraph (g)(1).

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

(9) WELL CELLAR is a lined or unlined containment surrounding one or more oil wells, allowing access to the wellhead components for servicing and/or installation of blowout prevention equipment.

(10) WELLHEAD is an assembly of valves mounted to the casing head of an oil well through which a well is produced. The wellhead is connected to an oil production line and in some cases to a gas casing line.

(d) Requirements

(1) The operator shall not allow a concentration of a TOC greater than 500 ppm in the well cellar.

(2) Effective July 1, 2004, the operator of an oil and gas production facility shall not allow any valve to be opened at the wellhead unless a portable container is used to catch and contain organic liquid that would otherwise drop into the well cellar or onto the ground. Such container shall be kept closed to the atmosphere when it contains organic liquid and is not in use.

(3) The operator of an oil and gas production facility shall not allow organic liquid to be stored in a well cellar. During periods of equipment maintenance, well plugging, abandonment operations, or well workover, the operator shall pump out or remove organic liquid that accumulates in the well cellar no later than two (2) days after the maintenance, drilling, well plugging, abandonment or workover activity at the well is completed. The operator may store organic liquid in a portable enclosed storage vessel provided the vessel is equipped with air pollution control equipment to reduce the TOC emissions to less than 250 ppm outlet concentration according to the test method in paragraph (g)(1), except where safety requirements established in a written company safety manual or policy deem it impractical during maintenance, plugging, abandonment, well workover or drilling operations. The operator shall conduct a TOC measurement according to the test method in paragraph (g)(1) at the time of filling, and weekly thereafter to ensure that the system achieves the emission standard of 250 ppm.

(4) The operator of an oil and gas production facility shall pump out the organic liquid accumulated in the well cellar immediately before a well is steamed or after a wellhead is steam cleaned.

(5) The operator of an oil and gas production facility shall pump out or remove organic liquid accumulated in the well cellar within five (5) calendar days, or by close of the following business day if the well cellar is located within 100 meters of a sensitive receptor when the TOC concentration in the well cellar is greater than 250 ppm as determined by the test method in paragraph (g)(1). In lieu of the method in paragraph (g)(1), an operator may measure the depth of accumulated organic liquid and pump-out the liquid when the depth exceeds two (2) inches. The organic liquid depth may be measured using a "copper coat" gauge or any other measuring instrument determined to be acceptable by the Executive Officer.

(6) Effective January 1, 2006, the operator of an oil and gas production facility shall not allow natural gas or produced gas to be vented into the atmosphere. The emissions of produced gas shall be collected and controlled using one of the following:

(A) A system handling gas for fuel, sale, or underground injection; or

(B) A device, approved by the Executive Officer, with a VOC vapor removal efficiency demonstrated to be at least 95% by weight per test method of paragraph (g)(2) or by demonstrating an outlet VOC concentration of 50 ppm according to the test method in paragraph (g)(1). If the control device uses supplemental natural gas to control VOC, it shall be equipped with a device that automatically shuts off the flow of natural gas in the event of a flame-out or pilot failure.

(7) Except as Rule 1173 applies to components of produced gas handling equipment located within 100 meters of a sensitive receptor, the operator shall repair any gaseous leaks of 250 ppm TOC or greater by the close of the business day following the leak discovery or take actions to prevent the release of TOC emissions to the atmosphere until repairs have been completed.

(8) Effective March 5, 2004, unless approved in writing by the Executive Officer, CARB, and USEPA as having no significant emissions impacts, no person shall:

(A) Remove or otherwise render ineffective a well cellar at an oil and gas production well except for purposes of abandonment to be certified by the California Department of Conservation, Division of Oil, Gas and Geothermal Resources; or

(B) Drill a new oil and gas production well unless a well cellar is installed for containment of fluids.

(e) Operator Inspection Requirements

(1) Effective July 1, 2004, the operator shall visually inspect:

(A) Any stuffing box not located in or above a well cellar daily;

(B) Any stuffing box located in or above a well cellar weekly; or

(C) Any stuffing box or produced gas handling and control equipment located 100 meters or less from a sensitive receptor daily. Receptor distance shall be determined as the distance measured from the stuffing box or produced gas handling and control equipment to the property line of the nearest sensitive receptor.

(2) Notwithstanding the requirements of subparagraphs (e)(1)(A) and (e)(1)(B), the operator shall perform monthly visual inspections of any stuffing box fitted with a stuffing box adapter, a closed crude oil collection container, and a well shut off switch that will shut down the well when the container is full.

(3) Effective, July 1, 2004, except for well cellars listed under subdivision (h), the operator shall quarterly, perform an inspection of all well cellars according to the test method in paragraph (g)(1).

(4) Within two (2) days of discovery of organic liquid leakage observed from the inspections pursuant to paragraph (e)(1)(A) or (e)(1)(B) and within 8 hours pursuant to paragraph (e)(1)(C), the operator shall conduct an inspection of the stuffing box and well cellar according to the test method in paragraph (g)(1) or measure the organic liquid depth using a “copper coat” gauge or any other measuring instrument determined to be acceptable by the Executive Officer.

(f) Recordkeeping Requirements

(1) The operator shall maintain all records that document the purchase and installation of the stuffing box adapter(s) to demonstrate compliance with

paragraph (e)(2) at the facility or facility headquarters and such records shall be made available to the Executive Officer upon request.

(2) The operator shall maintain all records of inspection, repair and pump-outs required by this rule in a form approved by the Executive Officer at the facility or facility headquarters for a period of three years or a period of five years for a Title V facility and such records shall be made available to the Executive Officer upon request.

(3) The operator shall maintain production records and other applicable information and documents sufficient to demonstrate eligibility for any exemption claimed pursuant to subdivision (h) and make them available to the Executive Officer upon request.

(g) Test Methods

(1) Measurement of TOC or VOC concentrations shall be conducted according to the United States Environmental Protection Agency (USEPA) Reference Method 21 using an appropriate analyzer calibrated with methane. The analyzer shall be calibrated before inspection each day prior to use. For the purpose of demonstrating compliance with the TOC concentration requirements in paragraphs (d)(1) and (d)(5), measurement of the TOC concentrations shall be conducted at a distance of no more than three (3) inches above the organic liquid surface in the well cellar.

(2) Determination of Efficiency of Emission Control Systems

The control equipment efficiency of an emission control system, on a mass emissions basis, and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by USEPA Test Methods 25, 25A, or 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. US EPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

(3) Laboratory Approval

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.

(4) Equivalent Test Methods

A person may use other methods to determine compliance with this rule provided it is demonstrated to be equivalent and approved in writing by the Executive Officers of the District, the California Air Resources Board, and the Regional Administrator of the USEPA, or their designees.

(h) Exemptions

(1) This rule shall not apply to well cellars associated exclusively with:

(A) Oil and gas production wells that have been idle and out of operation for more than six months with no liquid leaks or accumulation of crude oil in the well cellar as indicated by production records. All provisions of this rule shall apply upon commencement of operation of the idle well.

(B) Wells that have been certified as an abandoned well by the California Department of Conservation, Division of Oil, Gas and Geothermal Resources.

(C) Water, gas or steam injection wells.

(2) The provisions of paragraphs (d)(5), (d)(6) and (d)(7) shall not apply to any well or produced gas handling system undergoing maintenance and repair, well drilling and well abandonment operations, provided the maintenance and repair, drilling or abandonment operation is conducted in a manner that minimizes emissions to the atmosphere, and is consistent with the written company safety manual or policy.

(3) The provisions of paragraph (d)(1), (d)(2) and (d)(5) shall not apply to any well cellar used in emergencies at oil production facilities, if clean-up procedures are implemented within 24 hours after each emergency occurrence and completed within ten (10) calendar days.

(4) The provisions of paragraph (d)(6) of this rule shall not apply to oil and gas production wells in operation as of March 5, 2004, that produce no more than 1 barrel per day of oil or 200 standard cubic feet per day of produced gas per facility, provided that such production wells are not located within 100 meters of a sensitive receptor, and provided the production can be demonstrated from annual production records.

Demonstration of produced gas production shall be based on metered measurement of the gas.