



Major Substantive Requirement Comparison for Owners/Operators

Statewide RICE Regulation No. 7 v. NSPS Quad J

Substantive Requirement	Statewide RICE (5 CCR 1001-9)	NSPS Quad J (40 CFR Part 60)
<u>Applicability Provision?</u>	<p><u>Yes</u></p> <ul style="list-style-type: none"> • Limited to natural gas fired RICE constructed or relocated to Colorado from another state <ul style="list-style-type: none"> ◦ On or after July 1, 2007 for RICE > 500 HP ◦ On or after January 1, 2008 for RICE 100 HP < 500 ◦ Anytime for RICE < 100 HP • Excludes ICE that are subject to an emission control requirement in a federal MACT standard, a BACT limit, or a NSPS • Excludes emission standards for RICE < 100 HP • Excludes any rich burn or lean burn RICE operating prior to February 1, 2009 if the owner or operator can demonstrate that retrofit technology cannot be installed at \$5,000 per ton of combined VOCs and NOx emission reductions and the application is submitted to the Division by August 1, 2009 (Off-ramp) • Requirements do not apply to any engine having actual uncontrolled emissions below the permitting thresholds listed in Regulation No. 3, part B 	<p><u>Yes</u></p> <ul style="list-style-type: none"> • Covers natural gas, LPG, gasoline, and propane Stationary Spark-Ignited ICE (ICE) ordered after June 12, 2006 and manufactured after a date between July 1, 2007 and January 1, 2009 • Covers natural gas, LPG, gasoline, and propane ICE modified or reconstructed after June 12, 2006 • Covers all engine sizes



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<u>General Operations Standard?</u>	<p><u>Yes</u></p> <ul style="list-style-type: none"> All required air pollution control equipment shall be operated and maintained pursuant to manufacturer specification or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices 	<p><u>Yes</u></p> <ul style="list-style-type: none"> Based on the size of the ICE, the owner or operator must, to extent practicable, maintain and operate the ICE in a manner consistent with good air pollution control practice for minimizing emissions
<u>Emission Standards?</u>	<p><u>Yes</u></p> <ul style="list-style-type: none"> No emission standards for RICE < 100 HP Emission standards ranging between 2 NO_x, 4 CO, and 1 VOC (in g/hp-hr) and 1 NO_x, 2 CO, and 0.7 VOC (in g/hp-hr) for RICE > 100 HP Covers those RICE that are relocated irrespective of modification or reconstruction after a certain date 	<p><u>Yes</u></p> <ul style="list-style-type: none"> Emission standards for all sizes of ICE Emission standards ranging between 3 NO_x, 4 CO, and 1 VOC (in g/hp-hr) and 1 NO_x, 2 CO, and 0.7 VOC (in g/hp-hr) for ICE > 25 HP that are non-emergency, with other standards for RICE ≤ 25 HP and limited emergency RICE with > 25 HP Covers only those ICE that are manufactured or modified or reconstructed after a certain date
<u>Emission Equipment Installation Requirements?</u>	<p><u>Yes</u></p> <ul style="list-style-type: none"> Installation and operation of oxidation catalyst by July 1, 2010 for lean burn RICE with a manufacturer's name plate design rate > 500 HP Installation and operation of a non-selective catalyst reduction and an air fuel controller by July 1, 2010 for rich burn RICE with a manufacturer's name plate design rate > 500 HP 	<p><u>No</u></p> <ul style="list-style-type: none"> There is an expectation that AFR ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction, which must be maintained and operated appropriately to ensure proper operation to minimize emissions



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<u>Importation or Installation Deadline?</u>	<u>Yes</u> <ul style="list-style-type: none"> After July 1, 2010, an owner or operator may not construct or relocate a RICE > 500 HP to Colorado without installing and operating specifically identified control technology For RICE > 500 HP constructed or modified before February 1, 2009, an owner or operator must install and operate specific control technology as of July 1, 2010 UNLESS it submits an application by August 1, 2009 that demonstrates the Off-ramp requirements are met 	<u>Yes</u> <ul style="list-style-type: none"> Starting July 1, 2009, installation of ICE that do not meet the emission standard requirements will be curtailed with a moratorium after January 1, 2011
<u>Monitoring Requirements?</u>	<u>No</u> <ul style="list-style-type: none"> Not specifically addressed in the promulgated language found at XVII 	<u>Yes</u> <ul style="list-style-type: none"> Starting July 1, 2008, install non-resettable hour meters on emergency ICE if manufactured without meeting emission standards for non-emergency ICE with installation on all such engines by January 1, 2011
<u>Records Requirements?</u>	<u>No</u> <ul style="list-style-type: none"> Not specifically addressed in the promulgated language found at XVII 	<u>Yes</u> <ul style="list-style-type: none"> Depending on ICE size/type, owners or operators of ICE must keep some to all: (1) notifications submitted to comply and associated supporting documentation; (2) maintenance information related to the ICE; (3) if certified, documentation from the manufacturer that the engine meets emission standards; (4) if not certified or certified but operated as non-certified, documentation of compliance with emission standards; and (5) hours of operation via the non-resettable meter, separating emergency hours from non-emergency hours



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<u>Compliance Demonstration Requirements?</u>	<u>No</u> <ul style="list-style-type: none"> Not specifically addressed in the promulgated language found at XVII 	<u>Yes</u> <ul style="list-style-type: none"> Based on size/type, purchase a certified ICE or purchase a non-certified ICE and complete some to all of the following: (1) keep a maintenance plan; (2) keep records of maintenance; (3) to the extent practicable, maintain/operate ICE in manner consistent with good air pollution control practices for emission minimization; (4) conduct an initial performance test; and (5) conduct subsequent performance tests the earlier of 8,760 hours or every 3 years
<u>Notification Requirements?</u>	<u>No</u> <ul style="list-style-type: none"> Not specifically addressed in the promulgated language found at XVII 	<u>Yes</u> <ul style="list-style-type: none"> For non-certified ≥ 500 HP ICE, submit initial notification within 30 days of construction commencement date (date of engine order) that includes: (1) name and address of the owner or operator; (2) address of the affected source; (3) engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; (4) emission control equipment; and (5) fuel used