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Linn County, Iowa

LCPH USE ONLY

Facility No:

Date Received:

**LINN COUNTY PUBLIC HEALTH
AIR QUALITY DIVISION
REGISTRATION FORM FOR**

STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

LESS THAN 400 BRAKE HORSEPOWER

Background & Instructions: The Linn County Code of Ordinances (LCCO) 10.5(9) "o" exemption from obtaining an authorization to install (construction) permit, for stationary internal combustion engines with a brake horsepower rating of less than 400 measured at the shaft, **does not apply** to engines which federal New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP) applies pursuant to LCCO 10.5(9). Completion of this form is intended to allow facilities to register each stationary compression ignition internal combustion engine rated less than 400 brake horsepower (bhp) instead of obtaining a standard air construction permit. It is also intended to assist facilities in complying with the federal NSPS and NESHAP requirements. An owner or operator planning to install, modify or reconstruct a CI engine greater than or equal to 400 bhp must obtain a construction permit unless otherwise exempt, and may also be subject to NSPS and NESHAP requirements. If you are unclear as to whether or not your facility must obtain a standard air construction permit or qualifies for this registration call (319) 892-6000.

This registration must be completed if either of the following is true unless the owner or operator wishes to apply for a standard air construction permit in accordance with LCCO 10.5(2):

- The facility owner or operator is planning to install, modify, or reconstruct a stationary compression ignition internal combustion engine (CI engine)⁽¹⁾ that is rated less than 400 brake horsepower (bhp) **after** October 1, 2009.
- Or, the facility owner or operator has installed a CI engine that is rated less than 400 bhp **after** April 1, 2006 **and** before October 1, 2009.
- Or, the facility owner or operator has modified or reconstructed an installed CI engine **after** July 11, 2005 **and** before October 1, 2009.
- Or, the facility owner or operator has installed a fire pump that is rated less than 400 bhp **after** July 1, 2006 **and** before October 1, 2009.

⁽¹⁾ CI engine is a compression ignition engine that is a stationary internal combustion engine (ICE). A diesel engine is a compression ignition engine. A CI engine is not a spark ignition engine.

If your facility meets one of the conditions above submit a complete registration form for each CI engine to: Linn County Public Health, 1240 26th Ave Ct. SW, Cedar Rapids, Iowa 52404. Existing owners of a CI engine must submit a registration prior to January 1, 2010. A registration must be submitted prior to installing the CI engine for new installations. **Retain a copy of the completed form for your records. The registration becomes effective upon the Linn County's receipt of this signed registration. There is a registration fee of \$100. Linn County Public Health Air Quality Division will notify you in writing by mail or E-mail within two (2) weeks of receipt of this registration. If you do not receive written notification within this time period, please contact (319) 892-6000.**

Section 1 – Facility Information

Name of Firm/Company		Facility Name (if different)		Facility Plant No. (if known):	
Equipment Location – Street:		City:		State:	Zip:
				IA	
Mailing Address (if different):		City:		State:	Zip:
Person to Contact:		Phone Number:		Email (if available):	

Section 2 – Applicability Determination

New Source Performance Standards (NSPS) - 40 Code of Federal Regulations (CFR) Part 60, Subpart IIII:

Facility Applicability Questions *(The provisions of this subpart are not applicable to CI engines being tested at a stationary test cell/stand.)*

Emission Unit Number:	Description of Emission Unit:
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- Is this engine a portable engine that meets the definition of a nonroad engine in 40 CFR §1068.30?
(A portable engine that will remain at a location more than 12 months or a portable engine that operates more than 3 months per year as part of a seasonal source that returns to the same location is considered a stationary engine. Please contact the Linn County Public Health Air Quality Division if you are unsure if the portable engine should be considered a stationary engine or a nonroad engine.)
 No. Go to question 2.
 Yes. Stop, this engine is not subject to Subpart IIII. You do not need to submit this registration.
- Has this engine been modified or reconstructed after July 11, 2005?
(A modification is a physical or operational change that can increase the emissions of a regulated air pollutant. Reconstruction is replacing the components on an existing engine and the cost of the replacement components exceeds 50% the cost of a new engine. See 40 CFR §60.14 and §60.15 for complete definitions.)
 No. Go to question 3.
 Yes. This engine is subject to Subpart IIII. If modification or reconstruction occurred after July 11, 2005 or October 1, 2009 you must fill out the Engine Data section, read Sections 3, 4, & 5 of this form, sign and date Section 6 and submit to the Linn County Public Health Air Quality Division. A modified or reconstructed engine must meet the emissions standards for model year of when the engine was originally built.
- Is this engine a NFPA (National Fire Protection Association) certified fire pump engine?
 No. Go to question 5.
 Yes. Continue to question 4.
- Was the fire-pump engine manufactured after July 1, 2006?
(*Fire pump* is an emergency stationary ICE certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.)
 No. Stop, this engine is not subject to Subpart IIII. You do not need to submit this registration. Instead complete a Form EJ (Exemption Justification) and maintain at your facility. Form EJ can be found at <http://www.linncleanair.org>.
 Yes. This fire-pump engine is subject to Subpart IIII. Fill out the Engine Data section, read Sections 3, 4, & 5 of this form, sign and date Section 6 and submit to the Linn County Public Health Air Quality Division.
- Was the engine manufactured after April 1, 2006?
 No. Stop, this engine is not subject to Subpart IIII. You do not need to submit this registration. Instead complete a Form EJ (Exemption Justification) and maintain at your facility. Form EJ can be found at <http://www.linncleanair.org>.
 Yes. This engine is subject to Subpart IIII. Fill out the Engine Data section, read Sections 3, 4, & 5 of this form, sign and date Section 6 and submit to the Linn County Public Health Air Quality Division.

Engine Data

Date of Construction: <i>(The date of construction is the date the engine was ordered by the owner or operator.)</i>	
Has the engine been modified or reconstructed? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, please state the date:	
Is this engine an emergency engine ⁽¹⁾ ? Yes <input type="checkbox"/> No <input type="checkbox"/>	Engine Manufacturer:
	Model Year ⁽²⁾ : Brake horsepower (bhp):
Fuel Load Consumption Rate: gal/hour	

⁽¹⁾ *Emergency stationary internal combustion engine* is a stationary ICE whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

⁽²⁾ *Model year* is either: (1) the calendar year in which the engine was originally produced, or (2) the annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a non-road or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Section 3 – NSPS Requirements

Emission Standards for Owners and Operators

- A. 2007 and later model year engines **must** be certified by the manufacturer to comply with the emission standards of Subpart IIII. These standards are summarized in the appendix to this form, Tables B, C, and D.

Fuel Requirements for Owners and Operators

- A. Beginning October 1, 2007, engines must use a fuel that meets the following: 1) a maximum sulfur content of 500 ppm and 2) either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.
- B. Beginning October 1, 2010, engines must use a fuel that meets the following: 1) a maximum sulfur content of 15 ppm and 2) either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.

Emergency Engine Requirements for Owners and Operators

- A. Owners and operators of an emergency CI engine must install a non-resettable hour meter prior to start-up of the engine.
 - B. The engine may be operated for the purpose of maintenance checks and readiness testing a maximum of 100 hours/year. There is no time limit on use for emergency situations.
 - C. Operation other than for emergency operation and maintenance checks and readiness testing as permitted is prohibited
 - D. Owners and operators of an emergency engine must keep records of all operation of the engine. The owner must record the time of operation of the engine and the reason the engine was in operation. ⁽¹⁾
- ⁽¹⁾ Use the attached Engine Operation Log (or an equivalent form which captures all information necessary to comply with this NSPS requirement) to record and this information.

Summary of Compliance Requirements for Owners and Operators

- A. Owners and operators must meet the applicable emission standards listed in the appendix to this form. The engine must be installed and configured according to the manufacturer's specifications.
- B. Owner and operators must operate and maintain the CI engines according to manufacturer's written procedures for the life of the engine to maintain compliance with the emission standards.
- C. Owners and operators of pre-2007 model year CI engines or owners and operators of a fire pump engines manufactured prior to the model year matching the maximum engine power and model year criteria in Table E of the appendix to this form must comply with the emission standards in either Table A or Table D of the appendix. Compliance must be demonstrated according to one of the following methods:
 - 1. Purchase an engine certified according to 40 CFR Part 89 or 40 CFR Part 94, as applicable, for the same model year and maximum engine power.
 - 2. Keep records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in Subpart IIII.
 - 3. Keep records of engine manufacturer data indicating compliance with the standards.
 - 4. Keep records of control device vendor data indicating compliance with the standards.
 - 5. Conduct an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR §60.4212 as applicable.
- D. Owners and operators of CI fire pump engines that are manufactured in or after the model years specified in Table E of the appendix to this form must comply with the emission standards in Table D of the appendix by purchasing an engine certified to the applicable emission standards for the same model year and engine power. The engine must be installed and configured according to the manufacturer's specifications.

Section 4 – NESHAP Requirements

A stationary compression ignition internal combustion engine that is rated less than 400 bhp and that is installed, modified or reconstructed **after** January 18, 2008 **and** October 1, 2009 shall comply with the requirements of 40 CFR Part 63, Subpart ZZZZ by complying with the NSPS requirements of 40 CFR Part 60, Subpart IIII. There are no further requirements for such engines.

Section 5 – Transferability

As limited by LCCO 10.5(6)"b" and "c", this permit is not transferable from one piece of equipment to another or from one person to another. In the event the engine is replaced or an ownership change takes place, a new registration permit must be applied for pursuant to LCCO 10.5(6).

Section 6 – Disclaimer and Facility Certification

Summaries and other statements in this registration form and its appendix are intended solely as guidance, cannot be used to bind the agency, and are not a substitute for reading applicable statutes, rules and regulations (including, but not limited to, 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ). The federal regulations referenced in this form are available on-line at <http://www.ecfr.gov/cgi-bin/ECFR?page=browse>.

CERTIFICATION

"I certify that the stationary compression ignition internal combustion engine identified in this completed registration form is in compliance with the requirements of 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ. This certification is based on information and belief formed after reasonable inquiry, the statements and information in the document is true, accurate, and complete. I understand failure to comply with the requirements could result in penalty pursuant to LCCO 10.24(3)".

Responsible Official's Printed Name/Title¹

Mr. Mrs. Ms. Dr.

Signature

Date Signed: / /

⁽¹⁾ Fill in the certification section with a signature, name, title and date. The certification must be signed by a responsible official. A responsible official could be the owner, the designated representative of the owner, or the engineer who prepared the application and works for the company.

Appendix to LCPH AQD CI Engine Registration Form (LCPH Form 2009-III)

Compression Ignition Engines (Diesel Engines) Emission Standards 40 CFR Part 60, Subpart III

Table A. Emission Standards for Pre-2007 Model Year Engines: Non-Emergency Engines and Emergency Engines that are not Fire Pump Engines (based on Table 1 to subpart III)

Limits in grams/kW-hr (grams/HP-hr)

Maximum Engine Power	NMHC ⁽¹⁾ + NOx	Hydrocarbons	Oxides of Nitrogen (NOx)	Carbon Monoxide (CO)	Particulate Matter (PM)
kW < 8 (HP < 11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8 ≤ kW < 19 (11 ≤ HP < 25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19 ≤ kW < 37 (25 ≤ HP < 50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37 ≤ kW < 130 (50 ≤ HP < 175)			9.2 (6.9)		
130 ≤ kW < 300 (175 ≤ HP < 400)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

⁽¹⁾ Non-methane hydrocarbons

Table B - Emission Standards for 2007 Model Year and Later Non-Emergency Engines (based on 40 CFR §89.112 and 40 CFR §1039.101)

Limits in grams/KW-hr (grams/HP-hr)

Maximum Engine Power	Model Year(s)	NMHC + NOx	NMHC	NOx	CO	PM			
kW < 8 (HP < 11)	2007	7.5 (5.6)	_____	_____	8.0 (6.0)	0.80 (0.60)			
	2008+					0.40 (0.30)			
8 ≤ kW < 19 (11 ≤ HP < 25)	2007	7.5 (5.6)	_____	_____	6.6 (4.9)	0.80 (0.60)			
	2008+					0.40 (0.30)			
19 ≤ kW < 37 (25 ≤ HP < 50)	2007	7.5 (5.6)	_____	_____	5.5 (4.1)	0.60 (0.45)			
	2008-2012					0.30 (0.22)			
	2013+					0.03 (0.02)			
37 ≤ kW < 56 (50 ≤ HP < 75)	2007	7.5 (5.6)	_____	_____	5.0 (3.7)	0.40 (0.30)			
	2008 - 2012					0.30 (0.22)			
	2013+					0.03 (0.02)			
56 ≤ kW < 75 (75 ≤ HP < 100)	2007	7.5 (5.6)	_____	_____	5.0 (3.7)	0.40 (0.30)			
	2008-2011						4.7 (3.5)		
	2012-2013	_____				0.19 (0.14)		0.40 (0.30)	0.02 (0.01)
	2014+	_____							
75 ≤ kW < 130 (100 ≤ HP < 175)	2007	4.0 (3.0)	_____	_____	5.0 (3.7)	0.30 (0.22)			
	2008-2011								
	2012-2013					_____	0.19 (0.14)	0.40 (0.30)	0.02 (0.01)
	2014+					_____			
130 ≤ kW < 300 (175 ≤ HP < 400)	2007-2010	4.0 (3.0)	-----	-----	3.5 (2.6)	0.20 (0.15)			
	2011-2013	-----	0.19 (0.14)	0.40 (0.30)		0.02 (0.01)			
	2014+	-----							

Table C. - Emission Standards for 2007 Model Year and Later Emergency Engines that are not Fire Pump Engines (based on 40 CFR §89.112 and Table 2 to Subpart IIII)

Limits in grams/KW-hr (grams/HP-hr)

Maximum Engine Power	Model Year(s)	NMHC + NOx	CO	PM
kW < 8 (HP < 11)	2007	7.5 (5.6)	8.0 (6.0)	0.80 (0.60)
	2008+			0.40 (0.30)
8 ≤ kW < 19 (11 ≤ HP < 25)	2007	7.5 (5.6)	6.6 (4.9)	0.80 (0.60)
	2008+			0.40 (0.30)
19 ≤ kW < 37 (25 ≤ HP < 50)	2007	7.5 (5.6)	5.5 (4.1)	0.60 (0.45)
	2008+			0.30 (0.22)
37 ≤ kW < 75 (50 ≤ HP < 100)	2007	7.5 (5.6)	5.0 (3.7)	0.40 (0.30)
	2008+	4.7 (3.5)		
75 ≤ kW < 130 (100 ≤ HP < 175)	2007+	4.0 (3.0)	5.0 (3.7)	0.30 (0.22)
130 ≤ kW < 300 (175 ≤ HP < 400)	2007+	4.0 (3.0)	3.5 (2.6)	0.20 (0.15)

Table D. - Emission Standards for Emergency Engines that are Fire Pump Engines (based on Table 4 to Subpart IIII)

Limits in grams/KW-hr (grams/HP-hr)

Maximum Engine Power	Model Year(s)	NMHC + NOx	CO	PM
kW < 8 (HP < 11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8 ≤ kW < 19 (11 ≤ HP < 25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19 ≤ kW < 37 (25 ≤ HP < 50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37 ≤ kW < 56 (50 ≤ HP < 75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+	4.7 (3.5)		0.40 (0.30)
56 ≤ kW < 75 (75 ≤ HP < 100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+	4.7 (3.5)		0.40 (0.30)
75 ≤ kW < 130 (100 ≤ HP < 175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+	4.0 (3.0)		0.30 (0.22)
130 ≤ kW < 300 (175 ≤ HP < 400)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)

Table E. - Certification Requirements for Stationary Fire Pump Engine (based on Table 3 to Subpart IIII)

Maximum Engine Power	Starting model year the engine manufacturer must certify new stationary fire pump engines
kW < 75 (HP < 100)	2011
75 ≤ kW < 130 (100 ≤ HP < 175)	2010
130 ≤ kW < 300 (175 ≤ HP < 400)	2009

