

Gas Compressor Association

Summaries of Emissions Requirements

For

Natural Gas Fired Reciprocating Engines

Revision: 6
August 19, 2011

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The purpose of this guide is to help you gain a broad awareness of emissions regulations. Individuals should consult appropriate federal, state and local agencies and regulations for definitive information.

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| [State of New York \(add\)](#)

EPA NSPS JJJJ (New Source Performance Standards)

Effective March 18, 2008

See:

[40 CFR Part 60 Subpart JJJJ](#)

NSPS Final Emissions Levels:

-Engines with greater than 25 horsepower and less than 100 horsepower manufactured after July 1, 2008 must meet 2.8 g/bhp-hr NO_x and HC and 4.8 g/bhp-hr CO.

TABLE 3.—NO_x, HC, AND CO EMISSION STANDARDS IN g/KW-HR (g/HP-HR) FOR OWNERS/OPERATORS OF STATIONARY NON-EMERGENCY SI NATURAL GAS ENGINES 19<KW<75 (25<HP<100) AND LEAN BURN LPG ENGINES 19<KW<75 (25<HP<100)

Maximum engine power	Manufacture date	Emission requirement in g/KW-hr (g/HP-hr) ^{a, b}	
		HC+NO _x	CO
25<HP<100 ^c	July 1, 2008	3.8 (2.8)	6.5 (4.8)
	July 1, 2008 (severe duty)	3.8 (2.8)	200.0 (149.2)

- Engines with greater than or equal to 100 horsepower and less than or equal to 500 horsepower manufactured on or after July 1, 2008 must meet 2 g/bhp-hr NO_x, 4 g/bhp-hr CO, and 1.0 g/hp-hr VOC. Engines manufactured on or after January 1, 2011 must meet 1 g/bhp-hr NO_x, 2 g/bhp-hr CO, and 0.7 g/hp-hr VOC.
- Lean burn engines with greater than or equal to 500 horsepower and less than 1,350 horsepower manufactured on or after January 1, 2008 must meet 2 g/bhp-hr NO_x, 4 g/bhp-hr CO, and 1.0 g/hp-hr VOC. Engines manufactured on or after July 1, 2010 must meet 1 g/bhp-hr NO_x, 2 g/bhp-hr CO, and 0.7 g/hp-hr VOC.
- Engines greater than or equal to 500 horsepower, except those lean burns mentioned above, manufactured on or after July 1, 2007 must meet 2 g/bhp-hr NO_x, 4 g/bhp-hr CO, and 1.0 g/hp-hr VOC. Engines manufactured on or after July 1, 2010 must meet 1 g/bhp-hr NO_x, 2 g/bhp-hr CO, and 0.7 g/hp-hr VOC.

TABLE 4.—NO_x, CO, AND VOC EMISSION STANDARDS FOR STATIONARY SI ENGINES ≥100 HP (EXCEPT GASOLINE AND RICH BURN LPG), STATIONARY SI LANDFILL/DIGESTER GAS ENGINES, AND STATIONARY EMERGENCY ENGINES >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC	NO _x	CO	VOC
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG.	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG.	500≥HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≥HP<1,350).	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≥HP<1,350).	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
		7/1/2007	3.0	5.0	1.0	220	610	80
Landfill/Digester Gas lean burn	500≥HP<1,350	7/1/2010	2.0	5.0	1.0	150	610	80
		1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25>HP<130	1/1/2009	^b 10	387	N/A	N/A	N/A	N/A
		HP≥130	2.0	4.0	1.0	160	540	86

^a Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

^b The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x+HC.

Existing equipment

- A stationary engine that is overhauled as part of a maintenance program is not considered a modification if there is no increase in emissions.
- Engines greater than or equal to 100 horsepower and less than 500 horsepower manufactured prior to July 1, 2008, that are modified or reconstructed after June 12, 2006, are required to meet 3.0 g/bhp-hr NO_x, 4.0 g/bhp-hr CO, and 1.0 g/bhp-hr VOC.
- Engines greater than or equal to 500 horsepower manufactured prior to July 1, 2007, (or January 1, 2008 for lean burn engines greater than or equal to 500 horsepower and less than 1,350 horsepower), that are modified after June 12, 2006, are required to meet 3.0 g/bhp-hr NO_x, 4.0 g/bhp-hr CO, and 1.0 g/bhp-hr VOC.

Testing and recordkeeping

- Owners and operators must keep records of testing and maintenance
- Certified engines can demonstrate compliance if maintained and operated according to manufacture requirements and do not have to conduct testing.
- Certified engine not operated according to manufacture requirements will be considered non-certified.
- Certified engines less than 100 HP are exempt from testing regardless of how they are operated.
- Certified engines operating in a non-certified manner greater than or equal to 100 HP and less than 500 HP must conduct an initial performance test within the first year. Engines greater than 500 HP must conduct an initial test within the 60 days and then every 8760 hrs or 3 years whichever comes first.
- Non-certified engines greater than or equal to 25 HP and less than or equal to 500 HP must conduct an initial performance test within 60 days of achieving maximum production rate.
- Non-certified engines greater than 500 HP must conduct an initial test within 60 days and then every 8760 hrs or 3 years whichever comes first.
- Non-certified engines less than 100 HP do not have to test for VOCs.

EPA NSPS 0000 (New Source Performance Standards)

Effective October 15, 2012

See:

[40 CFR Part 60 Subpart OOOO](#)

The rule affects Oil and Gas sites that have commenced construction, modified, or reconstructed after Aug 23, 2011

- Work practice standards for compressors
- Pneumatic device specifications (level controllers)
- Storage Tanks, Dehys, SRUs, LDAR (Leak Detection and Repair), Green Completions during Fracking

Final rule pre-publication 4/18/12

- Effective 60 days after publication – **10/15/12**

Transmission & Storage only includes storage tanks

Modification not redefined for NSPS OOOO, refers to Subpart A

Refractured wells ARE affected but...

Relocated compressors are NOT

- **NSPS - New, reconstructed, or modified equipment will be subject:**
 - Compressors
 - Pneumatic devices
 - Hydraulically fractured gas wells
 - Storage vessels
 - Gas processing plants
 - Sulfur recovery units

Reciprocating Compressors

- Only newly constructed compressors = affected facilities
- Replacement of Compressor Rod Packing 26,000 hourly alternative
 - Allows changing packing every 36 months, no hourly records
 - Wellhead Compressors are not affected facilities

Pneumatic Controllers

- Definition of Affected Facilities only Continuous Bleed devices
- If using affected facilities, must be tagged with manufacturer info and installation date (mm/yy)
- Low bleed allowed at production facilities
- Air Actuation required at gas plants

Compliance Date – 10/15/12 (or upon startup) for gas plants, by 10/15/13 otherwise

Initial & Annual compliance reporting, notification prior to “commencing construction”

EPA NESHAP (National Emissions Standards for Hazardous Air Pollutants)

Effective March 18, 2008
Changes Effective April 1, 2013

See:

[40 CFR Part 63 Subpart ZZZZ](#)

Note: Previously NESHAP ZZZZ only covered engines that were:

- 1) Existing Engines over 500 horsepower at a Major Source of HAP's (Major Source = over 10 tons per year of a single HAP or over 25 tons per year of all HAP's combined).
- 2) Engines that were new. These engines complied with ZZZZ by complying with NSPS JJJJ.

The revisions to NESHAP ZZZZ now cover a majority of the remainder of the engines that did not fall into the above two categories such as:

- Existing UNDER 500 horsepower at Major Sources of HAP's
- Existing engines at Area Sources of HAP's (Area Source = any source that is not a Major Source)

In the gas compression *rental* industry, it is much more common for a leased compressor to be located at Area Sources rather than Major Sources.

New NESHAP Final Emissions Levels For Area Sources:

- Existing Non-Remote Four Stroke Rich Burn Engines > 500 HP at Area Sources of HAP must meet 270 ppmvd CO at 15% O₂ or reduce total CO emissions by 75% or more or reduce THC by 30% or more.
- Existing Non-Remote Four Stroke Lean Burn Engines > 500 HP at Area Sources of HAP must meet 47 ppmvd CO at 15% O₂ or reduce total CO emissions by 93% or more.
- Existing non-emergency, non-black start CI engines with 300<HP≤500 at Area Sources of HAP must meet 49 ppmvd CO at 15% O₂ or reduce total CO emissions by 70% or more.
- Existing non-emergency, non-black start CI engines with HP>500 at Area Sources of HAP must meet 23 ppmvd CO at 15% O₂ or reduce total CO emissions by 70% or more.

New NESHAP Final Management Practices:

- Existing Four Stroke Engines ≤ 500 HP must inspect or change the oil & filter, spark plugs, hoses, and belts every 1440 hrs (60 days) of run time.
- Existing Two Stroke Lean Burn Engines must inspect or change the oil & filter, spark plugs, hoses, and belts every 4320 hrs (6 months) of run time.
- Existing Remote Four Stroke Engines > 500 HP must inspect or change the oil & filter, spark plugs, hoses, and belts every 2160 hrs (90 days) of run time.
- Existing CI Engines ≤ 300 HP must inspect or change the oil & filter and air cleaner every 1000 hrs (42 days) of run time and inspect or change the hoses and belts every 500 hrs (20 days) of run time.
- Periods of startup shall not exceed 30 minutes unless a waiver has been provided by the EPA.
- A federally enforceable SSMP shall be drafted and followed for all Startup, Shutdown and Malfunction events. Compliance with this plan shall be identified on each semiannual compliance report.

CPMS:

- Existing Non-Remote Four Stroke Rich Burn Engines > 500 HP at Area Sources of HAP must maintain a catalyst inlet temperature between 750 and 1250 deg Fahrenheit. Pressure drop cannot increase by more than 2 inches of water from the pressure drop that was measured on the initial performance test.

- Existing Non-Remote Four Stroke Lean Burn Engines > 500 HP at Area Sources of HAP must maintain a catalyst inlet temperature between 450 and 1350 deg Fahrenheit. Pressure drop cannot increase by more than 2 inches of water from the pressure drop that was measured on the initial performance test.
- Catalyst Inlet Temperatures shall be recorded at least once every 15 minutes. Compliance will be determined by calculating 4 hour rolling averages.
- Pressure drop across the catalyst shall be determined during the initial compliance test and recorded monthly thereafter.
- Site specific monitoring plan shall specify details of conducting continuous monitoring.
- **Alternative to CPMS**, for existing Non-Remote Four Stroke Rich Burn Engines > 500 HP at Area Sources of HAP, the engine shall be shut down if the inlet temperature exceeds 1250 deg Fahrenheit.
- **Alternative to CPMS**, for existing Non-Remote Four Stroke Lean Burn Engines > 500 HP at Area Sources of HAP, the engine shall be shut down if the inlet temperature exceeds 1350 deg Fahrenheit.

Definition of Remote:

- For an Existing Four Stroke Engine > 500 HP at Area Sources of HAP that are located at a DOT facility, if the facility is designated as Class 1, the engine is remote. Engines at sites that are identified as Class 2-4 are considered non-remote.
- For an Existing Four Stroke Engine > 500 HP at Area Sources of HAP that are NOT located at a DOT facility, if there are 5 or fewer occupied buildings and none four stories or more within ¼ mile of the engine, then it is considered remote. Otherwise, the engine is non-remote.

Testing, Reporting and Recordkeeping:

- Owners and operators must keep records of testing and maintenance and provide all applicable notifications.
- Initial compliance tests for existing engines with applicable emissions limits must be performed within 180 days of May 3, 2013 for CI engines.
- Subsequent reference method compliance tests shall be completed every 8760 run hours or 3 years, whichever comes first.
- For Non-Remote Four Stroke Engines > 500 HP at Area Sources of HAP, an initial and annual compliance demonstrations shall be completed using Appendix A in the regulation, or Method 25 A for THC. The initial compliance demonstration shall be completed within 180 days after October 19, 2013 and consist of at least three fifteen minute runs. The annual compliance demonstration shall consist of at least one fifteen minute run.
- Semiannual compliance reporting and initial notification of compliance status shall be submitted after the applicable compliance dates for CI engines and SI engines.

EPA NO2 NAAQS

Texas has added language to address NO2 NAAQS. See [106.512](#) (6) (A-C) for 3 options to demonstrate compliance.

Colorado does not require modeling for minor sources with NO2 emissions of less than 40 TPY. See the [guidance memo](#) from the state of Colorado.

Other states either have not addressed the regulation or are pending in their final determination.

EPA Greenhouse Gas (GHG) Reporting

Effective:

See:

[40 CFR Part 98 Subpart W](#)

Reporting of green house gas emissions from 2010 is required for large combustion sources (sources that emit over 25,000 metric tons of CO₂). Natural engines emit around 4-5 metric tons of CO₂ per horsepower. Therefore a site would need 5,000 to 6,000 horsepower to trigger the reporting for 2010. This reporting is required to be done mid 2011 for the previous year.

Oil and gas sources were generally excluded from the 2010 reporting period unless they had large combustion sources discussed above. However under Subpart W of 40 CFR Part 98, most oil and gas sources will be required to file a report in 2012 for the 2011 period. This Subpart W report will include not only CO₂ from combustion but also other greenhouse gas emissions such as venting and blow downs. Methane has a CO₂ equivalency 21. Also, there is some aggregation language in the rule requiring operators to include all of their facilities in a field. The EPA estimates that 85% of all oil and gas sources will be required to report.

Within Subpart W, there are 8 “Segment Types” which represent different types of oil and gas operations. The segment types are:

- (1) *Offshore petroleum and natural gas production*
- (2) *Onshore petroleum and natural gas production*
- (3) *Onshore natural gas processing*
- (4) *Onshore natural gas transmission compression*
- (5) *Underground natural gas storage*
- (6) *Liquefied natural gas (LNG) storage*
- (7) *LNG import and export equipment*
- (8) *Natural gas distribution*

The three most common segment types are for the GCA related companies are *Onshore petroleum and natural gas production, Onshore natural gas processing and Onshore natural gas transmission compression*. The rule defines each segment type but it should be noted that midstream gathering is apparently not included in any of the segment types.

Each segment type has different “source types” of emissions that must be reported for that segment. Examples of source types include blow down vent stacks and reciprocating compressor rod packing venting. Not all source types are included on all segment types. See the rule for details.

There is some data that Operators should be capturing 2011 so they can report in 2012.

State of Texas

Permit By Rule (PBR)

Reference: Permit By Rule (PBR) Title 30, Part 1, Chapter 106, Subchapter O, Rule 106.352

See:

[PBR Rule 106.352](#) (New PBR)
[PBR Rule 106.512](#) (Old PBR Engine Limits)

This is the easiest way to permit a compressor in Texas and shortens the approval time dramatically. However, there are limitations to whether the PBR can be used. The base PBR provides for certain emissions levels that may be superseded if the location is considered a Major Source (over 100 TPY attainment area, over 50 TPY in DFW/BPA, over 25 TPY in HGB), if the compressor is subject to NSPS or if the compressor is located within one of the following non-attainment / early action areas:

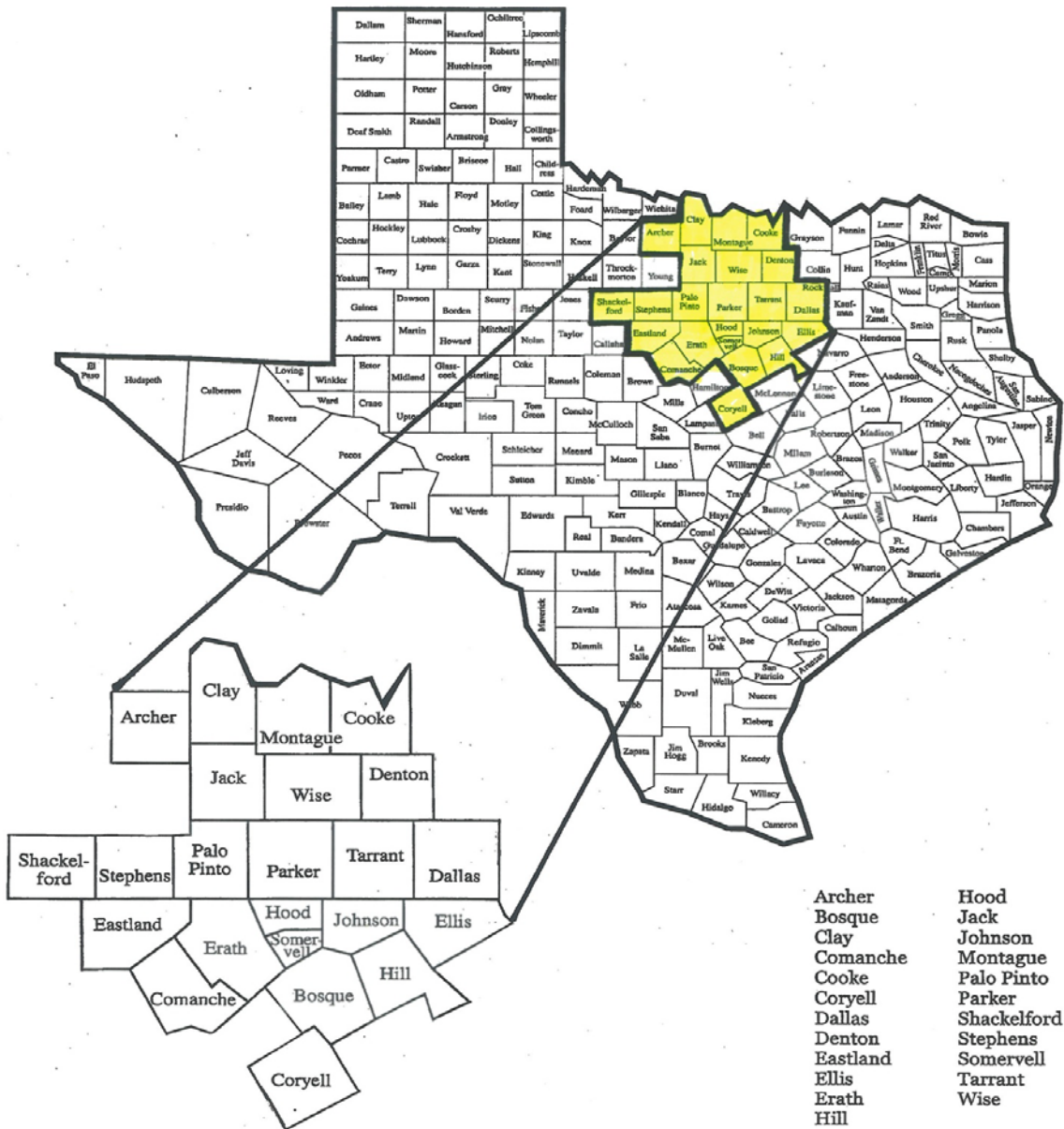
- Dallas [DFW](#)
 - Collin, Dallas, Denton, Tarrant, Ellis, Johnson, Kaufman, Parker, Rockwall
 - *Note: Wise County has been designated by the EPA as nonattainment but has not been addressed by the TCEQ
- Houston - [HGB](#)
 - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller
- East Texas (separate summary will be done for this area)
 - Anderson, Brazos, Burleson, Camp, Cass, Cherokee, Franklin, Freestone, Gregg, Grimes, Harrison, Henderson, Hill, Hopkins, Hunt, Lee, Leon, Limestone, Madison, Marion, Morris, Nacogdoches, Navarro, Panola, Rains, Robertson, Rusk, Shelby, Smith, Titus, Upshur, Van Zandt, and Wood Counties.

To determine if PBR is applicable it must meet 106.4. The following checklist can be used to check applicability: [Can I use PBR?](#)

The limits are different for the New Oil and Gas PBR and the Original PBR. The new Oil and Gas PBR is spelled out in 106.352 (a) through (k) while the original PBR is now in 106.352 (l). The requirements for Gas fired stationary sources such as compressors are found in Table 6 located in 106.352 (m) for the new PBR and in 106.512 for the original PBR. As of April 1, 2011, the new PBR is only applicable to 23 counties that make up the Barnett Shale but the Texas Commission on Environmental Quality (TCEQ) has started the process to develop a new PBR for the remainder of the state. Preliminary indications are that the emissions limits will be similar, if not the same, for the remainder of the state.

Counties Covered under New PBR are highlighted in yellow. The remainder of Texas is still under old PBR. New Permits after April 1st, 2011 in these counties will have to be issued under the new PBR.

Barnett Shale Counties



As of November 2012, Archer, Bosque, Coryell, Clay, Comanche, Eastland, Shackelford, and Stephens counties have been removed from this designated area.

Limits under NEW PBR (Barnett Shale Counties Only)

Summary by Category (for more information, see Table 6 included below)

- 2SLB
 - < 500 hp does not have a standard (exempt)
 - 500 hp and over
 - NOx standards range from 8.0 g/hp-hr down to 1.0 g/hp-hr depending on manufacture date and horsepower (see attached tables).
 - CO standard is generally 3.0 g/hp-hr
 - VOC is 1.0 g/hp-hr for engines manufactured on or after 7/1/10 (same as NSPS Tier 2). Older engines do not have a VOC standard.
- 4SLB
 - <500 hp = No standard for engines older than 7/1/08. For engines manufactured on or after 7/1/08, standard is 2/3/1 g/hp-hr (NOx/CO/VOC)
 - 500 hp and over
 - NOx standards range from 5.0 g/hp-hr down to 1.0 g/hp-hr depending on manufacture date and horsepower (see attached tables).
 - CO standard is generally 3.0 g/hp-hr
 - VOC is 1.0 g/hp-hr for engines manufactured on or after 7/1/10 (same as NSPS Tier 2). Older engines do not have a VOC standard
 - Phase II standard (4SLB, all hp) of 2.0 g/hp-hr kicks in at 2030 for all engines
- 4SRB
 - <500 hp exempt
 - 500 hp and over
 - NOx standards are 2.0 g/hp-hr for engines manufactured before 1/1/11 and 1.0 g/hp-hr for engines manufactured after 1/1/11
 - CO standard is 3.0 g/hp-hr
 - VOC is 1.0 g/hp-hr for engines manufactured after 1/1/11.
 - Phase II standard of 1.0 g/hp-hr of NOx for all engines in 2020

[TCEQ Webpage with PBR Information](#)

[TCEQ Webpage with Standard Permit \(SP\) Information](#)

OGS Standard Permit 106.352

Table 6 Engine and Turbine Emission and Operational Standards

Engine Type	Engine Size	Manufacture Date	NOx (g/bhp-hr)	CO (g/bhp-hr)	VOC (g/bhp-hr)
Rich Burn non-emergency Spark ignited	less than 500 hp	All dates	no standard	no standard	no standard
	greater than or equal to 500 hp	Before January 1, 2011	2	3	no standard
	greater than or equal to 500 hp	After January 1, 2011	1	3	1
	After January 1, 2020 and regardless of manufacture date, no rich-burn engine greater than or equal to 500 hp authorized by this rule shall emit NOX in excess of 1.0 g/bhp-hr. The commission reserves the right to re-evaluate the upgrade requirement if EPA promulgates any standards for existing engines.				
Lean Burn, 2SLB, non-emergency spark ignited	less than 500 hp	All dates	no standard	no standard	no standard
	greater than or equal to 500 hp	Before September 23, 1982	8	3	no standard
		Before June 18, 1992 and rated less than 825 hp	8	3	no standard
		After September 23, 1982, but prior to June 18, 1992 and rated 825 hp or greater	5	3	no standard
		After June 18, 1992 but prior to July 1, 2010	2.0 except under reduced speed, 80-100% of full torque conditions may be 5.0	3	no standard
		On or after July 1, 2010	1	3	1
Lean Burn, 4SLB non-emergency spark ignited, and dual fuel	less than 500 hp	Before July 1, 2008	no standard	no standard	no standard
		On or after July 1, 2008	2	3	1
	greater than or equal to 500 hp	Before September 23, 1982	5.0 except under reduced speed, 80-100% of full torque conditions may be 8.0	3	no standard
		Before June 18, 1992 and rated less than 825 hp	5.0 except under reduced speed, 80-100% of full torque conditions may be 8.0	3	no standard
		On or after September 23, 1982, but prior to June 18, 1992 and rated 825 hp or greater	5	3	no standard
		On or after June 18, 1992 but prior to July 1, 2010	2.0 except under reduced speed, 80-100% of full torque conditions, may be 5.0	3	no standard
		On or after July 1, 2010	1	3	1
	After January 1, 2030 and regardless of manufacture, no 4-stroke lean-burn engines authorized by this rule shall emit NOX in excess of 2.0 grams per brake horsepower per hour (g/bhp-hr). The commission reserves the right to re-evaluate the upgrade requirement if EPA promulgates any standards for existing engines				
Turbines	Turbines shall not emit greater than 25 ppmvd @15% NOx and 50 ppmvd @15% O2 for CO.				

Old PBR (see 106.512 for more information relating to engines)

- Equal to or over 240 HP must register with PI-7 and Table 29 (see link to PI-7 Forms) [TCEQ PI-7 Form](#)
- If under 240 HP do not need to register but must meet fuel requirements (Sour Gas) and no violation of NAAQS (see paragraph 5 and 6)
- Emissions Limits (note: Stricter rules apply for non-attainment areas and Major sources)
 - Under 500 HP – no limits under PBR – **may be limits under EPA NSPS**
 - 500+ HP –
 - Rich Burn – 2.0 g/hp-hr NO_x
 - Lean Burn (manufactured after 1982)– 2.0 g/hp-hr NO_x Note: older engines may have higher limits – see rule for details.
- AFR required if catalyst is used.
- Retest required within 7 days of oxygen sensor or catalyst replacement. Portable analyzer acceptable. (106.512)
- Checklist from TCEQ with above information: [TCEQ PBR Summary Checklist](#)

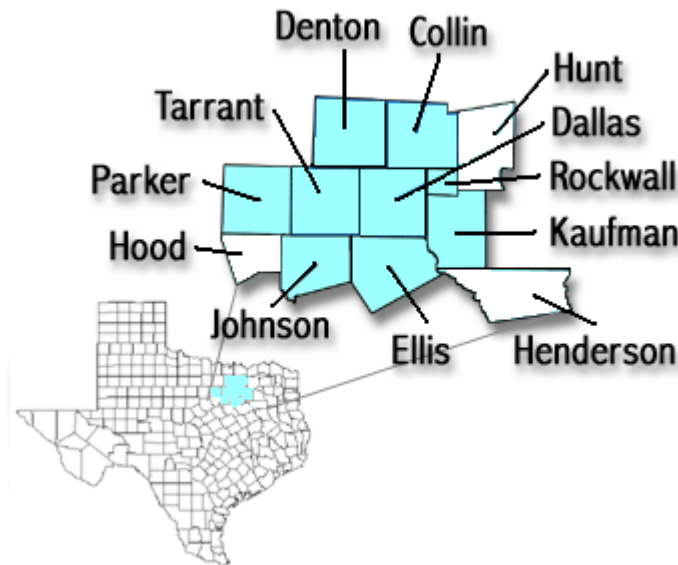
State of Texas

TCEQ DFW Non-attainment Area

Note: the following applies to Minor Sources only. It is not applicable to engines located at Major Sources.

Affected Counties (9):

- Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant.



Proposed Emissions Levels: [Rule 117.2110](#) [Compliance Schedule](#)

- Rich Burn engines must meet 0.5 g/bhp-hr NO_x by March 1, 2009.
- Lean Burn engines in service before June 1, 2007, must meet 0.7 g/bhp-hr NO_x by March 1, 2010.
- Lean Burn engines in service after June 1, 2007, or modified, reconstructed, or relocated must meet 0.5 g/bhp-hr NO_x by March 1, 2010.
- CO limit is 3.0 g/bhp-hr
- Engines under 50 hp are exempt.

Control Methods:

- Rich burn – non-selective catalytic reduction (NSCR) must have AFR (Rule 117.2030 (b) (4))

Testing Procedures:

- In accordance with Chapter 117.8000 or ASTM D6522-00
- Engines subject to this ruling must be tested at least quarterly and within 2 weeks of engine maintenance such as O₂ sensor replacement, catalyst cleaning, or catalyst replacement. (Rule 117.8140 (b))
- Retest within 60 days of any engine modification that could increase NO_x emissions
- Portable analyzers are acceptable

- Keep records for 5 years: emissions measurements, AFR and catalyst maintenance

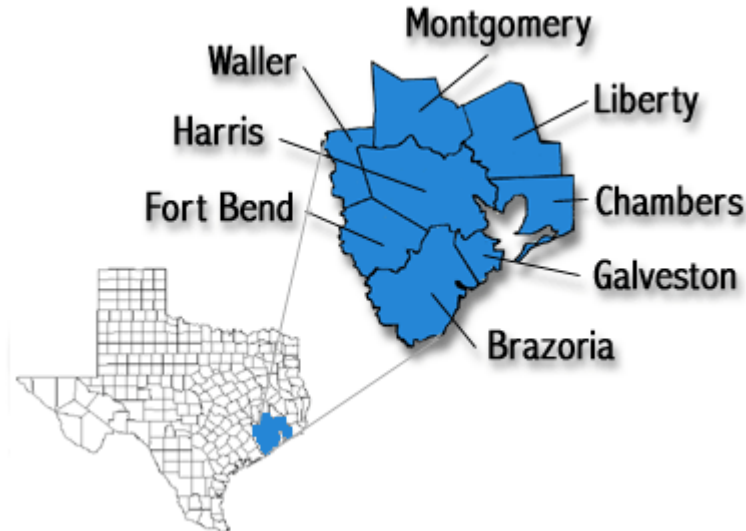
State of Texas

TCEQ HGB (Houston Galveston Brazoria) Non-attainment Area

Note: the following applies to Minor Sources only. It is not applicable to engines located at Major Sources.

Affected Counties (9):

- Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller.



Emissions Levels:

- See 117.2010 (a) for sources subject to Cap and Trade
- Emissions levels are lower of previous permit, permit by rule or:
 - o NO_x = 0.5 g/bhp-hr for Stationary, gas-fired, reciprocating internal combustion engines (Rule 117.2010 (c) (2) (B)) [See Rule 117.2010](#)
 - o CO = 3.0 g/bhp-hr for stationary internal combustion engines (Rule 117.2010 (i) (1))

Control Methods:

- Rich burn – non-selective catalytic reduction (NSCR) must have AFR (Rule 117.2030 (b) (4))

Testing Procedures:

- In accordance with Chapter 117.8000 or ASTM D6522-00
- Engines subject to this ruling must be tested at least quarterly and within 2 weeks of engine maintenance such as O₂ sensor replacement, catalyst cleaning, or catalyst replacement. (Rule 117.8140 (b))
- Retest within 60 days of any engine modification that could increase NO_x emissions
- Portable analyzers are acceptable
- Keep records for 5 years: emissions measurements, AFR and catalyst maintenance

State of Texas

TCEQ BPA (Beaumont Port Arthur) Non Attainment Area

Affects ***Major*** Sources only (Minor Sources are not addressed – For a Minor source, use normal permitting such as PBR or NSPS). A sight will be considered a Major Source in the BPA if it has more than 50 TPY of NO_x. (Rule 117.1 – Definition of a Major Source).

Counties affected: Hardin, Jefferson, Orange

Reference, Title 30, Part I, Chapter 117, Subchapter B, Division 1 [TX Admin Code BPA](#)

- Under 300 HP – Exempted 117.103 (a) (8)
- 300 HP or more
 - Rich Burn: 2 g/hp-hr NO_x and 3 g/hp-hr CO (see excerpt below)
Rule 117.105 (d) “No person shall allow the discharge into the atmosphere from any gas-fired, ***rich-burn***, stationary, reciprocating internal combustion engine rated 300 horsepower (hp) or greater, NO_x emissions in excess of a block one-hour average of 2.0 grams per horsepower-hour (g/hp-hr) and CO emissions in excess of a block one-hour average of 3.0 g/hp-hr.”
 - Lean Burn: 3 g/hp-hr NO_x and 3 g/hp-hr CO (see excerpt below)
Rule 117.105 (e) “No person shall allow the discharge into the atmosphere from any gas-fired, ***lean-burn***, stationary, reciprocating internal combustion engine rated 300 hp or greater, NO_x emissions in excess of 3.0 g/hp-hr and CO emissions in excess of 3.0 g/hp-hr, either as:
- Check regulations for monitoring and testing requirements

State of Texas

TCEQ East Texas Ozone Early Action Compact Area

Note: the following applies to Minor Sources only. It is not applicable to engines located at Major Sources.

Affected Counties (33):

- Anderson, Brazos, Burleson, Camp, Cass, Cherokee, Franklin, Freestone, Gregg, Grimes, Harrison, Henderson, Hill, Hopkins, Hunt, Lee, Leon, Limestone, Madison, Marion, Morris, Nacogdoches, Navarro, Panola, Rains, Robertson, Rusk, Shelby, Smith, Titus, Upshur, Van Zandt, and Wood.

Emissions Levels:

- Rich Burn engines greater than or equal to 240 HP and less than 500 HP must meet 1.0 g/bhp-hr NO_x by March 1, 2010.
- Rich Burn engines greater than or equal to 500 HP must meet 0.5 g/bhp-hr NO_x by March 1, 2010.
- Engines set after July 1, 2007 must meet emissions within 30 days of startup.
- Lean Burn engines are exempt from TCEQ ruling.
- CO is not regulated by this TCEQ ruling but is subject to federal or local jurisdictions.

Control Methods:

- Rich burn – NSCR catalyst with required AFR

Testing Procedures:

- In accordance with Chapter 117.80 or ASTM D6522-00
- Engines subject to this ruling must be tested at least quarterly and within 2 weeks of engine maintenance such as O₂ sensor replacement, catalyst cleaning, or catalyst replacement.
- Retest within 60 days of any engine modification that could increase regulated emissions
- Portable analyzers are acceptable
- Keep records for at least 5 years: emissions measurements, AFR and catalyst maintenance.

State of Louisiana

See:

[LDEQ LAC 33: part III - Air Pollution](#)

LDEQ LAC 33: part III incorporates by reference 40 CFR 60. Guidelines are essentially the same as the federal NSPS standard. [40 CFR Part 60 Subpart JJJJ](#)

See NSPS section for emissions limits

Initial Compliance Test:

All engines and turbines greater than 500 horsepower and operating more than 720 hours in a semi-annual period are required to conduct an “Initial Compliance Test” for NO_x, O₂ and CO.

If it was not anticipated that an engine or turbine would operate more than 720 hours in a semiannual period, but the engine or turbine does operate more than 720 hours in a semiannual period, the facility shall make a concerted effort to perform the initial compliance test as expeditiously as possible.

Initial compliance tests are also required after a major engine overhaul.

Additional testing may be required as seen appropriate by permitting authority (LAC33.III.501.C.6)

Method:

Two copies of the test results, calibration procedures, and operating conditions during the test are required to be submitted within 60 days of performing the test, unless a different frequency is specified by the facility’s air permit.

EPA Methods 1-4, 7E and 10 from 40 CFR 60 Appendix A shall be used.

Three test runs at maximum load will be conducted for each unit. Testing may be done at a lower load, but retesting will be required in order to operate at a higher load. Load is determined by effective horsepower, which is calculated using the Gas Processor's Association (GPA) formula or other calculation as approved by the Air Quality Assessment Division’s Engineering Support Group.

For engines, each run must last at least one hour. For turbines, each run must last at least twenty minutes.

The following operating conditions must be recorded every fifteen minutes and included in the test report:

- Engine speed
- Fuel rate
- Effective horsepower
- Intake manifold temperature
- Suction pressure
- Discharge pressure
- Compressed gas throughput
- Fuel header pressure
- Spark ignition time
- Stack temperature
- Ambient temperature

In cases where there are several engines or turbines of the exact make and model at a facility, a representative subset may be tested in lieu of testing all identical engines. A representative subset must contain at least 50% of the affected units.

Alternatives:

Alternate methods must have comparable accuracy and reliability to the EPA methods listed above. Use of an alternate method must be approved by the Air Quality Assessment Division's Engineering Support Group. Examples of alternate methods include:

1. Portable analyzer can be used in lieu of a reference method analyzer to measure concentration. The analyzer model must be approved. Calibrations must be done using EPA Protocol 1 gases according to the procedures for drift and bias limits outlined in EPA Method 7E and/or Method 10. Analyzer data shall be recorded at least once every 5 minutes. Portable emission analyzers that have received approval from the Department for internal combustion engine testing include:
 - a. Enerac 700, 2000, 3000 and 3000E
 - b. Dean DAI 6000 and 6500
 - c. ECOM KL, ECOM A-Plus, and ECOM AC
 - d. Testo 350
 - e. Lancom III
2. Use of F-factors to calculate flow rate through the stack. The F-factor method is described in EPA Method 19. The fuel flow rate is measured using a dedicated fuel meter. The fuel meter data should be included in the report, along with the calculations.
3. If a dedicated fuel meter is not available, manufacturer's data may be used to estimate stack flow rate. The manufacturer's data should be included in the test report, along with the calculations. The flow rate should be based on the operating conditions at the time of the test.

State of Oklahoma

See:

[OAC Title 252 Chapter 100 - Air Pollution](#)

The AQD has implemented the agency's Permit Continuum concept, which uses different types of permits for different facilities, depending on size, complexity and environmental risk. Under this program no permit is required for the smallest sources of air contaminant emissions, known as "de minimis facilities." [General Permits](#) have been issued to cover several categories of facilities that are more complex or have somewhat greater emissions. Many of the facilities covered by these General Permits are also subject to Federal Standards, such as the New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAPs). Individual permits are issued for facilities that do not fall into one of other continuum categories. In addition, most facilities that emit less than 40 tpy are "[permit exempt](#)," unless they are subject to one of these Federal Standards. Follow the links in this paragraph for more details.

[Fact sheets](#) are available which describe AQD's permitting program in more depth, including descriptions of who needs a permit, and which permit category a facility may be eligible for under the Permit Continuum. Because air quality permitting issues can be quite complex, the AQD offers a service called an Applicability Determination. If the determination concludes that a permit is required, the fee charged for the Applicability Determination is applied toward the permit application fee. DEQ's [Customer Assistance Program](#) also offers one-stop permitting assistance and a statewide toll-free number 1-800-869-1400.

AQD operates a dual permitting system — construction permits and operating permits — to control major (Part 70) and minor sources. A construction permit is required before a new source is constructed or an existing source is modified. The construction permit is issued after it is determined the source is designed to meet applicable rules and pre-construction requirements. An operating permit is issued after construction is completed and demonstration is made that the source is capable of meeting applicable emissions limitations and air pollution control requirements. An Authorization to Construct and an Authorization to Operate under a particular general permit would correspond to the construction and operating permit, respectively.

For more information about the permitting program and process consult the [Air Quality Permits](#) fact sheet (see link below). There are also [permit application advice documents](#) available for different types of facilities.

[Oklahoma Air Quality Permits Fact Sheet](#)

Permit exempt facility:

A facility may be permit exempt in if it meets certain criteria which include:

- Cannot have potential to emit of any pollutant greater than 100 tons per year (TPY). This is based on the highest level of uncontrolled emissions at any set point.
- Cannot have actual (controlled) emissions over 40 TPY
- Cannot have emissions limits under a federal rule such as NSPS, NESHAP, etc...(NSPS engines are NOT permit exempt and must have a permit)
- Is not operated in conjunction with another facility or source that is subject to air quality permitting.
- For more guidance see: [OK Permit Exempt Guidance Document](#)

General Permit for Oil & Gas Facilities (GP-OGF)

If an engine does not meet the criteria for a Permit Exempt Facility then it must have a permit. This would be the case for an engine that is subject to NSPS JJJJ. The general permit (GP-OGF) is designed to expedite the permit process. Potential emissions must still be less than major source levels. More information on GP-OGF can be found here: [OK Fact Sheet for GP-OGF Minor Permit](#)

State of New Mexico

See:

[Title 20, Chapter 2 Part 92 NMAC - Air Pollution](#)

20.2.98 NMAC incorporates by reference 40 CFR 60. Guidelines are essentially the same as the federal NSPS standard. [40 CFR Part 60 Subpart JJJJ](#) State of NM hopes to have delegation by EPA on NSPS by end of 2008.

State Permitting process:

NOI: Notice of intent. If “potential to emit” is less than 25 TPY then unit can be set with basically a notice (registering the unit). This is not applicable if site is within 1 km of a residence or 3 km of a public place.

Streamline:

New Source Review: tedious lengthy process that requires modeling

From NM website: [New Mexico Permitting Forms](#)

Overview & Guidance to New Mexico NSR Air Permitting Requirements

This document will help you determine if your facility is required to obtain a pre-construction New Source Review (NSR) Air Quality permit. The [Air Quality Bureau](#) categorizes facilities into three major groups when determining if an Air Quality permit is required:

- No Permit Required (NPR) determination – A facility may submit emissions calculations and supporting documentation requesting an NPR determination if it believes it does not require a permit or an NOI. To be eligible for an NPR determination, a facility’s potential emission rate (PER) must be less than 10 pounds per hour (pph) and 10 tons per year (tpy) of any regulated air contaminant or 1 ton per year (tpy) of lead.
- Notice of Intent to construct (NOI) – A NOI is not a permit, but is required for facilities that have a PER of less than 10 pounds per hour (pph), but more than 10 tons per year (tpy) of any regulated air contaminant. Refer to [20.2.73.200 NMAC](#) for applicability.
- Permit – A permit is required for facilities that have a PER, not potential to emit (PTE) that is greater than 10 pph and 25 tpy. Refer to [20.2.72.200 NMAC](#) for applicability. A permit can contain conditions that limit a facility’s PTE to something less than its PER. The submittal of a 20.2.72 NMAC permit application also fulfills the 20.2.73 NOI application submittal requirements.

Both regulations cited above can be found at <http://www.nmenv.state.nm.us/aqb/regs/index.html>. The applicability section of both regulations should be read carefully. The applicability determinations of these regulations is based on PER (not PTE); the PER of the facility is the worst-case emission rate of the facility without controls or other limitations (unless the controls or limitations are federally enforceable) and as if the facility were operating continuously 8760 hours per year (24 hrs/day, 365 days/yr). 20.2.72.202 lists processes that are exempt from permitting.

If you determine your facility needs a permit, you will need to read all of 20.2.72 NMAC. At this point many companies hire a consultant. We can provide a list of consultants who process New Mexico applications. Please understand that it is not proper for us to recommend any particular consultant.

If you are a small business, you may want to call our small business assistance hotline, 505-222-9507 or 800-224-7009. Our Small Business Assistance staff will be happy to assist you. A definition of a “small business” can be found at <http://www.nmenv.state.nm.us/aqb/sbap/index.html>.

For other than New Source Review (NSR) permitting Air Quality questions refer to our Air Quality Bureau contacts page at <http://www.nmenv.state.nm.us/aqb/AQB-Contacts.html>. I hope this information is of some assistance.

Ted Schooley

NSR Section Manager
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Santa Fe, New Mexico 87505
ted.schooley@state.nm.us
Telephone: (505) 827-1494
Fax: (505) 827-1523

State of Wyoming

Wyoming Air Quality Standards & Regulations

The state of Wyoming applies a Best Achievable Control Technology (BACT) approach to new engines at both major and minor sources. The Wyoming Department of Environmental Quality (WDEQ) will issue emissions limits for specific SI RICE on a site by site basis and the limits will vary depending on location and the other sources of emissions at the site. However, the WDEQ does have a general guideline they use to establish emissions limitations that meet their BACT standard for new (engines not yet permitted) SI RICE:

all figures are in units of grams per horsepower-hour

- Statewide (RB, > 100hp) & Sublette Co (all hp)
 - 0.7 NO_x
 - 2.0 CO
 - 0.7 VOC
 - 0.05 CH₂O

- Statewide (RB, < 100hp)
 - 2.0 NO_x
 - 2.0 CO
 - 1.0 VOC's
 - 0.05 CH₂O

- Statewide (LB and Ultra LB)

Engine Type	NO _x	CO	VOC's	CH ₂ O
LB (< 1400hp)	1	0.5	0.7	0.07
LB (> 1400hp)	0.7	0.5	0.7	0.07
Ultra LB (any hp)	0.5	0.5	0.7	0.07

The Wyoming Air Quality Division (AQD) operates a dual permitting system: construction permits and operating permits.

- **Construction Permit** is required before a new source is constructed or an existing source is modified. A construction permit is issued after the source has been determined to meet applicable rules and pre-construction requirements.
- **Operating Permit** is issued after construction is completed and demonstration is made that the source is capable of meeting applicable emissions limitations and air pollution control requirements.

The state of Wyoming AQD has yet to be delegated authority over NSPS subpart JJJJ. The EPA region 8 is constantly reviewing it member state’s requests for delegation, but as of April 2011 the NSPS subpart JJJJ standard is still applicable to both the EPA and the ADQ in Wyoming will share responsibility for enforcement. This means that operators will need to have dual reporting to both the State of Wyoming and the EPA.

If the state is delegated authority over the rule (JJJJ) they will be the sole recipient of reports and will have primary responsibility of enforcement and non-compliance punishment. The EPA would still have the option to supersede the state’s enforcement. The EPA would also remain in charge of requests for any deviations from the rule.

Contacts in WDEQ stationary source enforcement (counties in parentheses)

District 1 (Albany, Laramie, Platte, Goshen, Niobara).....	Glenn Spangler 307-777-3787
District 2 (Carbon, Natrona, Converse).....	Chris Hanify 307-473-3470
District 3 (Sheridan, Johnson, Campbell, Crook, Weston).....	Tanner Shatto 307-672-6457
District 4 (Park, Big Horn, Washakie, Hot Springs, Fremont, Lincoln).....	Greg Meeker 307-332-3047
District 5 (Sublette, Sweetwater, Uinta, Teton).....	Tony Hoyt 307-332-6755

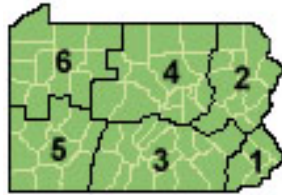
State of PENNSYLVANIA
Department of Environmental Protection

Bureau of Air Quality

<http://www.dep.state.pa.us/dep/deputate/airwaste/aq/default.htm>

NOTE: As of July, 2011, Pennsylvania is in the process of reviewing their permitting process because of the exponential increase of activity in the Marcellus Shale. Users should monitor regulatory activity for changes.

Air Quality Regional Offices



Region 1

Southeast Regional Office
2 East Main Street
Norristown, PA 19401
(484) 250-5920
(484) 250-5921 fax
Counties: Bucks, Chester, Delaware, Montgomery, Philadelphia

Region 2

Northeast Regional Office
2 Public Square
Wilkesbarre, PA 18711-0790
(570) 826-2435
(570) 826-2357 fax
Counties: Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, Wyoming

Region 3

South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8200
(717) 705-4702
(717) 705-4710 fax
Counties: Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York

Region 4

North Central Regional Office
208 West Third Street
Williamsport, PA 17701
(570) 327-3636
(570) 327-3565 fax
Counties: Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union

Region 5

Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222-4745
(412) 442-4161
(412) 442-4194 fax
Counties: Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland

Region 6

Northwest Regional Office
230 Chestnut Street
Meadville, PA 16335-3481
(814) 332-6940
(814) 332-6125 fax
Counties: Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, Mckean, Mercer, Venango, Warren

Air Quality General Permits

Applicants must submit a request for determination (RFD) to see if a permit is required. If a permit is required, then the following General Permit can be used if it is a minor source:

GENERAL PLAN APPROVAL AND/OR GENERAL OPERATING PERMIT (BAQ-GPA/GP – 5)

NATURAL GAS, COAL BED METHANE OR GOB GAS PRODUCTION OR RECOVERY FACILITIES

- Now covers ALL internal combustion engines
- Cannot be used for Transmission facilities
- Emissions limits at full rated load for existing engines 100 HP to 1500 HP previously approved by GP-5 (does not apply if relocated).
 - NO_x = 2.0 gm/hp-hr
 - CO = 2.0 gm/hp-hr
 - VOC = 2.0 gm/hp-hr

Otherwise, the applicable emission limits are below:

Engine Type	Rated bhp	NO _x	CO	NMNEHC as propane (excluding HCHO)	HCHO
NG-fired Lean and Rich burn	≤100	2.0 gm/bhp-hr	2.0 gm/bhp-hr	-	-
NG-fired Lean- burn	>100 to ≤500	1.0 gm/bhp-hr	2.0 gm/bhp-hr	0.70 gm/bhp-hr	-
NG-fired Lean- burn	>500	0.50 gm/bhp-hr	47 ppmvd @ 15% O ₂ or 93% reduction	0.25 gm/bhp-hr	0.05 gm/bhp-hr
NG-fired Rich-burn	>100 to ≤500	0.25 gm/bhp-hr	0.30 gm/bhp-hr	0.20 gm/bhp-hr	
NG-fired Rich-burn	>500	0.20 gm/bhp-hr	0.30 gm/bhp-hr	0.20 gm/bhp-hr	2.7 ppmvd @ 15% O ₂ or 76% <u>reduction</u>

These limits do not apply during periods of startup and shutdown that do not exceed 30 minutes per occurrence. A non-resettable hour meter is required as well as records of run hours and fuel used each month.

Performance testing is required for engines > 500 HP initially, within 180 days of startup for NO_x, CO, Formaldehyde, and NMHC or NMNEHC. Quarterly periodic monitoring of NO_x and CO is also required.

Plan Approval Applications

On December 5, 2007, the DEP Bureau of Air Quality implemented the optional Expedited Review Timeframes alternative in addition to the standard existing Money-Back Guarantee Program timeframes to enable the applicant and the Bureau to work together to reduce the time necessary to review plan approval applications. [Read the full details here](#) (PDF).

Please note that in addition to the completion of an individual plan approval or operating permit application, a completed [Compliance Review](#) Form, and Municipal Notification, as well as the payment of appropriate fees, must accompany the requested application. In order to participate in the Expedited Review Timeframe option of the MBG Program an applicant must include the completed [ERT Form](#) with the application package. Applications are to be submitted to the DEP [Regional](#) office serving you. Contact the [Allegheny](#) or [Philadelphia](#) air programs for permits in those counties. Note: All plan approval applications must be submitted with the [General Information Form](#) (GIF).

Covers internal combustion engines greater than 1500 HP

Air Quality Operating Permits

Please note that in addition to the completion of an individual plan approval or operating permit application, a completed [Compliance Review](#) Form, and Municipal Notification, as well as the payment of appropriate fees, must accompany the requested application. Applications are to be submitted to the DEP [Regional](#) office serving you. Contact the [Allegheny](#) or [Philadelphia](#) air programs for permits in those counties.

Pennsylvania Title V Operating Permit

[Title V Operating Permit](#)

Detailed information on completing the Title V Operating Permit Application.

These sections cited in 25 pa.Code, ARTICLE III. AIR RESOURCES

Chapter 122. Addresses National Standards of Performance for New Stationary sources. 40 CFR 60

Chapter 124. Addresses National Emissions Standards for Hazardous Air Pollutants
40 CFR 61

Chapter 127. Addresses Construction, Modification, Reactivation and Operation of Sources

Northeast Ozone Transport Region—The ozone transport region which includes this Commonwealth as established by section 184(a) of the Clean Air Act

- Philadelphia CMSA is classified as severe nonattainment for ozone
- The remainder of the state is treated as a moderate ozone nonattainment area for VOCs and NOx

Major NOx emitting facility—A facility which emits or has the potential to emit NOx from the processes located at the site or on contiguous properties under the common control of the same person at a rate greater than one of the following:

- (ii) Twenty-five TPY in an ozone nonattainment area designated as severe under section 182(d) and (f) of the Clean Air Act.
- (iv) One hundred TPY in an area included in an ozone transport region established under section 184 of the Clean Air Act (42 U.S.C.A. § 7511c).

Major VOC emitting facility—A facility which emits or has the potential to emit VOCs from processes located at the site or on contiguous properties under the common control of the same person at a rate greater than one of the following:

- (ii) Twenty-five TPY in an ozone nonattainment area designated as severe under section 182(d) of the Clean Air Act.
- (iii) Fifty TPY in an area included in an ozone transport region established under section 184 of the Clean Air Act.

- (C) For carbon monoxide nonattainment areas that are classified as “serious,” and in which stationary sources contribute significantly to carbon monoxide levels as determined under rules issued by the Administrator of the EPA, sources with the potential to emit 50 tpy or more of carbon monoxide.

Major facility—

(i) A facility which emits or has the potential to emit 100 TPY or more of a regulated NSR pollutant, except that lower emissions thresholds apply as follows:

(A) Fifty TPY of VOCs in a serious nonattainment area for ozone.

(B) Fifty TPY of VOCs in an area within an ozone transport region except for a severe or extreme nonattainment area for ozone.

(C) Twenty-five TPY of VOCs in a severe nonattainment area for ozone.

(D) Ten TPY of VOCs in an extreme nonattainment area for ozone.

(E) Seventy TPY of PM-10 in a serious nonattainment area for PM-10.

(F) Fifty TPY of CO in a serious nonattainment area for CO.

(ii) For the purposes of applying the requirements of Chapter 127, Subchapter E to the owner or operator of a facility located in an ozone nonattainment area or in an ozone transport region which emits or has the potential to emit NO_x, as follows:

(A) One hundred TPY or more of NO_x in an ozone nonattainment area classified as marginal, basic or moderate.

(B) One hundred TPY or more of NO_x in an ozone nonattainment area classified as a transitional, submarginal, or incomplete or no data area, when the area is located in an ozone transport region.

(C) One hundred TPY or more of NO_x in an area designated under section 107(d) of the Clean Air Act (42 U.S.C.A. § 7407(d)) as attainment or unclassifiable for ozone that is located in an ozone transport region.

(D) Fifty TPY or more of NO_x in a serious nonattainment area for ozone.

(E) Twenty-five TPY or more of NO_x in a severe nonattainment area for ozone.

(F) Ten TPY or more of NO_x in an extreme nonattainment area for ozone.

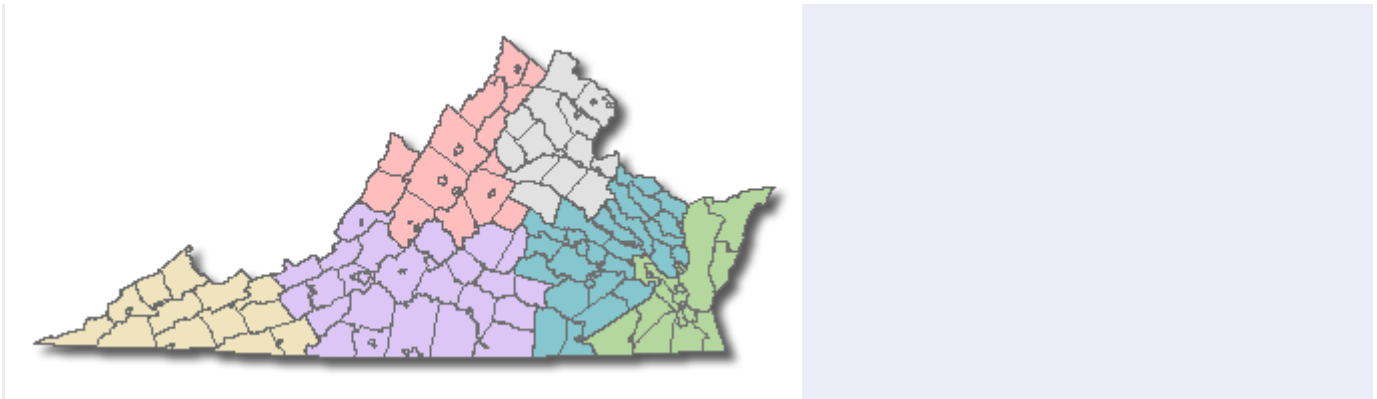
New engine installations must meet emission reduction requirements of NSPS, or area annual tonnage limits, which ever is more stringent.

State of VIRGINIA

[Virginia Dept. of Environmental Quality Web Site](#)

[Air Permitting Processes from Virginia DEQ web site](#)

DEQ regional offices



Click on a region to visit its web page.

Regional offices

- [Tidewater Regional Office](#), Virginia Beach
- [Piedmont Regional Office](#), Richmond/Glen Allen
- [Northern Regional Office](#), Woodbridge
- [Valley Regional Office](#), Harrisonburg
- [Blue Ridge Regional Office](#), Lynchburg/Roanoke
- [Southwest Regional Office](#), Abingdon

Other DEQ locations

- [Central Office](#) (Richmond)
- [Air monitoring](#) (Richmond)

AIR PERMIT FORMS			
(Form 805) UPDATED!	PDF	WORD	Federal Operating Permit Application Form General Instructions
(Form 7)	PDF	WORD	New, Modified and State Operating Permits Application Form
(Form 70)	PDF	WORD	Name or Ownership Change Permit Application Form
(Permit Fee Form)	PDF	WORD	Permit Application Fee Form for New Major Stationary Sources
(112j - Part 1)	PDF	WORD	Case by Case MACT Determination Form
(112j - Part 2)	PDF	WORD	Case by Case MACT Determination Form
EPA NOx BUDGET FORM	NOx Budget Permit		Application Forms

Permit Time Frames

Minor permit

Issued for facilities that emit less than 100 tons per year of a regulated pollutant and are non-controversial.

- **Completeness review:** 30 days
- **Processing of complete application:** 90 days; 180 days if public participation is required.
- **Public Participation:** Not required unless the project is deemed controversial
- **Remarks:** None

State Major permit under the Minor NSR Program

Issued for facilities that emit more than 100 tons per year of a regulated pollutant, or smaller sources of a controversial or precedent-setting nature.

- **Completeness review:** 30 days
- **Processing of complete application:** 180 days
- **Public Participation:** Required application notice; 30 days public comment period; public hearing
- **Remarks:** * In addition, if an Air Pollution Control Board decision is required, it may add 60 days; federal land manager review may add another 30 days.

Major NSR Prevention of Significant Deterioration permit

Issued for facilities that emit more than 250 tons per year of any pollutant (100 tons per year for 28 specific industries).

- **Completeness review:** *30 days
 - **Processing of complete application:** 365 days
 - **Public Participation:** Required application notice, public briefing, 30 day public comment period, public hearing, EPA and Federal Land Manager review.
 - **Remarks:** * Usually involves phased submittals, each with 30-day completeness review.
-

Article 5

Environmental Protection Agency Standards of Performance for New Stationary Sources (Rule 5-5)

9VAC5-50-400. General.

The U.S. Environmental Protection Agency Regulations on Standards of Performance for New Stationary Sources (NSPSs), as promulgated in 40 CFR Part 60 and designated in [9VAC5-50-410](#) are, unless indicated otherwise, incorporated by reference into the regulations of the board as amended by the word or phrase substitutions given in [9VAC5-50-420](#). The complete text of the subparts in [9VAC5-50-410](#) incorporated herein by reference is contained in 40 CFR Part 60. The 40 CFR section numbers appearing under each subpart in [9VAC5-50-410](#) identify the specific provisions of the subpart incorporated by reference. The specific version of the provision adopted by reference shall be that contained in the CFR (2009) in effect July 1, 2009. In making reference to the Code of Federal Regulations, 40 CFR Part 60 means Part 60 of Title 40 of the Code of Federal Regulations; 40 CFR 60.1 means 60.1 in Part 60 of Title 40 of the Code of Federal Regulations.

C. The exemption of new and relocated sources shall be determined as specified below:

1. Stationary sources with a potential to emit at rates less than all of the emission rates specified below shall be exempt from the provisions of this article pertaining to construction or relocation.

Pollutant	Emissions Rate
Carbon Monoxide	100 tons per year (tpy)
Nitrogen Oxides	40 tpy
Sulfur Dioxide	40 tpy
Particulate Matter	25 tpy
Particulate Matter (PM ₁₀)	15 tpy
Volatile organic compounds	25 tpy

9VAC5-20-204. Nonattainment areas.

A. Nonattainment areas are geographically defined below by locality for the criteria pollutants indicated. Following the name of each ozone nonattainment area, in parentheses, is the classification assigned pursuant to § 181(a) of the federal Clean Air Act (42 USC § 7511(a)) and 40 CFR 51.903(a).

1. Ozone (1-hour).

Northern Virginia Ozone Nonattainment Area (severe).

Arlington County
 Fairfax County
 Loudoun County
 Prince William County
 Stafford County
 Alexandria City
 Fairfax City
 Falls Church City
 Manassas City
 Manassas Park City

9VAC5-50-280. Standard for major stationary sources (prevention of significant deterioration areas).

B. A major stationary source shall apply best available control technology for each regulated NSR pollutant (as defined in [9VAC5-80-1615](#)) that it would have the potential to emit in significant amounts.

3. The following sources are not required to make demonstration of RACT as required by 9VAC5-40-7410 B or 9VAC5-40-7420 B.

b. Any stationary internal combustion engine with a rated capacity of less than 450 hp of output power.

9VAC5-80-1200. Compliance determination and verification by performance testing.

A. For stationary sources other than those specified in subsection B of this section, 8-6: 22

compliance with standards of performance shall be determined in accordance with the provisions of 9VAC5-50-20 and shall be verified by performance tests in accordance with the provisions of 9VAC5-50-30.

B. For stationary sources of hazardous air pollutants, compliance with emission standards shall be determined in accordance with the provisions of 9VAC5-60-20 and shall be verified by emission tests in accordance with the provisions of 9VAC5-60-30.

C. Testing required by subsections A and B of this section shall be conducted by the owner within 60 days after achieving the maximum production rate at which the new or modified source will be operated, but not later than 180 days after initial startup of the

source; and 60 days thereafter the board shall be provided by the owner with one or, upon request, more copies of a written report of the results of the tests.

D. For sources subject to the provisions of 40 CFR Part 60, 61 or 63, the compliance determination and performance test requirements of subsections A, B and C of this section shall be met as specified in those parts of Title 40 of the Code of Federal Regulations.

9VAC5-80-1320. Permit exemption levels.

2. Engines and turbines used for emergency purposes only and which do not exceed 500 hours of operation per year at a single stationary source as follows:

D. The exemption of modified and reconstructed sources shall be determined as specified below:

1. Stationary sources with net emissions increases less than all of the emission rates specified below shall be exempt from the provisions of this article pertaining to modification or reconstruction.

Pollutant Emissions Rate

Carbon Monoxide 100 tons per year (tpy)

Nitrogen Oxides 10 tpy

Sulfur Dioxide 10 tpy

Particulate Matter 15 tpy

Particulate matter PM10 10 tpy

Volatile organic compounds 10 tpy

Lead 0.6 tpy

Fluorides 3 tpy

Sulfuric Acid Mist 6 tpy

Hydrogen Sulfide (H₂S) 9 tpy

Total Reduced Sulfur 9 tpy

(including H₂S)

Reduced Sulfur Compounds 9 tpy

9VAC5 CHAPTER 80.

PERMITS FOR STATIONARY SOURCES.

"New source review program" means a program for the preconstruction review and permitting of new stationary sources or expansions to existing ones in accordance with regulations promulgated to implement the requirements of §§ 110 (a)(2)(C), 165 (relating to permits in prevention of significant deterioration areas) and 173 (relating to permits in nonattainment areas) and 112 (relating to permits for hazardous air pollutants) of the federal Clean Air Act.

"Reconstruction" means the replacement of components at an existing major process or production unit whenever:

1. The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new process or production unit; and

2. It is technologically and economically feasible for the reconstructed process or production unit to meet the applicable standard for new sources established in a permit.

9VAC5-80-1460. Public participation.

Public notification and comment period

Minor New, Modified, and certain Major Source Construction Permits

Who must apply:

Any person or entity intending to construct a new air pollution source, or to modify, relocate or reactivate an existing source not exempted by 9 VAC 5-80-11 of the state regulation. Permit exemption should be documented in writing from the appropriate DEQ regional office. A modification is any change to the facility or process, including hours of operation, which increases the potential to emit an air pollutant or causes a pollutant to be emitted that was not previously emitted. Major sources not subject to nonattainment area requirements or the Prevention of Significant Deterioration permit requirements are also included.

Typical requirements of a permit:

Stationary sources must control their emissions using the "best available control technology" or BACT for each criteria pollutant and "maximum achievable control technology" or MACT for regulated hazardous air pollutants for designated categories. Certain identified toxic pollutants must be limited to specified levels. Procedures are established for measuring and recording emissions and/or process rates.

Application process:

Contact the appropriate DEQ regional office for your location. To be considered complete, an application must:

- Demonstrate that the design incorporates BACT or meets the MACT standards.
- Present evidence that local zoning requirements are satisfied (for new facilities and major modifications).

For major sources, include proof of application fee paid. Review of complete application takes up to 90 days. Time frames for processing of applications provide more information. A public hearing may be required by the Air Board if controversy arises or if requested by the local governing body, and in all cases where emissions of any one pollutant will increase by 100 tons per year or more. Permit is normally issued by the DEQ regional director if no public hearing is required by the Air Board.

Federal Operating Permits

Who must apply:

All major stationary sources are required to submit federal operating permit applications to the Department. Major stationary sources are defined in the Title V regulations in 9 VAC 5-80-60 C. Major stationary source includes the following:

1. Any stationary source that emits or has the potential to emit more than 10 tons per year of any one hazardous air pollutant or 25 tons per year of a combination of hazardous pollutants
2. Any stationary source that emits or has the potential to emit more than 100 tons/yr of any criteria pollutant.
3. Stationary sources or emission units located in ozone nonattainment areas meet the major source definition when potential emissions of NO_x or VOC exceed the following:
 1. Stationary sources located in moderate or marginal nonattainment areas become major if potential emissions equal or exceed 100 tons per year.
 2. Stationary sources located in serious nonattainment areas become major if potential emissions equal or exceed 50 tons per year.
 3. Stationary sources located in severe nonattainment areas become major if potential emissions equal or exceed 25 tons per year.
 4. Stationary sources located in extreme nonattainment areas become major if potential emissions equal or exceed 10 tons per year.

4. Stationary sources or emission units located in attainment areas designated as ozone transport regions become major when the potential to emit equals or exceeds 50 tons per year of VOC.
5. The requirement to get a Title V permit has been deferred for the Stationary Sources that follow:
 1. Area sources as defined in the MACT regulations.
 2. Stationary sources that would be required to get a Title V permit for the sole reason of being applicable to a NSPS standard.

State Operating Permits

Who must apply:

The state-operating permit is elective. There is not a requirement for any particular emissions unit or stationary source to get a state operation permit. State operating permits are either issued at the request of the owner or at the discretion of the Department.

State of OHIO

[Ohio Environmental Protection Agency Web Site](#)

[Ohio Non-attainment Counties](#)

[Obtaining an Air Permit – Emission Activity Category Forms – Stationary IC Engine Form Reporting form for Stationary Internal Combustion Engine](#)

Permit to Install & Operate: http://www.epa.ohio.gov/portals/27/genpermit/GP12_PTIO.pdf

Obtaining a Permit- The first step in obtaining a permit is to submit a permit application. Permits must be obtained prior to installation by submitting a [Permit-to-Install \(PTI\)/Permit-to-Install and Operate \(PTIO\)](#) application. All of the application materials are available for download by clicking on the link below.

Electronic Permit applications can be submitted using the [eBusiness Center: Air Services](#) in a variety of ways depending on the type of facility where the operations are located. Some facilities are required to submit applications electronically. For more information please see the [Air Services](#) web page. For those who can submit hard copy applications, they must be sent to the appropriate District Office or Local Air Agency ([DO/LAA](#)). [Download Permit Applications](#)

[Who signs](#) for permit applications, fee reports and other required permit reports?

Getting Your Permit Quickly

If I have to fill out the applications quickly what do I do?

1. Call the [DO/LAA](#) and discuss the project and get the correct forms.
2. Fill out [Section I](#) of the PTI/PTIO application form, [Section II](#) for each emissions unit, and the [Emissions Activity Category form](#) for each emissions unit using the instructions found in the application.
3. Submit the application to the [DO/LAA](#).

If I need to get my permit processed quickly what do I do?

1. Complete the above steps.
2. Call the [DO/LAA](#) and ask for rush processing.
3. Call [Mike Hopkins](#), Assistant Chief of Permitting at (614) 644-3611 to put your permit on the "rush" list. [Information on this process](#) is available on the DAPC website.
4. Call the Ohio EPA periodically to monitor the progress and to offer to help.

General Permit: Oil and Gas Well-Site Production Operations (**GP 12**) *Note: See “2013 Activity/Proposal” section below for pending permit updates.*

Obtaining a Permit- Begin by locating the model general permit (GP) of interest using the following steps:

- Click on the link for the model GP category of interest on the [Available Model General Permits](#) tab.
- Select the specific model GP of interest within the category desired by clicking on the link for the specific model GP of interest.

The applicant should begin by reviewing the "Qualifying Criteria" document for the model GP of interest. After determining that the source(s) qualifies based on the "Qualifying Criteria" document for the model GP of interest, the applicant should carefully review the terms and conditions of the model GP for which they are applying. The applicant should ensure they can comply with the requirements in the model GP as they are written and that they can continue to comply with all other permits previously issued at the source. The terms and conditions of a model GP cannot be modified for site specific conditions. However, the terms and conditions of a previously issued permit, for example a permit-to-install (PTI), can be modified if it is necessary in order for the source to comply with the terms and conditions of the model GP. If this is the case for your source, contact your [District Office or Local Air Agency](#) for additional information.

When the applicant is ready to apply, the following steps should be followed:

1. Complete and sign the Qualifying Criteria document. The same signatory for the application should sign this document.

2. Complete the application and any Emissions Activity Category (EAC) form(s). Be sure to read the application instructions for the specific model general permit for which you are applying. It will provide the applicant with information regarding which sections of the application and EAC form(s) must be completed. Have the signatory, as defined in OAC rule 3745-31-04(B), sign the application.
3. Include a cover letter that states specifically which model general permit you are applying for, using the "Source Description" and "MGP Number" contained on the "Qualifying Criteria" document.
4. Submit a hardcopy of all documents to the [District Office or Local Air Agency](#).
 IMPORTANT: You have the option of applying through [Ohio EPA's online Air Services](#). Applying online eliminates the need to sign and mail paper copies of these forms.
 Ohio expects to be able to issue the model General Permit within 45 days of receipt of a complete application.

Quick Facts/weblinks:

- Air Permit "Wizard" Tool- <http://epawebapps.epa.state.oh.us/PermitWizard/jsp/index.jsp>
- Steps to Obtain Ohio EPA Air Pollution Permits- <http://www.epa.state.oh.us/dapc/permits/obtainpe.aspx>
- Air Permit Database- <http://extapex.epa.state.oh.us/epaxp/f?p=840:10:481403057803578>
- General Permit Page- <http://www.epa.state.oh.us/dapc/genpermit/genpermits.aspx>
- Current Air Quality Map- <http://wwwapp.epa.ohio.gov/gis/mapportal/>
- O&G Well Locator- <http://oilandgas.ohiodnr.gov/well-information/oil-gas-well-locator>
- Air Services Training- http://ohioepa.custhelp.com/app/answers/detail/a_id/1642
- Ohio EPA Q&A- <http://ohioepa.custhelp.com/app/answers/list/c/4>
- How is drilling in the Marcellus and Utica Shales regulated by Ohio EPA?- <http://epa.ohio.gov/MarcellusandUticaShale.aspx>

Detailed Summary:

On March 28, 2012 the state approved updates to the *Ohio Revised Code* (ORC) Chapter 1509 and associated regulations which govern oil and gas operations in Ohio, and establish the regulatory scheme under which the Ohio Department of Natural Resources (ODNR), through its Division of Oil and Gas Resources Management, regulates such activities.

The ORC provides ODNR-DOGRM with authority to implement any additional regulations and permit conditions for wells and associated facilities based on site-specific conditions necessary to protect the environment and public health and safety. For more information, visit www.ohiodnr.com/mineral/shale/tabid/23415/Default.aspx.

Air Permits for Emission Sources – General Overview

"Before an air pollution source may be constructed in Ohio, the applicant/facility owner must obtain an air permit-to-install-and-operate (PTIO). The Division of Air Pollution Control (DAPC) has developed model general permits-to-install (GP) and model general permits-to-install and operate for select sources in Ohio. The regulations for general permits can be found in OAC rule 3745-31-29."

"Note, however, if you are getting a case-by-case permit, say, for instance, for a mid-stream facility, you may need to obtain the permit **before** you do **any** construction (including pouring concrete and other activities). Talk to your District Office or Local Air Agency permit writer about this issue when you first contemplate installing such a facility (see OAC rule 3745-31-33, at <http://www.epa.ohio.gov/portals/27/regs/3745-31/3745-31-33f.pdf>)."

Ohio EPA's Division of Air Pollution Control (DAPC) requires a permit-to-install and operate (PTIO) for units or activities that emit air pollutants. Affected sites may have several air emission sources, including:

- dehydration systems;
- natural gas-fired and diesel engines;
- unpaved roadways;
- petroleum liquids and recovered-water storage tanks;
- natural gas-fired turbine generator sets;
- combustion devices/flares; and
- equipment/pipeline leaks.

"A PTIO outlines technical and design requirements and pollutant limits necessary for compliance with air pollution laws and rules. *This permit document is issued to Non-Title V and Synthetic Minor Title V facilities.* Permit-to-install and operate (PTIO) is a relatively recent permit document type. Effective June 30, 2008, Ohio EPA began issuing a single PTIO for an air contaminant source rather than a PTI,

followed by a separate permit-to-operate (PTO) for Non-title V and Synthetic Minor Title V facilities. The PTIO provides monitoring and reporting requirements into a single document for each emissions source.

General PTIO Conditions:

- To be issued to a **non-Title V** facility
- The renewal period for the PTIO is 10 years. Renewal period can be shortened due to several factors however.
- Ohio EPA conducts an inspection of the air pollution source to verify physical evidence of compliance with the emission standards. This includes visible emission evaluations, odor evaluations, records review and an evaluation of the physical condition of the equipment.
- Reporting Requirement: Facilities with PTIOs must submit an annual permit evaluation report (PER) to Ohio EPA for all air contaminant sources.”
- Applicable Emissions Limitations and/or Control Requirements

The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. *Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.*

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 60, Subpart JJJJ In accordance with 40 CFR	Engines shall either be certified to the applicable Part 60 Subpart JJJJ emission standards and/or the exhaust emissions shall not exceed:

	<p>60.4230, the engines in this emissions group are subject to the New Source Performance Standards (NSPS) for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE).</p> <p>40 CFR 60.4233(e)</p> <p>40 CFR 60.4231(a), (d), and (e)-mfg.</p> <p>Table 1 to Part 60, Subpart JJJJ</p>	<p>the applicable emission standards for nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC) as identified in Table 1 to Part 60, Subpart JJJJ; or</p> <p>for engines less than or equal to 25 HP, the applicable standards from 40 CFR Part 90 or Part 1054; or</p> <p>for engines greater than 25 HP and less than 100 HP, the applicable standards from Part 1048.</p> <p>Where the total summation of the SI ICE HP is equal to or less than 1,300 HP, the natural gas engine emissions shall not exceed the worst-case emission standards for engines of 100 HP or greater from Table 1 to the subpart²:</p> <p>2.0 grams of NOx per horsepower hour (2.0 g NOx/HP-hr) or 160 ppmvd at 15% O₂;</p> <p>4.0 grams of CO per horsepower hour (4.0 g CO/HP-hr) or 540 ppmvd at 15% O₂; and</p> <p>1.0 gram of VOC per horsepower hour (1.0 g VOC/HP-hr) or 86 ppmvd at 15% O₂;</p> <p>Where the total summation of the SI ICE HP is greater than 1,300 HP, the natural gas engine emissions shall not exceed the 2nd level emission standards from Table 1 to the subpart:</p> <p>1.0 grams of NOx per horsepower hour (2.0 g NOx/HP-hr) or 82 ppmvd at 15% O₂;</p> <p>2.0 grams of CO per horsepower hour (4.0 g CO/HP-hr) or 270 ppmvd at 15% O₂; and</p> <p>0.7 gram of VOC per horsepower hour (1.0 g VOC/HP-hr) or 60 ppmvd at 15% O₂.</p> <p>See b)(2)c., d. and e.</p>
b.	OAC rule 3745-17-11(B)(5)	<p>Particulate Emissions (PE) shall not exceed 0.310 lb/MMBtu for stationary small internal combustion engines rated less than or equal to 600 HP and 0.062 lb/MMBtu for stationary large internal combustion engines rated over 600 HP.</p>
c.	OAC rule 3745-18-04	<p>The SO₂ emission rate from well site natural gas</p>

		exceeds the limit for sweetened pipe-line quality fuel gas; therefore the SO ₂ emissions limit shall be based on sour gas with a maximum H ₂ S content of 250 ppmv.
d.	ORC 3704.03(T)	Combined exhaust emissions from all SI engines on site shall not exceed: 19.6 tons PE per rolling 12-month period; 25.1 tons NO _x per rolling 12-month period; 50.2 tons CO per rolling 12-month period; and 12.5 tons VOC per rolling 12-month period.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Compliance with any applicable limit found in 40 CFR Part 60, Subpart JJJJ, for pollutants less than ten tons per year, taking into account any controls. Emissions of sulfur dioxide (SO ₂) shall not exceed 2.6 tons/year based on a maximum H ₂ S content of 250 ppmv for sour gas. See b)(2)a.
g..	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
h.	40 CFR Part 60 Subpart JJJJ 40 CFR 60.4233 and OAC 3745-31-05(F)	All SI ICE shall meet all applicable NSPS requirements where the model year is subject to these emission standards and all older model year engines shall be fitted with a control device (where required) and shall be demonstrated to meet the NSPS emission standards as applicable to 2007 and later model year engines of the same size/power.

Note: The worst case emission standards for natural gas-fired engines between 100 and less than 500 HP were used to establish the emissions limitation. However, each engine shall be required to meet the applicable emission standards under 40 CFR Part 60, Subpart JJJJ, based on the manufacture date and size engine, or based on the size engine in Table 1 to the subpart for pre-NSPS engines retrofitted with a control device.

Additional Terms and Conditions (not all inclusive)

“The gram per horsepower-hour emissions limitations are based on the emission standards from Table 1 of NSPS JJJJ for natural gas-fired engines. In order to maintain the carbon monoxide (CO) emissions below major source thresholds, where the sum of the total HP of the SI ICE exceeds 1300 HP, the facility SI engines shall have a manufacturing date of no earlier than January 1, 2011 for engines less than 500 HP

or no earlier than July 1, 2010 for engines equal to or greater than 500 HP. However, each engine installed at the natural gas production site and subject to a more stringent standard, based on the model year and engine's size, must be demonstrated to comply with the applicable emissions standard established in 40 CFR 60.4233."

A PTIO is required for all emission sources, unless specifically exempt under the Ohio Administrative Code (OAC). **Current exemptions include:**

- 1) "De minimis" exemption (**OAC rule 3745-15-05**): This applies to sources that emit less than 10 pounds per day of any air contaminant and less than one ton per year of any hazardous air pollutant (or combination of hazardous air pollutants). If you are claiming a de minimis exemption for any air emission source, you are not required to notify Ohio EPA, however must keep records demonstrating that the source meets the exemption. You contact your local Ohio EPA district office or Local Air Agency (LAA) about the source. They can review your de minimis calculations and put information in the file about your exemption to assist future/new inspectors that may be reviewing your site information.
- 2) Permanent rule exemption (**OAC rule 3745-31-03(A)(1)**): This rule includes a list of over 45 emission sources that are exempt from permitting, including small boilers, detergent-based parts washers, small storage tanks and other sources that meet certain size criteria or have minimal air emissions. You are not required to provide notification to Ohio EPA for sources that fall under this exemption.
- 3) Permit-by-rule (**OAC rule 3745-31-03(A)(4)**): The permit-by-rule (PBR) covers several categories of small emission sources. You are not required to get a permit for a PBR source, but must comply with the emission limits, operational restrictions and recordkeeping specified in the rule. For sources covered under the PBR, you must file a one-page notification with Ohio EPA.

For more information:

PTIO instructions/forms for stationary applications:

www.epa.state.oh.us/dapc/genpermit/Oil_Gas_GP12.aspx

PTIO Permit Template: www.epa.ohio.gov/portals/27/genpermit/GP12_PTIO.pdf

PTIO Program Documents: http://www.epa.state.oh.us/dapc/regs/3745_31.aspx

General Permit: To improve its efficiency in processing permit applications, Ohio EPA has developed air general permits for a wide variety of business sectors, including a general permit for production operations at shale gas well sites. This general permit covers a variety of emission sources found at most well sites, including internal combustion engines, generators, dehydration systems, storage tanks and flares. It contains emissions limits, operating restrictions, monitoring and reporting requirements. Applicants meeting the qualifying criteria can apply for the general permit. Ohio EPA's review and approval process for the general permit is completed within weeks.

"A general permit is the same as any permit-to-install or permits-to-install and to operate (including emissions limits) that DAPC issues except all the terms and conditions of the permit have been developed in advance. This is referred to as the "model general permit". A potential applicant can review the model general permit qualifying criteria and terms and conditions and then complete the application and sign the qualifying criteria document if they believe they qualify for that model GP. DAPC will review the applicant's information to confirm they meet the qualifications and then issue the model GP to the applicant. At that point it becomes the applicants "general permit." All the terms and conditions of the "model general permit" remain the same when it is issued as the "general permit." The general permit will include a cover page that identifies facility and emission unit specific information."

“If you obtain the oil & gas well-site General Permit, the final permit must be obtained before the permittee hooks up any utilities to any piece of equipment regulated under the permit. Permittees can install the equipment, but they cannot hook up utilities, piping or duct work, nor operate the equipment, until the final permit is issued.”

For more information:

General Permit Notice: <http://epa.ohio.gov/portals/47/nr/2012/february/ShaleGasProduction.pdf>

General Permit Program- <http://www.epa.ohio.gov/dapc/genpermit/genpermits.aspx>

2013 Updates:

2013 Activity/Proposals: In early 2013, the Ohio EPA Division of Air Pollution Control (DAPC) released draft proposals for changes to O&G related General Permit 12, among other proposals. Ohio EPA proposed revisions for GP12 that includes providing two alternative permits titled GP12.1 & GP12.2. These draft proposals can be found at the website below. These will replace GP12. Comments for these proposals were due on March 22, 2013. According to the Ohio EPA “Final” versions (not posted yet) of the GP12.1 & GP12.2 will be released by the end of July 2013.

Draft General Permits: Split current GP12 into two versions for added flexibility. Estimated to be available by end of July 2013.

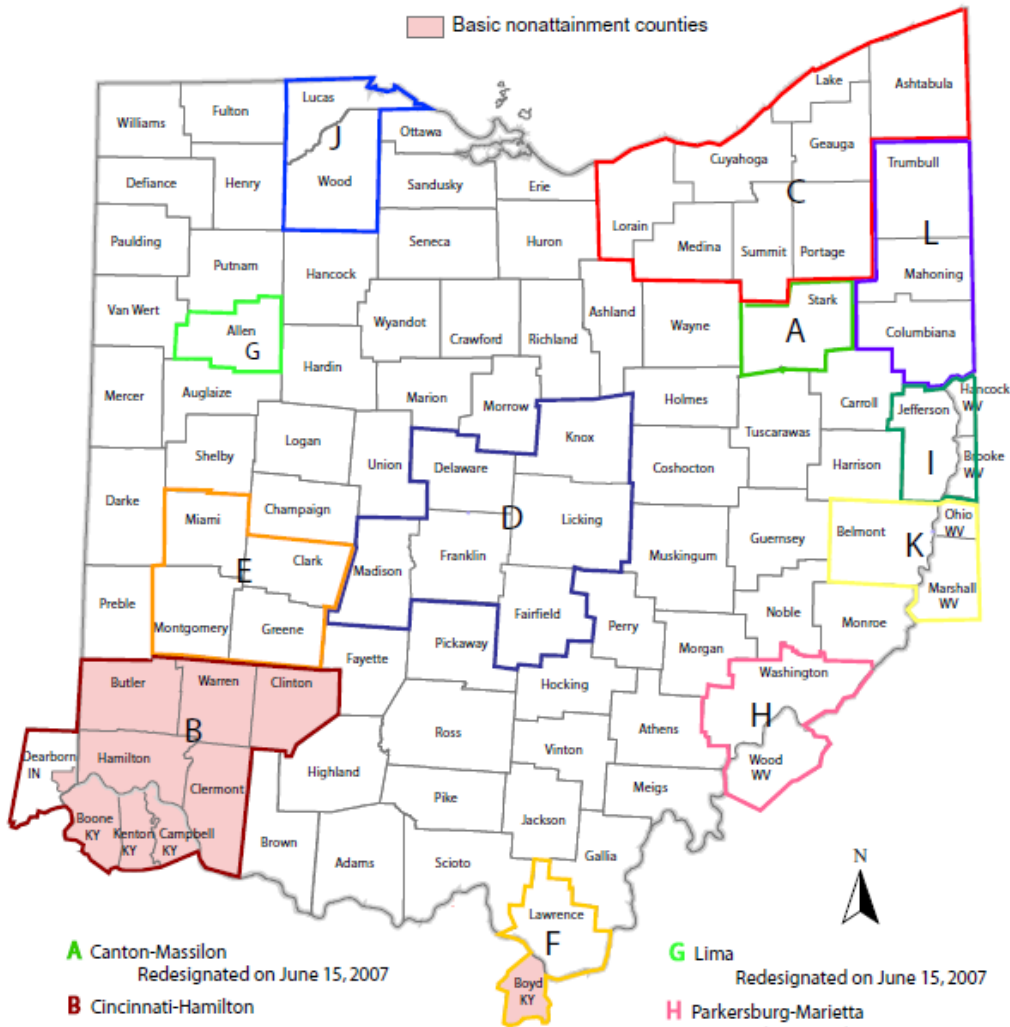
- 1) Same as prior (**GP12.1**)
- 2) (**GP12.2**) Total HP reduced from 1800HP to 1000HP *to allow larger flare sizes* (increased from 10 to 32mmBTU) for same overall emissions.

For more information on 2013 Updates see the following weblinks:

- March 8, 2013 Webinar, General Permit Update- http://ohioepa.custhelp.com/app/answers/detail/a_id/2493
- Proposed GP Update and PBR- <http://www.epa.state.oh.us/dapc/genpermit/genpermits.aspx>

Ohio 1997 Eight-Hour Ozone Nonattainment Areas

Basic nonattainment counties



- A** Canton-Massillon
Redesignated on June 15, 2007
- B** Cincinnati-Hamilton
- C** Cleveland-Akron-Lorain
Redesignated on September 15, 2009
- D** Columbus
Redesignated on September 15, 2009
- E** Dayton-Springfield
Redesignated on August 13, 2007
- F** Huntington-Ashland
- G** Lima
Redesignated on June 15, 2007
- H** Parkersburg-Marietta
Redesignated on June 15, 2007
- I** Steubenville-Weirton
Redesignated on June 15, 2007
- J** Toledo
Redesignated on August 9, 2007
- K** Wheeling
Redesignated on June 15, 2007
- L** Youngstown-Warren
Redesignated on June 12, 2007

State of WEST VIRGINIA

[W. VA Dept of Environmental Protection Web Site](#)

[W. VA Title 45 Series 16 - Performance Standards for New Stationary Sources](#)

45CSR13

**TITLE 45
LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY
SERIES 13
PERMITS FOR CONSTRUCTION, MODIFICATION, RELOCATION
AND OPERATION OF STATIONARY SOURCES OF AIR POLLUTANTS, NOTIFICATION
REQUIREMENTS, ADMINISTRATIVE UPDATES, TEMPORARY PERMITS, GENERAL
PERMITS, PERMISSION TO COMMENCE CONSTRUCTION, AND PROCEDURES FOR
EVALUATION**

§45-13-1. General.

1.1. Scope. -- The purpose of this rule is to set forth the procedures for stationary source reporting, and the criteria for obtaining a permit to construct and operate a new stationary source which is not a major stationary source, to modify a non-major stationary source, to make modifications which are not major modifications to an existing major stationary source, to relocate non-major stationary sources within the state of West Virginia, and to set forth procedures to allow facilities to commence construction in advance of permit issuance. Such construction, modification, relocation and operation without a required permit is a violation of this rule. This rule also establishes the requirements for obtaining an administrative update to an existing permit, a temporary permit or a general permit registration, and for filing notifications and maintaining records of changes not otherwise subject to the permit requirements of this rule. This rule does not apply to nonroad engines, nonroad vehicles, motor vehicles, or other emission sources regulated under Subchapter II of the federal Clean Air Act; provided, however that the Secretary may regulate such sources pursuant to another rule promulgated for that purpose.

1.2. Authority. -- W. Va. Code §22-5-1 et seq.

1.3. Filing Date. -- May 8, 2009.

1.4. Effective Date. -- June 1, 2009.

1.5. Former Rules. -- This legislative rule amends and replaces 45CSR13 "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits and Procedures for Evaluation" which was filed on April 21, 2003, and which became effective June 1, 2003.

2.6.a. Unless otherwise determined by the Secretary, emissions from a de minimis source shall not be included in determining the "potential to emit" for purposes of applicability under this rule. However, in implementing the permitting program under this rule, the Secretary may require emissions information for de minimis sources for inclusion in a permit review. Sources located in nonattainment areas may not be eligible to use Table 45-13B for the pollutant or its precursors for which the area is in nonattainment. Inclusion of an emissions unit in Table 45-13B does not preclude the source's duty to comply with the W. Va. Code §22-5-1 et seq. and all applicable state and federal regulations, including 45CSR4.

2.15. "Major modification" shall have the meanings ascribed to this term in 45CSR14 or 45CSR19 depending upon the attainment status, with respect to the National Ambient Air Quality Standards, of the area in which a particular stationary source is located.

2.16. "Major stationary source" shall have the meaning ascribed to this term in 45CSR14, 45CSR19, or 45CSR30.

2.17. "Modification" for the purpose of this rule means any physical change in or change in the method of operation of any existing stationary source, excluding any emissions unit which meets or falls below the criteria delineated in Table 45-13B, which:

2.17.a. Results in an emissions increase of six (6) pounds per hour and ten (10) tons per year or more, or more than 144 pounds per calendar day, of any regulated air pollutant;

2.19.a. Notwithstanding the provisions of subsection 2.19, any natural gas compressor which is equipped with a catalytic converter which is integral to the unit shall have its potential to emit determined taking into consideration reductions achieved by the catalytic converter. Said catalytic converter must be interlocked in such a way as to not allow operation of the engine without operation of the catalytic converter. The catalytic converter shall have the catalyst replaced every 45,000 hours of operation or every ten (10) years, whichever is earlier, as established by records kept by the source, unless the Secretary approves an alternative method of verifying catalyst effectiveness.

2.19.b. Upon written petition by a facility that an air pollution control device is inherent to the emission unit, the Secretary may rule on a case-by-case basis that potential to emit may be determined taking into consideration reductions achieved by the control device. "Inherent to the emission unit" shall mean that the emission unit cannot be operated without the air pollution control device being properly maintained.

2.20. "Regulated air pollutant" for the purpose of this rule means the following:

2.20.a. Nitrogen oxides (NO_x), volatile organic compounds (VOC), or particulate matter;

2.20.b. Any air pollutant for which a national ambient air quality standard has been promulgated including particulate matter (PM₁₀), sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone and lead or lead compounds;

2.20.c. Any air pollutant listed on table 45-13A;

2.20.d. Any air pollutant subject to an emission standard promulgated by the Secretary including mineral acids in 45CSR7;

2.20.e. Any air pollutant subject to a new source performance standard (NSPS) promulgated under section 111 of the Clean Air Act [including section 111(d)], which requires new and modified sources to satisfy emissions standards, work practice standards and other requirements;

5.12. The Secretary may develop and issue Class I and Class II general permits under this rule authorizing the construction, modification, relocation and operation of a category of sources by the same owner or operator or involving the same or similar processes or pollutants upon the terms and conditions specified in the general permit.

5.12.a. Class I general permits may be issued by the Secretary for those types of sources considered less significant than sources for which the Secretary issues Class II general permits. In making this determination as to significance, the Secretary shall consider the nature and volume of emissions from the source, whether the source operates on a continuous or an intermittent basis, the proximity of the source to any location occupied by the public and the length of time the source is expected to remain in place. The designation of Class I or Class II for a general permit shall be made at the time the permit goes through public comment and adoption for the source category governed by the general permit.

5.12.b. Class I and II general permits shall be subject to public notice requirements and application fees as specified under sections 8 and 12, respectively.

§45-13-7. Modeling.

7.1. Any source required to obtain a permit pursuant to this rule may be required to conduct modeling to assist the Secretary in determining whether the proposed construction, modification, relocation and operation will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment or be inconsistent with the intent and purpose of this rule or W. Va. Code §22-5-1 et seq. Any modeling required under

this subsection shall be conducted in accordance with 40CFR Part 51, Appendix W, or an alternative modeling protocol approved by the Secretary.

§45-13-8. Public Review Procedures.

§45-13-12. Permit Application Fees.

12.1. Applications for permits required under sections 5 and 11 shall be subject to the fee provisions of section 3 of 45CSR22, provided that Class I general permit registrations shall be subject to a \$250 application fee and Class II general permit registrations shall be subject to a \$500 application fee, in lieu of the \$1000 fee required under subdivision 3.4.a of 45CSR22; provided, however, that a source applying for a Class I general permit which qualifies as a small business under section 507(c) of the federal Clean Air Act shall not be subject to any application fees. The provisions of subdivision 3.4.b of 45CSR22 relating to additional fees shall not be applicable to sources applying for Class I general permits but shall be applicable to sources applying for Class II general permits. Applications for permits under section 4 shall be subject to the fee provisions of section 4.

16.14. Application fee. A permittee who submits an application to commence construction in advance of permit issuance under this section shall pay a fee of \$200 for each application submitted to cover a portion of the administrative costs of implementing this section.

2.29. "Federally enforceable" means all limitations and conditions which are enforceable by the Administrator including those requirements developed pursuant to 40 CFR Parts 60, 61 and 63, rules of the approved West Virginia State Implementation Plan, any permit requirements established pursuant to 40 CFR §52.21 or this rule, and any operating permits issued under a program that is incorporated into the State Implementation Plan and expressly requires adherence to any permit issued under such program.

2.39. Major emissions unit means:

2.39.a. Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant in an attainment area; or

2.39.b. Any emissions unit that emits or has the potential to emit the PAL pollutant in an amount that is equal to or greater than the major source threshold for the PAL pollutant as defined by the CAA for nonattainment areas. For example, in accordance with the definition of major stationary source in §182(c) of the CAA, an emissions unit would be a major emissions unit for VOC if the unit is located in a serious ozone non attainment area and it emits or has the potential to emit 50 or more tons of VOC per year.

§45-14-5. Area Classification.

5.1. Dolly Sods Wilderness Area and Otter Creek Wilderness Area are designated as Class I Areas;

5.2. The Spruce Knob-Seneca Rocks National Recreational Area, the Cranberry National Wilderness, and the New River Gorge National Scenic River are designated as Class II Areas; and

5.3. The remainder of the State of West Virginia is designated as a Class II Area.

45CSR16

TITLE 45

LEGISLATIVE RULE

DEPARTMENT OF ENVIRONMENTAL PROTECTION

AIR QUALITY

**SERIES 16
STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**

§45-16-1. General.

1.1. Scope. -- This rule establishes and adopts standards of performance for new stationary sources promulgated by the United States Environmental Protection Agency pursuant to section 111(b) of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement the standards of performance for new stationary sources set forth in 40 CFR Part 60. The Secretary hereby adopts these standards by reference. The Secretary also adopts associated reference methods, performance specifications and other test methods which are appended to these standards.

1.2. Authority. -- W.Va. Code §22-5-4.

1.3. Filing Date. -- May 8, 2009.

1.4. Effective Date. -- June 1, 2009.

1.5. Incorporation By Reference. -- Federal





Counterpart Regulation. The Secretary has determined that a federal counterpart rule exists, and in accordance with the Secretary’s recommendation, with limited exception, this rule incorporates by reference 40 CFR Parts 60 and 65, to the extent referenced in 40 CFR Part 60, July 1, 2008.

1.6. Former Rules. -- This legislative rule amends 45CSR16 “Standards of Performance for New Stationary Sources” which was filed April 23, 2008, and which became effective June 1, 2008.

Natural Gas Compressor Station General Permit Number G30-D

The requirements and conditions of this general permit address the prevention and control of regulated air pollutants from eligible natural gas compressor stations. The Natural Gas Compressor Station General Permit benefits the natural gas industry by incorporating all applicable air quality regulations into a single general permit.






General Permit G30-D was issued April 23, 2008.

General Permit Number G30-D			
Application Instructions and Forms			
Fact Sheet			
General Permit G30-D Registration			

Natural Gas Compressor Station General Permit Number G33-A

The requirements and conditions of this general permit address the prevention and control of regulated air pollutants from eligible stationary spark ignition internal combustion engines (SI ICE) greater than or equal to 25 hp and less than or equal to 500 hp. The SI ICE general permit benefits the natural gas industry by incorporating applicable air quality regulations from 40CFR60 Subpart JJJ into a Class I general permit.





General Permit G33-A was issued June 4, 2009.

General Permit Number G33-A			
Application Instructions and Forms			
Fact Sheet			
General Permit G33-A Registration			

Natural Gas Compressor Station General Permit Number G35-A

The requirements and conditions of this general permit address the prevention and control of regulated air pollutants from eligible natural gas compressor stations with glycol dehydration units, flares or other specified control devices. The Natural Gas Compressor Station general permit benefits the natural gas industry by incorporating all applicable air quality regulations into a single general permit.

General Permit G35-A was issued April 17, 2008.









General Permit Number G35-A			
Application Instructions and Forms			
Fact Sheet			
General Permit G35-A Registration			







Title V Guidance and Forms

[Click here for Title V Revision Guidance and Forms](#) Initial/Renewal Permit Application Forms

Below are links to Title V application forms. ALL initial and renewal Title V operating permit applications MUST BE submitted on these forms. Any application currently in house, but not processed by January 1, 2005, does not have to be resubmitted in the new format.

- The forms requiring data entry were setup by using fields of a specified length. If you are entering data that exceeds the specified length, please use the "Tab" key to go to the next line (another field) which should allow you to continue. It is best to use the "Tab" key instead of the "Enter" key in all instances.
- Rather than submit volumes of application forms, applications should be submitted on readable CDs (one CD per application copy) with the exception of the area map, plot plan, process flow diagrams and forms requiring a signature.
- Unlike AIR4, these applications do not contain a build-in Confidential Business Information (CBI) protection factor. If your application contains CBI, you must submit two CDs per application--one confidential copy and a separate, non-confidential application. This ensures no CBI is uploaded to our website.
- "Growing pains" when using these forms are expected. Please feel free to contact us with questions or comments on how to improve the forms.
- There may be additions to these instructions at any time; however, we will always maintain the most current version here, with revision dates.

	General instructions (NEW)	1/08
	List of Title V permit application forms	4/07
	Insignificant activities checklist	
	Title V permit application checklist for administrative completeness	1/07
	Precautionary notice - Claims of Confidentiality	3/02
	Title V general application forms	2/10
	Plot plan guidelines	3/04
	Attachment D - Equipment table	4/07

	General instructions (<i>NEW</i>)	1/08
	Attachment E - Emission unit form(s)	7/07
	Attachment F - Schedule of compliance form(s)	8/04
	Attachment G - Air pollution control devise form(s)	1/07
	Attachment H - Compliance Assurance Monitoring (CAM) plan form(s)	10/06
	CAM plan checklist - used to help ensure approvability of submitted CAM plan	7/06

Natural Gas General Permit

Registration Guidance

Request for registration under general permit R30-NGGP-2007.




If a source **HAS** submitted an AIR4 application, then submit:

Updates using new Title V application forms. In the equipment table mention which sections of the General Permit are applicable to the facility and individual equipment.

If a source **HAS NOT** submitted an AIR4 application or submitted new Title V application forms, then submit:

New Title V application forms. In the equipment table, mention which sections of the General Permit are applicable to the facility and individual equipment.

The Title V Natural Gas General Permit became final on **June 14, 2007**.

	Final Natural Gas General Permit
	Draft Registration Form
	Final Natural Gas General Permit Fact Sheet

45CSR34

TITLE 45

LEGISLATIVE RULE DEPARTMENT OF ENVIRONMENTAL PROTECTION

AIR QUALITY

SERIES 34

EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

§45-34-1. General.

1.1. Scope. -- This rule establishes and adopts a program of national emission standards for hazardous air pollutants (NESHAPS) and other regulatory requirements promulgated by the United States Environmental Protection Agency pursuant to 40 CFR Parts 61, 63 and section 112 of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the eight substances listed as hazardous air pollutants in 40 CFR §61.01(a), or one or more of the substances listed as hazardous air pollutants in section 112(b) of the CAA. The Secretary hereby adopts these standards by reference. The Secretary also adopts associated reference methods, performance specifications and other test methods which are appended to these standards.

1.2. Authority. -- W.Va. Code §22-5-4.

1.3. Filing Date. -- May 8, 2009.

1.4. Effective Date. -- June 1, 2009.

1.5. Incorporation by Reference. – Federal Counterpart Regulation. The Secretary has determined that a federal counterpart regulation exists, and in accordance with the Secretary’s ecommendation, with limited exception, this rule incorporates by reference 40 CFR Parts 61, 63 and 65, to the extent referenced in 40 CFR Parts 61 and 63, effective July 1, 2008.

1.6. Former Rules. -- This legislative rule amends 45CSR34 - “Emission Standards for Hazardous Air Pollutants” which was filed April 23, 2008, and which became effective June 1, 2008.

State of KENTUCKY

[Kentucky Dept for Environmental Protection Web Site](#)

[Adoption of NSPS by Kentucky](#)

[DEP form and Permit application library](#)

[Permit application form for Heat Exchangers, Turbines and Internal Combustion Engines](#)

[Kentucky Permitting/Registration Thresholds](#)

[State Implementation Plans Revisions](#)

State of Arkansas

See:

<http://www.adeg.state.ar.us/>

The ADEQ website, [adeg.state.ar.us](http://www.adeg.state.ar.us), provides a detailed guide to the rules and regulations for permitting and operating of oil and natural gas sites in the state.

Rule 18, 19, and 26 are the primary controls for permitting and operation. Rule 31 addresses the Non-Attainment New Source Review Requirements.

There are two non-attainment designations and they apply to Crittenden County in north east Arkansas, and a central Arkansas area composed of Pulaski, Saline, Faulkner, and Lonoke Counties.

Compliance Testing and Monitoring head, Heinz Braun stated, “We test all engines in accordance with Title 40, Part 60 Subpart JJJJ.”

The following natural gas and oil exploration production site equipment, separators, dehydration units, natural gas fired compressors, and pumping units, are exempt from permitting if not subject to federal standards (NSPS, NESHAP [excluding RICE MACT ZZZZ for area sources and NSPS JJJJ]). This does not include compressors located on natural gas transmission pipelines.

Sour Gas Processing Plants are required to get a permit, regardless of the actual emissions.

A general permit for Sweet Natural Gas sites not exempt from permitting is available at the following link (current under review for renewal):

http://www.adeg.state.ar.us/air/branch_permits/pdfs/1868-AGP-000-NOI.pdf

- *If The PTE is > 50 tpy for NOx or CO, the engines shall be tested within 180 days of startup and every 5 years thereafter using department approved analyzers or EPA testing.*

Permits in General

Do I Need A Permit?

Permitting and Registration thresholds are based on facility wide emissions and operations. Once a facility is required to obtain a permit/registration, all emission sources need to be accounted for unless the source qualifies as insignificant under Appendix A, Group B (see tables at end of these instructions).

Unless listed below, a facility does not require an air permit or registration.

You must submit a Registration (Regulation 18.315) if your emissions are:

- 40 tons per year or more but less than 75 tons per year of carbon monoxide;
- 25 tons per year or more but less than 40 tons per year of nitrogen oxides;
- 25 tons per year or more but less than 40 tons per year of sulfur dioxide;
- 25 tons per year or more but less than 40 tons per year of volatile organic compounds;
- 15 tons per year or more but less than 25 tons per year of particulate matter;
- 10 tons per year or more but less than 15 tons per year of PM₁₀;
- 1 ton per year or more but less than 2 tons per year of any single hazardous air pollutant; or
- 3 tons per year or more but less than 5 tons per year of a combination of hazardous air pollutants

You must obtain a minor source permit if your actual emissions are:

- 75 tons per year or more but less than 100 tons per year of carbon monoxide;
- 40 tons per year or more but less than 100 tons per year of nitrogen oxides;

- 40 tons per year or more but less than 100 tons per year of sulfur dioxide;
- 40 tons per year or more but less than 100 tons per year of volatile organic compounds;
- 25 tons per year or more of particulate matter;
- 15 tons per year or more but less than 100 tons per year of PM₁₀;
- 0.5 tons per year or more but less than 10 tons per year of lead;
- 2.0 ton per year or more but less than 10 tons per year of any single hazardous air pollutant;
- 5.0 tons per year or more but less than 25 tons per year of any combination of hazardous air pollutants; or
- 25 tons per year or more of any other air contaminant

You must obtain a minor source permit if your facility is one of the following:

- Medical waste incinerators;
- Rendering plants;
- Pathological waste incinerators, including crematories;
- Chemical process plants;
- Hazardous waste treatment storage or disposal facilities;
- Sour gas process plants;
- Lead acid battery recycling facilities;
- Charcoal plants; or
- The Director determines a permit is needed to protect the public health and welfare or to assist in the abatement or control of air pollution.

You must obtain a minor source or Title V permit if you facility is subject to a rule under 40 CFR Part 60, Part 61, or Part 63 as of June 27, 2008, except for:

- 40 CFR Part 60, Subpart AAA (Wood Stoves);
- 40 CFR Part 60, Subpart JJJ (Petroleum Dry Cleaners);
- 40 CFR Part 63, Subpart M (Perchloroethylene Dry Cleaners);
- 40 CFR Part 63, Subpart Q (Industrial Cooling Towers);
- Sources subject to 40 CFR Part 60, Subpart Dc (Steam Generating Units) which only burn gas;
- **40 CFR Part 63, Subpart ZZZZ (Stationary Reciprocating Internal Combustion Engines) for non-Part 70 sources (minor sources);**
- 40 CFR Part 63, Subpart WWWW (Hospital Ethylene Oxide Sterilizers);
- 40 CFR Part 63, Subpart CCCCC (Gasoline Dispensing Facilities);
- 40 CFR Part 60, Subpart IIII (Stationary Compression Ignition Internal Combustion Engines) for engines with a displacement of less than 30 liters per cylinder;
- **40 CFR Part 60, Subpart JJJJ (Stationary Spark Ignition Internal Combustion Engines);** and
- 40 CFR Part 63, Subpart HHHHHH (Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources).

You must obtain a Title V (Major Source) permit if your emissions are:

- 100 tons per year or more of carbon monoxide;
- 100 tons per year or more of nitrogen oxides;
- 100 tons per year or more of sulfur dioxide;
- 100 tons per year or more of volatile organic compounds;
- 100 tons per year or more of PM₁₀;
- 10 tons per year or more of lead.
- 10 ton per year or more of any single hazardous air pollutant;
- 25 tons per year or more of any combination of hazardous air pollutants; or
- 100 tons per year or more combined of the listed greenhouse gases (GHGs) and 100,000 tons per year or more of CO₂e. See the section on GHGs in these instructions.

You must obtain a Title V (Major Source) permit for the following sources/facilities:

- Certain other non-major sources may require an operating permit. This generally includes sources subject to a Federal regulation that specifically state that a Title V permit is required in the rule. See Chapter 3 Sec. 26.302 of Regulation #26 for more information.

State of Kansas

Quick Summary:

Minor Sources: Oil and natural gas production facilities and compressor stations which are located at an area source for HAP emissions and are considered minor sources for Title V purposes are required to obtain a construction permit, but **do not** require an operating permit. *Not applicable to synthetic minor sources.* Minor sources are required to:

1. Complete the form "Minor Source Oil and Natural Gas Production Facilities and Compressor Stations" following all instructions. The form can be found [here](#). (**Note: This permit option was released June 6, 2013**)

Synthetic Minor Source: Oil and natural gas production facilities and compressor stations which are classified as Synthetic Minor Source (*utilizes emissions controls to reduce the potential-to-emit of the source below the major source thresholds*) must obtain both a construction and operating permit. Synthetic Minor Sources are required to:

1. Complete a Construction Permit Form (check the "applying for approval" option) . Form is located [here](#). No fee is required for a "Construction Permit Approval" under K.A.R. 28-19-300(b).
2. A "equipment description form" must be submitted along with the "Construction Permit Approval". Form is located [here](#). Select the "Form 8-1.0" for Stationary Internal Combustion Engine.
3. Complete the form "Class II Operating Permit Application and Instructions" that can be found [here](#).
4. As an alternative to step 3, complete the form "Permit-By-Rule Application for Reciprocating Engines" that can be found [here](#).

Major/Title V Sources: Oil and natural gas production facilities and compressor stations which are located at an "major source/Title V" source must obtain both a construction and operating permit. Major Sources are required to:

1. Complete a Construction Permit Form (check the "applying for permit" option) . Form is located [here](#). A fee is required for a "Construction Permit Approval" under K.A.R. 28-19-300(a). The fee calculation method is located on the last page.
2. A "equipment description form" must be submitted along with the "Construction Permit. Form is located [here](#). Select the "Form 8-1.0" for Stationary Internal Combustion Engine.
3. Complete the form "Class I (Title V) Operating Permit Application and Instructions" that can be found [here](#).

Quick Facts/weblinks:

- Statutes and Regulations: <http://www.kdheks.gov/bar/regs.html>
- Permit Forms and Applications: <http://www.kdheks.gov/air-permit/download.html>
- FAQ: <http://www.kdheks.gov/air-permit/faq.html>
- Construction Permits and Approvals Information Sheet: http://www.kdheks.gov/air-permit/forms/Informational_Sheet.pdf
- Interactive O&G Well Locator: <http://maps.kgs.ku.edu/oilgas/index.cfm>

Detailed Summary:

Type of Construction Permits/Approval:

- **Construction Permit Form-** *Generally applies to a Title V Facility.* A permit to construct or modify an air emission source. Construction permits approve the construction, installation or modification of proposed sources of air emissions. Operating permits establish conditions for continued operation. If the facility requires an operating permit, simultaneous processing of the construction and operating permits is possible, but not required. Form is located [here](#).

The Purpose of a construction permit is to ensure that emissions from new construction and modifications do not cause or contribute to violations of the NAAQS and to assure new construction and modifications can comply with applicable regulations. A "Construction Permit" is required if:

1. The potential-to-emit of the proposed source or the increase in the potential-to-emit due to the modification equals or exceeds:
 - a. 100 tons per year of particulate matter for an agricultural-related activity;
 - b. 25 tons per year of particulate matter or 15 tons per year of PM10 for any activity which is not an agriculturalrelated activity;
 - c. 40 tons per year of sulfur dioxide (SO₂) or sulfur trioxide (SO₃), or a combination thereof; volatile organic compounds; or oxides of nitrogen (NO_x);
 - d. 100 tons per year of carbon monoxide;

- e. 0.6 tons per year of lead; or
- f. 10 tons per year of any single hazardous air pollutant or 25 tons per year of a combination of hazardous air pollutants. (The hazardous air pollutants are listed at K.A.R. 28-19-7(gg).);

- **Construction "Approval" Form-** "Construction Approval" is required for sources that do not require a "Construction Permit", but which are subject to EPA NSPS (except new residential wood heaters), EPA NESHAP (except asbestos demolition and renovation) or to a hazardous air pollutant standard or emission limitation are required to seek "Construction Approval". Applies to synthetic minor sources. Form is located [here](#).

Type of Operating (air) Permits:

- **Class I (Title V) Operating Permit Application-** The operating permit developed by Kansas in response to the requirements of Title V (*major source*) of the federal CAA and 40 CFR Part 70. (K.A.R. 28-19-500). A class I operating permit is a **permit to operate** an air contaminant emission stationary source and is a single document which contains all air quality requirements with which the source must comply. A stationary source may avoid obtaining a class I operating permit by electing to reduce its potential-to-emit through any physical or operational limitation or use of pollution control equipment required by a class II operating permit. Class I operating permits issued to affected sources shall have a **term of five years**.

- Regular Class I Permit application forms, instructions, and certification forms ([.pdf](#)) ([.doc](#))
- **Example** Kansas Regular Class I Application for *Natural Gas Compressor Station*. ([.pdf](#))

General Provisions: (not all inclusive)

- 28-19-16b. Permit required. (a) A major stationary source shall not begin actual construction, or major modification unless the owner or operator of the source has been issued a permit approving this activity.
- 28-19-16l. Failure to construct. Each permit issued for the construction or major modification of a major stationary source under the provisions of K.A.R. 28-19-16b shall become void if the construction has not commenced within 18 months after the applicant's receipt of such permit or if such construction is discontinued for 18 months or more. The secretary may extend the eighteen (18) month period upon a satisfactory showing that an extension is justified.
- 28-19-204. General provisions; permit issuance and modification; public participation. (a) The public shall be provided the opportunity to participate in the permit development or modification process prior to issuance of a construction permit for an affected facility, a class I or class II operating permit, or a significant modification of a class I or class II operating permit.
- **Note:** A Major stationary source that has the potential-to-emit 10 or more tons per year of any one HAP or 25 or more tons per year total of all HAPs or that has the potential-to-emit 100 or more tons per year of any regulated air pollutant. Fugitive emissions must be included when determining whether a class I operating permit is required if the stationary source is a federally designated fugitive emissions source as defined at K.A.R. 28- 19-200(dd). (K.A.R. 28-19-200(kk)). This definition applies to the Class I Operating Permit only.
- **Class II (Synthetic Minor) Operating Permit Application-** A permit to operate an air contaminant emission stationary source as described in K.A.R. 28-19-500(b). This permit provides the mechanism to reduce the potential-to-emit of a source ***below the major source thresholds***. (*utilizes emissions controls to reduce the potential-to-emit of the source below the major source thresholds.*) For purposes of the Kansas air quality act, a class II operating permit **is an approval, rather than a permit**, to operate an air contaminant emission stationary source. A class II operating permit shall **remain valid until modified, revoked or otherwise determined invalid**.
 - Class II Operating Permit Application and Instructions ([.pdf](#)) ([.doc](#))
 - Permit-By-Rule Application for Reciprocating Engines ([.pdf](#))([.doc](#))
 - **Criteria for PBR** (not all inclusive) :
 - a. Limit the operations of the source during each consecutive 12 month period to 5,800,000 horsepower hours, 4,300,000 kilowatt hours, or 40,000 million Btu fuel input?
 - b. Maintain on-site records demonstrating that the restrictions specified above (less than 5,800,000 horsepower hours, 4,300,000 kilowatt hours, or 40,000 million Btu fuel input) are being met for each consecutive 12 month period and that the records will be updated monthly?
 - c. Annually submit to the department in accordance with K.A.R. 28-19-561(c)(5), on forms approved by the department, a report of the actual horsepower hours, kilowatt hours, or Btu fuel input for the preceding calendar year

Note: Kansas issues air construction permits and air operating permits separately though the two may be processed simultaneously. Upon written request of the applicant, and as approved by the KDHE, procedural

requirements for an operating permit may be considered satisfied if accomplished during the construction permit process. (K.A.R. 28-19-502)

- **Minor Sources:** The State released a new permit on June 6, 2013 that is designed to apply to oil and natural gas production facilities and compressor stations which are located at an area source for HAP emissions and are considered minor sources for Title V purposes. Minor sources are not required to obtain an operating permit, only a construction permit. The form can be found [here](#). Additional information can be found at:
 - [Supplemental Information](#)
 - [Additional Engine Information](#)
 - [NSPS JJJJ Guidance](#)
 - [Spark Ignition RICE MACT Guidance](#)

- **Regulatory Requirements for Engines:** All IC engines must Comply with all applicable regulatory requirements as follows. The owner or operator shall comply with 40 CFR Part 60 Subpart A and 40 CFR Part 63 Subpart A, as applicable.
 - A. MACT ZZZZ
 - 1. The owner or operator shall comply with the requirements of MACT ZZZZ, as applicable
 - 2. If performance testing is required by 40 CFR 63.6610, 63.6611, or 63.6612 the testing shall be conducted within 180 days of the compliance date specified in 40 CFR 63.6595. In accordance with 40 CFR 63.7(b), notification of the date for performance testing and a performance testing protocol shall be submitted to KDHE at least 60 days prior to such date.
 - B. NSPS JJJJ
 - 1. Any new or reconstructed stationary Spark Ignition (SI) RICE originally installed on or after June 12, 2006 shall comply with MACT ZZZZ by complying with the requirements of NSPS JJJJ, as applicable. [40 CFR 63.6590(c)(1)]
 - 2. If performance testing is required by 40 CFR 60.4243(b)(2)(i) or (ii) it shall be conducted within 180 days after initial startup of the engine. In accordance with 40 CFR 60.8(d), notification of the date for performance testing and a performance testing protocol shall be submitted to KDHE Bureau of Air, Compliance and Enforcement Section at least 30 days prior to such date.

- **Facility-wide Notification, Recordkeeping, and Reporting:**
 - A. Except where specified in the regulations, any required documentation shall be readily available on-site or electronically available for two (2) years from the date of the record.
 - B. The owner or operator shall notify the KDHE Air Quality Representative at the appropriate KDHE district or local office within 30 days of initial startup. Please see attached map to determine the phone number of the appropriate district or local office.

Contacts:

Dept of Health & Environment: [**KDHE District Offices**](#)
Department of Permitting
1000 SW Jackson
Suite 310
Topeka, KS 66612-1366
(785) 296-1583

State of Colorado

See:

<http://www.cdphe.state.co.us/regulations/airregs/>

State of Colorado

All the Air Quality Control Commission Regulations (AQCC) - 1001 can be found in above link.

Regulation 3

Regulation 3 covers STATIONARY SOURCE PERMITTING AND AIR POLLUTANT EMISSION NOTICE REQUIREMENTS.

Unless specifically exempted by Regulation 3 (see below for examples), all air emission sources in Colorado are required to apply for a permit. Generally speaking, the first step in the process is to file for a Construction Permit Application together with the Air Pollution Emission Notice (APEN). APEN requirements also differ depending on whether the source is in a non-attainment area. In general, an APEN is required for all sources in excess of 2 tons per year (tpy) of any criteria pollutant in an attainment area and 1 tpy of any criteria pollutant in any non-attainment area.

If the APEN evaluation results in a determination that the source will exceed certain levels of criteria pollutants, a regular construction permit approval process will commence from the same application. Construction permit limitations are set forth in Reg. 3, Part B, II.D.2 for nonattainment areas and II.D.3 for attainment areas. These thresholds are five (5) tpy each of VOC or PM 10, ten (10) tpy of CO, SO₂, NO_x or total suspended particulate (TSS), or 200 lbs. of lead. Exemptions to this requirement specific to stationary internal combustion engines are noted in II.D.1.c and in general apply to engines less than 50 hp or 5 tpy in nonattainment areas and 100 hp or 10 tpy in attainment areas.

Exemptions from Air Pollutant Emission Notice Requirements

Stationary sources having emission units that are exempt from the requirement to file an APEN must nevertheless comply with all requirements that are otherwise applicable specifically to the exempted emission units, including, but not limited to: Title V, Prevention of Significant Deterioration, nonattainment New Source Review, opacity limitations, odor limitations, particulate matter limitations and volatile organic compounds controls.

The following sources are exempt from the requirement to file Air Pollutant Emission Notices because by themselves, or cumulatively as a category, they are deemed to have a negligible impact on air quality.

II.D.1.sss. Stationary Internal Combustion Engines that meet the following specifications:

II.D.1.sss.(i) Less than or equal to 175 horsepower that operate less than 1,450 hours per year;
or

II.D.1.sss.(ii) Greater than 175 horsepower and less than or equal to 300 horsepower that operate less than 850 hours per year; or

II.D.1.sss.(iii) Greater than 300 horsepower and less than or equal to 750 horsepower that operate less than 340 hours per year.

Sources of Hazardous Air Pollutants (HAPS) do not require permits unless there has been a federal New Source Performance Standard (NSPS) such as NSPS Subpart JJJJ, or a maximum available control technology (MACT) standard such as NESHAP Subpart ZZZZ, set for the pollutant and type of installation, or unless the emissions of criteria pollutants at the site exceeds permit thresholds listed in Reg 3 Part B II D 3. This is the case for reciprocating internal combustion engines located at major sources for HAPS, defined as any source exceeding 10 tpy of individual HAPS or 25 tpy of total HAPS. In this case, the engine comes under the RICE MACT (40 CFR Part 63 Subpart ZZZZ) regulation.

Businesses that operate Internal Combustion Engines (ICE) that were once exempt from submitting an Air Pollutant Emission Notice (APEN) to the Division now may be subject to reporting. 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.). On October 3, 2011, the EPA published in the Federal Register a final action partially approving and partially disapproving Colorado's SIP revisions, which revised APEN and permitting exemptions that the Air Quality Control Commission (AQCC) submitted to EPA in September 1997, June 2003, July 2005, August 2006, and August 2007. EPA commented that the APEN exemption should require recordkeeping and reporting. The Division opted to propose to repeal the APEN exemption and revise the permit exemption to be consistent with current SIP approved language instead of requiring additional recordkeeping and reporting. While the categorical exemptions have been repealed, sources may still utilize the general one and two ton APEN exemptions found in Part A, Section II.D.1.a. of Regulation No. 3.

If you own an engine that was exempt from the APEN submittal based on size (horse power) and hours of operation, you must now calculate your emissions and report them to the Division **if** they are above APEN reporting levels. Regulated engines may include, but are not limited to, small diesel engines, emergency engines for back-up power at a building, and small water pump engines.

<http://www.cdphe.state.co.us/ap/reg3revision.html>

Steps to determine if you need to report your engine to the Division:

Step #1- Determine if your engine is subject to New Source Performance Standard (NSPS) IIII

If your engines is subject to NSPS IIII, then you are required to report that engine and the emissions to the Division. Use the following checklist and guidance documents to determine if your engine is subject to NSPS IIII. If your engine is subject to a NSPS that has been incorporated by reference into AQCC

Regulation 6 Part A, exemptions for reporting and permitting do not apply pursuant to AQCC Regulation No. 3, Part A, Section II.D.1 and Part B, Section II.D.

- [NSPS IIII Determination Checklist](#)
- [Non-road Engine Determination Checklist](#)
- [NSPS IIII - Stationary Internal Combustion Engine Guidance Document](#)

If you purchase an engine from outside of Colorado or if you relocate your engine, refer to PS Memo 10-03 to determine if you may have tripped NSPS regulations.

- [PS Memo 10-03](#)

Step #2- Calculating emissions for your internal combustion engine

The following spreadsheets use accepted methods to calculate emissions from internal combustion engines. The preferred method is to use manufacturer' emission factors in grams per horse power hour (g/hp-hr), but if these factors can not be obtained, than use the appropriate emission factors from EPA's AP-42, Sections 3.3 and 3.4. Select the appropriate excel spreadsheet below to generally estimate your emissions: **Note these spreadsheets are conservative and are used to generally estimate emissions. You may more accurately estimate emissions using manufacturer emissions factors and site specific operated data for each engine in question.*

- [Diesel Fueled Engines with Manufacturer specific Emission Factors](#)
- [Diesel Fueled Engines < 600 hp](#)
- [Diesel Fueled Engines > 600 hp](#)
- [Natural Gas Fired Engines](#)

Step #3- Determine if your emissions are at reportable levels

- [Attainment and Non-attainment area reporting thresholds](#)
- [General permitting guidance for internal combustion engine reporting](#)

Step #4- Report your emissions to the Division

- [Reporting deadlines per county](#)
- [Form APCD-201 Internal Combustion Engine APEN \(PDF Version\)](#)
- [Form APCD-201 Internal Combustion Engine APEN \(Word Version\)](#)

Regulation 7

XVII.B.4. Condensate tanks, dehydrators and **internal combustion engines** that are subject to an emissions control requirement in a federal maximum achievable control technology (“MACT”) standard under 40 CFR Part 63, a Best Available Control Technology (“BACT”) limit, or a **New Source Performance Standard under 40 CFR Part 60 are not subject to this Section XVII.**

**Simply put, if a source is subject to one of the federal rules such as NSPS, the engine may be brought into Colorado without having to meet the requirements of Regulation 7.

Otherwise the following applies:

XVII.E. Control of emissions from new, modified, existing, and relocated natural gas fired reciprocating internal combustion engines (RICE).

XVII.E.1. (State Only) The requirements of this Section XVII.E. shall not apply to any engine having actual uncontrolled emissions below permitting thresholds listed in Regulation Number 3, Part B.

XVII.E.2. (State Only) New, Modified and Relocated Natural Gas Fired RICE

XVII.E.2.a. Except as provided in Section XVII.E.2.b. below, the owner or operator on any natural gas fired RICE that is either constructed or relocated to the state of Colorado from another state, on or after the date listed in the table below shall operate and maintain each engine according to the manufacturer's written instructions or procedures to the extent practicable and consistent with technological limitations and good engineering and maintenance practices over the entire life of the engine so that it achieves the emission standards required in Section XVII.E.2.b. Table 1 below.

XVII.E.2.b. Actual emissions from natural gas fired RICE shall not exceed the emission performance standards in Table 1 below as expressed in units of grams per horsepower-hour (G/hp-hr)

TABLE 1				
Maximum Engine Hp	Construction or Relocation Date	Emission Standards (G/hp-hr)		
		NOx	CO	VOC
< 100 Hp	Any	NA	NA	NA
≥100 Hp and < 500 Hp	On or after January 1, 2008	2.0	4.0	1.0
	On or after January 1, 2011	1.0	2.0	0.7
≥500 Hp	On or after July 1, 2007	2.0	4.0	1.0
	On or after July 1, 2010	1.0	2.0	0.7

XVII.E.3. Existing Natural Gas Fired RICE

XVII.E.3.a. (Regional Haze SIP) RICE

XVII.E.3.a.(i) Except as provided in Sections XVII.3.1.(i)(b) and (c) and XVII.E.3.a.(ii), all RICE with a manufacturer's name plate design rate greater than 500 horsepower, constructed or modified before February 1, 2009 shall install and operate both a non-selective catalytic reduction system (NSCR) and an air fuel controller (AFR) by July 1, 2010. A rich burn RICE is one with a normal exhaust oxygen concentration of less than 2% by volume.

XVII.E.3.a.(i)(a) All control equipment required by this section (XVII.E.3.a) shall be operated and maintained pursuant to manufacturer specifications or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices. The owner or operator shall keep manufacturer specifications or equivalent on file.

XVII.E.3.a.(i)(b) Internal combustion engines that are subject to an emissions control requirement in a federal MACT standard under 40 CFR Part 63, a Best Available Control Technology ("BACT") limit, or a NSPS Standard under 40 CFR Part 60 are not subject to this Section XVII.E.3.a.

XVII.E.3.a.(i)(c) The requirements of this section (XVII.E.3.a) shall not apply to any engine having actual uncontrolled emissions below permitting thresholds listed in Regulation Number 3, Part B.

XVII.E.3.a.(ii) Any rich burn RICE constructed or modified before February 1, 2009, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$ 5,000 per ton of combined volatile organic compound and nitrogen oxides emission reductions (this value shall be adjusted for future applications according to the current day consumer price index) is exempt complying with Section XVII.E.3.a. Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or

operator must submit an application making such a demonstration, together with all supporting documents, to the Division by **August 1, 2009**.

XVII.E.3.b. (State Only) Lean Burn Reciprocating Internal Combustion Engines

XVII.E.3.b.(i) Except as provided in Section XVII.E.3.b.(ii), all lean burn RICE with a manufacturer's nameplate design rate greater than 500 horsepower shall install and operate an oxidation catalyst by July 1, 2010. A lean burn RICE is one with a normal exhaust oxygen concentration of 2% by volume, or greater.

XVII.E.3.b.(ii) Any lean burn RICE constructed or modified before February 1, 2009, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$ 5,000 per ton of volatile organic compound emission reduction (this value shall be adjusted for future applications according to the current day consumer price index) is exempt complying with Section XVII.E.3.b.(i). Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or operator must submit an application making such a demonstration, together with all supporting documents, to the Division by **August 1, 2009**.

Colorado Department of Public Health and Environment Air Pollution Control Division

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).

- 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.

APEN AND PERMIT REPORTING THRESHOLDS FOR ATTAINMENT AND NONATTAINMENT AREAS				
	APEN		Air Permit	
Pollutant Category	Attainment (tons per year)	Nonattainment (tons per year)	Attainment (tons per year)	Nonattainment (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

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

➤ **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.cdphe.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.cdphe.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 is a Non-road Engine if...	An internal combustion engine is <i>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

➤ **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.cdphs.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.

Tribal and Federal Lands in 4 Corners Area

See:

<http://www.southern-ute.nsn.us/air-quality/environmental-commission>

As of early 2011, the Southern Ute Indian Tribe (SUIT) is finalizing a minor source program. Other tribes are looking closely at a permitting structure very similar to the SUIT program. As proposed the SUIT program requires a minor permit for emissions levels over:

NO _x	=	10 tons per year
CO	=	10 tons per year
VOC	=	5 tons per year
Other	=	see Table 1 to Section 5-103

The permitting will require BACT to be determined on a case by case basis common industry practice. Sources that are under 100 horsepower may be exempt from BACT requirements see 5-103(2)(b).

Submission of Corrections

Please submit suggestions or corrections to:

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Or

GCA HSE Committee