



**CONSTRUCTION INDUSTRY
AIR QUALITY COALITION**

January 7, 2008

Mrs. Mary Nichols, Chairman and
Members of the Board
California Air Resources Board
1001 "I" Street
P.O. Box 2815
Sacramento, California 95812

Coalition Members



RE: 15-Day Comments on In-Use Off-Road Diesel Vehicles Final Rule

Dear Chairman Nichols and Board Members:



Associated General Contractors
America-San Diego Chapter, Inc.

The Construction Industry Air Quality Coalition (CIAQC) and the Coalition to Build a Cleaner California (CBCC) appreciate the opportunity to express its strong opposition to the adoption of the Proposed Regulation for In-Use Off-Road Diesel Equipment in its current form. CIAQC recognizes the need to reduce Particulate Matter, Oxides of Nitrogen and visible emissions from off-road diesel vehicles; we are convinced, however, that the staff proposed regulation is unachievable for many reasons, including those outlined below:



Building Industry Association
of Southern California

CIAQC was formed in 1989 to promote the adoption and implementation of emission reduction measures that are cost-effective and efficient while minimizing unacceptable impacts on its construction and building industry members. The coalition is comprised of several major construction and building industry associations in California. These include the Associated General Contractors of California and San Diego, the Building Industry Association of Southern California, the Engineering Contractors Association, the Engineering and General Contractors Association, the Engineering & Utility Contractors Association, Southern California Contractors Association and the California Dump Truck Owners Association. Associate and affiliate members include the Southern California Rock Products Association (now a part of the California Construction and Industrial Materials Association), the California Rental Association and the California Construction & Industrial Materials Association. In all CIAQC represents several thousand member companies throughout California.



Engineering
Contractors Association



Engineering & General
Contractors Association



Engineering & Utility
Contractors Association

The Coalition to Build a Cleaner California is dedicated to improving California's air quality while maximizing the historic infrastructure investment approved by California voters in November 2006. The Coalition's members include CIAQC as well as the construction industry, its workers and infrastructure stakeholders. A list of the coalition's membership is attached.



Southern California
Contractors Association

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Major Funding Provided by the Construction Industry Advancement Fund and the Fund for Construction Industry Advancement

While we strongly oppose the proposed off-road regulation in its current form, we would like to acknowledge the willingness of your staff to sit down with CIAQC representatives and members.

We believe that in the haste to adopt a regulation, many important factors and impacts were overlooked or ignored by the staff in their presentation to the members of the Board. First and foremost were the implications of the SOON program and its practical impacts on the fleet management behavior of the construction industry. We believe that CARB also seriously underestimated the extent of the current economic climate and its effect on construction companies, their fleets and their ability to comply with the significant financial costs of the rule. In addition little attention was given to the lack of VDECS technology for this type of engine application the long-term effects of the particulate traps and their contribution to green house gas emissions.

REQUEST FOR A HEARING

We would like to repeat our request for a hearing under Cal. Gov't Code 11346.8(a). As indicated on our December 13, 2007 letter to the Executive Officer, we believe a hearing is required for three reasons. First because the information CARB used to justify its cost effectiveness determination was rendered inaccurate when the Board instructed the staff to bifurcate the rule to allow easy adoption by other states. This will dramatically effect the availability of "newer" used equipment for the California market.

Second, the SOON program changes made at the last minute completely changed the nature of the program and should have been subject to a formal comment period in advance of the Board decision.

Third, we have always been advised that the comment period after Board adoption would be at least 30 days to accommodate the lack of notice on the SOON program before adoption. Lacking that extended comment period, CARB is compelled to conduct a hearing on at least the SOON program.

ADMINISTRATIVE PROCEDURES ACT

Clarity

The Administrative Policy Act (APA) requires the Office of Administrative Law (OAL) verify that adopted regulations meet certain standards before the regulations are enacted and published as law. Regulatory intent and requirements regarding clarity are summarized below.

Legislative Intent.

11340. The Legislature finds and declares as follows:

- (b) The language of many regulations is frequently unclear.... The language is often confusing to the persons who must comply with the regulations.
- (e) There exists no central office in state government with the power and duty to review regulations to ensure that they are written in a comprehensible manner...
- (g) The complexity and lack of clarity in many regulations put small businesses, which do not have the resources to hire experts to assist them, at a distinct disadvantage...

11340.1. (a) The Legislature therefore declares that it is in the public interest to establish an Office of Administrative Law which shall be charged with the orderly review of adopted regulations. It is the intent of the Legislature that the purpose of such review shall be to ...improve the quality of those regulations which are adopted.

APA Standard for "Clarity"

11349.1. (a) The office shall review all regulations adopted,and make determinations using all of the following standards:

(3) Clarity. means written or displayed so that the meaning of regulations will be easily understood by those persons directly affected by them.

We submit that CARB's In-Use Off-Road Rule does not comply with the APA standard for clarity.

Example 1

Text at 2449.2(a)(2)(A)4

4. **Exemptions** – The following exemptions from the retrofit requirement apply, provided that retrofits have been or are being applied to all other engines in the owner's fleet not subject to these exemptions. A fleet is exempt from the retrofit requirement in 2449.2(a)(2)(A)1. if all its vehicles' engines meet one of the criteria below:

- a. Engines in vehicles less than 5 years old,
- b. Engines for which there is no highest level VDECS (i.e., for which there is no Level 2 or 3 VDECS, or for which there is a Level 2 or 3 VDECS which cannot be used without impairing the safe operation of the vehicle as demonstrated per section 2449(e)(8)),
- c. Engines equipped with an original equipment manufacturer diesel particulate filter that came new with the vehicle, or
- d. Engines already retrofit with a Level 2 or 3 VDECS that was the highest level VDECS available at time of installation. An engine with a Level 2 VDECS that was not the highest level VDECS at time of installation does not qualify for this exemption.

Compare the adopted text with the following revised text, which we corrected for clarity.

Text corrected for clarity at 2449.2(a)(2)(A)4

4. **Exemptions** – The following engines are exempt from the retrofit requirement.
- a. Vehicle engines where the vehicle is less than five years old.
 - b. Engines where a Highest Level VDECS is unavailable, or where a Highest Level VDECS would result in unsafe operation of the vehicle per section 2449(e)(8),
 - c. Engines equipped with an original equipment manufacturer diesel particulate filter when new, or
 - d. Engines with a Highest Level VDECS that was the highest-level VDECS available at the time of installation.

The corrected text has the same exact result as the original adopted text at 79 words compared to the original text at 175 words. More than 50% of the original text is superfluous and obfuscates intent.

Consider the original adopted text at 2449.1(a)(2)(A)4

- 4. Exemptions** – Vehicles meeting the criteria below are exempt from the turnover requirement. A fleet is exempt from the turnover requirement in 2449.1(a)(2)(A)1. if all its vehicles meet one of the criteria below:
- a. Vehicles less than 10 years old – If all vehicles in a fleet will be less than 10 years old on the compliance date, no turnover is required.
 - b. Specialty vehicles if all the following criteria are met:
 - i. The fleet has turned over all other vehicles first,
 - ii. No repower is available for the specialty vehicle, as demonstrated to the Executive Officer,
 - iii. A used vehicle with a cleaner engine is not available to serve a function and perform the work equivalent to that of the specialty vehicle, as demonstrated to the Executive Officer, and
 - iv. The specialty vehicle has been retrofit with highest level VDECS.
 - c. A vehicle retrofit within the last six years with a Level 2 or 3 VDECS that was highest level VDECS at the time of retrofit.
 - d. A vehicle with a Tier 4 interim engine or Tier 4 final engine.

Again compare the adopted text with the following text we again corrected for clarity.

Text corrected for clarity at 2449.1(a)(2)(A)4

- 4. Exemptions** – The following engine are exempt from the fleet turnover requirement.
- a. Vehicle engines where the vehicle is less than ten years old.
 - b. Engines in specialty vehicles if all the following criteria are met:
 - i. No repower is available for the specialty vehicle engine, as demonstrated to the Executive Officer,
 - ii. A used vehicle with a cleaner engine is unavailable as demonstrated to the Executive Officer, and
 - c. A vehicle engine retrofit equipped with the Highest Level VDECS at the time of retrofit.
 - d. Tier 4 interim engine or Tier 4 final engine.

Original text is 179 words long. Our revised text is 94 words in length. Almost 50% of the original text is again unnecessary. Simplicity is the handmaiden of clarity. The extra text serves only to obfuscate intent. Simply compare the original and revised text.

Consider our corrections in a bit more detail.

The introductory paragraph from 2449.2(a)(2)(A)4

The following exemptions from the retrofit requirement apply, provided that retrofits have been or are being applied to all other engines in the owner's fleet not subject to these exemptions. A fleet is exempt from the retrofit requirement in 2449.2(a)(2)(A)1. if all its vehicles' engines meet one of the criteria below:

Compare that with the following, which has the same exact result.

The following engines are exempt from the retrofit requirement.

The original first sentence is not only awkwardly phrased; it says that exemptions do not apply to nonexempt engines. We submit that this is nonsensical and succeeds in making a simple point (the following engines are exempt) complex and confusing.

This same reasoning appears again in the section on exemptions from fleet turnover requirement for specialty vehicles.

Text at 2449.1(a)(2)(A)4.i

i. The fleet has turned over all other vehicles first,

In a clear well written rule all text must have a clear and concise purpose that is essential to a rule. Text here again suggests an operator would somehow conclude that because one vehicle is exempt then all his nonexempt vehicles would be exempt as well. This raises the bizarre prospect that if this specific text was eliminated that nonexempt equipment would become exempt. The elimination of this text would in fact not only no affect on what is exempt and what is not, but would clarify that very point.

Then consider the second sentence in that introductory paragraph to the retrofit exemptions.

A fleet is exempt from the retrofit requirement in 2449.2(a)(2)(A)1 if all its vehicles' engines meet one of the criteria below:

Text here says if all your engines are exempt then all your engines are exempt, and is equally pointless.

This same odd sort of reasoning appears again,

From 2449.1(a)(2) (A)4

A fleet is exempt from the turnover requirement in 2449.1(a)(2)(A)1. if all its vehicles meet one of the criteria below *[if all your engines are exempt then all your engines are exempt]*

And again,

Text at 2449.1(a)(2)(A)4.a

If all vehicles in a fleet will be less than 10 years old on the compliance date, no turnover is required [*if all your engines are exempt then all your engines are exempt*]

By stating the obvious, the rule text again succeeds in making a simple point confusing. And it again raises the bizarre prospect that the elimination of such text might somehow affect when an operator is exempt and when he is not. On the contrary, the elimination of such text not only has not such affect, it again clarifies that very intent.

There are other problems as well. Consider the original rule text from 2449.1(a)(2)(A)4.b.ii.

No repower is available for the specialty vehicle engine, as demonstrated to the Executive Officer.

The rule provides absolutely no clarification on what constitutes an “available” repower for specialty vehicles or otherwise. Cost is certainly never listed as a constraint. There is absolutely nothing in the rule that addresses when a repower is “available” or “unavailable.” Costs are certainly not a constraint on what may be “available.” We submit that where costs are not a constraint any repower can be done. For clarity something as critical as what constitutes an “available” certainly must be specified in the rule.

And here is yet another problem with text in these same sections.

Text at 2449.1(a)(2)(A)4.a

“Vehicles less than 10 years old – If all vehicles in a fleet will be less than 10 years old based on date of manufacture on the compliance date, no turnover is required.” [are exempt from NOX BACT]

Text at 2449.2(a)(2)(A)4.a.

“Engines in vehicles less than 5 years old based on the date of manufacture” [are exempt from PM BACT]

Why is “engines” in one exemption and not the other? Does the latter exemption apply to the age of the vehicle or the engine of the engine? If it applies to the age of the vehicle why add “Engines in”? If it applies to the age of the engine why add “in vehicles”?

There are a variety of other problems with these two sections as well we not detail here for the sake of brevity. They include:

- Partially redefining terms that were defined in the definition section
- Inconsistent use of terms and phrases
- Redundant exemptions, and in general
- Poorly constructed and awkward text

Let us return to the legislative intent to the APA.

(b) The language of many regulations is frequently unclear.... The language is often confusing to the persons who must comply with the regulations.

And to the standard for "clarity."

(3) Clarity. means written or displayed so that the meaning of regulations will be easily understood by those persons directly affected by them.

We contend that rule text in the two sections on exemptions, which are critical elements of this rule, do not come remotely close to the standard for "clarity."

Example 2

In other instances text is required for clarity and is missing. For example

Text in the first paragraph of Appendix A to the rule.

"If engine data required to be reported is unknown, such engines are assumed to be 1900-1969 vehicles for fleet average purposes.

The obvious question is what missing data would trigger CARB treating an engine as a 1900 to 1969 model year engine? Or more succinctly, what data is used to identify the model year of an engine? Under this rule treating an engine as a newer engine as a 1969 model year engine could have huge implications to an equipment owner. There are very few "data" that are used to verify the model year of an engine. These include the engine serial number, manufacturer build code, or, in the case of Tier 1 or higher engines, an emission certification engine family. These numbers are either stamped on the block or, more commonly, stamped on a plate that is then attached to the block.

It is not uncommon for an engine to be missing an identification plate, or to have a plate that is only partially legible, primarily as a consequence of undergoing rebuilds. But even if these numbers are missing an engine manufacturer can generally bracket the range of years an engine was made, if not identify the exact year, by looking at the engine's build and components (for example, that an engine was built between 1996 and 2001).

We believe that because of the implications of treating an engine as a 1969 model year engine, and the fact that "data" used to make this determination are highly limited; clarification could be provided with minimal effort. We would revise this text as follows.

Revised text

...if the model year of an engine cannot be verified because it is missing a serial number, a manufacturer's build code, or a certified emission family number; and the engine manufacturer or authorized representative is unable to confirm the model year of the engine based on those codes or the engine's build and components, such an engine shall be treated as a 1969 model year engine. If engine build and components are used to identify the model year, the engine owner shall maintain documentation provided by the manufacturer documenting

the model year of that engine. If a manufacturer can only bracket the model year of the engine (for example, that an engine was built between 1987 and 1994) the earliest date the engine was manufactured shall be used the model year of that engine (in the example, 1987).

We realize that it is impossible to write rule with any significance that provides 100% clarity on all issues that may arise. But that being said, if clarity is a requirement then critical aspects of a rule must be defined. We note that crafting the above text took us approximately 15 minutes.

Note that the original revised text is also another example of poorly crafted text that lacks clarity. Ignoring our primary point (missing text) consider the original and our revised text.

Original text.

.. if engine data required to be reported is unknown, such engines are assumed to be 1900-1969 vehicles for fleet average purposes.

Revised text.

.. if an engine model year is unknown such engines are assumed to be 1969 model year.

Saying "1900 to 1969" is pointless because the only thing the engine model year is used for is to identify the emission rate for that engine, and the emission rates for 1900 to 1969 model year engines are exactly the same. The text "for fleet average purposes" is again pointless. It implies that there might some other use for the model year besides calculating fleet average emission rates. There is not. Finally, the word "vehicles" is a mistake and should read "engines." The fleet averages emission rates and fleet average targets are all based on the age of the engine and not the vehicle.

In the preceding we covered 393 words of rule text. The rule is roughly some 15,000 words long. Adopted rule text is saturated with problems like the ones we have identified.

OAL is required to determine that an adopted rule is

"...written or displayed so that the meaning of regulations will be easily understood by those persons directly affected by them."

We submit that the adopted text does not come remotely close the APA standard for Clarity."

Complexity

As we indicated under "Clarity", the Administrative Policy Act (APA) requires the Office of Administrative Law (OAL) verify that adopted regulations meet certain standards before the regulations are enacted and published as law. In the previous section we addressed one critical aspect of "clarity:" whether the average person subject to the rule can reasonably understand the language used to convey the rule requirements. In this section we assess a closely related

standard: complexity. Here we assess the structure of the rule and if that structure facilitates or impedes understanding and compliance.

APA Legislative Intent.

11340. The Legislature finds and declares as follows:

...

(b) The language of many regulations is frequently unclear and *unnecessarily complex*, even when the complicated and technical nature of the subject matter is taken into account. The language is often confusing to the persons who must comply with the regulations.

...

(g) The *complexity* and lack of clarity in many regulations put small businesses, which do not have the resources to hire experts to assist them, at a distinct disadvantage.

APA Standard.

11349.1. (a) The office [OAL] shall review all regulations adopted,and make determinations using all of the following standards:

(3) Clarity. means written or displayed so that the meaning of regulations will be easily understood by those persons directly affected by them.

We assess the complexity of the rule by identifying the specific steps a fleet owner must take to comply with the rule. We caution that because of the lack of clarity in rule language, as we detailed in the previous section, many aspects of the rule are less than entirely clear. The following therefore represents our best estimate.

In the following we take a "large" fleet owner through the rule and identify the basic actions he must take to comply with the first of ten successively more stringent compliance dates and the timeline under which these steps must happen.

Calculate Fleet Size and Compile Base Data

1. The fleet owner must determine which equipment in his fleet that is subject to the rule that he owns or will own on March 1, 2009 by comparing each piece of diesel off-road equipment with the rule applicability provisions. We find the applicability provisions to be reasonably clear.
2. The fleet owner must get and record the chassis, make, model, year and serial number. This information is typically readily available to the equipment owner.
3. He must also get and record the engine make, model, year and serial number for each engine. Here things become more complex, as it is not uncommon for engines to be missing SNs. Rule text says if engine data required to be reported is unknown, the engine is treated as 1969 model year engine. As we indicated in our previous discussion of clarity, the rule does not specify what missing data would trigger treating a newer engine as an older, higher emission engine. Treating a newer engine as an older engine could have major compliance implications to a fleet owner.
4. He must get then identify each engine's precise maximum HP. According to the rule this means "the engine's net horsepower or net flywheel power certified to Society of Automotive Engineers (SAE) Method J1349. If the engine's net horsepower or net flywheel

power certified to SAE Method J1349 is not available, another net horsepower or net flywheel power from the manufacturer's sales and service literature may be used." The In-Use Off-Road is applicable to literally thousands of different model engines. Each specific engine make, model and year will typically come with different HP ratings. And it is not uncommon for engines to have been modified at some point (for example, different injectors, addition of a charge air cooler, etc.) Every other internal combustion has a rule applicability cut-off, for example 25 HP or 50 HP. This limits the need for highly precise HP ratings to highly limited subset of engines. This rule is dependent on the fleet owner being able to confirm and document, in accordance with the rule definition of HP, the precise HP of every engine in his fleet. An incorrect HP rating for a single engine could cause significant compliance problems for a fleet owner. Requiring such a degree of precision for every engine makes this rule highly complex.

5. He must then sum the HP for all engines in his fleet (call this 09 TOTAL HP)
6. He must also record chassis, make, model, year, SN, engine make, model, year, SN, maximum HP and HP documentation, and if a PM retrofit devices was installed the date of installation, make and model of the device, the CARB certification Level, and a verification it was highest Level device available at the time of installation (call this FLEET RECORD 09).
7. He must then submit FLEET RECORD 09 to CARB by April 1, 2009 for his fleet as it exists on March 1, 2009. The fleet owner is required to submit
 - a. Responsible person name, corporate parent (if applicable), company or agency name, street address, phone number, email address (if available), and taxpayer identification number.
 - b. A list of each vehicle subject to this regulation along with the following information for each vehicle.
 - i. Vehicle type;
 - ii. Vehicle manufacturer;
 - iii. Vehicle model;
 - iv. Vehicle model year;
 - v. Whether the vehicle is a low-use vehicle;
 - vi. Whether the vehicle is a specialty vehicle;
 - vii. Whether the vehicle is a dedicated emergency vehicle;
 - viii. Whether the vehicle is a dedicated snow removal vehicle;
 - ix. Whether the vehicle is used for agricultural operations for over half of its annual operating hours;
 - x. Whether the vehicle is an electric vehicle that replaced a diesel vehicle;
 - xi. Whether the vehicle is one that the owner intends to retire within one year; and
 - xii. For each engine that propels the vehicle, the engine manufacturer, engine family (if any), engine serial number, engine model year, engine maximum power, type of retrofit emission control equipment installed (if any), date installed, and its verification level.
 - xiii. For vehicles that owners intend to define as low-use, report two-hour meter readings, one from on or before March 1, 2008 and one from on or after March 1, 2009, and the dates of reading. If using the three-year rolling average definition of low-use, report two-hour meter readings, one from on or before March 1, 2006 and one from on or after March 1, 2009.
 - xiv. For vehicles that owners intend to define as specialty vehicles, report demonstration, per criteria approved by the Executive Officer, that no

repower is available and no used vehicle with a cleaner engine is available to serve a function equivalent to and perform work equivalent to that of the specialty vehicle.

- xv. For electric vehicles that replace a diesel vehicle, report the following information regarding the diesel vehicle replaced: vehicle type, vehicle manufacturer, vehicle model, vehicle model year, vehicle serial number, engine manufacturer, engine family (if any), engine serial number, engine model year, engine maximum power and date retired.

Calculate Fleet Average Emission Rates

8. The fleet owner's first compliance date is March 1, 2010. To show compliance on that date he must first identify any normal changes he plans to make to his fleet between March 1, 2009 and March 1, 2010. Changes may include adding, retiring, replacing, repowering (higher Tier and Tier 2 or higher), retrofitting vehicles, or moving vehicles to backup service (less than 100 hours per year). Note that he cannot buy any equipment with uncontrolled Tier 0 engines and any equipment with uncontrolled Tier 0 engines must be sold out of state. He would have to maintain records of where he sells Tier 0 equipment.
9. If he made any changes that affected his total fleet HP, he would have to calculate his total fleet hp (steps 1 through 6) reflecting those changes (call this 10 TOTAL HP, if his HP did not change make 09 TOTAL HP = 10 TOTAL HP).
10. He must calculate his fleet average PM and NOx emission rates. To do this he must first locate the PM and NOx emission rates for each engine included in 10A TOTAL HP. The rates are given in the rule and vary by pollutant, engine model year and engine HP.
11. He must multiply the HP times the PM and NOx emission rates for each engine.
12. If the engine is equipped with a certified PM control device, he must multiply PM emissions from step 11 by 1 minus the certified control efficiency (expressed as a decimal) of that device.
13. He must complete steps 10 through 13 for all engines and sum the total NOx and PM emissions.
14. He must divide the NOx and PM emissions by the 10 TOTAL HP, which gives the fleet average PM and NOx emission rate (call these 10 PM FLEET AVG and 10 NOX FLEET AVG)
15. If a fleet owner owns a mixed fleet of older and newer equipment, and typically uses the newer equipment substantially more than the older equipment, and the owner could live with requirements to monitor hours and possibly restrict the comparative use of the equipment continue to step 16, otherwise go to step 22.
16. Take the first engine included in 10 TOTAL HP and calculate its emissions for NOx and PM as indicated in steps 10 through 12, and then multiply those emissions by the hours the fleet owner expects the engine to run in the future, between March 1, 2009 and March 1, 2010.
17. Sum the emissions for PM and NOx for all engines.
18. Multiply the HP of each engine by its annual hours and sum the results for all engines.
19. Divide the total emissions (step 17) by value given in step 18.
20. Multiply that result by the 1.18, which is the penalty the rule applies to this method. The result is the fleet average emission rates including hours (call this 10 PM FLEET AVG W/HRS and 10 NOX FLEET AVG W/HRS)
21. Compare the 10 PM FLEET AVG with 10 PM FLEET AVG W/HRS, and 10 NOX FLEET AVG with 10 NOX FLEET AVG W/HRS. If the method that includes hours produces lower emission rates for both pollutants, the operator has to decide if the risk of this method

warrants its use (predicting and complying with predicted hours). To simplify the following discussion we are going to call the fleet average emission rate used by the fleet owner 10 PM AVG and 10 NOX AVG, regardless of the fleet average calculation method he uses.

Calculate Early Carryover Credit

22. If any engines have been or will be repowered with a higher tier engine before March 1, 2009 and the fleet owner plans to own equipment with that engine on March 1, 2010, sum the HP for those engines (call this EARLY NOX CREDIT)
23. To get credit for equipment retired before March 1, 2009 the fleet owner must identify and document Tier 0 engines retired between March 1, 2006 and March 1, 2009. The owner must also.
24. Identify Tier 0 engines added between March 1, 2006 and March 1, 2009, and
25. Identify and document fleet HP on March 1, 2007, and
26. Identify and document fleet HP on March 1, 2008, and
27. Add the total fleet hp for the fleet on March 1, 2007, to the total fleet hp on March 1, 2008, and to the total fleet hp on March 1, 2009 (which was already done 09 TOTAL HP.
28. Multiply the sum in step 27 by 0.08.
29. From the value given in Step 23 subtract the values given in Step 24 and 28. If the result is positive, this is the fleet owner's carryover HP credit for early retirement. Add those HP to EARLY NOX CREDIT.
30. The fleet owner must identify any engines that have been retrofit with a qualified Level 2 or 3 device before March 1, 2009 that the fleet owner still plans to own on March 1, 2010. He must verify those devices were the most efficient at the time of installation for those engines. Multiply that HP by 2. Sum that HP (call this TOTAL PM EARLY CARRYOVER CREDIT).

Calculate Fleet Average Emission Targets.

31. Target emission rates are given per compliance year and engine size (HP) and are listed in the rule. Again, a mistake on engine HP could result in a incorrect result (compliance problem). For each engine included in 09 TOTAL HP get the March 1, 2010 PM and NOx target emission rates for that size engine.
32. Multiply the engine's maximum HP by those emission rates.
33. Complete steps 31 and 32 for all engines and sum the PM and NOx emissions.
34. Divide that sum by the 09 TOTAL HP. This is the fleet average emission target for that year (call these 10 NOX TARGET and 10 PM TARGET)

Identify and Evaluate NOx Compliance Requirements and Options

35. Multiply 09 TOTAL HP by 0.08 (call this 10 BASE TURNOVER OBLIGATION).
36. Determine if the fleet changes identified in step 8 qualify as a "turnover" and sum the HP "turned-over." Turnover is defined as moving equipment to backup service (less than 100 hrs per year), repowering with a higher tier engine which must be Tier 2 or higher, or retrofitting with a certified NOx control device. Call the HP turned over 10 TURNOVER.
37. Sum 10 TURNOVER and TOTAL NOX CARRYOVER CREDIT. From that sum subtract 10 BASE TURNOVER OBLIGATION. Call the result 10 TURNOVER OBLIGATION.

38. He must then compare 10 NOX AVG with 10 NOX TARGET. If 10 NOX AVG is less than or equal to 10 NOX TARGET, the fleet owner complies with the fleet average target for that year and go to step 44, otherwise go to the next step.
39. To reach this point the fleet owner did not meet his NOx target. If the value in 10 TURNOVER OBLIGATION is positive he has met BACT requirements and skip to step 44, otherwise continue to the next step.
40. To reach this point the fleet owner did not meet his NOx target, and his carryover credit did not meet his NOx BACT (turnover) obligation. He must "turnover" HP equal to 10 TURNOVER OBLIGATION starting with Tier 0 vehicles, then Tier 1 and so forth noting that Tier 1 and higher are exempt until 2013. His turnover options are retire (i.e., sell out of state), repower with a higher tier, Tier 2 or higher, retrofit with a certified NOx control device, or move to back up service (again limited to 100 hours per year). Note that equipment replacement (replacing a equipment powered by a lower tier engine with another higher tier engine), is not allowed for "turnover" credit. He must compile data on the options, including what is feasible and infeasible and identify what he can put in place by March 1, 2010. If he identifies these actions and he has any remaining HP balance left in his obligation, and that HP balance is more than one half the HP of any equipment in his fleet that is not exempt, he must "turnover" that piece of equipment. Note then there no limit on what constitutes cost feasibility. Finally he must also consider exemptions:
 - a. Vehicles less than 10 years old
 - b. Specialty vehicles
 - c. A vehicle retrofit within the last six years with a qualified PM control device
 - d. A vehicle with a Tier 4 interim engine or Tier 4 final engine.
41. Once he has identified his turnover path, he must then recalculate his fleet average NOx emission rate (call this 10 NOx AVG), by repeating steps 10-21, as applicable.
42. If 10 NOx AVG is substantially less than 10 NOX TARGET, the operator may want to assess "turning over" fewer engines, which would require he complete step 41 again.
43. Once his final compliance actions have been set, he needs to add the HP turned over to 10 TURNOVER OBLIGATION.

Identify and Evaluate PM Compliance Requirements and Options

44. To comply the PM control requirements the operator must first multiply 09 TOTAL HP by 0.2 (call this 10 RETROFIT OBLIGATION).
45. He must then subtract 10 RETROFIT OBLIGATION from TOTAL PM EARLY CARRYOVER CREDIT (call this result 10 RETROFIT OBLIGATION).
46. He must then compare 10 PM AVG with 10 PM TARGET. If the average is less than the target, and the fleet owner did not make any changes to his fleet (the fleet data used in his 09 TOTAL HP and 10 TOTAL HP are the same), skip to step 48.
47. If the fleet owner made or expects to make any changes to his fleet between March 1, 2009 and March 1, 2010, as reflected in his NOx compliance strategy he needs to rerun his fleet average emission rate for PM (repeating steps 10 to 21 for PM) because fleet changes needed to meet NOx requirements will generally affect PM emission rates as well (call this 10 PM AVG).
48. If any of the changes made to meet the NOx requirements included a retrofit NOx control device that included a qualifying PM control device, or the addition of a Tier 4 powered vehicle coupled with the elimination of a Tier 0-3 powered vehicle of the same or greater hp, then he must sum the HP of the affected engines and add that to 10 RETROFIT OBLIGATION (call this 10 RETROFIT OBLIGATION).

49. He must then again compare 10 PM AVG with 10 PM TARGET. If 10 PM AVG is less than or equal to 10 PM TARGET, the fleet owner complies with the fleet average target for that year and can skip to step 55.
50. To reach this point the fleet owner did not meet his PM target. He must then comply with PM BACT. If the value in 10 RETROFIT OBLIGATION is positive, he has met his retrofit obligation using carryover and/or other retrofit credit (step 48), and can skip to step 55.
51. To reach this point the fleet owner did not meet his PM target, and his carryover credit and other retrofit credit did not meet his PM BACT (retrofit) obligation. He must retrofit HP equal to 10 TURNOVER OBLIGATION starting with Tier 0 vehicles, then Tier 1 and so forth. His retrofit options are
 - a. Retrofit with a qualified PM control device
 - b. Replace a Tier 1-3 power vehicle with a Tier 4 powered vehicle where the new vehicle has the same or less HP than the vehicle being replaced.
 - c. Retire a Tier 0 equipment without replacement (cannot be counted in "b" immediately above).

Oddly, the rule does not mention Tier 4 repowers. Those engines are required to meet a PM emission standard that less than a Tier 3 engine equipped with a Level 3 PM control device. So we must assume Tier 4 repowers would be given credit towards the retrofit obligation. He must compile data on the options, including what is feasible and infeasible and identify what he can put in place by March 1, 2010. If he identifies these actions and he has any remaining HP balance left in his obligation, and that HP balance is more than one half the HP of any equipment in his fleet that is not exempt, he must "retrofit" that piece of equipment. Note then there no limit on what constitutes cost feasibility in relation to the cost of installing a PM control device. Finally, he must consider exemptions.

 - a. Vehicles less than 5 years old.
 - b. Engines for which there is no certified PM control device.
 - c. Applications where the installation of a PM control device would result in unsafe operating conditions.
 - d. Engines equipped with an original equipment manufacturer diesel particulate filter that came new with the vehicle.
 - e. Engines already retrofit qualified PM control device.
52. Once he has identified actions he must take to meet his retrofit obligation, he must then recalculate his fleet average emission rate (call this 10 PM AVG) by repeating steps 10-21, as applicable. If the changes involved anything other than PM retrofit device, he needs to recalculate his 10 NOX AVG and reassess his NOx compliance strategy.
53. If he 10 PM AVG is substantially less than 10 PM TARGET, the operator may want to assess completing fewer equipment, which would require he complete steps 10-21 and again recalculate his fleet average PM rate (10 PM AVG).
54. Finally, he must add the HP retrofit to 10 RETROFIT OBLIGATION (call this 10 RETROFIT OBLIGATION).

Requirements for Largest Fleets to Achieve Additional Reductions of Oxides of Nitrogen Under the Solicitation for Applications Program (known as the SOON Program)

55. If the fleet owner operates in a region where the local district opts into the SOON program, and his fleet size is 20,000 HP or more where 40% or more of the vehicles (not HP) is Tier 0 or Tier 1 he is subject to SOON. If he is not, skip to step 61.
56. The fleet owner would have to identify a specific compliance plan for the contract life of the grant funding awarded under SOON plus one year. The South Coast AQMD has proposed a

seven-year contract life. Assuming South Coast AQMD opens the first SOON solicitation as proposed in 2008 that would mean the fleet owner would have to identify the specific actions he would take to comply with the rule covering 2008 through 2016. Because the rule requires he demonstrate compliance starting March 1, 2010; this would require he develop a specific compliance strategy covering the following compliance dates/targets: March 1, 2010, March 1, 2011, and March 1, 2012, March 1, 2013, March 1, 2014, March 1, 2015, and March 1, 2016. He would be required to steps 31 through 43 seven times to demonstrate compliance with the rule's NOx limits. Because actions he takes to reduce NOx can and likely would affect his PM compliance, he would have to complete steps 44 to 54 seven additional times as well.

57. He would then be required to calculate a fleet average SOON NOx target rate for March 1, 2011. This would require he complete steps 32-35 an additional time using the lower NOx targets listed under the SOON provisions.
58. He would then have to identify actions other than those required to comply with the base rule (included in his 2008-2016 rule compliance plan), that must get his fleet average NOx emission rate to at or below the March 1, 2011 SOON target. This would require that he again reassess his compliance options and then recalculate his NOx emissions under SOON.
59. He must then prepare a funding request comprised of his base compliance plan, the actions he would have to take to meet SOON NOx limits, and cost quotations covering the cost of those actions. The participating air district would then rank the projects based on cost-effectiveness in reducing NOx emissions and fund the most cost-effective projects until funding runs out for that solicitation. Fleet owners with funded projects would be obligated to comply with funding contracts and complete funded projects.
60. If he experiences any subsequent unexpected changes in equipment and/or retrofit technologies that affects his base compliance plan (seven years into the future) this could and likely would affect his based compliance and SOON compliance resulting in his need to redo his entire compliance strategy. The work (steps) required would likely be substantial covering many of the preceding steps.

Annual Compliance Report

61. The fleet owner must review and update the information submitted in step 7 and submit the following information:
 - a. A certification signed by a responsible official that the information is accurate and that the fleet is in compliance with the regulation.
 - b. Any additions, deletions, or changes to the fleet must be reported. Such changes may include vehicles removed from the fleet, vehicles added to the fleet through purchase or by bringing into California, vehicles newly defined as low-use or specialty vehicles, repowers, and retrofits. If there are no changes, the fleet may indicate there are no changes
 - c. For vehicles defined as low-use that operate only in California, report the hour meter readings for the last 12 months and the dates of reading. Fleets must report two hour meter readings, one from before or on March 1 of the previous year and one from on or after March 1 of the current year. If using the three-year rolling average option, fleets must report two hour meter readings, one from before or on March 1 of the first year of the three year period, and one from on or after March 1 of the current year. 2. **Vehicles Used In and Outside California** - For vehicles defined as low-use that operate in and outside California, submit a log that contains the following information:

- i. Each date the vehicle entered California and the hour meter reading upon entry,
- ii. Each date the vehicle exited California and the hour meter reading upon exit.
- d. Fleets using the hours in fleet average option in 2449(d)(1)(E) must report the annual use and hour meter readings and date of reading for each vehicle in the fleet, once from before or on March 1 of the previous year and once from on or after March 1 of the current year.

Conclusions

Legislative intent regarding complexity is clear.

(b) The language of many regulations is frequently unclear and *unnecessarily complex*, even when the complicated and technical nature of the subject matter is taken into account.

(g) The *complexity* and lack of clarity in many regulations put small businesses, which do not have the resources to hire experts to assist them, at a distinct disadvantage.

The APA standard for complexity is equally clear.

(3) Clarity. means written or displayed so that the meaning of regulations will be easily understood by those persons directly affected by them.

As we have indicated, this rule is extremely complex. We have identified 61 basic steps a large fleet would operator would need to take to comply with this rule. We caution that the list of steps we identified is a simplified version of the steps a fleet owner would have to take. Many of the steps we identified are comprised of numerous separate assessments and actions the operator must take (for example, assessing technology options). In most cases operators would need to assess different compliance options, which would require he repeat steps and compare results. Finally, we identified the steps an operator would need to take to comply with a single compliance year. But the rule has ten successively more stringent compliance dates annually from 2010 to 2020. Lower cost short-term compliance options could cost an operator more when he gets into later compliance dates. The rule therefore requires an operator prepare a compliance strategy many years into the future, which multiplies the steps he must take many times and significantly adds to complexity.

The vast majority of these steps is not trivial and depends on detailed and accurate assessments and calculations involving engines, technologies, emissions, and so forth. Because the actions required by the rule involve substantial capital, cover 10 years, and it takes many months for companies to secure capital needed for new equipment, engines and/or low emission retrofit technologies, the rule depends on the ability of companies to predict future economic conditions, which adds additional complexity as well as uncertainty.

We submit that this rule does not come remotely close to the APA standard for the “complexity” aspect of “clarity.” The rule is “*unnecessarily complex*.”

CARB indicated that this rule was adopted in response to a mandate established by CARB’s “Risk Reduction Plan to Reduce Particulate Matter Emissions From Diesel Fueled Engines and Vehicles,” which CARB adopted October of 2000. To date CARB has adopted a number of rules pursuant to that mandate including separate rules applicable to diesel engines in Waste

Collection Vehicles, Transit Vehicles, stationary applications, transport refrigeration units, agricultural equipment, cargo handling equipment, and portable equipment. The In-Use Off-Road rule is only rule that requires NOx control, the calculation of fleet averaging and emission targets, the calculation of carryover credits, and compliance requirements every year for ten years. It also the only rule that requires the precise HP of every engine be verified. Many of the engines regulated under the In-Use Off-Road rule are exactly the same engine as regulated under other adopted rules (for example portable equipment or cargo handling rules). If CARB can accomplish the same mandate with a far simpler rule, then the In-Use Off-Road rule is *unnecessarily complex*

APA intent indicates that the *complexity* of the regulation *puts small businesses, which do not have the resources to hire experts to assist them, at a distinct disadvantage*. The rule establishes three fleet classifications: small (up to 2,500 total fleet HP); medium (2,501 to 5,000 total fleet HP), and large (5,001 total fleet HP and higher). Small fleets need only comply with the rules PM requirements and are given additional time to comply with the rule. The requirements for medium and large fleets are the same, except the first compliance date for medium fleets is March 1, 2013 whereas the first compliance date for large fleets is March 1, 2010. At a cutoff of 5,000 HP, a large fleet category could be comprised of as few as 10 pieces of equipment. The median size of a “large” company would be defined as a small business according to the State of California Department of General Services (less than 100 employees with gross revenues of less than \$12 million per year). The medium and small fleet categories would be comprised of entirely small businesses. As we have shown, this rule is very complex and would therefore put small businesses at a disadvantage compared to large companies that have the resources to devote qualified staff to complying with these complex requirements.

The APA standard indicates rules must be clear so that the “*meaning of regulations will be easily understood by those persons directly affected by them.*” We have listed the steps involved in complying with this rule and contend the basic structure of the rule is so complex that an average person will be confounded by the rule requirements and what they have to do and when to comply with this rule.

Finally, we note that the rule is so complex CARB found it necessary to provide a Fleet Average Calculator (complex-series of Excel worksheets) to assist companies perform some of the complex calculations required by this rule. The latest version of the that calculator comes with the following warnings:

** For use as an educational aid only; not to be used for ARB reporting purposes.*

A rule that requires an agency prepare a highly complex calculator to help companies comply with a rule speaks directly to the complexity of that rule. The fact that the rule is so complex that the calculator itself comes with a warning that it should not be used for compliance purposes is a clear indication of a rule that is so complex that not only does not comply with APA standard for complexity; it is impractical.

Alternatives

In previous sections we addressed if the adopted regulation meets legislative intent and OAL standards for “clarity,” and “complexity.”

In this section we turn to the APA standards for “alternatives.” The APA standards for alternatives are summarized below:

11346.2. Every agency subject to this chapter shall prepare, submit to the office ...

(3) (A) A description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives...

(B) A description of reasonable alternatives to the regulation that would lessen any adverse impact on small business and the agency's reasons for rejecting those alternatives.

11346.5. (a) The notice of proposed adoption ...of a regulation shall include the following:

...

(13) A statement that the adopting agency must determine that no reasonable alternative considered by the agency or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

11346.9. Every agency subject to this chapter shall do the following:

(a) Prepare and submit to the office with the adopted regulation a final statement of reasons that shall include all of the following:

...

(4) A determination with supporting information that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

(5) An explanation setting forth the reasons for rejecting any proposed alternatives that would lessen the adverse economic impact on small businesses.

CARB started the rule making effort with workshops in November 2004 and over the next two years and eight months leading to the adopted of the rule held approximately 25 workshops, workgroup meeting or hearing on the proposed regulation. These meetings are summarized below.

Date	Meeting Type	Date	Meeting Type
Nov-16-04	Workshop	Dec-18-06	Workshop
Nov-17-04	Workshop	Dec-20-06	Workshop
Dec-13-04	Workgroup	Dec-21-06	Workshop
Feb-16-05	Workgroup	Feb-20-07	Workshop
Jun-9-05	Workgroup	Feb-23-07	Workshop
Jul-13-06	Workshop	Feb-26-07	Workshop
Jul-19-05	Workshop	Mar-1-07	Workshop
Aug-30-05	Workgroup	May-25-07	Hearing
Jan-24-06	Workshop	Jun-18-07	Workgroup
Jan-31-06	Workshop	Jul-16-07	Workgroup
Feb-15-06	Workgroup	Jul-26-07	Hearing
Jul-21-06	Workgroup		

For alternatives to have any opportunity in any project or program, regardless of whether the project or program is a house or a regulation, or run by the private or public sector, a consideration of alternatives must be considered as early on the planning and development process as possible. The reason is obvious. If any entity spends time and resources building anything that entity will have a vested interest in that design. And the further that entity gets into construction, the greater that vested interest becomes.

This rule making effort lasted 32 months from the date of the first meeting to the final July 26, 2007 adoption hearing. The administrative record shows that there was not a single word on alternatives in any material prepared by CARB during this entire time until Month 29. In other words CARB addressed alternatives after more than 90% of the time devoted to the rule making had gone by. By that time (two years and six months into the rule building process) we estimate that CARB staff had spent in excess of 10,000 staff hours on its initial and sole approach.

The only item we could find on "alternatives" is in the staff report for this rule, which was released by CARB April 4, 2007. We note that out of a 203 page staff report six pages were devoted to alternatives. That report was released for the board adoption hearing, which was originally scheduled for May 25, 2007.

An essential aspect to a consideration of alternatives is the evaluation criteria upon which the alternatives are to be assessed. Absent clear and reasoned criteria an evaluation of alternatives is pointless. There is no record of such criteria anywhere in the entire 32-month rule making effort, including the staff report.

The APA standards for alternatives indicate that CARB must provide *[a] description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives... and [a] description of reasonable alternatives to the regulation that would lessen any adverse impact on small business and the agency's reasons for rejecting those alternatives.*

We submit that the record shows that CARB deferred any information on alternatives until the very end of the rule making effort and never established criteria upon which alternatives were to be assessed. By the time CARB prepared its discussion of alternatives, CARB staff had vested its approach with thousands and thousands of staff hours. CARB never presented any information on evaluation criteria to be used to assess the relative merits of alternatives. We contend that these facts reasonably indicate that CARB's assessment of alternatives was perfunctory at best and not remotely in compliance the APA standard listed above.

The APA requires CARB state that *no reasonable alternative considered by the agency or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.*

We submit that the record shows that CARB's rule development process for this rule never afforded an opportunity to identify and discuss alternatives and as such cannot meet this standard.

The APA requires CARB to submit *an explanation setting forth the reasons for rejecting any proposed alternatives that would lessen the adverse economic impact on small businesses.*

As we have documented, while the process used by CARB explicitly excluded a consideration of alternatives, some entities still provided suggested alternatives. Some of these formed the basis for CARB's ad hoc discussion of alternatives in the staff report. However, we are aware of at least one suggested alternative that was completely ignored by CARB. Larry Jacinto Construction submitted a suggested alternative to CARB in writing in February of 2007, which CARB totally ignored. CARB therefore failed to meet this standard as well.

Finally, we wish to digress a moment from the tenor of our previous comments. Regardless of the specific requirements of the APA, for any regulation like this one with a price tag in the billions of dollars (acknowledged by CARB), prudent and sound public policy simply demands that the process used to develop such a regulation provide and accommodate every opportunity for the consideration of alternatives to accomplish the basic end as sought by the regulation. If an alternative can be identified that can accomplish the same end faster, cheaper, or better, the process must encourage rather than discourage a consideration such alternatives. The fact this rule making effort treated alternatives as a nuisance is just really bad public policy.

AVAILABILITY OF VDECS TECHNOLOGY

The rule as written requires very aggressive actions on industry's part (both in schedule and expense) and despite the tough requirements the state has provided very few workable solutions. That is, the tools to comply are too limited in scope and too few in number to lend themselves to securing the compliance we all want. This is a serious flaw and a possible insurmountable hurdle to clear for the managers of construction fleets. More options need to emerge and swiftly. There is an additional important problem in CIAQC's view: the fact that the same CARB regulatory staff have the additional direct responsibility to screen the technologies allowed to be used in which to comply are also responsible for overseeing regulatory compliance makes a clear conflict from the construction industry's point of view. They should be implemented separately.

It should be noted that there has been a misrepresentation by CARB staff regarding the current availability/suitability of VDECS technology throughout the development of the regulation, both to industry and to the ARB. The goal of the CARB Verification Procedure is "an emission control system that is durable and compatible with various engines and applications." CARB staff has indicated that the VDECS technology is either available today or right around the corner, ready for application. It is not.

Recently CARB verified VDECS devices from HUSS for several off-road equipment types. Subsequent to this many of the HUSS applications previously approved were found not suitable on a number of CAT applications.

Another significant issue associated with the installation of VDECS technologies that CIAQC has learned is that at least one insurance company stated that it will not provide liability insurance on any equipment if major, after market modifications are made to off-road equipment, such as the installation of these VDECS. If this practice continues, any equipment owner in the state will have a significant hurdle to face in the event of litigation that may result from any accidents involving modified equipment. This is a liability that the industry can not accept, nor will our insurance companies.

It is not practical to try to develop any type of comprehensive business/compliance plan to address up to 20% of fleet horsepower per year when the true, "real world" application of VDECS is such a moving and uncertain target.

This uncertainty is further demonstrated with the CARB Diesel Retrofit Showcase (Showcase) that is currently underway. The \$5 million Showcase offered retrofit equipment manufactures the opportunity fit their VDECS devises onto off-road equipment to demonstrate their viability in real world conditions and earn credit hours toward devise verification. During this process some VDECS manufactures have subsequently withdrawn their devises from the Showcase altogether and devises that were matched with equipment have been changed giving the appearance that manufactures are "shopping around" to avoid failures where initially not anticipated. The Showcase is proving to be yet another example of VDECS expectations exceeding real world applicability and availability.

GREEN HOUSE GAS CONSIDERATIONS

In its Technical Support Document, CARB does not consider the lifecycle emissions from the manufacture, delivery, installation, use, and servicing of the controls that the off-road regulation will impose. There seems to be an unintended consequence in the rule, and if ARB properly considered the lifecycle emissions, it would find that CO2 emissions increase significantly.

The Associated General Contractors of America and CIAQC asked Michael Naylor to analyze CARB's emission analysis of greenhouse gases prepared for its proposed in-use offroad-diesel rule (ORD) (See Affidavit of Michael H. Naylor included in AGC of America's comments).

In its April 2007 staff report, CARB appears to have considered two elements of carbon dioxide (CO2) emissions that it expects to result from the ORD rule. The first is a reduction of CO2 emissions from the ORD rule's limitations on excessive idling and the second, an increase in CO2 emissions from a fuel-economy penalty from the ORD rule's after-treatment requirements.

Section C of the staff report acknowledges that greenhouse gas emissions under the rule would increase by as much as two to four percent due to the fuel economy penalty that would result from the required use of cleaner engines and after-treatment devises. However, the staff report goes on to find that this increase would be mitigated by the reduction in both black carbon emissions and CO2 emissions that would result from idling limitations imposed by the rule.

However CARB failed to account for significant sources or greenhouse gas emissions that would result from intermediate, life-cycle steps necessary to comply with the ORD rule. In his analysis, Mr. Naylor identified ten additional sources of CO2 emissions attributable to the ORD rule that CARB failed to consider. These include (a) manufacture of raw steel materials to manufacture off-road machine (i.e. fabrication of the engine and equipment frame); (b) fabrication of non-steel parts for off-road machine; (c) shipment of the fabricated parts to the factory for manufacturing of the machine and engine; (d) shipment of new machine from the factory to dealership; (e) fuel consumption due to machine transport to retrofit facility for installation of after-treatment system; (f) regeneration of the diesel particulate filters; (g) manufacture of urea used in the selective catalytic reduction (SCR) after-treatment systems; (h) distribution of urea by supply trucks to fleets for replenishing urea in the SCRs; (i) urea reaction with NOx in the SCR device; and (j) fuel consumed by service truck that is used by technician to clean and maintain the Diesel Particulate Filters (DPFs).

Based on Mr. Naylor's findings, it is estimated that the overall impact of the ORD rule will be an increase in CO2 emissions of about eight times that which would be offset by the reduction in emissions from the idling prohibition in 2020. CARB is responsible to evaluate the environmental impacts of its regulations but failed to fully consider CO2 emissions in its analysis of the ORD rule.

TEST FOR PROPER CEQA EVALUATION HAS NOT BEEN MET

The environmental impact analysis conducted by the ARB failed to take into account the cumulative impacts of the regulation as required by the California Environmental Quality Act. When the requirements of the recently amended Portable Equipment Rule and the soon to be adopted On-Road Rule are included the impacts on the construction industry are significant, particularly in this economic climate.

For example, the most likely compliance path for most contractors will be to dump equipment. We are already seeing record setting equipment auctions in California. In November 2007 we saw the record setting auction in which 64% of the equipment left the state and 29% left the Country. This has been a growing trend since early 2007 and is indicative of a shrinking fleet in California. It means fewer contractors doing fewer projects at higher cost.

The effect of this fleet reduction is to reduce the overall capacity of the industry in California and effectively defer the environmental benefits of the projects they would otherwise be constructing. Those benefits, particularly in transportation, far outweigh the nominal air quality impacts of the construction phase. That trade-off was not thoroughly examined in the CARB environmental analysis.

DEFINITION OF A SMALL BUSINESS

The definition of small business used to define a small fleet (Government Code section 11342.610) is inappropriate and unnecessary for the purposed of the regulation. The size of a fleet should be based on the fleet's maximum horsepower. To include revenue criteria for small fleets only creates artificial limitations for small fleets (equal or less than 2,500 horsepower). For example, pursuant to the small business definition, \$9.5 million is the upper limit for "general construction" and for "Special Trade construction" the limit is \$5.0 million. "Services" is limited to \$2.0 million. In addition, a construction project, and thus a company's income, is heavily dependent on labor and materials. Since 2000 the CPI has increased by 17%. The cost of construction labor has increased by 23% and the cost of materials such as lumber, steel, aggregate and cement has increased 45%. Fuel costs have more than doubled. During that same period a fleet may not have increased in size at all, but the company that met the small business definition in 2000, most assuredly did not in 2007. The small business definition affects different equipment owners (small fleets) with differing revenue limits and needs to be removed from the regulation. Further, this treatment is implicitly unfair as the small fleet definition includes a local municipality fleet in a low population county even its total maximum horsepower exceeds 2,500. It does so while ignoring the construction value (work) associated with the activities of such fleets, including labor costs and materials and the overall budgets of the municipalities.

INADEQUATE NOTICE AND CONSULTATION, ESPECIALLY FOR NOX

By adding NOx controls to the regulation on the eve of proposing it, ARB dramatically changed the ORD rule that it put through workshops for months in advance. Although that may meet APA Section 11346.5's minimum 45-day notice requirements, it does not even approach the stakeholder involvement that the APA envisions for "complex proposals" such as this:

In order to increase public participation and improve the quality of regulations, state agencies proposing to adopt regulations shall, prior to publication of the notice required by Section 11346.5, involve parties who would be subject to the proposed regulations in public discussions regarding those proposed regulations, when the proposed regulations involve complex proposals... that cannot easily be reviewed during the comment period.

Gov't Code §11346.45(a). APA Section 11346.45's pre-rulemaking public participation provisions would have improved the quality of the eventual ORD proposal, and we call on the Board to direct staff to implement the public process envisioned by Section 11346.45(a). It is not too late to get this rule right.

In addition to inadequate notice and stakeholder involvement, ARB also has inadequately consulted with its sister agencies. Indeed, ARB does not appear even to have submitted its ORD package to the Office of Planning and Research for dissemination via that Office's CEQA-mandated Clearinghouse function. Moreover, CEQA required ARB to consult with federal, state, regional, and local public agencies (including transportation planning agencies) before adopting regulations that (a) affect California's transportation infrastructure, (b) regulate offroad equipment leased, owned, or contracted for by California state and local agencies, including trustee agencies, and (c) regulate federally preempted vehicles. ARB's intra-agency consultation has been inadequate. While some coalition members have public-agency members, even our private members would have benefited from ARB's gaining perspective from public agencies more expert than ARB in the construction industry.

THE SOON PROGRAM WILL NOT WORK

CARB approved the SOON Program in principle as an adjunct to the In-Use Off-Road-Diesel Vehicle Regulation in July 2007. The SOON Program was hastily developed without adequate opportunity to determine if the elements were even workable as a voluntary program. Many of the changes were made by CARB staff immediately prior to the Board meeting with virtually no opportunity for the construction industry to understand the implications of the program. The construction industry is very disappointed and unhappy with the CARB regulation and adamantly believes the SOON Program, as now written, will not achieve the emission reductions estimated for the following reasons.

The program is not voluntary as originally envisioned. Making the program mandatory will require all eligible fleets to develop compliance plans and apply for funding whether or not they have the matching dollars to participate in the SOON. Further the program requires that the contractors install the necessary repowers if they are selected for funding.

The SOON elements are not fully funded as originally agreed. Most contractors will not be able to afford the compliance costs of the CARB rule let alone the added costs of the

SOON program. The requirement for contractors' matching funds and the added burden of a contractor-funded particulate trap will be beyond the reach of most contractors. If contractors are forced to retire equipment to comply with SOON, no State Implementation Plan (SIP) credits will be achieved.

The cost effectiveness requirement is unnecessary. Because these emissions are in excess to CARB's requirements, the low Cost-Effectiveness threshold will unfairly burden the larger contractors who use their equipment more hours annually.

The seven-year contract length is unacceptable. No contractor is willing or able to commit to a seven-year residency requirement as currently proposed by the South Coast Air Quality Management District (SCAQMD). Further, the method of calculating fleet average emissions will require SOON participants to over-comply on the CARB side of the regulation.

State-wide Opt-In is unworkable. Since the excess NOx reductions are only needed in two air districts (SCAQMD and San Joaquin Valley Air Pollution Control District), the SOON program should be limited to only those districts. Most of the contractors eligible for the program already operate in the two districts. Both districts are already proposing different SOON programs. This greatly complicates contractor compliance plans. Adding more districts will make it even worse.

The 40% eligibility requirement should only apply to equipment over 175 horsepower. Since this is a NOx repower program eligibility, should be determined by the percentage of equipment that can reasonably be repowered.

CARB needs to insist that the district plans be consistent and compatible. Differing requirements will make it impossible for contractors to demonstrate multi-district compliance. SOON Program applicants should only be required to prepare a single compliance plan and funding application for their fleet irrespective of where the project equipment operates within the state.

The SOON program needs to be removed from the CARB rule and simplified. The emission reductions required for SOON in South Coast and San Joaquin Valley is estimated to be only 1,000 to 1,300 engines to be repowered total. Those reductions can be achieved in a much simpler fashion than proposed by the SOON regulation.

The eligibility date and percentage are arbitrary and problematic. The January 1, 2008 and 40% vehicle eligibility threshold will exclude large contractors with 39% or fewer eligible vehicles. The eligibility criteria also prevents fleets that drop below the 40% from exiting the SOON program after January 1, 2008. Contractors whose fleets become 40% Tier O and Tier 1 after January 1, 2008 are excluded from the program. Compliant fleets should be allowed the option to participate in a voluntary SOON Program if they so choose.

The annual CARB NOx fleet averages coupled with the SOON 3-year averages, make it impossible for contractors to develop reasonable compliance plans. CIAQC made it very clear at the adoption hearing that the only way the SOON program could be implemented

was if the CARB NOx fleet averages were made every three years for those in the SOON program.

The SOON program should recognize that these additional costs and constraints could be significant and beyond the means of many companies, especially if a company is "awarded" several projects. Therefore the SOON program should establish a voluntary award cap so that the additional financial burdens of this program are distributed evenly and not placed squarely on only a few companies.

In conclusion, CIAQC and the CBCC would like to thank the Board and its staff for working with us to develop this regulation. We recognize that a lot of work and effort by your staff and the construction industry has already taken place. We stand ready and willing to see through to the end that a regulation of this scope and importance is technically and economically feasible, results in real emission reductions and does not destroy an industry that provides an essential service to the residents of California.

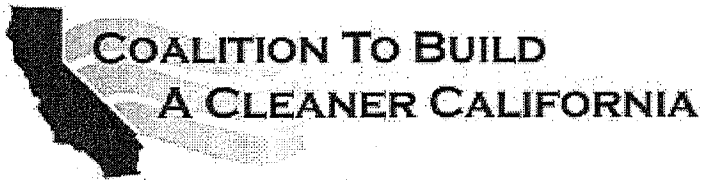
Please do not hesitate to contact me if you have any questions.

Sincerely,



Michael W. Lewis
Senior Vice-President
Construction Industry Air Quality Coalition and
Coalition to Build a Cleaner California

Attachment: Coalition to Build A Cleaner California Membership List



OUR MEMBERS

The Coalition to Build a Cleaner California is dedicated to improving California's air quality while maximizing the historic infrastructure investment approved by California voters in November 2006. The Coalition's members include the construction industry, its workers and infrastructure stakeholders. A current list of our membership is below.

Construction Industry Air Quality Coalition Members

Associated General Contractors of California
Associated General Contractors of San Diego
Building Industry Association of Southern California
California Construction and Industrial Materials Association
Engineering Contractors Association
Engineering & Utility Contractors Association
Engineering and General Contractors Association
Mobile Crane Operators Group
Southern California Contractors Association
California Dump Truck Owners Association
The California Rental Association

Labor Organizations

California Conference of Carpenters
California Alliance for Jobs
Operating Engineers Local Union Nos. 3 & 12
Southern California Cement Masons Local 600
Southern California District Council of Laborers

Individual Construction Contractors

SKANSKA Construction
Synes & Pennick, Inc.

Coalition Partners

AGC America
American Concrete Pumping Association
American Road and Transportation Builders Association
Associated Builders and Contractors
California Building Industry Association
California Ski Industry Association
National Electrical Contractors Association
Valley Contractors Exchange