

Air Quality Update

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December 16, 2011 - SJVAPCD

CARB'S TRUCK AND BUS REGULATION; ON-ROAD HEAVY-DUTY DIESEL VEHICLES

In 2008, the California Air Resources Board (CARB) approved the Truck and Bus regulation aimed at reducing particulate matter (PM) and nitrogen oxides (NO_x) from existing vehicles operating in California. The first implementation date begins January 1st, 2012.

The regulation applies to lighter diesel fueled trucks and buses with a gross vehicle weight rating (GVWR) between 14,001 pounds to 26,000 pounds and heavier diesel fueled trucks and buses, those with a GVWR exceeding 26,000 pounds both privately or federally owned, and includes school buses. Public fleets, solid waste collection trucks, and transit buses are already subject to other regulations and are not part of the truck and bus regulation.

Table 1 – Engine Model Year Schedule

Engine Year	Requirement From January 1 st 2012 (Heavier Trucks)
Pre-1994	No requirements until 2015, then 2010 engine
1994-1995	No requirements until 2016 then 2010 engine
1996-1999	PM filter from 2012 to 2020, then 2010 engine
2000-2004	PM filter from 2013 to 2021, then 2010 engine
2005-2006	PM filter from 2014 to 2022, then 2010 engine
2007-2009	No requirements until 2023, then 2010 engine
2010	Meets final requirements

Compliance requirements, along with the associated implementation timeline outlined, is different depending on whether a truck is classified as a lighter truck or heavier truck. Lighter trucks and buses do not have to meet compliance requirements until 2015.

Heavier trucks have two options to comply with the regulation. Fleets can comply with the compliance schedule by engine model year or they could use a phase-in option that allows greater flexibility.

Table 2 – Phase-In Option (Heavier Trucks)

Compliance Date	Vehicles With PM Filters
January 1, 2012	30%
January 1, 2013	60%
January 1, 2014	90%
January 1, 2015	90%
January 1, 2016	100%

Beginning January 1st, 2012, heavier trucks are required to meet the outlined engine model year schedule in **Table 1**. PM filter installation would be required on 1996 model year and newer engines, and would replace the vehicles eight years later. Trucks with 1995 model year and older engines would require engine replacement starting in 2015.

The phase-in option is - outlined in **Table 2**. This option allows fleets to decide which vehicles to retrofit or replace, regardless of engine model year. Fleets must report information about all of their heavier trucks by January 31st, 2012 to utilize this option. Fleets can comply by demonstrating that they have met the percentage requirements outlined within the table. Therefore,

by 2012 the fleet would need to have PM filters on 30% of the heavier vehicles within their fleet. This option counts 2007 model year and newer engines originally equipped with PM filters toward compliance. Any engine with a PM filter regardless of age would be compliant until at least 2020.

Air Quality Tip

Operators of Non-Agricultural Operations (Non-AO) spark ignited engines are required to submit an emission control plan (ECP) as required by Rule 4702. Operators of Non-AO spark ignited engines that already have an approved ECP must submit a letter to the District indicating that the previously approved ECP is still valid.

Upcoming Training Offered by Yorke Engineering:

San Joaquin Valley Air Quality Permitting and Compliance Seminar:
April 24th and 25th, 2012
<http://www.yorkeengr.com/classes.htm>

Upcoming Due Dates:

- Title V – Report of Required Monitoring semi-annually*
- CARB In Use Off Road Heavy Diesel Trucks 1/1/12
- CARB Cap-and-Trade (Registration) 1/31/12
- DTSC Biennial Report (Hazardous Waste Reporting) 3/1/12
- USEPA GHG Mandatory Reporting 3/31/12
- CARB GHG Report (Full Reporting) 4/10/12
- CARB GHG Report (Power Entities & Abbreviated Reporting) 6/1/12

All due dates listed are the statutory dates; sometimes dates are extended when they fall on weekend/holiday.

*Your due date is based on the issuance date of your Title V permit.

SAN JOAQUIN VALLEY APCD RULE CHANGES ADOPTED

For full details on rule adoptions go to:

http://www.valleyair.org/rules/rules_recently_adopted.htm

- Rule 4702: *Internal Combustion Engines*

On August 18, 2011, Rule 4702 was amended to further limit emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur oxides (SO_x) from internal combustion engines. Rule applicability has expanded to include any internal combustion engine with a rating of 25 horsepower (hp) or greater, which is lower than the previous threshold of 50 hp or greater. The emission limits have been established for Non-Agriculture Operations (Non-AO) spark-ignited (SI) engines and Non-AO field gas fueled cyclic loaded engines greater than 50hp as outlined in **Table 3** below:

Table 3 – Emission Limits/Standards

Engine Type	NO _x (ppmv)	CO (ppmv)	VOC (ppmv)
1.) Rich-Burn			
a.) Waste gas	50 or 90% Reduction	2000	250
b.) Cyclic loaded	50	2000	250
c.) All Other Engines	25 or 90% Reduction	2000	250
2.) Lean-Burn			
a.) Two-stroke, gaseous fueled less than 100hp	75 or 85% Reduction	2000	750
b.) All Other Engines	90 or 65% Reduction	2000	750

A new provision has been added to the rule to allow the payment of annual NO_x emission fees in lieu of compliance with the newly revised NO_x, VOC and CO emission limits.

The monitoring requirement has also been reduced to allow annual NO_x measurements instead of quarterly for engines that operate less than 120 days/year.

On and after July 1, 2012 no person shall sell or offer for sale any non-AO spark ignited engine or any non-AO compression ignited engine rated between 25-50 HP unless the engine meets the applicable emission limits specified in federal New Source Performance Standards (NSPS) for the year in which the engine was last purchased.

By January 1, 2013 owners of Non-AO engines rated between 25-50 HP have to submit a one-time report detailing the engine size, model, serial number, manufacturer, location of the engine, type of fuel, type of ignition, combustion type, purpose and intended use of the engine, fuel consumption for the previous one-year period, and typical daily operating schedule.

- Rule 4605: *Aerospace Assembly Component Coating Operations*

On June 16, 2011, Rule 4605 was amended to correct the deficiencies found by EPA in meeting the 1997 Control Techniques Guideline (CTG) Document for Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations

(EPA-453/R-97-004).

The newly amended rule incorporates the CTG requirements and VOC limits along with administrative changes. The implementation deadline for the new VOC limits is January 1, 2013.

- Rule 4352: *Solid Fuel Fired Boilers, Steam Generators and Process Heaters*

Rule 4352 was amended on December 15, 2011. The purpose of the amendments is to address issues found by EPA regarding those related to Reasonably Achievable Control Technology for NO_x. The amended rule further limit emissions of NO_x and CO from solid fuel fired boilers, steam generators and process heaters.

The new NO_x and CO emission limits are summarized in the table below:

Table 4 – NO_x and CO Emission Limits – Rule 4352

Fuel Type	Emission Limits effective until December 31, 2012	
	NO _x limit	CO Limit
Municipal Solid Waste	200 ppmv corrected to 12% CO ₂	400 ppmv corrected to 3% O ₂
Biomass	115 ppmv corrected to 3% O ₂	
All Others		
Fuel Type	Emission Limits effective on and after January 1, 2013	
	NO _x limit	CO Limit
Municipal Solid Waste	165 ppmv corrected to 12% CO ₂	400 ppmv corrected to 3% O ₂
Biomass	90 ppmv corrected to 3% O ₂	
All Others	65 ppmv corrected to 3% O ₂	

Yorke Engineering, LLC specializes in environmental and air quality consulting for stationary and mobile sources including dispersion modeling, health risk assessments, permitting, emission inventories, air quality compliance systems, etc. Yorke Engineering has assisted over 200 customers including a wide variety of industrial facilities and government organizations throughout California.