



RICE MACT / NSPS Update: How to Make Sense of this Difficult Issue

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Overview

- Who is covered and by what rule?
 - Brief overview of regulations
 - What information you need to determine applicability
 - Applicability Criteria for each rule
- Common questions/compliance issues
 - Installing or moving engines
 - Restrictions on emergency vs non-emergency usage
 - Recordkeeping mistakes
- General Compliance Guidance

Brief Overview of Regulations

- 40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
 - Commonly referred to as RICE MACT, applies to existing, new, and reconstructed stationary engines.
 - Compression ignition (CI) and spark ignition (SI).
 - Both major and area sources of HAP emissions are subject.
 - Focuses on controlling hazardous air pollutant (HAP) emissions.
- 40 CFR Part 60, Subpart IIII: New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines.
 - NSPS for new, modified, or reconstructed stationary CI engines.
- 40 CFR Part 60, Subpart JJJJ: New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines.
 - NSPS for new, modified, or reconstructed stationary SI engines.

Note: NSPS Subparts IIII and JJJJ apply to manufacturers and owners/operators of CI or SI Engines. *Our discussion will focus on owners/operators.*

NSPS focuses on controlling criteria air pollutant (CAP) emissions.

Brief Overview of Regulations cont'd

Useful General Definitions

- CI: compression ignition (diesel)
- SI: spark ignition (gas [natural gas, landfill gas, gasoline, propane, etc.])
 - 2SLB: 2-stroke lean burn
 - 4SLB: 4-stroke lean burn
 - 4SRB: 4-stroke rich burn
- 2-Stroke: power cycle completed in 1 revolution of crank shaft
- 4-Stroke: power cycle completed in 2 revolutions of crank shaft
- Lean Burn: higher air/fuel ratio
- Rich Burn: lower air/fuel ratio

Determining Applicability Step 1: Collect Info

- What information do you need to determine applicability to RICE MACT and/or NSPS?

	RICE MACT	NSPS Subpart IIII (CI)	NSPS Subpart JJJJ (SI)
Is your facility a major or area source of HAPs?	X		
Engine type (CI vs SI)	X	X	X
Fuel type(s)	X	X	X
Engine size/rating	X	X	X
Power Cycle (2- or 4-stroke)	X (SI only)		X
Rich vs Lean Burn	X (SI only)		X
Engine displacement	X	X	X
Date the engine was ordered		X	X
Date the engine was manufactured (model year)		X	X
Date the engine was modified (if applicable)		X	X
Date construction / installation or reconstruction commenced	X	X	X

Determining Applicability Step 1 cont'd

- The deadlines for compliance demonstration have passed, unless unit is a new installation or it is modified/reconstructed (NSPS only)
 - Note: Movement of a subject unit to or from a major source to or from a minor source of HAP emissions, may change your compliance requirements under RICE MACT.
- Knowing your dates:
 - “Commenced construction” under NSPS is the date the engine was **ordered**.
 - That is, the date the facility entered into a contractual obligation to purchase the engine.
 - “Commenced construction” under RICE MACT is the date **installation started**.
 - That is, the date the facility entered into a contractual obligation to undertake and complete, within a reasonable amount of time, the **on-site installation** of the engine.

Determining Applicability Step 2: Intended Use



- What will you need to use the engine for?
 - Emergency vs Non-Emergency
 - Stationary vs Nonroad (Portable)

- Emergency unit must meet **all** three criteria:
 - Operated in an emergency situation – *this is not always cut and dry*
 - Limited hours of operation during non-emergencies (>50 hours)
 - As part of a financial arrangement with another entity for all of a number of conditions.

Note: May 2015 Court Decision – vacatur of certain paragraphs on some non-emergency usages under financial arrangements for both NSPS and NESHAP.

Determining Applicability Step 2 cont'd

- Stationary vs. Nonroad (Portable)
 - Both NSPS and NESHAP regulations apply to stationary units.
 - Stationary means not used in a motor vehicle and not a nonroad engine
 - Nonroad engines are:
 - Self propelled (e.g. tractor)
 - Propelled while performing their function (e.g. lawnmower)
 - Portable or transportable
 - Is the unit in a permanently fixed position?
 - Mounting
 - Fixed piping
 - Wheels
 - Demonstrated use and application at multiple locations
 - Time at a specific location within a facility (e.g. >12 months)

Determining Applicability Step 3: Put it all together

- RICE MACT
 - No engine is too small or too large to be subject!
 - Area and Major sources are subject
 - Very few exemptions for stationary RICE:
 - Engine test cells
 - Emergency engines at residential, commercial or institutional (by NAICS code) area sources.
 - Stationary RICE used for national security purposes (must request an exemption)

Determining Applicability Step 3 cont'd

- You are subject to RICE MACT but have limited requirements under 63.6590(b) if...
 - New or reconstructed unit >500 HP at a major source with > 10% of annual gross heat input from landfill or digester gas – notification, reporting, and recordkeeping but not emissions testing
 - Existing units >500 HP at a major source – no requirements:
 - SI 2SLB
 - SI 4SLB
 - Limited use (<100 hours)
 - >10% of annual gross heat input from landfill or digester gas

Determining Applicability Step 3 cont'd

- You are subject to RICE MACT but only have to comply with NSPS if under 63.6590(c)...
 - New or reconstructed RICE at an area source
 - New or reconstructed unit at major source:
 - 2SLB \geq 500 HP
 - 4SLB $<$ 250 HP
 - SI 4SRB \leq 500 HP
 - \geq 500 HP and $>$ 10% of annual gross heat input from landfill or digester gas
 - Limited use and \leq 500 HP
 - CI \leq 500 HP
- ****Note the “gray area” here.** There are units that meet the criteria of 63.6590(c) but were ordered or manufactured before the applicable dates of the NSPS (e.g. CI constructed (ordered) after July 11, 2005 and manufactured after April 1, 2006 (July 1, 2006 for firepump engines **OR** modified/reconstructed after July 11, 2005) and therefore have **NO** requirements under either rule. State specific rules may apply.

Determining Applicability Step 3 cont'd

- NSPS Subpart IIII and JJJJ Applicability
 - NSPS doesn't "care" if you are a major or area source when determining applicability.
 - NSPS exempts test cells but does not exempt residential/commercial/industrial engines like RICE MACT does.
 - 60.4200(e) and 60.4230(f) exemption for temporary CI/SI engines located at stationary sources and operating less than 1 year, provided they meet standards applicable to the unit under nonroad provisions (primarily manufacturer oriented).
- You can have requirements under both NSPS and RICE MACT!
 - New engines at major sources that don't meet any of the exemptions or limited requirements under RICE MACT

- What do I need to know before I purchase/install a new engine?
 - Is it permanent or temporary? Portable or Stationary? Emergency?
 - Make sure it is certified per NSPS requirements.
 - Will you need a permit?
 - You do not have to get a Part 70 permit solely because you are subject to NSPS IIII or JJJJ or RICE MACT.
 - But, you may need a construction permit and/or operation permit revision, etc. depending on your state requirements.
 - Notification, recordkeeping, maintenance, emission testing and controls, reporting, etc. all depend what Rule the unit is subject to and how it is categorized.

Common Questions Continued

- I want to move or relocate an existing engine or rent a temporary engine...what do I need to do?
 - How long will it be onsite (stationary vs. portable)?
 - Relocating an **existing** unit from one facility to another does NOT make it a “new” engine unless reconstruction is triggered.
 - What if moving from area to major source or vice versa? (still not “new” but becomes subject to the applicable existing unit requirements)
 - Temporary engines may be exempt from RICE MACT/NSPS but not state permitting.
 - e.g. in some states, if the unit is stationary when it emits pollutants then it is a stationary emission source for permitting purposes even if it won’t be permanently at the site.

Common Questions Continued

- I need to keep track of what??
 - If you are exempt or have limited requirements because you are an emergency engine... you **must** have records to show you meet the definition of an emergency engine (i.e., track all hours of operation and the reason why)
 - Keep records of maintenance
 - Moving portable units
 - Emissions testing
 - Notification
 - Reporting

- Emergency Engines
 - I used my emergency engine for non-emergency purposes >50/100 hours – now what?
 - There is no leeway with the definition. If you exceed the non-emergency hours, you are no longer “emergency” for the LIFE of the engine.
 - I’m under an interruptible service agreement or similar utility contract... can I still be an emergency engine? (hint: NO)
 - Even if you are under the contract but haven’t used the engine for that reason, it is still not allowed for an “emergency RICE”. You must permit/comply as a non-emergency engine if you have such a contract/agreement.
- “Portable” units:
 - I have an engine that can be moved but I don’t...
 - I move my engine just to make it “portable”:

- General Compliance Guidance
 - Recordkeeping
 - Notifications
 - Testing
 - Maintenance
 - Control Equipment
- Periodic Review of Requirements with Intended Use
 - Tracking Change in Intended Use
 - Contractual changes with other entities
 - Internal facility changes to support production
 - Major Source vs. Area Source for RICE MACT

Thank you

Questions?

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