



Air Pollution Control Division

Small Business Assistance Program

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 may 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). New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) are federal standards that may also apply to internal combustion engines. Colorado 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 requirements | Federal NSPS and Colorado-only new source |
| • Regulation No. 8 requirements | Federal NESHAP and Colorado-only HAP |

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.
- 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 Initial Notification to the Division even if they are not required to submit an APEN.

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 the Ozone Non-attainment area map at: www.colorado.gov/pacific/cdphe/ozone-information

➤ Submitting an Air Pollutant Emission Notice (APEN)

To report air emissions, owners or operators must submit the specialty APEN form titled, “Reciprocating Internal Combustion Engine,” Form #APCD-201 for natural gas engines, or the “Reciprocating Internal Combustion Engine”, form for diesel engines. All APENs are downloadable through the Division’s website at: www.colorado.gov/pacific/cdphe/air-

[permits](#). The APEN 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: If a permit is required the Air Pollution Control Division requires the business to have a valid air permit before commencing construction, as defined in Regulation No. 3, Part A, Section I.B.11.

There are two different types of permits that can be obtained for an internal combustion engine, a Construction Permit or a General Permit. Construction permits are issued as follows:

1. Construction Permits will be issued as “Issuances” (i.e. Issuance 1, Issuance 2, etc), this allows a business to construct the facility and begin operation. A new Issuance will be written for each modification to a permit.
2. A “Final Approval to Operate” letter is issued after a business certifies that the facility is in compliance with the conditions of the Issuance 1 permit. A business must certify compliance with their permit within 180 days after the commencement of operation of the equipment in the Issuance 1 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 a permit may be found online under the Final Approval Self Certification Packet under Construction Permit Forms and APENS at:

www.colorado.gov/pacific/cdphe/air-permits

General Permits are different from Construction Permits in that once the Division receives the APEN the business can begin operation of the engine, without having to wait for a Final Approval to Operate letter. The business must be able to comply with the conditions listed under the General Permit. When the general permit is not applicable or does not meet the unique needs of a facility, an individual permit is issued through the traditional construction permit process. General Permits are issued as follows:

1. The business submits the APEN for the specific type of engine and requests a General Permit be issued (GP 02 for natural gas engines or GP 06 for diesel engines). The APEN processing fees, as well as the General Permit fee, are paid with the submittal of the APEN. The General Permit fee is listed on the APEN form itself.
2. Print or download specific General Permit from the Divisions website at:

<http://www.colorado.gov/pacific/cdphe/general-air-permits>

3. Once the Division has received the APEN the business can start operation of the equipment.
4. A General Permit approval letter is issued to the business noting the specific equipment covered under the GP.

➤ **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.gpoaccess.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 Permit exemptions for engines?

Regulation No. 3 (Part B, Section II.D.1.c.) contains categorical exemptions for construction permitting requirements for engines. Part B exempts the following stationary internal combustion engines:

- Engines powering portable drilling rigs,
- An engine that is an emergency power generator that operates no more than 250 hrs/year; or
- An engine with uncontrolled actual emissions less than 5 tons per year for each individual criteria pollutant emitted; or
- An engine with manufacturer's site-rated horsepower of less than 50

NOTE: The previous exemptions are specifically for permitting, and an APEN still may be required.

➤ 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. New Source Performance Standards (NSPS) are stationary source standards to regulate emissions of criteria air pollutants from new sources, and National Emission Standards for Hazardous Air Pollutants (NESHAPS) are standards to regulate emissions of hazardous air pollutants (HAPs) from existing and new sources. If a source is subject to an NSPS or NESHAP that the Division has adopted an *Initial Notification* shall be submitted to 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 <http://www.epa.gov/ttn/atw/icengines/> A guidance document, "New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines," is available on the divisions website under APEN and permitting guidance for Engines and Generators. Click on guidance located under A-G.
- 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 <http://www.epa.gov/ttn/atw/icengines/>

NOTE: To determine if the AQCC has adopted NSPS or NESHAP rules, see Colorado Regulation No. 6 and 8 at: www.colorado.gov/pacific/cdphe/aqcc-regs. 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.

➤ Relocating an Internal Combustion Engine into the State of Colorado

Sources relocating to Colorado are subject to the Federal New Source Performance Standard that have been adopted by the state and fall under a state-only requirement per Regulation Number 6. Regulation Number 6 states that relocation of a source from outside of the State of Colorado into the State of Colorado is considered to be a new source, subject to the requirements of Regulation Number 6, with the exception of internal combustion engines. Engines coming in from out of state must be able to demonstrate compliance with the newest standards regardless of having to obtain an air permit from the Division. See PS Memo 10-03 to determine what standards your engine would have to meet if it is being moved into the state of Colorado.

PS MEMO 10-03: www.colorado.gov/pacific/cdphe/permitting-guidance-memos

NOTE: If your engine had previously operated in Colorado, but then is relocated to another State and will eventually be brought back into Colorado, the date it first operated in Colorado will be used as the initial date of operation in Colorado. For example, if an engine first operated in Colorado in 1992 and then was relocated to Wyoming in 1999, and then brought back to Colorado in 2006, the equipment must comply with the requirements as to when it first operated in Colorado in 1992, unless the engine has been reconstructed or modified.

❖ HELP IS AVAILABLE

Contact the Small Business Assistance Program (SBAP) at (303) 692-3148 or (303) 692-3175; or visit our website at www.colorado.gov/pacific/cdphe/small-business-assistance-program-sbap