

ATTACHMENT 5

**NEW SOURCE PERFORMANCE STANDARDS FOR POST-MODEL YEAR 2007
EMERGENCY COMPRESSION IGNITION ENGINES**

I. APPLICABILITY

[40 CFR 60.4200(a)(1)(i)]

The standards contained in this Attachment apply to owners/operators of emergency stationary compression ignition engines (CI ICE) that are not certified National Fire Protection Association (NFPA) fire pump engines and are model year 2007 or later. Specifically applicable units are identified as such in the Authorization to Operate (ATO). These standards are required in addition to those in the Specific Conditions and the Additional Permit Requirements. **All conditions in this Attachment are Federally Enforceable Conditions.**

II. OPERATIONAL LIMITATIONS

[PCC 17.12.185.A.2]

A. Emission Limitations

[40 CFR 60.4203, 40 CFR 60.4202(a) & 40 CFR 4205(b)]

1. Certified Emission Limits

- a. New CI ICE subject to this Attachment shall be certified by the manufacturer at or below the applicable emission standards and shall continue to meet them for the useful life of the engine.
- b. Modified or reconstructed CI ICE subject to this Attachment shall be certified by the entity that conducts the modification or reconstruction (via the appropriate testing according to 40 CFR 60.4212, if appropriate). This certification shall state that emissions will be at or below the applicable emission standards and the unit shall continue to meet them for the useful life of the engine.
- c. Applicable emission standards and the useful life of the engine are identified in Section III of the ATO (Supplemental Requirements).
- d. The Permittee must operate and maintain applicable units according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. [40 CFR 60.4206]

2. Opacity Standards

[40 CFR 60.4202(a)(1) & (a)(2), 40 CFR 89.113 & 40 CFR 1039.105]

Except for constant-speed engines, opacity shall not exceed:

- a. 20 percent during the acceleration mode;
- b. 15 percent during the lugging mode; and
- c. 50 percent during the peaks in either the acceleration or lugging modes.

B. Fuel Requirements

[40 CFR 60.4207]

1. Beginning October 1, 2007, stationary CI ICE subject to this Attachment that use diesel fuel must use diesel fuel that meets the following requirements on a per-gallon basis:

[40 CFR 60.4207(a) & 80.510(a)]

- a. Sulfur content: 500 parts per million (ppm) maximum;

- b. Cetane index or aromatic content, as follows:
 - i. A minimum cetane index of 40; or
 - ii. A maximum aromatic content of 35 volume percent.
2. Beginning October 1, 2010, stationary CI ICE subject to this Attachment that use diesel fuel must use diesel fuel that meets the following requirements on a per-gallon basis:

[40 CFR 60.4207(b) & 80.510(b)]

 - a. Sulfur content: 15 ppm maximum;
 - b. Cetane index or aromatic content, as follows:
 - i. A minimum cetane index of 40; or
 - ii. A maximum aromatic content of 35 volume percent.
3. With respect to pre-2011 model year stationary CI ICE subject to this Attachment, the Permittee may petition the **Administrator** for approval to use remaining non-compliant fuel that does not meet the fuel requirements of II.B.1 & 2 of this Attachment beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the Permittee shall be required to submit a new petition.

[40 CFR 60.4207(c)]
- C. Installation Restrictions

[40 CFR 60.4208]

 1. After December 31, 2008, the Permittee may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines in 40 CFR 60, Subpart III, as applicable.

[40 CFR 60.4208(a)]
 2. After December 31, 2009, the Permittee may not install stationary CI ICE with a maximum engine power of less than 25 HP (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines in 40 CFR 60, Subpart III, as applicable.

[40 CFR 60.4208(b)]
 3. The requirements of II.C.1 and 2 of this Attachment do not apply to stationary CI ICE that have been modified or reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. This provision does not extend to imported units which shall be treated as new sources.

[40 CFR 60.4208(g) & (h)]
- D. Emergency Designation

[40 CFR 60.4211(e)]

Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The Permittee may petition the Control Officer for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing as permitted in this Attachment, is prohibited.

E. Compliance [40 CFR 60.4211]

1. The Permittee must operate and maintain the applicable stationary CI ICE according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. In addition, the Permittee may only change those settings that are permitted by the manufacturer. [40 CFR 60.4211(a)]
2. With respect to 2007 model year and later stationary CI ICE subject to this Attachment, the Permittee shall demonstrate compliance with the emission standards specified in the ATO by purchasing an engine certified to those standards. The engine must be installed and configured according to the manufacturer's specifications. [40 CFR 60.4211(c)]

III. Monitoring Requirements [40 CFR 60.4209(a)]

A. The Permittee shall install a non-resettable hour meter on each applicable stationary CI ICE prior to startup of each engine.

B. Opacity [40 CFR 89.113(b)]

1. Opacity levels in II.A.2 of this attachment are to be measured and calculated as set forth in 40 CFR part 86, subpart I. Notwithstanding the provisions of 40 CFR part 86, subpart I, two-cylinder nonroad engines may be tested using an exhaust muffler that is representative of exhaust mufflers used with the engines in use.
2. The following engines are exempt from the requirements of III.B.1 above of this attachment [40 CFR 89.113 (c)(1) & (3)]
 - i. Single-cylinder engines;
 - ii. Constant-speed engines.

IV. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. Hourly Operational Records [40 CFR 60.4214(b)]

Starting with the model years in the following table, if the applicable engine(s) does not meet the standards for a non-emergency unit for the same model year and maximum horsepower, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall also record the time of operation of the engine and the reason the engine was in operation during that time. All records shall be maintained for five years

Engine Power	Starting Model Year
$25 \leq \text{HP} < 75$	2013
$75 \leq \text{HP} < 175$	2012
$\text{HP} \geq 175$	2011

B. Diesel Fuel Recordkeeping

The Permittee shall maintain records that verify compliance with the diesel fuel requirements in II.B of this attachment.

C. Opacity

The Permittee shall keep all records generated to show compliance with the opacity level measurement requirements of III.B of this attachment.

V. Testing Requirements

[40 CFR 60.4212] [PCC 17.12.185.A.3.a]

Should the Permittee elect to or be required to conduct performance testing to demonstrate compliance with the applicable standards of this Attachment, the Permittee shall do so in accordance with 40 CFR 60.4212.

VI. Additional Requirements

[40 CFR 60.4218 & 60.4214(b)]

The General Provisions of 40 CFR 60.1 through 60.19 apply to applicable sources as indicated in Table 8 of 40 CFR Subpart III except that the Permittee is not required to submit an initial notification.

VII Facility Recordkeeping

[PCC 17.12.185.A.4]

All records required by, or generated to verify compliance with this attachment shall be maintained for five years.

