PROPOSAL: Recognize Funds and Issue RFP for In-Use Emissions Testing of On-Road Heavy-Duty Vehicles

SYNOPSIS: Assessment of in-use emissions from heavy-duty vehicles remains a critical component for measuring the effectiveness of engine, fuel and aftertreatment technologies as well as the South Coast Air Basin’s progress toward achieving the federal ambient air quality standards. SCAQMD staff proposes to conduct in-use emissions testing, fuel usage profile characterization, and an impact assessment of current technology and alternative fuels on fuel consumption and in-use emissions from heavy-duty vehicles in various vocations. This action is to recognize funds of up to $2.5 million from CEC and the Southern California Gas Company to cofund this project. This action is to also issue an RFP to solicit proposals to conduct in-use emissions testing, fuel usage profile characterization, and an impact assessment of current technology and alternative fuels on fuel consumption and in-use emissions from heavy-duty vehicles.

COMMITTEE: Technology, March 18, 2016; Recommended for Approval

RECOMMENDED ACTIONS:
1. Recognize, upon receipt, up to $2.5 million from CEC and the Southern California Gas Company (SoCalGas) into the Clean Fuels Fund (31) to conduct in-use emission testing, fuel usage profile characterization, and an impact assessment of current technology and alternative fuels on fuel consumption and in-use emissions from heavy-duty vehicles.
2. Issue RFP #P2016-19 to solicit proposals to conduct in-use emission testing, fuel usage profile characterization, and an impact assessment of current technology and alternative fuels on fuel consumption and in-use emissions from heavy-duty vehicles.

Michael B. O’Kelly
Acting Executive Officer
**Background**

On-road heavy-duty engines are now subject to the 2010 U.S. EPA emissions standards of 0.01 gram per brake-horsepower-hour (g/bhp-hr) PM and 0.2 g/bhp-hr NOx. However, engine manufacturers are still using emissions credits which allow them to produce a mixture of engines certified at or below 0.2 g NOx and engines certified at a level higher than 0.2 g NOx to comply with emissions standards on an average basis. While recent studies have shown NOx and PM emissions are reduced from heavy-duty vehicles powered by modern-technology engines, emissions from heavy-duty vehicles still dominate the total basinwide NOx and PM emissions. In addition, a new heavy-duty natural gas engine recently certified by CARB achieves a 90% lower NOx emissions level than the current 2010 engine emissions standard. Therefore, additional assessment of in-use vehicle emissions remains a critical component for measuring the effectiveness of engine, fuel and aftertreatment technologies and improving emission inventories for air quality modeling and planning as well as developing effective strategies toward achieving the federal ambient air quality standards.

**Proposal**

These actions are to recognize up to $2.5 million from CEC and the Southern California Gas Company (SoCalGas) for in-use emissions testing of heavy-duty vehicles and to issue RFP #P2016-19 to solicit proposals to conduct in-use emissions testing, fuel usage characterization, and an impact assessment of current technology and alternative fuels on fuel consumption and in-use emissions from heavy-duty vehicles used in various vocations.

The test vehicles will involve up to 200 on-road heavy-duty vehicles used in transit, school bus, refuse, delivery and goods movement applications and powered by engines fueled with alternative fuels, conventional and alternative diesel fuels, and a combination of diesel and natural gas (dual) fuels. The engines will be categorized into seven groups including natural gas engines certified at or below 0.2 g/bhp-hr NOx, natural gas engines certified at or below 0.02 g/bhp-hr NOx, diesel engines certified at or below 0.2 g/bhp-hr NOx, diesel engines without selective catalytic reduction, dual fuel engines, and alternative fuel engines (hybrid and fully electric technology).

Proponents will be required to instrument test vehicles with portable emissions measurement systems (PEMS), portable vehicle activity measurement systems (PAMS), and other hardware to monitor daily vehicle activities, fuel usage profile and emissions. Proponents will then use the PEMS’ and PAMS’ results to recommend whether to develop new or improved or retain existing vocation-based heavy-duty drive cycles. In addition, proponents will be required to: 1) perform chassis dynamometer tests of a number of selected test vehicles, 2) instrument a number of test vehicles used in delivery and good movement applications with laboratory-grade test equipment to
assess real-world in-use emissions, fuel usage profile, and engine aftertreatment technology performance as the vehicles are driven over typical vocation routes, 3) match vehicle technologies to vocations for which technology benefits can be maximized, and 4) provide recommendations on how to prioritize staff and financial resources to support advanced engine and aftertreatment technology research and demonstration programs.

**Outreach**

In accordance with SCAQMD’s Procurement Policy and Procedure, a public notice advertising the RFP and inviting bids will be published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County’s Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin.

Additionally, potential bidders may be notified utilizing SCAQMD’s own electronic listing of certified minority vendors. Notice of the RFP will be emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations, and placed on the Internet at SCAQMD’s website (http://www.aqmd.gov) where it can be viewed by making the selection “Grants & Bids”.

**Bid Evaluation**

Proposals will be reviewed and evaluated by a diverse, technically qualified panel in accordance with criteria contained in the attached RFP.

**Benefits to SCAQMD**

The proposed project will be used to measure the effectiveness of engine, fuel and aftertreatment technologies, improve emission inventories for air quality modeling and planning, and match vehicle technologies to vocations for which technology benefits can be maximized as well as to develop effective strategies toward achieving the federal ambient air quality standards. The proposed project is included in the Technology Advancement Office Clean Fuels Program 2016 Plan Update under “Fuel/Emissions Studies.”

**Resource Impacts**

Potential bidders will provide the total cost of the proposed project. SCAQMD staff anticipates the RFP will result in the recommendation of approximately one to three awards based on the availability of funds and the quality of proposals received.

Sufficient funds are available from the Clean Fuels Program Fund, established as a special revenue fund resulting from the state-mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile
sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.

**Attachment**
RFP #P2016-19 – In-Use Emissions Testing and Fuel Usage Profile of On-Road Heavy-Duty Vehicles
South Coast Air Quality Management District (SCAQMD) requests proposals for the following purpose according to terms and conditions attached. In the preparation of this Request for Proposals (RFP) the words "Proposer," "Contractor," "Consultant," "Bidder" and “Firm” are used interchangeably.

PURPOSE

The SCAQMD is seeking proposals from Contractor Teams to conduct in-use emissions testing, characterize fuel usage profile, develop new or improve existing heavy-duty vehicle drive cycles, and assess the impact of current technology and alternative fuels on fuel consumption and in-use emissions from on-road heavy-duty vehicles with Gross Vehicle Weight Rating (GVWR) greater than 14,000 pounds (lb.) and used in transit, school bus, refuse, delivery and goods movement applications. The Contractor Team must consist of, at a minimum, a heavy-duty vehicle emission testing laboratory and individuals with many years of experience in developing vocation-based heavy-duty drive cycles and evaluating a wide range of engine, aftertreatment, diesel fuel, alternative fuel and energy technologies for heavy-duty vehicles. The prospective prime contractor will be responsible for coordinating all aspects of this project including obtaining regulatory permits (if needed), securing test vehicles, scheduling and coordinating all installations and emissions testing, conducting data analysis and preparing reports.

The test vehicles will involve up to 200 on-road heavy-duty vehicles with GVWR greater than 14,000 pounds (lb.) and used in transit, school bus, refuse, delivery and goods movement applications. The test vehicles are limited to those powered by engines fueled with alternative fuels (fossil fuel-based and renewable natural gas, propane, electric and hybrid), conventional and alternative diesel fuels, and a combination of diesel and natural gas (dual) fuels. The engines are categorized into six groups including:

- Model year (MY) 2010 – 2015 natural gas engines certified at or below 0.20 gram per brake horsepower hour (g/bhp-hr) nitrogen oxides (NOx);
- Natural gas engines certified to California Air Resources Board (CARB) optional standard at or below 0.02 g/bhp-hr NOx;
- MY 2010 - 2015 diesel engines certified at or below 0.20 g/bhp-hr NOx;
- Diesel engines with no selective catalytic reduction (SCR) systems;
- Dual fuel engines; and
- Alternative fuel engines (hybrid and fully electric technology).

Prospective proposers will be required to instrument up to 200 test vehicles with portable emissions measurement systems (PEMS), portable vehicle activity measurement systems (PAMS), and other hardware to monitor daily vehicle activities, fuel usage profile and emissions. Prospective proponents will then use the PEMS’ and PAMS’ results to recommend
whether to develop new or improved or retain existing vocation-based heavy-duty drive cycles. In addition, prospective proponents will be required to:

- Perform chassis dynamometer tests of up to 60 test vehicles using the developed or improved or existing drive cycles;
- Instrument up to 10 test vehicles used in delivery and goods movement applications with laboratory-grade test equipment to assess real-world in-use emissions, fuel usage profile, and engine aftertreatment technology performance as the vehicles are driven over typical vocation routes;
- Develop deterioration factors for engine aftertreatment technologies employed on up to 8 test vehicles; and
- Based on the test results, provide recommendations to improve CARB EMFAC model (if needed), identify technology issues and how to mitigate them, prioritize SCAQMD and the California Energy Commission (CEC) staff and financial resources to support advanced engine and aftertreatment technology research and demonstration programs, and match vehicle technologies to vocations for which technology benefits can be maximized.

INDEX - The following are contained in this Request for Proposals (RFP):

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Background/Information</td>
</tr>
<tr>
<td>II</td>
<td>Contact Person</td>
</tr>
<tr>
<td>III</td>
<td>Schedule of Events</td>
</tr>
<tr>
<td>IV</td>
<td>Participation in the Procurement Process</td>
</tr>
<tr>
<td>V</td>
<td>Statement of Work/Schedule of Deliverables</td>
</tr>
<tr>
<td>A.</td>
<td>Statement of Work</td>
</tr>
<tr>
<td></td>
<td>i. Task 1 – Test Vehicle Selection and Regulatory Permits</td>
</tr>
<tr>
<td></td>
<td>ii. Task 2 – Test Vehicle Activity Protocol</td>
</tr>
<tr>
<td></td>
<td>iii. Task 3 – In-Use Chassis Dynamometer Emissions Test</td>
</tr>
<tr>
<td></td>
<td>iv. Task 4 – Real-World In-Use Emission Tests</td>
</tr>
<tr>
<td></td>
<td>v. Task 5 – Aftertreatment Technology Deterioration Factors</td>
</tr>
<tr>
<td></td>
<td>vi. Task 6 – Technology Impact, Shortfall, Improvement and Benefits</td>
</tr>
<tr>
<td></td>
<td>vii. Task 7 – Comparison of In-Use Emissions and EMFAC Factor</td>
</tr>
<tr>
<td>B.</td>
<td>Schedule of Deliverables</td>
</tr>
<tr>
<td>VI</td>
<td>Required Qualifications</td>
</tr>
<tr>
<td>VII</td>
<td>Proposal Submittal Requirements</td>
</tr>
<tr>
<td></td>
<td>VOLUME I – TECHNICAL PROPOSAL</td>
</tr>
<tr>
<td></td>
<td>VOLUME II – COST PROPOSAL</td>
</tr>
<tr>
<td>VIII</td>
<td>Proposal Submission</td>
</tr>
<tr>
<td>IX</td>
<td>Proposal Evaluation/Contractor Selection Criteria</td>
</tr>
<tr>
<td>X</td>
<td>Funding</td>
</tr>
<tr>
<td>XI</td>
<td>Sample Contract</td>
</tr>
</tbody>
</table>

Attachment A - Participation in the Procurement Process
Attachment B - Certifications and Representations
SECTION I: BACKGROUND/INFORMATION

On-road heavy-duty engines are now subject to the 2010 U.S. EPA emissions standards of 0.01 g/bhp-hr PM and 0.20 g/bhp-hr NOx. However, engine manufacturers are still using emissions credits which allow them to produce a mixture of engines certified at or below 0.20 g NOx and engines certified at a level higher than 0.20 g NOx to comply with the emissions standards on an average basis. These engines are broadly classified as natural gas stoichiometric engines with three-way catalysts and lean-burn engines with exhaust gas recirculation (EGR) and selective catalytic reduction (SCR) systems, high pressure direct injection dual-fuel engines equipped with SCR systems, diesel engines with advanced EGR and diesel particulate filter (DPF) technology, and diesel engines with DPF and urea-based SCR technology. While recent studies have shown NOx and PM emissions are reduced from heavy-duty vehicles powered by modern-technology engines, emissions from heavy-duty vehicles still dominate the total basin-wide NOx and PM emissions. Therefore, additional assessment of in-use vehicle emissions remain a critical component for measuring the effectiveness of engine, fuel and aftertreatment technologies and improving emission inventories for air quality modeling and planning as well as developing effective strategies toward achieving the federal ambient air quality standards. SCAQMD, CEC and the Southern California Gas Company (SoCalGas) seek to conduct in-use emissions testing, fuel usage characterization, and an impact assessment of current technology and alternative fuels on fuel consumption and in-use emissions from on-road heavy-duty vehicles with GVWR greater than 14,000 lb and used in transit, school bus, refuse and goods movement applications. The test and assessment results will be used to:

- Develop or improve vocation-based drive cycles and emissions inventory;
- Develop deterioration factors for engine and aftertreatment technologies;
- Identify technology issues and how to mitigate them;
- Prioritize staff and financial resources to support advanced engine and aftertreatment technology research and demonstration programs; and
- Match vehicle technologies to vocations to maximize technology benefits.

The proposed RFP supports the implementation of advanced alternative fuel technology that could potentially reduce NOx and PM emissions from on-road heavy-duty vehicles.

SECTION II: CONTACT PERSON:

Questions regarding the content or intent of this RFP or on procedural matters should be addressed to:

Adewale Oshinuga**
Program Supervisor
Science and Technology Advancement
SCAQMD
21865 Copley Drive
Diamond Bar, CA 91765-4178
(909) 396-2599
**Please note: All interested parties in this RFP (#P2016-19), including potential bidders and those seeking to join a bidding team, are encouraged to periodically visit the SCAQMD website at [www.aqmd.gov/rfp](http://www.aqmd.gov/rfp). Clarifications will be provided to frequently asked questions.**

SECTION III: SCHEDULE OF EVENTS

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1, 2016</td>
<td>RFP Released</td>
</tr>
<tr>
<td>May 6, 2016</td>
<td>Bidders’ Conference*</td>
</tr>
<tr>
<td>June 10, 2016</td>
<td>Proposals Due to SCAQMD - No Later Than 5:00 pm</td>
</tr>
<tr>
<td>June 13 – June 24, 2016</td>
<td>Proposal Evaluations</td>
</tr>
<tr>
<td>July 22, 2016</td>
<td>Technology Committee</td>
</tr>
<tr>
<td>September 2, 2016</td>
<td>Governing Board Approval</td>
</tr>
<tr>
<td>October 7, 2016</td>
<td>Anticipated Contract Execution</td>
</tr>
</tbody>
</table>

*Participation in the Bidders’ Conference is optional. Such participation would assist in notifying potential bidders of any updates or amendments. Any questions from prospective bidders or interested parties should be directed, with reference to this RFP, to Adewale Oshinuga, via aoshinuga@aqmd.gov. Bidders planning to attend the Bidders’ Conference should notify Adewale Oshinuga by email before the close of business day, May 5, 2016. The Bidders’ Conference will be held in Room CC3-5 at SCAQMD Headquarters in Diamond Bar, California, at 10:00 a.m. on Friday, May 6, 2016.

SECTION IV: PARTICIPATION IN THE PROCUREMENT PROCESS

It is the policy of SCAQMD to ensure that all businesses including minority business enterprises, women business enterprises, disabled veteran business enterprises and small businesses have a fair and equitable opportunity to compete for and participate in SCAQMD contracts. Attachment A to this RFP contains definitions and further information.

SECTION V: STATEMENT OF WORK/SCHEDULE OF DELIVERABLES

A. Statement of Work
The purpose of the RFP is to solicit proposals to conduct in-use emissions testing, characterize fuel usage profiles, develop new or improve existing heavy-duty vehicle drive cycles, and assess the impact of current technology and alternative fuels on fuel consumption and in-use emissions from on-road heavy-duty vehicles with GVWR greater than 14,000 lb. Prospective proponents will be required to instrument up to 200 test vehicles used in transit, school bus, refuse, delivery and goods movement applications with PEMS, PAMS, and other hardware to monitor daily vehicle activities, fuel usage profiles and emissions. Prospective proponents will then use the PEMS’ and PAMS’ results to recommend whether to develop new or improved or retain existing vocation-based heavy-duty drive cycles. In addition, prospective proponents will be required to:
- Perform chassis dynamometer tests of up to 60 test vehicles using the developed or improved drive cycles;
Instrument up to 10 test vehicles used in delivery and goods movement applications with laboratory-grade test equipment to assess real-world in-use emissions, fuel usage profiles, and engine aftertreatment technology performance as the vehicles are driven over typical vocation routes;

- Develop deterioration factors for engine aftertreatment technologies up to 8 test vehicles; and
- Based on the test results, provide recommendations to improve CARB’s EMFAC model (if needed), identify technology issues and how to mitigate them, prioritize SCAQMD and CEC staff and financial resources to support advanced engine and aftertreatment technology research and demonstration programs, and match vehicle technologies to vocations to maximize technology benefits.

The proposed project is anticipated to be completed in 18 months. The proposal should address concisely the information requested in the following Tasks and Sub-Tasks in the format specified in Section VII - Proposal Submittal Requirements. Information provided should be specific enough for evaluation and scoring purposes and for inclusion into a binding contract. Successful bidders are expected to provide complete details of work proposed for this project.

**Task 1 – Test Vehicle Selection and Regulatory Permits**

The objective of this task is for the Contractor Team to develop a test vehicle recruitment protocol and recruit test vehicles. The test vehicles will involve up to 200 on-road heavy-duty vehicles with GVWR greater than 14,000 lb. and used in transit, school bus, refuse, delivery and goods movement applications. The test vehicles are limited to those powered by engines fueled with alternative fuels, conventional and alternative diesel fuels, and dual fuels. Contractor shall:

1.1. Develop a Test Vehicle Recruitment Protocol to up to 200 test vehicles that is representative of vehicles with GVWR greater than 14,000 lb. and used in transit, school bus, refuse, delivery and goods movement applications. The test vehicles are limited to those powered by engines fueled with alternative fuels, conventional and alternative diesel fuels, and dual fuels. The engines are categorized into six groups including:

- MY 2010 – 2015 natural gas engines certified at or below 0.20 g/bhp-hr NOx;
- Natural gas engines certified to CARB optional standard at or below 0.02 g/bhp-hr NOx;
- MY 2010 - 2015 diesel engines certified at or below 0.20 g/bhp-hr NOx;
- Diesel engines with no SCR system;
- Dual fuel engines; and
- Alternative fuel engines (hybrid and fully electric technology).

The protocol shall include, at a minimum, specific approach for:

1.1.1. Drawing a representative sample of up to 200 test vehicles from the population of vehicles (GVWR greater than 14,000 lb.) used in transit, school bus, refuse, delivery and goods movement applications and operated in South Coast Air Basin (Basin). To minimize natural skewness of vehicle emissions, this approach shall address:

1.1.1.i. Vehicles powered only by engines in the six categories listed above;
1.1.1.ii. The number of vehicles in each category based on, at a minimum, the engine age, technology and make and model, vehicle’s mileage (at least 5,000 miles), and the representativeness of the vehicles to the
heavy-duty vehicle (GVWR greater than 14,000 lb.) population in the Basin; and

1.1.1.iii. Steps for inviting potential fleets to participate in the in-use emissions study; and

1.1.2. Ensuring that the test vehicles are drivable and safe. This approach must include, at a minimum, procedures for;

1.1.2.i. Performing vehicle safety and drivability tests;
1.1.2.ii. Collecting and assessing vehicle maintenance and usage history;
1.1.2.iii. Reading and diagnosis active and inactive fault codes;
1.1.2.iv. Screening the engine Electronic Control Unit (ECU) and On-Board Diagnostic (OBD) system, if available, to identify engine sensors malfunction or failure;
1.1.2.v. Screening the OBD system (if available) to identify aftertreatment device malfunction or failure; and
1.1.2.vi. Inviting engine and vehicle manufacturers to participate in the screening of engine and aftertreatment device faulty codes, failure and malfunction;

1.2. Submit the protocol developed in Task 1.1 to the SCAQMD Project Manager for approval;

1.3. Work with the Technical Review Committee to identify up to 200 test vehicles based on the approved protocol in Task 1.2;

1.4. Work with fleet participants, engine and vehicle manufacturers, and CARB staff to secure the number of test vehicles in each engine technology category and vocation recommended by the Technical Review Committee and assigned to Contractor by the SCAQMD Project Manager;

1.5. Prepare a Test Vehicle Matrix, including at a minimum, the following information:

1.5.1. Test vehicle

1.5.1.i. Ownership,
1.5.1.ii. Condition and maintenance history,
1.5.1.iii. Vocation,
1.5.1.iv. Model year,
1.5.1.v. Gross vehicle weight rating (GVWR), and
1.5.1.vi. Odometer reading.

1.5.2. Engine

1.5.2.i. Technology,
1.5.2.ii. Make, family, model year, serial number, displacement, maximum rated power, and
1.5.2.iii. Certification level.

1.5.3. Aftertreatment Device

1.5.3.i. Technology and
1.5.3.ii. Condition.
1.5.4. Fuel type.

1.6. Submit the Test Vehicle Matrix in Task 1.5 to the SCAQMD Project Manager for approval.

1.7. Itemize all activities, if any, that may require regulatory permits.

Task 2 – Test Vehicle Activity Protocol

The objective of this task is for the Contractor Team to develop a Test Vehicle Activity Protocol to establish procedures for collecting, storing and analyzing second-by-second vehicle operating information, in-use emissions and location, as well as procedures to develop new or improve existing drive cycles for heavy-duty vehicles used in transit, school bus, refuse, delivery and goods movement applications. Contractor shall:

2.1. Develop a Test Vehicle Activity Protocol for: gathering, storing and analyzing vehicle driving data, emissions and location; determining whether to develop new or improved or retain existing vocation-specific drive cycles; and, if needed, developing or improving the existing drive cycles. The protocol shall include a detailed description of the tools (PEMS and PAMS) and procedures for:

2.1.1. Gathering and storing second-by-second operating information, in-use emissions, loaded weight, axle group weight and location of test vehicles. The procedures shall include detailed description of the:

2.1.1.i. Continuous measurement systems with all necessary hardware and software equipment interface components and how the systems will be fitted with the test vehicles;

2.1.1.ii. Guidelines and performance specifications of the measurement systems. The systems shall, at a minimum:

a) Include an integrated Global Positioning System (GPS) and other tools capable of measuring second-by-second road grade, vehicle’s location (latitude and longitude), speed, acceleration, power, revolution per minute, mass air flow, time and other operational data necessary for interpreting test vehicle driving histories as well as for developing or improving heavy-duty vehicle drive cycles;

b) Include an on-board weight system capable of periodically measuring vehicle’s loaded weight and axle group weight;

c) Communicate with the engine’s ECU and OBD (if available) through industry standard communication protocols and record data into memory without adversely affecting the ECU or OBD or any sensors;

d) Start automatically when a test vehicle is started and stop automatically when the test vehicle is stopped;

e) Be configurable in a “plug-and-play manner” with an Ethernet or USB connector and/or wireless signal;

f) Allow data to be uploaded to a server at predefined rates;

g) Interface with a server that provides a centralized repository of data and events if a remote feature of the system is selected.
The server shall provide a secure gateway for end users to view and/or download data for analysis;
h) Allow exportation of data to CSV or other industry standard file type to facilitate analysis using common data analysis tools or allow data to be housed in a relational database;
i) Have ability to download data using mobile broadband or other cellular/mobile based communication devices;
j) Be flexible and capable of incorporating multiple transmission protocols;
k) Have adequate data storage capacity;
l) Monitor and record multiple engine parameters from the engine’s ECU;
m) Monitor and record all selected parameters on a “per second” basis (1 HZ) or at any configurable frequency, continuously for a minimum period of one week;
n) Measure and record temperature and pressure at engine-out, tailpipe, and pre and post of aftertreatment devices; and
o) Measure test vehicle's exhaust carbon monoxide (CO), carbon dioxide (CO2), total hydrocarbon (THC), and total NOX emissions.

2.1.2. Interpreting and analyzing (QA/QC) driving data gathered in Task 2.1.1. This procedure shall, at a minimum, provides strategies for discovering and resolving issues with:
2.1.2.i. Equipment (PAMS, PEMS, GPS, etc.) failure or malfunction;
2.1.2.ii. Signal noise in equipment; and
2.1.2.iii. Dataset.

2.1.3. Segregating driving data into micro-trip bins;

2.1.4. Selecting micro-trip bins that are representative of the entire pool of micro-trips for each vocation;

2.1.5. Processing the selected micro-trips in preparation of developing new or improving existing vocation-based drive cycles; and

2.1.6. Developing conditioning drive cycles, cold start and hot start frequencies, as well as, frequency of temperature and low load operations for vehicles equipped with aftertreatment devices;

2.2. Submit the protocol developed in Task 2.1 to the SCAQMD Project Manager for approval;

2.3. Implement the approved Test Vehicle Activity Protocol(s)l in Task 2.2 and gather test vehicle activity data;

2.4. Develop a representative route for each vocation based on the test vehicle activity data in Task 2.3 for the purpose of Real-World In-Use Emission tests in Task 4;
2.5. Assess the effectiveness of existing vocation-based heavy-duty drive cycles based on the test vehicle activity data in Task 2.3 and recommend whether to develop new or improved or retain existing vocation-based heavy-duty drive cycles for transit bus, school bus, refuse, delivery and goods movement vehicles;

2.6. Submit a report of the assessment in Task 2.5 to the SCAQMD Project Manager for review. The SCAQMD Project Manager will present the report to the Technical Review committee to discuss the Contractor's recommendation regarding whether the existing drive cycle should be replaced or retained.

2.7. Develop or improve existing vocation-based heavy-duty drive cycles if so recommended by the Technical Review Committee; and

2.8. Submit the newly developed or improved vocation-based heavy-duty drive cycles to the SCAQMD Project Manager for approval.

**Task 3 – In-Use Chassis Dynamometer Emissions Test**

The objective of this task is for the Contractor Team to develop an In-Use Chassis Emission Test Plan and conduct chassis dynamometer tests per newly developed or improved or existing vocation-based heavy-duty drive cycles to establish THC, methane, nonmethane hydrocarbon, nitrogen dioxide (NO2), nitrogen monoxide (NO), nitrous oxides (N2O), NOx, CO, particulate matter (PM), ultrafine (aerodynamic diameter less than 0.1 micrometer), ammonia (NH3), CO2, and toxic air contaminant emissions from up to 60 test vehicles selected from the Vehicle Test Matrix. Contractor shall:

3.1. Develop an In-Use Chassis Emission Test Plan for conducting a chassis dynamometer tests of up to 60 test vehicles selected from the approved Vehicle Test Matrix in Task 1.6. The plan shall include detailed description of the:

3.1.1. Steps that will be taken to ensure that the test vehicles are drivable and safe. These steps shall be consistent with the approved Test Vehicle Recruitment Protocol in Task 1;

3.1.2. Type and purpose of each sensor or equipment with all necessary hardware and software equipment interface components to be instrumented on test vehicles;

3.1.3. Chassis dynamometer test procedures including vehicle setup, conditioning, coast-down, and cold-start and triplicate hot-start test procedures;

3.1.4. Approach to validate or evaluate the newly developed or improved vocation-based heavy-duty drive cycles approved by SCAQMD Project Manager in Task 2.8;

3.1.5. Following vocation-based heavy-duty drive cycles should the Technical Review Committee recommend that the existing drive cycles be used:

3.1.5.i. Central Business District (CBD) driving schedule;
3.1.5.ii. Urban Dynamometer Driving Schedule (UDDS);
3.1.5.iii. Orange County Transit Authority (OCTA) driving schedule;
3.1.5.iv. Port Drayage drive cycle;
3.1.5.v. SCAQMD refuse truck cycle; and
3.1.5.vi. CARB Heavy Heavy-Duty Diesel Truck (HHDDT) drive cycle.

3.1.6. Procedures for collecting, measuring and recording all data necessary to determine:
3.1.6.i. Vehicle distance specific fuel consumption;
3.1.6.ii. NOx emissions during extended idle period
3.1.6.iii. THC, methane, and nonmethane hydrocarbon emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
3.1.6.iv. NO, N2O, NO2, CO, CO2, NH3, PM, and ultrafine emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
3.1.6.v. Benzene, toluene, ethylbenzene, xylene, formaldehyde, acetaldehyde, and carbonyl emissions;
3.1.6.vi. Gaseous and PM emissions in the Not-to-Exceed zone (NTE);
3.1.6.vii. Gravimetric analysis of PM10, PM2.5, PM1 and total PM;
3.1.6.viii. PM concentration and size distribution;
3.1.6.ix. Chemical characterization of PM – elemental carbon (including metal) and organic carbon analyses; and
3.1.6.x. Engine aftertreatment technology performance.

3.2. Submit the In-Use Chassis Emission Test Plan in Task 3.1 to the SCAQMD Project Manager for approval;

3.3. Conduct chassis dynamometer in-use emissions tests (one cold start and triplicate hot-start per drive cycle) of up to 60 test vehicles selected from the approved Vehicle Test Matrix in Task 1.6 based on the emission test plan approved in Task 3.2; and

3.4. Submit an In-Use Chassis Emission Test Report to SCAQMD Project Manager. The report shall include, but not limited to the following:

3.4.1. Vehicle distance specific fuel consumption;
3.4.2. NOx emissions during extended idle period
3.4.3. THC, methane, and nonmethane hydrocarbon emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
3.4.4. NO, N2O, NO2, CO, CO2, NH3, PM and ultrafine emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
3.4.5. Benzene, toluene, ethylbenzene, xylene, formaldehyde, acetaldehyde, and carbonyl emissions;
3.4.6. Gaseous and PM, emissions in the NTE zone;
3.4.7. Gravimetric analysis of PM10, PM2.5, PM1 and total PM;
3.4.8. PM concentration and size distribution;
3.4.9. Chemical characterization of PM – elemental carbon (including metal) and organic carbon analyses; and
3.4.10. Engine aftertreatment technology performance.

Task 4 – Real-World In-Use Emission Tests
The objective of this task is for the Contractor Team to develop a Real-World In-Use Emission Test Plan and conduct emissions test of up to 10 test vehicles used in delivery and goods movement applications to assess real-world in-use emissions, fuel usage profile, and engine
aftertreatment technology performance as the vehicles are driven over typical vocation routes. Contractor shall:

4.1. Develop a Real-World In-Use Emission Test Plan to conduct in-use emission tests of up to 10 test vehicles used in delivery and goods movement applications as the vehicles are driven over typical vocation routes and loaded up to 70,000 pounds gross vehicle weight rating. The delivery and goods movement test vehicles shall be selected from the approved Vehicle Test Matrix in Task 1.6. The plan shall include detailed description of the:

4.1.1. Test routes representative of delivery and goods movement vehicles’ operations in the Basin and consistent with the routes identified in the Test Vehicle Recruitment Protocol in Task 1;

4.1.2. Transportable 40 CFR 1065 compliant CVS emissions measurement systems and how the systems are prepared or conditioned in preparation for testing vehicles;

4.1.3. Location, type and purpose of each sensor or equipment with all necessary hardware and software equipment interface components to be instrumented on the test vehicles;

4.1.4. Real-world test procedures, including methods and tools to:
   4.1.4.i. Prepare and condition test vehicles for testing;
   4.1.4.ii. Measure or determine the topology, road grade and ambient conditions along the routes; and
   4.1.4.iii. Continuously monitor, collect and record parameters necessary to determine the efficiency of each aftertreatment technology installed on the engine exhaust.

4.1.5. Procedures for collecting, measuring and recording all data necessary to determine:
   4.1.5.i. Vehicle distance specific fuel consumption;
   4.1.5.ii. THC, methane, and nonmethane hydrocarbon at engine-out, tailpipe, and pre and post aftertreatment devices emissions;
   4.1.5.iii. NO, N2O, NO2, CO, CO2, NH3, PM and ultrafine emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
   4.1.5.iv. Gaseous and PM emissions in the NTE zone;
   4.1.5.v. Benzene, toluene, ethylbenzene, xylene, formaldehyde, acetaldehyde, and carbonyl emissions;
   4.1.5.vi. Gravimetric analysis of PM10, PM2.5, PM1 and total PM;
   4.1.5.vii. PM concentration and size distribution; and
   4.1.5.viii. Chemical characterization of PM – elemental carbon (including metal) and organic carbon analyses.

4.2. Submit the Real-World In-Use Emission Test Plan in Task 4.1 to the SCAQMD Project Manager for approval;
4.3. Conduct emissions tests of up to 10 test vehicles used in delivery and goods movement applications and selected from the approved Vehicle Test Matrix in Task 1.6 based on the Real-World Emission Test Plan approved in Task 4.2; and

4.4. Submit a Real-World Emission Test Report to SCAQMD Project Manager. The report shall include, but not limited to, the following:

4.4.1. Route, topology, grade and ambient conditions;
4.4.2. Vehicle distance specific fuel consumption;
4.4.3. THC, methane, and nonmethane hydrocarbon emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
4.4.4. NO, N2O, NO2, CO, CO2, NH3, PM and ultrafine emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
4.4.5. Benzene, toluene, ethylbenzene, xylene, formaldehyde, acetaldehyde, and carbonyl emissions;
4.4.6. Gaseous and PM emissions in the NTE zone;
4.4.7. Gravimetric analysis of PM10, PM2.5, PM1 and total PM;
4.4.8. PM concentration and size distribution;
4.4.9. Chemical characterization of PM – elemental carbon (including metal) and organic carbon analyses; and
4.4.10. Engine aftertreatment technology performance.

Task 5 – Engine and Aftertreatment Technology Deterioration Factors
The objective of this task is for the Contractor Team to develop a detailed Deterioration Factor Test Plan to determine the degradation rate of engine aftertreatment technology on up to 8 test vehicles selected from the approved Vehicle Test Matrix in Task 1.5. The Contractor shall:

5.1. Develop a Deterioration Factor Test Plan to determine the degradation rate of engine aftertreatment technology on up to 8 test vehicles selected from the approved Vehicle Test Matrix in Task 1.6. The plan shall include detailed description of the procedures or methods that will be used to:

5.1.1. Determine the minimum number of test vehicles needed for this task;
5.1.2. Establish the number of emission tests and the test vehicle in-service accumulation schedule within the period of each emission test;
5.1.3. Collect emission-related and non-emission-related scheduled and non-scheduled maintenance history within the in-service accumulation period; and
5.1.4. Conduct emission tests, data analyses and data evaluation. The emission test procedures shall be consistent with the approved Emission Test Plan in Task 3.2.

5.2. Submit the Deterioration Factor Test Plan in Task 5.1 to the SCAQMD Project Manager for approval;

5.3. Implement the approved Deterioration Factor Test Plan in Task 5.1;

5.4. Submit the Deterioration Factor Test Report to the SCAQMD Project Manager. The report shall include, but not limited to the following:

5.4.1. A Deterioration Test Vehicle Matrix consisting of selected vehicles and consistent with the approved Test Vehicle Matrix in Task 1.6;
5.4.2. Emission test results including:
   5.4.2.i. Vehicle distance specific fuel consumption;
   5.4.2.ii. THC, methane, and nonmethane hydrocarbon emissions;
   5.4.2.iii. NO, N2O, NO2, CO, CO2, NH3, PM and ultrafine emissions;
   5.4.2.iv. Benzene, toluene, ethylbenzene, xylene, formaldehyde, acetaldehyde, and carbonyl emissions;
   5.4.2.v. Gaseous and PM emissions in the NTE zone;
   5.4.2.vi. Gravimetric analysis of PM10, PM2.5, PM1 and total PM;
   5.4.2.vii. PM concentration and size distribution; and
   5.4.2.viii. Chemical characterization of PM – elemental carbon (including metal) and organic carbon analyses; and

5.4.3. Degradation rate of engine aftertreatment technology on the selected vehicles for gaseous and PM emissions.

Task 6 –Technology Impact, Issues, Improvement and Benefits
The objective of this task is for the Contractor Team to prepare a Technology Assessment Plan to: 1) identify the impact of current and near-future technology on engine performance, emissions and fuel usage; 2) establish engine aftertreatment issues and how to mitigate them; and 3) match vehicle technologies to vocations for which technology benefits can be maximized. The Contractor shall:

6.1. Prepare a Technology Assessment Plan to identify the impact of current and near-future technology on engine performance, emissions and fuel usage; 2) establish engine aftertreatment issues and how to mitigate them; and 3) match vehicle technologies to vocations for which technology benefits can be maximized. The plan shall be consistent with the Vehicle Test Protocol in Task 2, In-Use Chassis Emission Test Plan in Task 3, and the Real-World In-Use Emission Plan in Task 4;

6.2. Submit the Technology Assessment Plan to the SCAQMD Project Manager for review;

6.3. Implement the approved Technology Assessment Plan in Task 6.2; and

6.4. Submit a Technology Assessment Report to SCAQMD Project Manager. The report shall include, but not limited to the following:
   6.4.1. Engine and aftertreatment technologies;
   6.4.2. Impact of current and near term engine and aftertreatment technologies on engine performance, emissions, and fuel usage;
   6.4.3. Engine and aftertreatment technologies’ issues and how to mitigate them; and
   6.4.4. A list of matched vehicle technologies to vocations for which technology benefits can be maximized.

Task 7 –Comparison of In-Use Emissions and EMFAC Emissions
The objective of this task is for the Contractor Team to develop an In-Use Emission and EMFAC Assessment Protocol to compare emissions data obtained from the Test Vehicle Activity data in Task 2, In-Use Chassis Dynamometer Emission Test in Task 3, and Real-World In-Use Emission Tests in Task 4 to emissions outputs from CARB EMFAC model for vehicles in the same category as the test vehicles. The Contractor shall:

7.1. Develop an In-Use Emission and EMFAC Assessment Protocol to compare emissions data from chassis-dynamometer in-use emissions test, PEMS in-use emissions test,
and real-world-based in-use emissions test to emissions outputs from CARB EMFAC model from a number of vehicles selected from the approved Vehicle Test Matrix in Task 1.5;

7.2. Submit the In-Use Emission and EMFAC Assessment Protocol to the SCAQMD Project Manager for review. The SCAQMD Project Manager will present the report to the Technical Review Committee to discuss the effectiveness of the protocol to meet the objective of the in-use emissions study;

7.3. Work with CARB staff to implement the approved In-Use Emission and EMFAC Assessment Protocol in Task 7.2;

7.4. Submit an In-Use Emission and EMFAC Assessment Report to SCAQMD Project Manager. The report shall include, but not limited to the following:

7.4.1. Current CARB emissions inventory data for vehicles in the same category as the test vehicles;

7.4.2. Assessment of the in-use emissions measurements obtained from chassis dynamometer, PEMS and the transportable emission measurement system;

7.4.3. Assessment of the capability of PEMS, chassis dynamometer and transportable emissions measurement system to measure near-zero emissions; and

7.4.4. Results from comparing chassis-dynamometer-based in-use emissions, PEMS-based in-use emissions, and real-world-based in-use emissions to EMFAC emissions from the vehicles selected from the approved Vehicle Test Matrix in Task 1.5.

B. Schedule of Deliverables
Contractor shall supply the following reports to the SCAQMD under the contract agreements. Each submitted report shall be stapled, not bound, printed in black ink, double-sided type, on an 8-1/2 by 11 inch page, and shall include camera-ready originals.

1. Formal updates of program progress to the SCAQMD’s Program Manager once every month throughout the testing phases of the proposed project. If there is any engine problem or failure of retrofit technology, proponents shall schedule an immediate meeting with SCAQMD’s Project Manager.

2. Two stapled copies of each quarterly progress report due by the 10th day of each month following the reporting period. Contractor shall submit one copy of each progress report to SCAQMD’s Project Manager and one copy to SCAQMD’s Technology Advancement Staff Specialist assigned to contracts, in conjunction with the invoice for the same period. Each progress report shall include, but not be limited to:
   a. Reference to SCAQMD contract number and title of project;
   b. Reporting time period (months, year);
c. Description of work completed during the reporting period, including a discussion of problems encountered and how those problems were resolved; and other relevant activities;
d. Summary of data and test results for each task;
e. Discussion of work planned for the next reporting period;
f. Discussion of project status with respect to time schedule and steps being taken to resolve any delays; and
g. Discussion of cost status with respect to budget status and work completed to date, cost to date, explanation of any overruns, and steps being taken to bring costs back into line.

3. Two bound copies of the draft Final Report for review, comment and approval shall be submitted not later than two months after the completion of the proposed project. Contractor shall submit one copy of the draft final report to SCAQMD’s Project Manager and one copy to SCAQMD’s Technology Advancement-Contracts Administrator assigned to contracts. This document shall be considered in the public domain, in conformance with the California Public Records Act (Government Code Section 6250 et seq.). SCAQMD shall complete their review of the draft final report within four weeks of its receipt from proponent. The draft final report shall include, but not be limited to, the following:
a. Reference to SCAQMD contract number and title of project;
b. Project background and objectives;
c. An executive summary up to three pages in length, including a short, definitive statement of the project; objective of the project, including emission reduction objectives or potential, and reference to SCAQMD Rules if applicable; subject of the project including technology demonstration site, participants, dates, etc.; conclusions; and recommendations. The recommendations shall include, but not limited to air quality benefits, near-term emission reduction, cost, and technology limitations;
d. A detailed description of the scope of work;
e. Findings or results of each task;
f. Summary of all testing and analysis, and emissions and operational data, including, but not limited to, temperature profiles, emissions, fuel and oil consumption, maintenance, reliability, operating cost, thermal efficiency, control efficiency, and engine performance;
g. Results - a discussion of the expected project results versus what was actually achieved; and
h. Problems - a discussion of any significant problems encountered during the contract and how they were resolved.

4. Contractor shall submit three stapled originals of the final report to the SCAQMD’s Technology Advancement-Contracts Administrator assigned to contracts incorporating the comments, no later than three months after the completion of the proposed project. The final report shall also include acknowledgement of all sponsors and participants in the project. This document shall be considered in the public domain, in conformance with the California Public Records Act (Government Code Section 6250 et seq.).
5. Contractor shall submit a two-page project synopsis, along with the final report. In addition to a hard copy of this synopsis, Contractor shall provide the synopsis in an electronic version, using Microsoft WORD 97 or compatible version.

SECTION VI: REQUIRED QUALIFICATIONS

A. Individual consultants, consulting firms, heavy-duty vehicle emission testing laboratories, and universities proposing to bid on this proposal must have many years of experience and knowledge in developing vocation-based heavy-duty drive cycles and evaluating wide range of engine, aftertreatment, diesel fuel, alternative fuel and energy technologies for heavy-duty vehicles.

B. Proposer must submit the following:

1. Resumes or similar statement of qualifications of the lead person and key persons assigned to the project. Substitution of project manager or lead person will not be permitted without prior written approval by SCAQMD.

2. List all key personnel assigned to the project by level, and name, and include resumes. Specify the estimated time to be spent by the lead person and key persons assigned to the project.

3. List specific portion of the project to be subcontracted. Include all subcontractors and their resumes or similar statement of qualification.

4. Summary of major similar projects handled during the last five years demonstrating experience in AQMD, federal, and state air quality regulations, alternative fuel technologies, and diesel-fueled heavy-duty engines.

SECTION VII: PROPOSAL SUBMITTAL REQUIREMENTS

Submitted proposals must follow the format outlined below and all requested information must be supplied. Failure to submit proposals in the required format will result in elimination from proposal evaluation. SCAQMD may modify the RFP or issue supplementary information or guidelines during the proposal preparation period prior to the due date. Please check our website for updates (http://www.aqmd.gov/grants-bids). The cost for developing the proposal is the responsibility of the Contractor, and shall not be chargeable to SCAQMD.

Each proposal must be submitted in three separate volumes:

- Volume I - Technical Proposal
- Volume II - Cost Proposal
- Volume III - Certifications and Representations included in Attachment B to this RFP must be completed and executed by an authorized official of the Contractor.

A separate cover letter including the name, address, and telephone number of the contractor, and signed by the person or persons authorized to represent the Firm should accompany the proposal submission. Firm contact information as follows should also be included in the cover letter:
1. Address and telephone number of office in, or nearest to, Diamond Bar, California.
2. Name and title of Firm’s representative designated as contact.

A separate Table of Contents should be provided for Volumes I and II.

**VOLUME I - TECHNICAL PROPOSAL**

**DO NOT INCLUDE ANY COST INFORMATION IN THE TECHNICAL VOLUME**

**Summary (Section A)** - State overall approach to meeting the objectives and satisfying the scope of work to be performed, the sequence of activities, and a description of methodology or techniques to be used.

**A Team Selection**

A.1. Proponent must identify each member of the project team in accordance with Section VI(B) of this RFP.

A.2. Proponent must provide adequate information about each team member such that the evaluation panel can assess each member’s contributions, commitments, and experience in heavy-duty engines and vehicles, engine industry, and alternative fuel technologies. A letter from a retrofit technology manufacturer that they are part of the team, and defining their contribution to the proposed project must be provided.

**B Specific Information for Statement of Work Task**

**Task 1 – Test Vehicle Selection and Regulatory Permits**

B.1.1. Proponents must present a Test Vehicle Recruitment Protocol to select up to 200 test vehicles that is representative of on-road heavy-duty vehicles with GVWR greater than 14,000 lb. and used in transit, school bus, refuse, delivery, and goods movement applications. The test vehicles is limited to those powered by engines fueled with alternative fuels, conventional and alternative diesel fuels, and dual fuels. The engines are categorized into six groups including:

- MY 2010 – 2015 natural gas engines certified at or below 0.20 g/bhp-hr NOx;
- Natural gas engines certified to CARB optional standard at or below 0.02 g/bhp-hr NOx;
- MY 2010 - 2015 diesel engines certified at or below 0.20 g/bhp-hr NOx;
- Diesel engines with no SCR system;
- Dual fuel engines; and
- Alternative fuel engines (hybrid and fully electric technology)

B.1.2. Proponents must present techniques for drawing a representative sample of up to 200 test vehicles from population of vehicles (GVWR greater than 14,000 lb.) used in transit, school bus, refuse, delivery, and goods movement applications and operated in the Basin. This technique must address:

B.1.2.1. Vehicles powered only by engines in the six categories listed above;
B.1.2.2. The number of vehicles in each category based on, at a minimum, the engine age, technology and make and model, vehicle’s mileage (at least
B.1.2.3. Steps for inviting potential fleets to participate in the in-use emissions study.

B.1.3. Proponents must present techniques for ensuring that the test vehicles are drivable and safe. This technique must include, at a minimum, procedures for:
B.1.3.1. Performing vehicle safety and drivability tests;
B.1.3.2. Collecting and assessing vehicle’s maintenance and usage history;
B.1.3.3. Reading and diagnosis active and inactive fault codes;
B.1.3.4. Screening engine ECU and OBD system (if available) to identify engine sensors malfunction or failure;
B.1.3.5. Screening OBD system (if available) to identify aftertreatment device malfunction or failure; and
B.1.3.5. Inviting engine and aftertreatment device faulty codes, failure, and malfunction.

Task 2 – Test Vehicle Activity Protocol

B.2.1. Proponents must present a Test Vehicle Activity Protocol for: 1) gathering, storing, and analyzing vehicle driving data, emissions and location; 2) determining whether to develop new or improved or retain existing vocation-specific drive cycles; and, 5) if needed, developing or improving the existing drive cycles.

B.2.2. Proponents must provide a detailed description of the tools (PEMS and PAMS) and procedures for gathering and storing second-by-second operating information, in-use emissions, loaded weight, axle group weight and location of test vehicles. The procedures must include detailed description of the:
B.2.2.1. Continuous measurement systems with all necessary hardware and software equipment interface components and how the systems will be fitted with the test vehicles;
B.2.2.2. Guidelines and performance specifications of the measurement systems. The systems shall, at a minimum,
B.2.2.2.i. Include an integrated Global Positioning System (GPS) and other tools capable of measuring second-by-second road grade, vehicle’s location (latitude and longitude), speed, acceleration, power and revolution per minute, mass air flow, time, and other operational data necessary in interpreting test vehicles’ driving history as well as for developing or improving heavy-duty vehicle drive cycles;
B.2.2.2.ii. Include an on-board weight system capable of periodically measuring vehicle’s loaded weight and axle group weight;
B.2.2.2.iii. Communicate with engine’s ECU and OBD system (if available) through industry standard communication protocols and record data into its memory without adversely affecting the ECU or any sensors;
B.2.2.2.iv. Start automatically when a test vehicle is started and stop automatically when the test vehicle is stopped;
B.2.2.2.v. Be configurable in a “plug-and-play manner” with an Ethernet or USB connector and/or wireless signal;
B.2.2.2.vi. Allow data to be uploaded to a server at predefined rates;
B.2.2.2.vii. Interface with a server that provides a centralized repository of data and events if a remote feature of the system is selected. The server shall provide a secure gateway for end users to view and/or download data for analysis;
B.2.2.2.viii. Allow exportation of data to CSV or other industry standard file type to facilitate analysis using common data analysis tools; or allow data to be housed in a relational database;
B.2.2.2.ix. Have ability to download data using mobile broadband or other cellular/mobile based communication devices;
B.2.2.2.x. Be flexible and capable of incorporating multiple transmission protocols;
B.2.2.2.xi. Have adequate data storage capacity;
B.2.2.2.xii. Monitor and record multiple engine parameters from the engine’s ECU;
B.2.2.2.xiii. Monitor and record all selected parameters on a “per second” basis (1 HZ) or at any configurable frequency, continuously for a minimum period of one week;
B.2.2.2.xiv. Measure and record temperature and pressure at engine-out, tailpipe, and pre and post of aftertreatment devices; and
B.2.2.2.xv. Measure test vehicle’s exhaust carbon monoxide (CO), carbon dioxide (CO2), total hydrocarbon (THC), and total NOx emissions.

B.2.3. Proponents must provide a detailed description of the procedures for interpreting and analyzing (QA/QC) driving data presented in Task B.2.2. This procedure must, at a minimum, include strategies for discovering and resolving issues with:
B.2.3.1. Equipment (PAMS, PEMS, GPS, etc.) failure or malfunction;
B.2.3.2. Signal noise in equipment; and
B.2.3.3. Dataset.

B.2.4. Proponents must provide a detailed description of the techniques for:
B.2.4.1. Segregating driving data into micro-trip bins;
B.2.4.2. selecting micro-trip bins that are representative of the entire pool of micro-trips for each vocation;
B.2.4.3. Processing the selected micro-trips in preparation of developing new or improving existing vocation-based drive cycles; and
B.2.4.4. Developing conditioning drive cycles, cold start and hot start frequencies, as well as, frequency of temperature and low load operations for vehicles equipped with aftertreatment devices.

**Task 3 – In-Use Chassis Dynamometer Emissions Test**

B.3.1. Proponents must present an In-Use Chassis Emission Test Plan for conducting a chassis dynamometer tests of up to 60 heavy-duty vehicles presented in Task B.1.

B.3.2. Proponents must present detailed description of steps that will be taken to ensure that the test vehicles are drivable and safe. These steps shall be consistent with the Test Vehicle Recruitment Protocol in Task B.1.
B.3.3. Proponents must present the type and purpose of each sensor or equipment with all necessary hardware and software equipment interface components to be instrumented on test vehicles.

B.3.4. Proponents must present chassis dynamometer test procedures including vehicle setup, conditioning, coast-down, and cold-start and triplicate hot-start test procedures.

B.3.5. Proponents must present procedures to validate or evaluate newly developed or improved vocation-based heavy-duty drive cycles.

B.3.6. Proponents must present detailed description of the following vocation-based heavy-duty cycles:
   B.3.6.1. CBD driving schedule;
   B.3.6.2. UDDS;
   B.3.6.3. OCTA driving schedule;
   B.3.6.4. Port Drayage drive cycle;
   B.3.6.5. SCAQMD refuse truck cycle; and
   B.3.6.6. CARB HHDDT drive cycle.

B.3.7. Proponents must present procedures for collecting, measuring, and recording all data necessary to determine:
   B.3.7.1. Vehicle distance specific fuel consumption;
   B.3.7.2. NOx emissions during extended idle period;
   B.3.7.3. THC, methane and nonmethane hydrocarbon emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
   B.3.7.4. NO, N2O, NO2, CO, CO2, NH3, PM and ultrafine emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
   B.3.7.5. Benzene, toluene, ethylbenzene, xylene, formaldehyde, acetaldehyde, and carbonyls emissions;
   B.3.7.6. Gaseous and PM emissions in the NTE zone;
   B.3.7.7. Gravimetric analysis of PM10, PM2.5, PM1 and total PM;
   B.3.7.8. PM concentration and size distribution;
   B.3.7.9. Chemical characterization of PM - elemental carbon (including metal) and organic carbon analyses; and
   B.3.7.10. Engine aftertreatment technology performance.

Task 4 – Real-World In-Use Emission Tests
B.4.1. Proponents must present a Real-World In-Use Emission Test Plan to conduct in-use emission tests of up to 10 test vehicles used in delivery and goods movement applications as the vehicles are driven over typical vocation routes and loaded up to 70,000 pounds. The delivery and goods movement test vehicles will be selected from test vehicles in Task B.1.

B.4.2. Proponents must present detailed description of the transportable 40 CFR 1065 compliant CVS emissions measurement systems and how the systems are prepared or conditioned in preparation for testing vehicles.
B.4.3. Proponents must provide the location, type and purpose of each sensor or equipment with all necessary hardware and software equipment interface components to be instrumented on the test vehicles.

B.4.4. Proponents must present real-world test procedures, including methods and tools to:
   B.4.4.1. Prepare and condition test vehicles for testing;
   B.4.4.2. Measure or determine the topology, road grade, and ambient conditions along the routes; and
   B.4.4.3. Continuously monitor, collect and record parameters necessary to determine the efficiency of each aftertreatment technology installed on the engine exhaust.

B.4.5. Proponents must present detailed description of the procedures for collecting, measuring, and recording all data necessary to determine:
   B.4.5.1. Vehicle distance specific fuel consumption;
   B.4.5.2. NOx emissions during extended idle period;
   B.4.5.3. THC, methane and nonmethane hydrocarbon emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
   B.4.5.4. NO, N2O, NO2, CO, CO2, NH3, PM and ultrafine emissions at engine-out, tailpipe, and pre and post aftertreatment devices;
   B.4.5.5. Gaseous and PM emissions in the NTE zone;
   B.4.5.6. Benzene, toluene, ethylbenzene, xylene, formaldehyde, acetaldehyde, and carbonyls emissions;
   B.4.5.7. Gravimetric analysis of PM10, PM2.5, PM1 and total PM;
   B.4.5.8. PM concentration and size distribution;
   B.4.5.9. Chemical characterization of PM - elemental carbon (including metal) and organic carbon analyses; and
   B.4.5.10. Engine aftertreatment technology performance.

Task 5 – Engine and Aftertreatment Technology Deterioration Factors

B.5.1. Proponents must present a deterioration Factor Test Plan to determine the degradation rate of engine aftertreatment technology employed on up to 8 test vehicles presented in Task B.1.

B.5.2. Proponents must determine the number of test vehicles needed to this task.

B.5.3. Proponents must establish the number of emission tests and the test vehicles in-service accumulation schedule within the period of each emission test.

B.5.4. Proponents must present procedures for collecting emission-related and non-emission-related scheduled and non-scheduled maintenance history within the in-service accumulation period.

B.5.5. Proponents must present detailed description of the procedures or methods for conducting emission tests, data analyses, and data evaluation. The emission test procedures shall be consistent with the Emission Test Plan in Task B.3.

Task 6 – Technology Impact, Shortfall, Improvement and Benefits
Proponents must present a Technology Assessment Plan to identify the impact of current and near future technology on engine performance, emissions and fuel usage; 2) establish engine aftertreatment issues and how to mitigate the them; and 3) match vehicle technologies to vocations for which technology benefits can be maximized. The plan must be consistent with the Vehicle Test Protocol in Task 2, In-Use Chassis Emission Test Plan in Task 3, and the Real-World In-Use Emission Plan in Task 4.

Task 7 – Comparison of In-Use Emissions and CARB EMFAC Emissions
Proponents must present an In-Use Emission and EMFAC Assessment Protocol to compare emissions data obtained from the Test Vehicle Activity data, In-Use Chassis Dynamometer Emission Test data, and Real World In-Use Emissions Test data to emissions outputs from EMFAC model from a number of vehicles presented in Task B.1.

Program Schedule (Section B) - This section shall identify anticipated dates of completion of all tasks and subtasks specified in the Statement of Work, including a list of milestones and deliverables. Specifically, this section should include:

1. An overall time schedule in Gantt chart form;
2. A list of significant milestones, project deliverables, and the projected calendar delivery dates of each. Milestones include project kickoff meetings, task start and completion dates, start and completion of testing, availability of test data, progress reports, interim reports, draft and final reports, and project review meetings

Project Organization (Section C) - Describe the proposed management structure, program monitoring procedures, and organization of the proposed team. Provide a statement detailing your approach to the project, specifically address the Firm’s ability and willingness to commit and maintain staffing to successfully complete the project on the proposed schedule.

Qualifications (Section D) - Describe the technical capabilities of the Firm. Provide references of other similar studies or projects performed during the last five years demonstrating ability to successfully complete the work. Include contact name, title, and telephone number for any references listed. Provide a statement of your Firm’s background and related experience in performing similar services for other governmental organizations.

Assigned Personnel (Section E) - Provide the following information about the staff to be assigned to this project:

1. List all key personnel assigned to the project by level, name and location. Provide a resume or similar statement describing the background, qualifications and experience of the lead person and all persons assigned to the project. Substitution of project manager or lead personnel will not be permitted without prior written approval of SCAQMD.
2. Provide a spreadsheet of the labor hours proposed for each labor category at the task level.
3. Provide a statement indicating whether or not 90% of the work will be performed within the geographical boundaries of SCAQMD.
4. Provide a statement of education and training programs provided to, or required of, the staff identified for participation in the project, particularly with reference to management consulting, governmental practices and procedures, and technical matters.
5. Provide a summary of your Firm's general qualifications to meet required qualifications and fulfill statement of work, including additional Firm personnel and resources beyond those who may be assigned to the project.

Subcontractors (Section F) - This project may require expertise in multiple technical areas. List any subcontractors that will be used, identifying functions to be performed by them, their related qualifications and experience and the total number of hours or percentage of time they will spend on the project.

Conflict of Interest (Section G) - Address possible conflicts of interest with other clients affected by actions performed by the Firm on behalf of SCAQMD. SCAQMD recognizes that prospective Contractors may be performing similar projects for other clients. Include a complete list of such clients for the past three (3) years with the type of work performed and the total number of years performing such tasks for each client. Although the Proposer will not be automatically disqualified by reason of work performed for such clients, SCAQMD reserves the right to consider the nature and extent of such work in evaluating the proposal.

Additional Data (Section H) - Provide other essential data that may assist in the evaluation of this proposal.

VOLUME II - COST PROPOSAL

Name and Address - The Cost Proposal must list the name and complete address of the Proposer in the upper left-hand corner.

Cost Proposal – SCAQMD anticipates awarding a fixed price contract. Cost information must be provided as listed below:

1. Detail must be provided by the following categories:

   A. Labor – The Cost Proposal must list the fully-burdened hourly rates and the total number of hours estimated for each level of professional and administrative staff to be used to perform the tasks required by this RFP. Costs should be estimated for each of the components of the work plan.

   B. Subcontractor Costs - List subcontractor costs and identify subcontractors by name. Itemize subcontractor charges per hour or per day.

   C. Travel Costs - Indicate amount of travel cost and basis of estimate to include trip destination, purpose of trip, length of trip, airline fare or mileage expense, per diem costs, lodging and car rental.

   D. Other Direct Costs - This category may include such items as postage and mailing expense, printing and reproduction costs, etc. Provide a basis of estimate for these costs.

   E. Facilities & Administrative (F&A) Costs – The F&A costs must not exceed 10.6% of the total proposed project cost.

2. It is the policy of the SCAQMD to receive at least as favorable pricing, warranties, conditions, benefits and terms as other customers or clients making similar purchases or receiving similar services. SCAQMD will give preference, where appropriate, to vendors who certify that they will provide "most favored customer" status to the SCAQMD. To receive preference points, Proposer shall certify that SCAQMD is receiving "most favored
customer” pricing in the Business Status Certifications page of Volume III, Attachment B – Certifications and Representations.

**VOLUME III - CERTIFICATIONS AND REPRESENTATIONS** (see Attachment B to this RFP)

(See Attachment B to this RFP)

**SECTION VIII: PROPOSAL SUBMISSION**

All proposals must be submitted according to specifications set forth in the section above, and this section. Failure to adhere to these specifications may be cause for rejection of the proposal.

**Signature** - All proposals must be signed by an authorized representative of the Proposer.

**Due Date** - All proposals are due no later than 5:00 p.m., June 10, 2016, and should be directed to:

Procurement Unit  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765-4178  
(909) 396-3520

**Submittal** - Submit eight (8) complete copies of the proposal in a sealed envelope, plainly marked in the upper left-hand corner with the name and address of the proposer and the words "RFP #P2016-19."

**Late bids/proposals will not be accepted under any circumstances.**

**Grounds for Rejection** - A proposal may be immediately rejected if:

- It is not prepared in the format described, or
- It is signed by an individual not authorized to represent the Firm.

**Modification or Withdrawal** - Once submitted, proposals cannot be altered without the prior written consent of SCAQMD. All proposals shall constitute firm offers and may not be withdrawn for a period of ninety (90) days following the last day to accept proposals.

**SECTION IX: PROPOSAL EVALUATION/CONTRACTOR SELECTION CRITERIA**

A. A panel selected by the SCAQMD will evaluate all submitted proposals. This panel may include members outside the SCAQMD. The panel will make a recommendation to the Executive Officer and/or the Governing Board of the SCAQMD for final selection of a contractor and negotiation of a contract.

B. Each member of the evaluation panel shall be accorded equal weight in his or her rating of proposals. The evaluation panel members shall evaluate the proposals according to the specified criteria and numerical weightings set forth below.
1. (a) **Proposal Evaluation Criteria**

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding of Proposed In-Use Emission Study 20</td>
</tr>
<tr>
<td>Technical Approach 20</td>
</tr>
<tr>
<td>Technical Qualifications of Contracting Team 20</td>
</tr>
<tr>
<td>Previous Experience on Similar Projects 10</td>
</tr>
</tbody>
</table>

Cost 30

**TOTAL:** 100

1. (b) **Additional Points**

- Small Business or Small Business Joint Venture 10
- DVBE or DVBE Joint Venture 10
- Use of DVBE or Small Business Subcontractors 7
- Low-Emission Vehicle Business 5
- Local Business (Non-Federally Funded Projects Only) 5
- Off-Peak Hours Delivery Business 2
- Most Favored Customer 2

The cumulative points awarded for small business, DVBE, use of small business or DVBE subcontractors, low-emission vehicle business, local business, and off-peak hours delivery business shall not exceed 15 points.

**Self-Certification for Additional Points**

The award of these additional points shall be contingent upon Proposer completing the Self-Certification section of Attachment B – Certifications and Representations and/or inclusion of a statement in the proposal self-certifying that Proposer qualifies for additional points as detailed above.

2. To receive additional points in the evaluation process for the categories of Small Business or Small Business Joint Venture, DVBE or DVBE Joint Venture or Local Business (for non-federally funded projects), the proposer must submit a self-certification or certification from the State of California Office of Small Business Certification and Resources at the time of proposal submission certifying that the proposer meets the requirements set forth in Section III. To receive points for the use of DVBE and/or Small Business subcontractors, at least 25 percent of the total contract value must be subcontracted to DVBEs and/or Small Businesses. To receive points as a Low-Emission Vehicle Business, the proposer must demonstrate to the Executive Officer, or designee, that supplies and materials delivered to SCAQMD are delivered in vehicles that operate on either clean-fuels or if powered by diesel fuel, that the vehicles have particulate traps installed. To receive points as an Off-Peak Hours Delivery Business, the proposer must submit, at proposal submission, certification of its commitment to delivering
supplies and materials to SCAQMD between the hours of 10:00 a.m. and 3:00 p.m. To receive points for Most Favored Customer status, the proposer must submit, at proposal submission, certification of its commitment to provide most favored customer status to the SCAQMD. The cumulative points awarded for small business, DVBE, use of Small Business or DVBE Subcontractors, Local Business, Low-Emission Vehicle Business and Off-Peak Hour Delivery Business shall not exceed 15 points.

The Procurement Section will be responsible for monitoring compliance of suppliers awarded purchase orders based upon use of low-emission vehicles or off-peak traffic hour delivery commitments through the use of vendor logs which will identify the contractor awarded the incentive. The purchase order shall incorporate terms which obligate the supplier to deliver materials in low-emission vehicles or deliver during off-peak traffic hours. The Receiving department will monitor those qualified supplier deliveries to ensure compliance to the purchase order requirements. Suppliers in non-compliance will be subject to a two percent of total purchase order value penalty. The Procurement Manager will adjudicate any disputes regarding either low-emission vehicle or off-peak hour deliveries.

3. For procurement of Research and Development (R & D) projects or projects requiring technical or scientific expertise or special projects requiring unique knowledge and abilities, technical factors including past experience shall be weighted at 70 points and cost shall be weighted at 30 points. A proposal must receive at least 56 out of 70 points on R & D projects and projects requiring technical or scientific expertise or special projects requiring unique knowledge and abilities, in order to be deemed qualified for award.

4. The lowest cost proposal will be awarded the maximum cost points available and all other cost proposals will receive points on a prorated basis. For example if the lowest cost proposal is $1,000 and the maximum points available are 30 points, this proposal would receive the full 30 points. If the next lowest cost proposal is $1,100 it would receive 27 points reflecting the fact that it is 10% higher than the lowest cost (90% of 30 points = 27 points).

C. During the selection process the evaluation panel may wish to interview some proposers for clarification purposes only. No new material will be permitted at this time. Additional information provided during the bid review process is limited to clarification by the Proposer of information presented in his/her proposal, upon request by SCAQMD.

D. The Executive Officer or Governing Board may award the contract to a Proposer other than the Proposer receiving the highest rating in the event the Governing Board determines that another Proposer from among those technically qualified would provide the best value to SCAQMD considering cost and technical factors. The determination shall be based solely on the Evaluation Criteria contained in the RFP, on evidence provided in the proposal and on any other evidence provided during the bid review process.
E. Selection will be made based on the above-described criteria and rating factors. The selection will be made by and is subject to Executive Officer or Governing Board approval. Proposers may be notified of the results by letter.

F. The Governing Board has approved a Bid Protest Procedure which provides a process for a Bidder or prospective Bidder to submit a written protest to SCAQMD Procurement Manager in recognition of two types of protests: Protest Regarding Solicitation and Protest Regarding Award of a Contract. Copies of the Bid Protest Policy can be secured through a request to SCAQMD Procurement Department.

G. The Executive Officer or Governing Board may award contracts to more than one proposer if in (his or their) sole judgment the purposes of the (contract or award) would best be served by selecting multiple proposers.

H. If additional funds become available, the Executive Officer or Governing Board may increase the amount awarded. The Executive Officer or Governing Board may also select additional proposers for a grant or contract if additional funds become available.

I. Disposition of Proposals – Pursuant to SCAQMD’s Procurement Policy and Procedure, SCAQMD reserves the right to reject any or all proposals. All proposals become the property of SCAQMD, and are subject to the California Public Records Act. One copy of the proposal shall be retained for SCAQMD files. Additional copies and materials will be returned only if requested and at the proposer’s expense.

J. If proposal submittal is for a Public Works project as defined by State of California Labor Code Section 1720, Proposer is required to include Contractor Registration No. in Attachment B. Proposal submittal will be deemed as non-responsive and Bidder may be disqualified if Contractor Registration No. is not included in Attachment B. Proposer is alerted to changes to California Prevailing Wage compliance requirements as defined in Senate Bill 854 (Stat. 2014, Chapter 28), and California Labor Code Sections 1770, 1771 and 1725.

SECTION X: FUNDING
Proponents will provide the total cost of proposed project. Funding is available from the Clean Fuels Fund, established as special revenue from the state-mandated Clean Fuels Program. The CEC and SoCalGas will provide additional funds, which will be included as part of the SCAQMD contract(s). SCAQMD anticipates awarding a total of approximately one to three contracts from this announcement based on availability of funds and the quality of proposals received. Contractors will be expected to enter into a “Fixed Price” contract with SCAQMD for specific tasks. Payments will be based upon task deliverables.

SECTION XI: SAMPLE CONTRACT
A sample contract to carry out the work described in this RFP is available on SCAQMD’s website at http://www.aqmd.gov/grants-bids or upon request from the RFP Contact Person (Section II).
ATTACHMENT A

PARTICIPATION IN THE PROCUREMENT PROCESS

A. It is the policy of South Coast Air Quality Management District (SCAQMD) to ensure that all businesses including minority business enterprises, women business enterprises, disabled veteran business enterprises and small businesses have a fair and equitable opportunity to compete for and participate in SCAQMD contracts.

B. Definitions:

The definition of minority, women or disadvantaged business enterprises set forth below is included for purposes of determining compliance with the affirmative steps requirement described in Paragraph G below on procurements funded in whole or in part with federal grant funds which involve the use of subcontractors. The definition provided for disabled veteran business enterprise, local business, small business enterprise, low-emission vehicle business and off-peak hours delivery business are provided for purposes of determining eligibility for point or cost considerations in the evaluation process.

1. "Women business enterprise" (WBE) as used in this policy means a business enterprise that meets all of the following criteria:

   a. a business that is at least 51 percent owned by one or more women, or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more women.

   b. a business whose management and daily business operations are controlled by one or more women.

   c. a business which is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign-based business.

2. "Disabled veteran" as used in this policy is a United States military, naval, or air service veteran with at least 10 percent service-connected disability who is a resident of California.

3. "Disabled veteran business enterprise" (DVBE) as used in this policy means a business enterprise that meets all of the following criteria:

   a. is a sole proprietorship or partnership of which at least 51 percent is owned by one or more disabled veterans or, in the case of a publicly owned business, at least 51 percent of its stock is owned by one or more disabled veterans; a subsidiary which is wholly owned by a parent corporation but only if at least 51 percent of the voting stock of the parent corporation is owned by one or more disabled veterans; or a joint venture in which at least 51 percent of the joint venture’s management and control and earnings are held by one or more disabled veterans.

   b. the management and control of the daily business operations are by one or more disabled veterans. The disabled veterans who exercise management and control are not required to be the same disabled veterans as the owners of the business.
c. is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, firm, or other foreign-based business.

4. "Local business" as used in this policy means a company that has an ongoing business within geographical boundaries of SCAQMD at the time of bid or proposal submittal and performs 90% of the work related to the contract within the geographical boundaries of SCAQMD and satisfies the requirements of subparagraph H below.

5. “Small business” as used in this policy means a business that meets the following criteria:
   a. 1) an independently owned and operated business; 2) not dominant in its field of operation; 3) together with affiliates is either:
      • A service, construction, or non-manufacturer with 100 or fewer employees, and average annual gross receipts of ten million dollars ($10,000,000) or less over the previous three years, or
      • A manufacturer with 100 or fewer employees.
   b. Manufacturer means a business that is both of the following:
      1) Primarily engaged in the chemical or mechanical transformation of raw materials or processed substances into new products.

6. "Joint ventures" as defined in this policy pertaining to certification means that one party to the joint venture is a DVBE or small business and owns at least 51 percent of the joint venture.

7. "Low-Emission Vehicle Business" as used in this policy means a company or contractor that uses low-emission vehicles in conducting deliveries to SCAQMD. Low-emission vehicles include vehicles powered by electric, compressed natural gas (CNG), liquefied natural gas (LNG), liquefied petroleum gas (LPG), ethanol, methanol, hydrogen and diesel retrofitted with particulate matter (PM) traps.

8. “Off-Peak Hours Delivery Business” as used in this policy means a company or contractor that commits to conducting deliveries to SCAQMD during off-peak traffic hours defined as between 10:00 a.m. and 3:00 p.m.
PARTICIPATION IN THE PROCUREMENT PROCESS

9. “Benefits Incentive Business” as used in this policy means a company or contractor that provides janitorial, security guard or landscaping services to SCAQMD and commits to providing employee health benefits (as defined below in Section VIII.D.2.d) for full time workers with affordable deductible and co-payment terms.

10. “Minority Business Enterprise” as used in this policy means a business that is at least 51 percent owned by one or more minority person(s), or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more minority persons.

   a. a business whose management and daily business operations are controlled by one or more minority persons.

   b. a business which is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign-based business.

   c. “Minority person” for purposes of this policy, means a Black American, Hispanic American, Native-American (including American Indian, Eskimo, Aleut, and Native Hawaiian), Asian-Indian (including a person whose origins are from India, Pakistan, and Bangladesh), Asian-Pacific-American (including a person whose origins are from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the United States Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, and Taiwan).

11. “Most Favored Customer” as used in this policy means that the SCAQMD will receive at least as favorable pricing, warranties, conditions, benefits and terms as other customers or clients making similar purchases or receiving similar services.

12. “Disadvantaged Business Enterprise” as used in this policy means a business that is an entity owned and/or controlled by a socially and economically disadvantaged individual(s) as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note) (10% statute), and Public Law 102-389 (42 U.S.C. 4370d)(8% statute), respectively;

   a. Small Business Enterprise (SBE);
   b. Small Business in a Rural Area (SBRA);
   c. Labor Surplus Area Firm (LSAF);
   d. Historically Underutilized Business (HUB) Zone Small Business Concern, or a concern under a successor program.

C. Under Request for Quotations (RFQ), DVBEs, DVBE business joint ventures, small businesses, and small business joint ventures shall be granted a preference in an amount equal to 5% of the lowest cost responsive bid. Low-Emission Vehicle Businesses shall be granted a preference in an amount equal to 5 percent of the lowest cost responsive bid. Off-Peak Hours Delivery Businesses shall be granted a preference in an amount equal to 2 percent of the lowest cost responsive bid. Local businesses (if the procurement is not
ATTACHMENT A

PARTICIPATION IN THE PROCUREMENT PROCESS

funded in whole or in part by federal grant funds) shall be granted a preference in an amount equal to 2% of the lowest cost responsive bid. Businesses offering Most Favored Customer status shall be granted a preference in an amount equal to 2 percent of the lowest cost responsive bid.

D. Under Request for Proposals, DVBEs, DVBE joint ventures, small businesses, and small business joint ventures shall be awarded ten (10) points in the evaluation process. A non-DVBE or large business shall receive seven (7) points for subcontracting at least twenty-five (25%) of the total contract value to a DVBE and/or small business. Low-Emission Vehicle Businesses shall be awarded five (5) points in the evaluation process. On procurements which are not funded in whole or in part by federal grant funds local businesses shall receive five (5) points. Off-Peak Hours Delivery Businesses shall be awarded two (2) points in the evaluation process. Businesses offering Most Favored Customer status shall be awarded two (2) points in the evaluation process.

E. SCAQMD will ensure that discrimination in the award and performance of contracts does not occur on the basis of race, color, sex, national origin, marital status, sexual preference, creed, ancestry, medical condition, or retaliation for having filed a discrimination complaint in the performance of SCAQMD contractual obligations.

F. SCAQMD requires Contractor to be in compliance with all state and federal laws and regulations with respect to its employees throughout the term of any awarded contract, including state minimum wage laws and OSHA requirements.

G. When contracts are funded in whole or in part by federal funds, and if subcontracts are to be let, the Contractor must comply with the following, evidencing a good faith effort to solicit disadvantaged businesses. Contractor shall submit a certification signed by an authorized official affirming its status as a MBE or WBE, as applicable, at the time of contract execution. SCAQMD reserves the right to request documentation demonstrating compliance with the following good faith efforts prior to contract execution.

1. Ensure Disadvantaged Business Enterprises (DBEs) are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.

2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and Local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.

5. Using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

6. If the prime contractor awards subcontracts, require the prime contractor to take the above steps.

H. To the extent that any conflict exists between this policy and any requirements imposed by federal and state law relating to participation in a contract by a certified MBE/WBE/DVBE as a condition of receipt of federal or state funds, the federal or state requirements shall prevail.

I. When contracts are not funded in whole or in part by federal grant funds, a local business preference will be awarded. For such contracts that involve the purchase of commercial off-the-shelf products, local business preference will be given to suppliers or distributors of commercial off-the-shelf products who maintain an ongoing business within the geographical boundaries of SCAQMD. However, if the subject matter of the RFP or RFQ calls for the fabrication or manufacture of custom products, only companies performing 90% of the manufacturing or fabrication effort within the geographical boundaries of SCAQMD shall be entitled to the local business preference.

J. In compliance with federal fair share requirements set forth in 40 CFR Part 33, SCAQMD shall establish a fair share goal annually for expenditures with federal funds covered by its procurement policy.
Dear SCAQMD Contractor/Supplier:

South Coast Air Quality Management District (SCAQMD) is committed to ensuring that our contractor/supplier records are current and accurate. If your firm is selected for award of a purchase order or contract, it is imperative that the information requested herein be supplied in a timely manner to facilitate payment of invoices. In order to process your payments, we need the enclosed information regarding your account. **Please review and complete the information identified on the following pages, remember to sign all documents for our files, and return them as soon as possible to the address below:**

**Attention: Accounts Payable, Accounting Department**
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765-4178

If you do not return this information, we will not be able to establish you as a vendor. This will delay any payments and would still necessitate your submittal of the enclosed information to our Accounting department before payment could be initiated. Completion of this document and enclosed forms would ensure that your payments are processed timely and accurately.

If you have any questions or need assistance in completing this information, please contact Accounting at (909) 396-3777. We appreciate your cooperation in completing this necessary information.

Sincerely,

Michael B. O’Kelly  
Chief Financial Officer

DH:tm

Enclosures: Business Information Request  
Disadvantaged Business Certification  
W-9  
Form 590 Withholding Exemption Certificate  
Federal Contract Debarment Certification  
Campaign Contributions Disclosure  
Direct Deposit Authorization  

REV 9/15
## BUSINESS INFORMATION REQUEST

| Business Name |  |
| Division of |  |
| Subsidiary of |  |
| Website Address |  |

### Type of Business

- [ ] Individual
- [ ] DBA, Name _______________, County Filed in _______________
- [ ] Corporation, ID No. ________________
- [ ] LLC/LLP, ID No. ________________
- [ ] Other ________________

### REMITTING ADDRESS INFORMATION

| Address |  |
| City/Town |  |
| State/Province | Zip |
| Phone | ( ) - Ext | Fax | ( ) - |
| Contact | Title |
| E-mail Address |  |
| Payment Name if Different |  |

All invoices must reference the corresponding Purchase Order Number(s)/Contract Number(s) if applicable and mailed to:

**Attention:** Accounts Payable, Accounting Department  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA  91765-4178
BUSINESS STATUS CERTIFICATIONS

Federal guidance for utilization of disadvantaged business enterprises allows a vendor to be deemed a small business enterprise (SBE), minority business enterprise (MBE) or women business enterprise (WBE) if it meets the criteria below.

- is certified by the Small Business Administration or
- is certified by a state or federal agency or
- is an independent MBE(s) or WBE(s) business concern which is at least 51 percent owned and controlled by minority group member(s) who are citizens of the United States.

Statements of certification:

As a prime contractor to SCAQMD, (name of business) will engage in good faith efforts to achieve the fair share in accordance with 40 CFR Section 33.301, and will follow the six affirmative steps listed below for contracts or purchase orders funded in whole or in part by federal grants and contracts.

1. Place qualified SBEs, MBEs, and WBEs on solicitation lists.
2. Assure that SBEs, MBEs, and WBEs are solicited whenever possible.
3. When economically feasible, divide total requirements into small tasks or quantities to permit greater participation by SBEs, MBEs, and WBEs.
4. Establish delivery schedules, if possible, to encourage participation by SBEs, MBEs, and WBEs.
5. Use services of Small Business Administration, Minority Business Development Agency of the Department of Commerce, and/or any agency authorized as a clearinghouse for SBEs, MBEs, and WBEs.
6. If subcontracts are to be let, take the above affirmative steps.

Self-Certification Verification: Also for use in awarding additional points, as applicable, in accordance with SCAQMD Procurement Policy and Procedure:

Check all that apply:

- Small Business Enterprise/Small Business Joint Venture
- Local business
- Minority-owned Business Enterprise
- Women-owned Business Enterprise
- Disabled Veteran-owned Business Enterprise/DVBE Joint Venture
- Most Favored Customer Pricing Certification

Percent of ownership: _______ %

Name of Qualifying Owner(s): __________________________________________

State of California Public Works Contractor Registration No. ________________.

I, the undersigned, hereby declare that to the best of my knowledge the above information is accurate. Upon penalty of perjury, I certify information submitted is factual.

_________________________ ____________________________
NAME TITLE

_________________________ ____________________________
TELEPHONE NUMBER DATE
Definitions

Disabled Veteran-Owned Business Enterprise means a business that meets all of the following criteria:

- is a sole proprietorship or partnership of which is at least 51 percent owned by one or more disabled veterans, or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more disabled veterans; a subsidiary which is wholly owned by a parent corporation but only if at least 51 percent of the voting stock of the parent corporation is owned by one or more disabled veterans; or a joint venture in which at least 51 percent of the joint venture's management and control and earnings are held by one or more disabled veterans.
- the management and control of the daily business operations are by one or more disabled veterans. The disabled veterans who exercise management and control are not required to be the same disabled veterans as the owners of the business.
- is a sole proprietorship, corporation, partnership, or joint venture with its primary headquarters office located in the United States and which is not a branch or subsidiary of a foreign corporation, firm, or other foreign-based business.

Joint Venture means that one party to the joint venture is a DVBE and owns at least 51 percent of the joint venture. In the case of a joint venture formed for a single project this means that DVBE will receive at least 51 percent of the project dollars.

Local Business means a business that meets all of the following criteria:

- has an ongoing business within the boundary of SCAQMD at the time of bid application.
- performs 90 percent of the work within SCAQMD’s jurisdiction.

Minority-Owned Business Enterprise means a business that meets all of the following criteria:

- is at least 51 percent owned by one or more minority persons or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more minority persons.
- is a business whose management and daily business operations are controlled or owned by one or more minority person.
- is a business which is a sole proprietorship, corporation, partnership, joint venture, an association, or a cooperative with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign business.

“Minority” person means a Black American, Hispanic American, Native American (including American Indian, Eskimo, Aleut, and Native Hawaiian), Asian-Indian American (including a person whose origins are from India, Pakistan, or Bangladesh), Asian-Pacific American (including a person whose origins are from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the United States Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, or Taiwan).

Small Business Enterprise means a business that meets the following criteria:

a. 1) an independently owned and operated business; 2) not dominant in its field of operation; 3) together with affiliates is either:

- A service, construction, or non-manufacturer with 100 or fewer employees, and average annual gross receipts of ten million dollars ($10,000,000) or less over the previous three years, or
- A manufacturer with 100 or fewer employees.

b. Manufacturer means a business that is both of the following:

1) Primarily engaged in the chemical or mechanical transformation of raw materials or processed substances into new products.

Small Business Joint Venture means that one party to the joint venture is a Small Business and owns at least 51 percent of the joint venture. In the case of a joint venture formed for a single project this means that the Small Business will receive at least 51 percent of the project dollars.

Women-Owned Business Enterprise means a business that meets all of the following criteria:

- is at least 51 percent owned by one or more women or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more women.
- is a business whose management and daily business operations are controlled or owned by one or more women.
- is a business which is a sole proprietorship, corporation, partnership, or a joint venture, with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign business.

Most Favored Customer as used in this policy means that the SCAQMD will receive at least as favorable pricing, warranties, conditions, benefits and terms as other customers or clients making similar purchases or receiving similar services.
Request for Taxpayer Identification Number and Certification

Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

Business name/disregarded entity name, if different from above

Check appropriate box for federal tax classification; check only one of the following seven boxes:

- Individual/sole proprietor or
- Corporation
- Single-member LLC
- Partnership
- Trust/estate
- Limited liability company

Note: For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.

Exempt payee code (If any)

Exemption from FATCA reporting code (If any)

(Applies to accounts maintained outside the U.S.)

Address (number, street, and apt. or suite no.)

City, state, and ZIP code

Requestor's name and address (optional)

Part I Taxpayer Identification Number (TIN)
Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see How to get a TIN on page 3.

Social security number

Employer identification number

Part II Certification
Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and

2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and

3. I am a U.S. citizen or other U.S. person (defined below); and

4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions: You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here
Signature of U.S. person

Date

General Instructions
Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we issue it) is available at www.irs.gov/w9.

Purpose of Form
An individual or entity (Form W-9 requestor) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following: Form 1099-INT (interest earned or paid) Form 1099-DIV (dividends, including those from stocks or mutual funds) Form 1099-MISC (various types of income, prizes, awards, or gross proceeds) Form 1098-T (student loan interest) Form 1098-E (student loan interest) Form 1098-C (canceled debt) Form 1098-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2. By signing the filed-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding,

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that you are a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of allocatively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See What is FATCA reporting? on page 2 for further information.
Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester’s form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

• An individual who is a U.S. citizen or U.S. resident alien;
• A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
• An estate (other than a foreign estate); or
• A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay withholding tax under section 1441 on any foreign partners’ share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1441 require a partnership to so pay tax on the income of its U.S. partners. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1441 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing his U.S. status and avoiding withholding on his allocable share of net income from the partnership conducting a trade or business in the United States:

• In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
• In the case of a grantor trust with a U.S. grantor or other U.S. owner generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
• In the case of a trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the applicable Form W-8 or Form 8833 as Publication 515, Withholding of Tax on Certain Foreign Financial Accounts, indicates (For Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the form of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a “saving clause.” Exceptions specified in the saving clause may permit an exemption from tax to be claimed for certain types of income even after the treaty has otherwise expired, resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following facts:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for U.S. source income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if he or her stay in the United States exceeds 5 calendar years. However, paragraph 1 of Protocol 2 of the U.S.-China treaty (dated April 30, 1994) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this section (under paragraph 2 of the first protocol) and is relying on this exemption to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8833.

Backup Withholding
What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 26% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, and broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from time charter operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
   2. You do not certify your TIN when required (see the Part II Instructions on page 3 for details),
   3. The IRS tells the requester that you furnished an incorrect TIN,
   4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
   5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See exempt payee code on page 3 and the separate instructions for the Requester of Form W-9 for more information.

Also see Special rules for partnerships above.

What is FATCA reporting?
The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are U.S. persons. Certain payees are exempt from FATCA reporting. See Exemption from FATCA reporting code on page 3 and the instructions for the Requester of Form W-9 for more information.

Updating Your Information
You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you are no longer a tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties
Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with respect to a reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions
Line 1
You must enter one of the following on this line, do not leave this line blank. The name should match the name on your tax return.

a. Individual. Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your tax name, the last name as shown on your social security card, and your new last name.

b. Sole proprietor or single-member LLC. Enter your individual name as shown on your 1040/1040A/1040EZ or on line 2. You may enter your business, trade, or doing business as (DBA) name on line 2.

c. Partnership, LLC that is not a single-member LLC, or Corporation, or S Corporation. Enter the entity’s name as shown on the entity’s tax return on line 1 and any business, trade, or DBA name on line 2.

d. Other entity. Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. Disregarded entity. For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a “disregarded entity.” See Regulations section 301.7701-2(c)(2)(ii). Enter the owner’s name on line 1.

The name of the entity entered on line 1 should never be a disregarded entity name. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner’s name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity name on line 1, “Business name/disregarded entity name.” If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.
Line 2
If you have a business name, trade name, DGA name, or disregarded entity name, you may enter it on line 2.

Line 3
Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the “Limited Liability Company” box and enter “RP” in the space provided. If the LLC has filed Form 8282 or 2553 to be taxed as a corporation, check the “Limited Liability Company” box and in the space provided enter “C” for C corporation or “S” for S corporation. If it is a single-member LLC that is disregarded entity, do not check the “Limited Liability Company” box; instead check the first box in line 3 “Individuals/career or single-member LLC.”

Line 4, Exemptions
If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

Exempt payee code.
• Generally, individuals (including sole proprietors) are not exempt from backup withholding.
• Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
• Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
• Corporations are exempt from backup withholding with respect to attorneys’ fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1. An organization exempt from tax under section 501(c), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(h)(2).
2. The United States or any of its agencies or instrumentalities.
3. A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities.
4. A foreign government or any of its political subdivisions, agencies, or instrumentalities.
5. A corporation.
6. A dealer in securities or commodities registered to do business in the United States, the District of Columbia, or a U.S. commonwealth or possession.
7. A futures commission merchant registered with the Commodity Futures Trading Commission.
8. A real estate investment trust.
9. An entity registered at all times during the tax year under the Investment Company Act of 1940.
10. A common trust fund operated by a bank under section 564(a).
11. A financial institution.
12. A mediator known in the investment community as a nominee or custodian.

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above. 1 through 13.

IF the payment is for . . .  THEN the payment is exempt for . . .

Interest and dividend payments All exempt payees except for 7.
Broker transactions Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Borrower exchange transactions and patronage dividends Exempt payees 1 through 4.
Payments over $600 required to be reported and direct assets over $5,000 Exempt payees 1 through 4.
Payments made in settlement of payment card or third party network transactions Exempt payees 1 through 4.

1 See Form 1099-MISC, Miscellaneous income, and its instructions.

However, the following payments made to a corporation and reportable on Form 1096-MISC are not exempt from backup withholding: medical and health care payments, attorneys’ fees, gross proceeds paid to an attorney reportable under section 6045(e), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with “Not Applicable” (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(c) or any individual retirement plan as defined in section 7701(a)(37).
B—The United States or any of its agencies or instrumentalities.
C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities.
D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(ii).
E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(ii).
F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state.
G—A real estate investment trust.
H—A regulated investment company as defined in section 581 or an entity registered at all times during the tax year under the Investment Company Act of 1940.
I—A common trust fund as defined in section 564(a).
J—A bank as defined in section 581.
K—A broker.
L—A trust exempt from tax under section 604 of subpart E of title 13.
M—A tax exempt trust under section 403(b) plan or section 457(g) plan.

Note. You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5
Enter your address (number, street, and apartment or suite number). This is where the requestor of this Form W-9 will mail your information returns.

Line 6
Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)
Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an SSN, see How to get a TIN below.

If you are a sole proprietor and you have an SSN, you may enter either your SSN or ITIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see Limited Liability Company (LLC) on this page), enter the owner’s SSN or ITIN. (If the owner has one). Do not enter the disregarded entity’s SSN. If the LLC is classified as a corporation or partnership, enter the entity’s EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get the form online at www.ssa.gov. You may also get this form by calling 1-800-772-1112. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write “Applied For” in the space for the TIN, sign and date the form, and give it to the requestor. For interest and dividend payments, and certain payments made with respect to readily traceable instruments, generally you will have 90 days to get a TIN and give it to the requestor before you are subject to backup withholding on payments. The 90-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requestor.

Note! Entering “Applied For” means that you have already applied for a TIN or that you intend to apply for one soon.

Caution! A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.
Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see Exempt payee code cator.

Signature requirements. Complete the certification as indicated in items 1 through 5 below:
1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered inactive during 1983. You must give your correct TIN, but you do not have to sign the certification.
2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.
3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.
4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. “Other payments” include payments made in the course of the recipient’s trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys including payments to corporations.
5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To give the Requester

For this type of account: Give name and SSN of:
1. Individual
2. Two or more individuals (joint account)
3. Custodian account of a minor (Uniform Gifts to Minors Act)
4. The usual revocable savings trust (grantor is also trustee)
b. So-called trust account that is not a legal or valid trust under state law
5. Sole proprietorship or disregarded entity owned by an individual
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(1)(ii)) (A)

For this type of account: Give name and EIN of:
7. Disregarded entity not owned by an individual
8. A valid trust, estate, or pension trust
9. Corporation or LLC electing corporate status on Form 2553
10. Association, club, religious, charitable, educational, or other tax-exempt organization
11. Partnership or multi-member LLC
12. A broker or registered nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or person that receives agricultural program payments
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(1)(ii)) (b)

1. You must show your individual name and you may also enter your business or DBA name on the “Business name disregarded entity” name line. You may use either your SSN or EIN if you have one, but the IRS encourages you to use your SSN.
2. List first and circle the name of the trust, estate, or pension trust. (Do not list the name of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see Special rules for partnerships on page 7.
3. Note: Grantor also must provide a Form W-9 by trustee of trust.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. The IRS can help by giving your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:
- Protect your SSN.
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.
- If your tax records are affected by identity theft and you receive a notice from the IRS, respond immediately to the address or phone number on the notice.
- If your tax records are currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-909-4492 or submit Form 10429.
- For more information, see Publication 4555, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4776 or TTY/TDD 1-800-929-8659.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contact with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@mca.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: spoofing@ftc.gov or contact them at: http://www.consumer.gov/doh/ or 1-877-438-4338.

Visit IRS.gov to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you. Mortgage interest you pay on the acquisition or abandonment of secured property, the cancellation of debt, or contributions made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on this form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividends, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.
2015 Withholding Exemption Certificate

The payee completes this form and submits it to the withholding agent.

Withholding Agent (Type or print)

Name

Payee

Name

[ ] SSN or ITIN [ ] FEIN [ ] CA Corp no. [ ] CA SOS file no.

Address (apt. list, room, PO Box, or PMB no.)

City (If you have a foreign address, see instructions.)

State ZIP Code

Exemption Reason

Check only one reason box below that applies to the payee.

By checking the appropriate box below, the Payee certifies the reason for the exemption from the California income tax withholding requirements on payment(s) made to the entity or individual.

☐ Individuals — Certification of Residency:

I am a resident of California and I reside at the address shown above. If I become a nonresident at any time, I will promptly notify the withholding agent. See Instructions for General Information D, Definitions.

☐ Corporations:

The corporation has a permanent place of business in California at the address shown above or is qualified through the California Secretary of State (SOS) to do business in California. The corporation will file a California tax return. If this corporation ceases to have a permanent place of business in California or ceases to do any of the above, I will promptly notify the withholding agent. See Instructions for General Information D, Definitions.

☐ Partnerships or Limited Liability Companies (LLCs):

The partnership or LLC has a permanent place of business in California at the address shown above or is registered with the California SOS, and is subject to the laws of California. The partnership or LLC will file a California tax return. If the partnership or LLC ceases to do any of the above, I will promptly inform the withholding agent. For withholding purposes, a limited liability partnership (LLP) is treated like any other partnership.

☐ Tax-Exempt Entities:

The entity is exempt from tax under California Revenue and Taxation Code (R&T) Section 23701 (insert letter) or Internal Revenue Code Section 501(c) (insert number). If this entity ceases to be exempt from tax, I will promptly notify the withholding agent. Individuals cannot be tax-exempt entities.

☐ Insurance Companies, Individual Retirement Arrangements (IRAs), or Qualified Pension/Profit Sharing Plans:

The entity is an insurance company, IRA, or a federally qualified pension or profit-sharing plan.

☐ California Trusts:

At least one trustee and one noncontingent beneficiary of the above-named trust is a California resident. The trust will file a California fiduciary tax return. If the trustee or noncontingent beneficiary becomes a nonresident at any time, I will promptly notify the withholding agent.

☐ Estates — Certification of Residency of Deceased Person:

I am the executor of the above-named person's estate or trust. The decedent was a California resident at the time of death. The estate will file a California fiduciary tax return.

☐ NonMilitary Spouse of a Military Servicemember:

I am a nonmilitary spouse of a military servicemember and I meet the Military Spouse Residency Relief Act (MSRRA) requirements. See instructions for General Information E, MSRRA.

CERTIFICATE OF PAYEE: Payee must complete and sign below.

Under penalties of perjury, I hereby certify that the information provided in this document is, to the best of my knowledge, true and correct. If conditions change, I will promptly notify the withholding agent.

Payee’s name and title (type or print) __________________________ Telephone (____) __________________

Payee’s signature ▶ __________________________ Date __________________

For Privacy Notice, get FTB 1131 ENG/SP. 7061153 Form 590 02 2014
2015 Instructions for Form 590
Withholding Exemption Certificate

References in these instructions are to the California Revenue and Taxation Code (R&T).

General Information

Registered Domestic Partners (RDP) — For purposes of California income tax, references to a spouse, husband, or wife also refer to a Registered Domestic Partner (RDP) unless otherwise specified. For more information on RDPs, get FTB Pub. 737, Tax Information for Registered Domestic Partners.

A Purpose

Use Form 590, Withholding Exemption Certificate, to certify an exemption from nonresident withholding.

Form 590 does not apply to payments of backup withholding. For information on California backup withholding, go to libc.ca.gov and search for backup withholding.

Form 590 does not apply to payments for wages to employees. Wage withholding is administered by the California Employment Development Department (EDD). For more information, go to edd.ca.gov or call 888.745.3388.

Do not use Form 590 to certify an exemption from withholding if you are a Seller of California real estate. Sellers of California real estate use Form 594-C, Real Estate Withholding Certificate, to claim an exemption from real estate withholding.

The following are excluded from withholding and completing this Form:

• The United States and any of its agencies or instrumentalities.

• A state, a possession of the United States, the District of Columbia, or any of its political subdivisions or instrumentalities.

• A foreign government or any of its political subdivisions, agencies, or instrumentalities.

B Income Subject to Withholding

California Revenue and Taxation Code (R&T) Section 19962 requires withholding of income or franchise tax on payments of California source income made to nonresidents of California.

Withholding is required on the following, but is not limited to:

• Payments to nonresidents for services rendered in California.

• Distributions of California source income made to domestic nonresident partners, members, and S corporation shareholders and allocations of California source income made for foreign partners and members.

• Payments to nonresidents for rents if the payments are made in the course of the withholding agent’s business.

• Payments to nonresidents for royalties from activities sourced to California.

• Distributions of California source income to nonresident beneficiaries from an estate or trust.

• Endowment payments received for services performed in California.

• Prizes and winnings received by nonresidents for contests in California.

However, withholding is optional if the total payments of California source income are $1,500 or less during the calendar year.

For more information on withholding get FTB Pub. 1017, Resident and Nonresident Withholding Guidelines. To get a withholding publication, see Additional Information.

C Who Certifies this Form

Form 590 is certified by the payee. California residents or entities exempt from the withholding requirement should complete Form 590 and submit it to the withholding agent before payment is made. The withholding agent is then relieved of the withholding requirements if the agent relies in good faith on a completed and signed Form 590 unless notified by the Franchise Tax Board (FTB) that the form should not be relied upon.

An incomplete certificate is invalid and the withholding agent should not accept it. If the withholding agent receives an incomplete certificate, the withholding agent is required to withhold tax on payments made to the payee until a valid certificate is received. In lieu of a completed certificate on the preprinted form, the withholding agent may accept as a substitute certificate a letter from the payee explaining why the payee is not subject to withholding. The letter must contain all the information required on the certificate in small language, including the under penalty of perjury statement and the payee’s taxpayer identification number. The withholding agent must retain a copy of the certificate or substitute for at least four years after the last payment to which the certificate applies, and provide it upon request to the FTB.

For example, if an entertainer (or the entertainee’s business entity) is paid for a performance, the entertainer’s information must be provided. Do not submit the entertainer’s agent or promoter information.

The grantor of a grantor trust shall be treated as the payee for withholding purposes. Therefore, if the payee is a grantor trust and one or more of the grantors is a nonresident, withholding is required. If all of the grantors on the trust are residents, no withholding is required. Resident grantors can check the box on Form 590 labeled “Individuals — Certification of Residency.”

D Definitions

For California non-wage withholding purposes, nonresident includes all of the following:

• Individuals who are not residents of California.

• Corporations not qualified through the California Secretary of State (CA SOS) to do business in California or having no permanent place of business in California.

• Partnerships or limited liability companies (LLCs) with no permanent place of business in California.

• Any trust without a resident grantor, beneficiary, or trustee, or estates where the decedent was not a California resident.

Foreign refers to non-U.S.

For more information about determining resident status, get FTB Pub. 1031, Guidelines for Determining Resident Status. Military servicemembers have special rules for residency. For more information, get FTB Pub. 1032, Tax Information for Military Personnel.

Permanent Place of Business:

A corporation has a permanent place of business in California if it is organized and existing under the laws of California or if it is a foreign corporation qualified to transact intrastate business by the CA SOS. A corporation that has not qualified to transact intrastate business (e.g., a corporation engaged exclusively in interstate commerce) will be considered as having a permanent place of business in California only if it maintains a permanent office in California that is permanently staffed by its employees.

E Military Spouse Residency Relief Act (MSRRA)

Generally, for tax purposes you are considered to maintain your existing residence or domicile. If a military servicemember and nonmilitary spouse have the same state of domicile, the MSRRA provides:

• A spouse shall not be deemed to have lost a residence or domicile in any state solely by reason of being absent to be with the servicemember serving in compliance with military orders.

• A spouse shall not be deemed to have acquired a residence or domicile in any other state solely by reason of being there to be with the servicemember serving in compliance with military orders.

Domicile is defined as the one place:

• Where you maintain a true, fixed, and permanent home.

• To which you intend to return whenever you are absent.
A military servicemember's nonmilitary spouse is considered a nonresident for tax purposes if the servicemember and spouse have the same domicile outside of California and the spouse is in California solely to be with the servicemember who is serving in compliance with Permanent Change of Station orders.

California may require nonmilitary spouses of military servicemembers to provide proof that they meet the criteria for California personal income tax exemption as set forth in the MSRFA.

Income of a military servicemember's nonmilitary spouse for services performed in California is not California-source income subject to state tax if the spouse is in California to be with the servicemember serving in compliance with military orders, and the servicemember and spouse have the same domicile in a state other than California.

For additional information or assistance in determining whether the applicant meets the MSRFA requirements, get FTB Pub. 1032.

**Specific Instructions**

**Payee Instructions**

Enter the withholding agent's name.

Enter the payee's information, including the taxpayer identification number (TIN) and check the appropriate TIN box.

You must provide an acceptable TIN as requested on this form. The following are acceptable TINs: social security number (SSN); individual taxpayer identification number (ITIN); federal employer identification number (FEIN); California corporation number (CA Corp No.); or CA SOS file number.

Private Mail Box (PMB) – Include the PMB in the address field. Write “PMB” first, then the box number. Example: 111 Main Street PMB 123.

**Foreign Address** – Enter the information in the following order: City, Country, Province/Region, and Postal Code. Follow the country's practice for entering the postal code. Do not abbreviate the country's name.

Check the box that reflects the reason why the payee is exempt from the California income tax withholding requirement.

**Withholding Agent Instructions**

Keep Form 590 for your records. Do not send this form to the FTB unless it has been specifically requested.

For more information, contact Withholding Services and Compliance, see Additional Information.

The payee must notify the withholding agent if any of the following situations occur:
- The individual payee becomes a nonresident.
- The corporation ceases to have a permanent place of business in California or ceases to be qualified to do business in California.
- The partnership ceases to have a permanent place of business in California.
- The LLC ceases to have a permanent place of business in California.
- The tax-exempt entity loses its tax-exempt status.

If any of these situations occur, then withholding may be required. For more information, get Form 592, Resident and Nonresident Withholding Statement, Form 592-B, Resident and Nonresident Withholding Tax Statement, and Form 592-V, Payment Voucher for Resident and Nonresident Withholding.

**Additional Information**

For additional information or to speak to a representative regarding this form, call the Withholding Services and Compliance telephone service at:

**Telephone**: 888 792 4900
916 645 4900

**Fax**: 916 645 912

OR write to:

WITHOLDING SERVICES AND COMPLIANCE MS F102
FRANCHISE TAX BOARD
PO BOX 942667
SACRAMENTO CA 94267-0651

You can download, view, and print California tax forms and publications at ftb.ca.gov.

OR to get forms by mail write to:

TAX FORMS REQUEST UNIT
FRANCHISE TAX BOARD
PO BOX 307
RANCHO CORDOVA CA 95671-0307

For all other questions unrelated to withholding or to access the TTY/TDD numbers, see the information below.

**Internet and Telephone Assistance**

**Website**: ftb.ca.gov

**Telephone**: 800 822 5711 from within the United States
916 845 6500 from outside the United States.

TTY/TDD: 800 822 6268 for persons with hearing or speech impairments.

**Assistencia Por Internet y Telefónica**

**Sitio web**: ftb.ca.gov

**Teléfono**: 800 822 5711 dentro de los Estados Unidos
916 845 6500 fuera de los Estados Unidos.

TTY/TDD: 800 822 6268 para personas con discapacidades auditivas o del habla
CAMPAIGN CONTRIBUTIONS DISCLOSURE

In accordance with California law, bidders and contracting parties are required to disclose, at the time the application is filed, information relating to any campaign contributions made to South Coast Air Quality Management District (SCAQMD) Board Members or members/alternates of the MSRC, including: the name of the party making the contribution (which includes any parent, subsidiary or otherwise related business entity, as defined below), the amount of the contribution, and the date the contribution was made. 2 C.C.R. §18438.8(b).

California law prohibits a party, or an agent, from making campaign contributions to SCAQMD Governing Board Members or members/alternates of the Mobile Source Air Pollution Reduction Review Committee (MSRC) of more than $250 while their contract or permit is pending before SCAQMD; and further prohibits a campaign contribution from being made for three (3) months following the date of the final decision by the Governing Board or the MSRC on a donor’s contract or permit. Gov’t Code §84308(d). For purposes of reaching the $250 limit, the campaign contributions of the bidder or contractor plus contributions by its parents, affiliates, and related companies of the contractor or bidder are added together. 2 C.C.R. §18438.5.

In addition, SCAQMD Board Members or members/alternates of the MSRC must abstain from voting on a contract or permit if they have received a campaign contribution from a party or participant to the proceeding, or agent, totaling more than $250 in the 12-month period prior to the consideration of the item by the Governing Board or the MSRC. Gov’t Code §84308(c).

The list of current SCAQMD Governing Board Members can be found at SCAQMD website (www.aqmd.gov). The list of current MSRC members/alternates can be found at the MSRC website (http://www.cleantransportationfunding.org).

SECTION I

Contractor (Legal Name): ____________________________________________________________

DBA, Name ________________________________ County Filed in ______________________

Corporation, ID No. ________________________________

LLC/LLP, ID No. ________________________________

List any parent, subsidiaries, or otherwise affiliated business entities of Contractor: 
(See definition below).

________________________________________________________________________

SECTION II

Has Contractor and/or any parent, subsidiary, or affiliated company, or agent thereof, made a campaign contribution(s) totaling $250 or more in the aggregate to a current member of the South Coast Air Quality Management Governing Board or member/alternate of the MSRC in the 12 months preceding the date of execution of this disclosure?

☐ Yes ☐ No  If YES, complete Section II below and then sign and date the form. If NO, sign and date below. Include this form with your submittal.
Campaign Contributions Disclosure, continued:

<table>
<thead>
<tr>
<th>Name of Contributor</th>
<th>Governing Board Member or MSRC Member/Alternate</th>
<th>Amount of Contribution</th>
<th>Date of Contribution</th>
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<tbody>
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I declare the foregoing disclosures to be true and correct.

By: __________________________

Title: __________________________

Date: __________________________

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**DEFINITIONS**

Parent, Subsidiary, or Otherwise Related Business Entity (2 Cal. Code of Regs., §18703.1(d.))

1. Parent subsidiary. A parent subsidiary relationship exists when one corporation directly or indirectly owns shares possessing more than 50 percent of the voting power of another corporation.

2. Otherwise related business entity. Business entities, including corporations, partnerships, joint ventures and any other organizations and enterprises operated for profit, which do not have a parent subsidiary relationship are otherwise related if any one of the following three tests is met:

   (A) One business entity has a controlling ownership interest in the other business entity.

   (B) There is shared management and control between the entities. In determining whether there is shared management and control, consideration should be given to the following factors:

      (i) The same person or substantially the same person owns and manages the two entities;

      (ii) There are common or commingled funds or assets;

      (iii) The business entities share the use of the same offices or employees, or otherwise share activities, resources or personnel on a regular basis;

      (iv) There is otherwise a regular and close working relationship between the entities; or

   (C) A controlling owner (50% or greater interest as a shareholder or as a general partner) in one entity also is a controlling owner in the other entity.
Direct Deposit Authorization

STEP 1: Please check all the appropriate boxes
☐ Individual (Employee, Governing Board Member) ☐ New Request
☐ Vendor/Contractor ☐ Cancel Direct Deposit
☐ Changed Information

STEP 2: Payee Information

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Middle Initial</th>
<th>Title</th>
</tr>
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</table>

Vendor/Contractor Business Name (if applicable)

<table>
<thead>
<tr>
<th>Address</th>
<th>Apartment or P.O. Box Number</th>
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<table>
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<tr>
<th>City</th>
<th>State</th>
<th>Zip</th>
<th>Country</th>
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<thead>
<tr>
<th>Taxpayer ID Number</th>
<th>Telephone Number</th>
<th>Email Address</th>
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</thead>
</table>

Authorization

1. I authorize South Coast Air Quality Management District (SCAQMD) to direct deposit funds to my account in the financial institution as indicated below. I understand that the authorization may be rejected or discontinued by SCAQMD at any time. If any of the above information changes, I will promptly complete a new authorization agreement. If the direct deposit is not stopped before closing an account, funds payable to me will be returned to SCAQMD for distribution. This will delay my payment.

2. This authorization remains in effect until SCAQMD receives written notification of changes or cancellation from you.

3. I hereby release and hold harmless SCAQMD for any claims or liability to pay for any losses or costs related to insufficient fund transactions that result from failure within the Automated Clearing House network to correctly and timely deposit monies into my account.

STEP 3: You must verify that your bank is a member of an Automated Clearing House (ACH). Failure to do so could delay the processing of your payment. You must attach a voided check or have your bank complete the bank information and the account holder must sign below.

To be Completed by your Bank

<table>
<thead>
<tr>
<th>Name of Bank/Institution</th>
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<table>
<thead>
<tr>
<th>Account Holder Name(s)</th>
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</table>

☐ Saving ☐ Checking

<table>
<thead>
<tr>
<th>Account Number</th>
<th>Routing Number</th>
</tr>
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<table>
<thead>
<tr>
<th>Bank Representative Printed Name</th>
<th>Bank Representative Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

ACCOUNT HOLDER SIGNATURE:

For SCAQMD Use Only

Input By ______________________ Date _____________