



Air Pollutant Emission Notice (APEN) and Permitting Requirements for Internal Combustion Engines in Colorado

Stationary internal combustion engines, emergency power generators, and non-road engines release air pollutants, such as Nitrogen Oxides (NO_x), Particulate Matter (PM), Carbon Monoxide (CO), Non-methane Hydrocarbons (NMHC), and Sulfur Dioxides (SO_x), and Hazardous Air Pollutants (HAPS). These pollutants, also known as criteria and non-criteria pollutants are regulated by the Air Pollution Control Division (Division) at the Colorado Department of Public Health and Environment (CDPHE). In Colorado, owners or operators of these engines may be required to submit an Air Pollutant Emissions Notice (APEN), and obtain an air permit from the Division. Air quality regulations for these engines generally include permitting, emissions control, monitoring, recordkeeping and reporting requirements. This guidance document identifies those air quality regulations that apply to engines (stationary and portable) in Colorado by providing key definitions and identifying general reporting and permitting requirements as well as the more specific federal New Source Performance Standards (NSPS) specific to engines.

General Air Emissions Reporting and Permitting Requirements

The Division, under Regulation No. 3, requires that any process or activity that emits criteria and non- criteria pollutants at or above specific limits be reported to the Division – see Table 1 (below). Regulation No. 3, Part A includes regulations specific to reporting of air emissions for inventory purposes, and Part B includes requirements for obtaining pre-construction permits. Parts C and D are specific to permitting of very large sources of air pollutants. New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) may also apply to internal combustion engines. Regulation No. 6 sets standards of performance for specific new stationary sources in Colorado. Regulation No. 8 sets forth specific work practices, emission control requirements and standards for hazardous air pollutants (HAP).

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| • Regulation No. 3, Part A | APEN Requirements |
| • Regulation No. 3, Part B | Construction Permits |
| • Regulation No. 3, Part C | Title V Operating Permits |
| • Regulation No. 3, Part D | New Source Review Permits |
| • Regulation No. 6 | Federal NSPS and Colorado-only new source requirements |
| • Regulation No. 8 | Federal NESHAP and Colorado-only HAP requirements |

Air Pollutant Emission Notices must be filed for all engines that emit pollutants that meet or exceed the APEN and/or Construction Permit reporting thresholds in Table 1 (below). A source could be “APEN Exempt” or “Permit Exempt” as described below.

- Sources that emit pollutants below APEN reporting thresholds are classified as “APEN Exempt.” APEN exempt sources are not required to submit an APEN to the Division; however, a source may elect to submit an APEN to receive an official APEN Exemption letter from the Division, if applicable.
- Sources that meet or exceed the APEN reporting thresholds but not the construction permitting thresholds are classified as “Permit Exempt.” Permit Exempt sources must still submit an APEN to the Division.

NOTE: Engines that are subject to an NSPS or MACT adopted by the Air Quality Control Commission (AQCC) under Colorado Reg. No. 6 Part A or Reg. No 8 Part E must submit an APEN and obtain an air permit regardless of pollutant emissions or any exemptions in Reg. No. 3 Parts A or B.

**Table 1.
APEN AND PERMIT REPORTING THRESHOLDS FOR
ATTAINMENT AND NON-ATTAINMENT AREAS**

Criteria Air Pollutants	APEN		Construction Permit	
	Attainment* (tons per year)	Non-attainment* (tons per year)	Attainment* (tons per year)	Non-attainment* (tons per year)
Volatile organic compounds	2	1	5	2
PM-10 and PM-2.5	2	1	5	1
Total suspended particulates	2	1	10	5
Carbon monoxide	2	1	10	5
Sulfur dioxide	2	1	10	5
Nitrogen oxides	2	1	10	5
Lead	100 pounds per year	100 pounds per year	200 pounds per year	200 pounds per year
Other criteria pollutants ¹	2	1	5	2

*To see the current Attainment and Non-attainment areas of Colorado go to: www.cdphe.state.co.us/ap/ozone.html

➤ Submitting an Air Pollutant Emission Notice (APEN)

To report air emissions, owners or operators should submit the specialty APEN form titled, “*Reciprocating Internal Combustion Engine*,” Form #APCD-201. All APENs are downloadable through the Division’s website at: www.cdphe.state.co.us/ap/downloadforms.html. The APEN form is used to report information such as the size of the engine, fuel type, date the engine was ordered and/or manufactured, and the intended use of the engine (e.g. backup or emergency power). APENs are valid for up to five years and each APEN must be renewed at least 30 days prior to the five-year expiration date. Additionally, revised APENs must be submitted to the Division when certain changes occur. Examples of such changes include, but are not limited to: a name change, a change in ownership, reconstruction of equipment, a significant change in emissions and/or a change in the portable status of the engine.

➤ The Permit Process

The Division will use the information provided in the APEN to determine the specific terms and conditions for your permit and to determine if a construction permit or a Title V Operating Permit is required.

NOTE: The Air Pollution Control Division requires businesses to have a valid construction permit before commencing construction, as defined in Regulation No. 3, Part B, Section I.B.10.

Construction permits are issued in two phases: Initial Approval and Final Approval.

1. An **Initial Approval (IA)** permit allows a business to construct the facility and begin operation.
2. A **Final Approval (FA)** permit is issued after a business certifies that the facility is in compliance with the conditions of the Initial Approval permit. A business must certify compliance with their permit within 180 days after the commencement of operation of the equipment in the Initial Approval permit. The information required to certify compliance may include opacity observations, recordkeeping and other case-specific requirements. Information on how to self-certify compliance

with an IA permit may be found online under the Final Approval Self Certification Packet at: <http://www.cdph.state.co.us/ap/downloadforms.html>.

Oil and gas construction permits are issued in two phases also, though in a slightly different way.

1. A **Construction Permit** allows a business to construct the facility and begin operation.
2. A **Final Authorization** letter, to be attached to the previously issued Construction Permit, is issued after a business certifies that the facility is in compliance with the conditions of the Construction Permit. A business must certify compliance with their permit within 180 days after the commencement of operation of the equipment in the Construction Permit. The information required to certify compliance may include opacity observations, recordkeeping and other case-specific requirements. Information on how to self-certify compliance with an oil and gas construction permit may be found online under the Construction Permit Self-Certification Forms section at: <http://www.cdph.state.co.us/ap/oilgaspermitting.html>.

➤ **Are there any APEN exemptions for engines?**

In previous years, Regulation No. 3 listed specific exemptions from APEN reporting requirements for select engines under a certain horsepower and hours of operation. **However, these specific exemptions have been removed from Regulation No. 3** (previously found in Reg. 3 Part A, Sections II.d.1.sss. and ttt.).

As a result, owners and/or operators must now determine if their engines will emit pollutants above the APEN reporting limits as listed in Table 1. The one exception is for non-road engines. Non-road engines are not regulated under the stationary source permitting program and, therefore, owners or operators of non-road engines are not required to submit an APEN or obtain an air permit from the Division at this time. Any engine that meets the definition of a non-road engine does not fall under Regulation No. 3 Stationary Source requirements.

The definition of a non-road engine provided in Regulation No. 3 is complex. In Table 2 (below) the definition of a non-road engine is simplified and organized into what a non-road engine *is* and what it *is not*. Information provided in Table 2 can be used to determine whether an engine meets the definition of a non-road engine.

TABLE 2 DO YOU HAVE A NON-ROAD ENGINE?	
An internal combustion engine <i>is</i> a Non-road Engine if...	An internal combustion engine <i>is not</i> a Non-road Engine if...
...it is in or on a piece of equipment that is self-propelled or serves a dual purpose by propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or	...it is used to propel a motor vehicle or a vehicle used only for competition, or is subject to Title II of the Federal Clean Air Act (Mobile sources); or
...it is in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or	...it is regulated by a federal New Source Performance Standard (NSPS) ¹ ; or
...by itself, or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indications of transportability may include wheels, skids, handles, dolly, trailer or platform.	...it remains at a single location for more than 12 consecutive months or is a seasonal source that remains at a single location for at least 2 years and operates approximately 3 months (or 2,190 hours) or more each year. ²

¹NSPS Subpart IIII will be effective September 11, 2006 and affects stationary compression ignition internal combustion engines that commenced construction after July 11, 2005. On January 18, 2008 EPA promulgated NSPS Subpart JJJJ for stationary spark ignition internal combustion engines. For more information, visit www.epaaccess.gov/cfr/index.html

²If another seasonal engine that performs the same function replaces the original engine, the consecutive time period is not interrupted (the consecutive month or seasonal period continues as if the engine had not been replaced).

➤ Are there any Construction Permit exemptions for engines?

Regulation No. 3 (Part B, Section II.D.1.c.) contains an exemption for construction permitting requirements for engines, **which was recently revised**. Part B now exempts engines powering portable drilling rigs, emergency generators that operate no more than 250 hours per year, and engines with manufacturer's site-rated horsepower less than 50 from the requirement to obtain a construction permit. Part B also exempts engines if no individual uncontrolled criteria pollutant emission rate exceeds five tons per year. Again, if an engine is subject to an NSPS or MACT adopted by the AQCC under Colorado regulation it will not be exempt from permitting requirements.

These exemptions do not extend to APEN reporting requirements; see the previous question for APEN reporting exemptions.

➤ NSPS and NESHAP Applicability For Select Engines

The Environmental Protection Agency (EPA) creates federal rules to limit the emissions of specific air pollutants for certain sources. These federal rules, when adopted by the Colorado Air Quality Control Commission (AQCC or Commission), are enforced by the Division. For example, New Source Performance Standards (NSPS) are stationary source standards to regulate emissions of criteria air pollutants and National Emission Standards for Hazardous Air Pollutants (NESHAPS) are standards to regulate emissions of hazardous air pollutants (HAPs). If a source is subject to an NSPS or NESHAP listed in Regulation Nos. 6 or 8, respectively, that source (equipment, activity or process) is required to submit an APEN and obtain a construction permit from the Division.

Listed below are the NSPS and NESHAP rules that may apply to stationary internal combustion engines:

- NSPS IIII- Applies to owners/operators and manufacturers of certain stationary compression ignition (CI) internal combustion engines (stationary diesel engines). This rule (published on July 11, 2006) sets new emission standards for owners and operators of stationary ICE and engine manufacturers. NSPS IIII is available online at www.epa.gov/ttn/atw/nsps/cinsps/fr11jy06.pdf A guidance document, "New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines," is available online at www.cdphe.state.co.us/ap/stationarylibrary.html
- NSPS JJJJ- Applies to new stationary spark ignition engines that are manufactured or ordered after the date the proposed rule is published in the Federal Register and engines that are manufactured after July 1, 2007 (engines greater than or equal to 500 horsepower) and after July 1, 2008 (engines less than 500 horsepower). Stationary spark ignition engines that begin modification or reconstruction after June 12, 2006 are also subject to the rule. NSPS JJJJ is available online at www.epa.gov/ttn/atw/area/fr18ja08.pdf.
- NESHAP ZZZZ- Applies to existing, new and reconstructed stationary engines (both Compression Ignition and Spark Ignition). This rule regulates Hazardous Air Pollutant (HAP) emissions from stationary Reciprocating Internal Combustion Engines (RICE) at both major and area sources of HAPs. All sizes of engines are covered and the only exemption is for existing emergency engines located at residential, institutional or commercial area sources. NESHAP ZZZZ is available online at www.epa.gov/ttn/atw/area/fr18ja08.pdf. Direct final amendments to Subpart ZZZZ are available online at www.epa.gov/ttn/atw/rice/fr09mr11.pdf

NOTE: To determine if the AQCC has adopted NSPS or NESHAP rules, see Colorado Regulation at: <http://www.cdphe.state.co.us/ap/regoverview.html>. If the State has not adopted the NSPS or the NESHAP then the authority to enforce the rules falls under the EPA, and Colorado's APEN and construction permitting requirements are not applicable.

➤ **HELP IS AVAILABLE**

Contact the Small Business Assistance Program (SBAP) at (303) 692-3148 or (303) 692-3175; or visit our website at www.cdph.state.co.us/ap/sbap/index.html.

