

# Wisconsin Air Regulations Applicable to Reciprocating Internal Combustion Engines

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There are three federal regulations that apply to Reciprocating Internal Combustion Engines (RICE), depending on the type of engine and the date of construction: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary RICE, New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) Engines, and NSPS for Stationary Spark Ignition (SI) Engines. In addition to the federal regulations, Wisconsin Department of Natural Resources (DNR) has several regulations that may apply to your RICE which are outlined in this factsheet.

Emergency electric generators, or emergency engines, are now defined in Wisconsin Administrative Code under the term **Restricted Use RICE**. Definitions are provided at the end of this fact sheet.

## Air Pollution Permits or Exemptions

Restricted use RICE are exempt from needing a construction permit under s. NR 406.04(1)(w), Wis. Adm. Code. Where the only source of air pollution is a restricted use RICE, a facility may be exempt from operation permit requirements under s. NR 407.03(1)(u), Wis. Adm. Code.

However, facilities with new RICE, restricted use or otherwise, that are subject to the NSPS are NOT eligible for the operation permit exemptions under either the actual emissions-based exemption in s. NR 407.03(1m) or a facility-wide exemption under s. NR 407.03(2). Those facilities will need an operation permit. If the facility would otherwise meet the permit exemption criteria, except for the fact the NSPS applies, then the facility may be eligible for a registration operation permit (ROP).

If you have questions on whether your facility might be eligible for one of these exemptions or the ROP, please refer to the DNR web page for Small Air Sources: <http://dnr.wi.gov/topic/SmallBusiness/SmallAirSources.html>.

## Wis. Adm. Code NR 431—Control of Visible Emissions

If the visible emissions from an engine are not already regulated under one of the NSPS mentioned above, then the emissions are regulated under either:

- NR 431.04, if the engine was constructed on or before April 1, 1972, or
- NR 431.05, if constructed after April 1, 1972.

## Wis. Adm. Code NR 445—State Hazardous Air Pollutants

For sources that combust Group I Virgin Fossil Fuels (natural gas or #2 distillate fuel), the hazardous air pollutant emissions are exempt from the requirements in chapter NR 445 under s. NR 445.07(5), Wis. Adm. Code.

Engines that are subject to emission limits or control requirements within the spark ignition or the compression ignition NSPS standards (as required under the NESHAP) are exempt from the requirements in ch. NR 445. However, being required to meet work practice standards in the NESHAP may still require the engine to meet NR 445 requirements for formaldehyde.



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Sources that combust fuel oil may be subject to s. NR 445.09, which outlines specific requirements on fuel sulfur content, control devices and compliance demonstration methods for CI engines.

Sources that combust biofuels need to keep emissions below the threshold values for formaldehyde in Table A, in s. NR 445.07, or apply Best Available Control Technology (BACT).

## Wis. Adm. Code NR 485.055 – Particulate Emission Limit for Gasoline and Diesel Internal Combustion Engines

This rule limits the particulate matter emissions from stationary or semi-stationary gasoline or diesel-powered internal combustion reciprocating engines to 0.50 pounds of particulate matter per million Btu heat input, unless a more restrictive limit applies, either in an applicable NSPS or as established in an air permit.

### Definitions

**Non-road engine** - an engine that is not used in a motor vehicle but is portable - As defined in 40 CFR 1068.30, an engine is portable if it does not stay and is not intended to stay at a single location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. Portable (non-road) engines are not stationary engines for purposes of this rule. A facility may consult with its EPA regional office or request a site-specific applicability determination if it is uncertain whether it meets the criteria specified to be considered a nonroad or stationary engine. To view determinations already issued by EPA visit <http://cfpub.epa.gov/adi/>.

**Restricted use reciprocating internal combustion engine or restricted use RICE** - (formerly defined as “emergency electrical generator”) as defined in Wis. Adm. Code NR 400.02(136m) means a reciprocating internal combustion engine that is one of the following:

- a) Operated no more than 200 hours per year and that meets the definition of emergency stationary RICE or black start engine in 40 CFR 63.6675.
- b) Operated in accordance with the definition of limited use RICE in 40 CFR 63.6675.

**Stationary** – means not used in a motor vehicle and not a non-road engine.

### For Additional Questions Contact:

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