

INTERNAL COMBUSTION ENGINE (ICE) WORKSHEET INSTRUCTIONS

Be sure to review the following instructions prior to completing this application. More detailed instructions can be found on Page 7.

- Submit this worksheet as a supplemental document to an *Application for Authority to Construct/Permit to Operate*. If submitting this worksheet without a permit application, or in response to an AQMD request for supplemental information, locate and check the “Supplemental Information” box at the top left of Page 2.
- The worksheet must be filled out completely for all items that are applicable, except where noted as optional.
- The *Application for Authority to Construct/Permit to Operate*, all applicable emission unit and/or control device worksheet(s), and payment should be hand delivered to the AQMD drop box located ([here](#)), or mailed to:
NNPH, AQMD
1001 E. Ninth Street, Suite B171
Reno, NV 89512
- One worksheet must be submitted for each internal combustion engine (ICE), even if they are identical. Assign an Emission Unit ID (EU ID) to each ICE. An EU ID is a fictitious ID that the facility assigns (ex., ICE #1 EU ID = ICE1; ICE #2 EU ID = ICE2, etc.).
- Other forms that may be required in addition to this worksheet:
 - For emission control equipment, use the appropriate *Emission Control Device Worksheet (Control Device, Cyclone, Flare, Fabric Filter/Baghouse, or Scrubber)* and duplicate as needed. Be sure to indicate the emission unit that the control equipment is affecting.
- For the purpose of determining whether a source needs an operating permit, AQMD will calculate its potential to emit (PTE) using 8,760 hours of operation for all continuous-duty engines and 500 hours of operation for emergency engines.
- Emergency equipment for which these units are not the primary power supply, such as emergency generators and fire pumps, AQMD will limit the maximum operating hours for testing and maintenance to the limits specified in any applicable NSPS or NESHAP (ex., 100 hours/year).
- Continuous-duty equipment for which these units are the primary power supply, AQMD will calculate a source’s permitted PTE using 8,760 hours per year unless the emissions unit is physically or voluntarily limited.

ASSISTANCE AND RESOURCES

District Board of Health Regulations Governing Air Quality Management:

<https://www.nnph.org/programs-and-services/air-quality/regulations/index.php>

The Air Quality Management Division Permitting Department can be contacted at (775) 784-7200 or AQMDPermitting@nnph.org.

INTERNAL COMBUSTION ENGINE (ICE) WORKSHEET

FOR AQMD USE ONLY

Permit No.:

Supplemental Information

Facility Information			
1. New Permit		Permit Modification	
2. Existing facilities only. Permit Number (AAIRXX-XXXX):			
3. Facility Name:			
4. Facility Address:			
City:		State:	ZIP Code:
Engine Specifications			
5. Emission Unit ID (EU ID):			
6. Engine Manufacturer:		7. Date of Engine Manufacture:	
8. Engine Model No.:		9. Engine Serial No.:	
10. Engine Power Rating:		(hp) @	RPM
11. Date Engine Ordered:		12. Date of Installation:	
13. No. of Cylinders:			
14. Displacement:		liters <u>OR</u>	in ³
15. Check ALL configurations that apply to this engine: Continuous-duty <u>OR</u> Emergency Spark Ignition <u>OR</u> Compression Ignition Two Cycle <u>OR</u> Four Cycle Lean Burn <u>OR</u> Rich Burn			
16. Fuel Type:		Natural Gas	Diesel
		Propane/LPG	Other (specify):
17. Maximum hours of operation per year:			
Equipment Specifications			
18. Check ONE option below that best describes the equipment receiving power from the engine: Generator Fire Pump Other (specify):			
19. Equipment Manufacturer:			
20. Equipment Output Rating:		kW (If not kW, specify unit):	

21. Equipment Model No.:	22. Equipment Serial No.:	
Engine Emissions Data		
23. List the emission data for this unit for particulate matter under 10 microns (PM ₁₀), particulate matter under 2.5 microns (PM _{2.5}), nitrogen oxides (NO _x), sulfur dioxide (SO ₂), carbon monoxide (CO), and volatile organic compounds (VOCs). Greenhouse gas (GHG) missions (calculated in CO ₂ e) are only required for sources subject to major New Source Review and/or Title V.		
Pollutant	Emissions Rate	Units (check one)
PM ₁₀ /PM _{2.5}		g/bhp-hr <u>OR</u> g/kW-hr
NO _x		g/bhp-hr <u>OR</u> g/kW-hr
SO ₂		g/bhp-hr <u>OR</u> g/kW-hr
CO		g/bhp-hr <u>OR</u> g/kW-hr
VOC		g/bhp-hr <u>OR</u> g/kW-hr
GHG		g/bhp-hr <u>OR</u> g/kW-hr
24. Check ALL sources of emissions data referenced above and note for which pollutant(s): Manufacturer's Guarantee. Pollutant(s): Source Test. Pollutant(s): AP-42 (if no other data available). Pollutant(s):		
25. Specify the air pollution control methods used with the engine:		

Regulation Applicability

26. **40 CFR Part 60, Subpart IIII**: Is the engine subject to this regulation and/or applicable to the paragraph in this section? Yes No

The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. (1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is: (i) 2007 or later, for engines that are not fire pump engines; (ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines; (2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are: (i) Manufactured after April 1, 2006, and are not fire pump engines, or (ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006; (3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005; (4) The provisions of § 60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

Regulation Applicability

27. [40 CFR Part 60, Subpart JJJJ](#): Is the engine subject to this regulation and/or applicable to the paragraph in this section? Yes No

The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. (1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008; (2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is: (i) On or after July 1, 2008; or (ii) On or after January 1, 2009, for emergency engines; (3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 kW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is: (i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP), (ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP, (iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP, or (iv) On or after January 1, 2009, for emergency engines; (4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured: (i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP), (ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP, (iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP, or (iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 kW (25 HP); (5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006; (6) The provisions of § 60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

Regulation Applicability

28. **40 CFR Part 63, Subpart ZZZZ:** Is the engine subject to this regulation and/or applicable to the paragraph in this section? Yes No

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand; (a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition; (b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site; (c) An area source of HAP emissions is a source that is not a major source; (d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable; (e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C; (f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in § 63.6675, which includes operating according to the provisions specified in § 63.6640(f); (1) Existing residential emergency stationary RICE located at an area source of HAP emissions at do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii); (2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii); (3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

Attach flow diagram(s) and manufacturer's specification sheet(s). Duplicate sheet as needed.

DETAILED WORKSHEET INSTRUCTIONS**Facility Information**

1. Specify if the worksheet is for a new permit or for modification of an existing permit by checking the appropriate box.
2. **For existing facilities only.** Provide the Permit Number, which can be found at the top of page 1 of the existing Permit to Operate (ex. AAIRXX-XXXX).
3. Provide the facility name as it appears on the *Application for Authority to Construct/Permit to Operate*. If a permit already exists for this operation, enter the name as it appears on the existing permit, which can be found at the top of page 1 of the existing Permit to Operate where it says, "Permit Issued To".
4. Provide the facility address.

Engine Specifications

5. One worksheet must be submitted for each internal combustion engine (ICE), even if they are identical. Assign an Emission Unit ID (EU ID) to each ICE. An EU ID is a fictitious ID that the facility assigns (ex., ICE #1 EU ID = ICE1; ICE #2 EU ID = ICE2, etc.).
- 6-9. Specify the engine manufacturer, date of manufacture, engine model number, and engine serial number.
10. Specify the engine power rating.
11. Specify the order date of the engine.
12. Specify the installation date of the engine.
13. Specify the number of cylinders in the engine.
14. Specify the displacement of the engine.
15. Specify all the configurations that apply to the engine.
16. Specify the fuel(s) that will be combusted in the engine.
17. Specify the maximum hours of operation per year. If it is not 8,760 hours, the maximum will be an operational limit in the permit. Emergency units will use 500 hours of operation per year.

Equipment Specifications

18. Specify the equipment receiving power from the engine. Select ONE option.
- 19-22. Specify the manufacturer, power rating, model number, and serial number of the equipment that receives power from the engine.

Engine Emissions Data

23. Specify the emissions data for the engine for all the pollutants listed. Only Major Source NSR or Title V sources are required to provide GHG emission rate. If the emission rate is calculated using AP-42 emission factors, no verification is required.
24. Specify all sources of emissions data, and for which pollutants.
25. Specify the method of air pollution control used with the engine.

Regulation Applicability

- 26-28. Specify which of the (3) regulations apply to the engine, according to engine type and when construction commenced.