

1. Can the initial notifications be e-mailed?

At the present time, the EPA and the Iowa DNR will only accept hard copies of the initial notification. If a company had engines at several sites, it would be acceptable to summarize the information in a table form and attach it to a notification form. The due date is August 31, 2010. The initial notification should be sent to both US EPA Region VII and the Iowa DNR. The DNR address is: NESHAP Coordinator, Iowa DNR, Air Quality Bureau, 7900 Hickman Rd. , Suite 1, Windsor Heights, IA 50324. EPA's address is Director, Air and Waste Management Division, U.S. Environmental Protection Agency, 901 N. 5th Street, Kansas City, KS 66101.

2. Table 2d of the rule requires that compression ignition (CI) engines located at area sources to comply with the following requirement: *During periods of startup you must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply . What if an engine needs longer to startup than 30 minutes? Does the rule allow for a longer startup period?*

Table 2d applies to engines located at area sources. After the 30 minute period, the expectation would be that the engine is meeting applicable emission standards. Table 2d contains no explicit provision that would allow sources to obtain a longer period for startup. There is nothing in the rule that allows for a longer startup period. In the preamble to the Rule, EPA states that it will allow owners and operators of engines to work with State permitting authorities pursuant to EPA regulation 40 CFR Part 63, Subpart E to seek approval for alternative management practices. After the Iowa DNR adopts the modified RICE rule, it expects that it will be able to administratively handle requests for alternative operating practices in accordance with general provisions of the NESHAP regulations.

3. If an engine is required to be tested, where should the reports be sent?

All test reports and notifications should be sent to: Stack Test Coordinator, Iowa DNR, Air Quality Bureau, 7900 Hickman Road, Suite 1, Windsor Heights, IA, 50324. Additional information on stack testing and test protocol can be found at: <http://www.iowadnr.gov/air/prof/comp/stacktest.html>. The test report does not need to be sent to the U. S. EPA.

4. How are dual fuel engines regulated under this rule?

A dual fuel engine can be classified as either a CI (compression ignition) engine or an SI (spark ignition) engine. In the definition of spark ignition in the RICE NESHAP, EPA states: "*Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.*"

Therefore, in order to determine whether a dual fuel engine is an SI or a CI engine, the operator would have to determine the annual amount of each of the fuels burned in the engine. The amount of each fuel (e.g. natural gas and fuel oil) would then have to be multiplied by the heat content of each fuel (e.g. BTU/cf and BTU/gallon) and the total heat input of the fuels for the engine would have to be determined. If the heat input contribution from burning oil was less than 2% of the total annual heat input, the engine would be considered an SI engine. If the heat input contribution from burning oil was equal to or more than 2%, the engine would be considered a CI engine. EPA does intend to modify the RICE rule again in August of 2010 to include requirements for SI engines.

5. What effect does burning biodiesel have on CO emissions from a CI engine?

The Iowa DNR has reviewed the test data that was provided for the tests that were done on engines at Winterset and Story City in 2006 and 2007 as part of a study done by IAMU. Three engines were tested: a 2002 Caterpillar engine in Winterset, a 1966 Cooper engine in Winterset and a 1972 Fairbanks Morse engine in Story City. (Biodiesel testing was also done in Sumner in 2004, but CO emissions were not measured.) In general, for diesel engines, CO and PM emissions decrease when burning biodiesel blends. NOx emissions generally will increase.

The CO test results are summarized in the table below.

Engine ID	Biodiesel blend	CO concentration (ppmvd @ 15% O2)
2002 Caterpillar	100%	20.2
2002 Caterpillar	20%	32.34
1966 Cooper	20%	94.8
1972 Fairbanks Morse	100%	204.3

The RICE NESHAP emission standard for existing, non-emergency engines greater than 500 HP is 23 ppmvd @ 15% O2.