

NEW REGULATIONS FOR STATIONARY COMBUSTION ENGINES INCLUDING ENGINES <500 HP

INTRODUCTION

U.S. EPA, on January 18, 2008, issued its final rules promulgating air regulations for new and reconstructed stationary internal combustion engines with new widespread applicability to smaller-type engines. The rule became effective on March 18, 2008, with compliance dates beginning in July 2008. Although engines subject to these regulations are most often employed by power plants and chemical and manufacturing plants to generate electricity and power pumps and compressors, **the new regulations apply to all facilities with stationary internal combustion engines regardless of facility or engine size.** The final rule, generally, is composed of two separate sets of conditions including those relating to New Source Performance Standards (“NSPS”) for new stationary spark ignition internal combustion engines and Maximum Achievable Control Technology (“MACT”) for new and reconstructed stationary reciprocating internal combustion engines. Each part is discussed separately below

NSPS STANDARDS

The first set of conditions implement NSPS aimed at reducing emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from **all** new, modified and reconstructed stationary spark ignition (“SI”) internal combustion engines **regardless of size.** Engines subject to this rule must comply by July 1, 2008.

- “New” SI engines are those that are manufactured or ordered after January 18, 2008 and manufactured after July 1, 2007, for engines greater than or equal to 500 horsepower (“HP”), and manufactured after July 1, 2008, for SI engines less than 500 HP.
- SI engines that begin modification or reconstruction after June 12, 2006 (representing the date of U.S. EPA’s rule proposal), are also subject to this rule.
- The rule adopts the standard NSPS definition of “modified” set forth in 40 CFR § 60.14. “Modified” is defined as “any physical or operational change...which results in an increase in the emission rate...of any pollutant.” There are limited activities which are excluded from this definition which include certain routine maintenance, repair and replacement; increase in production rate accomplished without capital expenditures; increase in hours of operation not otherwise subject to an emissions limit; use of an alternative fuel or raw material; use of new device whose primary function to reduce air pollutants; and relocation or change in ownership of an existing facility. 40 CFR § 60.14(e). **Please note** that the definition of “modified” has been subject to much judicial interpretation and such words as “routine maintenance, repair and replacement” should not be taken on face value. Legal counsel should be consulted to determine whether certain activities are indeed excluded from the definition of “modified.”
- The rule also incorporates the standard NSPS definition of “reconstruction” as set forth in 40 CFR §60.15. “Reconstruction” is defined as “the replacement of components...to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new [engine], and it is technologically and economically feasible to meet the applicable standards set forth in this part.” 40 CFR § 60.15(b)(1)-(2)

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MACT STANDARDS

The second set of conditions promulgated on January 18, 2008 affect new and reconstructed stationary¹ reciprocating internal combustion engines (“RICE”). These conditions require owners and operators of smaller facilities, *i.e.*, “area sources,” operating any size RICE, or those running a RICE of less than or equal to 500 HP at larger facilities, *i.e.*, “major sources,” to comply with technology-based standards for reducing hazardous air pollutant emissions.

- “Major source” is defined as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence. 40 CFR §63.2.
- “Area source” is defined as any stationary source of hazardous air pollutants that is not a major source as defined in this part. 40 CFR §63.2.

These technology-based standards were previously only applicable to RICE greater than 500 HP located at major sources as set forth in 40 CFR part 63, subpart ZZZZ. U.S. EPA’s action on January 18, 2008 revises subpart ZZZZ to apply with equal force to all new or reconstructed RICE located at area sources and RICE at major sources with ratings less than or equal to 500 HP. These sources must now comply with all components of subpart ZZZZ including but not limited to operating and HAP emissions requirements, as well as monitoring, recordkeeping, and reporting requirements.

Please note that the above-described definitions of new and reconstructed are also applicable to the RICE regulations.

Summary of Air Pollutants Regulated by the NSPS and MACT Standards

<u>NSPS</u>	<u>MACT</u>
VOC	Total HAP including but not limited to the following:
NO _x	Formaldehyde
CO	Acrolein
PM	Methanol
NMHC	Acetaldehyde

¹Stationary reciprocating internal combustion engine (RICE) means any reciprocating 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 mobile RICE is designed to be and capable of being moved from one location to another. However, if the engine remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source than it may be considered stationary.



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DEMONSTRATING COMPLIANCE

Owners and operators subject to these rules have a variety of options to demonstrate compliance with this final rule. Owners and operators utilizing certified engines can demonstrate compliance by relying on the emission limits certified by the engine manufacturer. So long as each owner or operator follows emission-related maintenance of the engine according to the manufacturer's instructions, they are deemed in compliance. Where a non-certified engine is employed, owners and operators are required to conduct initial performance testing and possible future testing depending on the engine size, as well as maintain an engine maintenance log.

Finally, because of the likely widespread applicability of these regulations it is essential for all owners and operators of stationary internal combustion engines of all sizes to understand their obligations under these new rules. The above provides a summary of such obligations but ultimately the final rules should be consulted to determine each facilities exact regulatory requirements.

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