



Announcing the MSRC's

**Off-Road Diesel Construction Equipment
Retrofit Demonstration Program**

**An Opportunity for Manufacturers of Off-Road
Diesel Emission Control Systems**

**Request for Manufacturer Qualifications &
Participation Application**

RFQ2007-08

March 2, 2007



DATE: March 2, 2007

TO: Manufacturers of Diesel Emission Control Systems

SUBJECT: MSRC Off-Road Diesel Construction Equipment Retrofit Program – The “Showcase Program”

The Mobile Source Air Pollution Reduction Review Committee (MSRC) is pleased to announce a **Clean Transportation Funding™** opportunity available to manufacturers of Off-Road Diesel Emission Control Systems. This program, entitled the “Showcase Program”, is designed to encourage manufacturers of qualifying retrofit devices to participate with construction equipment fleet owners in retrofitting their engines with diesel emission control devices to reduce diesel particulate matter (PM) or diesel PM plus oxides of nitrogen (NO_x). The goal of this program is to demonstrate new emission control systems that will earn California Air Resources Board (CARB) verified status as well as achieve significant near term emission reductions from off-road construction equipment.

This program is open to manufacturers who have previously received verification from either the United States Environmental Protection Agency’s (U.S. EPA) Voluntary Retrofit Program, CARB’s Verification Procedure, or the Verminderung der Emissionen von Realmaschinen im Tunnelbau (VERT) program. Fulfillment of this requirement may be from a prior on-road or off-road retrofit device verification.

The Off-Road Diesel Retrofit “Showcase” Program is unique in that CARB and the MSRC will endeavor to match manufacturers’ proposed retrofit devices with participating construction equipment fleet operators. CARB has developed a profile of construction equipment sought for participation in the Showcase Program, as described in Section I.F. Retrofit devices with the broadest range of off-road applications are most desirable for demonstration in the Showcase Program.

Participation in the Showcase requires completion and submittal of manufacturer qualifications and a participation application. Templates to assist in application preparation are included as an attachment to this Request for Qualifications.

Please note that all manufacturer applications may not be accepted. Priority will be given to manufacturers whose devices have broadest applicability to off-road heavy-duty diesel construction equipment. Priority will also be given to manufacturers’ devices that have high potential to obtain emissions reductions in both diesel PM *and* NO_x. A discussion of manufacturer retrofit device evaluation and ranking is included in Section I.F.

The Request for Qualifications and Participation Application can also be accessed via the Internet by visiting the MSRC’s website at www.cleantransportationfunding.org or CARB’s website at www.arb.ca.gov/diesel/showcase.showcase.htm. If you have any questions

regarding the Showcase Demonstration Program please contact one of the staff members listed in Section I.G.

On behalf of the MSRC and its Clean Transportation Funding Program, we look forward to working with you to implement this important diesel pollution reduction program.

TABLE OF CONTENTS

Section I: Program Introduction		Page
I.A.	PROGRAM INTRODUCTION	1
I.B.	PROGRAM SCHEDULE	1
I.C.	VENDOR WORKSHOP.....	2
I.D.	PARTICIPATION GUIDELINES, REQUIREMENTS, & PROCEDURES.....	2
I.E.	OFF-ROAD CONSTRUCTION EQUIPMENT PROFILE.....	6
I.F.	EVALUATION & SELECTION CRITERIA.....	6
I.G.	STAFF CONTACT INFORMATION.....	8
 Section II: Application Forms		
II.A.	APPLICATION INSTRUCTIONS & FORMS.....	9

SECTION I.A: PROGRAM INTRODUCTION

The Mobile Source Air Pollution Reduction Review Committee (MSRC) is pleased to announce an opportunity for manufacturers of diesel emission control system technologies to demonstrate the viability and effectiveness of their products in heavy-duty off-road diesel construction equipment under various operating conditions and duty cycles. The Off-Road Diesel Retrofit “Showcase Program” is designed to encourage manufacturers of qualifying retrofit devices to participate with off-road construction equipment fleet owners in retrofitting their equipment with diesel emission control devices that reduce diesel particulate matter (PM) or diesel PM plus oxides of nitrogen (NO_x).

While the Showcase Program will result in significant immediate reductions in harmful diesel emissions, the principal goal is to successfully demonstrate the viability and effectiveness of new diesel emission control systems on a broad range of off-road heavy-duty diesel construction equipment, **resulting in CARB verification of new Level 3 off-road retrofit devices**. Therefore, manufacturers participating in this Program will be requested to seek CARB verified status following successful demonstration of their retrofit device.

Participation in this Demonstration Program is limited to manufacturers of diesel emission control devices who have previously received on-road or off-road product verification through the United States Environmental Protection Agency’s (U.S. EPA) Voluntary Retrofit Program, CARB’s Verification Procedure, or the Verminderung der Emissionen von Realmaschinen im Tunnelbau (VERT) program.

The selection of specific retrofit devices for demonstration in the Showcase Program will be based upon an evaluation of a Qualifications & Participation Application submitted by each interested retrofit device manufacturer. Applications will be evaluated by the technical staff of the MSRC, CARB, and South Coast Air Quality Management District and matched against the “Showcase Construction Equipment Profile” as described in Section I.E., below. The Equipment Profile defines a wide cross section of construction equipment desired for demonstration in the Showcase Program. Proposed retrofit devices with broad compatibility with the equipment types and duty cycles common to the construction industry are most desirable for inclusion in the Showcase Program.

While the MSRC strives to be inclusive with its **Clean Transportation Funding™** programs, it is important to state upfront that the Showcase Demonstration Program is unique. While each manufacturer seeking participation in the Program will be given thorough and thoughtful consideration, the stated goals of the Program may result in some manufacturer applications not being accepted, either in part or in full.

I.B. PROGRAM SCHEDULE

The Showcase demonstration program will be conducted in accordance with the timeline shown below. Manufacturer Participation Applications will be accepted as of March 2, 2007. Participation Applications will be accepted for a three-month period, closing on May 31, 2007. Applications may be submitted at any time during this period.

Table 1.B.1: Key Program Dates

Off-Road Showcase Event	Date
Program Announcement & Application Release	March 2, 2007
Earliest Date for Application Submission	March 2, 2007
Vendor Workshop	March 22, 2007
Last Date that Applications will be Accepted	May 31, 2007

MSRC and CARB staff members are available to answer questions and provide technical guidance anytime during the application acceptance period. Please refer Section I.G. of this document for a list of staff contacts.

I.C. VENDOR WORKSHOP

A joint MSRC/CARB Vendor Workshop will be held on Thursday, March 22 2007. **Please note that attendance at the Vendor Workshop is voluntary.** The purpose of the Vendor Workshop is to provide new or updated solicitation information, provide clarification regarding this Request for Qualifications, and answer general questions regarding application preparation. In addition, the Vendor Workshop will provide a forum to address individual application preparation issues and provide one-on-one guidance to potential applicants. The location and time for the Vendor Workshop is as follows:

Date: March 22, 2007
 Time: 1:00 p.m. – 2:00 p.m.
 Location: South Coast AQMD Headquarters
 Conference Room CC-6
 Address: 21865 Copley Drive
 Diamond Bar, California 91765

Please note that the Showcase Equipment Owner Workshop will be convened immediately following the Vendor Workshop. Manufacturers are welcome to attend both workshops. Please contact the MSRC staff if you need more information regarding either Workshop or directions to the South Coast AQMD Headquarters. Contact information is provided in Section I.G.

I.D. PARTICIPATION GUIDELINES, REQUIREMENTS, & PROCEDURES

The Off-road Diesel Retrofit Showcase Program is a voluntary demonstration program that will pair manufacturers of diesel emission control retrofit devices with off-road construction equipment operators located in the South Coast Air Quality Management District (AQMD)¹. To ensure that the Showcase Program conforms to all applicable AQMD legal requirements and MSRC policies, the following requirements and conditions have been established and apply to all manufacturer applicants:

¹ The geographical jurisdiction of the South Coast AQMD includes the urban, non-desert portions of Los Angeles, Orange, Riverside, and San Bernardino Counties in Southern California.

1. **Eligible Participants** – Diesel emission control system manufacturers seeking to participate in the Showcase Demonstration **MUST** have experience with the verification process and have earned a prior on-road or off-road verification from the United States Environmental Protection Agency's (U.S. EPA) **Voluntary Retrofit Program**, CARB's **Verification Procedure**, or the **Verminderung der Emissionen von Realmaschinen im Tunnelbau** (VERT) program for one or more of their company's products. *There will be no exceptions to this requirement.*
2. **Authorized Individual(s)** – Only those individuals designated as authorized representatives by the manufacturer of the diesel emission control system may sign the application form as agreement to participate in the Showcase program, and as such, will be held responsible for the accuracy of any and all information provided.
3. **Diesel Emission Control Strategy Requirement** – Only diesel emission control system devices or technologies expected to achieve a reduction in particulate matter emissions of at least 85% or less than a 0.01 grams/brake horsepower-hour (g/bhp-hr) are eligible for inclusion in the Showcase demonstration program. Diesel emission control strategies that also include a NO_x reduction component must be anticipated to achieve the required 85% PM reduction and a minimum of 25% reduction in NO_x emissions.
4. **Verification Requirement** – As previously stated, the principal goal of the Showcase Program is to obtain new Level 3 verified diesel emission control systems (VDECS) with broad applicability to heavy-duty off-road diesel construction equipment. Therefore, **manufacturers participating in the Showcase are required to pursue verification of their product through CARB during the demonstration program.** Applicants must agree to comply with all requirements and conditions as detailed in the CARB Verification Procedure. Complete information may be found in the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines* on the ARB website at: www.arb.ca.gov/diesel/verdev/verdev.htm
5. **Experimental Permit Requirement** - Manufacturers are required to obtain an experimental permit(s) before installing a non-ARB verified device or system on an engine for use in the Showcase project. Section 43014 of the California Health and Safety Code allows the Air Resources Board to issue this permit for the testing of experimental motor vehicle pollution control device installed in used motor vehicles. To obtain a permit, the manufacturer must submit a letter of request to:

Air Resources Board
Aftermarket Parts Section
9480 Telstar Avenue
El Monte, CA 91731
Attn: Ms. Rose Castro

These experimental permits are valid for one year from the date of signature and are not transferable. If the demonstration testing for the Showcase project continues beyond this time period, the manufacturer must apply for an extension of the permit(s).

Questions regarding this requirement should be addressed to:
Ms. Rose Castro, Manager, Aftermarket Parts Section, at (626) 575-6848.

6. **Modification of Device** – A manufacturer’s product cannot be modified once it has been submitted for the verification process. Doing so will nullify the verification of the device, and all emission data collected to that point will be deemed invalid.
7. **Conditional Verification** – Applicants may be eligible to receive conditional verification of their product by completing one-third of the required minimum durability period or through the use of preexisting data. Conditional verification is equivalent to full verification for the purposes of satisfying the requirements of in-use emission control regulations as set forth by the ARB.
8. **Application Screening** – Applications received in response to this Showcase Announcement will be screened to ensure they comply with all program requirements and policies of the MSRC and CARB. Applications deemed noncompliant with the requirements included herein will be returned to the applicant and will not undergo further evaluation. The MSRC retains sole authority for determining whether or not an application meets the minimum qualifications requirements.
9. **Selection Criteria** – Rating of manufacturer’s applications will include but is not limited to the following; a) cost effectiveness of their proposed retrofit device(s); b) ability of proposed device(s) to achieve NO_x reduction in addition to particulate matter; c) ease of device installation; and e) how quickly the product achieves regeneration. Only those applications which best meet the selection criteria as outlined in Section I.F. will be accepted. It is the intent of the Showcase project to demonstrate a wide variety of technologies, and all applications that are received will be thoroughly evaluated and ranked within a given Technology Category (i.e., active Diesel Particulate Filters (DPF), passive DPFs, NO_x + DPF, etc.). Priority may be given to certain applications in order to provide a mix of technologies for demonstration purposes.
10. **Application Evaluation** – Applications from device manufacturers will be matched with off-road construction equipment based on applicability and compatibility of technologies, and will be ranked within a Technology Category. In the event demand exceeds the funding available for retrofit device demonstrations, manufacturer applications that receive the highest scores in the evaluation and ranking process will be given priority.
11. **Multimedia Assessment** – Manufacturers whose diesel emission control strategies rely on Alternative Diesel Fuel or a fuel additive must complete a multimedia assessment to ensure that their product does not have any adverse effect on the environment. The multimedia requirement represents a significant cost of verification and applicants should thoroughly understand the process before deciding to undertake this testing. Information on the multimedia requirement may be found in the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines*, Section 2710, available on CARB’s website at: www.arb.ca.gov/diesel/verdev/verdev.htm. Applicants intending to utilize alternative diesel fuel or fuel additives are encouraged to contact Ms. Shawn Daley (see Contact Information Section I.F.) to discuss multimedia requirements.
12. **Available Funding** – The amount of MSRC funding currently allocated to the Showcase Program is a minimum of \$1,000,000. Funding will be awarded to qualifying off-road construction equipment owners for the purchase and installation costs of a diesel emission control device or system from a participating Showcase manufacturer.

13. **Maximum Allowable Per Manufacturer** – To ensure broad-based participation by manufacturers in the Showcase program, manufacturers will be limited to a total of \$200,000 for all systems and/or devices purchased and installed by participating off-road construction equipment owners during the Showcase demonstration. This amount is based on the retail price of the manufacturer’s device or product. ***Please note that if a manufacturer applicant intends to share some of the costs with the fleet owners, manufacturers must quote their regular retail cost per device or system on application form.***
14. **Participation with Multiple Off-Road Construction Equipment Fleets** – Manufacturers may participate with more than one participating off-road construction equipment operator, if applicable, provided that maximum retail purchase cap of \$200,000 has not been exceeded.
15. **Payment** – Diesel emission control system manufacturers who participate in the Showcase will receive payment for each device installed and demonstrated by a participating off-road construction equipment operator. Payment to the device manufacturer will be in accordance with standard industry business practices. Equipment owners will receive reimbursement from the MSRC upon retrofit device installation and submission of all required reports and invoices. Equipment owners will receive reimbursement only for direct costs associated with the purchase and installation of the diesel emission control device. Device regeneration equipment, maintenance of device, administrative costs, project management expenses, etc. are not reimbursable costs under the Showcase demonstration program.
16. **Purchase Agreement with Equipment Owner** – Manufacturers will be required to enter into a contract and/or legally enforceable purchase agreement with the construction equipment owner for the purchase and installation of the agreed upon retrofit devices. All after-treatment devices must be purchased and installed within twelve (12) months of execution of this Agreement.
17. **Vehicle Profile** – Manufacturer’s devices or systems must be applicable to the Vehicle Profile as shown in Section I.E. This profile represents the wide range of equipment within in the construction industry used in a variety of off-road conditions and environments.
18. **Technical Support and Issue Resolution** – Manufacturers will be required to provide on-site technical support for the duration of the demonstration project. This may include, but is not limited to: troubleshooting device installation issues; malfunction of backpressure monitors; training of equipment operators in device operation and regeneration; any other issue that may arise while the demonstration is in progress.
19. **Diversity of Products** – The Showcase Program is designed to allow a wide variety of diesel emission control technologies to participate. The goal of the project is to have a mix of technologies meeting the requirements of Section I.D.3., including active or passive diesel particulate filters; flow-through filters; selective catalytic reduction (SCR) systems; fuel borne catalysts (FBC); or other previously verified technologies. As was discussed in I.D.7, an evaluation and selection process will be used to achieve the desired mix of technologies.
20. **Assistance** – MSRC and CARB staff are available to assist applicants in determining their diesel emission control strategy’s eligibility to participate in the program. Please see the contact information in Section I.G.

I.E. OFF-ROAD CONSTRUCTION EQUIPMENT PROFILE

Table 1.E-1, below, shows the types of construction equipment desired for retrofit as part of the Showcase program. Manufacturers are encouraged to submit an application for a retrofit device or system which would be applicable to one or more of these off-road construction vehicles. Staff will work with manufacturers to ensure that their product will be applicable for these engines. This profile is based on the population of the California construction industry fleet contained in the California Air Resource Board's Off-Road Emissions Inventory.

Table 1.E-1: Off-Road Diesel Construction Equipment Targeted for Inclusion in the Showcase Demonstration Program

Showcase Vehicle Population Profile				
Vehicle \ HP	25-174	175-499	500+	
Bore/Drill Rigs	2			2
Cranes	2	1		3
Crawler Tractors	5	4	1	10
Excavators	4	7	1	12
Graders	1	3		4
Off-Highway Tractors	1	3	1	5
Off-Highway Trucks		2	1	3
Other Mobile Off-road	2			2
Pavers	2			2
Rollers	3	2		5
Rough Terrain Forklifts	4			4
Rubber Tired Dozers	1	1		2
Rubber Tired Loaders	5	6	1	12
Scrapers		2	1	3
Skid Steer Loaders	10	1		11
Tractors/Loaders/Backhoes	10	4	1	15
Trenchers	5			5
	57	36	7	100

I.F. EVALUATION & SELECTION CRITERIA

Each diesel emission control system or device proposed by a manufacturer for demonstration in the Showcase Program will undergo evaluation and ranking by a Subcommittee comprised of members of the MSRC Technical Advisory Committee, supported by additional technical representatives of the MSRC and California Air Resources Board. The following Table illustrates the criteria and weighting factors that will be applied during the evaluation and ranking process:

Table I.F-1: Retrofit System Evaluation Criteria

MANUFACTURER	DATE
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TECHNOLOGY TYPE		FINAL SCORE			
PRODUCT NAME					
RATING FACTORS		COMMENTS			
M A N D A T O R Y	1.	VERIFICATION Does applicant currently have a verified product with U.S. EPA, VERT or ARB?	YES	NO	
	2.	VERIFICATION OF SHOWCASE PRODUCT Does applicant agree to complete the verification process for this product?	YES	NO	
	3.	EQUIVALENT TO LEVEL 3: 85% REDUCTION Does this device meet the minimum PM reduction?	YES	NO	
	4.	TECHNICAL SUPPORT Does applicant agree to provide technical support during the demonstration project period?	YES	NO	
A NO answer in any of the above categories will automatically disqualify applicant from the Showcase					
			Weight Factors	Rating (0-10)	Comments
P E R F O R M A N C E	5.	NOx REDUCTION Percentage of NOx reduction greater than 25%	10		
	6.	OTHER POLLUTANTS Does this system show potential increase in other pollutants? If yes, assign zero points; if no, assign ten points. Does this system show potential decrease in other pollutants? If yes, assign maximum points; if no, assign zero points.	6 2		
A P P L I C A B I L I T Y	7.	VEHICLE PROFILE How well does this diesel emission control system meet the required off-road vehicle population?	10		
	8.	TARGET GROUPS Does the application identify specific target groups?	10		
	9.	MULTIPLE TARGET GROUPS Will this device apply to more than one area of off-road? Airport equipment? Port equipment?	3		
	10.	FEASIBILITY OF CONTROL DEVICE Is this device easy to use and install? Will this device replace or fit in the OEM muffler?	3 10		
	11.	OLDER ENGINES Will this system provide options for older pre-regulated engines?	10		
	12.	COST Cost of Device? Cost of installation?	10 10		
	13.	COMMERCIAL AVAILABILITY Is this device/system currently available in California?	1		

O T H E R	14.	COST EFFECTIVENESS Will this system be competitive with other available systems?	5			
	15.	DEMONSTRATED RETROFITS Is data provided on previous retrofits for this device?	10			
	16.	MULTIMEDIA Will this product require multimedia evaluation? If so, is previous multimedia data available? (If no multimedia is required, enter 0 in rating column)	-10			

I.G. IF YOU NEED HELP... CONTACT INFORMATION

This Request for Qualifications and Participation Application can be obtained by accessing the MSRC web site at www.cleantransportationfunding.org or the Air Resources Board Showcase website at www.arb.ca.gov/diesel/showcase/showcase.htm. MSRC and CARB staff members are available to answer questions during the application acceptance period. In order to help expedite assistance, please direct your inquiries to the applicable staff person, as follows:

- For **General & Administrative Assistance**, please contact:

Mr. Ray Gorski
MSRC Technical Advisor
Phone: 909-396-2479
Fax: 909-396-3682
E-mail: rgorski@aqmd.gov

- For **Manufacturer Eligibility Requirements**, please contact:

Ms. Susan Reed
CARB Retrofit Assessment Section
Phone: 626-575-6847
Fax: 626-575-6699
E-mail: sreed@arb.ca.gov

- For **Testing and Installation**, please contact:

Mr. Johnny Karim
CARB Testing and Field Support Section
Phone: 626-459-4303
Fax: 626-575-6699
E-mail: jkarim@arb.ca.gov

- For **Verification Program**, please contact:
Ms. Shawn Daley
Manager, CARB Retrofit Assessment Section
Phone: 626-575-6972
Fax: 626-575-6699
E-mail: sdaley@arb.ca.gov

SECTION II: APPLICATION FORMS

II.A. APPLICATION INSTRUCTIONS

A Participation Application must be completed and submitted prior to receiving approval to participate in the Showcase. The application forms are included in Section II of this document. Applications must be submitted in accordance with the instructions outlined below and all requested information must be supplied.

1. **Application Elements** - All applications must contain the following:
 - a) **Cover letter** - Transmittal of the application must be accompanied by a cover letter signed by the person(s) authorized to contractually bind the proposing entity.
 - b) **Application Forms** - Applications must include completed Forms, including all required attachments and supporting documentation as requested.
2. **Application Submittal Instructions** - All applicants must submit one (1) original application and five (5) copies (total of six) in a sealed envelope, marked in the upper left-hand corner with the name and address of the applicant and the words "PQ2007-08 Showcase Manufacturer Program". The earliest date for application submittal is March 2, 2007. Please note that Showcase applications must be received no later than 5:00 p.m. May 31, 2007 to be considered. All applications should be directed to:

Procurement Unit
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Please note that faxed or e-mailed applications will not be accepted.

3. **Addenda** – The Mobile Source Air Pollution Reduction Review Committee may modify the Program Announcement and/or issue supplementary information or guidelines relating to the Program Announcement during the application preparation period of March 2, 2007 through May 31, 2007. Any solicitation amendments will be posted on the MSRC Website at www.cleantransportationfunding.org.
4. **Application Modifications** - Once submitted, applications cannot be altered without the prior written consent of the Mobile Source Air Pollution Reduction Review Committee.
5. **Application Screening** - Applications received in response to this Showcase Announcement will be screened upon receipt to insure they comply with all program legal requirements of the AQMD and policies of the MSRC and CARB. Applications that do not

comply with the stipulated requirements will be returned to the applicant for revision and resubmission. Only applications received that comply with all minimum submission requirements will be deemed acceptable and undergo further evaluation.

6. **Application Evaluation & Approval Process** - Applications deemed compliant by MSRC staff will be forwarded to a Committee of representatives from the MSRC Technical Advisory Committee, with additional technical support from the South Coast AQMD and CARB. This committee will evaluate applications using criteria previously described in Section I.F.

Following Application evaluation, the MSRC will notify all manufacturer applicants as to the results of the evaluation. Manufacturers who are deemed qualified and proposed diesel emission control systems desirable for demonstration in the Showcase Program will receive written confirmation from the MSRC. Manufacturers who are not recommended for participation in the Showcase Demonstration Program will receive a written explanation of the evaluation results and Committee member findings and will be offered a formal application debriefing if desired. The MSRC retains sole authority to determine which manufacturers, if any, are deemed qualified to participate in the Showcase Program.

The MSRC and CARB will match qualified manufacturers diesel emission control devices with participating off-road construction equipment. ***While every effort will be made to match each manufacturer's qualified retrofit device with a participating fleet, the unique attributes of the Showcase Demonstration may result in some devices not being demonstrated. Thus, the MSRC cannot guarantee that every qualified manufacturer will ultimately participate in the Showcase Program.***

If selected to participation in the Showcase Program, the Manufacturer will be required to submit a Verification Plan for the retrofit device(s) selected for inclusion in the demonstration program.

Information regarding the CARB Diesel Emission Control Strategies Verification Program can be accessed via the CARB website at <http://www.arb.ca.gov/diesel/verdev/verdev.htm>. Questions regarding the Verification Procedure should be directed to:

Ms. Shawn Daley, Manager
Retrofit Assessment Section
sdaley@arb.ca.gov
(626) 575-6972

Manufacturers of Diesel Emission Control Systems Application for Participation in the Showcase Program

PART I: MANUFACTURER INFORMATION

A. Identification Information						
Name of Company:						
Name of Primary Contact Person:						
Phone Number:				E-Mail Address:		
Company Mailing Address:						
City:				State:		Zip:
Do you currently have a control strategy verified by any of the following agencies?			ARB <input type="checkbox"/> EPA <input type="checkbox"/> VERT <input type="checkbox"/> Check all that apply			
Is the control strategy for which you are applying verified by any of the following agencies?			ARB <input type="checkbox"/> EPA <input type="checkbox"/> VERT <input type="checkbox"/> Check all that apply			
If verified by ARB, list the Executive Order Number or Control Strategy Family Name						
If verified, describe the engines and applications for which it has been verified						

B. Product Availability

Is the control strategy currently commercially available in California?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Name of distributor:			
Company Location:			
Primary Contact Person:			
Phone Number:			
E-Mail Address:			

C. Technology Type (check all applicable boxes)

DPF <input type="checkbox"/>	Active <input type="checkbox"/> Passive <input type="checkbox"/>	
If DPF uses catalyst, specify catalyst formulation:		
Filter regenerated on-line?	<input type="checkbox"/>	
Filter regenerated off-line?	<input type="checkbox"/>	
Number of hours of operation before regeneration required:		
Time required for regeneration:		
Is regeneration dependent on size of unit? YES <input type="checkbox"/> NO <input type="checkbox"/>		
Source of regeneration energy:		
Electricity	<input type="checkbox"/>	
Fuel	<input type="checkbox"/>	
NOx Control	<input type="checkbox"/>	Describe:
FBC	<input type="checkbox"/>	Describe:
Other	<input type="checkbox"/>	Describe:

D. Previous Experience and Pre-Existing Data

Is your device currently used in any off-road conditions?	If yes, please describe
Do you have any previous data-logging data on off-road applications? If yes, please provide with application.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Do you have existing test data and/or engineering analysis to support anticipated emission reduction/increase claim(s)? If yes, please provide with application.	Yes <input type="checkbox"/> No <input type="checkbox"/>

E. Verification

The intent is to have project participants complete the verification process. Do you agree to pursue ARB verification?	Yes <input type="checkbox"/> No <input type="checkbox"/>
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F. Identification of Emission Control Group	
What category of engines do you intend to verify? Unregulated <input type="checkbox"/> Tier 1 <input type="checkbox"/> Tier 2 <input type="checkbox"/> Tier 3 <input type="checkbox"/>	
What horse-power ranges are included in the above categories?	
Identify parameters used in selection of engines	
• Application	
• Engine type	
• Minimum exhaust temperature for proper operation	
• Maximum consecutive minutes operating below minimum exhaust temperature	
• Number of Hours of Operation Before Cleaning of Filter Required	
• Fuel Type	
• Verification Level Sought	
What is the maximum backpressure allowed when the control strategy is in operation?	

G. Commercial Availability

Is control strategy feasible? (Ease of use and installation)
Please provide information on any demonstrated retrofits.

H. Emissions Reduction

What is the anticipated percent reduction from control strategy (from baseline emissions)?					
PM		A.	%	NOx (if applicable)	%
What is the potential increase in other pollutant levels from control strategy (percent increase from baseline emissions)?					
NO ₂		%			
NO _x		%			
CO		%			
CO ₂		%			
HC		%			

I. Material and Installation Costs

Retrofit device		\$
Design cost for installation		\$
Installation cost		\$
Data-logging cost		\$
Fuel cost		\$
Fuel infrastructure cost (if applicable)		\$
Maintenance cost		\$
Will your company be willing to pay for a portion of the material and/or installation cost?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
If so, please specify amount:		

J. Technical Support

Your company will be required to provide technical support should problems arise during demonstration/installation. Please list the contact information for the person providing technical support during the test program:		
Name:		
Phone:	Cell:	Pager:

PART II: PROPOSED VERIFICATION TESTING PROTOCOL

The following information may or may not be available at the time of application preparation; thus, submittal of Part II as an element of the Application is OPTIONAL. Submittal of the requested information as an element this Application will, however expedite the verification process. Once received, a CARB staff person will be assigned to work with you through the verification process.

Please refer to the Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Title 13, California Code of Regulations, Sections 2700-2710) in completing this section. For further information, please contact Ms. Shawn Daley (see Contact information, Section I.G).

A. Emission Reduction Testing

Test facility identification	
Test facility contact	
Test engine information	
• Make	
• Model	
• Engine family	
• Model year	
• Displacement	
• PM certification level	
• NO _x certification level	
Test vehicle information (if applicable)	
• Make	
• Model	
• Model year	
What type of emission testing?	
• Engine <input type="checkbox"/>	Please state cycle:
• Chassis <input type="checkbox"/>	Please state cycles:
	• UDDS <input type="checkbox"/>
	• Low-speed cycle <input type="checkbox"/>
State cycle:	
Will you request waiver for low speed cycle? Yes <input type="checkbox"/> No <input type="checkbox"/>	
• If yes, please provide data and/or engineering justification with application.	

Emission Reduction Testing (continued)

Please provide a schematic of collection system	
Identify measurement instrument for:	
• Total PM	
• NMHC or HC	
• NO _x	
• NO ₂	
• CO	
• CO ₂	
Does the diesel emission control strategy reduce NO _x ?	Yes <input type="checkbox"/> No <input type="checkbox"/>
What is the effect of elevated NO _x emissions on the control strategy?	
Please explain how strategy responds to elevated NO _x emissions that do not occur at the time the strategy is calibrated?	
What are the anticipated emissions during filter regeneration events?	

B. Warranty

Does your company agree to comply with the product warranty requirements as outlined in Section 2707 of the verification regulation?	Yes <input type="checkbox"/> No <input type="checkbox"/>
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C. In-Use Compliance

Does applicant agree to complete in-use compliance requirements?	Yes <input type="checkbox"/> No <input type="checkbox"/>
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The undersigned parties agree to the terms and conditions as set forth in this Agreement. The undersigned parties certify under the penalty of perjury that they are duly authorized to bind the parties to this Agreement.

APPLICANT:

Signature of Authorized Official

Name:
Title:

Date:_____