

RULE 1110.2

Emissions from Stationary, Non-Road and Portable Internal Combustion Engines

(A) General

(1) Purpose

- (a) To limit emissions of Oxides of Nitrogen (NO_x), Volatile Organic Compounds (VOCs) and Carbon Monoxide (CO) from Internal Combustion Engines.

(2) Applicability

- (a) This rule is applicable to all Internal Combustion Engine(s) over 50 bhp.

(B) Definitions

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

- (1) “Air Pollution Control Officer (APCO)” – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.
- (2) “District” – The Antelope Valley Air Quality Management District that includes the geographical area described in District Rule 103.
- (3) “Emergency Engine” – Any Engine which operates as a temporary replacement for primary mechanical or electrical power during periods of fuel or energy shortage or while the primary power supply is under repair.
- (4) “Exempt Compounds” – Those compounds listed as excluded from the definition of volatile organic compounds in 40 CFR 51.100(s).
- (5) “Facility” – Any building, structure, emissions unit(s) or installation which emits or may emit a Regulated Air Pollutant and which is:
 - (a) Located on one or more contiguous or adjacent properties within the District; and
 - (b) Under the control of the same person (or by persons under common control); and

- (c) Belongs to the same industrial grouping, as determined by being within the same two-digit Standard Industrial Classification Code (SICC).
 - (d) For the purpose of this regulation, such above-described grouping, remotely located but connected only by land carrying a pipeline, shall not be considered one Facility.
- (6) “Internal Combustion Engine (Engine)” – Any spark- or compression-ignited Engine, not including Engines used for self-propulsion.
- (7) “Location” – Any single site at a building, structure, Facility, or installation. For Engines that perform maintenance on equipment at its permanent or ordinary Location, each maintenance site shall be a separate Location.
- (8) “Non-Road Engine” – Any Engine defined under 40 CFR Part 89, which meets the specified emissions limits therein, and that does not remain or will not remain at a Location for more than 12 consecutive months, or a shorter period of time where such period is representative of normal annual source operation at a stationary source that resides at a fixed Location for more than 12 months (e.g., seasonal source or operation such as canning facilities or equipment used to manufacture snow) and meets any one of the following:
- (a) Is used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as an off highway mobile crane); or
 - (b) Is used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawn mowers and string trimmers); or
 - (c) By itself, or in or on a piece of equipment, is Portable or transportable. Portable means designed to be and capable of being carried or moved from one Location to another. Transportable includes, but is not limited to, wheels, skids, carrying handles, dolly, trailer, platform or mounting.
- (9) “Portable Engine” – Any Engine designed and capable of being carried or moved from one Location to another. Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

An Engine is not Portable if:

- (a) It is attached to a foundation at a single Location; or
- (b) It remains or will remain at a single Location for more than 12 consecutive months; or
- (c) It is a replacement Engine for a specific application which remains or is intended to remain for 12 consecutive months; or

- (d) It is a seasonal or other source that normally operates less than 12 consecutive months as its normal operational year.

Any period during which the Engine is not operated and is maintained at a designated storage facility shall be excluded from the residency time determination.

- (10) “Rated Brake Horsepower (bhp)” – The rating specified by the manufacturer, without regard to any derating, and listed on the Engine nameplate.
- (11) “Regulated Air Pollutant” – Any of the following air pollutants:
 - (a) Any air pollutant, and its precursors, for which an ambient air quality standard has been promulgated.
 - (b) Any air pollutant that is subject to a standard under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or the regulations promulgated thereunder.
 - (c) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or the regulations promulgated thereunder.
 - (d) Any air pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §112) or the regulations promulgated thereunder.
- (12) “Stationary Engine” – Any Engine which is either attached to a foundation or if not so attached, does not meet the definition of a Portable or Non-Road Engine and is not a motor vehicle as defined in Section 415 of the California Vehicle Code.
- (13) “Volatile Organic Compound (VOC)” – Any volatile compound of carbon, excluding Exempt Compounds.

(C) Requirements

(1) General Emissions Limits

(a) The owner or operator of any Stationary Engine subject to this rule shall:

- (i) Replace any such Engine with an electric motor; or
- (ii) Remove the Engine from service, permanently; or
- (iii) Ensure that the emissions from such Engine do not exceed the emission limits of TABLE I.

TABLE I GENERAL ENGINE EMISSIONS LIMITS		
NO_x	VOC	CO
36 ppm*	250 ppm*	2000 ppm*

* Corrected to 15% oxygen on a dry gas basis and averaged over a 15-minute interval.

(2) Portable Engine Emission Limit

(a) The owner or operator of any Portable Engine subject to this rule shall:

- (i) Register the Engine with the CARB Statewide Portable Equipment Registration Program, successfully obtaining a valid certificate for the Engine; or
- (ii) Spark-Ignited Engines shall comply with the emission limits in TABLE II below:

TABLE II SPARK-IGNITION PORTABLE ENGINES COMPLIANCE LIMITS		
NO_x	VOC	CO
80 ppm*	240 ppm*	176 ppm*

* Corrected to 15% oxygen on a dry gas basis and averaged over a 15 minute interval.

- (iii) Compression-Ignited Engines shall comply with the emission limits in TABLE III below:

TABLE III PORTABLE COMPRESSION-IGNITED ENGINE LIMITS	
Rated Brake Horsepower (bhp)	Requirements
50 bhp or greater	535 ppm* NO _x or a turbocharger and aftercooler/intercooler and 4-degree injection timing retard

* Corrected to 15% oxygen on a dry gas basis and averaged over a 15 minute interval.

(D) Monitoring

- (1) For Stationary Engines of 1000 bhp and greater, subject to the provisions of section (C) of this rule and operating more than two million bhp-hr per calendar year:
 - (a) Continuous Emission Monitoring System (CEMS) Requirement
 - (i) The owner/operator shall install, operate and maintain a NO_x CEMS as approved by the APCO to demonstrate compliance within the emission limits of this rule.
 - (ii) This system shall include equipment that measures and records exhaust gas NO_x concentrations, corrected to 15% oxygen on a dry basis.
 - (iii) CEMS shall meet the requirements described in 40 CFR Part 60, particularly those in Appendix B, Spec. 2 and Appendix F.
 - (iv) CEMS reporting to the APCO shall be as prescribed in 40 CFR Part 60.7(c), 60.7(d) and 60.13, with NO_x reported after corrections to 15% oxygen on a dry basis.
 - (b) Alternative Monitoring Device or Equipment, in lieu of CEMS
 - (i) The owner/operator of an Engine that is required to install a CEMS may request in writing to the APCO, California Air Resources Board (CARB) and USEPA, approval of an alternative monitoring device (or system components) to demonstrate compliance with the limits of this rule.
 - (ii) The applicant shall demonstrate to the APCO, CARB and USEPA, that the proposed monitoring device is, at a minimum, comparable in relative accuracy, precision, reliability and timeliness to a CEMS for that Engine, on a case-by-case basis; or
 - (iii) The APCO, CARB and USEPA, may approve, on a case-by-case basis, criteria for equipment which is equivalent to the criteria specified in 40 CFR 75, Subpart E.
 - (iv) Such alternative monitoring device, equipment or procedure must be approved in writing by the APCO and obtain a valid permit to operate with the District. The approval shall include a monitoring plan that includes, at a minimum, equipment specifications, monitoring, record keeping, compliance testing and reporting requirements.

- (2) For Stationary Engines of less than 1,000 bhp and Stationary Engines of greater than 1,000 bhp operating less than two million bhp-hr per calendar year which are subject to the provisions of section (C):
- (a) Quarterly Screening Analysis
- (i) The owner/operator shall inspect each Engine each calendar quarter in which compliance testing is not required pursuant to subsection (F)(1) of this rule with a Portable NO_x analyzer to determine compliance with the emissions limits contained in section (C) of this rule.
 - (ii) An instrument reading in excess of the emission limit contained in section (C) of this rule shall not be considered a violation of this rule, so long as the problem is corrected and a follow-up inspection is conducted within 15 days of the initial inspection.
 - (iii) Instrument readings, a determination of whether or not the Engine is in compliance, a description of corrective action(s) taken, and the initials of the person recording the reading shall be recorded on an inspection log and kept in accordance with the provisions of section (G) of this rule.
- (b) Alternate Screening Analysis
- (i) The owner/operator of an Engine that is required to be inspected pursuant to subsection (D)(2)(a) above, may request in writing to the APCO, for approval of an alternate screening analysis to demonstrate compliance with the emissions limits contained in section (C) of this rule.
 - (ii) The application for an alternate screening analysis shall include:
 - a. A listing of each Engine, its permit number and Location which is to be subject to the alternate screening analysis.
 - b. A specific emission inspection procedure to assure that the Engine is operated in compliance with the provisions of this rule. Inspections shall be conducted every quarter or after every 2,000 hours of Engine operations whichever is less, but in no case less than quarterly.
 - c. A description and schedule of preventative maintenance procedures or practices which will be used to maintain the Engine(s) in compliance with the provisions of this rule.
- (3) Any monitoring system shall have data gathering and retrieval capability approved by the APCO. Data shall be maintained for at least five (5) years and made available for inspection by the APCO.

(E) Equipment Requirements

- (1) All Engines subject to this rule shall:
 - (a) Have an operational, non-resettable totalizing time (in hours) meter, to determine the Engines elapsed operating time.
 - (b) Have a non-resettable fuel meter or acceptable alternative as approved by the APCO, CARB and USEPA, to determine fuel consumption.

(F) Compliance Test Requirements and Methods

- (1) The owner/operator of any engine subject to this rule shall:
 - (a) Provide source test information regarding the exhaust gas; specifically for NO_x, VOC reported as methane and CO concentrations (concentrations in ppm by volume, corrected to 15% oxygen on dry basis) according to the following schedule:
 - (i) Once each 8,760 hours of operation or once every 24 months whichever period is shorter.
 - (ii) Compliance testing shall be conducted under conditions that are typical of normal Engine load and duty cycle.
 - (iii) The compliance test shall be conducted and the report received at the District not less than 90 days prior to the Engines permit renewal date.
 - (b) Conduct testing to verify compliance in accordance with the following test methods:
 - (i) NO_x emissions subject to the provisions of this rule shall be determined by the procedure detailed in EPA Test Method 7E.
 - (ii) CO emissions by EPA Test Method 10.
 - (iii) VOC emissions by EPA Test Method 25, 25A or 25B.
 - (iv) Other test methods determined to be equivalent after review by the staffs of the District, CARB, and the USEPA, and approved in writing by the APCO, may also be used to determine compliance with provisions of this rule.

(G) Record Keeping and Reporting

- (1) The owner/operator of any Engine shall maintain an Engine operating log on a monthly basis that includes:
 - (a) The total hours of operation for each day of operation; and
 - (b) Type and quantity of fuel used (liquid/gas); and

- (c) The cumulative hours of operation since the last source test required in subsection (F)(1); and
 - (d) The purpose or reason for operating the Engine for each day of operation.
 - (e) The results of any screening analysis or alternative screening analysis if required pursuant to subsection (D)(2).
- (2) Required records and data shall be available for inspection any time, remain at the Facility for five (5) years, and upon request, be submitted to the APCO at the end of each calendar year in a manner and form approved by the APCO.

(H) Exemptions

- (1) The provisions of sections (C), (D), (E), (F), and (G) shall not apply to:
- (a) Engines operated for the purpose of performance verification and testing.
 - (b) Auxiliary Engines used to power other Engines or gas turbines during start-ups.
 - (c) Portable Engines that are registered under the Statewide Portable Equipment Registration Program pursuant to Title 13, Article 5 of the CCR.
- (2) The provisions of sections (C), (D), and (F) shall not apply to:
- (a) The operation of any Engine during the existence of any officially declared disaster or state of emergency.
 - (b) Emergency Engines and Engines used for fire-fighting and flood control.
 - (c) Non-Road Engines.
 - (d) Laboratory Engines used in research and testing purposes.
 - (e) Supplemental Engines which operate for the manufacture of snow which have a Facility limit to operate 1200 hours or less during seasonal operations (November 1 through April 15).

See SIP Table at www.avaqmd.ca.gov